2022 FULTON COUNTY
MULTIJURISDICTIONAL HAZARD MITIGATION PLAN

Prepared by BOLD planning

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2022 Fulton County Multijurisdictional Hazard Mitigation Plan

June 2022

Encompassing the Jurisdictions of:
Fulton County, Georgia, and the Cities of Alpharetta, Atlanta, Chattahoochee Hills, College Park, East Point, Fairburn, Hapeville, Johns Creek, Milton, Mountain Park, Palmetto, Roswell, Sandy Springs, South Fulton, and Union City.

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Executive Summary

The 2022 Fulton County Multijurisdictional Hazard Mitigation Plan, developed in partnership with the Atlanta-Fulton Emergency Management Agency (AFCEMA) and Tennessee-based BOLDplanning Inc. (BOLDplanning), updates and revises the hazard mitigation activities for Fulton County, Georgia (GA). The plan, which supersedes the 2016 Fulton County Multijurisdictional Hazard Mitigation Plan, encompasses 16 jurisdictions, i.e., one county and 15 cities, aka "the planning area." These include Fulton County, GA, and the participating cities of Alpharetta, Atlanta, Chattahoochee Hills, College Park, East Point, Fairburn, Hapeville, Johns Creek, Milton, Mountain Park, Palmetto, Roswell, Sandy Springs, South Fulton, and Union City.

The Fulton County Mitigation Planning Committee, or MPC, evaluated the mitigation measures to be undertaken and outlined a strategy for the implementation of mitigation projects over the plan's five-year life cycle. The priorities and overall hazard risk for the 2022 Fulton County Hazard Mitigation Plan have remained unchanged for all participating jurisdictions since the 2016 plan.

Formal adoption and implementation of a federally approved hazard mitigation plan, or HMP, presents many benefits to Fulton County and its multiple jurisdictions. Most notably, by identifying problems and possible solutions in advance of a disaster, the planning area will be in a better position to obtain hazard mitigation funding from the Federal Emergency Management Agency (FEMA). This may include both pre- and post-disaster financial assistance.

This document aims to produce the following strategic outcomes:

- Reduce loss of life and decrease property losses due to the occurrence of natural disasters within the planning area
- Provide the framework and coordination to encourage government, and both public and private sector organizations at all levels, to undertake mitigation to minimize potential disasters and to employ mitigation strategies in the recovery following disasters

Specifically, these strategic outcomes will be brought about through the following planning process:

1) Identify, describe, and characterize the hazards to which Fulton County and its participating jurisdictions are susceptible
2) Assess the risk of each hazard, including probability, frequency, exposure, and vulnerability
3) Examine feasible mitigation opportunities appropriate for the identified hazards, and prioritize those opportunities
4) Implement mitigation actions to reduce loss of life and damage to property
5) Identify mitigation opportunities for long-term planning consideration

Glossary

AFCEMA – Atlanta-Fulton County Emergency Management Agency
ACS – American Community Survey
AJC – Atlanta Journal-Constitution
ARC – Atlanta Regional Commission
ASCE – American Society of Civil Engineers
BFE – Base Flood Elevation
CDC – Centers for Disease Control and Prevention
CFR – Code of Federal Regulations
CRS – Community Rating System
CUSEC – Central U.S. Earthquake Consortium
CWPP – Community Wildfire Protection Plan
DFIRM – Digital Flood Insurance Rate Map
DHS – Department of Homeland Security
EAP – Emergency Action Plan
EMS – Emergency Medical Services
EMA – Emergency Management Agency
EOC – Emergency Operations Center
EOP – Emergency Operations Plan
FEMA –Federal Emergency Management Agency
FIRM – Flood Insurance Rate Map
FIS – Flood Insurance Study
FMA – Flood Mitigation Assistance Grant Program
FP&S – Fire Prevention and Safety Grants
GEPD – Georgia Environmental Protection Division
GIS – Geographic Information System
GEMA – Georgia Emergency Management Agency
GMIS – Georgia Mitigation Information System
HMGP – Hazard Mitigation Grant Program
HMP – Hazard Mitigation Plan
LEPC – Local Emergency Planning Committee
LEOP – Local Emergency Operations Plan
MJHMP – Multijurisdictional Hazard Mitigation Plan
MPC – Mitigation Planning Committee
MOU – Memorandum of Understanding
NFHL – National Flood Hazard Layer
NFIP – National Flood Insurance Program
NFPA – National Fire Protection Association
NOAA – National Oceanic and Atmospheric Administration
NCEI – National Centers for Environmental Information
NWS – National Weather Service
PDM – Pre-Disaster Mitigation (Grant Program)
POC – Point of Contact
RFP – Request for Proposal
RL – Repetitive Loss
SFHA – Special Flood Hazard Area
SOP – Standard Operating Procedure
SRL – Severe Repetitive Loss
UASI – Urban Area Security Initiative
UDC – Unified Development Code
USACE – U.S. Army Corps of Engineers
USDA – U.S. Department of Agriculture
USGS – U.S. Geological Survey

Introduction to Mitigation

The Emergency Management Cycle & Mitigation

Understanding the emergency management cycle is the first step in effectively planning and operating in relation to all disaster-related activities. The emergency management cycle is an open-ended and ongoing process. The four phases in the process are mitigation, preparedness, response, and recovery. Each phase of the cycle can last for years, months, or only moments in duration, while different paths can exist simultaneously.

Mitigation planning is the process of determining how to reduce or eliminate loss of life and damage to property resulting from natural disasters. It is carried out as any sustained action to reduce or eliminate long-term risk to life and property from a hazard event. Mitigation encourages long-term reduction of hazard vulnerability. As is the goal of emergency management, so is the goal of mitigation to save lives and reduce property damage.

The Disaster Mitigation Act of 2000 (DMA 2000)

In the past, federal legislation has provided funding for disaster relief, recovery, and some hazard mitigation planning. The Disaster Mitigation Act of 2000 (DMA 2000) became law on October 30, 2000, amending the Robert T. Stafford Disaster Relief and Emergency Assistance Act (the "Stafford Act") (Public Law 93-288, as amended). Regulations for this activity can be found in Title 44 of the Code of Federal Regulations Part 206, Subpart M.

This legislation reinforces the importance of mitigation planning and emphasizes planning for disasters before they occur. This act establishes a pre-disaster hazard mitigation program and new requirements for the national post-disaster Hazard Mitigation Grant Program (HMGP).

Section 322 of the act specifically addresses mitigation planning at the state, local, and tribal levels. It identifies new requirements that allow HMGP funds to be used for mitigation planning activities and increases the amount of HMGP funds available to states that have developed a comprehensive, enhanced mitigation plan prior to a disaster. States and communities must have an approved mitigation plan in place prior to receiving post-disaster HMGP funds. Local and tribal mitigation plans must demonstrate that their proposed mitigation measures are based on a sound planning process that accounts for the risk to and the capabilities of the individual communities and identifiable gaps.

DMA 2000 is intended to facilitate cooperation between state and local authorities, prompting them to work together. It encourages and rewards local and state pre-disaster planning and promotes sustainability as a strategy for disaster resistance. This enhanced planning network will better enable local and state governments to articulate accurate needs for mitigation, resulting in faster allocation of funding and more effective risk reduction projects. To implement the new DMA 2000 requirements, FEMA prepared an interim final rule, published in the Federal Register on February 26, 2002, at 44 CFR Parts 201 and 206, which establishes planning and funding criteria for states and local communities.

On October 31, 2007, FEMA subsequently published an Interim Rule in the Federal Register, which ensures the Flood Mitigation Assistance (FMA) program planning requirements are consistent with the mitigation planning regulations as cited in the Code of Federal Regulations (CFR) at Title 44, Chapter 1, Part 201 (44CFR Part 201).

This interim rule established that local communities must comply with mitigation planning requirements to be eligible to apply for FEMA mitigation project grant funding, including FMA and FEMA's Severe

Repetitive Loss (SRL) Program. Meeting the requirements of the regulations cited above ensures participating jurisdictions within the planning area will be eligible to receive disaster assistance, including hazard mitigation grants available through the Robert T. Stafford Disaster Relief and Emergency Assistance Act, P.L. 93-288, as amended.

Fulton County has the responsibility to coordinate activities relating to hazard evaluation and mitigation, and to prepare and submit to FEMA a local hazard mitigation plan, following the criteria established in 44 CFR 201.6 and Section 322 of the DMA 2000 (Public Law 106- 390).

Section 1: Planning Process

Planning Process
- Plan Development
- Stakeholder Participation
- Community Involvement

Local Procedures & Resources

Planning Area

Hazard Risk Assessment

Mitigation Strategy

1.1 – Plan Introduction

This update to the 2016 Fulton County Multijurisdictional Hazard Mitigation Plan (HMP) comprises 16 jurisdictions: one county and 15 cities. These include Fulton County, GA, and the cities of Alpharetta, Atlanta, Chattahoochee Hills, College Park, East Point, Fairburn, Hapeville, Johns Creek, Milton, Mountain Park, Palmetto, Roswell, Sandy Springs, South Fulton, and Union City. Since the last plan update the City of South Fulton became incorporated on May 1, 2017, as a new jurisdiction in Fulton County. With this new addition, South Fulton will include mitigation projects and strategies in this plan update.

Each jurisdiction, as documented within the plan update, actively participated in the planning process from its inception. Accordingly, each jurisdiction provided at least one representative to offer a locality-specific perspective.

Members of the Mitigation Planning Committee, or MPC, actively participated in meetings, as well as solicited input from elected officials, municipal leaders, and community members, to ensure that all jurisdictional information was reflected in the plan.

If a committee member could not attend a meeting, they were contacted by phone to receive all documentation from the meeting. The phone call(s) consisted of a brief overview of the meeting along with time for the planning committee member to offer his/her suggestions or comments. A detailed description of the planning process, including a list of contributions from each jurisdiction, is provided in Section 1.2.2 – Jurisdictions. A complete list of planning committee participation can be found in Section 1.3 – Stakeholder Participation.

1.2 – Plan Development

1.2.1 – Plan Drafting Stage

Fulton County's plan revision process began on November 15, 2018, when AFCEMA applied for a Hazard Mitigation Grant Program (HMGP) grant under FEMA Project HMGP 4338-0041. The County was awarded the grant to begin the process of updating its previously FEMA-approved mitigation plan on December 4, 2019. Following the funding commitments, Fulton County hired Tennessee-based BOLDplanning to facilitate the plan's development.

After a delayed start due to the County's response to the global pandemic, the Fulton County mitigation planning process was initiated on August 26, 2021, when BOLDplanning hosted a stakeholder kick-off planning meeting. Due to the COVID-19 pandemic, this event was held virtually rather than in person, safely allowing the public and plan stakeholders to provide feedback from remote locations. During this meeting, an initial Mitigation Planning Committee (MPC), comprised of representatives from each participating jurisdiction, was organized. The MPC was instructed to solicit interested persons from their communities to also participate on the committee. All participating jurisdictions actively took part in the planning process.

Numerous primary planning events, i.e., meetings and activities, involving the MPC, the public, and other stakeholders, were conducted during the mitigation planning process. All meetings and activities were held virtually rather than in-person given the ongoing COVID-19 pandemic.

Additional planning events included meetings with representation from the other participating jurisdictions as well as the public. Planning events also included conference phone calls with municipal and agency officials who could not attend scheduled meetings. Further, there were monthly situation report (SitRep) calls with AFCEMA to provide updates along the phases of plan development. These SitRep calls were held at the beginning of each month and were facilitated by BOLDplanning via web conferencing.

Throughout the planning process, the public was given multiple opportunities to review the plan's progress, ask questions, and provide input on hazards. They were also invited to provide feedback on mitigation project prioritization, hazard identification, and hazard ranking. Further, BOLDplanning launched two online Hazard Mitigation Plan (HMP) surveys specifically created for the planning area.

The first survey, the Fulton County, GA Hazard Mitigation Plan Survey, allowed for MPC members, plan stakeholders, and the public to provide input to hazards and potential hazard mitigation projects that are ongoing for the County. The second survey, the Fulton County, GA Hazard Mitigation Plan – Open Comment Survey, allowed all MPC members, plan stakeholders, and the public to provide feedback and input on the MJHMP update prior to its submission to the Georgia Emergency Management Agency (GEMA) and FEMA. Details and documentation pertaining to the participation of the MPC, and the public can be found in Appendix D – Public Participation.

Planning Process Summary

1) Each participating jurisdiction appointed a jurisdictional representative to serve on the MPC along with AFCEMA, other plan stakeholders, and BOLDplanning.
2) AFCEMA and BOLDplanning provided staff support to facilitate the planning process and prepare the plan.
3) Meetings were held with MPC members to understand and agree on planning processes and steps required. This included organizing resources, assessing hazards, developing a mitigation plan, implementing the plan, and monitoring progress.

AFCEMA and BOLDplanning held subsequent discussions about the planning process with GEMA staff.

1.2.2 – What's New in this Plan Update?

Much like the process for updating Fulton County's MJHMPs in the past, this plan update involved a comprehensive review of the previous plan (in this case, 2016) and performing a gap analysis, a specific process for evaluating each plan section and determining which portions require updating. As part of the gap analysis, each section was reviewed in detail to identify all areas requiring re-evaluation and subsequent data needs.

As part of the 2022 plan update, certain elements of the previous MJHMP have been retained, while outdated information has been either updated or removed. For the current version, there is a particular focus on updating the risk assessment, providing status for mitigation actions listed in the 2016 plan, identifying new mitigation actions, and describing meetings and presentations held as part of the plan update.

What's New? Section 3 – Planning Area

New Jurisdiction –City of South Fulton: Since the last plan update in 2016, the City of South Fulton became incorporated (May 1, 2017) as a new jurisdiction in Fulton County. With this new addition, the City of South Fulton will include mitigation projects and strategies in this plan update. No previously identified mitigation projects and strategies for Unincorporated Fulton County will carry forward in the 2022 plan update.

Critical Facilities Summary: The Fulton County MPC thoroughly assessed the list of critical facilities that was uploaded to the Georgia Mitigation Information System (MIS) and used for the previous plan update

(https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex). This list was referenced throughout this plan update and provided a basis for the vulnerability assessments and loss estimates. AFCEMA staff updated this critical facilities list to produce updated GIS maps located within the County for this plan update. The complete list is available in Appendix C – Critical Facilities & Infrastructure.

What's New? Section 4 – Hazard Risk Assessment

The Fulton County MPC assessed the hazards addressed in the County's 2016 MJHMP and the State of Georgia 2019 Hazard Mitigation Strategy, Standard and Enhanced Plan, and a final decision was made as to which hazards should be analyzed for the 2020 plan update. A comparison of the hazards, along with the reasoning for the final decision to include/exclude in this plan update is shown in the proceeding table.

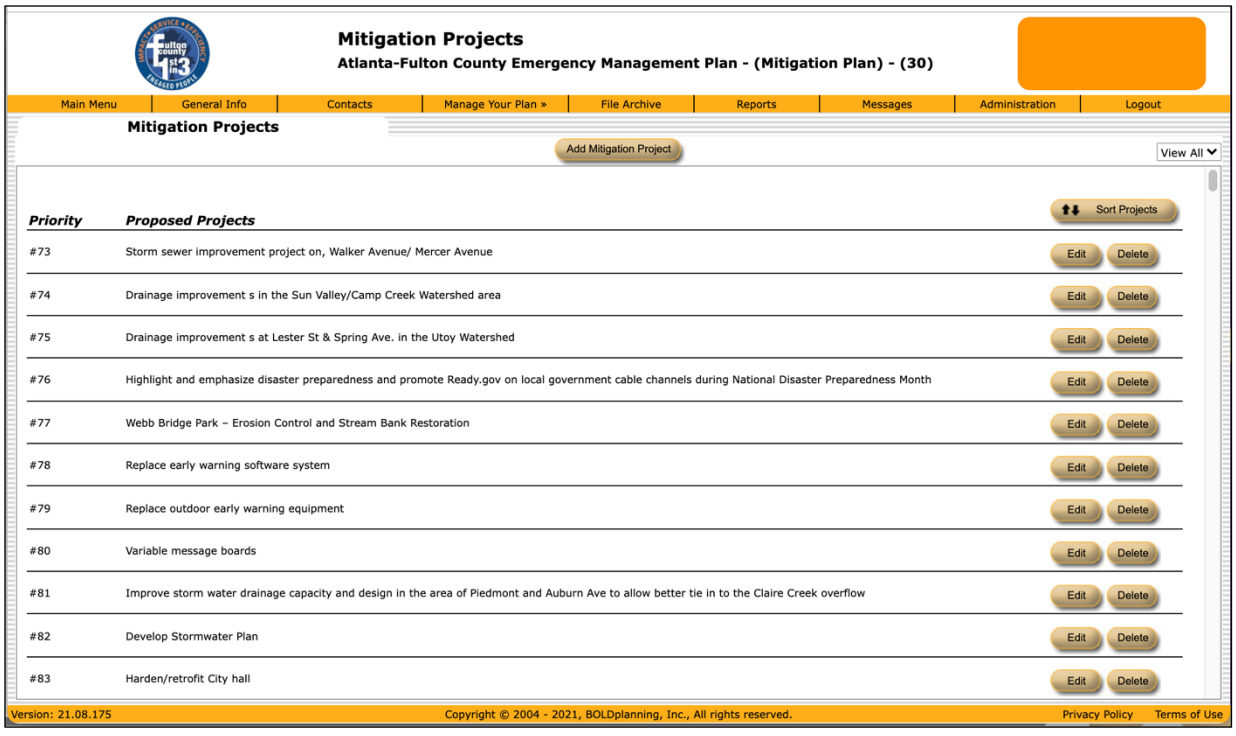
Table 1: Summary of Hazards for 2022 Update, Fulton County MJHMP

Summary of Hazards for 2022 Update, Fulton County MJHMP			
Hazards	**2016 Fulton County MJHMP Hazards**	**2019 Georgia Hazard Mitigation Strategy Standard and Enhanced Plan**	**Final Decision – Include/Exclude in 2022 MJHMP Update**
Natural Hazards			
Coastal Hazards	Excluded	Included	Excluded – No Reasonable Risk
Drought	Included	Included	Included – Disaster History
Earthquake	Included	Included	Included – Disaster History
Extreme Heat	Included	Included	Included – Disaster History
Inland Flooding	Included as Flood	Included	Included as Flood – Disaster History
Geological Hazards (including Landslide and Sinkhole)	Included	Included	Included – Disaster History
Hurricane Wind	Included as Tropical Systems	Included	Included as Tropical Systems – Disaster History
Severe Weather	Included	Included	Included as Severe Weather (including Thunderstorm Wind, Lightning, and Hail)
Severe Winter Weather	Included	Included	Included as Severe Winter Weather (including Cold Wave/Extreme Cold, Ice Storm, Heavy Snow, and Winter Storm)
Tornado	Included	Included	Included – Disaster History
Wildfire	Included	Included	Included as Wildfire/Wildland Urban Interface Fire – Disaster History
Wind	Included as Severe Weather	Included	Included as Severe Weather – Disaster History
Human-caused Hazards			
Dam Failure	Included	Included	Included – Disaster History

What's New? Section 5 – Mitigation Strategy

The 2016 Fulton County MJHMP included a risk assessment of identified hazards for the County and all participating municipalities, along with a mitigation strategy to address the hazards' risk and vulnerability. Accordingly, an open discussion took place with the MPC during the planning phase to determine the current mitigation action/priorities to include in this plan update. Among them, and considered a key part of the planning process, AFCEMA solicited information and feedback from the County's participating jurisdictions and stakeholders to help identify mitigation activities/goals/projects for plan inclusion. Typically, mitigation activities/goals/projects focus on strengthening infrastructure and facilities. Input regarding the activities/goals/projects related to the mitigation strategy provided AFCEMA greater knowledge about each jurisdictions' needs, facilities, and infrastructure. A Mitigation Strategy Update Meeting facilitated by AFCEMA and BOLDplanning provided Fulton County's jurisdictions with information on how to offer valuable insight related to the hazards within Fulton County. The Fulton County mitigation planning points of contact (POCs) learned how BOLDplanning would assist them in providing input to update the mitigation projects from the previous plan as well as how and when to offer any new/proposed projects to include in the current HMP update.

Following this meeting, representatives from BOLDplanning worked with AFCEMA and the County's municipalities to provide updates relevant to previously identified mitigation projects (2016), including the current status (completed, deferred, or carryover). The MPC was also tasked with identifying any new mitigation projects for the 2022 plan update and entering them into the BOLDplanning.com platform created specifically for Fulton County, **fultoncounty.boldplanning.com**. During the planning process, Fulton County was able to update the online system with its mitigation projects from the 2016 plan update along with the new/proposed projects for the next five-year plan cycle (2022-2027).



The list of mitigation projects and actions selected for this plan update is based upon the potential to reduce risk to life and property with an emphasis on new and existing infrastructure, ease of implementation, community and agency support, consistency with local jurisdictions' plans and capabilities, available funding, vulnerability, and total risk.

As with previous updates to its hazard mitigation plan, the planning area will continue to take a multi-jurisdictional approach to mitigation planning where the goals and objectives will be synchronized to facilitate a more thorough and standardized approach to mitigation planning. This plan update includes multiple carryover projects from the 2016 Fulton County MJHMP as they are still relevant, in progress, or ongoing. Also, the hazards, mitigation goals, objectives, and measures that were developed jointly between Fulton County and the cities of Alpharetta, Atlanta, Chattahoochee Hills, College Park, East Point, Fairburn, Hapeville, Johns Creek, Milton, Mountain Park, Palmetto, Roswell, Sandy Springs, and Union City, in 2016, have been carried over to this plan update due to being deferred because of a lack of funding and/or resources to complete the mitigation projects/actions during the last five-year cycle. All priorities were reassessed using STAPLE+E for this plan update to ensure that the projects reflect current priorities. More details on these projects can be found in Section 5 – Mitigation Strategy.

***Note**: Since the last plan update, the City of South Fulton became incorporated (May 1, 2017) as a new jurisdiction in Fulton County. With this new addition, South Fulton will include mitigation projects and strategies in this plan update.*

What's New? Section 5.5 – Planning Integration

Mitigation does not end at plan approval; plan approval is only the beginning. The successful implementation of any number of mitigation activities and projects requires the coordination and collaboration of local agencies, departments, and organizations. Each group has varying decision-making processes and authorities governing their actions. This plan, once approved, must be integrated into their decision-making processes as a tool for improving their respective resiliencies.

Fulton County intends to incorporate its 2022 MJHMP into other planning documents that the County and its participating jurisdictions utilize. Where applicable, portions of the previous MJHMP were considered for incorporation into other local plans and programs. This includes some form of incorporation into the Fulton County Comprehensive Plan 2016-2035 (October 2016), which focuses on land use and community development, and is required of all local governments by the Georgia Department of Community Affairs (DCA). The 2022 Fulton County MJHMP will also be incorporated into the comprehensive plans of all participating jurisdictions.

Portions of the 2022 Fulton County MJHMP may also be integrated into the Fulton County Local Emergency Operations Plan (LEOP), emergency plans for all participating jurisdictions, and other existing or future public safety-related plans. This plan is not only useful for implementing mitigation activities and projects but also critical in creating development plans and capital improvement projects. The risk assessment in this plan can prevent unmanaged and dangerous development in identified hazard areas or other portions of the planning area that decrease a community's overall resiliency.

1.2.3 – Jurisdictions

The following table lists the participating jurisdictions of Fulton County and their lead representative contact(s) during the MJHMP update's development, along with their MPC contributions by plan development phase.

Table 2: Jurisdictional Contribution by Planning Phase

Jurisdictional Contribution by Planning Phase				
Jurisdiction and Representative	**Planning Process**	**Risk Assessment**	**Mitigation Strategy**	**Plan Maintenance**
Fulton County Cat Hofmann, Atlanta-Fulton County Emergency Management Agency, Division Chief	• Participated in the MPC • Provided information on critical facilities, hazards, POCs • POC and jurisdiction lead for the MPC	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Provided mitigation projects and actions history • Proposed mitigation projects • Prioritized mitigation projects using STAPLE+E approach	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance
Fulton County Matthew Kallmyer, Atlanta-Fulton County Emergency Management Agency, Director	• Lead the Mitigation Planning Committee (MPC) • Provided information on critical facilities, hazards, Points of Contact (POCs) • Served as primary POC and jurisdiction co-lead for the MPC	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	Provided mitigation projects and actions history • Proposed mitigation projects • Prioritized mitigation projects using STAPLE+E approach	• Will lead in the MPC as prescribed in Section 2 – Plan Maintenance
Fulton County Destiny Ruffin, Atlanta-Fulton County Emergency Management Agency, Lieutenant	• Co-Lead the Mitigation Planning Committee (MPC) • Provides overall coordination, as well as administrative support for the Mitigation Planning Committee (MPC) • Provided information on critical facilities, hazards, Points of Contact (POCs) • Served as secondary POC and jurisdiction co- lead for the MPC	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Provided mitigation projects and actions history • Proposed mitigation projects	• Will co-lead in the MPC as prescribed in Section 2 – Plan Maintenance

Jurisdictional Contribution by Planning Phase				
Jurisdiction and Representative	**Planning Process**	**Risk Assessment**	**Mitigation Strategy**	**Plan Maintenance**
City of Alpharetta Jim Gilvin, City of Alpharetta, Mayor	• Participated in the MPC • Provided information on critical facilities, hazards, POCs • POC and jurisdiction lead for the MPC	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Proposed mitigation projects • Prioritized mitigation projects using STAPLE+E approach	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance
City of Atlanta Andre Dickens, City of Atlanta, Mayor	• Participated in the MPC • Provided information on critical facilities, hazards, POCs • POC and jurisdiction lead for the MPC	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Proposed mitigation projects • Prioritized mitigation projects using STAPLE+E approach	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance
City of Chattahoochee Hills Tom Reed, City of Chattahoochee Hills, Mayor	• Participated in the MPC • Provided information on critical facilities, hazards, POCs • POC and jurisdiction lead for the MPC	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Proposed mitigation projects • Prioritized mitigation projects using STAPLE+E approach	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance
City of College Park Bianca Motley Broom City of College Park, Mayor	• Participated in the MPC • Provided information on critical facilities, hazards, POCs • POC and jurisdiction lead for the MPC	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Proposed mitigation projects • Prioritized mitigation projects using STAPLE+E approach	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance
City of East Point Deana Holiday Ingraham, City of East Point, Mayor	• Participated in the MPC • Provided information on critical facilities, hazards, POCs • POC and jurisdiction lead for the MPC	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Proposed mitigation projects • Prioritized mitigation projects using STAPLE+E approach	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance
City of Fairburn Mario Averyt, City of Fairburn, Mayor	• Participated in the MPC • Provided information on critical facilities, hazards, POCs • POC and jurisdiction lead for the MPC	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Proposed mitigation projects • Prioritized mitigation projects using STAPLE+E approach	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance

Jurisdictional Contribution by Planning Phase				
Jurisdiction and Representative	**Planning Process**	**Risk Assessment**	**Mitigation Strategy**	**Plan Maintenance**
City of Hapeville Alan Hallman, City of Hapeville, Mayor	• Participated in the MPC • Provided information on critical facilities, hazards, POCs • POC and lead jurisdiction for the MPC	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Provided mitigation projects and actions history • Proposed mitigation projects • Prioritized mitigation projects using STAPLE+E approach	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance
City of Johns Creek John Bradberry, City of Johns Creek, Mayor	• Participated in the MPC • Provided information on critical facilities, hazards, POCs • POC and lead jurisdiction for the MPC	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Provided mitigation projects and actions history • Proposed mitigation projects • Prioritized mitigation projects using STAPLE+E approach	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance
City of Milton Peyton Jamison, City of Milton, Mayor	• Participated in the MPC • Provided information on critical facilities, hazards, POCs • POC and jurisdiction lead for the MPC	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Proposed mitigation projects • Prioritized mitigation projects using STAPLE+E approach	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance
City of Mountain Park Jim Still, City of Mountain Park, Mayor	• Participated in the MPC • Provided information on critical facilities, hazards, POCs • POC and jurisdiction lead for the MPC	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Proposed mitigation projects • Prioritized mitigation projects using STAPLE+E approach	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance
City of Palmetto J. Clark Boddie, City of Palmetto, Mayor	• Participated in the MPC • Provided information on critical facilities, hazards, POCs • POC and jurisdiction lead for the MPC	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Proposed mitigation projects • Prioritized mitigation projects using STAPLE+E approach	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance
City of Roswell Kurt Wilson, City of Roswell, Mayor	• Participated in the MPC • Provided information on critical facilities, hazards, POCs • POC and jurisdiction lead for the MPC	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Proposed mitigation projects • Prioritized mitigation projects using STAPLE+E approach	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance

Jurisdictional Contribution by Planning Phase				
Jurisdiction and Representative	**Planning Process**	**Risk Assessment**	**Mitigation Strategy**	**Plan Maintenance**
City of Sandy Springs Russell "Rusty" Paul, City of Sandy Springs, Mayor	• Participated in the MPC • Provided information on critical facilities, hazards, POCs • POC and jurisdiction lead for the MPC	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Proposed mitigation projects • Prioritized mitigation projects using STAPLE+E approach	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance
City of South Fulton Khalid Kamau, City of South Fulton, Mayor	• Participated in the MPC • Provided information on critical facilities, hazards, POCs • POC and jurisdiction lead for the MPC	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Proposed mitigation projects • Prioritized mitigation projects using STAPLE+E approach	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance
City of Union City Vince R. Williams, City of Union City, Mayor	• Participated in the MPC • Provided information on critical facilities, hazards, POCs • POC and lead jurisdiction for the MPC	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Provided mitigation projects and actions history • Proposed mitigation projects • Prioritized mitigation projects using STAPLE+E approach	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance

The following table details the stakeholders and MPC members who participated in the hazard mitigation planning process. This list contains all relevant local and state agencies involved in hazard mitigation activities, agencies that have the authority to regulate development, and any appropriate neighboring communities.

Table 3: Plan Stakeholders & MPC Members

Plan Stakeholders & MPC Members			
Name	**Organization**	**Position**	**Collaboration/Invitation**
Principal Plan Developers			
Stu Miller	BOLDplanning	CEO	Executive management
Will Minkoff	BOLDplanning	Project Support	Provided additional support and input; coordinated kick-off meeting
James Woulfe	BOLDplanning	Plan Reviewer	Project Manager; Provided final plan review prior to GEMA and FEMA submissions
Emily Long	BOLDplanning	Mitigation Project Lead	Project lead and mitigation specialist
Linda Young	BOLDplanning	Plan Reviewer, Plan Editor	Plan reviewer and editor
Tanya Scott	BOLDplanning	Project Support	Provided additional support and input; coordinated kick-off meeting
Michael Amberson	BOLDplanning	Project Support	Provided additional support and input; coordinated kick-off meeting
Local Governments			
Matthew Kallmyer	Atlanta-Fulton County Emergency Management Agency (ACEMA)	Director/Chief	Mitigation Planning Committee Chair, represented jurisdiction, and provided additional support and input
Destiny Ruffin	Atlanta-Fulton County Emergency Management Agency (ACEMA)	Lieutenant/Project Coordinator	Mitigation Planning Committee – Administrative Support, represented jurisdiction, and provided additional support and input
Cat Hofmann	Atlanta-Fulton County Emergency Management Agency (ACEMA)	Division Chief	Represented jurisdiction; provided additional support and input
Stephanie Yancey	Fulton County Department of Information Technology/GIS	Geospatial Project manager	Represented jurisdiction; provided GIS support and input
Andy Wheeler	City of Alpharetta Fire & Rescue	Captain/Emergency Management Coordinator	Represented jurisdiction; Provided additional support and input
Asher Morris	City of Atlanta Mayor's Office of Emergency Preparedness	Emergency Preparedness Manager	Represented jurisdiction; Provided additional support and input

Plan Stakeholders & MPC Members			
Name	**Organization**	**Position**	**Collaboration/Invitation**
Greg Brett	City of Chattahoochee Hills Fire & Emergency Medical Services	Chief/Emergency Management Coordinator	Represented jurisdiction; Provided additional support and input
Andrea Smalls	City of College Park Fire Rescue	Emergency Management Coordinator	Represented jurisdiction; Provided additional support and input
Charles Kendrick	City of East Point Fire &. Rescue	Deputy Chief of Operations/Emergency Management Coordinator	Represented jurisdiction; Provided additional support and input
Miguel Ribot	City of Fairburn Fire & Rescue	Fire Captain	Represented jurisdiction; Provided additional support and input
David Bloodworth	City of Hapeville Fire & Rescue	Fire Chief/ Emergency Management Coordinator	Represented jurisdiction; Provided additional support and input
Chris Coons	City of Johns Creek Fire & Rescue	Fire Chief/ Emergency Management Coordinator	Represented jurisdiction; Provided additional support and input
Matthew Marietta	City of Milton Fire & Rescue	Deputy Fire Chief/Emergency Management Coordinator	Represented jurisdiction; Provided additional support and input
James Dame	City of Mountain Park Fire & Rescue	Fire Chief/Emergency Management Coordinator	Represented jurisdiction; Provided additional support and input
Henry Argo	City of Palmetto Fire & Rescue	Fire Chief/Emergency Management Coordinator	Represented jurisdiction; Provided additional support and input
Tony Papoutsis	City of Roswell Fire & Rescue	Deputy Fire Chief/Emergency Management Coordinator	Represented jurisdiction; Provided additional support and input
Imani White	City of Sandy Springs Fire & Rescue	Executive Officer of Emergency Preparedness/Emergency Management Coordinator	Represented jurisdiction; Provided additional support and input
Sterling Jones	City of South Fulton Fire & Rescue	Deputy Fire Chief/Emergency Management Coordinator	Represented jurisdiction; Provided additional support and input
Jeff Collins	Union City Fire & Rescue	Assistance Fire Chief	Represented jurisdiction; Provided additional support and input
State and Federal Agencies			
Lucy Herring	Georgia Emergency Management/Homeland Security (GEMA)	Hazard Mitigation Planning Specialist	Represented agency; Provided additional support and input

1.2.4 – Major Mitigation Planning Meetings & Activities

The Fulton County MPC held several meetings to discuss the mitigation planning process as well as to gain public support and input for the plan update. The MPC also initiated the Public Review Period and Formal Plan Adoption(s). Following is a brief synopsis of those meetings and activities. Proof of meetings, sign-in sheets, and public notification documentation can be found in Appendix B – Public Participation.

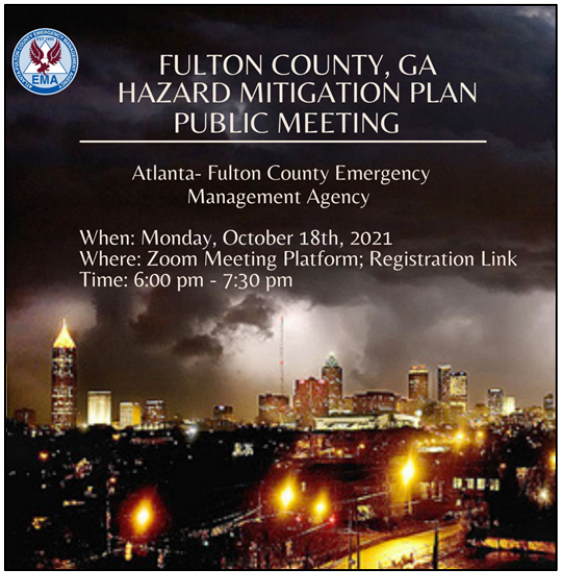
Hazard Mitigation Plan Update Stakeholder Kick-Off and Information Gathering Virtual Meeting – August 26, 2021

Plan developer, BOLDplanning, hosted this meeting for AFCEMA, all participating jurisdictions, and other plan stakeholders. Due to the ongoing COVID-19 pandemic, the meeting was held virtually via web conferencing rather than in person. This allowed everyone to safely participate and provide feedback from remote locations. Prior to the meeting, email announcements were sent to stakeholders representing various county departments and participating jurisdictions over a two-week period. Forty (40) stakeholder attendees participated in the meeting, and the Fulton County Mitigation Planning Committee, or MPC, was formed. The MPC reviewed the planning process, asked questions, and took on any/all assigned roles. BOLDplanning worked with the MPC to collect contact information as well as details specific to hazard history, critical facilities, etc. Documentation specific to this meeting is in Appendix B – Public Participation.

Hazard Mitigation Plan – Mitigation Strategy Update Virtual Meeting – October 13, 2021

AFCEMA hosted this meeting for the Fulton County MPC and plan stakeholders to help them learn how to represent the jurisdictions in the planning process, i.e., provide valuable insight related to hazards within the County. Due to continued COVID-19 concerns, AFCEMA and BOLDplanning facilitated this meeting virtually via web conferencing. Eleven (11) stakeholder attendees participated. No members of the public were invited due to plan stakeholders gathering information to update the status of mitigation projects from the previous plan (2016). Meeting participants learned about the process for updating these projects and were encouraged to ask questions and/or express concerns. Documentation pertaining to this meeting is in Appendix B – Public Participation.

Hazard Mitigation Plan Public Meeting – October 18, 2021



Like previous meetings, the Hazard Mitigation Plan Public Meeting was held virtually via web conferencing due to COVID-19 concerns. Its purpose was to gather all-important, hazard-related information from the community-at-large. The meeting was publicized through various communications outlets, including AFCEMA's website and the County's social media accounts. Fourteen (14) stakeholder attendees participated in the meeting; five of whom were from the public. Documentation pertaining to this meeting is in Appendix B – Public Participation.

Hazard Mitigation Plan Update Public Review Period – May 2, 2022 – May 16, 2022

During this time, AFCEMA and Fulton County's MPC invited the public to review a draft copy of the 2022 MJHMP prior to its submission to GEMA. Due to the COVID-19 pandemic, and government reopening/COVID-19 Safe Practices for Fulton County and its participating jurisdictions, the Public Review Period of the plan draft was also held virtually. MPC members and the public were encouraged to review a draft copy of the Fulton County MJHMP posted to AFCEMA's website (https://www.fultoncountyga.gov/inside-fulton-county/fulton-county-

departments/atlanta-fulton-emergency-management-agency/h‹azard-mitigation) before asking questions or voicing concerns. The MPC, stakeholders, and the public provided feedback and input on the plan draft by completing a feedback questionnaire. Documentation pertaining to the Public Review Period is in Appendix B – Public Participation.

Hazard Mitigation Plan Update Final Review Meeting – Weekly Meeting

AFCEMA and BOLDplanning also conducted weekly meetings via web conferencing, which provided the MPC and plan stakeholders a final opportunity to review the 2022 Fulton County MJHMP prior to GEMA submission. AFCEMA emailed the MPC and plan stakeholders in advance of the meeting, requesting final comments (via email) for consideration.

Hazard Mitigation Plan Update Adoption Signing – (Date TBD)

The 2022 Fulton County MJHMP adoption letters will be disseminated and signed by the participating jurisdictions. The signing of these resolutions codifies the adoption of the plan update by the participating jurisdictions.

1.3 – Stakeholder Participation

Fulton County's MPC is made up of different stakeholders working together for the development and ongoing maintenance of this plan update. The participants are grouped into actively participating representatives from the participating jurisdictions within Fulton County.

- **Mitigation Planning Committee (MPC)** – This group consists of the jurisdictional representatives from the planning area, AFCEMA, GEMA, supporting state and federal agencies, and BOLDplanning.
- **Other Stakeholders** – This group consists of interested parties from the local community. The 2022 Fulton County MJHMP was developed with the support and input from various commercial, educational, environmental, and other interests.
- **Members from the public-at-large** – FEMA requires this planning effort to be open to constant input from interested citizens in compliance with the Sunshine Laws. In Georgia, public meetings must comply with the State's Open Meetings Act, unless established by statutory exemption. Therefore, any individual citizen who wishes to be involved in this effort to mitigate future disasters is encouraged to attend the MPC meetings and to solicit relevant comments to be included in the draft sections of the written plan.

1.4 – Community Involvement

The Fulton County MPC provided numerous opportunities for community involvement in the hazard mitigation planning process. This included businesses, schools/colleges, non-profits, and other interested parties both in and outside the County. The public was notified of open meetings via Fulton County's website and approved social media outlets for two weeks prior to each meeting. For documentation, see Appendix B – Public Participation.

Local and regional agencies and the representatives of participating jurisdictions, including mayors, public officials, planning, building, and zoning representatives, GIS personnel, and the fire department(s), were notified of MPC meetings via email and phone. Emergency managers from neighboring Georgia counties, including Cobb, DeKalb, Douglas, Gwinnett, and others, were personally invited to attend the kick-off and public meeting.

Relevant federal, regional, state, and local governments, among others, were invited to provide input and technical expertise. The entities who volunteered, either in person, remotely, or by providing hazard data, are listed in the following table.

Table 4: Partner Involvement by Entity

Partner Involvement by Entity		
Entry Classification	**Entity**	**Entity Input**
Federal Agencies	Environmental Protection Agency (EPA), National Parks, National Oceanic and Atmospheric Administration/ National Centers for Environmental Information (NOAA/NCEI), American Society of Civil Engineers (ASCE), Army Corp of Engineers, United States Department of Agriculture (USDA), FEMA, Natural Resources Conservation Service (NRCS), National Inventory of Dams, United States Geological Survey (USGS), National Weather Service (NWS), U.S. Census Bureau	Provided census data, weather data, dam data, land use data, and geological data
State Agencies	GEMA, Georgia Bureau of Investigation (GBI), Georgia Department of Transportation (GDOT), Georgia Environmental Protection Division, Georgia Forestry Commission, State Courts	Provided oversight and technical assistance; provided hazard records; provided hazard data
Local Governments	AFCEMA; Fulton County Information Technology GIS department, Participating Municipalities (Cities of Alpharetta, Atlanta, Chattahoochee Hills, College Park, East Point, Fairburn Hapeville, Johns Creek, Milton, Mountain Park, Palmetto, Roswell, Sandy Springs, South Fulton, and Union City), Fulton County Schools, Atlanta Public Schools, Fulton County Water System, FultonCommute.org	Provided input as MPC members / principal subjects; Provided input – GIS maps; Provided input – public school map; provided input from various interests
Private Organizations	BOLDplanning, Fulton County-Marietta Water Authority; Metropolitan North Georgia Water Planning District; Central United States Earthquake Consortium	Directed planning effort as principal planners; provided input from various interests; provided hazard data
Academia	University of Georgia Information Technology Outreach Services (ITOS)	Provided input – Hazus report

Section 2: Local Procedures & Resources

Planning Process
Local Procedures & Resources
• Available Resources
• Continued Public Involvement
• Plan Maintenance Process
Planning Area
Hazard Risk Assessment
Mitigation Strategy

2.1 – Available Resources

2.1.1 – Documentation Resources

The Fulton County MPC conducted a comprehensive review of the planning area, i.e., Fulton County and the cities of Alpharetta, Atlanta, Chattahoochee Hills, College Park, East Point, Fairburn, Hapeville, Johns Creek, Milton, Mountain Park, Palmetto, Roswell, Sandy Springs, South Fulton, and Union City, to determine the availability of existing emergency management and preparedness information. Following is a synopsis of the MPC's findings.

2016 Fulton County Multijurisdictional Hazard Mitigation Plan

https://www.fultoncountyga.gov/inside-fulton-county/fulton-county-departments/atlanta-fulton-emergency-management-agency/hazard-mitigation

Fulton County's FEMA-approved 2016 MJHMP served as the foundation for this plan update. Its contents were thoroughly reviewed and, where applicable, incorporated into the 2022 MJHMP.

Fulton County Critical Facilities List

https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex

The Fulton County MPC assessed the list of critical facilities uploaded to the Georgia Mitigation Information System (MIS) for the 2016 MJHMP update. This list was also used as the basis for the vulnerability assessments and loss estimates for the 2022 MJHMP update. AFCEMA staff updated this critical facilities list to produce updated GIS maps located within the County for this plan update. The complete list is available in Appendix C – Critical Facilities & Infrastructure.

Georgia Hazard Mitigation Strategy, Standard and Enhanced Plan, March 18, 2019 – March 17, 2024

https://gema.georgia.gov/hazard-mitigation-planning

The Georgia Hazard Mitigation Strategy (GHMS) is a result of the State's continued efforts to reduce its exposure to losses from natural hazards and to maintain eligibility for the full range of disaster assistance available under the Robert T. Stafford Disaster Relief and Emergency Assistance Act as amended by the Disaster Mitigation Act of 2000 (DMA 2000). The Enhanced State Mitigation Plan documents the State's commitment to the objectives of hazard mitigation. This designation recognizes Georgia as a proactive leader in implementing a comprehensive statewide program. The enhanced status acknowledges the extra effort the State has made to reduce losses, protect resources, and create safer communities.

Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (2020)

In 2020, GEMA partnered with the Carl Vinson Institute of Government at the University of Georgia to develop a detailed risk assessment focused on defining hurricane, riverine flood, and tornado risks in Fulton County. This assessment identifies the characteristics and potential consequences of the disaster, how much of the community could be affected by the disaster, and the impact on community assets. See Appendix E – Hazard Risk Analyses Supplement to Fulton County Joint Hazard Mitigation Plan for more information.

2035 Fulton County Comprehensive Plan (2016-2035), 2019 Update

https://www.fultoncountyga.gov/inside-fulton-county/fulton-county-departments/public-works/planning-zoning-and-permitting/2035-comp-plan

Adopted on October 5, 2016, and updated by Fulton County Community Development in 2019, the 2035 Fulton County Comprehensive Plan addresses the County's vision, policies, and goals out to 2035.

City of Alpharetta Comprehensive Plan – Horizon 2040

https://www.alpharetta.ga.us/docs/default-source/publications/comprehensive-plan/alpharetta-comprehensive-plan-2040.pdf?sfvrsn=7492ccab_8

The City of Alpharetta Comprehensive Plan – Horizon 2040 was formally adopted on October 25, 2021. It includes a Community Involvement Plan, Existing Conditions Analysis, and Plan Elements. The plan focuses on traffic congestion and walkability as well as housing, office and retail vacancies, growth management, sense of place/placemaking, open space, and broadband services.

City of Atlanta Comprehensive Plan – Plan A: Atlanta's 2021 Comprehensive Development Plan

https://www.atlcitydesign.com/2021-cdp

The City of Atlanta Comprehensive Plan was adopted on October 28, 2021. It includes planning elements related to land use planning, transportation, housing and community development, local economic development, broadband internet, natural systems and resiliency, urban design, historic preservation, public safety facilities, and neighborhood planning.

City of Chattahoochee Hills Comprehensive Plan Update 2021

https://www.dca.ga.gov/sites/default/files/chattahoocheehillscomprehensiveplanupdate20211217_adopted.pdf

The City of Chattahoochee Hills Comprehensive Plan Update was adopted on November 9, 2021. The plan builds an intentional vision to remain rural and calls for promoting a village and hamlet pattern of development to preserve open space while accommodating anticipated growth. It also focuses on broadband service, future development strategies, transportation, and historic preservation.

City of College Park Comprehensive Plan 2021

https://p1cdn4static.civiclive.com/UserFiles/Servers/Server_11492833/File/City%20of%20College%20Park%202021%20Comprehensive%20Plan%20Update%20DRAFT%207.16.21.pdf

The City of College Park Comprehensive Plan outlines the community's strategies for economic, equity, transportation, cultural, and environmental growth and sustainment for a 20-year period. Goals include business district unification, safe transportation infrastructure, investments in arts and culture, and enhancements to environmental and public health, among others.

City of East Point Comprehensive Plan Update – 2017

https://www.eastpointcity.org/wp-content/uploads/2022/01/Comprehensive-Plan-Update-2017.pdf

The City of East Point Comprehensive Plan Update – 2017 was adopted on February 19, 2018. It focuses on economic development, natural and cultural resources, housing, community facilities and services, land use and design, transportation, intergovernmental coordination, and population. The plan also defines future development and community redevelopment goals.

City of Fairburn Comprehensive Plan – Fairburn Plan 2040

https://www.dca.ga.gov/sites/default/files/2021.09.01.cityoffairburn.2020compplanupdate_adopted.pdf

The City of Fairburn Comprehensive Plan – Fairburn Plan 2040 was adopted on August 23, 2021. It includes planning elements related to vision, needs and opportunities, community goals, land use, housing, economic development, transportation, community work program, and broadband service. The plan's stated vision is for the City of Fairburn to be an economically thriving community and a desired destination for residents and visitors of all ages.

City of Hapeville Comprehensive Plan/Livable Centers Initiative (LCI) Study Update

https://www.dca.ga.gov/sites/default/files/hapeville_city_plan_update_2017.pdf

The City of Hapeville Comprehensive Plan/LCI Study The city of Hapeville was the recipient of a 2016 Atlanta Regional Commission (ARC) Livable Centers Initiative study grant to complete this process. Unique to this LCI process is the integration of the Comprehensive Plan Update into the report. This study, in addition to being an update to the 2005 Hapeville Main Street Town Center LCI is also an update to the 2005 Comprehensive Plan. Plan goals centers around transportation, land use, and vision & character.

City of Johns Creek Comprehensive Plan 2018-2028 – Connect Johns Creek

https://www.dca.ga.gov/sites/default/files/johnscreekcicompplan_adopted_2018_reduced.pdf

The City of Johns Creek Comprehensive Plan 2018-2028 was adopted on October 8, 2018. Its stated vision to guide the city is, "Johns Creek is an exceptional city that seeks to enhance its residential quality of life by supporting diversity, arts, business, and schools." The plan defines eight goals related to community development and perseveration, recreation, cultural preservation, economic development, natural and historical preservation, and transportation.

City of Milton Comprehensive Plan – Milton 2040

https://www.cityofmiltonga.us/home/showpublisheddocument/5494/637756853396130000

The City of Milton Comprehensive Plan – Milton 2040 was adopted in October 2021. Its stated vision is to: promote a high quality of life, create a strong sense of community and place, respect our heritage while guiding our future, and be the best place to call home. The plan's structure is built around best practices related to land use and ordinances; parks, trails, and greenspace, commercial nodes, agritourism, and partnerships & funding.

City of Mountain Park Comprehensive Plan Update 2021

https://www.dca.ga.gov/sites/default/files/2021.10.26.cityofmountainpark.comprehensiveplanupdate_adopted.pdf

The City of Mountain Park Comprehensive Plan Update 2021 was adopted on October 25, 2021. It focuses on needs and opportunities related to economic growth and sustainability, public safety, community development, transportation, civic engagement, and the natural environment.

City of Palmetto Comprehensive Plan Update 2017

https://www.dca.ga.gov/sites/default/files/palmetto_ci_plan_update_2017.pdf

The City of Palmetto Comprehensive Plan Update 2017 is designed to develop the City's vision, establish priorities, encourage dialogue and action, guide decision making, and determine how to best allocate limited resources. The plan focuses on community development and sustainability, education, housing, transportation, and marketing.

City of Roswell Comprehensive Plan – Roswell 2040

https://www.dca.ga.gov/sites/default/files/2021.10.21.cityofroswell.compplanupdate.adopted.pdf

The City of Roswell Comprehensive Plan – Roswell 2040 was adopted on October 12, 2021. The plan defines goals and policies related to population, economic development, housing, land use and urban design, transportation, community facilities, natural and cultural resources, and broadband.

City of Sandy Springs Comprehensive Plan – 2017 The Next Ten

https://www.dca.ga.gov/sites/default/files/2017.04.17.sandyspringscomp planadopted_reducedsizefordca.pdf

The City of Sandy Springs Comprehensive Plan – 2017 The Next Ten was adopted in February 2017. The plan identified ten overarching themes to guide the community. These include neighborhood preservation, mobility, connections, open space, balanced community, competitive, transit, redevelopment, quality of place/quality of life, and development management tools.

City of South Fulton Comprehensive Plan –2021 Our South Fulton

https://www.dca.ga.gov/sites/default/files/2021.12.17cityofsouthfulton comprehensiveplanupdate_adopted.pdf

The City of South Fulton Comprehensive Plan – 2021 Our South Fulton was adopted on December 14, 2021. The stated vision for the plan is, “City of South Fulton will be an innovative, diverse community that is safe, environmentally conscious, healthy, transparent, and financially sustainable for all its citizens and visitors. The goals of the plan are to ensure stable housing for all, building trust within the community, creating an economic engine for the South Side, develop a unique South Fulton, and develop a strong community for South Fulton.

City of Union City Comprehensive Plan Update 2020

https://www.dca.ga.gov/sites/default/files/2021.05.13.cityofunioncity. compplanupdate_adopted.pdf

The City of Union City Comprehensive Plan Comprehensive Plan Update 2020 was adopted on April 20, 2021. It identified community needs and opportunities related to development patterns, social and economic development, and resource conservation. The plan is guided by the stated vision, “Union City will have mixed-use development connected to parks and downtown areas with safe crossings, lighting, and a convenient public transportation system.”

Fulton County Comprehensive Transportation Plan (CTP)

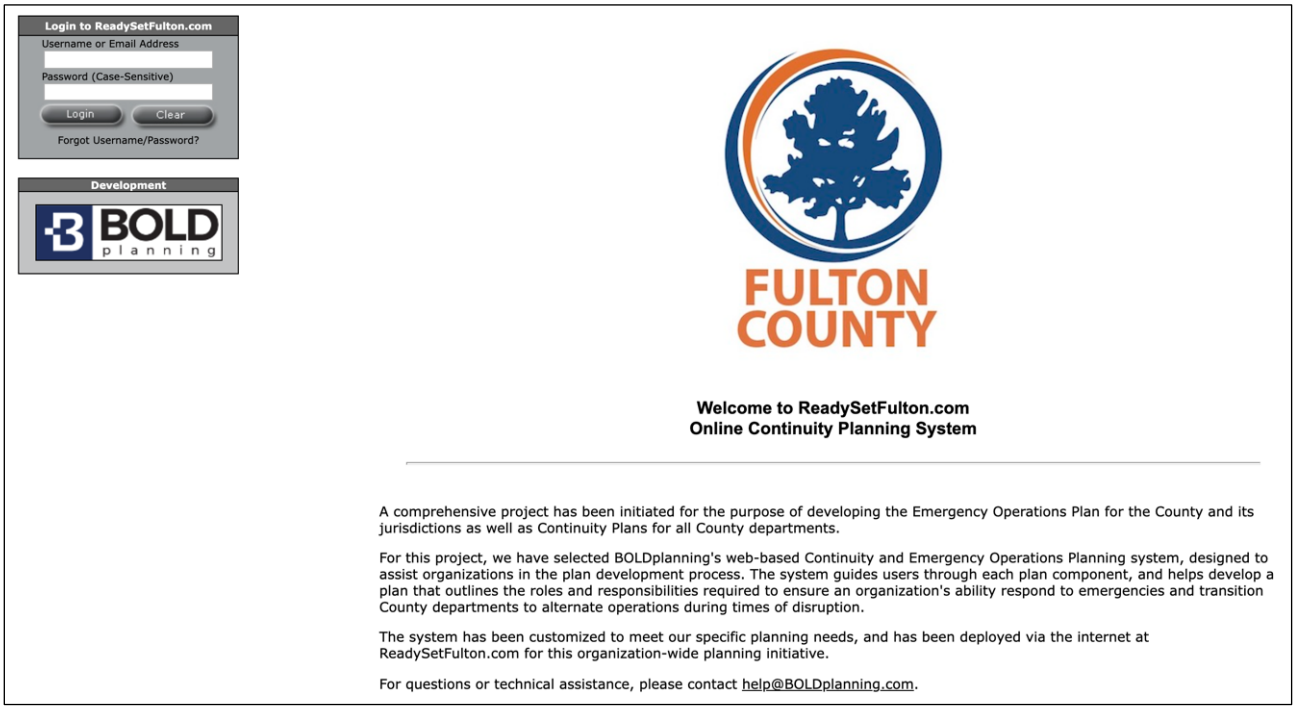
https://www.fultoncountyga.gov/inside-fulton-county/fulton-county-initiatives/fulton-county-transit-plan

The Comprehensive Transportation Plan (CTP) was prepared to serve as the blueprint for all transportation investments–automobile, transit, freight, pedestrian, and bicycle–by Fulton County and its municipalities for the next 25 years. A long range, multimodal, comprehensive plan, the CTP integrally links land use and transportation within the County and its incorporated areas to efficiently address traffic congestion and safety concerns on the transportation network.

Fulton County Emergency Operations, Continuity of Operations Plans

Fulton County has initiated a comprehensive project to develop a countywide Emergency Operations Plan (EOP) as well as a Continuity of Operations (COOP) plan for all county departments using the BOLDplanning.com platform, dubbed “ReadySetFulton.com.” The platform, which

follows a best practices methodology, replaces cumbersome, paper-based plans with online, "living" documents that can be access, updated, and tested as often as needed.



Fulton County, Georgia Flood Insurance Study

The Fulton County Flood Insurance Study (FIS) revises and updates information on the existence and severity of flood hazards in the geographic area of Fulton County, including the Cities of of Alpharetta, Atlanta, Chattahoochee Hills, College Park, East Point, Fairburn, Hapeville, Johns Creek, Milton, Mountain Park, Palmetto, Roswell, Sandy Springs, and Union City; and the unincorporated areas of Fulton County (referred to collectively herein as Fulton County). This FIS aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. This study has developed flood-risk data for various areas of the community that will be used to establish actuarial flood insurance rates and to assist the community in its efforts to promote sound floodplain management. Minimum floodplain management requirements for participation in the National Flood Insurance Program (NFIP) are set forth in the Code of Federal Regulations (CFR) at 44 CFR, 60.3.

U.S. Army Corp of Engineers, Mobile District – Sweetwater Creek Flood Risk Management Project, Fulton County

The study area encompassing Sweetwater Creek and its tributaries have experienced multiple large flooding events within the past decade prompting Fulton County, Georgia, and the U.S. Army Corps of Engineers to enter into a Feasibility Cost Sharing Agreement. The agreement calls for Fulton County and the USACE to perform the analyses necessary to determine whether a federal interest exists in measures to reduce the risk of flooding. This document explains what is known about the study area, the floodplain characteristics, existing condition flood damages and expected future condition flood damages in the absence of flood damage reduction measures. Within this report is the documentation of the procedures used to analyze various measures designed to reduce the risk of flood damages and recommends a plan alternative regarding National Economic Development (NED).

Georgia Safe Dams Programs

https://epd.georgia.gov/watershed-protection-branch/safe-dams-program

Pursuant to the Georgia Safe Dams Act, O.C.G.A. Secs. 12-5-370 et seq., the Safe Dams Program is responsible for developing and maintaining an inventory of dams, classifying dams, and ensuring compliance of all regulated dams. The Dam Diagram and Inventory of Dams information is included in the Dam Failure hazard identified within this MJHMP update.

Fulton County Planning Documents

Fulton County's participating jurisdictions provided a host of planning, zoning, and development-related documents. These documents were reviewed, assessed, and cataloged to compile Section 5.1 – Mitigation Capabilities as well as Section 5.5 - Planning Integration.

2.1.2 – Fiscal Resources

The MPC assessed their available funding options. The following is a list of federal, state, and local funding sources that are either available or relevant to the Fulton County MJHMP update.

Building Resilient Infrastructure and Communities Grant (BRIC)

As a result of amendments by the Disaster Relief and Recovery Act 2018, the Building Resilient Infrastructure and Communities (BRIC) Grant Program replaced the Pre-Disaster Mitigation (PDM) Grant Program. BRIC is a nationally competitive program that supports states, local communities, tribes, and territories as they undertake hazard mitigation projects, reducing the risks they face from disasters and natural hazards. The BRIC program guiding principles are supporting communities through capability- and capacity-building; encouraging and enabling innovation; promoting partnerships; enabling large projects; maintaining flexibility; and providing consistency.

Fire Prevention and Safety Grants (FP&S)

These grants are administered by FEMA to enhance safety of the public and firefighters from fire and fire-related hazards. The primary goal is to target high-risk populations and reduce injury. Fire departments, local governments, and recognized community organizations are eligible to receive this funding.

Flood Mitigation Assistance Program (FMA)

The Flood Mitigation Assistance (FMA) program is designed to aid in the buyout of repetitive loss (RL) and severe repetitive loss (SRL) properties as well as assist in the funding of flood mitigation projects and activities.

Hazard Mitigation Grant Program (HMGP)

The Hazard Mitigation Grant Program (HMGP) is managed by FEMA and administered by GEMA.

Pre-Disaster Mitigation Grant Program (PDM)

As previously mentioned, the Pre-Disaster Mitigation (PDM) Grant Program, also managed by FEMA, has been replaced with the BRIC program. The development of this plan was funded by an existing PDM grant at a 75% match.

Local Revenues & Budgets

Recognizing the importance of hazard mitigation planning, Fulton County and its participating jurisdiction(s) have self-funded the 25% match required by FEMA's PDM/BRIC grant.

2.1.3 – Technical Resources

The Fulton County MPC employed a variety of technical resources in its plan development. These technical resources were instrumental in completing an accurate vulnerability and risk assessment.

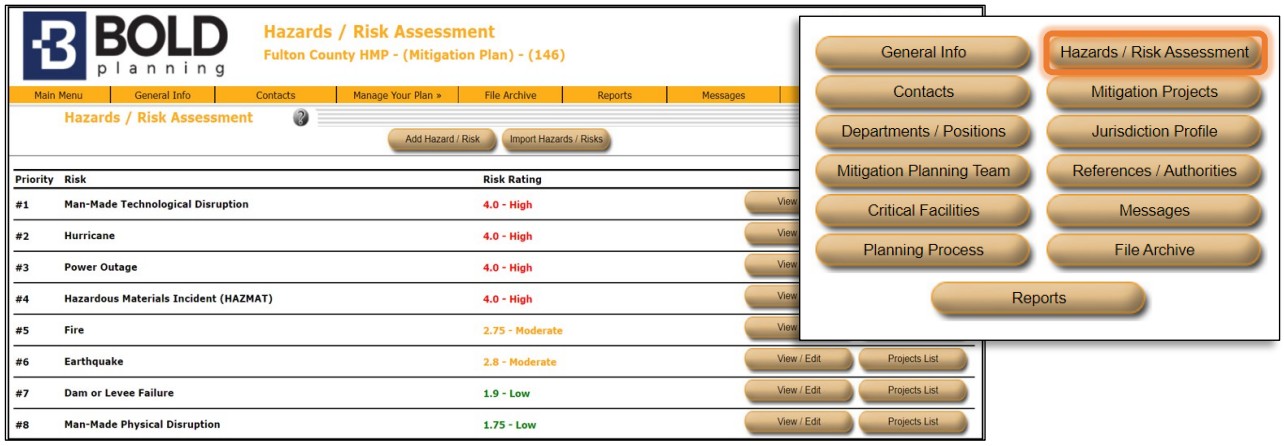
BOLDplanning (now a division of Agility Recovery)

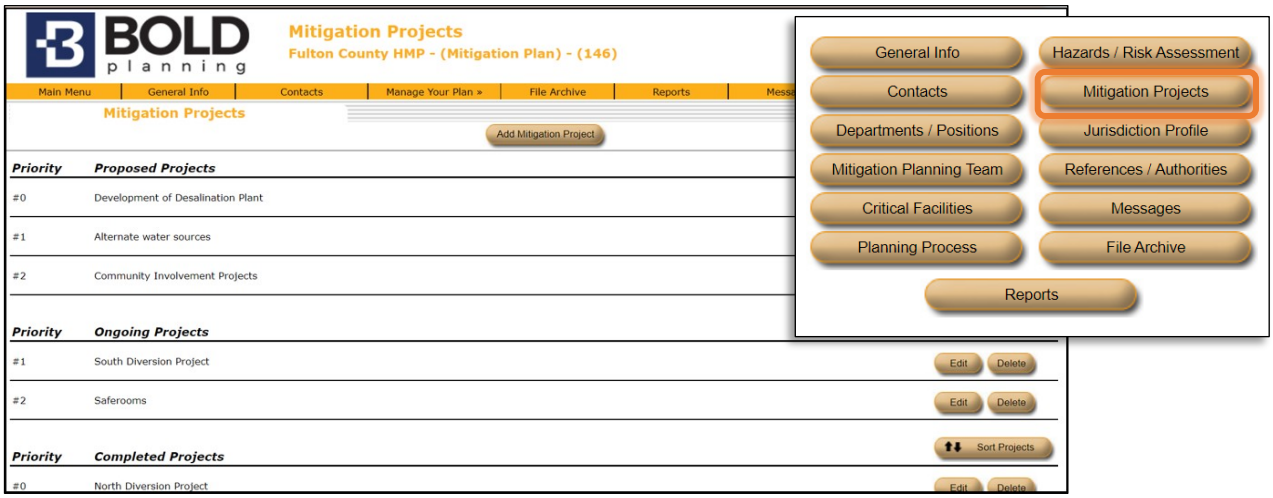
Over 17 years in business, and as the principal plan writer, BOLDplanning has helped state and local agencies across the country create more than 10,000 Hazard Mitigation Plans (HMPs), Continuity of Operations Plans (COOPs), Emergency Operations Plans (EOPs), and Local Emergency Operations Plans (LEOPs). The company offers clients a unique combination of expert consulting and a world-class online software solution – the BOLDplanning.com platform – that together make the planning process easier, more efficient, and more effective.

The company has a 100% FEMA approval rate for over 50 state, local and tribal mitigation plans since 2014, including numerous first-submission approvals.

Company capabilities also include significant facilitation, stakeholder engagement, HSEEP training and GIS expertise. The firm's planning experts have deep experience in hazard mitigation planning and GIS, as well as substantial knowledge of FEMA and state requirements.

Throughout this hazard mitigation planning project, the BOLDplanning.com platform (shown on the following page) has been utilized to capture key data and keep the project on schedule. This platform will be available on an ongoing basis for plan maintenance and project tracking, as well as integrating additional plans such as Continuity of Operations (COOP) and Emergency Operations (EOP), if desired.





Georgia Mitigation Information System (GMIS)

GMIS is an online mapping tool developed by Information Technology Outreach Services (ITOS), a division of the Carl Vinson Institute of Government at the University of Georgia and the Hazard Mitigation Division of GEMA/Homeland Security (HS). GMIS supports the documentation and implementation of mitigation activities through the State of Georgia through mapping and reporting of critical facilities, mitigation properties, and National Flood Insurance Program (NFIP) properties. Each risk assessment map developed for this plan, along with the Hazus models, were created using Hazus 2.2SP1.

ArcGIS v10

Each map developed for this plan was created using ESRI's ArcGIS v10.

FEMA DFIRM – Map Data Center

FEMA's National Flood Hazard Layer (NFHL) data was instrumental in mapping floodplain locations and estimating potential flood impacts and loss estimates.

National Oceanic and Atmospheric Administration/National Centers for Environmental Information (NOAA/NCEI)

Weather data and historical events were primarily provided by NOAA/NCEI, which is formerly known as the National Climatic Data Center (NCDC).

U.S. Army Corps of Engineers (USACE)

USACE provided Fulton County and BOLDplanning with data from its national dam inventory containing their location and assessed hazard level.

2.2 – Continued Public Involvement

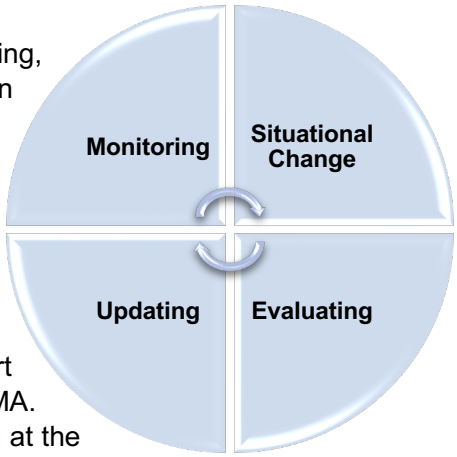
Fulton County is dedicated to involving the public in the continual shaping of its mitigation plan and the development of its mitigation projects and activities.

The Fulton County MPC will continue to keep the public informed about its hazard mitigation projects and activities through AFCEMA's website. Additionally, it will provide a "comments/suggestions" option for the public to submit input through the website.

The public will also be invited to participate in annual MPC meetings to review and discuss the mitigation-related events of the past year.

Copies of the updated 2022 Fulton County MJHMP will be available online through AFCEMA's website and distributed to all participating jurisdictions.

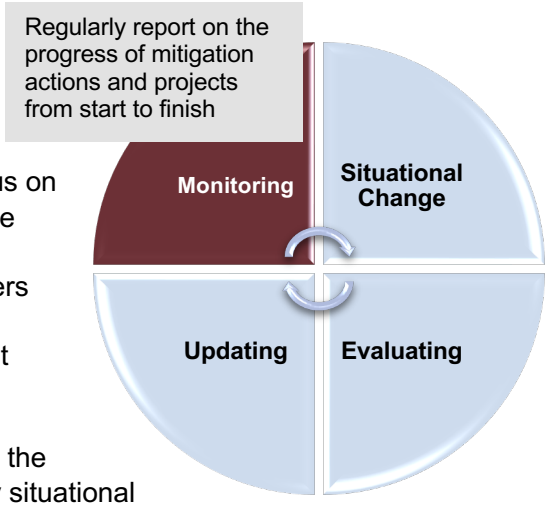
2.3 – Plan Maintenance Process



The Fulton County MPC has developed a method to ensure monitoring, evaluation, and updating of its multijurisdictional hazard mitigation plan. Upon adoption of the Fulton County 2022 MJHMP, AFCEMA will utilize its MPC to provide plan updates, revisions, and data collection for future hazard mitigation planning purposes. The MPC chair will form a subcommittee for proposed mitigation projects comprised of AFCEMA's Director and jurisdictional representatives from the MPC. The chair of the subcommittee will be determined by a vote in the subcommittee. Additional members may be added based on necessity. The subcommittee will submit a quarterly report to the MPC, which in turn, will submit an annual report to AFCEMA. Refer to the Fulton County MJHMP (update) Evaluation Report form at the end of this section for additional details.

AFCEMA may request a non-scheduled report on the monitoring, evaluation, or updating of any portion of the MJHMP due to irregular progress on mitigation actions and or projects, in the aftermath of a hazard event, or for any reason deemed appropriate.

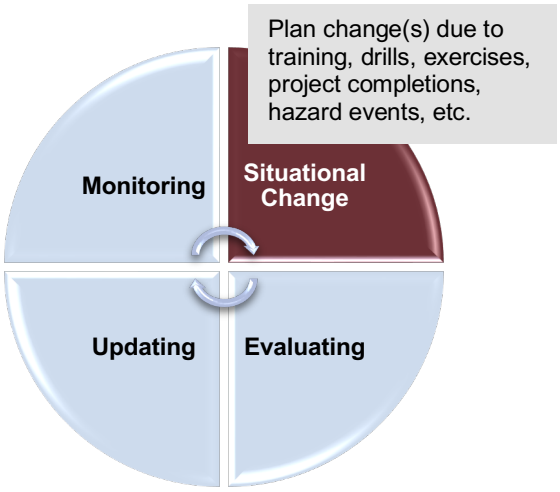
2.3.1 – Plan Monitoring & Situational Change



Plan monitoring can be defined as the ongoing process by which stakeholders obtain regular feedback on the progress being made towards achieving their goals and objectives. In the more limited approach, monitoring may focus on tracking projects and the use of the agency's resources. In the broader approach, monitoring also involves tracking strategies and actions being taken by partners and non-partners, and figuring out what new strategies and actions need to be taken to ensure progress towards the most important results.

A monitoring report will be written and submitted for review to the MPC and after the annual MPC meeting or when triggered by situational change. The monitoring report answers the questions on the following page.

- ✓ *Is the mitigation project under, over, or on budget?*
- ✓ *Is the mitigation project behind, ahead of, or on schedule?*
- ✓ *Are there any changes in Fulton County's capabilities which impact the MJHMP?*
- ✓ *Has the mitigation action been initiated, or its initiation planned?*
- ✓ *Is the current process of prioritizing mitigation actions and projects appropriate and accurate?*
- ✓ *Has the current method of incorporating mitigation actions and projects yielded a comprehensive action and project strategy to address seen and unforeseen hazards?*

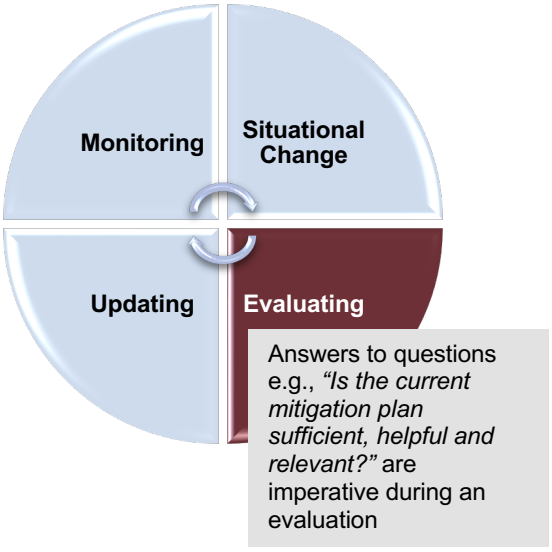


- ✓ *If applicable, has participation in a mitigation action's collaboration been regular?*
- ✓ *Was a negative result caused directly or indirectly by insufficient levels of public outreach?*
- ✓ *If any, what plan updates occurred, why did they occur, and what is their impact?*

The plan maintenance process is cyclical and maintenance items can operate simultaneously within the process.

2.3.2 – Plan Evaluating

A plan evaluation is a rigorous and independent assessment of either completed or ongoing activities to determine the extent to which they are achieving stated objectives and contributing to decision making.



An evaluation report (see 2.3.4 – Evaluation Report) will be written and submitted to Fulton County's MPC when the situation dictates. The following situations are typical examples of when an evaluation will be necessary.

- Post hazard event
- Post training exercise
- Post tabletop or drill exercise
- Significant change or completion of a mitigation project
- Significant change or completion of a mitigation action

An evaluation report will ask the following questions in response to the previously listed events.

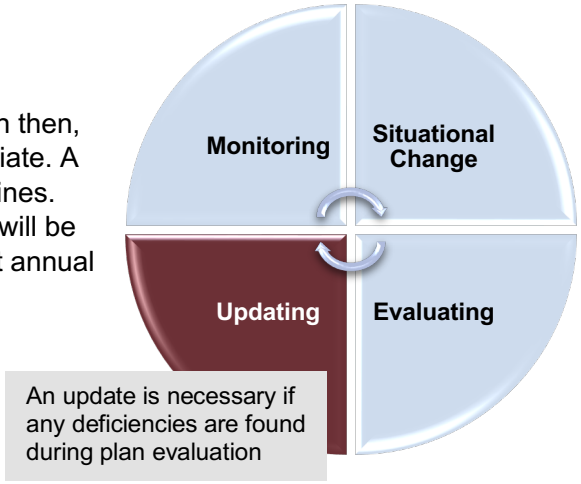
- ✓ *Do the mitigation objectives and goals continue to address the current hazards?*
- ✓ *Are there new or previously unforeseen hazards?*
- ✓ *Does a change in hazard vulnerability demand a change of or addition of mitigation actions or projects?*

- ✓ *Does a change in the mitigation strategy demand a change of or addition of mitigation actions or projects?*
- ✓ *Are current resources appropriate for implementing a mitigation project?*
- ✓ *Was the outcome of a mitigation action/project expected?*
- ✓ *Are there implementation problems?*
- ✓ *Was the public engaged to the point where they were satisfied with current engagement strategies?*
- ✓ *Did the public participate in a number that produced a positive yield on the plan, action, or project?*
- ✓ *Are there coordination problems?*

2.3.3 – Plan Updating

Typically, the updating of a hazard mitigation plan is initiated upon the completion of a plan evaluation and even then, only when the evaluation determines an update is appropriate. A plan update also occurs every five years per FEMA guidelines. Additionally, when new hazard data becomes available, it will be added to the plan. New data will be confirmed or denied at annual MPC meetings.

For whatever reason, an update to Fulton County's MJHMP can be written any time it is deemed necessary by AFCEMA.



According to FEMA/DMA 2000 guidelines for mitigation planning, Fulton County will begin the update process three years from this plan's adoption. It will do so under the direction of the AFCEMA's Director. AFCEMA will coordinate and facilitate bi-annual meetings within the five-year cycle with stakeholders from the participating jurisdictions. These meetings will allow AFCEMA, the MPC Chair, MPC members, and stakeholders from Fulton County and the Cities of Alpharetta, Atlanta, Chattahoochee Hills, College Park, East Point, Fairburn, Hapeville, Johns Creek, Milton, Mountain Park, Palmetto, Roswell, Sandy Springs, South Fulton, and Union City, to gather relevant information needed for the next plan update. These meetings will ensure the appropriate status of certain goals (mitigation activities and projects) identified in mitigation strategy are up to date, as required by FEMA, in the next five-year plan update.

Fulton County Mitigation Planning Committee
Fulton County Hazard Mitigation Plan
Evaluation Report

Hazard Mitigation Plan Sub-Committee Chair: _____
Meeting Date: _____
Plan Approval Date: _____
Plan Expiration Date: _____
Have there been any disasters or training event since the last report? If so, list them below:

Disaster Number/ Training Event	Hazard Type(s)	Was the hazard expected or unforeseen?	Is a plan update required?
Example: DR-1000	*Tornado*	*Unforeseen*	*Yes*
Example: Annual Training	*Flash Flooding*	*Expected*	*No*

Mitigation Projects:

Mitigation Project	Participating Jurisdiction(s)	Proposed/Scheduled/In Progress/Completed	Behind/Ahead/On-Schedule	Estimated Completion Date
Example: Tornado Safe Room	*Cannon*	*In Progress*	*On-Schedule*	*1/1/2021*

Public Engagement and Outreach Notes:

Miscellaneous Notes:

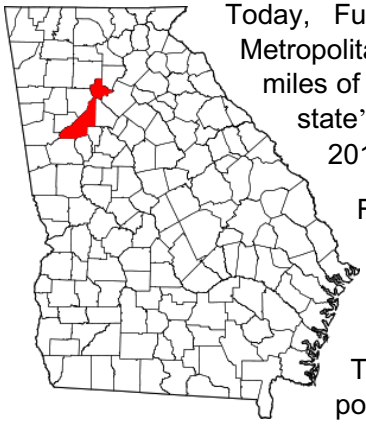
Section 3: Planning Area

Planning Process
Local Procedures & Resources
Planning Area
- Demographics
- Land Use & Development
- Critical Faciltiies & Infrastructure

Hazard Risk Assessment
Mitigation Strategy

County Profile

Carved from DeKalb County and created by the Georgia General Assembly in 1853, Fulton County is in the central northwestern portion of the State of Georgia. Or, more specifically, in the Piedmont region near the foothills of the Blue Ridge Mountains. It is uniquely long and narrow in shape and is bordered by ten Georgia counties: Cherokee (northwest), Forsyth (northeast), Gwinnett (east), DeKalb (east), Clayton (south), Fayette (south), Coweta (southwest), Carroll (west), Douglas (west), and Cobb (west).



Today, Fulton County is part of the Atlanta-Sandy Springs-Roswell, Georgia Metropolitan Statistical Area, aka Metro Atlanta area. The County has 528.7 square miles of land area and a population of 1,066,710 (U.S. Census 2020), making it the state's most-populous county. This represents a 15.6 percent increase since the 2010 Census.

For hazard mitigation purposes, the planning area includes the cities of Alpharetta, Atlanta (the Fulton County seat), Chattahoochee Hills, College Park, East Point, Fairburn, Hapeville, Johns Creek, Milton, Mountain Park, Palmetto, Roswell, Sandy Springs, South Fulton, and Union City.

The City of Atlanta is the largest participating jurisdiction in both size and population (498,715, U.S. Census 2020). It ranks as not only the most populous city in the State of Georgia but also the 37th largest in the country. According to Forbes, http://www.forbes.com/places/ga/atlanta, Atlanta is a top business city and is a primary transportation hub of the Southeastern United States – via highway, railroad, and air. In fact, it has the country's third largest concentration of Fortune 500 companies, including the Coca-Cola Company, Delta Air Lines, and Turner Broadcasting. More than 75 percent of Fortune 1000 companies also have business operations in the metropolitan area, helping Atlanta realize a current gross metropolitan product of $379.4 billion.

The City of Mountain Park is the smallest jurisdiction to participate in this update to the Fulton County Multi-Jurisdictional Hazard Mitigation Plan. The City of South Fulton, which was incorporated in 2017, is the newest.

Employment

The U.S. Census (2020) indicates the presence of 37,892 employer establishments in Fulton County. Among them are one of the busiest airports in the world, Hartsfield-Jackson Atlanta International Airport (ATL); the two largest convention centers in the state; and the worldwide headquarters of many Fortune 500 companies. Fulton County's unemployment rate is generally less than the national average and future job growth, i.e., over the next ten years, is predicted to be 45.9%, which is higher than the U.S. average of 33.5% (https://www.bestplaces.net/economy/county/georgia/fulton). The median household income is $80,013, which is above the State of Georgia's average of $61,980 (U.S. Census 2020).

Housing

U.S. Census data (2020) also shows there are 439,578 households in Fulton County. A household includes all the people who occupy a housing unit as their usual residence. The 2020 Decennial Census identified 494,006 housing units in the County. A housing unit is a house, apartment, mobile home or trailer, a group of rooms, or a single room occupied as separate living quarters (or if vacant, intended for occupancy as separate living quarters).

Table 5: Population Summary, Fulton County

Population Summary, Fulton County			
Jurisdiction	**Population**	**Households**	**Housing Units**
Fulton (County)	1,066,710	427,379	494,006
Alpharetta (City)	65,818	23,958	26,089
Atlanta (City)	498,715	215,179	258,245
Chattahoochee Hills (City)	2,950	1,026	1,439
College Park (City)	13,930	6,291	7,090
East Point (City)	38,358	14,782	17,945
Fairburn (City)	16,483	4,919	6,798
Hapeville (City)	6,553	2,499	2,997
Johns Creek (City)	82,453	28,748	29,139
Milton (City)	41,296	14,248	14,941
Mountain Park (City)	583	448	282
Palmetto (City)	5,071	1,800	2,055
Roswell (City)	92,833	34,885	38,032
Sandy Springs (City)	108,080	49,537	53,606
South Fulton (City)	107,436	35,149	41,468
Union City (City)	26,830	9,722	11,414

Data Source: U.S. Census Bureau (2020 Decennial Census), https://data.census.gov/cedsci/profile?g=0500000US13121

The median price of a home sold in Fulton County in April 2020 was $332,500 compared with $310,000 during the same month in 2019 (Smart Real Estate Data of Marietta).

Regarding new housing stock, the U.S. Census (2020) shows the issuance of 4,289 building permits in 2020. However, since not all permits become actual housing starts, and starts lag the permit stage of construction, this number does not represent total new construction, but should provide a general indicator on construction activity and the local real estate market.

The following table provides a structural summary, by sector, for Fulton County, as identified by FEMA's geographic information system-based natural hazard analysis tool, Hazus.

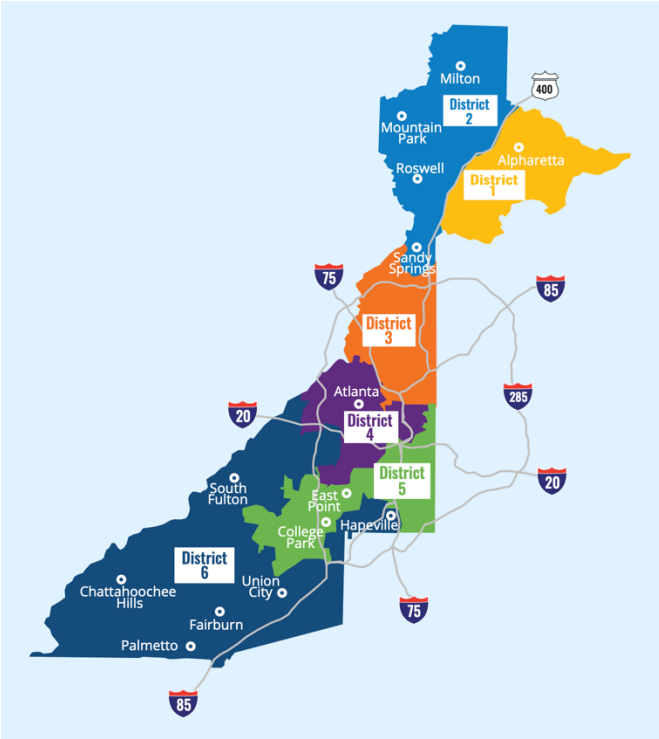
Table 6: Structural Summary, Fulton County

Structural Summary, Fulton County						
Agricultural	**Commercial**	**Government**	**Industrial**	**Residential**	**Education**	**Religious**
$170,460,000	$26,071,694,000	$928,332,000	$3,810,644,000	$98,908,429,000	$1,485,710,000	$2,275,163,000

Data Source: Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan
***Note**: Per the Hazus report, the GBS records for Fulton County were replaced with data derived from parcel and property assessment data obtained from Fulton County. The County provided-property assessment data was current as of October 2020 and the parcel data current as of October 2020. The exposure values represent the total number and replacement cost for all Fulton County buildings.*

Government

Fulton County is governed by a seven-member Board of Commissioners. Six are elected by geographic district and one is elected countywide as the chairperson. Each works in a part-time capacity and serves a four-year term. The Board of Commissioners elects a vice chairperson from among their members annually. Fulton County Government is administered by the County Manager, who was appointed by the Board of Commissioners.



Each of the cities within Fulton County have their own local governing bodies in place. These consist of an elected mayor and city council, and an appointed city manager or chief operation officer, who oversees the day-to-day operations of their respective city's functions, i.e., zoning, code enforcement, building permits, site inspections, business licenses, public safety, etc.

Fulton County residents are served and protected by the Fulton County Police Department, the Fulton County Sheriff's Office, and Georgia State Patrol. Fulton County provides fire services to its unincorporated area via a MOU with one of its municipalities. AFCEMA's Aircraft Rescue and Fire Fighting Division provides fire services to Fulton County Executive Airport at Brown Field (FTY) which is, a Class D airport located just west of Atlanta (i.e., Charlie Brown Field, a local Class D airport located just west of Atlanta).

AFCEMA is the lead organization responsible for providing management and coordination of mitigation, preparedness, response, and recovery activities within Fulton County.

Hospitals & Medical Facilities

The County has multiple hospitals and health care facilities that range in size and primary function, including emergency/trauma care, primary care, long-term care, and walk-in care.

Senior Care & Living Facilities

Fulton County has an extensive system of programs and services for its senior (65+) population. Nursing homes, senior centers, and senior housing facilities, of which there are many in Fulton County, are considered vulnerable to the impacts from disasters.

Note: *DMA 2000 requires that hazard mitigation plans consider socially vulnerable populations. These populations can be more susceptible to hazard events, based on several factors, including their physical and financial ability to react or respond during a hazard, and the location and construction quality of their housing. Accordingly, the elderly (65+ population) as well as those living in low-income households are considered vulnerable populations within this update to the 2022 Fulton County MJHMP.*

Schools

As for public education, Fulton County is served by two school systems: Atlanta Public Schools (https://www.atlantapublicschools.us) and Fulton County Schools (https://www.fultonschools.org).

Atlanta Public Schools is one of the largest school districts in the state of Georgia, serving approximately 51,000 students across 87 schools and five programs. The district is organized into nine K-12 clusters

with 64 traditional schools, 19 charter schools, six partner schools, two alternative schools, and five alternative programs.

Fulton County Schools is the fourth largest school system in Georgia. It has more than 10,900 full- and part-time employees, and more than 6,900 teachers and other certified personnel, who work in 108 schools and administrative and support buildings. Approximately 94,400 students will attend classes during the 2021-2022 school year across 59 elementary schools, 19 middle schools, 19 high schools, 10 start-up charter organizations (some charters have multiple campuses but are considered one school), and one full-time virtual school.

Transportation

Highways – Three major interstate highways converge in Atlanta: I-20 runs east to west across town, while I-75 runs from northwest to southeast, and I-85 runs from northeast to southwest. The latter two combine to form the Downtown Connector (I-75/85) through the middle of the city. The Connector is one of the ten most congested segments of interstate highway in the country. Atlanta is mostly encircled by I-285, a beltway known as "the Perimeter," which has come to mark the boundary between the interior of the region and its surrounding suburbs. Numerous, heavily traveled state routes are also present within Fulton County.

Airports – Hartsfield-Jackson Atlanta International Airport (ATL) is located seven miles south of the central business district of Atlanta. The airport serves as a portal to hundreds of destinations, domestic and international, for over 100 million passengers annually. From 1998 to early 2020, ATL reigned as the world's busiest passenger airport, but according to Airports Council International, in 2019 and 2020, Hartsfield-Jackson Atlanta International Airport dropped to number two (behind Guangzhou Baiyun International Airport in China in 2020. This change is attributed to the COVID-19 pandemic. Statistics show that ATL handled only 42.9 million passengers in 2020, which is less than half the number (110 million) in 2019. However, of 2021, ATL is once again the number one busiest airports in the world.

Hartsfield-Jackson Atlanta International Airport is the primary hub of Delta Air Lines and includes major carriers, such as American Airlines, Frontier Airlines, Southwest Airlines, United Airlines, and others.

Charlie Brown Field is a local, Class D airport located just west of Atlanta, and operated by Fulton County. It is the nearest airport to Hartsfield-Jackson Atlanta International Airport and handles much of the general aviation traffic that would otherwise go there. The airport exists below and near Hartsfield-Jackson Atlanta International Airport's Class B airspace.

Rail Systems – Atlanta began as a railroad town and it still serves as a major rail junction, with several freight lines belonging to Norfolk Southern and CSX intersecting below street level in downtown. It is the home of major classification yards for both railroads, Inman Yard on the NS and Tilford Yard on the CSX. Long-distance passenger service is provided by Amtrak's Crescent train, which connects Atlanta with many cities between New Orleans and New York. The Amtrak station is located several miles north of downtown.

Public Transportation – The Metropolitan Atlanta Rapid Transit Authority, or MARTA, is the principal rapid-transit system in the Metro Atlanta area, and is the eighth largest in the U.S. Though originally formed in 1971 as strictly a bus system, MARTA today also consists of 48 miles of rail track and 38 train stations. It also maintains a single rail station at Hartsfield-Jackson Atlanta International Airport (ATL). Presently, MARTA serves nearly 400,000 passengers a day.

Evacuation Routes

Specific evacuation plans are identified in Fulton County's Local Emergency Operations Plan (LEOP), Hazardous Materials Plan, or Dam Safety Plan(s). The County assists with the coordination and communication of evacuation routing as necessitated by the execution of local municipal EOPs.

The County and all participating jurisdictions have identified mitigation actions to protect critical facilities and critical infrastructure, including facilities available to support sheltering and transportation routes that facilitate evacuation and the movement of emergency vehicles.

Shelters

With the support and cooperation of the American Red Cross and local jurisdictions, the County assists with the coordination and communication of shelter availability as necessitated by the execution of local municipal Emergency Operations Plans, or EOPs.

Climate

Fulton County is known to have a humid, subtropical climate. The summer (July) high is around 88 degrees, and the winter (January) low is around 32 degrees. The County receives 52 inches of rain and two inches of snow, on average, each year, which is below the U.S. average of 38 and 28 inches respectively.

According to the National Weather Service (NWS), 2019 ended up being warmer and drier across north and central Georgia. Average temperatures were at least two degrees above normal. Ranked by average temperatures, Atlanta (66.1 degrees) recorded its warmest year on record. Climate change is generally considered to be the root cause for the increase.

The annual BestPlaces Comfort Index for Fulton County is 6.8 (10=best), which means it is one of the most pleasant places in Georgia.

Given its many attributes, including location, continued financial and economic vitality, premier public school system, and comfortable climate, Fulton County remains attractive to new residents, businesses, and visitors alike. As evidence, the Georgia Department of Economic Development, https://www.georgia.org, estimates that more than half of the state's $68.96 billion tourism industry (2019) comes from the Metro Atlanta area. And the Atlanta Regional Commission https://www.atlantaregional.org, predicts Fulton County's population will grow by as many as 462,745 by 2050.

Participating Jurisdictions

Following are brief descriptions of the municipalities participating in the 2022 Fulton County MJHMP.

Alpharetta – Located in northern Fulton County and intersected by Hwy. 120 and GA-400, KnowAtlanta (https://www.knowatlanta.com/blog/moving-to-alpharetta), describes Alpharetta as "a diverse city close to Atlanta with award-winning parks, excellent schools, a multitude of family-friendly festivals and events, unique shopping destinations, and a thriving culinary scene." Alpharetta is currently among the fastest growing cities in Fulton County and the South. It spans 26.9 square miles and has a population of 65,818 (U.S. Census 2020). As the headquarters of many companies, including LexisNexis, Verizon, and ADP, and with the presence of nearly 700 high-tech companies, Alpharetta is dubbed "Technology City of the South."

Atlanta – Situated among the foothills of the Appalachian Mountains, and nicknamed ATL, The Big Peach, or The City in a Forest, Atlanta is the capital of Georgia. The city, which was founded in 1847, sits at 1,050 feet above mean sea level, making it the highest elevation of any major city east of the Mississippi River. It encompasses 135.7 square miles and has a population of nearly half a million people (498,715, U.S. Census 2020). Consequently, Atlanta is ranked as the most populous city in Georgia as well as the 37th largest in the country. It also remains one of the fastest growing cities in the state. Atlanta is home to the Hawks,

the Falcons, and Atlanta United FC. Atlanta has the third-largest concentration of Fortune 500 companies in the U.S., including, famously, the headquarters of Coca-Cola. It is also the location of one of the world's busiest airports, Hartsfield-Jackson Atlanta International, or ATL. Rich with history and modern flair, Atlanta has a culture all its own and is today considered by many to be one of the best cities to live in or visit in America.

Chattahoochee Hills – Chattahoochee Hills is one of Metro Atlanta's newer cities. It was incorporated in 2007 to keep the area rural and prevent urban sprawl. Most of the city sits in South Fulton County, but parts of Douglas, Carroll, and Coweta counties were annexed into the community. Before its incorporation, it was known as Chattahoochee Hill Country, and before that, it was part of a town called Rico. Today, it is made up of over 60,000 acres and has a population of 2,950 (U.S. Census 2020).

College Park – Originally founded as Atlantic City, later renamed Manchester, and then College Park, this historic city was founded in 1890 and incorporated five years later. It presently has a total area of 11.1 square miles, of which 0.019 square miles is water, and is located only minutes away from the Hartsfield-Jackson Atlanta International Airport. College Park has a population of 13,930 (U.S. Census 2020) and is known for providing access to all of Atlanta's amenities while maintaining the charm of a friendly, metropolitan neighborhood.

East Point – Spanning 14.7 square miles, East Point is a suburban city located southwest of Atlanta. It was founded as a railroad terminus with 16 families in 1870 and grew quickly after becoming an inviting place for industry to develop. Today, its eclectic community offers all the amenities of the bustling city and the convenience of being minutes from Hartsfield-Jackson Atlanta International Airport, but with the charm and uniqueness of a small town (Explore Georgia, 2021). East Point is the second MARTA stop from the airport and sits at the apex of three major interstates. As of the 2020 Census, the city had a population of 38,358.

Fairburn – Early records show that what is now called Fairburn was settled as early as 1830. In 1833, the town was founded as Cartersville, changing its name one year later to Berryville, and eventually to Fairburn (most likely after a township in the County of York, England). Today, the city is one that embraces the future while remembering the past. As part of an award-winning revitalization plan for downtown, Fairburn still retains its two train depots both built in 1917 which have since been transformed to two sit-down family restaurants. The Fairburn Education Campus serves as the home for the Atlanta campus of Georgia Military College and Brenau University, giving residents and other communities an opportunity to receive higher education in Liberal Arts (https://www.fairburn.com/newsroom/about-fairburn). According to the U.S. Census 2020, the City of Fairburn covers 16.9 square miles and has a population of 16,483.

Hapeville – Incorporated in 1891, Hapeville is today a Main Street city known for its vibrant arts culture, eclectic dining experiences, and burgeoning economic development opportunities. Hapeville is conveniently located about seven miles from downtown Atlanta, offering big city amenities with small-town charm. It is also centrally located between I-75 and I-85 immediately adjacent to Hartsfield-Jackson Atlanta International Airport. Small but large in stature, Hapeville spans only 2.4 square miles and is home to the original Dwarf House

Chick-fil-A, Delta Airlines, and Porsche Cars North America Headquarters & Experience Center. As of the 2020 Census, the city has a population of 6,553.

Johns Creek – The City of Johns Creek began as a small, picturesque outpost nestled along the Chattahoochee River and the gentle foothills of North Georgia in the early 19th century. Fast-track development began in 1981 with the development of Technology Park/Johns Creek, a thriving economic driver that today has attracted numerous Fortune 100 firms and professionals from all over the globe. The city was incorporated in 2006. Today, spanning 30.8 square miles and with a population of 82,453 (U.S. Census 2020), the city is the 10th largest in Georgia. Johns Creek is also recognized as one of the safest cities in Georgia (#2 Safest City in Georgia, SafeWise, 2020) and one of the best places to live in the state (#2 Best Place to Raise a Family in Georgia, Niche.com, 2020, and #3 Best Places to Live in Georgia, Niche.com, 2020).

Milton – Milton, which today covers 38.5 square miles and has a population of 41,296 (U.S. Census 2020), was incorporated in December 2006. It was created out of the unincorporated northernmost part of northern Fulton County. Milton is bordered by the cities of Roswell and Alpharetta on the south, and the counties of Forsyth on the east and Cherokee on the north and west. The city is consistently ranked as offering residents among the highest quality of life in Georgia. In 2011, just five years after its incorporation, Milton was rated as having the highest quality of life in the state of Georgia, and ninth-highest quality of life in the southern U.S. Additionally, the website, 24/7 Wall Street, also ranked Milton as the best place to live in Georgia in 2019. The city also regularly ranks as one of Georgia's safest cities, according to numerous reports.

Mountain Park – Incorporated in 1927, Mountain Park is primarily in the western part of northern Fulton County, with a small portion extending less than 1,000 feet into southeastern Cherokee County. The city spans only 0.5 square miles and has a population of 583 (U.S. Census 2020), making it the smallest jurisdiction to participate in the Fulton County Multi-Jurisdictional Hazard Mitigation Plan. Mountain Park is essentially an eclectic community and designated wildlife refuge. There is no zoning for commercial or business use, only residential. The city is surrounded on three sides by the City of Roswell.

Palmetto – Palmetto, founded as a town in 1854, was originally an unincorporated community in Campbell County, Georgia. It became part of Fulton County on January 1, 1932 (the city is located mostly in Fulton County and partly in Coweta County). Palmetto is located 25 miles south of Atlanta on U.S. Highway 29 and on the Atlanta and West Point railroad. It is located on the highest point above sea level between Atlanta and New Orleans and covers 11.9 square miles. The population of the City of Palmetto is 5,071 (U.S. Census 2020).

Roswell – Incorporated in February 1854, Roswell is a city in north Fulton County. It covers 40.7 square miles and has a population of 92,833 (U.S. Census 2020). Roswell is today recognized as Georgia's eighth largest city, but its major growth in population has just happened in the last 20 years. The city features the natural beauty of the Chattahoochee River, 13 parks (over 900 acres), and an affluent historic district. Popular among tourists and residents alike is Roswell's "A Southern Trilogy," which features the historic house museums of Barrington Hall, Bulloch Hall, and Smith Plantation. Over the years, the city has received numerous recognitions pertaining to its safety, sustainability, and historic

preservation efforts. Among them, Roswell was named a City of Excellence by the Georgia Municipal Association (only 50 cities in the state have been honored with the designation).

Sandy Springs – With roots dating back to the 1800s, Sandy Springs originated as a watering stop for Native-Americans who frequented its bubbling springs. It quickly evolved into a community as settlers moved into the area and grew exponentially over the years. Today, Sandy Springs encompasses 38.5 square miles and is home to a population of 108,080 (U.S. Census 2020). It is the sixth largest city in Georgia and the second largest city in the metropolitan Atlanta area. Sandy Springs is also known for being one of the largest cities in the U.S. to incorporate (2005) and uses an unusual public-private model for governance. Located on the Chattahoochee River and considered one of the fastest growing cities in Georgia, the city enjoys and expresses a traditional Southern charm, while also catering to its business-minded residents with efficient and responsive services. Accordingly, it is the location of several large corporate headquarters, including UPS, Inspire Brands, and Mercedes-Benz.

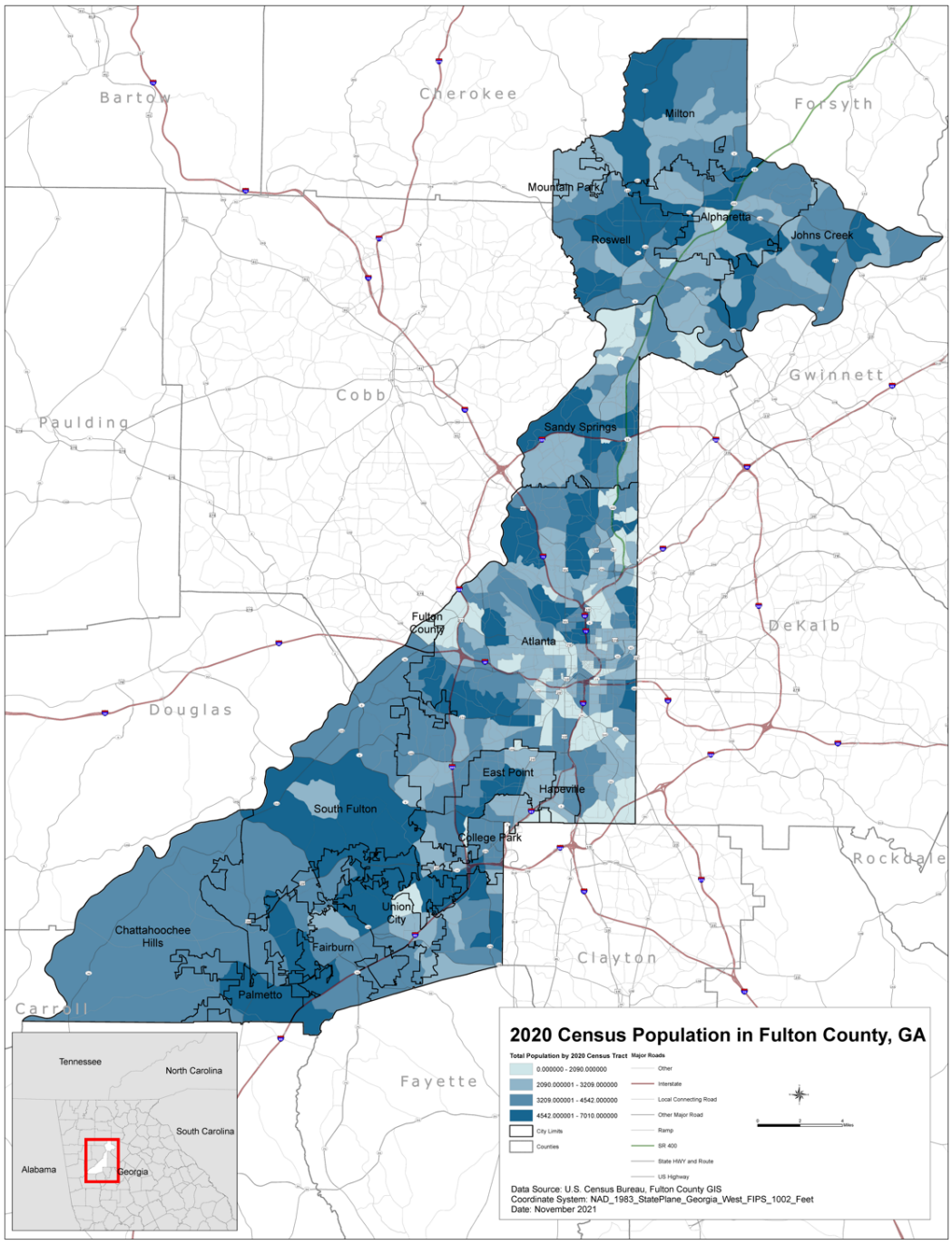
South Fulton – The City of South Fulton is the latest area within Fulton County to incorporate (May 2017) and is the newest participant in Fulton County's Multi-Jurisdictional Hazard Mitigation Plan. The city is situated within a 15–20-minute drive to Atlanta and the Hartsfield-Jackson International Airport (ATL). South Fulton is considered by many to represent the best of all worlds, from the bustling business districts on Roosevelt and Old National Highways to sprawling, rural scenes along the city's picturesque southeast border. And communities such as Red Oak, Campbellton, and Sandtown enjoy rich histories that have unfolded for hundreds of years. South Fulton comprises 84.8 square miles and is the home of 107,436 people (U.S. Census 2020), making it Georgia's fifth largest city in population. Interestingly, nearly 92 percent of its residents hold at least a high school diploma, and the median household income is $80,051, making the city one of the best-educated and most affluent in the south metro Atlanta area (https://www.cityofsouthfultonga.gov/3009/About-Us).

Union City – Incorporated by the Georgia General Assembly in 1908, Union City is situated in the southern portion of thriving Fulton County. It spans 19.7 square miles and has a population of 26,830 (U.S. Census 2020). Union City features all the cultural, spiritual, educational, and economic opportunities of a large metropolitan community, but the charm that can only be found in a much smaller community. It is a mere 15 minutes from the City of Atlanta and conveniently located ten miles from the world's largest airport, Hartsfield-Jackson Atlanta International, or ATL. Among its many features are the beautiful elements of nature illustrated by the Southern bloom of the dogwood trees, crepe myrtles, and Bradford pears, all of which are sure to give everyone the comforts of home.

3.1 – Demographics

Of the 159 counties in the State of Georgia, Fulton County is ranked as 17th in land area and number one in population size. According to the U.S. Census Bureau, the population of Fulton County increased from 920,581 (U.S. Census 2010) to 1,066,710 (U.S. Census 2020). This represents a 15.87% increase over a ten-year period.

Map 1: Fulton County, Census Population Map



Map Source: Fulton County GIS Department

The following table details the population demographics specific to Fulton County and its participating jurisdictions.

Table 7: Community Demographics, Fulton County, GA

Community Demographics, Fulton County, GA							
Jurisdiction	Size (Sq. Mi.)	Population			% Population Change		
		2000	2010	2020	2000 - 2010	2010 – 2020	2000 – 2020
Fulton (County)	526.6	816,006	920,581	1,066,710	12.82%	15.87%	30.7%
Alpharetta (City)	26.9	34,854	57,551	65,818	65.1%	14.36%	88.8%
Atlanta (City)	137.5	416,474	420,003	498,715	0.847%	18.74%	19.7%
Chattahoochee Hills (City)	58.0	-	2,378	2,950	-	24.05%	-
College Park (City)	11.1	20,382	13,942	13,930	-31.6%	-0.86%	-31.6%
East Point (City)	14.7	39,595	33,712	38,358	-14.86%	13.78%	-3.12%
Fairburn (City)	16.9	5,464	12,950	16,483	137%	27.3%	201.7%
Hapeville (City)	2.41	6,180	6,373	6,553	3.12%	2.834%	6.04%
Johns Creek (City)	30.8	-	76,728	82,453	-	7.46%	-
Milton (City)	38.5	-	32,661	41,296	-	26.44%	-
Mountain Park (City)	0.5	506	547	583	8.1%	6.58%	15.22%
Palmetto (City)	11.9	3,400	4,488	5,071	32%	13%	49.1%
Roswell (City)	40.7	79,334	88,346	92,833	11.36%	5.08%	17%
Sandy Springs (City)	38.5	85,781	93,853	108,080	9.41%	15.16%	26%
South Fulton (City)	84.8	-	-	107,436	-	-	-
Union City (City)	19.7	11,621	19,456	26,830	67.4%	37.9%	131%

Data Source: U.S. Census Bureau (2020 Decennial Census)

**Percent of Population Change Calculation: https://www.omnicalculator.com/math/percentage-change#how-to-calculate-the-percent-change*

**__Note__: No 2000 census data is available for the cities of Chattahoochee Hills (incorporated in 2007), Johns Creek (incorporated in 2006), and Milton (incorporated in 2006) as they were incorporated after census, and included, for the first time, in the 2020 census. Additionally, no census data is available for the City of South Fulton (incorporated 2017) for 2000 or 2010 as it was incorporated after the census, and included, for the first time, in the 2020 census.*

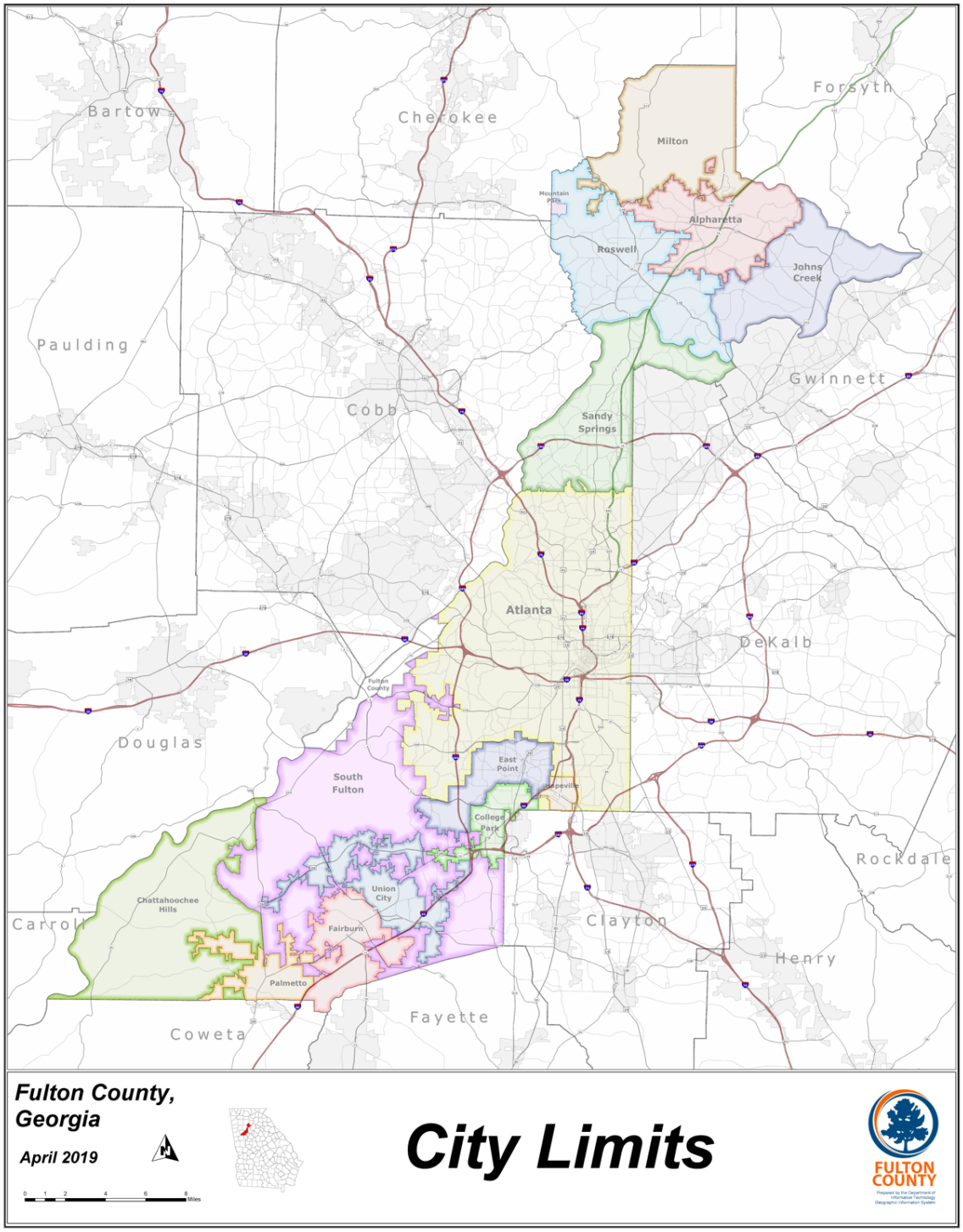
The Atlanta Regional Commission (ARC), as previously stated, projects Fulton County's population will grow by as many as 462,745 by 2050.

The U.S. 2020 Decennial Census, in combination with the 2019 American Community Survey, also included the following demographic values specific to Fulton County:

- Of the total population, 453,834 are categorized as Black or African American; 418,700 are categorized as White; 86,302 are categorized as Hispanic or Latino, 80,949 are categorized as Asian. The balance of the population is comprised of Other/Combined races. Additionally, 12.8% of the total population is foreign born.
- Of the total population, 84% speak English only at home; 15.4% speak a language other than English at home, including Spanish (6.2%) and Asian and Pacific Islander (3.8%).
- Of the total population, 12% is over the age of 65 and 21.4% are under the age of 18. The median age is 35.9 years.
- Of the total population, 57.5% have a bachelor's degree or higher.
- Of the total population, 59.4% are enrolled in school (K-12).
- Of the total population, 13.5% of people live below the poverty level.

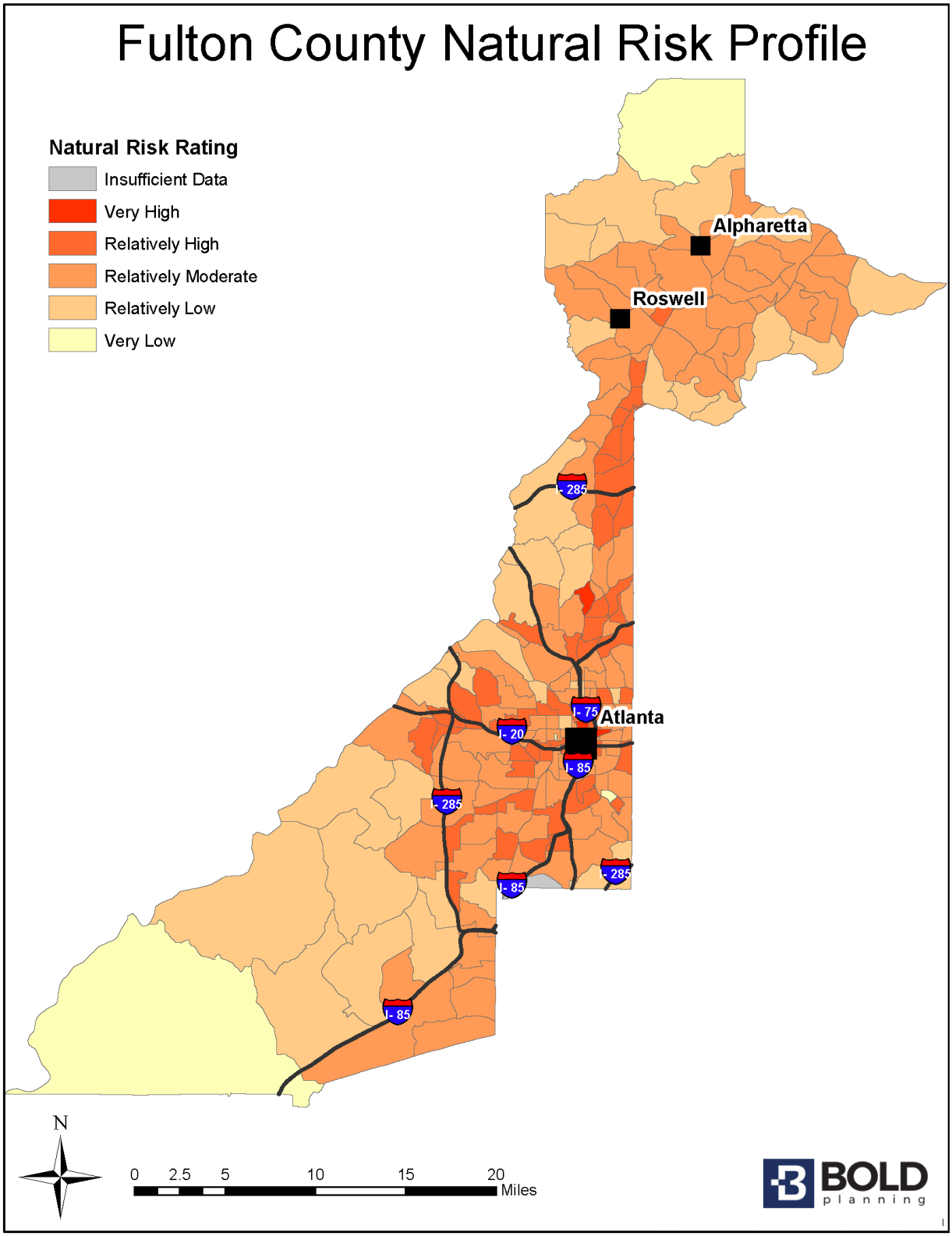
It is important to note that population trends can be used as a basis for estimating future changes within the planning area. Population trends can provide a basis for making decisions on the type of mitigation approaches to consider and the locations in which these approaches should be applied. This information can also be used to support planning decisions regarding future development in vulnerable locations, e.g., nursing homes or low-income households.

Map 2: Fulton County, Community Profile



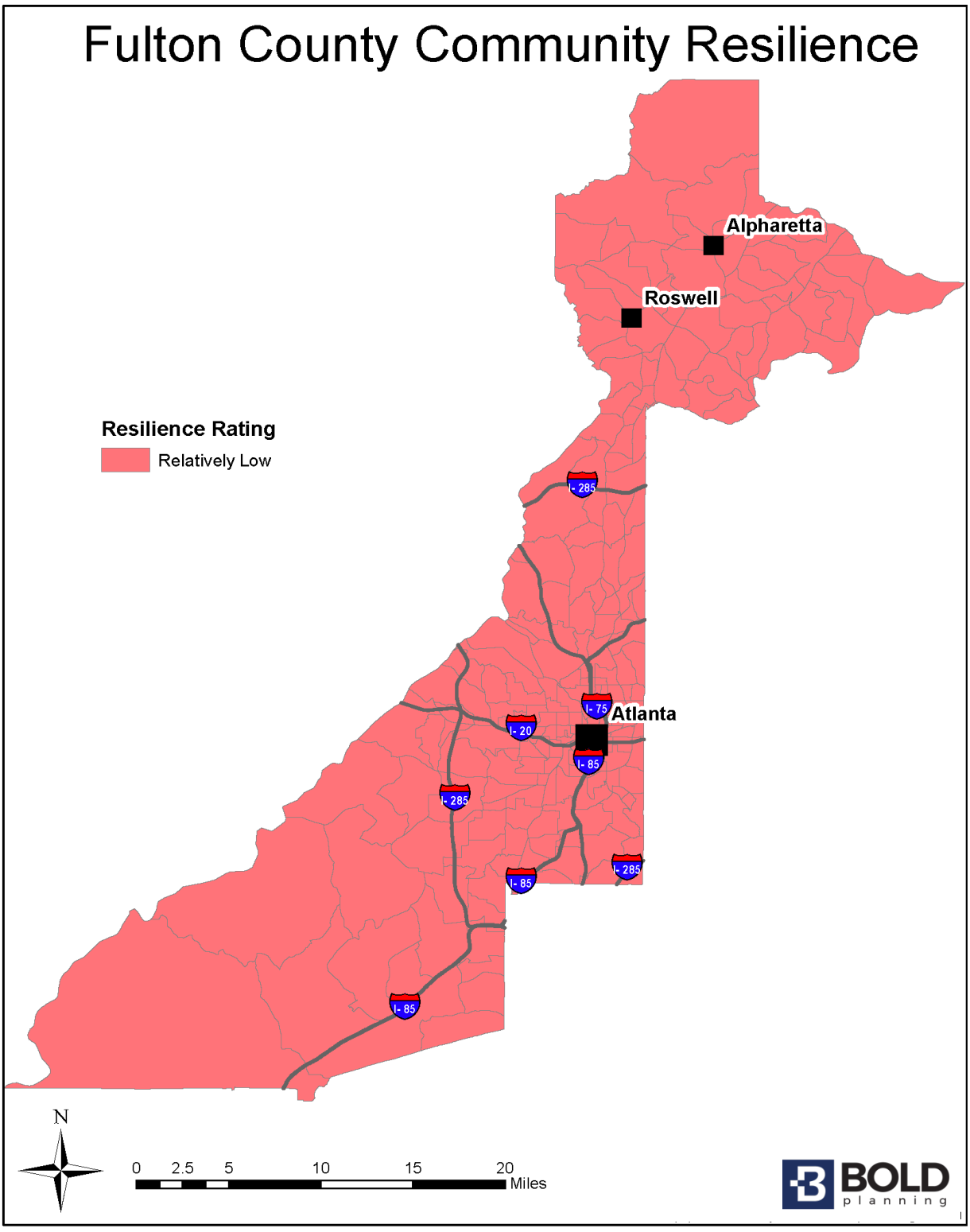
Map Source: Fulton County – Printable Maps, https://www.fultoncountyga.gov/-/media/Departments/Public-Works/Planning-Zoning-and-Permits/GIS-Interactive-Maps/CityLimits.ashx

Map 3: Fulton County Natural Risk Profile



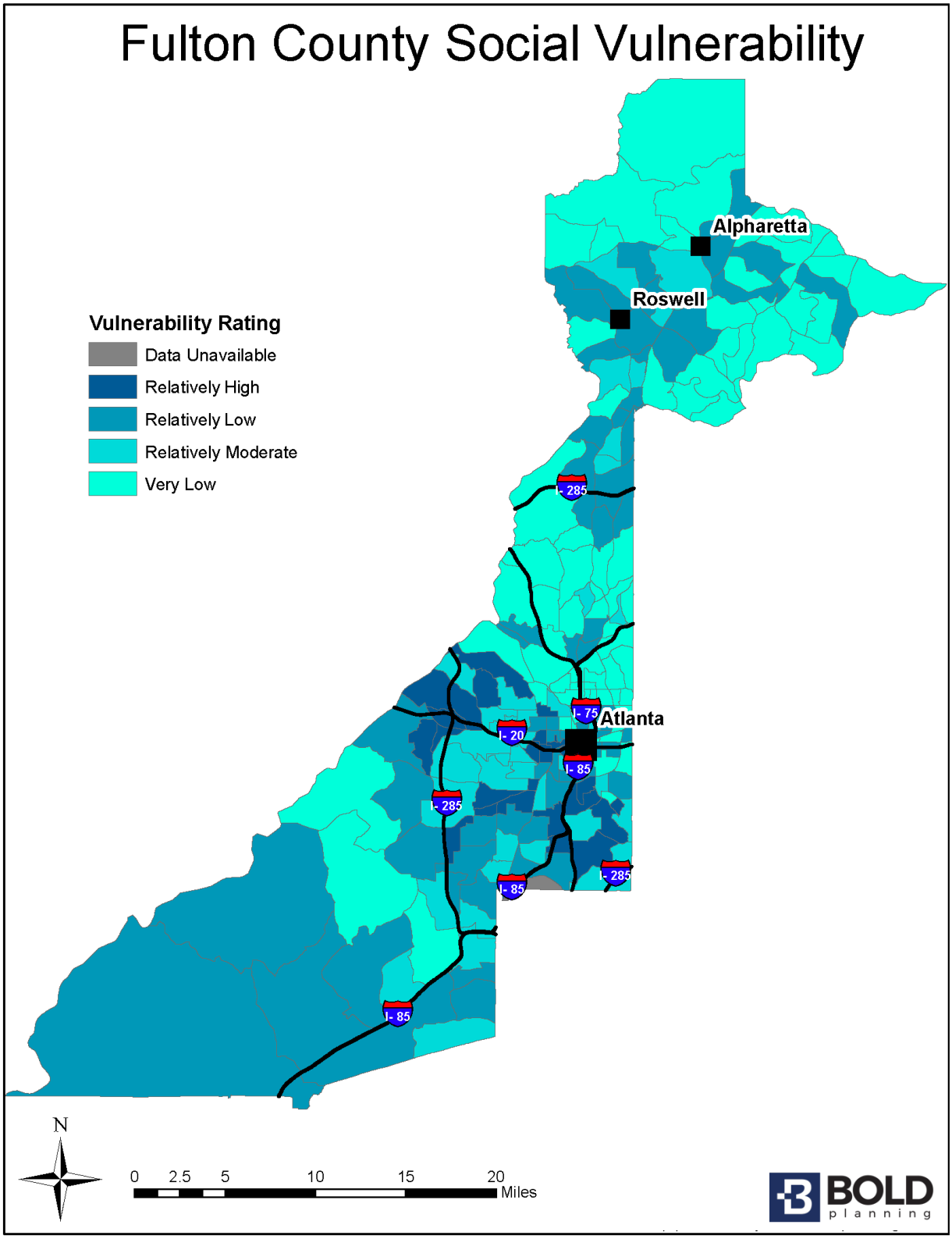
Map/Data Source: FEMA National Risk Index, https://www.fema.gov/flood-maps/products-tools/national-risk-index
Map Produced by BOLDplanning

Map 4: Fulton County Community Resilience



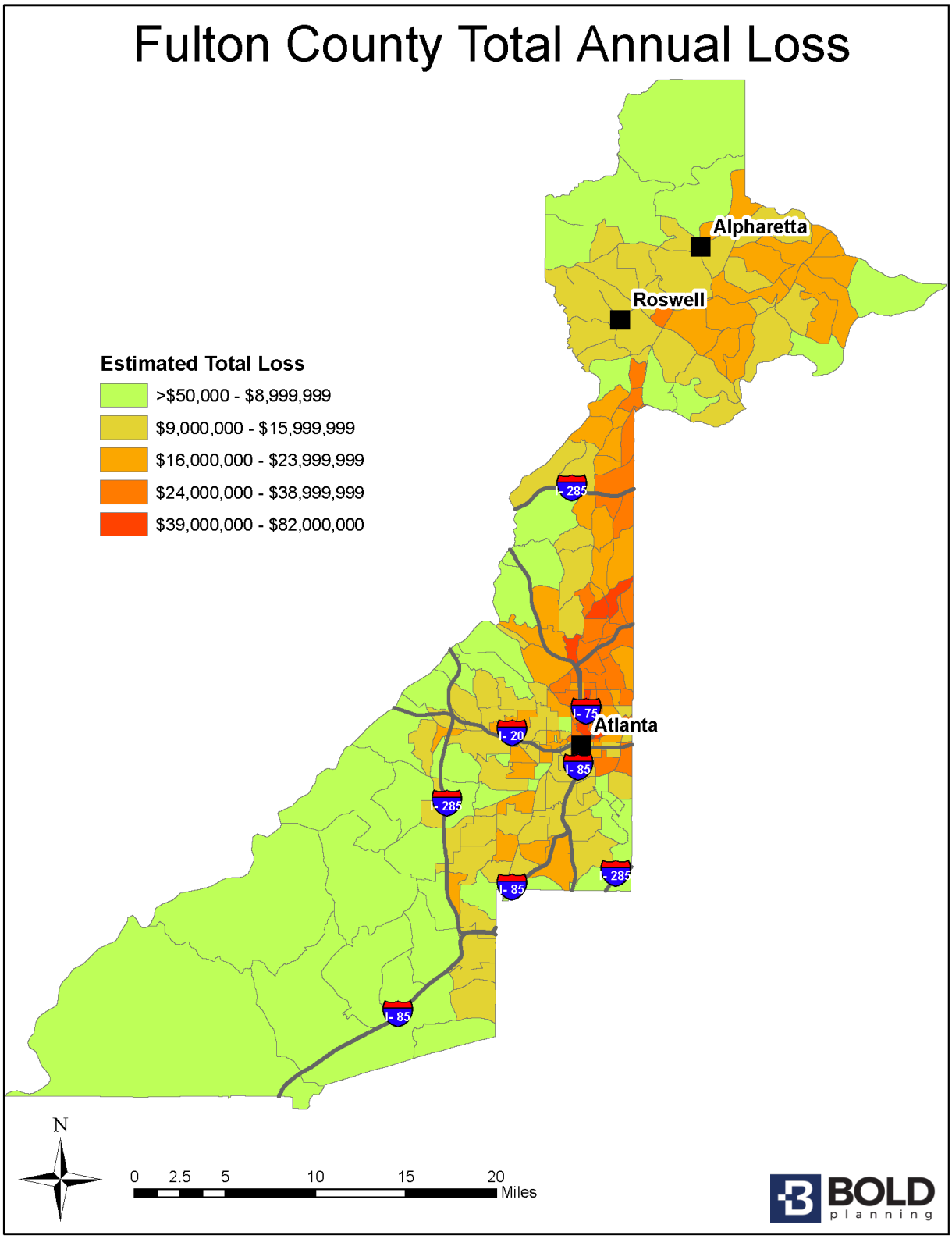
Map/Data Source: FEMA National Risk Index Map, https://www.fema.gov/flood-maps/products-tools/national-risk-index
Map Produced by BOLDplanning

Map 5: Fulton County Social Vulnerability



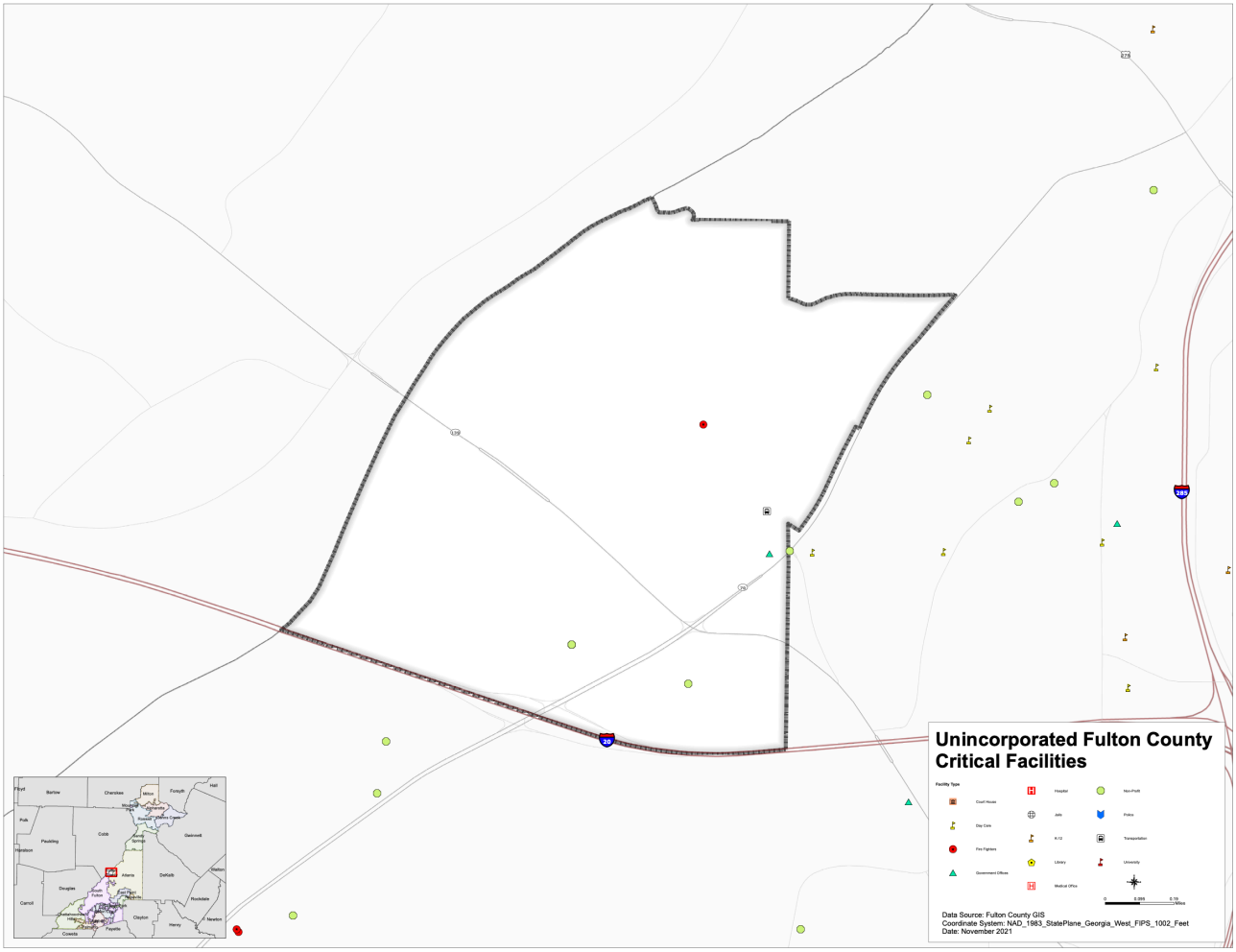
Map/Data Source: FEMA National Risk Index Map, https://www.fema.gov/flood-maps/products-tools/national-risk-index
Map Produced by BOLDplanning

Map 6: Fulton County Total Annual Loss (Estimated)



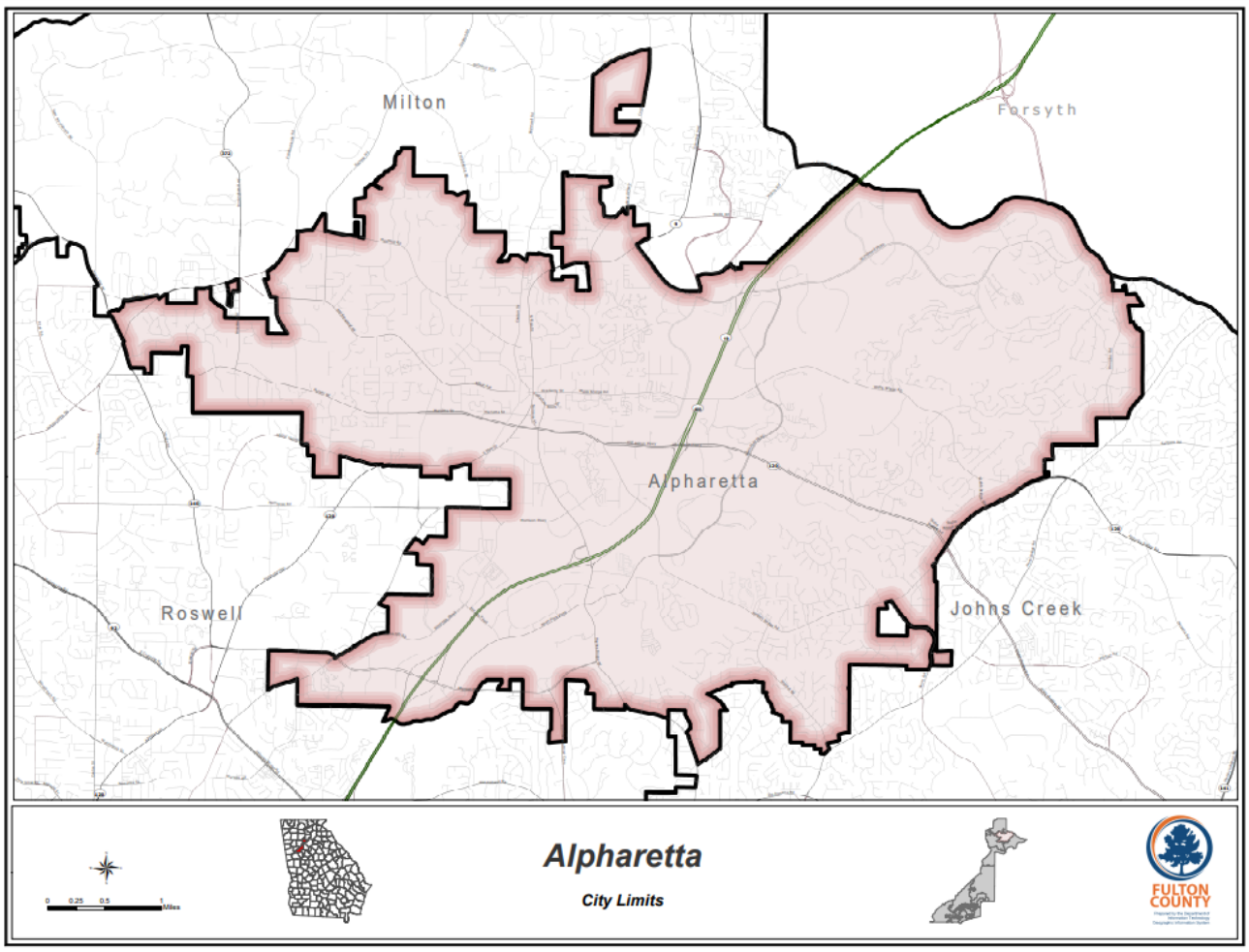
Map/Data Source: FEMA National Risk Index, https://www.fema.gov/flood-maps/products-tools/national-risk-index
Map Produced by BOLDplanning

Map 7: Unincorporated Fulton County



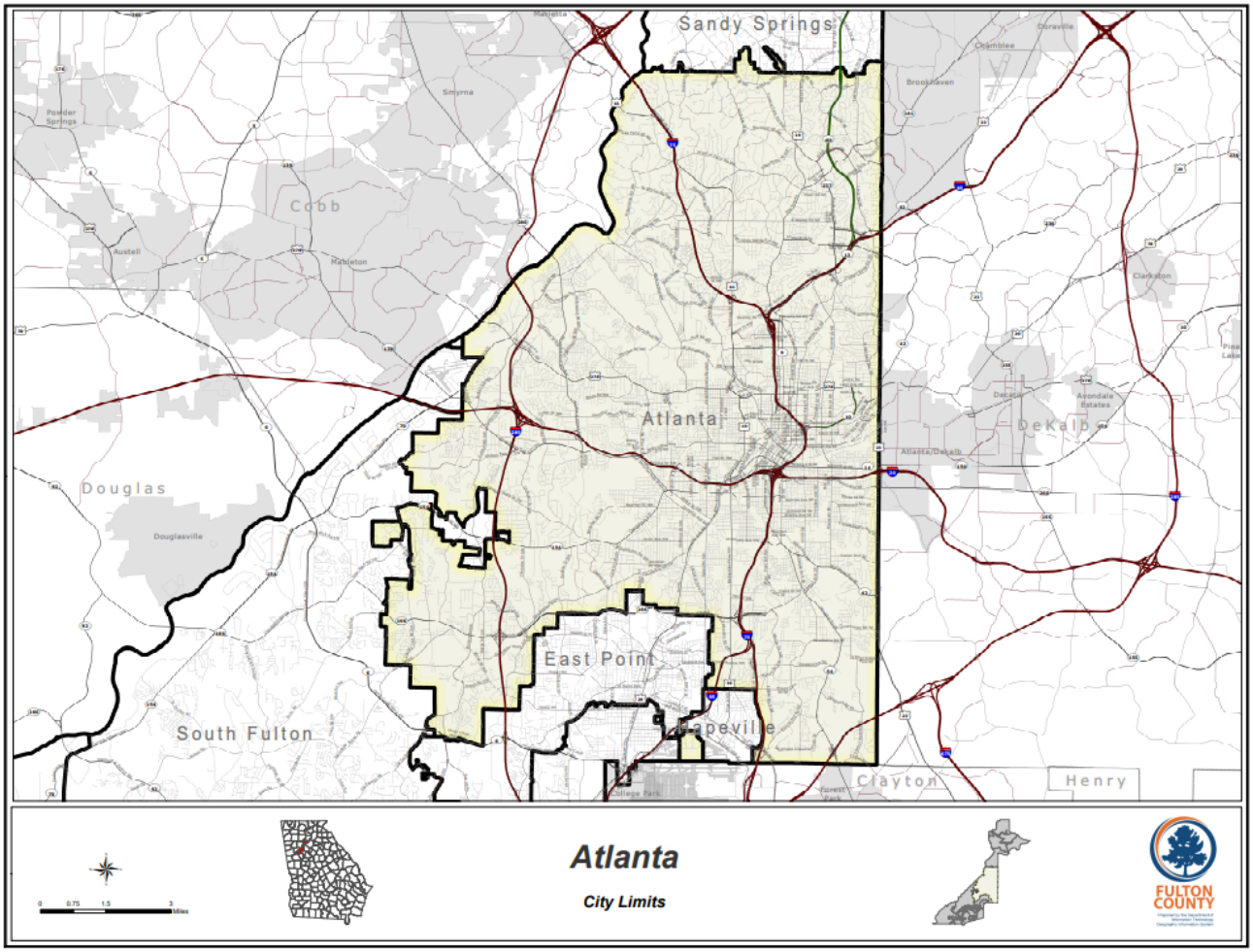
Map Source: Fulton County and/or AFCEMA

Map 8: City of Alpharetta, GA – Community Profile



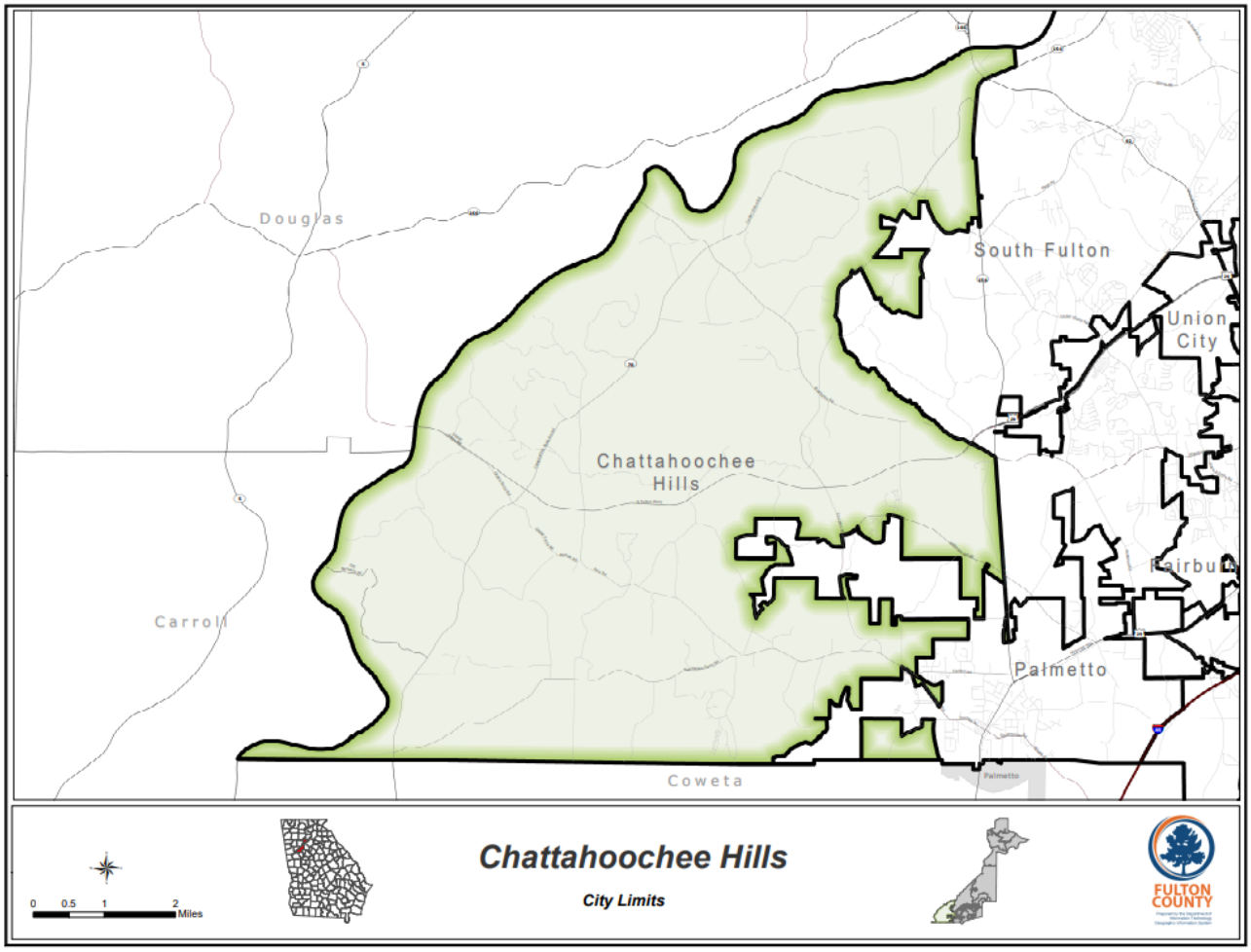
Map Source: City Alpharetta, Department of Information Technology Geographic Information System

Map 9: City of Atlanta, GA – Community Profile



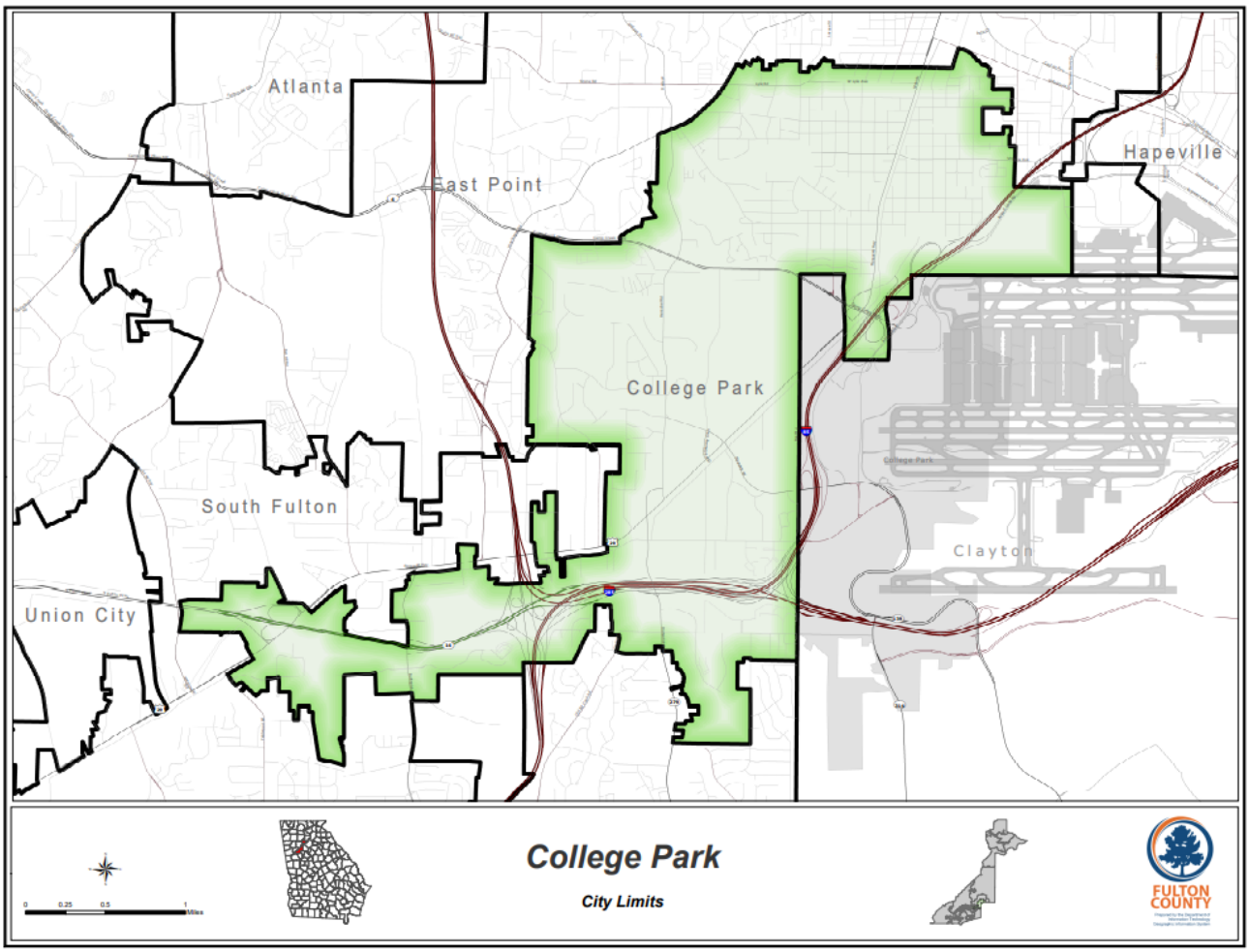
Map Source: City of Atlanta, Department of Information Technology Geographic Information System

Map 10: City of Chattahoochee Hills, GA – Community Profile



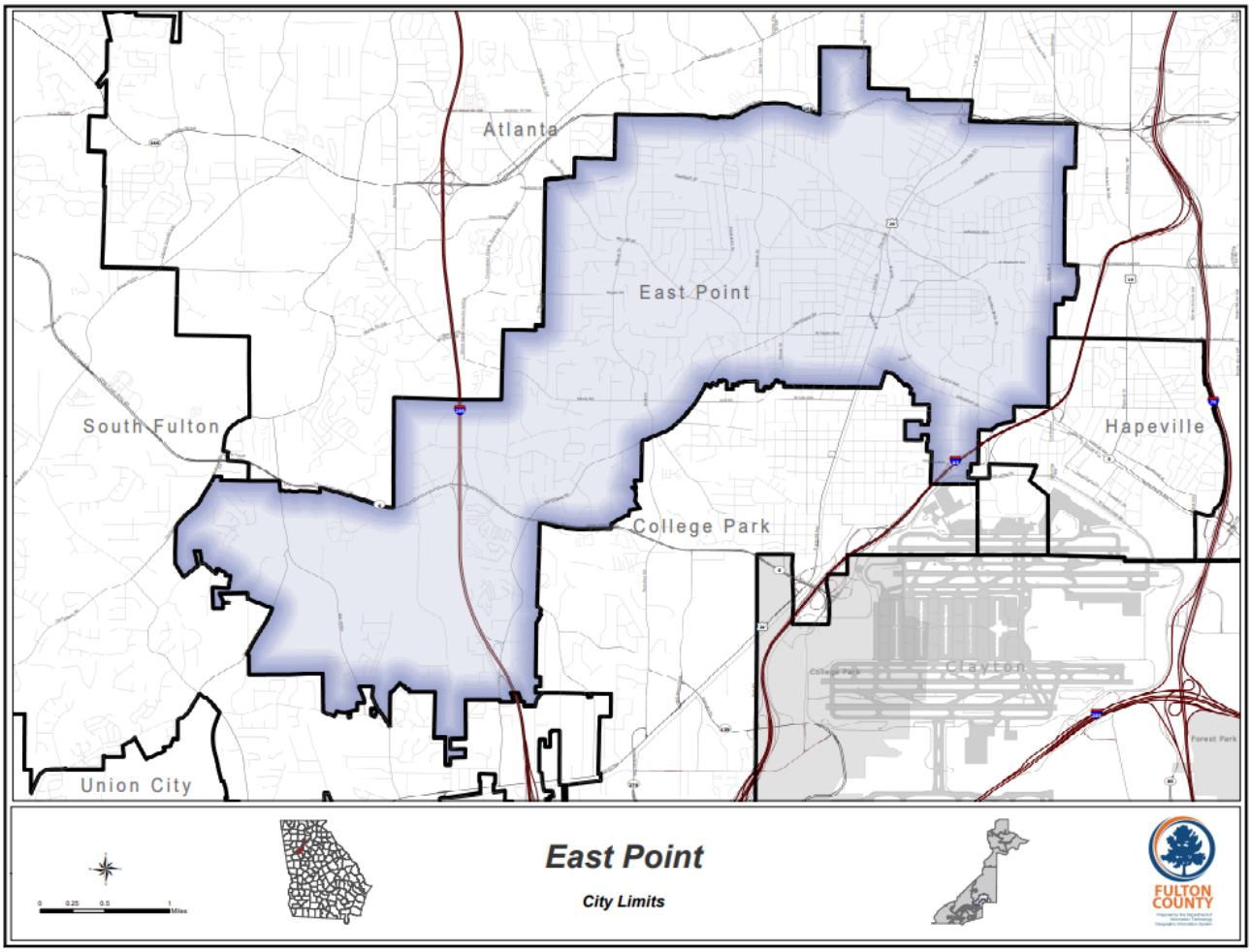
Map Source: City of Chattahoochee Hills GA, Department of Information Technology Geographic Information System

Map 11: City of College Park, GA, Community Profile



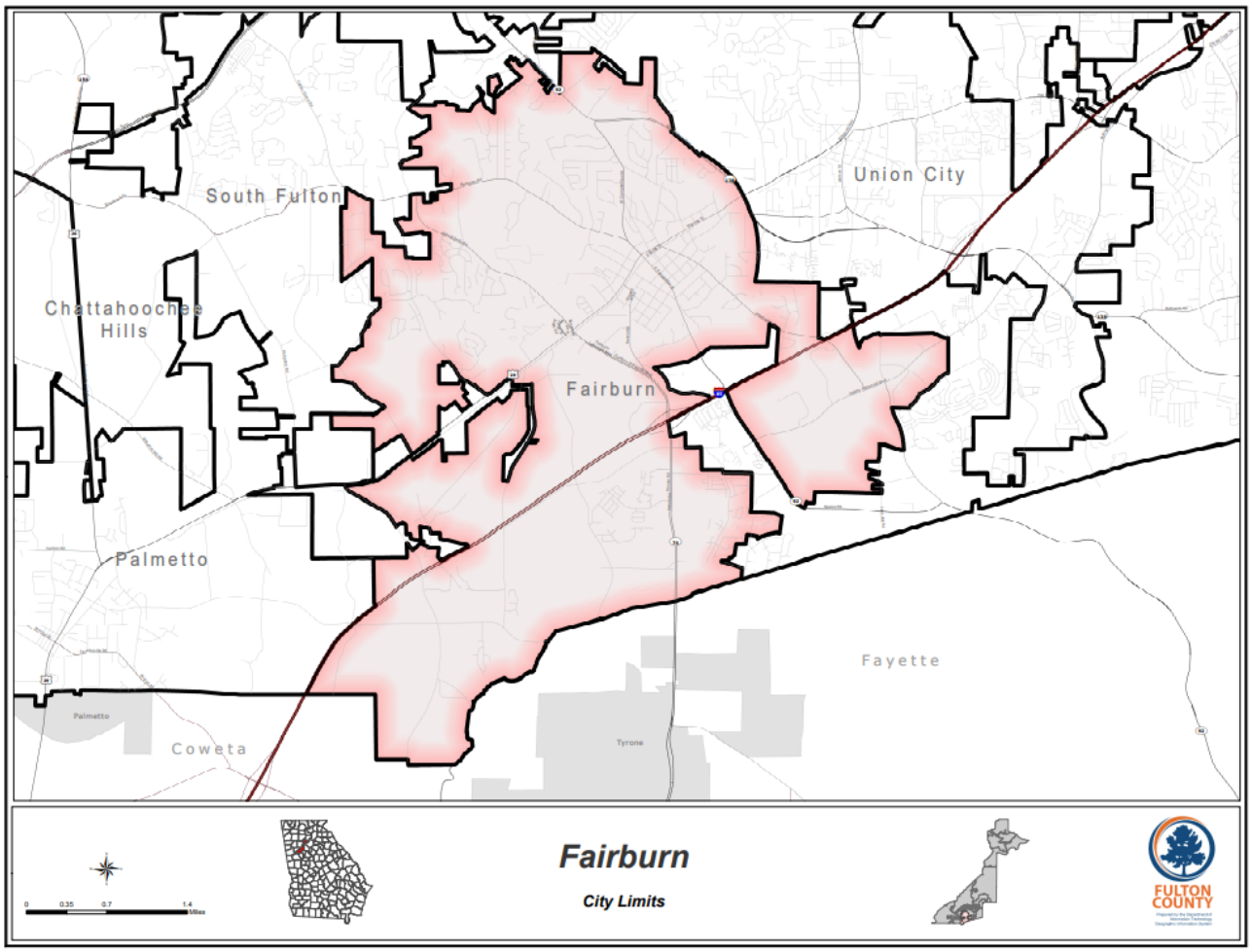
Map Source: City of College Park, GA, Department of Information Technology Geographic Information System

Map 12: City of East Point, GA – Ward Map, Community Profile



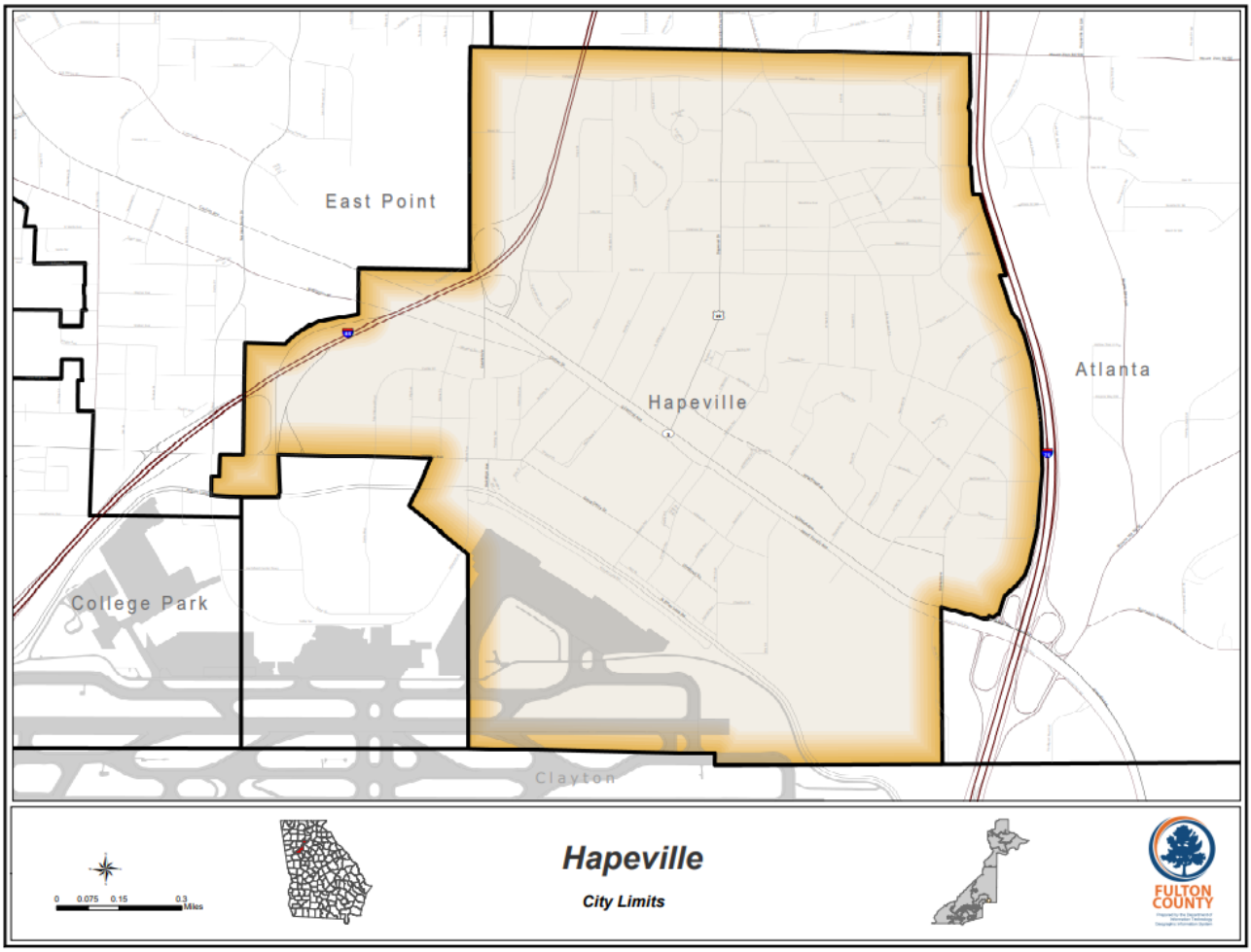
Map Source: City of East Point, GA, Department of Information Technology Geographic Information System

Map 13: City of Fairburn, GA, Community Profile



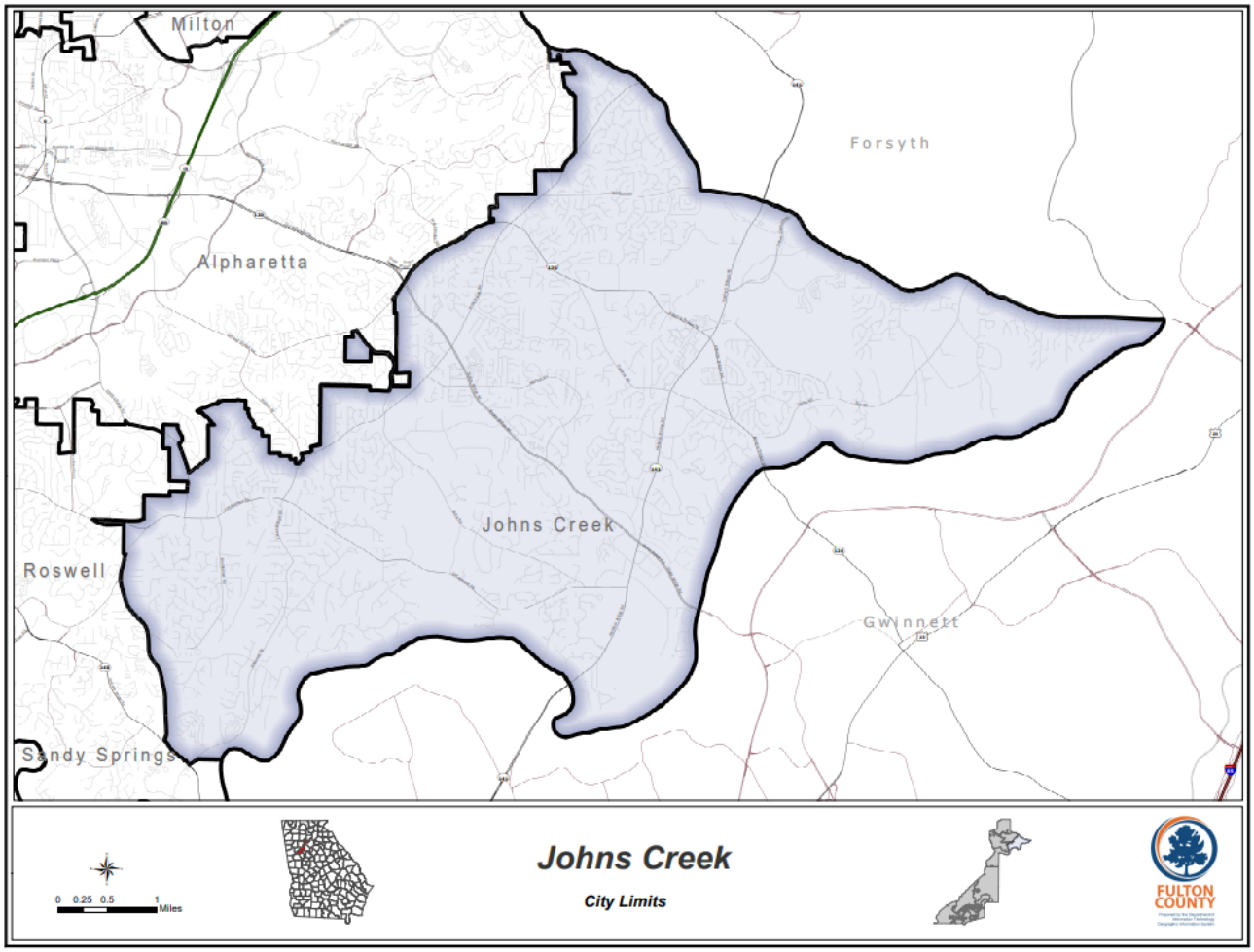
Map Source: City of Fairburn, GA, Department of Information Technology Geographic Information System

Map 14: City of Hapeville, GA (Official Major Street Plan Map), Community Profile



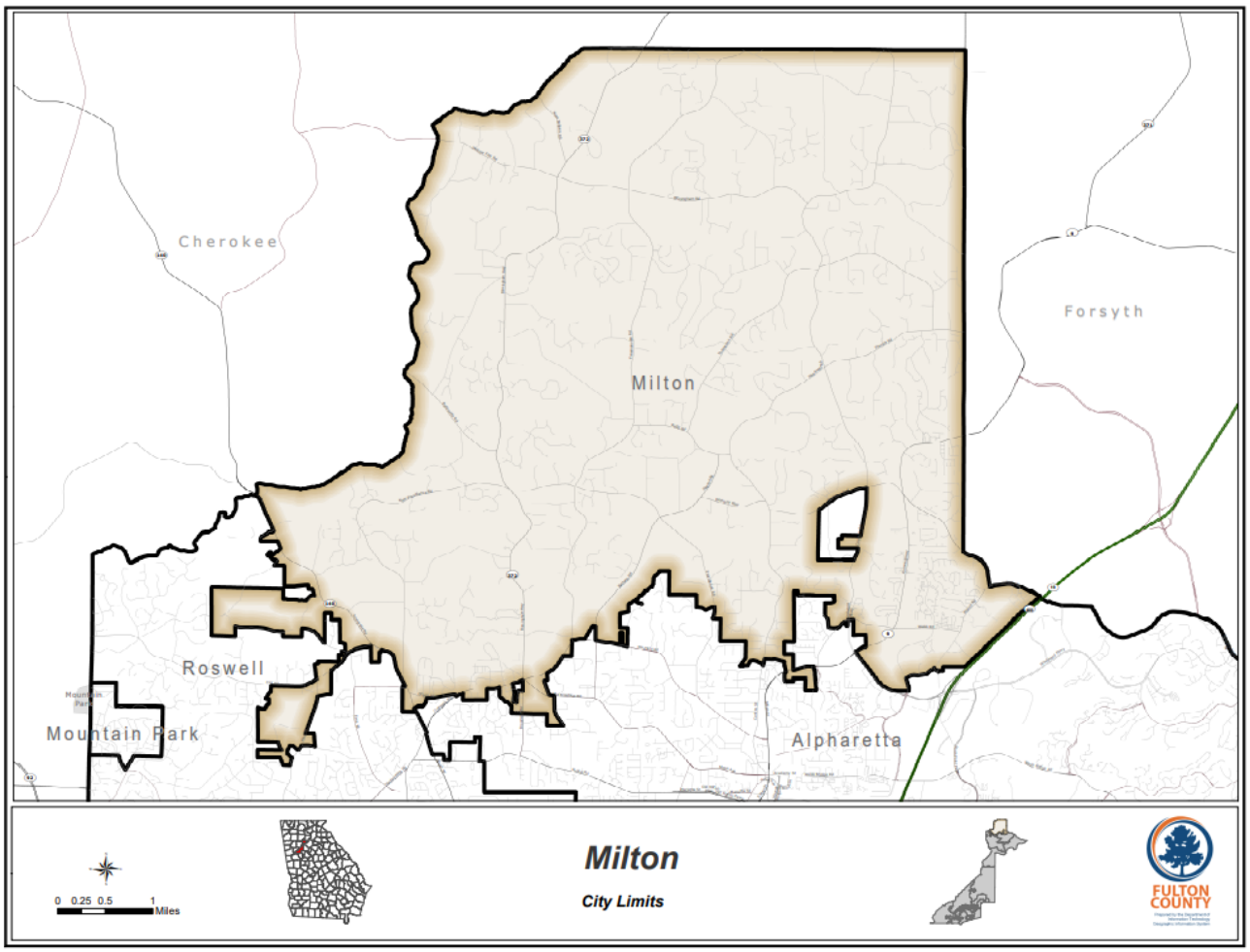
Map Source: City of Hapeville, GA, Department of Information Technology Geographic Information System

Map 15: City of Johns Creek, GA – Community Profile



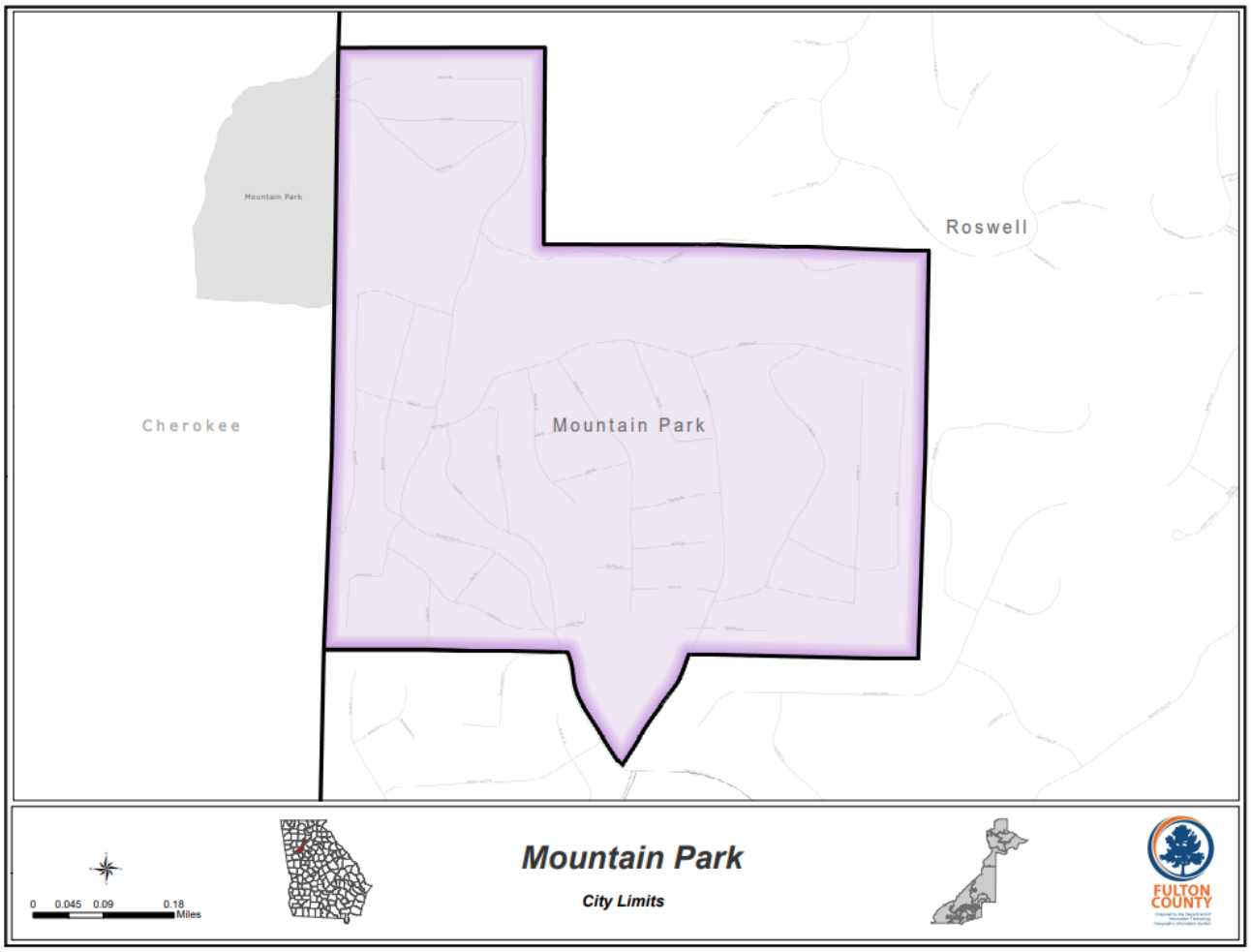
Map Source: City of Johns Creek, Map Gallery, Department of Information Technology Geographic Information System

Map 16: City of Milton, GA – Community Profile



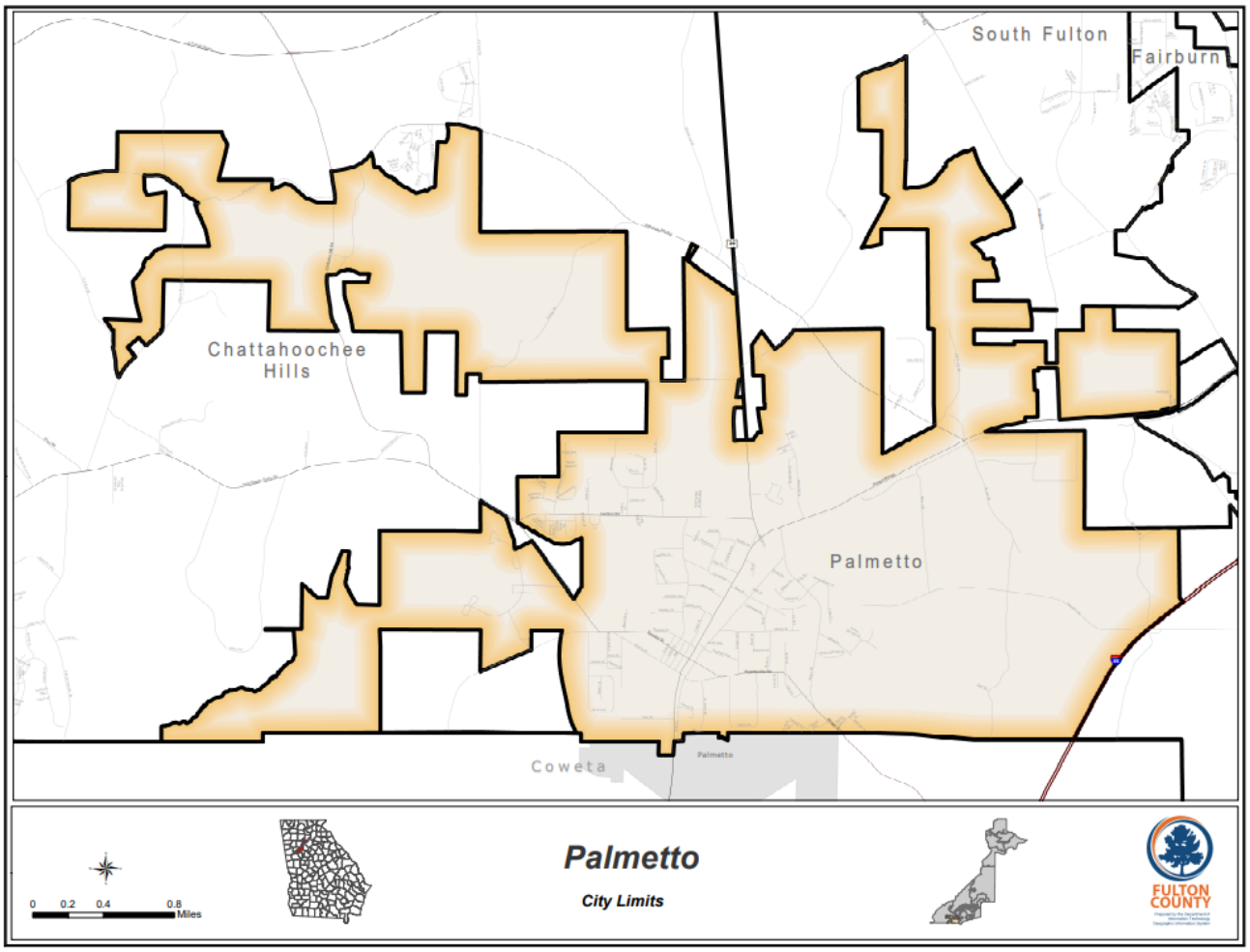
Map Source: City of Milton, Department of Information Technology Geographic Information System

Map 17: City of Mountain Park – Community Profile



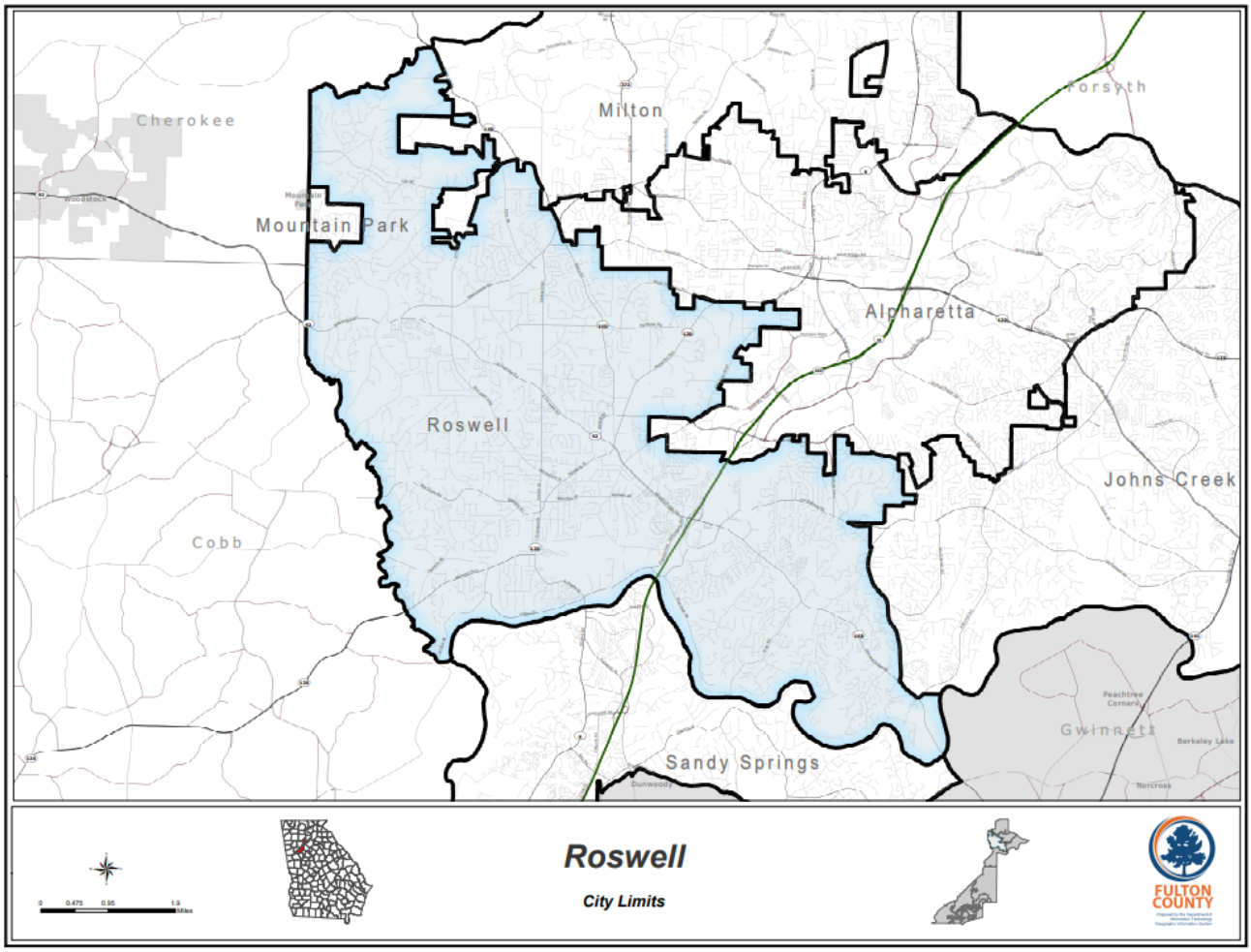
Map Source: City of Mountain Park, GA, Department of Information Technology Geographic Information System

Map 18: City of Palmetto, GA – Community Profile



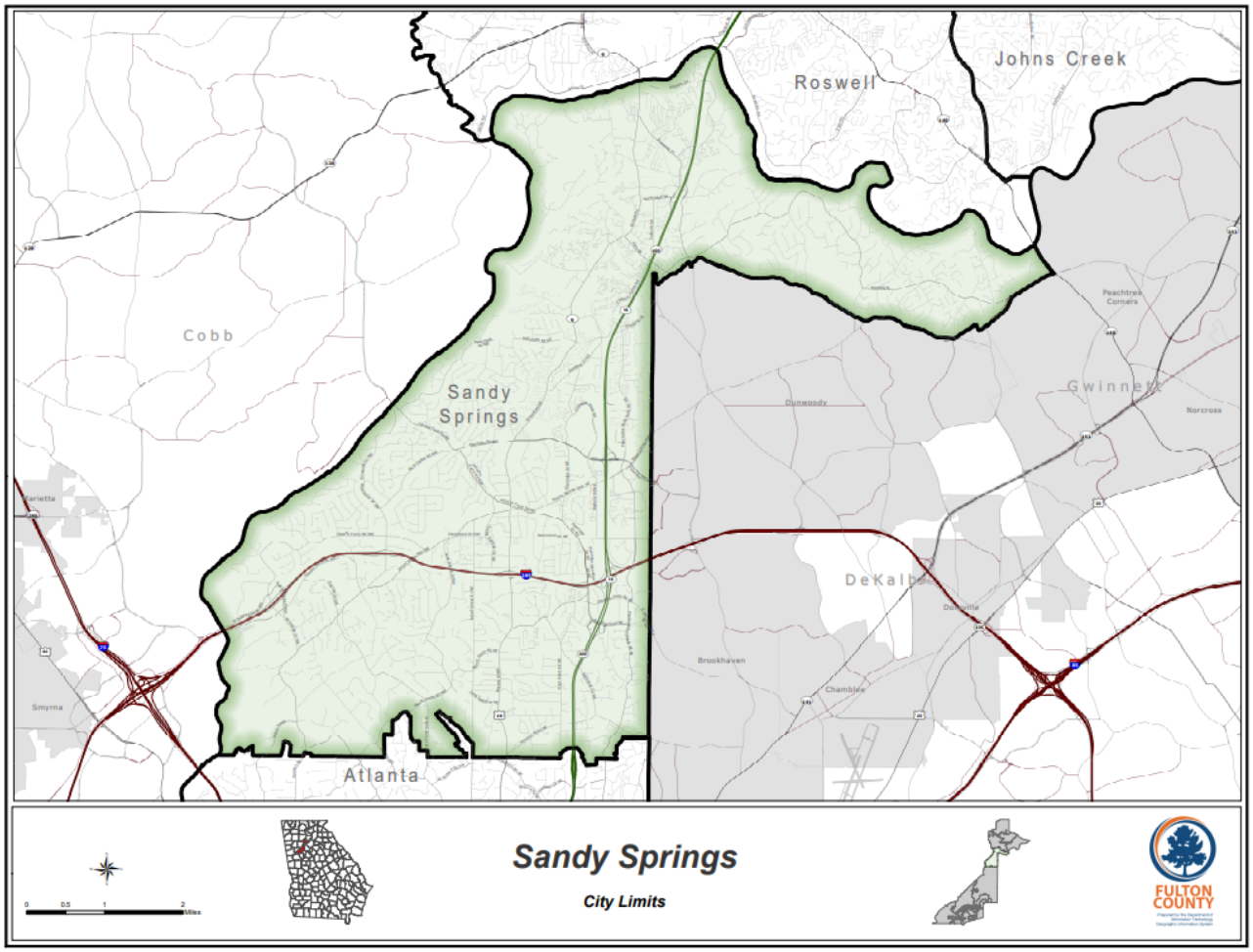
Map Source: City of Palmetto, Department of Information Technology Geographic Information System

Map 19: City of Roswell, GA – Community Profile



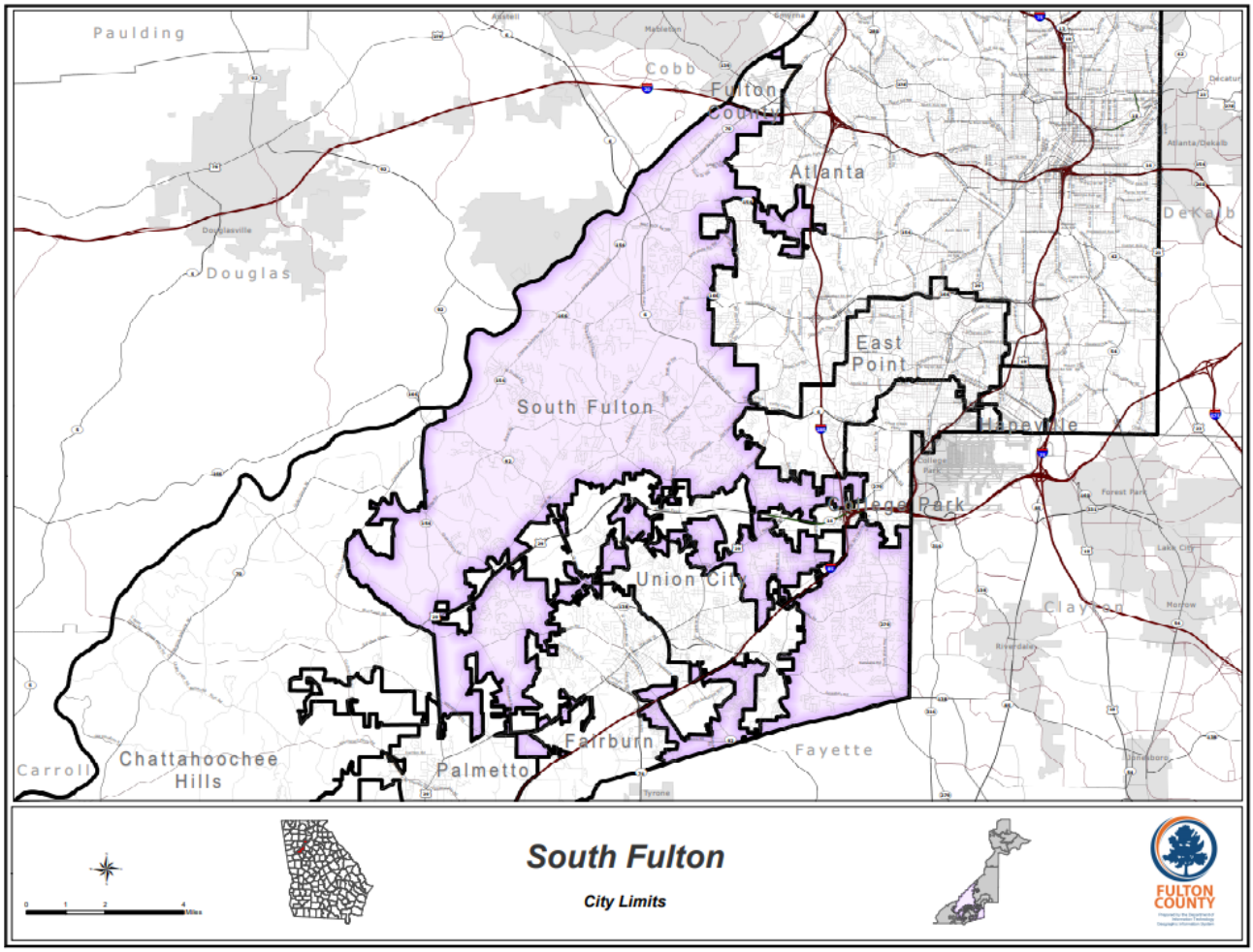
Map Source: City of Roswell, GA, Department of Information Technology Geographic Information System

Map 20: City of Sandy Springs, GA – Community Profile



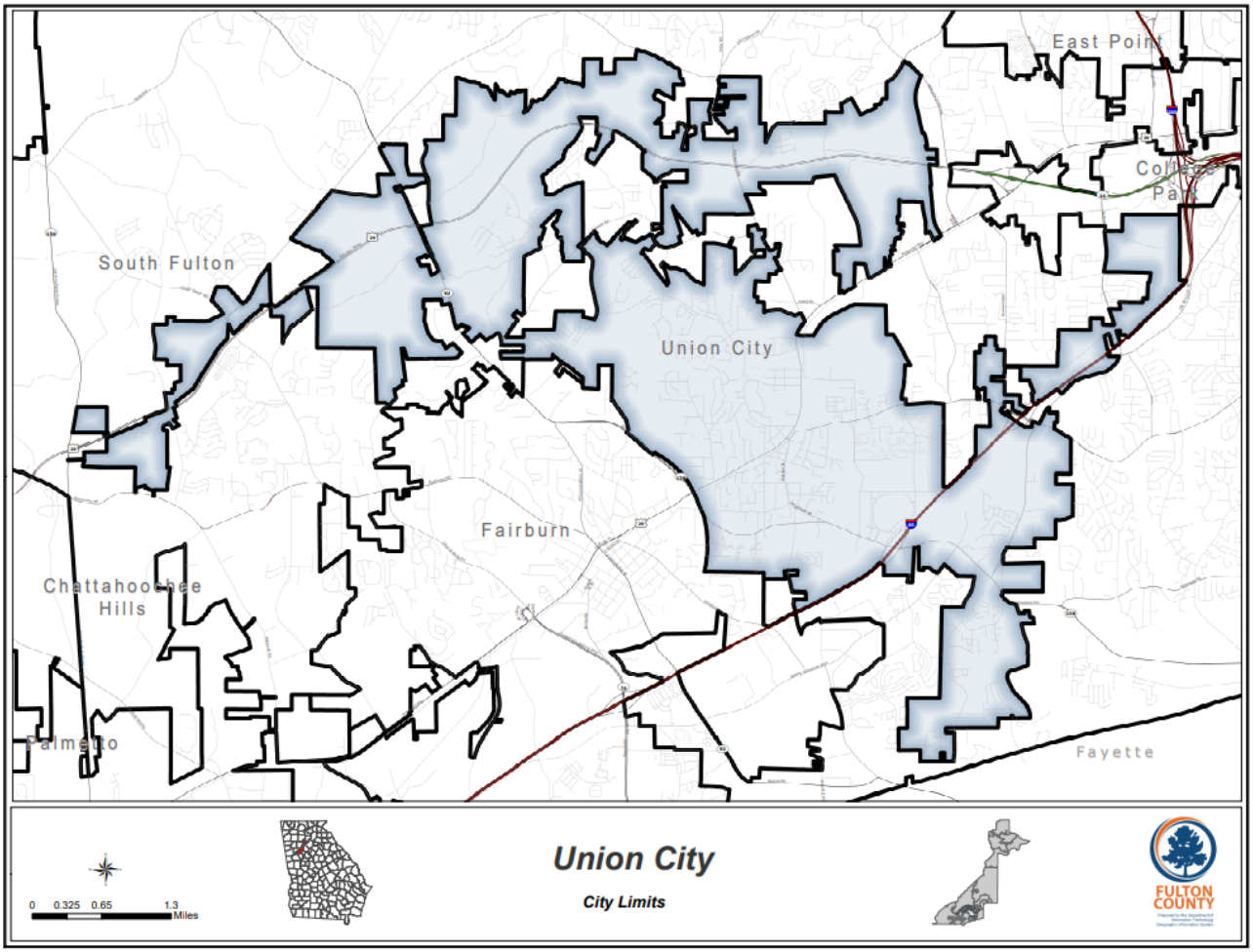
Map Source: City of Sandy Springs, GA, Department of Information Technology Geographic Information System

Map 21: City of South Fulton, GA – Community Profile



Map Source: City of South Fulton, Department of Information Technology Geographic Information System

Map 22: City of Union City, GA – Community Profile



Map Source: City of Union City, Department of Information Technology Geographic Information System

3.2 – Land Use & Development

As previously mentioned, Fulton County was originally carved from DeKalb County, Georgia, and formally established in 1853. Today, it is part of the thriving Metro Atlanta area, and encompasses 526.6 square miles of land area. Its population, as of the 2020 Decennial Census, is 1,066,710, which is up 15.7% from 2010 (population 920,581).

Significant changes have taken place to the jurisdictional boundaries within Fulton County over the last two decades. Five new municipalities were incorporated: the City of Sandy Springs (December 2005), the cities of Johns Creek and Milton (December 2006), the City of Chattahoochee Hills (December 2007), and most recently, the City of South Fulton (November 2017).

With the U.S. Census Bureau reporting 4,289 building permits issued in 2020, new construction and structural improvements continue at a steady pace throughout Fulton County. It presently follows the Updated Georgia State Minimum Standard Codes, which went into effect on January 1, 2020.

As required by state statute, (OCGA 50-8-7.1 et seq.), every local government in Georgia is required to have a comprehensive plan. And the 2014 update to the Minimum Standards and Procedures for Local Comprehensive Planning, https://www.gacities.com/GeorgiaCitiesSite/media/PDF/DCA-Minimum-Standards-Local-Comprehensive-Planning.pdf, requires that each government update its comprehensive plan at least once every five years.

Three elements are required for every community's plan: Community Goals, Needs and Opportunities, and the Community Work Program. Additional elements may also be required based upon local conditions within the specific community. Examples of optional elements include Infrastructure and Community Facilities, Natural Resources, Community Sustainability, Disaster Resilience, Education, Greenspace, Historic and Cultural Resources, Human Services, Intergovernmental Coordination, Public Safety, Recreation, and Solid Waste Management.

Following are the links to all participating jurisdictions' comprehensive plans:

- Fulton County, https://www.fultoncountyga.gov/inside-fulton-county/fulton-county-departments/public-works/planning-zoning-and-permitting/2035-comp-plan
- Alpharetta (City), https://www.alpharetta.ga.us/docs/default-source/publications/comprehensive-plan/alpharetta-comprehensive-plan-2040.pdf?sfvrsn=7492ccab_8
- Atlanta (City), https://www.atlantaga.gov/government/departments/city-planning/office-of-zoning-development/zoning/2016-comprehensive-development-plan-cdp, and 2021 draft, https://www.dca.ga.gov/sites/default/files/2021.10.29.atlantacompplanupdate_adopted.pdf
- Chattahoochee Hills (City), https://www.dca.ga.gov/sites/default/files/chattahoochee_hills_ci_plan_update_2016_0.pdf
- College Park (City), https://www.dca.ga.gov/sites/default/files/college_park_ci_plan_update_2016_0.pdf
- East Point (City), https://www.dca.ga.gov/sites/default/files/2018.03.19_eastpointcompplanadopted.pdf
- Fairburn (City), https://www.dca.ga.gov/sites/default/files/2021.09.01.cityoffairburn.2020compplanupdate_adopted.pdf
- Hapeville (City), https://www.hapeville.org/DocumentCenter/View/106/Comprehensive-Plan-2025---Final?bidId=

- Johns Creek (City), https://www.dca.ga.gov/sites/default/files/johnscreekcicompplan_adopted_2018_reduced.pdf
- Milton (City), https://dca.ga.gov/sites/default/files/milton_city_of_comp_plan_update_cag_2011.pdf
- Mountain Park (City), https://www.dca.ga.gov/sites/default/files/2021.10.26.cityofmountainpark.comprehensiveplanupdate_adopted.pdf
- Palmetto (City), https://www.dca.ga.gov/sites/default/files/palmetto_ci_plan_update_2017.pdf
- Roswell (City), https://www.roswellgov.com/home/showpublisheddocument/7726/637704973639930000
- Sandy Springs (City), https://www.dca.ga.gov/sites/default/files/2017.04.17.sandyspringscompplanadopted_reducedsizefordca.pdf
- South Fulton (City), https://www.cityofsouthfultonga.gov/DocumentCenter/View/4967/2035-Fulton-County-Comprehensive-Plan- ***(Note:** This plan was developed prior to the City of South Fulton's incorporation in November 2017. It is currently being updated to reflect the city's planning efforts v. those of unincorporated Fulton County.)*
- Union City (City), https://www.dca.ga.gov/sites/default/files/2021.05.13.cityofunioncity.compplanupdate_adopted.pdf

In addition to local comprehensive plans, the State of Georgia, which is divided into 12 planning regions, requires Regional Plans to aid with future land use and development. Regional Plans are a guide for future decision-making that address critical regional issues and opportunities and provide a framework for advancing the state's planning goals. Regional Plans are also wider in scope than local plans, and deal with broader issues that involve a variety of entities, including state and federal agencies, local governments, and private organizations. Each of Georgia's twelve Regional Commissions develops a regionally specific plan, which must be approved by DCA and adopted by its Regional Council. (Georgia Department of Community Affairs, https://www.dca.ga.gov/local-government-assistance/planning/regional-planning/regional-comprehensive-planning).

Fulton County lies within the Atlanta Planning region, which also includes Cherokee, Clayton, Cobb, DeKalb, Douglas, Fayette, Forsyth, Gwinnett, Henry, and Rockdale counties, and the City of Atlanta. Information pertaining to the Atlanta Planning region's Comprehensive Plan is available online at: https://www.dca.ga.gov/node/2767. *(**Note**: The 2016 plan is currently in the process of being updated.)*

With the Atlanta Regional Commission, https://www.atlantaregional.org, predicting Fulton County's population to grow by as many as 462,745 by 2050, the information within the plans is essential to making meaningful, long-term decisions pertaining to community development. This includes mitigating the hazards that pose risk to all and/or portions of the planning area. A hazard-specific analysis, as it relates to land use and development trends within Fulton County, is included within each identified hazard in Section 4 – Hazard Risk Assessment.

As explained by the Georgia Municipal Association, https://www.gacities.com/Resources/GMA-Handbooks-Publications/Handbook-for-Georgia-Mayors-and-Councilmembers/Part-Three-MANAGEMENT-of-MUNICIPAL-GOVERNMENT/Planning-and-Land-Use.aspx, the placement of certain infrastructure, i.e., roads and bridges, water/sewer/stormwater facilities, schools and libraries, police/fire/EMS facilities, and parks and recreation facilities, determine in large part where future development will go as well. Land adjacent to public investment is more easily developed and is more

likely to be converted from agriculture, conservation, or another "green" use to a more intensive use when public facilities become available. For this reason, city leaders should be careful to avoid environmentally sensitive areas when choosing the location of common infrastructure.

Unfortunately, several major environmental problems associated with rapid land development persist within the planning area. Among them are the loss of trees and other vegetation, loss of wildlife habitat, poor air quality, and the creation of severe micro-climates, e.g., urban heat islands. Of equal concern is reduced water quality since the Chattahoochee River is the source of drinking water for most of Fulton County. Additionally, the conversion of undeveloped land to impervious surfaces has significantly increased storm water runoff, which directly impacts the quality and flow of Fulton County's streams.

All participating jurisdictions within Fulton County participate in the National Flood Insurance Program (NFIP). Fulton County and the Cities of Atlanta, College Park, East Point, Johns Creek, and Roswell participate in the Community Rating System (CRS). There are currently 351 properties identified as Repetitive Loss (RL) or Severe Repetitive Loss (SRL). See Section 4 (FL) – Flood for additional information.

3.3 – Critical Facilities & Infrastructure

Certain facilities have a net positive value on the community, i.e., they contribute to the public good by facilitating the basic functions of society. These facilities maintain order, public health, and education, and help the economy function. Additionally, there are infrastructure and facilities integral to disaster response and recovery operations. Conversely, some facilities and infrastructure are of extreme importance due to the negative externalities created when they are impacted by a disaster. What fits this definition will vary slightly from community to community, but the definition remains as a guideline for identifying critical facilities and infrastructure. The following table includes information pertaining to critical facilities and infrastructure within Fulton County. See Appendix C for additional details.

Table 8: Critical Facilities & Infrastructure, Fulton County

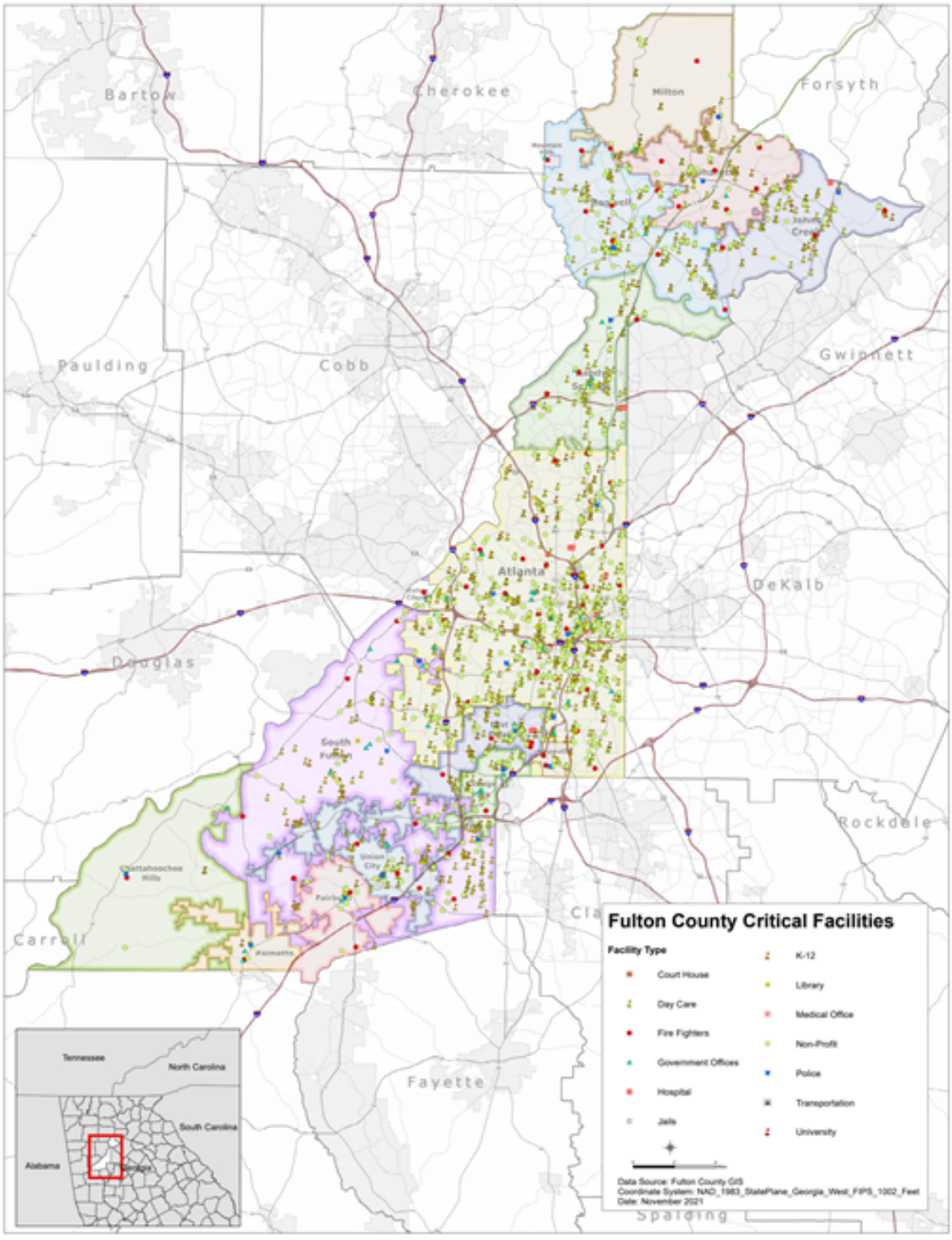
Critical Facilities & Infrastructure, Fulton County													
Jurisdiction	Court House	Daycare	Fire	Hospital	Jail	K-12	Library	Non-Profit	Police	Transportation	Medical Office	University	Gov't Office
Fulton County	0	0	1	0	0	0	0	4	0	1	0	0	1
Alpharetta (City)	0	58	6	0	0	9	1	21	1	0	0	0	2
Atlanta (City)	4	414	29	10	1	90	22	280	5	1	1	11	26
Chattahoochee Hills (City)	0	1	1	0	0	2	0	2	1	0	0	0	2
College Park (City)	0	21	2	0	0	5	1	13	1	0	0	0	4
East Point (City)	0	52	4	3	0	11	1	27	1	0	0	0	4
Fairburn (City)	0	4	3	0	0	1	1	9	1	1	0	0	2
Hapeville (City)	0	6	3	0	0	2	1	4	1	0	0	0	2
Johns Creek (City)	0	77	4	1	0	15	2	14	1	0	0	0	1
Milton (City)	0	13	4	0	0	8	1	8	1	0	0	0	1
Mountain Park (City)	0	0	1	0	0	0	0	0	0	0	0	0	1
Palmetto (City)	0	0	1	0	0	1	1	2	1	0	0	0	2
Roswell (City)	0	86	7	2	0	18	2	48	1	0	0	0	2

Critical Facilities & Infrastructure, Fulton County													
Sandy Springs (City)	0	69	3	4	0	11	1	24	1	0	0	2	5
South Fulton (City)	0	112	11	0	0	21	3	40	4	0	0	0	8
Union City (City)	0	29	3	0	1	5	0	8	1	0	0	1	1
Total	**4**	**942**	**83**	**20**	**2**	**199**	**37**	**504**	**21**	**2**	**1**	**14**	**64**

Data Source: GMIS

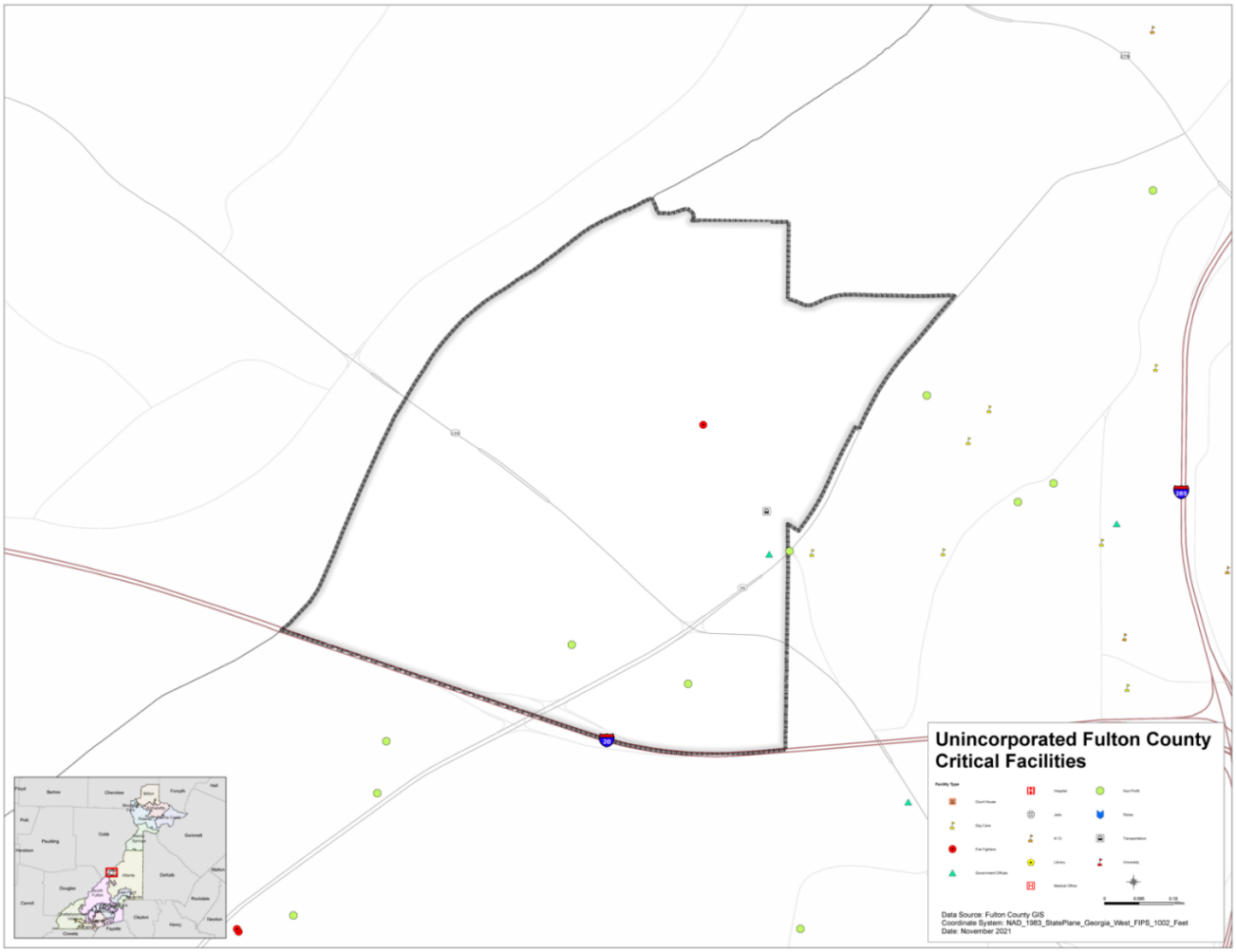
The following maps, generated by AFCEMA (GIS Department), Fulton County (GIS Department), Fulton County Schools, Atlanta Public Schools and local colleges and universities – Clark Atlanta University, Emory University, Georgia State University, Georgia Tech Institute, Morehouse College, and Spelman College in 2021, reflect critical facilities within the planning area.

Map 23: Fulton County, Critical Facilities & Infrastructure



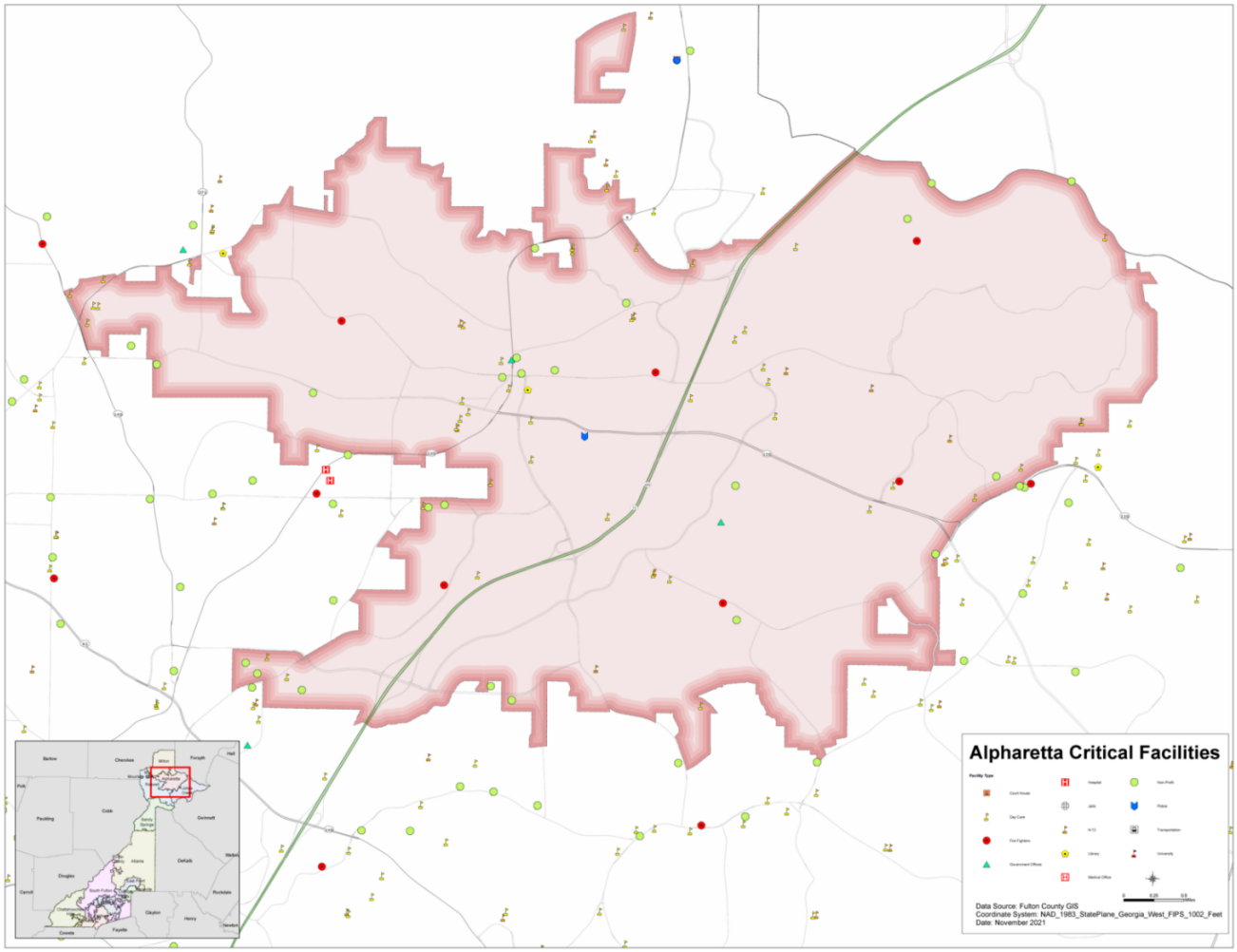
Map Source: AFCEMA (GIS Department) and/or Fulton County (GIS Department)

Map 24: Fulton County - Unincorporated, Critical Facilities & Infrastructure



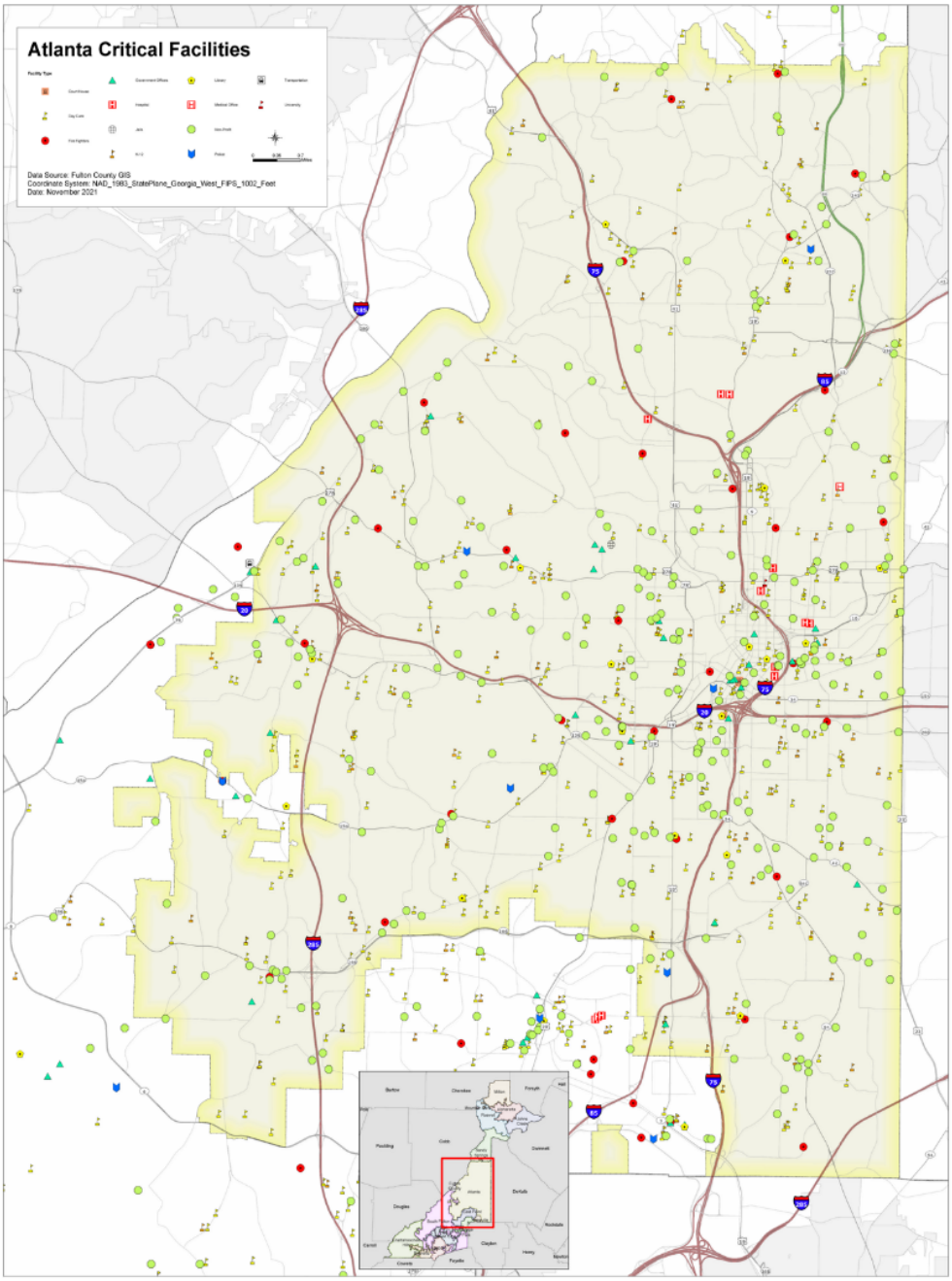
Map Source: AFCEMA (GIS Department) and/or Fulton County (GIS Department)

Map 25: City of Alpharetta, Critical Facilities & Infrastructure



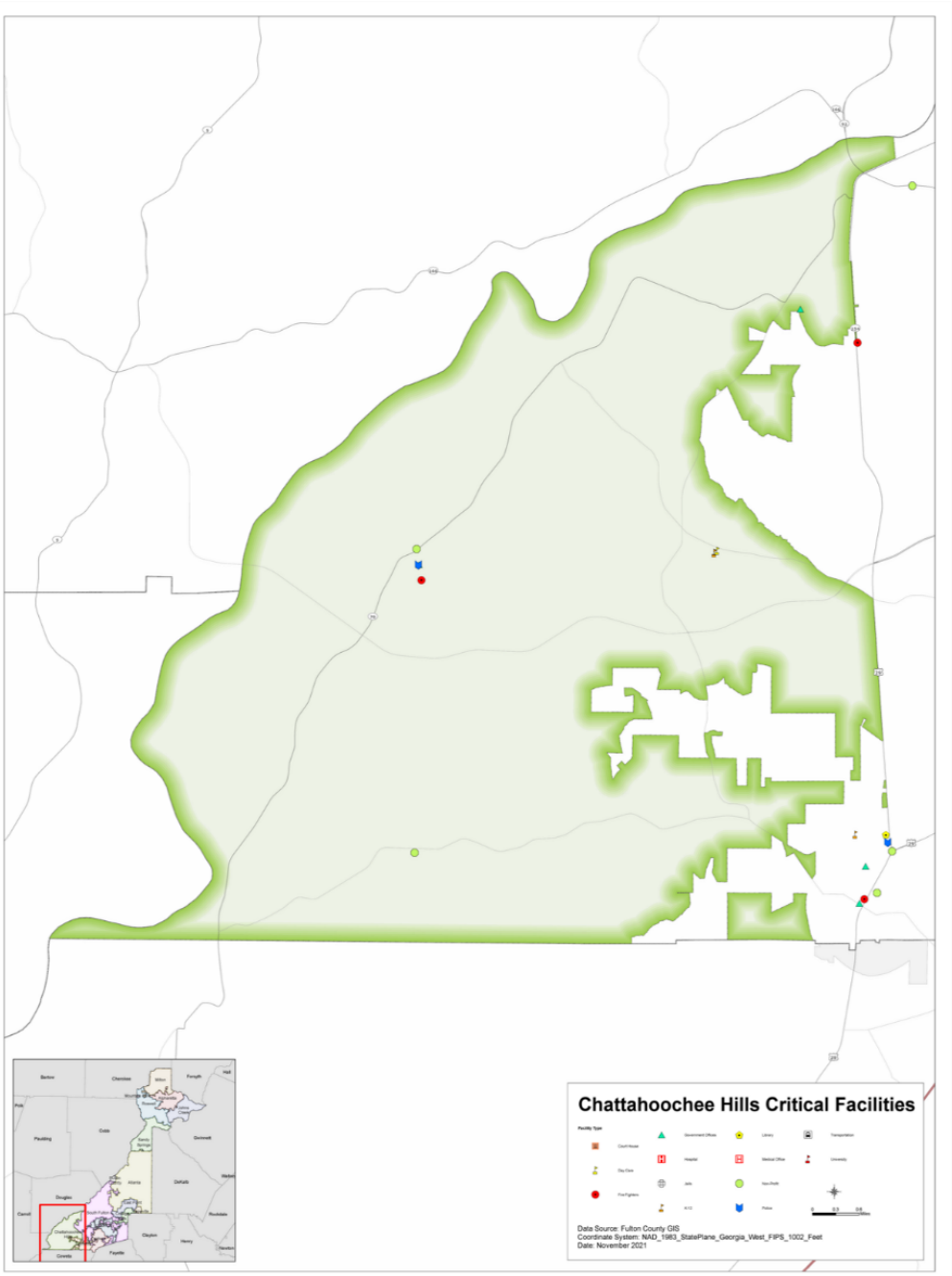
Map Source: AFCEMA (GIS Department) and/or Fulton County (GIS Department)

Map 26: City of Atlanta, Critical Facilities & Infrastructure



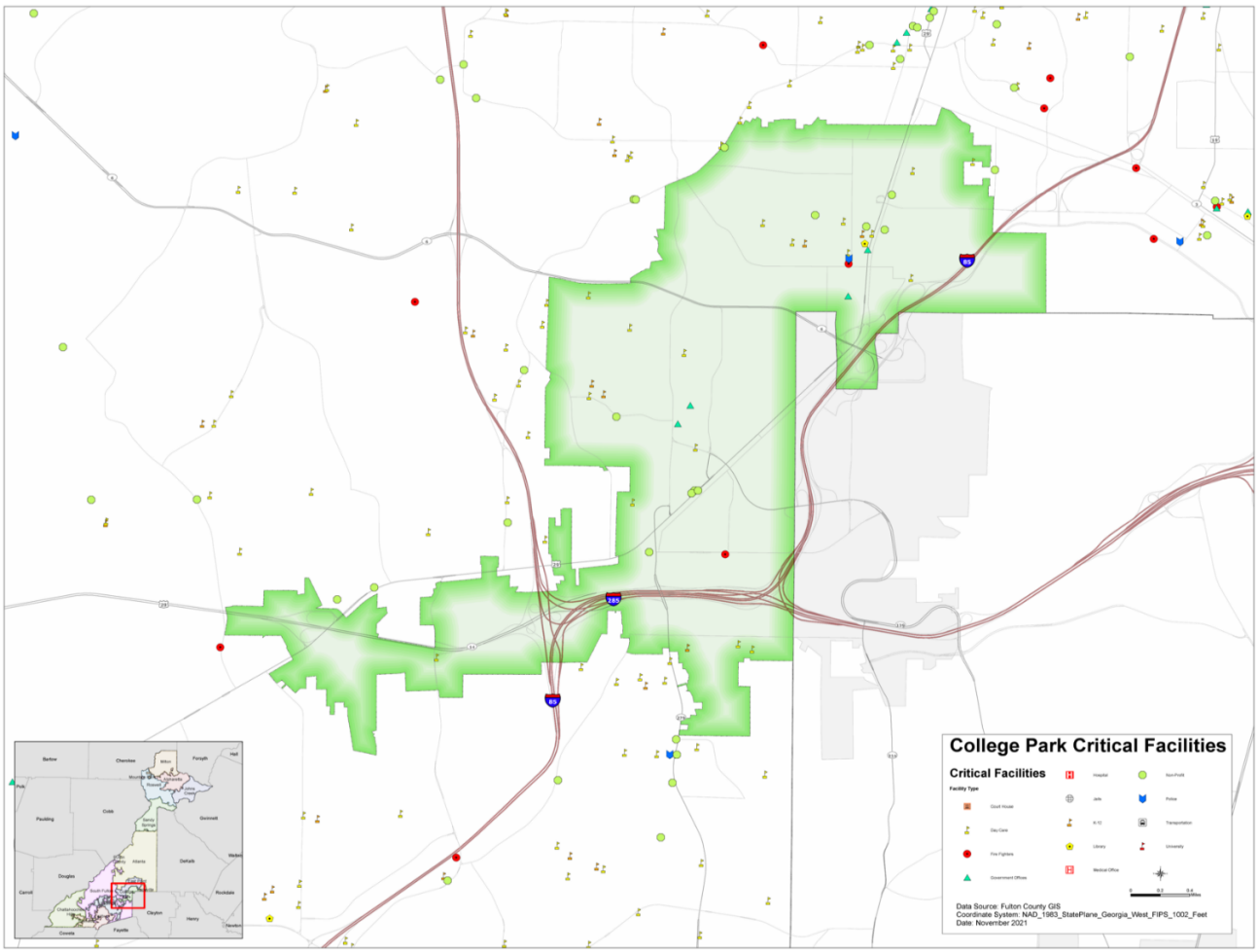
Map Source: AFCEMA (GIS Department) and/or Fulton County (GIS Department)

Map 27: City of Chattahoochee Hills, Critical Facilities & Infrastructure



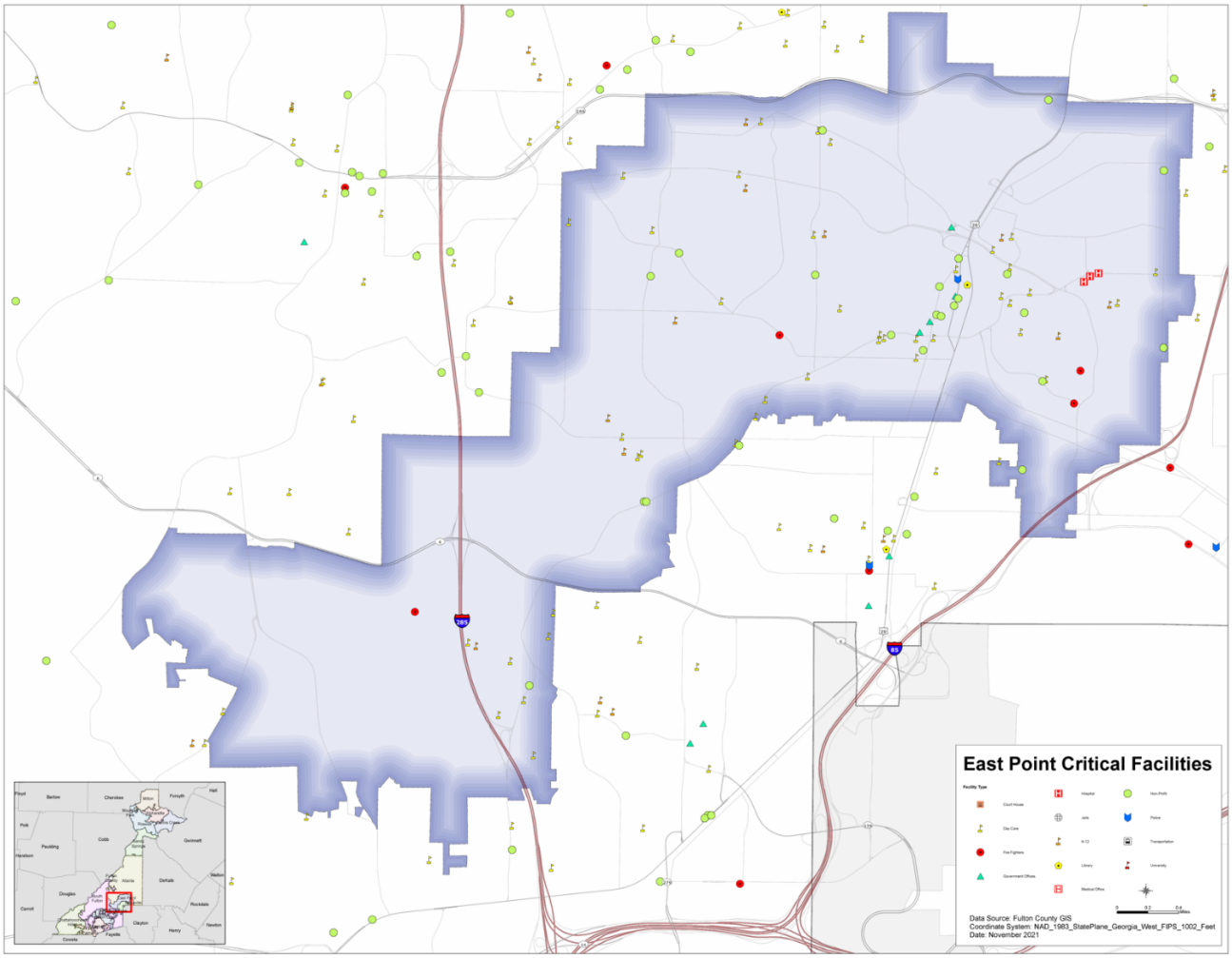
Map Source: AFCEMA (GIS Department) and/or Fulton County (GIS Department)

Map 28: City of College Park, Critical Facilities & Infrastructure



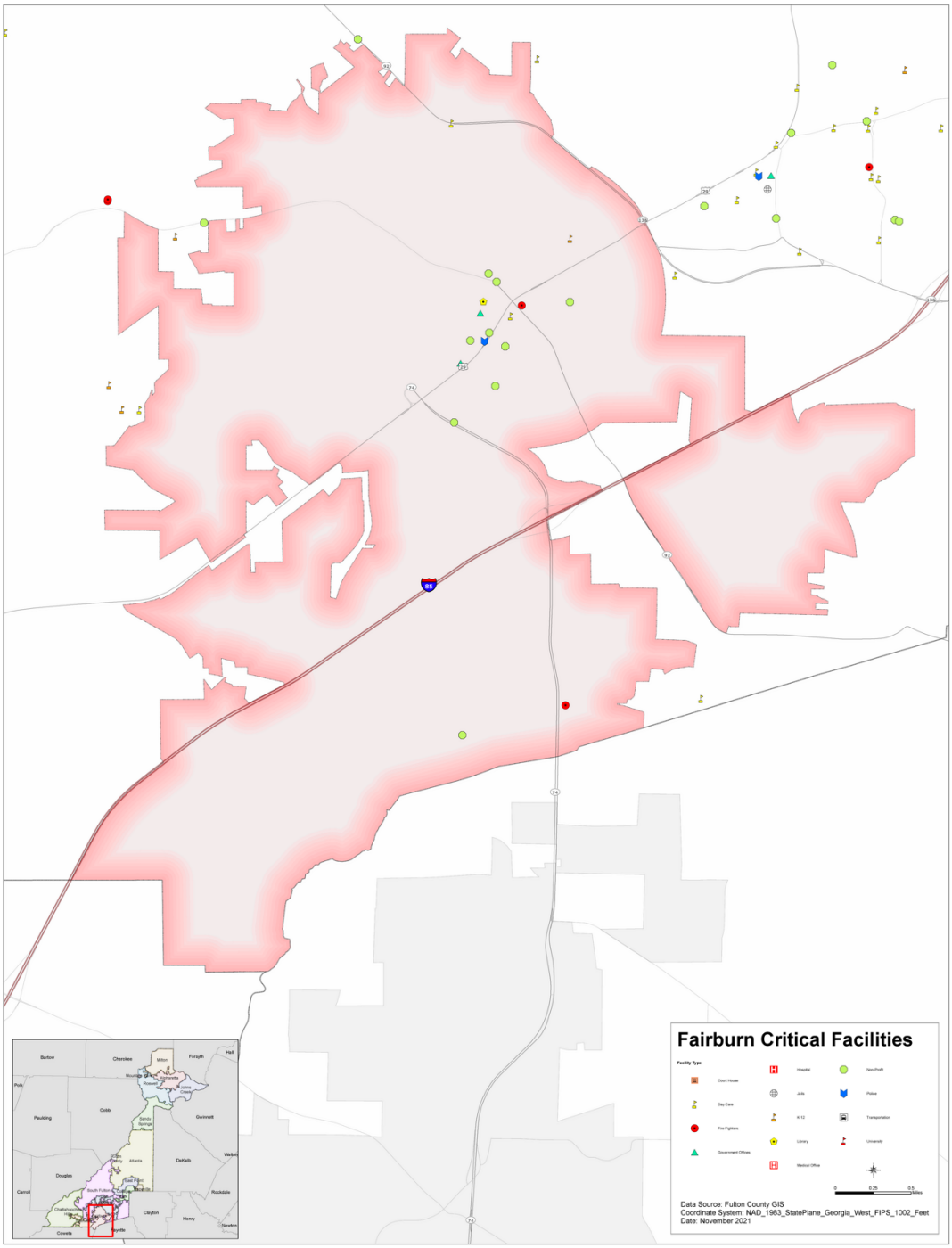
Map Source: AFCEMA (GIS Department) and/or Fulton County (GIS Department)

Map 29: City of East Point, Critical Facilities & Infrastructure



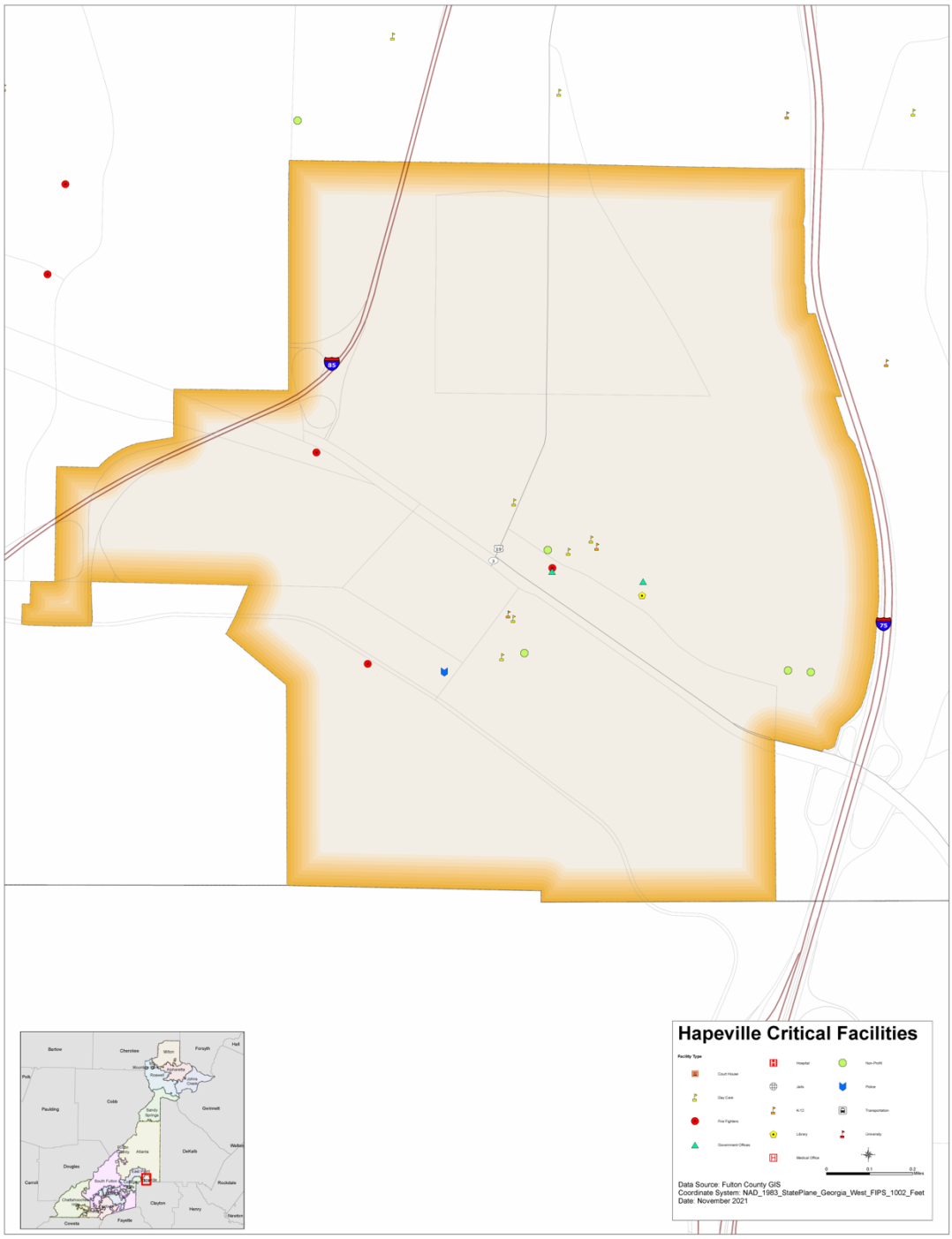
Map Source: AFCEMA (GIS Department) and/or Fulton County (GIS Department)

Map 30: City of Fairburn, Critical Facilities & Infrastructure



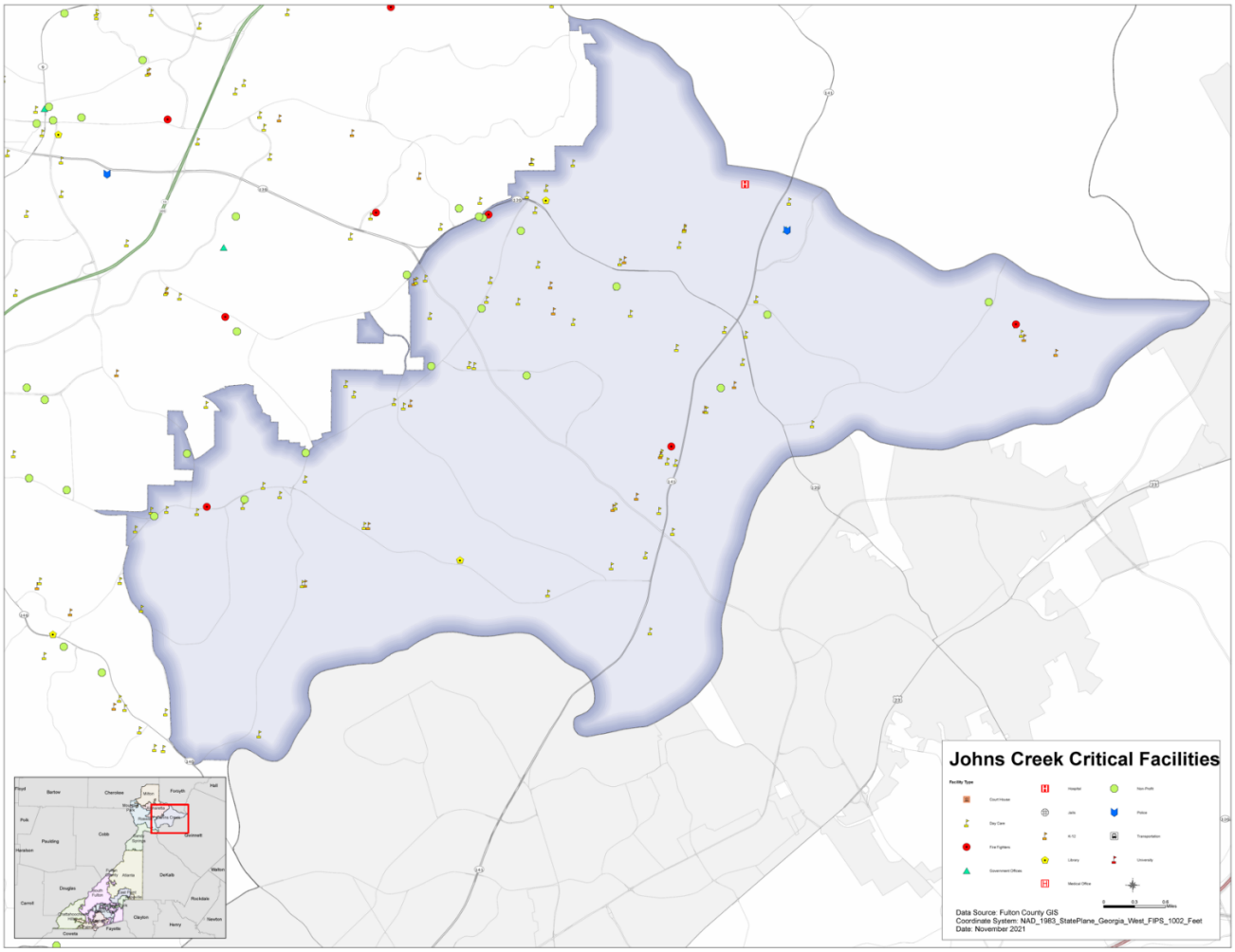
Map Source: AFCEMA (GIS Department) and/or Fulton County (GIS Department)

Map 31: City of Hapeville, Critical Facilities & Infrastructure



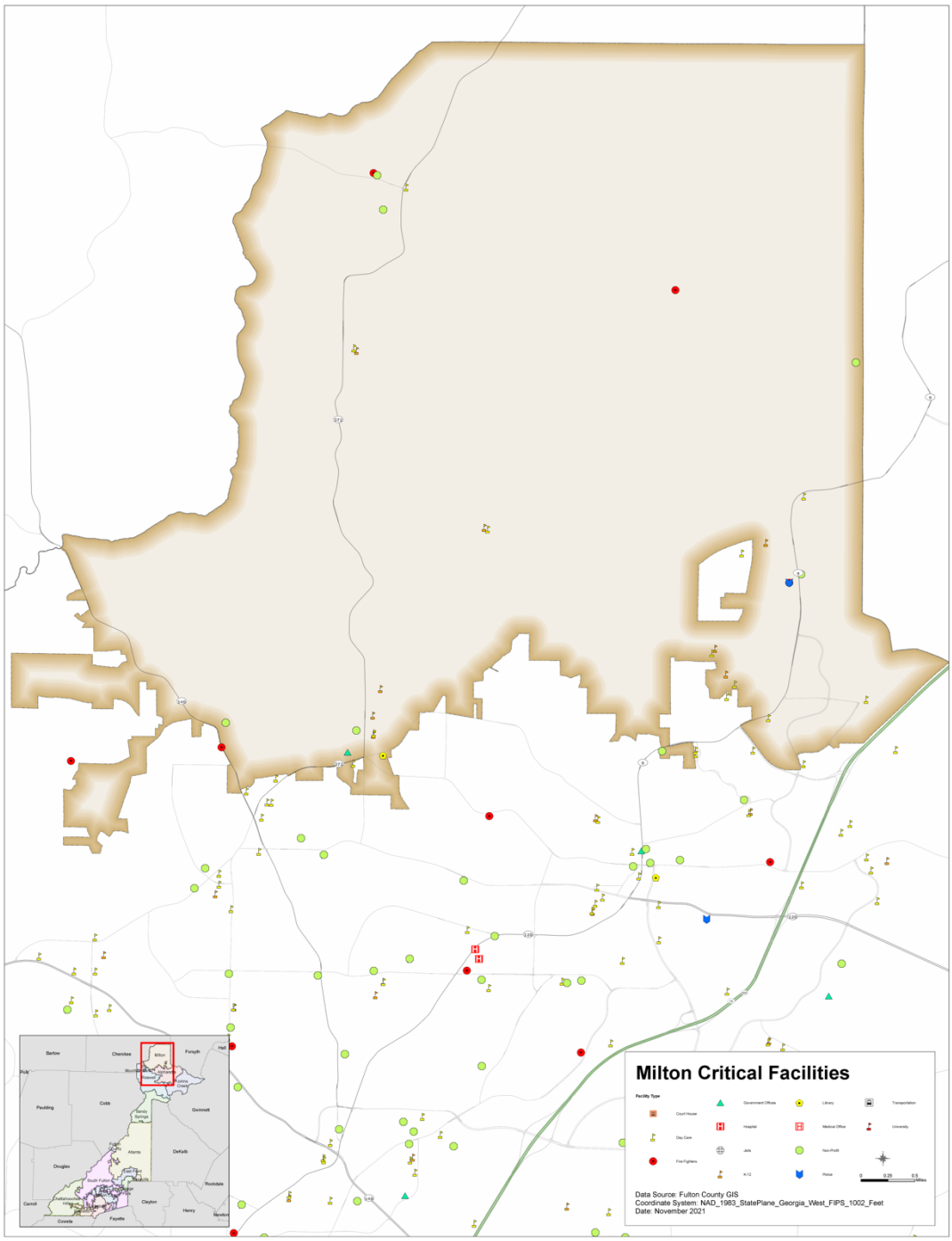
Map Source: AFCEMA (GIS Department) and/or Fulton County (GIS Department)

Map 32: City of Johns Creek, Critical Facilities & Infrastructure



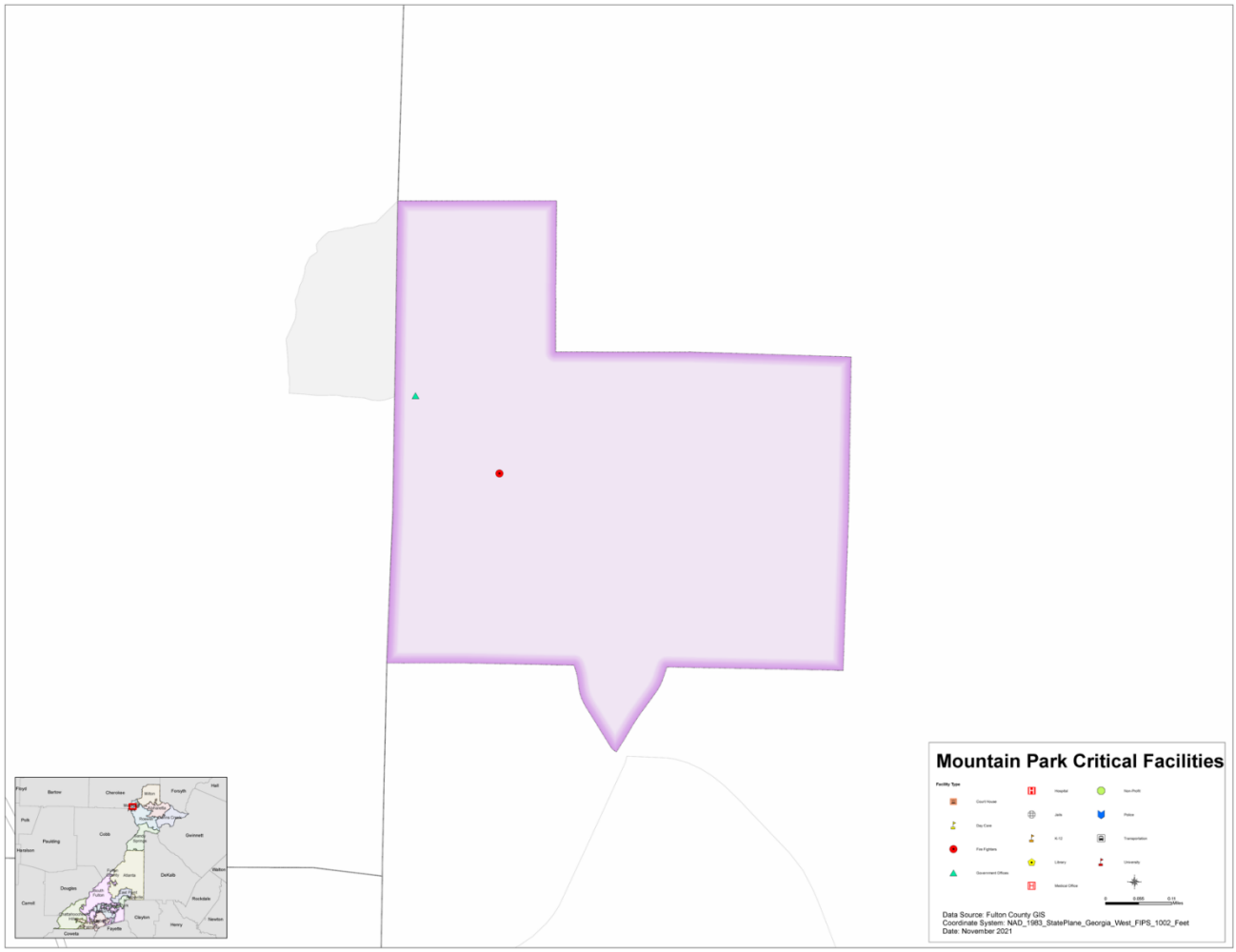
Map Source: AFCEMA (GIS Department) and/or Fulton County (GIS Department)

Map 33: City of Milton, Critical Facilities & Infrastructure



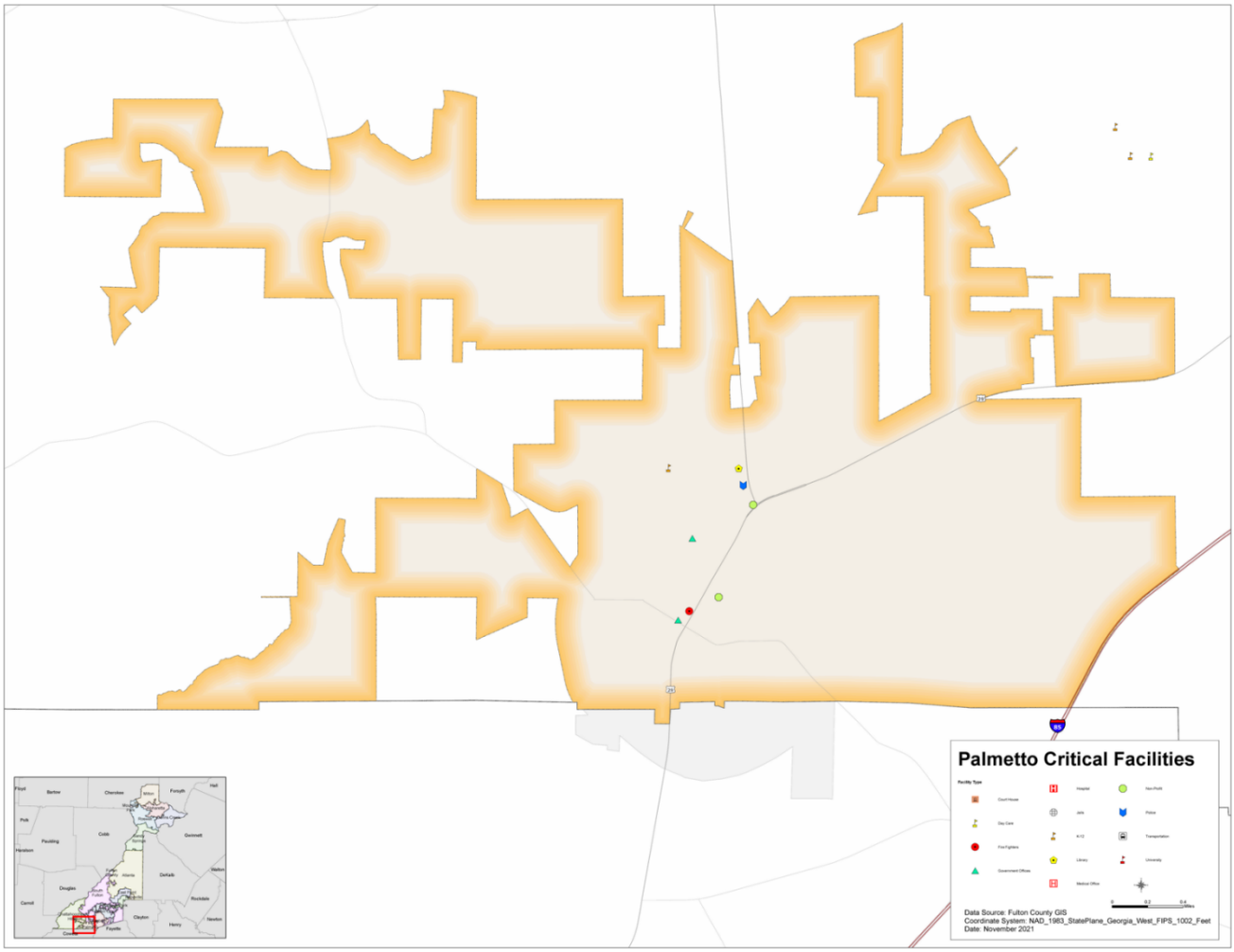
Map Source: AFCEMA (GIS Department) and/or Fulton County (GIS Department)

Map 34: City of Mountain Park, Critical Facilities & Infrastructure



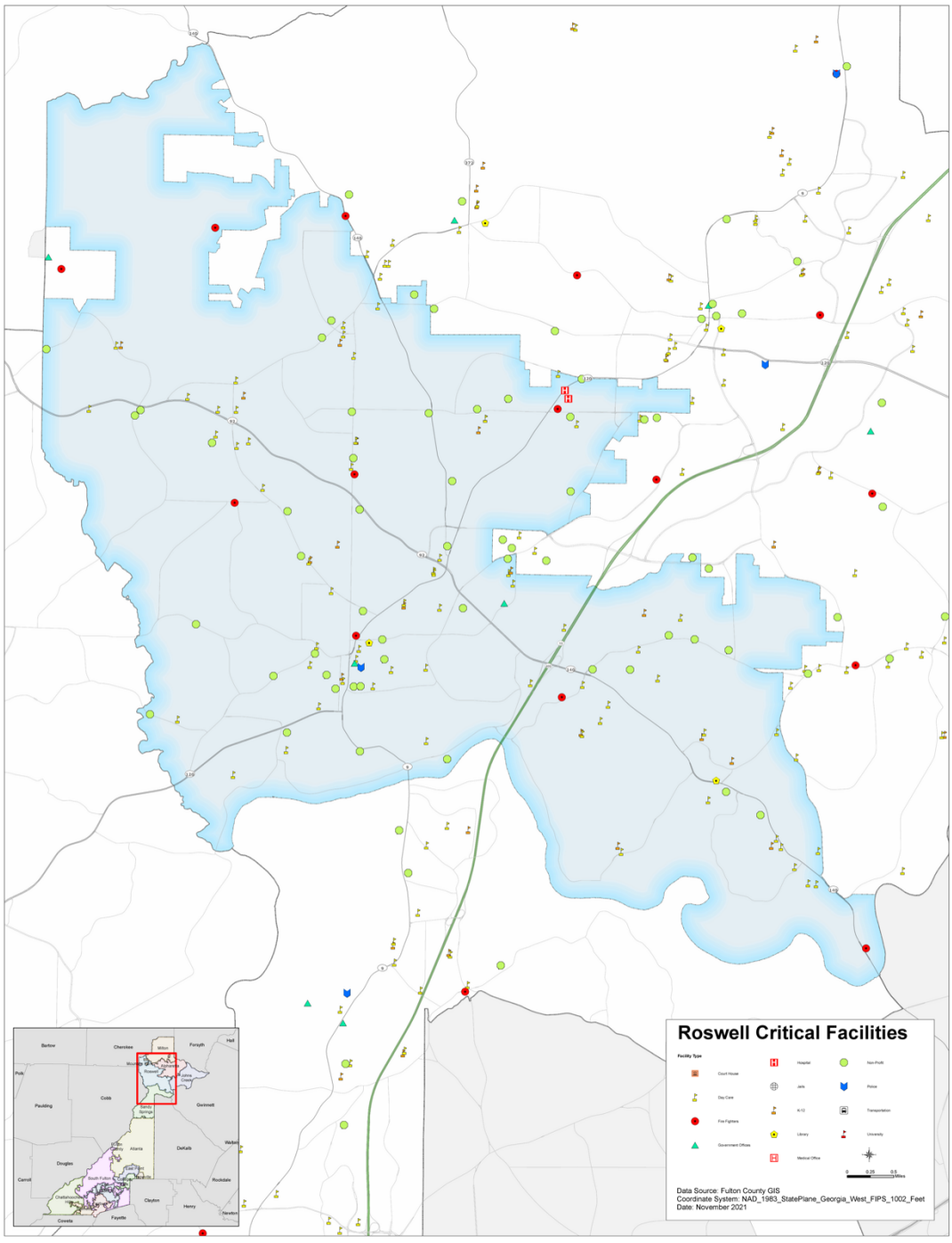
Map Source: AFCEMA (GIS Department) and/or Fulton County (GIS Department)

Map 35: City of Palmetto, Critical Facilities & Infrastructure



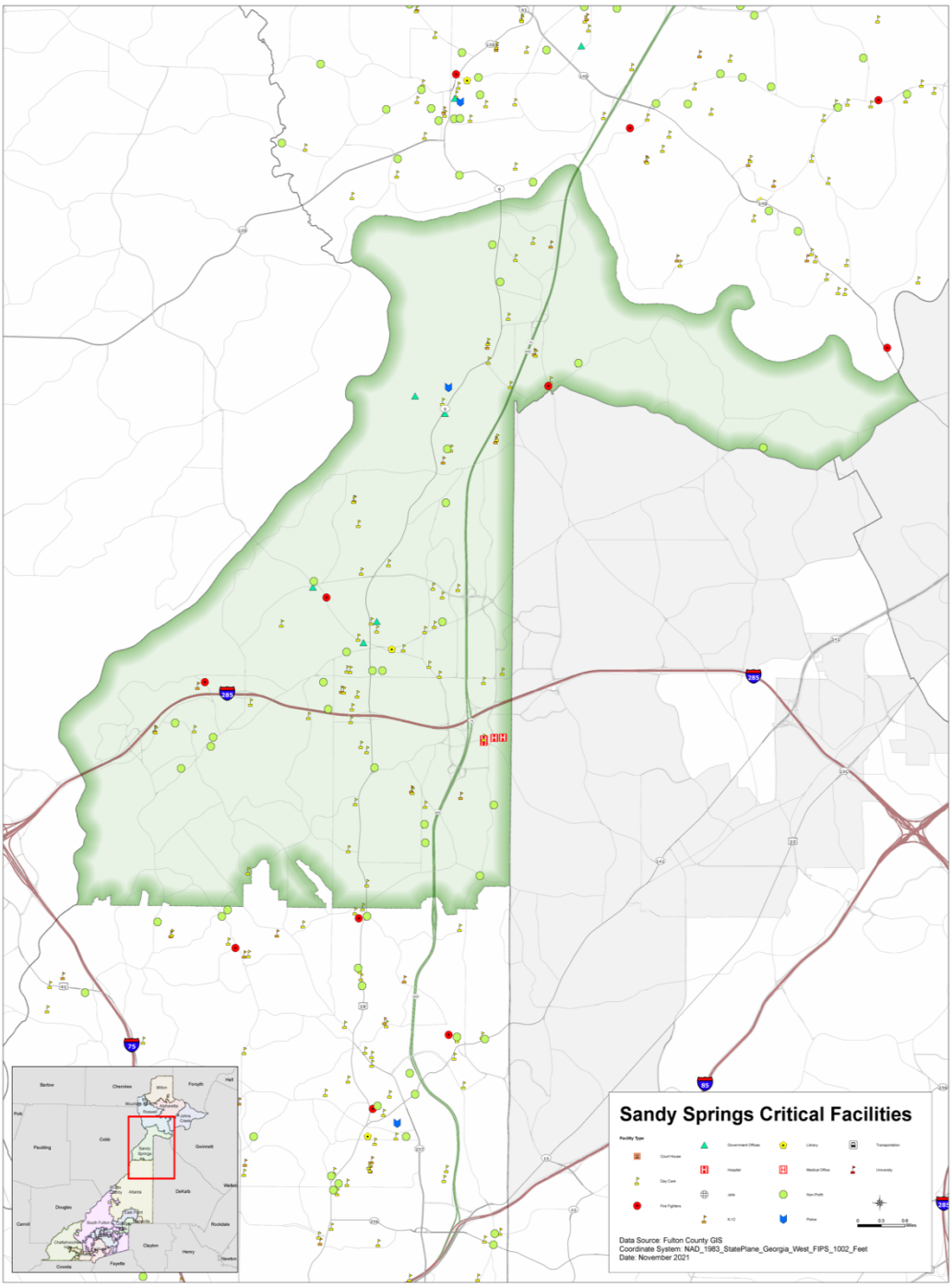
Map Source: AFCEMA (GIS Department) and/or Fulton County (GIS Department)

Map 36: City of Roswell, Critical Facilities & Infrastructure



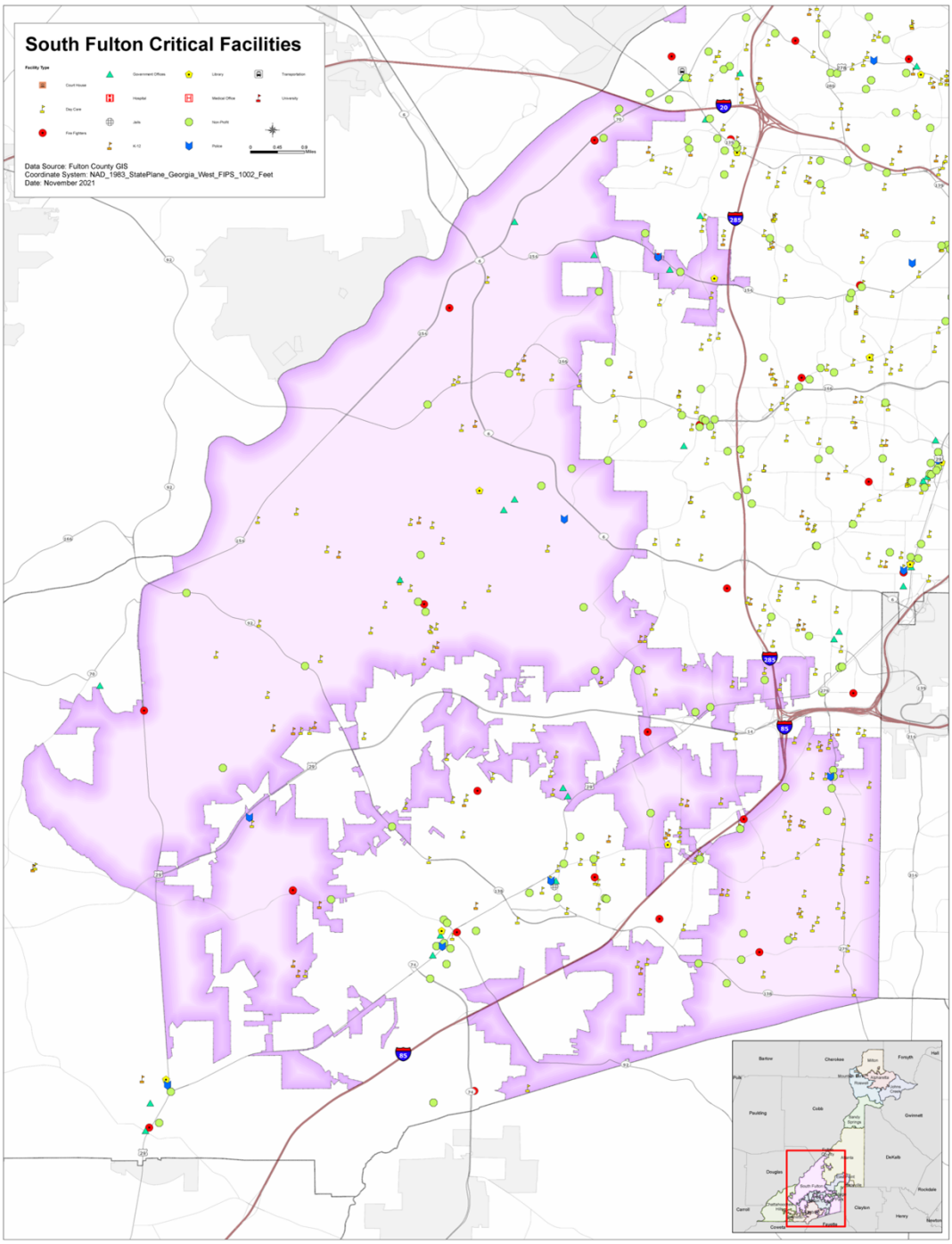
Map Source: AFCEMA (GIS Department) and/or Fulton County (GIS Department)

Map 37: City of Sandy Springs, Critical Facilities & Infrastructure



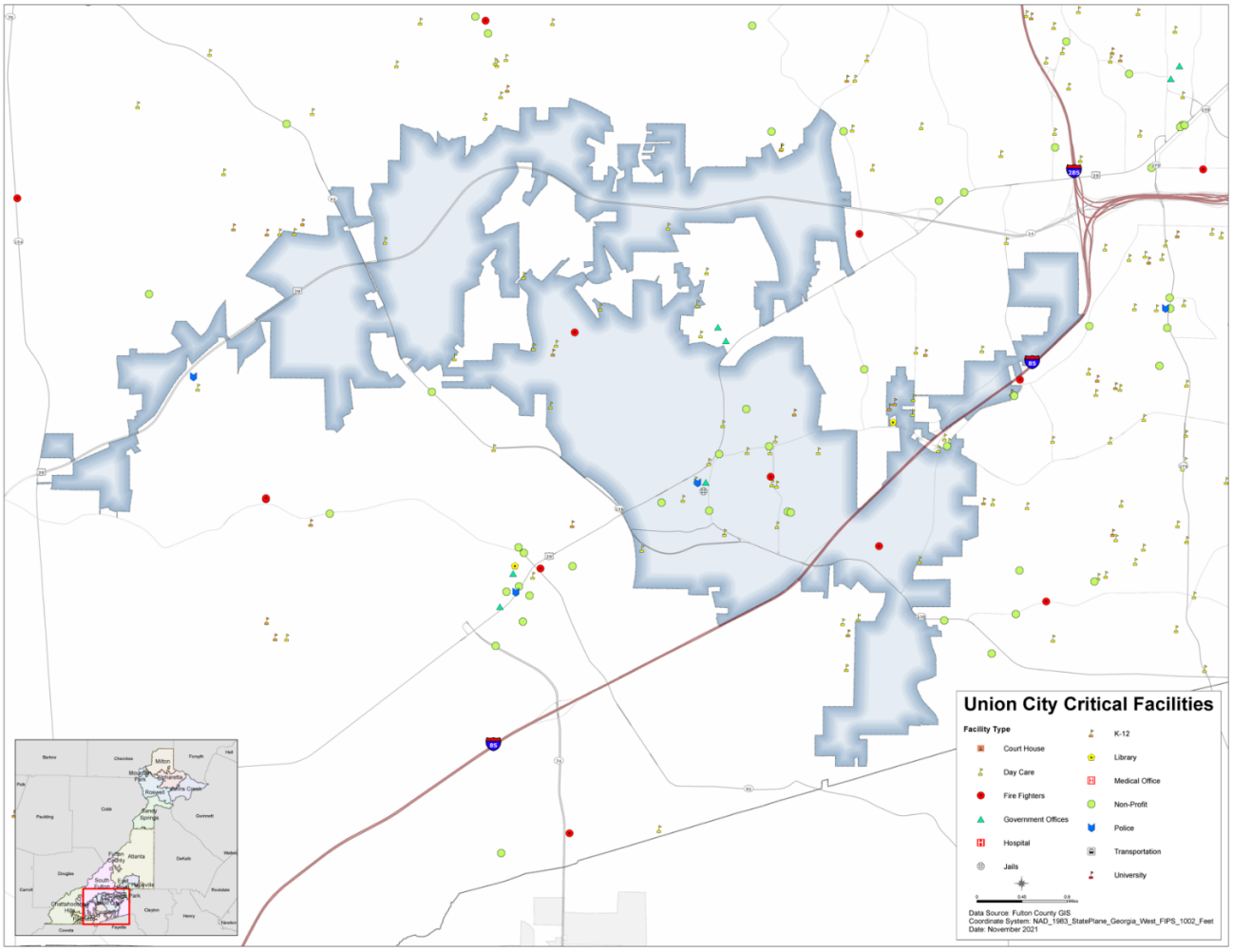
Map Source: AFCEMA (GIS Department) and/or Fulton County (GIS Department)

Map 38: City of South Fulton, Critical Facilities & Infrastructure



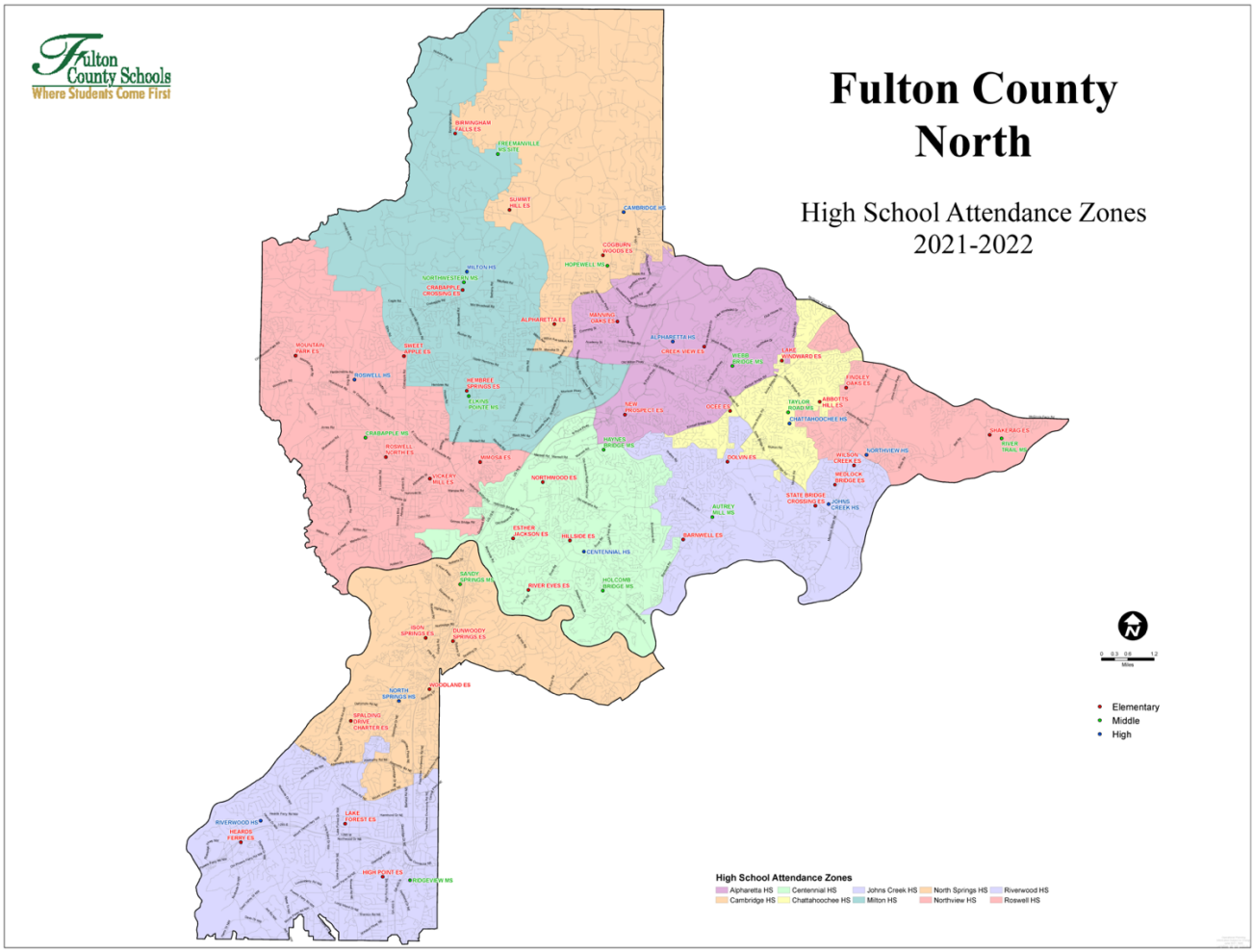
Map Source: AFCEMA (GIS Department) and/or Fulton County (GIS Department)

Map 39: City of Union City, Critical Facilities & Infrastructure



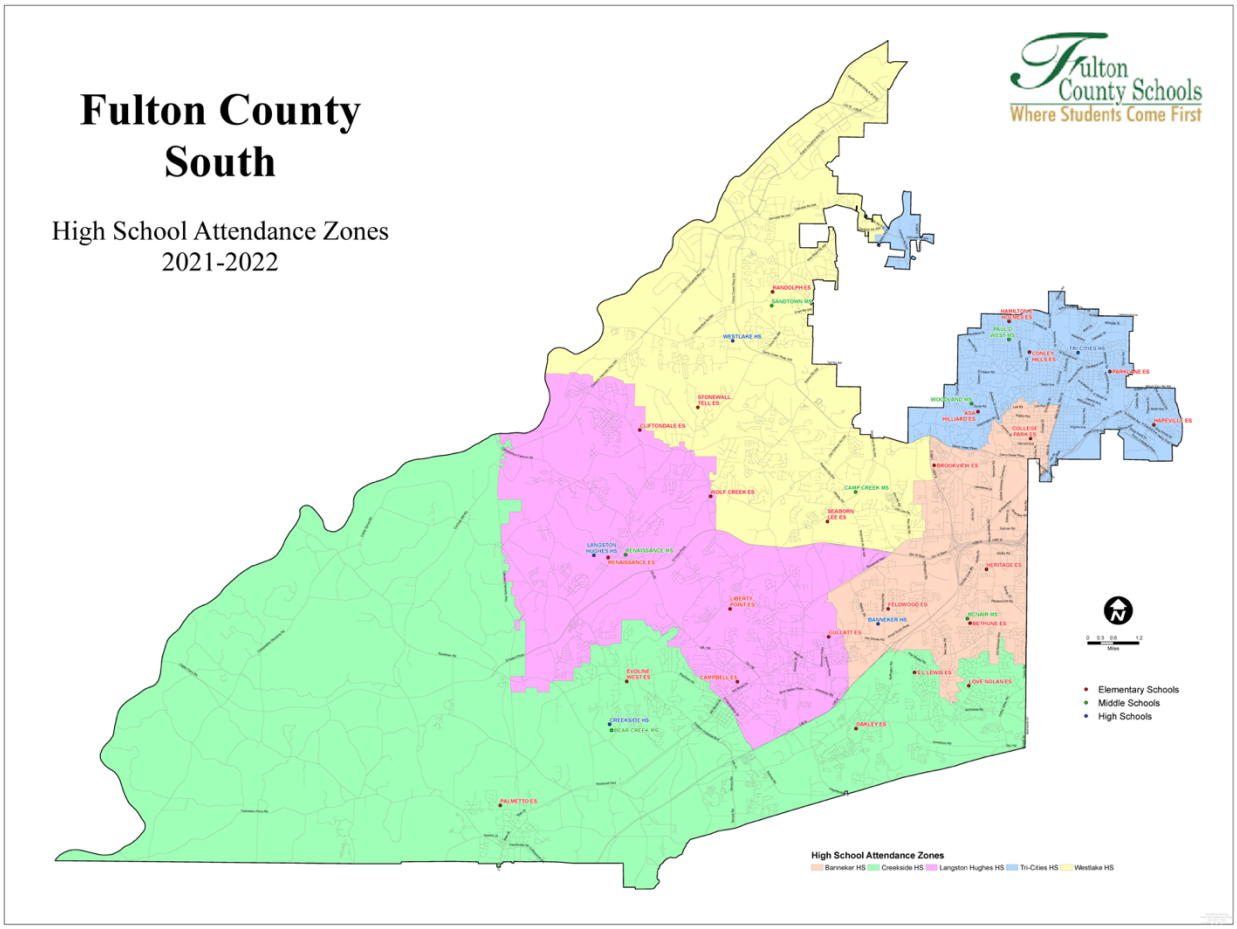
Map Source: AFCEMA (GIS Department) and/or Fulton County (GIS Department)

Map 40: Fulton County Public Schools, Fulton County North, High School Attendance Zone, 2021-2022



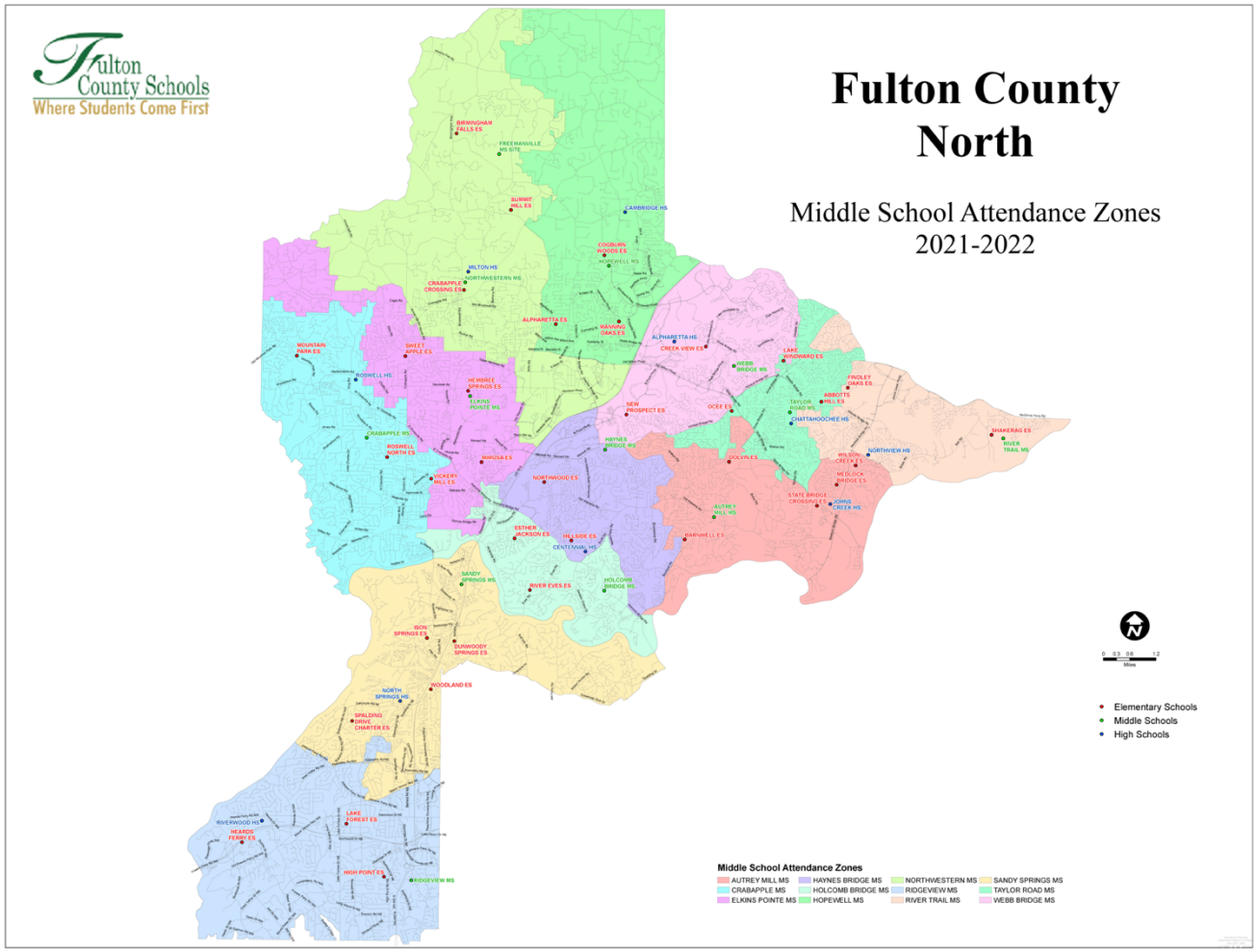
Map Source: Fulton County, GA Schools,
https://www.fultonschools.org/cms/lib/GA50000114/Centricity/domain/2947/hs/LargeMap_NF_HS_2122.pdf

Map 41: Fulton County Public Schools, Fulton County South, High School Attendance, 2021-2022



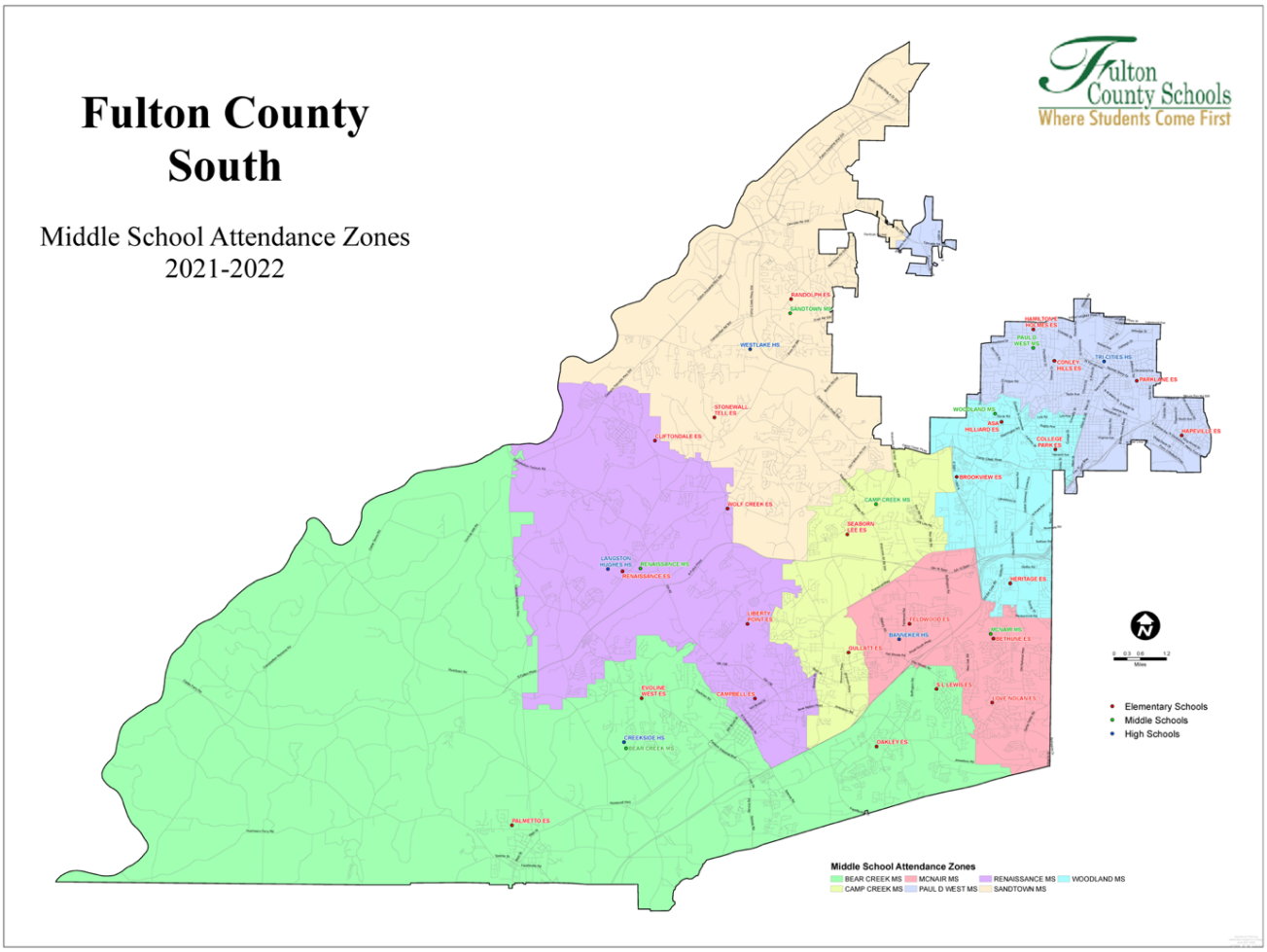
Map Source: Fulton County, GA Schools,
https://www.fultonschools.org/cms/lib/GA50000114/Centricity/domain/2947/hs/LargeMap_SF_HS_2122.pdf

Map 42: Fulton County Public Schools, Fulton County North, Middle School Attendance Zone, 2021-2022



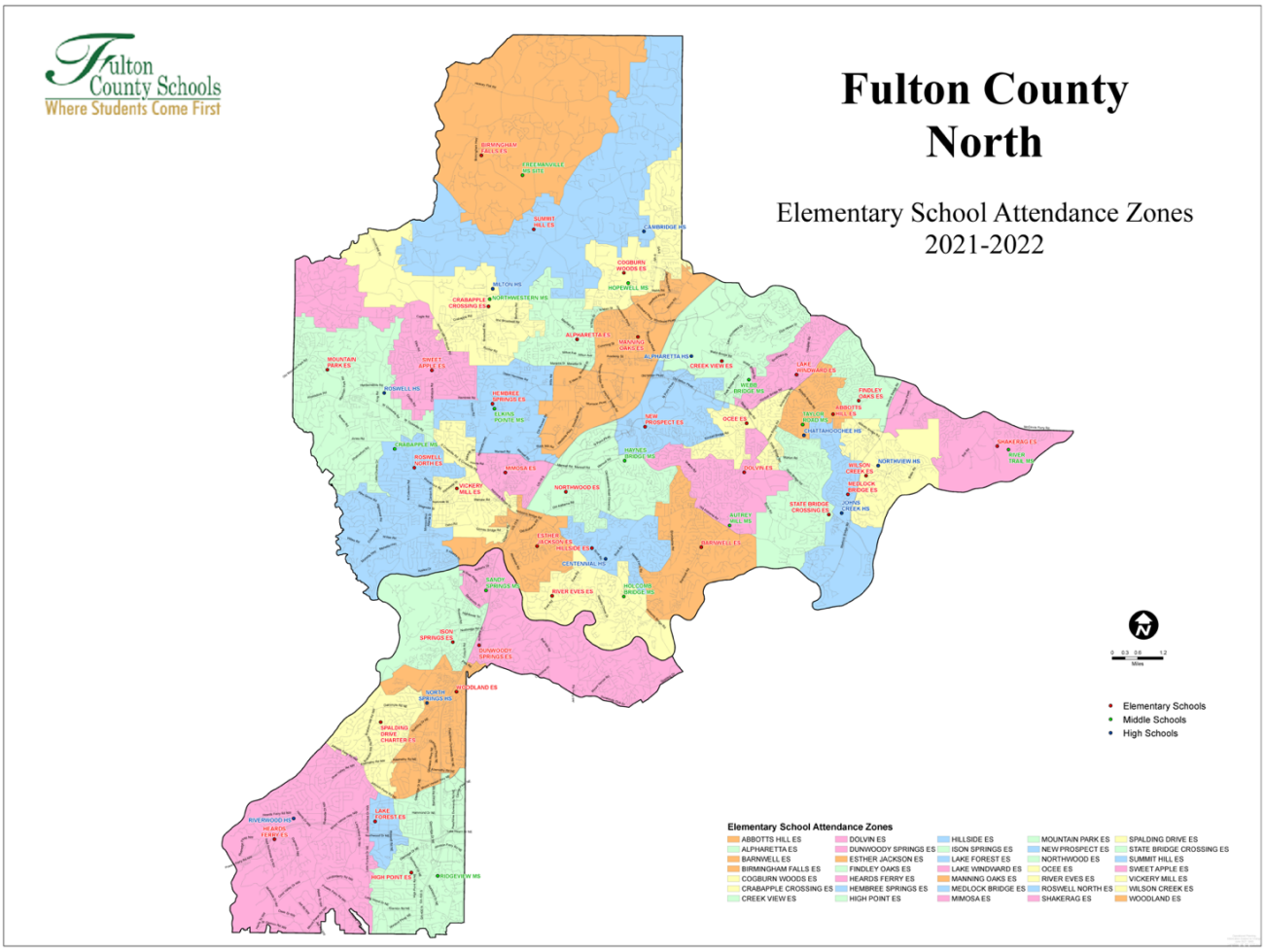
Map Source: Fulton County, GA Schools,
https://www.fultonschools.org/cms/lib/GA50000114/Centricity/domain/2947/ms/LargeMap_NF_MS_2122.pdf

Map 43: Fulton County Public Schools, Fulton County South, Middle School Attendance Zone, 2021-2022



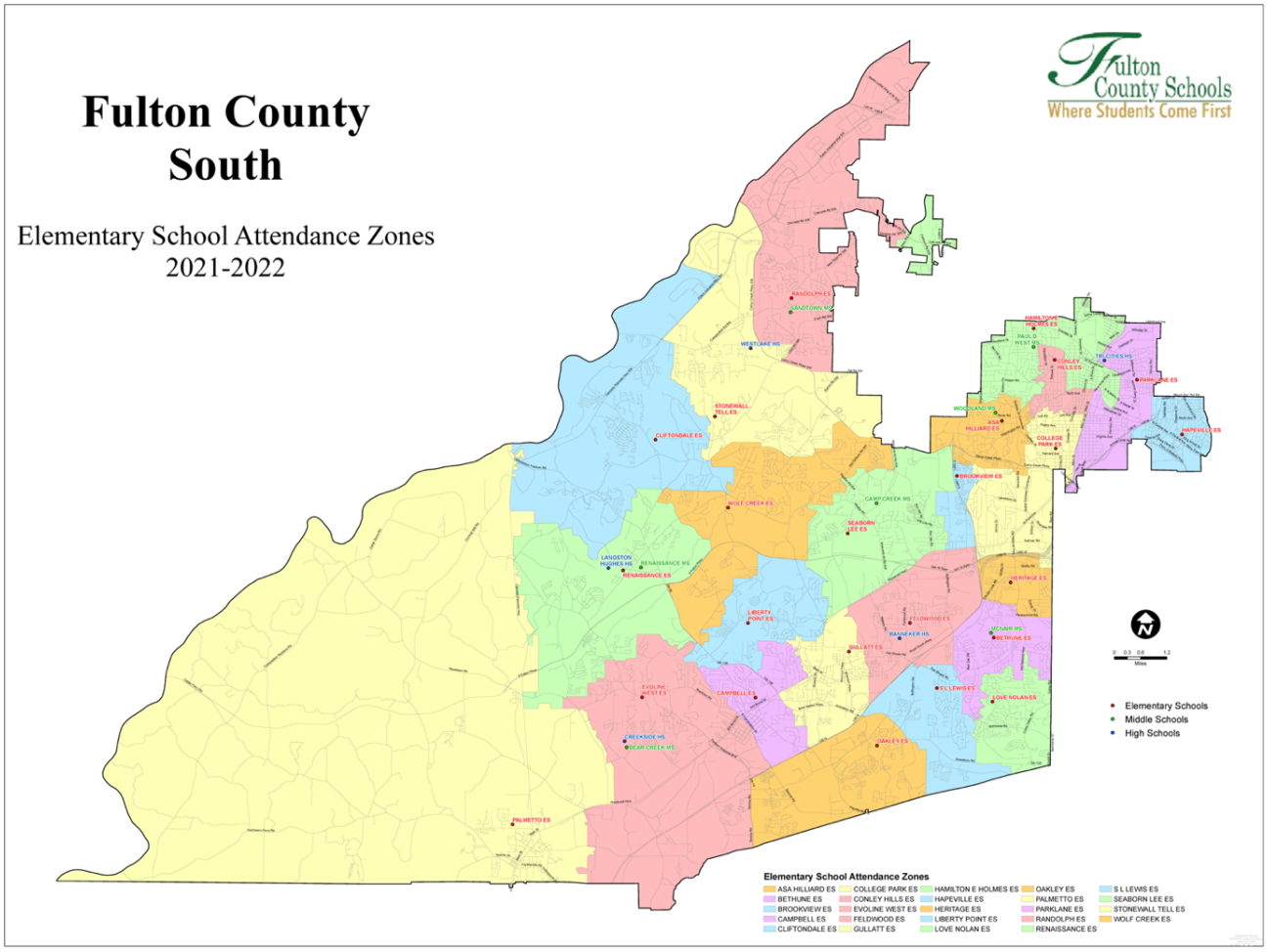
Map Source: Fulton County, GA Schools,
https://www.fultonschools.org/cms/lib/GA50000114/Centricity/domain/2947/ms/LargeMap_SF_MS_2122.pdf

Map 44: Fulton County Public Schools, Fulton County North, Elementary School Attendance Zone, 2021-2022



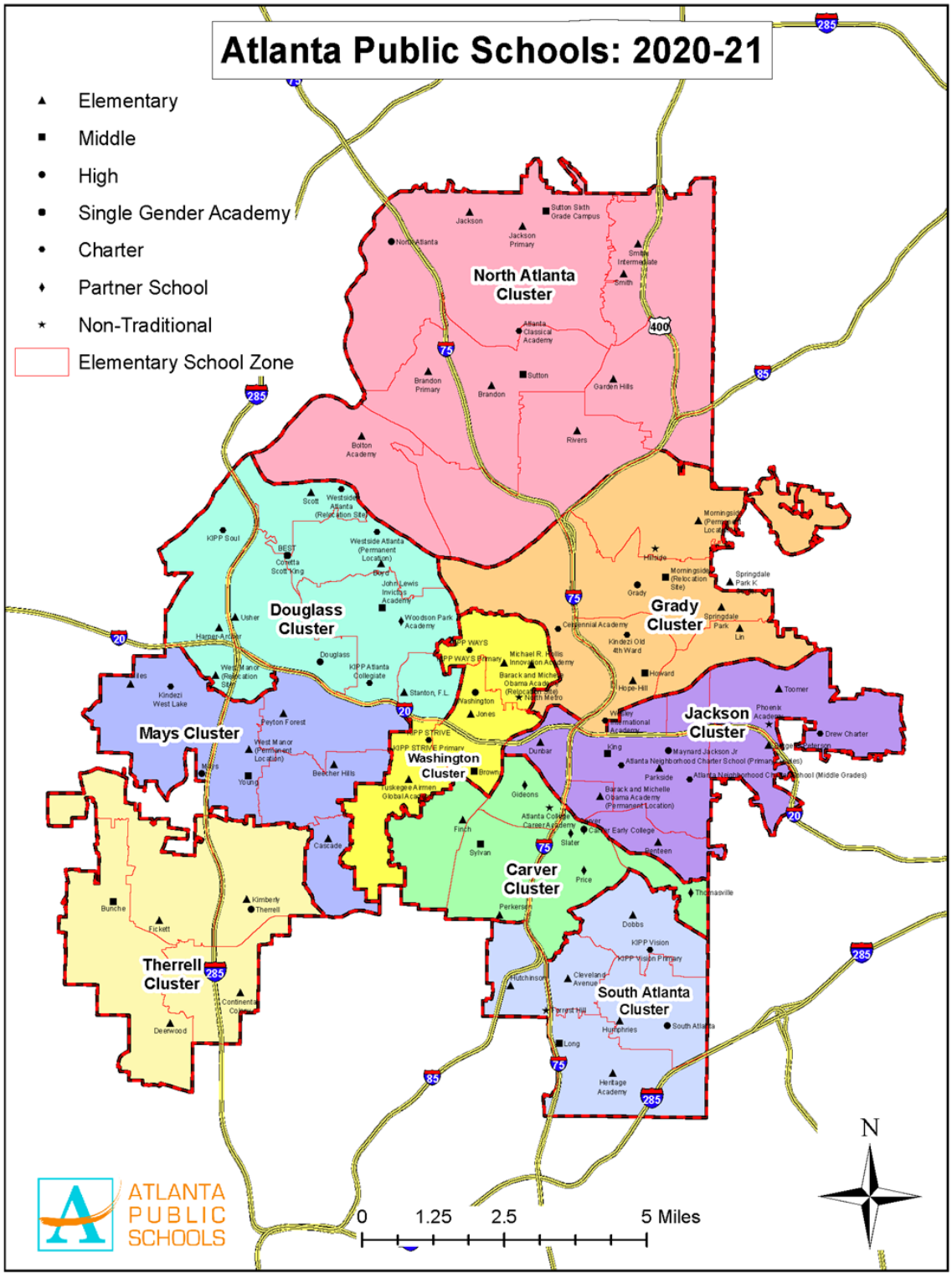
Map Source: Fulton County, GA Schools,
https://www.fultonschools.org/cms/lib/GA50000114/Centricity/domain/2947/es/LargeMap_NF_ES_2122.pdf

Map 45: Fulton County Public Schools, Fulton County South, Elementary School Attendance Zone, 2021-2022



Map Source: Fulton County, GA Schools,
https://www.fultonschools.org/cms/lib/GA50000114/Centricity/domain/2947/es/LargeMap_NF_ES_2122.pdf

Map 46: Atlanta Public Schools, School Zone Boundary Cluster Map



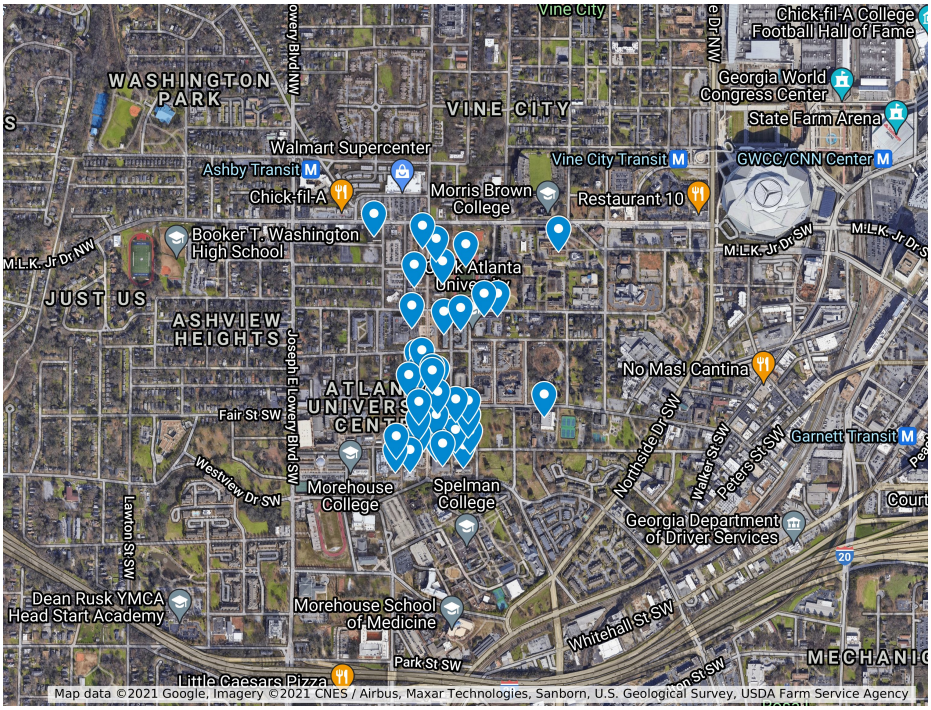
Map Source: Atlanta Public Schools,
https://www.atlantapublicschools.us/cms/lib/GA01000924/Centricity/Domain/108/aps_locations20_21_letter.pdf

Map 47: Clark Atlanta University Campus Map

CAU Campus Map

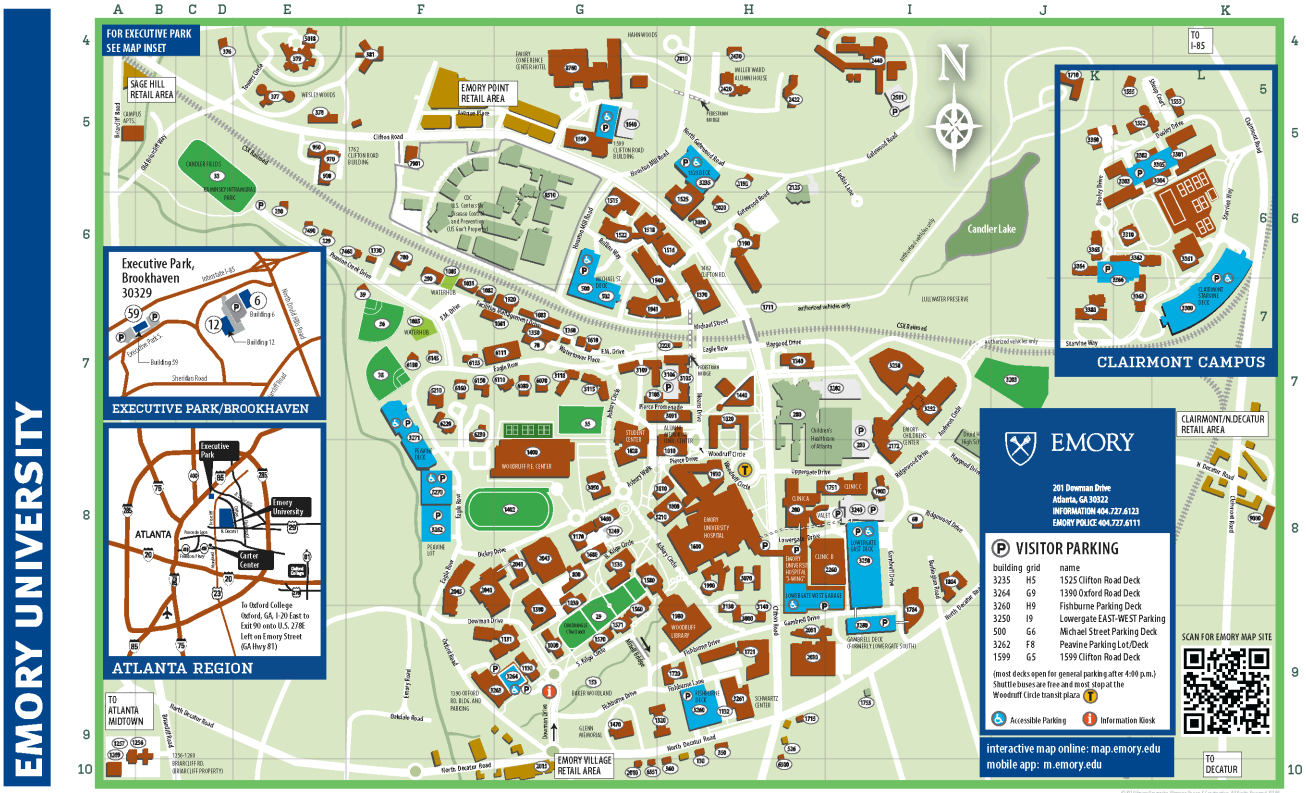
Campus Map

- Harkness Hall
- Dunkin' Donuts
- Wells Fargo ATM
- Clark Atlanta University Bookstore
- Paschal Center
- Heritage Commons
- Thomas Cole Research Center for Science and Technology
- Sage-Bacote Hall
- Albert H. Watts Alumni House
- Trevor Arnett Hall
- Wright Hall
- Clement Hall
- McPheeters-Dennis Hall
- Haven-Warren Hall
- Ware Academic Center
- Career Planning and Placement Center
- Faculty and Staff Parking
- Title III



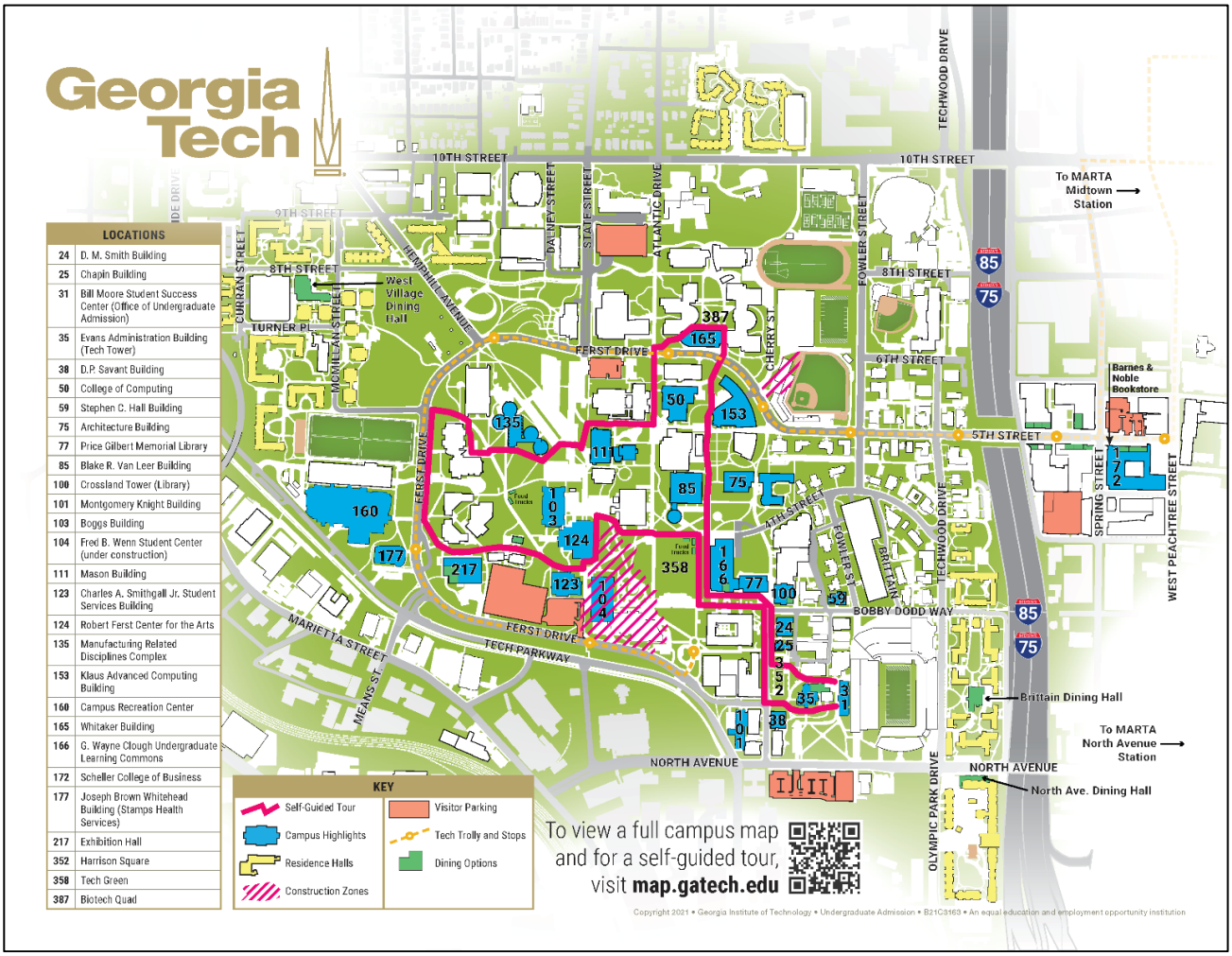
Map Source: Clark Atlanta University, https://www.google.com/maps/d/print?mid=1RTHDjN9epsAi0NSwZa37aMjyame3jYsu&pagew=792&pageh=612&llsw=33.74574%2C-84.417985&llne=33.755838%2C-84.404918

Map 48: Emory University Campus Map, 2021



Map Source: Emory University, http://www.map.emory.edu/mappdf/gis_map/EmoryMap_Legend.pdf

Map 49: Georgia Tech Institute, Campus Map, 2021

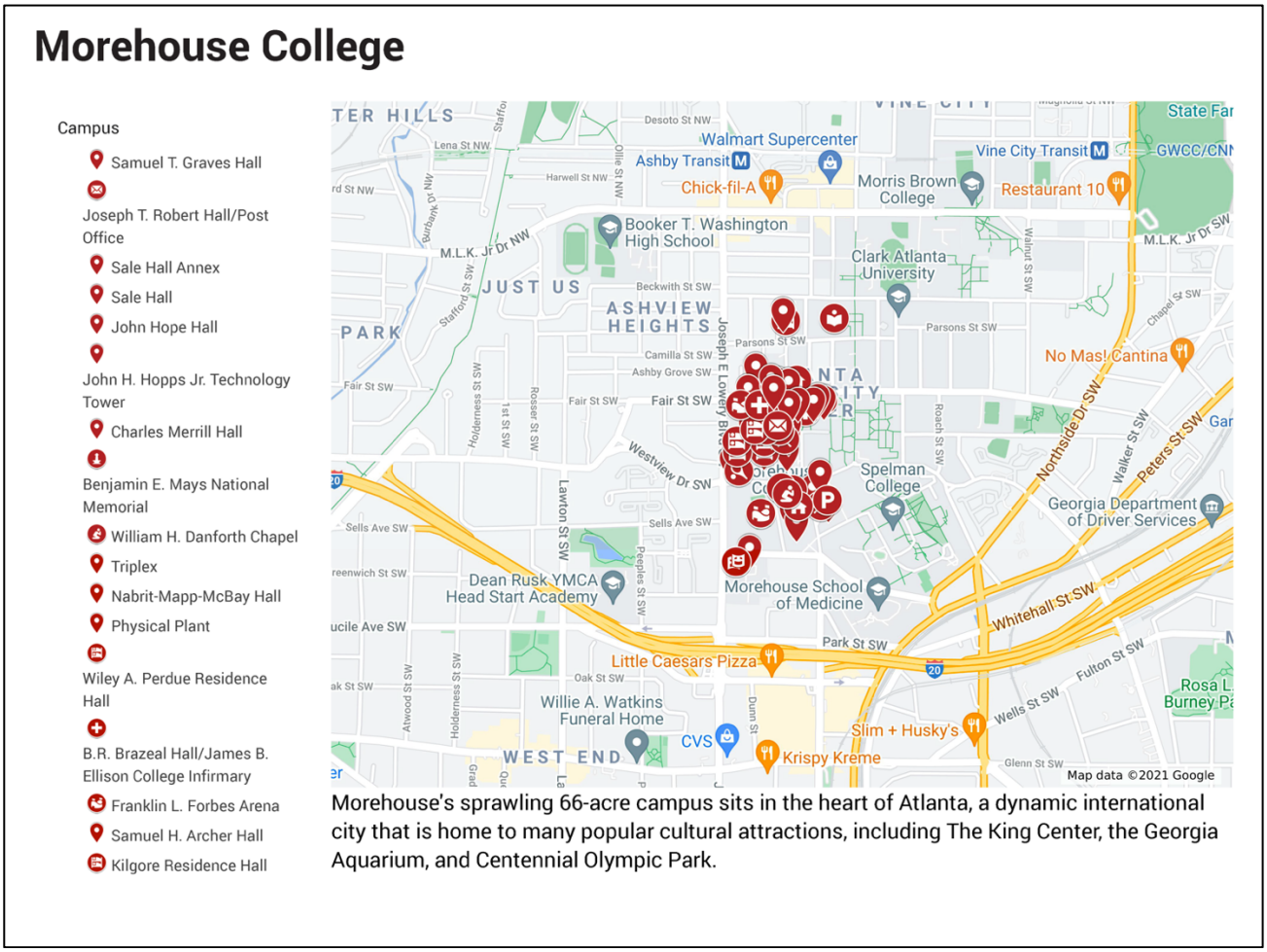


Map Source: Georgia Tech Institute, https://admission.gatech.edu/images/pdf/GeorgiaTechCampusMap2021.pdf

Map 50: Georgia State University Campus Map, 2021

Map Source: Georgia State University, https://georgiastateuniversity.myuvn.com/wp-content/uploads/sites/9/2019/07/GSUCampusMap.jpg

Map 51: Morehouse College Campus Map, 2021



Morehouse's sprawling 66-acre campus sits in the heart of Atlanta, a dynamic international city that is home to many popular cultural attractions, including The King Center, the Georgia Aquarium, and Centennial Olympic Park.

Map Source: Morehouse College,
https://www.google.com/maps/d/viewer?mid=1NeNC0va83zwMKYbGvPjl8NlFJzzxfPcZ&ll=33.747749633641114%2C-84.4154041&z=16

Map 52: Spelman College Campus Map, 2021

Map Source: Spelman College, https://www.spelman.edu/images/visitors/campus-map-with-legend.jpg

Map 53: Atlanta Technical College

A – Aviation Building

B – Dennard Conference Center

C – Academic Complex

D – Bio-science, EMT and Continuing Education Wing

E – Childcare Center

F – New Connections Building

G – Library and Testing Center

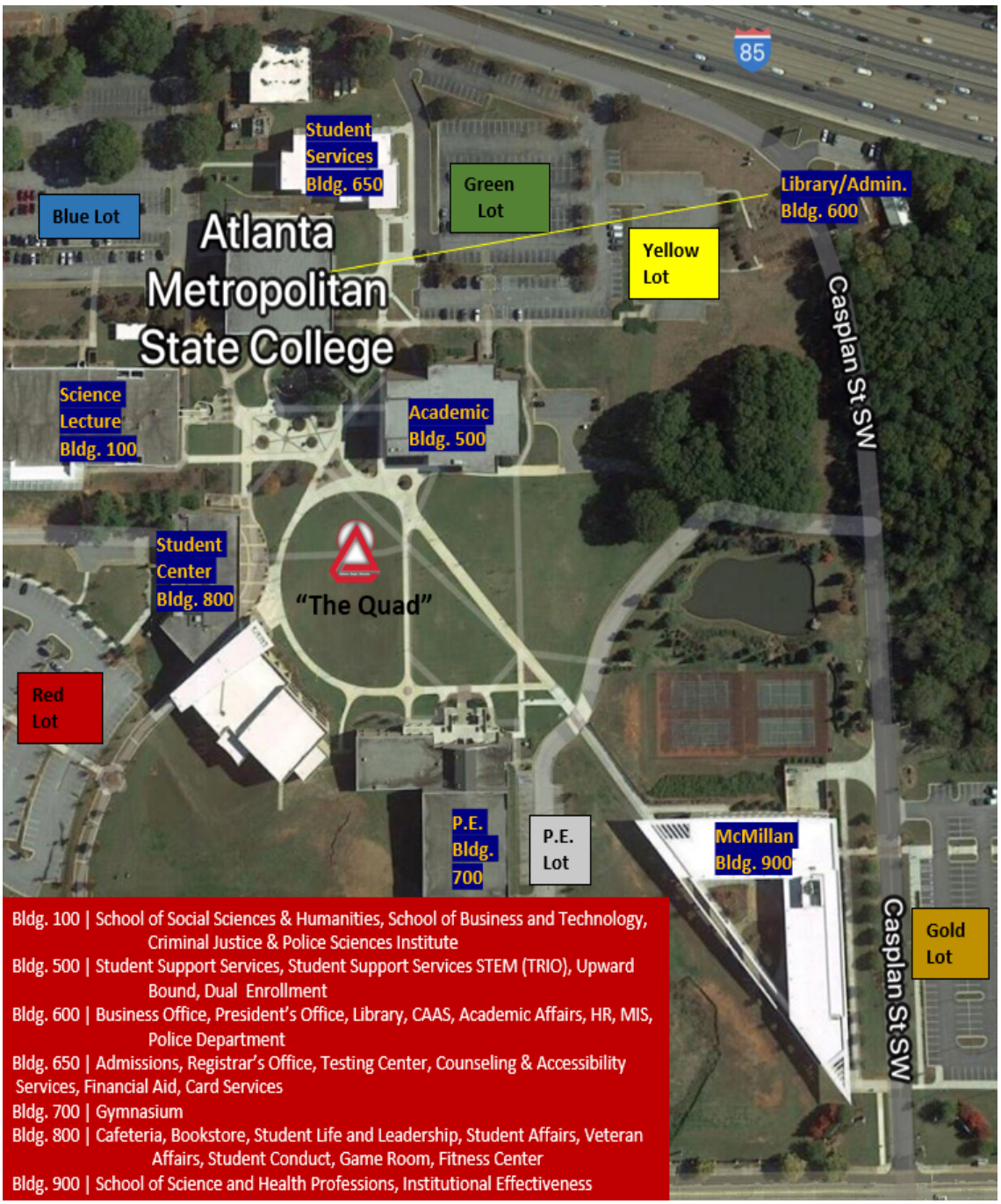
H – Brenda Watt Jones Allied Health and Technology Complex

I – Atlanta Technical College AIM Building

M – Mobile complex

Map Source: https://atlantatech.edu/campus-map/

Map 54: Atlanta Metropolitan State College



Map Source: https://www.atlm.edu/about-amc/directions.aspx

Section 4: Hazard Risk Assessment

Planning Process
Local Procedures & Resources
Planning Area
Hazard Risk Assessment
- Identifying Hazards
- Profiling Hazards
- Hazards
- Land Use & Development Trends
- Hazard Risk Summary
- Excluded Hazards

Mitigation Strategy

The goal of hazard mitigation is to reduce the future impacts of hazards, including property damage, disruption to local and regional economies, and the amount of public and private funds spent to assist recovery. To be done correctly, mitigation decision-making should be based on risk assessment.

A risk assessment consists of three components: hazard profiling, exposure, and vulnerability assessment. The process entails past hazard events, probability of future events, asset lists, loss estimation, and other sections where appropriate.

Review of recently declared disasters, i.e., from 2016 to the present, provides an overview of the hazards facing Fulton County and its participating jurisdictions. This timeframe is referenced because Fulton County has a FEMA-approved hazard mitigation plan that will expire on February 28, 2022. Since 2016, Fulton County and its participating jurisdictions have experienced two presidentially declared disasters. These disaster declarations were due to hurricane and epidemic/pandemic. A list of the declared disasters occurring in Fulton County and its participating jurisdictions since 2016 is presented in the following table. Smaller events are more frequent and are not reflected in the table.

***Note**: Human-caused hazards such as Epidemic/Pandemic were not identified in the 2019 Georgia Hazard Mitigation Strategy Standard and Enhanced Plan (March 18, 2019 – March 17, 2024) and Statewide Hazard Assessment, or the 2016 Fulton County Hazard Mitigation Plan (December 12, 2012). This disaster declaration was included in the table below due to the COVID-19 pandemic affecting Fulton County and its participating jurisdictions during the drafting of this plan update.*

Table 9: Presidential Disaster Declarations, Fulton County

Presidential Disaster Declarations, Fulton County		
Designation	**Incident Period**	**Incident Type**
DR - 4338	09/7/2017 – 09/20/2017	Hurricane Irma
DR - 4501	01/20/20 – Continuing	COVID-19 Pandemic

Data Source: FEMA

4.1 – Identifying Hazards

The first step in developing a hazard assessment is to identify the hazards that have a reasonable risk of occurring in Fulton County and its participating jurisdictions. Proper identification allows for appropriate and well-planned action 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 proceeding table lists the 13 hazards identified in the Georgia Hazard Mitigation Strategy Standard and Enhanced Plan (March 18, 2019 – March 17, 2024) and Statewide Hazard Assessment, as well as the justification for their inclusion/exclusion within the 2022 Fulton County MJHMP. Of these 13 state-identified hazards, 12 post some level of risk to Fulton County and/or at least one of its participating jurisdictions. These hazards are Drought, Earthquake, Extreme Heat (aka Heat Wave), Inland Flooding (aka Flood), Geological Hazards, Hurricane Wind (aka Tropical Systems), Severe Weather, Severe Winter Weather, Tornado, Wildfire (aka Wildfire/Wildland Urban Interface Fire), Wind, and Dam Failure (a human-

caused disaster). Details for each of these hazards and their potential impact on Fulton County and its participating jurisdictions are in Section 4.3 – Hazard Risk Summary.

Research indicates one of the 13 state-identified hazards, Coastal Hazards, poses no reasonable risk to the planning area. As such, it is excluded from this plan update. Justification for its exclusion can be found in Section 4.4 – Excluded Hazards.

***Note**: The hazard of Wind is combined with Severe Weather for this plan update, resulting in a total of 11 profiled hazards.*

Table 9: State of Georgia Identified Hazards

State of Georgia Identified Hazards			
Hazards in State / Previous County MJHMP	**Previous Inclusions**	**Included/Excluded**	**Justification**
Natural Hazards			
Coastal Hazards	State Plan	Excluded	No Reasonable
Drought	State Plan, Prior County Plan	Included	Disaster History
Earthquake	State Plan, Prior County Plan	Included	Disaster History
Extreme Heat	State Plan, Prior County Plan (included as Heat Wave)	Included	Disaster History
Inland Flooding	State Plan, Prior County Plan (included as Flood)	Included as Flood	Disaster History
Geological Hazards	State Plan, Prior County Plan	Included	Disaster History
Hurricane Wind	State Plan, Prior County Plan (included as Tropical Systems)	Included as Tropical Systems	Disaster History
Severe Weather	State Plan, Prior County Plan	Included	Disaster History
Severe Winter Weather	State Plan, Prior County Plan	Included	Disaster History
Tornado	State Plan, Prior County Plan	Included	Disaster History
Wildfire	State Plan, Prior County Plan (included as Wildfire/ Urban Interface Fire)	Included as Wildfire/ Wildland Urban Interface Fire	Disaster History
Wind	State Plan, Prior County Plan (included as Severe Weather)	Included as Severe Weather	Disaster History
Human-caused Hazards			
Dam Failure	State Plan, Prior County Plan	Included	Hazard is Possible

4.2 – Profiling Hazards

Hazard profiles are outlined in the following sections of the 2022 Fulton County MJHMP. For some hazards, the Repetitive Loss (RL) Structures and Hazus Models sections may not be applicable, and therefore, not included.

4.2.1 – Hazard Description

This section describes the general characteristics of the profiled hazard.

4.2.2 – Location & Extent

This section contains information about the location, i.e., the geographic area(s) within the planning area, that may be affected by the profiled hazard, along with the extent, i.e., the potential strength and magnitude of the profiled hazard.

4.2.3 – Previous Occurrences

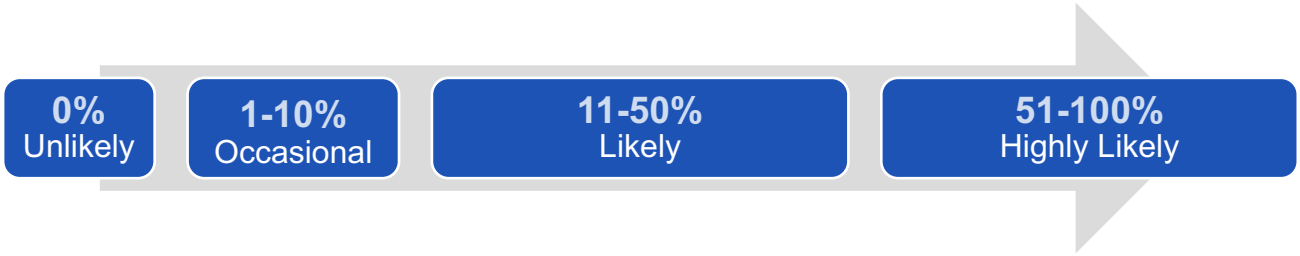
This section contains a history of previous events for the profiled hazard.

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 a 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 as well.*

4.2.3A – Probability of Future Events

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

Illustration 1: Probability Categories/Range per Year



4.2.4 – Vulnerability & Impact

This section describes the potential impacts of the profiled hazard for each participating jurisdiction and provides an overall summary of each one's vulnerability to damage/loss of structures, systems, populations, and community assets.

4.2.4A – Critical Facilities & Infrastructure

When appropriate, this section details the critical facilities and infrastructure pertinent to the profiled hazard.

4.2.4B – Land Use & Development Trends

This section provides a general description of land use and development trends within the planning area as it relates to the profiled hazard.

4.2.4C – Unique & Varied Risk

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

4.2.4D – Repetitive Loss Structures

If applicable to the profiled hazard, a description of the location types, along with estimates for the number of Repetitive Loss (RL) properties, will be provided in this section.

4.2.5 – Hazus Models

The following information is derived from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan, which was developed by the Carl Vinson Institute of Government at the University of Georgia in 2021. The detailed risk assessment focused on defining hurricane, riverine flood, and tornado risks in Fulton County. More specifically, it identified the characteristics and potential consequences of

such disasters, how much of the planning area could be affected by such disasters, and the impact on community assets.

Hazus-MH, Version 2.2 SP1, was used to perform the analyses for Fulton County. The application includes default data (derived from a variety of national sources and in some cases several years old) for every county in the United States. Fulton County provided building inventory information from its property tax assessment system to improve data quality.

Additionally, the default Hazus-MH site-specific point inventory was updated using data compiled from the Georgia Emergency Management Agency (GEMA). The default Hazus-MH aggregate inventory (General Building Stock) was also updated prior to running the scenarios. Reported losses reflect the updated data sets.

The GBS records for Fulton County were replaced with data derived from parcel and property assessment data obtained from Fulton County. The County provided property assessment data was current as of November 2021 and the parcel data current as of November 2021. Records without improvements were deleted. The parcel boundaries were converted to parcel points located in the centroids of each parcel boundary; then, each parcel point was linked to an assessor record based upon matching parcel numbers. The parcel assessor match-rate for Fulton County is 98.5%. The generated building inventory represents the approximate locations (within a parcel) of structures. The building inventory was aggregated by census block. Both the tract and block tables were updated. The following table shows the results of the changes to the GBS tables by occupancy class.

*Table 10: GBS Building Exposure Updates by Occupancy Class**

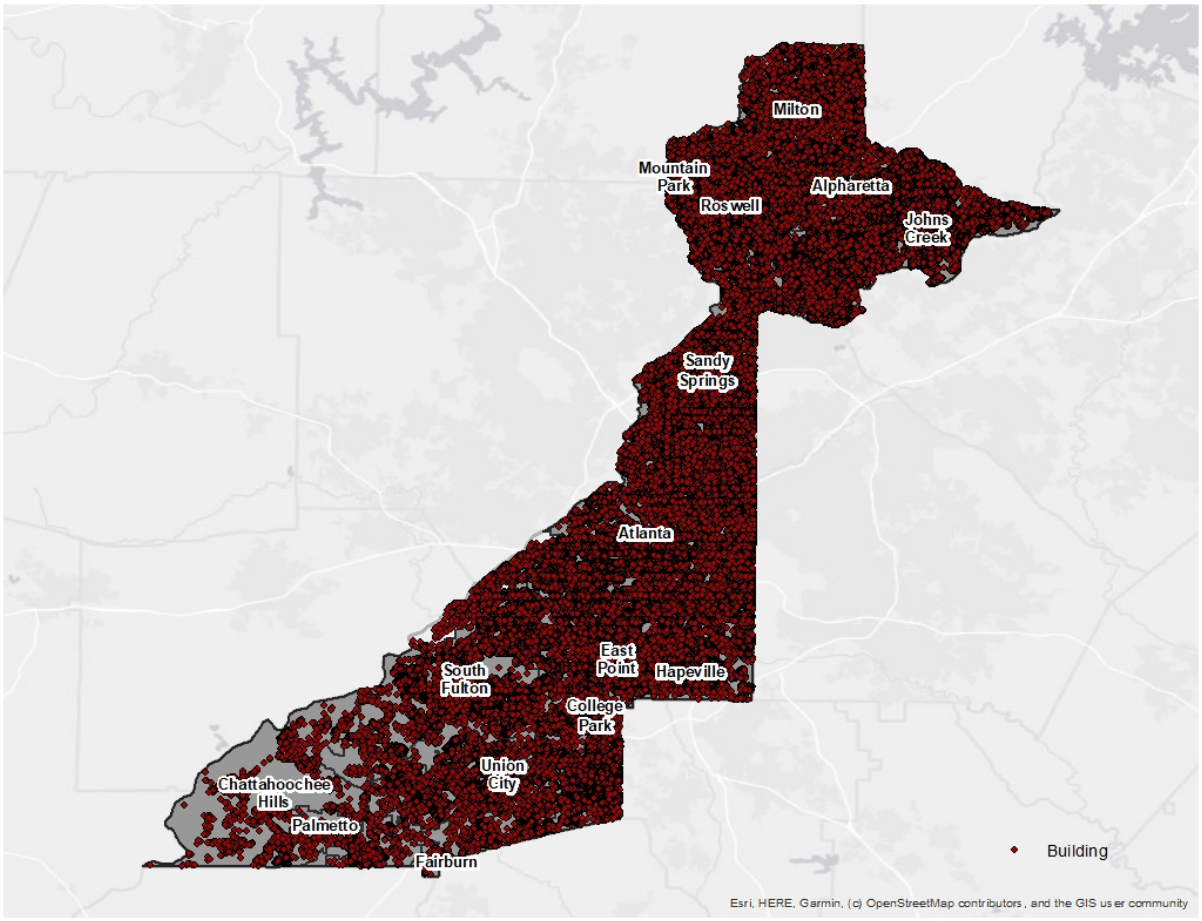
GBS Building Exposure Updates by Occupancy Class, Fulton County				
General Occupancy	Default Hazus-MH County	Updated Count	Default Hazus-MH Exposure	Updated Exposure
Agricultural	589	30	$170,460,000	$4,954,000
Commercial	21,367	10,524	$26,071,694,000	$7,611,528,000
Education	819	237	$1,485,710,000	$593,274,000
Industrial	4478	1843	$3,810,644,000	$3,577,154,000
Religious	2345	606	$2,275,163,000	$401,776,000
Residential	263,885	306,375	$98,908,429,000	$94,653,572,000
Total	294,345	320,345	$133,650,432,000	$107,089,548,000

**The exposure values represent the total number and replacement cost for all Fulton County buildings*

For Fulton County, the updated GBS was used to calculate hurricane wind losses. The flood losses and tornado losses were calculated from building inventory modeled in Hazus-MH as User-Defined Facility (UDF) or site-specific points. The following map shows the distribution of buildings as points based on data provided by Fulton County.

***Note:** The UDF inventory category in Hazus-MH allows the user to enter site-specific data in place of GBS data.*

Map 55: Fulton County Overview, GBS Distribution



Map Source: Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan

The default Hazus-MH essential facility data was updated to reflect improved information available in the Georgia Mitigation Information System (GMIS) as of November 2021. For these risk analyses, only GMIS data for buildings that Hazus-MH classified as Essential Facilities was integrated into Hazus-MH because the application provides specialized reports for these five facilities. Essential Facility inventory was updated for the analysis conducted for this report. The following tables summarize the counts and exposures, where available, by Essential Facility classification of the updated data.

Table 11: Essential Facilities (Updated), City of Alpharetta

Essential Facilities, City of Alpharetta		
Classification	**Updated Count**	**Updated Exposure**
EOC	0	$0
Care	1	$14,634
Fire	6	$6,537,000
Police	1	$721,000
School	9	$212,777,000
Total	**17**	**$234,669,000**

Table 12: Updated Essential Facilities, City of Atlanta

Essential Facilities, City of Atlanta		
Classification	**Updated Count**	**Updated Exposure**
EOC	1	$880,000
Care	13	$729,372,000
Fire	29	$32,409,000
Police	8	$125,796,000
School	88	$852,701,000
Total	**139**	**$1,741,158,000**

Table 13: Essential Facilities (Updated), City of Chattahoochee Hills

Essential Facilities, City of Chattahoochee Hills		
Classification	**Updated Count**	**Updated Exposure**
EOC	0	$0
Care	0	$0
Fire	1	$111,000
Police	1	$618,000
School	1	$3,537,000
Total	**3**	**$4,266,000**

Table 14: Essential Facilities (Updated), City of College Park

Essential Facilities, City of College Park		
Classification	**Updated Count**	**Updated Exposure**
EOC	0	$0
Care	1	$2,149,000
Fire	2	$872,000
Police	1	$1,135,000
School	5	$43,867,000
Total	**9**	**$48,023,000**

Table 15: Essential Facilities (Updated), City of East Point

Essential Facilities, City of East Point		
Classification	**Updated Count**	**Updated Exposure**
EOC	0	$0
Care	1	$16,272,000
Fire	4	$5,172,000
Police	1	$4,943,000
School	10	$118,121,000
Total	**16**	**$144,508,000**

Table 16: Essential Facilities (Updated), City of Fairburn

Essential Facilities, City of Fairburn		
Classification	**Updated Count**	**Updated Exposure**
EOC	0	$0
Care	0	$0
Fire	3	$1,928,000
Police	1	$680,000
School	2	$33,842,000
Total	**6**	**$36,450,000**

Table 17: Essential Facilities (Updated), City of Hapeville

Essential Facilities, City of Hapeville		
Classification	**Updated Count**	**Updated Exposure**
EOC	0	$0
Care	0	$0
Fire	3	$77,864,000
Police	1	$1,790,000
School	2	$6,033,000
Total	**6**	**$85,687,000**

Table 18: Essential Facilities (Updated), City of Johns Creek

Essential Facilities, City of Johns Creek		
Classification	**Updated Count**	**Updated Exposure**
EOC	0	$0
Care	1	$105,237,000
Fire	4	$3,290,000
Police	1	$11,140,000
School	17	$313,451,000
Total	**23**	**$433,118,000**

Table 19: Essential Facilities (Updated), City of Milton

Essential Facilities, City of Milton		
Classification	**Updated Count**	**Updated Exposure**
EOC	0	$0
Care	0	$0
Fire	4	$13,793,000
Police	1	$7,613,000
School	8	$180,454,000
Total	**13**	**$201,860,000**

Table 20: Essential Facilities (Updated), City of Mountain Park

Essential Facilities, City of Mountain Park		
Classification	**Updated Count**	**Updated Exposure**
EOC	0	$0
Care	0	$0
Fire	1	$216,000
Police	0	$0
School	0	$0
Total	**1**	**$216,000**

Table 21: Essential Facilities (Updated), City of Palmetto

Essential Facilities, City of Palmetto		
Classification	**Updated Count**	**Updated Exposure**
EOC	0	$0
Care	0	$0
Fire	1	$163,000
Police	1	$763,000
School	1	$14,779,000
Total	**3**	**$15,705,000**

Table 22: Essential Facilities (Updated), City of Roswell

Essential Facilities, City of Roswell		
Classification	**Updated Count**	**Updated Exposure**
EOC	0	$0
Care	1	$55,366,000
Fire	7	$8,027,000
Police	1	$6,380,000
School	17	$213,180,000
Total	**26**	**$282,953,000**

Table 23: Essential Facilities (Updated), City of Sandy Springs

Essential Facilities, City of Sandy Springs		
Classification	**Updated Count**	**Updated Exposure**
EOC	0	$0
Care	3	$89,042,000
Fire	3	$4,482,000
Police	1	$2,561,000
School	12	$162,032,000
Total	**19**	**$258,117,000**

Table 24: Essential Facilities (Updated), City of South Fulton

Essential Facilities, City of South Fulton		
Classification	**Updated Count**	**Updated Exposure**
EOC	0	$0
Care	0	$0
Fire	9	$2,884,000
Police	4	$2,347,000
School	21	$551,905,000
Total	**34**	**$557,136,000**

Table 25: Essential Facilities (Updated), City of Union City

Essential Facilities, Union City		
Classification	**Updated Count**	**Updated Exposure**
EOC	0	$0
Care	0	$0
Fire	3	$790,000
Police	2	$11,202,000
School	5	$16,222,000
Total	**10**	**$28,214,000**

Table 26: Essential Facilities (Updated), Unincorporated Areas of Fulton County

Essential Facilities, Unincorporated Areas of Fulton County		
Classification	**Updated Count**	**Updated Exposure**
EOC	0	$0
Care	0	$0
Fire	2	$76,747,000
Police	0	$0
School	0	$0
Total	**2**	**$76,747,000**

Hazus-MH loss estimates may be impacted by certain assumptions and process variances made in this risk assessment.

- The Fulton County analysis used Hazus-MH Version 2.2 SP1, which was released by FEMA in May 2015.
- County-provided parcel and property assessment data may not fully reflect all buildings in the county. For example, some counties do not report not-for-profit buildings such as government buildings, schools, and churches in their property assessment data. This data was used to update the General Building Stock as well as the User Defined Facilities applied in this risk assessment.
- Georgia statute requires that the Assessor's Office assign a code to all the buildings on a parcel based on the buildings primary use. If there is a residential or a commercial structure on a parcel

and there are also agricultural buildings on the same parcel Hazus-MH looks at the residential and commercial "primary" structures first and then combines the value of all secondary structures on that parcel with the value of the primary structure. The values and building counts are still accurate but secondary structures are accounted for under the same classification as the primary structure. Because of this workflow, the only time that a parcel would show a value for an agricultural building is when there are no residential or commercial structures on the parcel thus making the agricultural building the primary structure. This is the reason that agricultural building counts and total values seem low or are nonexistent.

- GBS updates from assessor data will skew loss calculations. The following attributes were defaulted or calculated:
    - Foundation Type was set from Occupancy Class for commercial and industrial buildings. The software that was used in the valuation process values these buildings without consideration for different foundation types. The building inventory was developed with the assumption that these buildings all have slab foundations. Foundation types were taken directly from the tax records for residential properties.
    - First Floor Height was set from Foundation Type
    - Content Cost was calculated from Replacement Cost
- It is assumed that the buildings are located at the centroid of the parcel.
- The essential facilities extracted from the GMIS were only used in the portion of the analysis designated as essential facility damage. They were not used in the update of the General Building Stock or the User Defined Facility inventory.

The hazard models included in this risk assessment included:

- Hurricane assessment which was comprised of a wind only damage assessment.
- Flood assessment based on the 1% annual chance event that includes riverine assessments.
- Tornado assessment based on GIS modeling.

Photo Source: iStock by Getty Images

4.2(D) – Drought

4.2.1 – 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, 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.

With below average or no rainfall, soil can dry out and plants can die. If unusually dry weather persists and water supply problems develop, the period is defined as a drought. Human activity such as over-farming, excessive irrigation, deforestation, and poor erosion controls can exacerbate the effects of drought. 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, be 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.

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 decrease 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.

Droughts are regularly monitored by multiple federal agencies using several 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 Index (PDI), devised in 1965, was the first drought indicator to assess moisture status comprehensively. 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 27: 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

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

Drought is a persistent problem across the nation, as evidenced by its widespread presence in 2018. Early in the year (February 2018), the U.S. Drought Monitor reported that 38.4% of the continental U.S. was in drought. That was the highest percentage since the 40% recorded in May 2014. Additionally, consider 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, unfortunately, following suit.

4.2.2 – Location & Extent

The State of Georgia and Fulton County has experienced bouts of dry weather for several times over the years.

Illustration 2: Drought Percent Area, State of Georgia

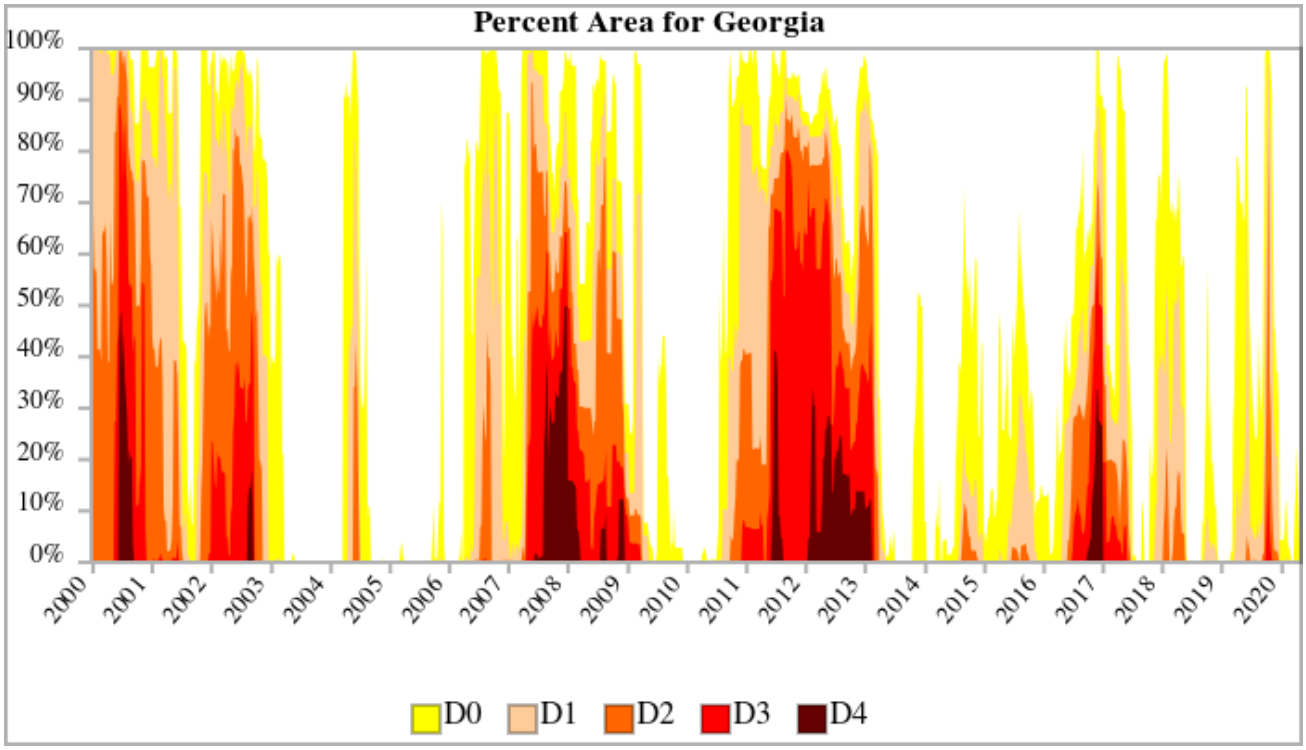
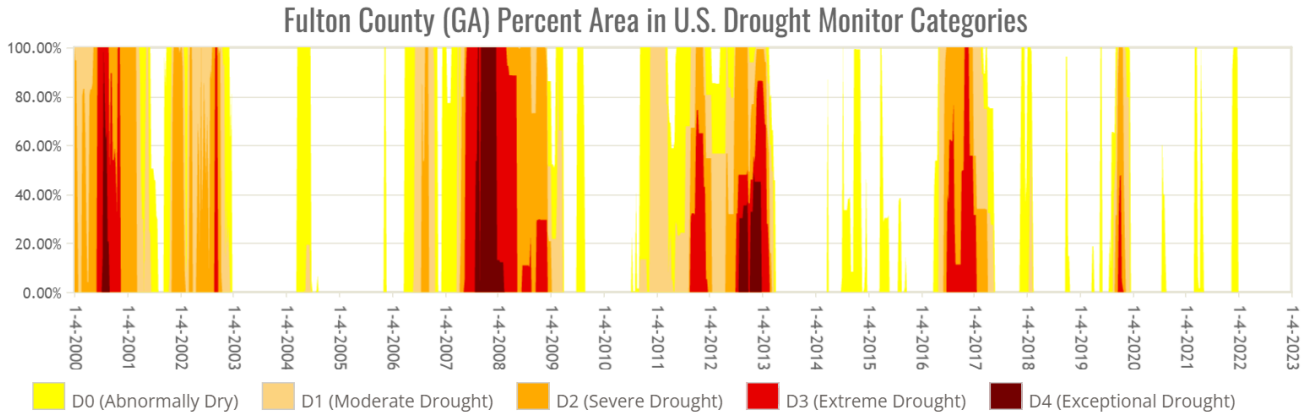


Illustration 3: Drought Percent Area, Fulton County



Drought typically does not have a direct impact on critical facilities or infrastructure. However, possible losses/impacts to them can include loss of critical functions due to low water supplies. Severe droughts can negatively affect drinking water supplies. Should a public water system be affected, the losses could total into the millions if water must be purchased and shipped from other locations.

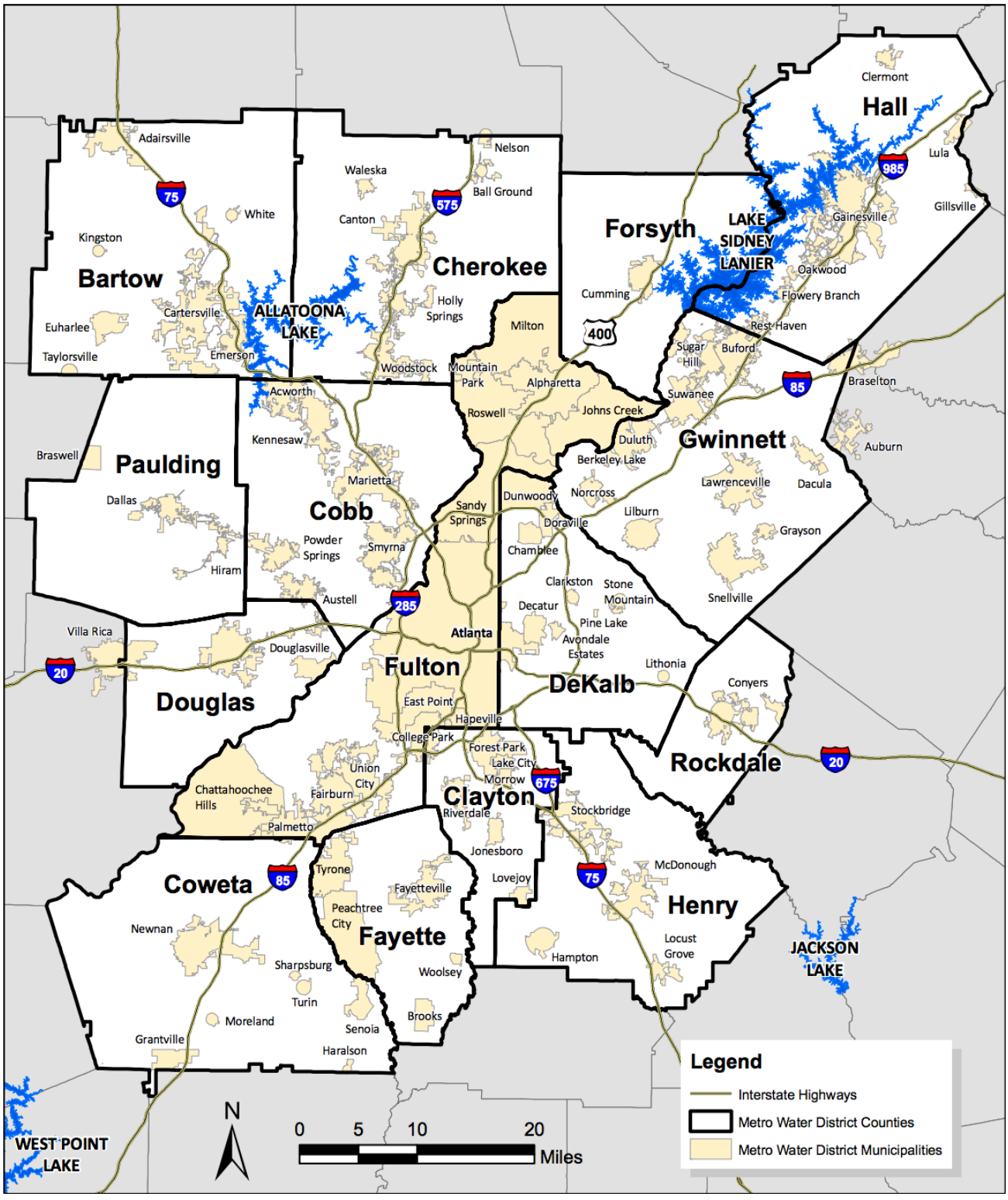
Severe drought could also pose a significant risk to public health if water sources become scarce, or worse, contaminated. This is especially true for those who get their drinking water from private wells. Per the Centers for Disease Control and Prevention (CDC), viruses, such as E. coli and salmonella, as well

as protozoa and bacteria, can contaminate both groundwater and surface water when rainfall decreases. Additionally, acute respiratory and gastrointestinal illnesses are more easily spread from person-to-person when hand washing is compromised by a perceived or real lack of available water.

Severe drought can also increase an area's vulnerability to wildfire due to dry vegetation. Dry, hot, and windy weather combined with dry vegetation and a spark, whether through human intent, accident, or lightning, can trigger a blaze. Such fires, as experienced in Georgia's Okefenokee National Wildlife Refuge in April 2017, can scorch hundreds of thousands of acres of land.

The following map depicts the Metropolitan North Georgia Water Planning District.

Map 56: Metropolitan North Georgia Water Planning District, Water District Map

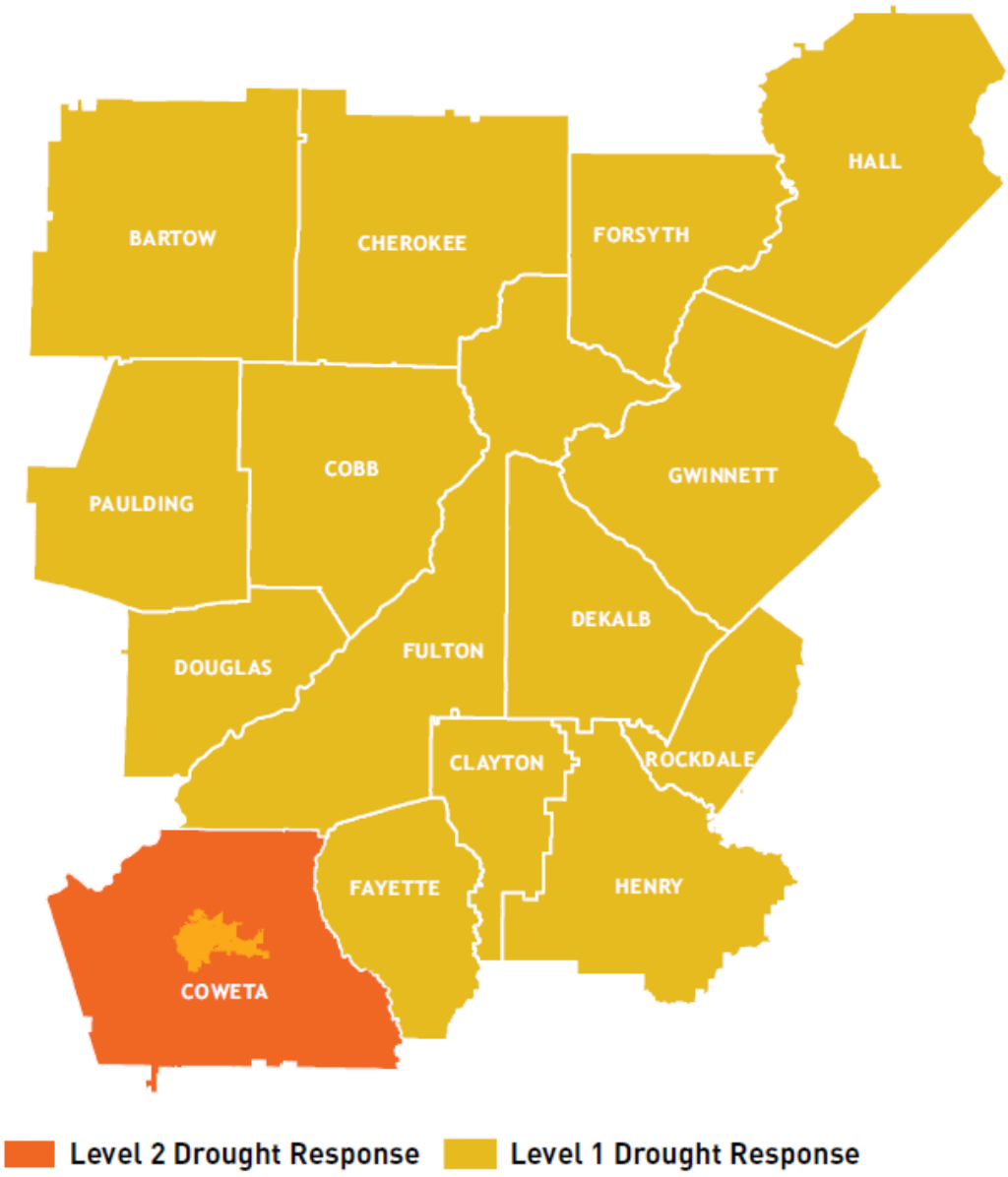


Map Source: Metropolitan North Georgia Water Planning District (https://northgeorgiawater.org/what-is-the-metro-water-district/)

In September 2019, 7.5 million people in the State of Georgia experienced drought conditions. By the end of the month, that number reached 62 percent of the State. Severe to exceptional drought (categories D2-D4) went from 0 percent of Georgia at the start of the month to 28 percent by the end. On December 27, 2019, the Georgia Environmental Protection Division (EPD) lifted the Level 1 Drought Response due to the rainfall at the end of 2019 which helped improve drought conditions in the region. This drought order

was in place for much of the 15-county metro Atlanta area, including Fulton County. As of November 2020, the Metropolitan North Georgia Water Planning District, which serves Fulton County, indicated no drought level response had been declared for the Metro Atlanta Region or the State of Georgia.

Map 57: Drought Response, Metro Atlanta, GA Area, Fall 2019



Map Source: Metropolitan North Georgia Water Planning District

4.2.3 – Previous Occurrences

Between January 1, 2016, to December 31, 2020, the National Oceanic and Atmospheric Administration (NOAA) and its National Centers for Environmental Information (NCEI) documented 15 occurrences of drought within the planning area. The following table provides information pertaining to each of these events.

Table 28: Drought Events, Fulton County

Drought Events, Fulton County					
Location	Date	Event Type	Injuries/ Deaths	Property Damage	Crop Damage
South Fulton (Zone)	6/1/2016	Drought	0	0	0
North Fulton (Zone)	6/1/2016	Drought	0	0	0
North Fulton (Zone)	7/1/2016	Drought	0	0	0
South Fulton (Zone)	7/1/2016	Drought	0	0	0
North Fulton (Zone)	8/1/2016	Drought	0	0	0
South Fulton (Zone)	8/1/2016	Drought	0	0	0
North Fulton (Zone)	9/1/2016	Drought	0	0	0
South Fulton (Zone)	9/1/2016	Drought	0	0	0
South Fulton (Zone)	10/1/2016	Drought	0	0	0
North Fulton (Zone)	10/1/2016	Drought	0	0	0
South Fulton (Zone)	11/1/2016	Drought	0	0	0
North Fulton (Zone)	11/1/2016	Drought	0	0	0
North Fulton (Zone)	12/1/2016	Drought	0	0	0
South Fulton (Zone)	12/1/2016	Drought	0	0	0
South Fulton (Zone)	1/1/2017	Drought	0	0	0
TOTAL – 15 EVENTS			**0/0**	**$0**	**$0**

Data Source: NOAA/NCEI Storm Events Database

From January 1, 2000, to December 31, 2020, NOAA/NCEI recorded 62 drought events in Fulton County. According to the National Climatic Data Center, north-central Georgia, including Fulton County, experienced drought conditions in 1997, 1999, 2000, 2001, 2002, 2003, 2004, 2007, 2008, 2011, 2012, 2016, 2017, and 2019. Fulton County experience a series of droughts from 1999 to 2004. In that time, Fulton County suffered $1.265 million in crop damages, while the State of Georgia suffered over $306 million in crop damages.

4.2.3A – Probability of Future Events, Drought

Fulton County and its participating jurisdictions can expect a drought event with a **295%** probability per year, or 2.95 events per 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 for Fulton County and its participating jurisdictions is considered **highly likely**.

Table 29: Probability of Future Events, Drought

Probability of Future Events, Drought	
Event Year	Event Count
2000	12
2001	6
2002	4
2003	2
2004	2

Probability of Future Events, Drought	
Event Year	Event Count
2005	0
2006	0
2007	10
2008	0
2009	0
2010	0
2011	1
2012	0
2013	0
2014	0
2015	0
2016	14
2017	5
2018	0
2019	6
2020	0
Total Recorded Events =	**62**
Total Years =	**21**
Yearly Probability =	**295%**

Data Source: NOAA/NCEI Storm Events Database

4.2.4 – Vulnerability & Impact

Fulton County has recorded 62 drought events since 2000, of which the range and magnitude was between "slightly dry" and "extremely dry." Based on the future probability in the preceding table, from January 1, 2000, to December 31, 2020, Fulton County and its participating jurisdictions can expect 2.95 drought events per year with each ranging anywhere below 0 and -4 on the Palmer Drought Severity Index and 0 to -2 on the Standard Precipitation Index. Droughts do not pose any risk to critical facilities and/or infrastructure in Fulton County or its participating jurisdictions.

Table 30: Historical Impacts, Drought

Historical Impacts, Drought	
Count of Events	62
Impacts Per Year	2.95
Average Magnitude	-
Magnitude Range	-
Average Cost	$20,403
Magnitude of Cost	$0 - $1,265,000
Total Recorded Cost	$1,265,000
Average Fatalities	0.00
Total Fatalities	0.00
Average Injuries	0.00
Total Injuries	0.00

Data Source: NOAA/NCEI Storm Events Database

Vulnerability of Population

Drought itself poses no direct risk of injury or death for Fulton County and its participating jurisdictions.

Vulnerability of Systems

Table 31: Vulnerability of Systems to Droughts, Fulton County

Vulnerability of Systems to Droughts, Fulton County	
Community Lifeline System	**Vulnerability**
Safety and Security	Low vulnerability. Droughts may affect the available water supply for firefighting.
Food, Water, Shelter	High vulnerability. Droughts may affect the available water supply. Droughts may increase the risk of virus or bacteria contamination of ground and surface water. Droughts may affect crop production.
Health and Medical	Low vulnerability. Droughts may affect available water supply.
Energy	Low vulnerability. Droughts may hinder hydroelectrical power generation.
Communications	No vulnerability.
Transportation	No vulnerability.
Hazardous Materials	No vulnerability.

Drought can have a significant effect on a community's agriculture. If the precipitation level is below normal, farmers will struggle to grow crops and feed livestock. All jurisdictions throughout Fulton County are susceptible to the effects of drought which includes limited water usage and damage to crops/vegetation.

4.2.4A – Critical Facilities & Infrastructure

Drought does not pose any risk to critical facilities and infrastructure within Fulton County or its participating jurisdictions. A complete list of critical facilities and infrastructure can be found in Appendix C.

4.2.4B – Land Use & Development Trends

Because the population of Fulton County continues to grow and development projects are underway, people and facilities within the planning area are increasingly vulnerable to the short- and long-term effects of drought. Water Conservation is a major need during drought events. The 2016 Fulton County MJHMP notes that the County's drinking water supply comes from the Chattahoochee River. More than 450 million gallons per day (MGD) are pumped from the Chattahoochee River by local utilities. The Fulton County Water Services Division and the Atlanta Department of Watershed Management are two major suppliers of potable water in the County.

Fulton County, in conjunction with the Georgia Environmental Protection Division and the Metropolitan North Georgia Water Planning District, encourages water conservation and water-saving habits within the planning area. Residents are encouraged to take steps to conserve water in their homes and places of business. Additionally, they are reminded to abide by the State of Georgia's permanent "Year-Round Outdoor Water Restrictions" which limit outdoor watering to before 10:00 AM and after 4:00 PM in order to avoid the hottest part of the day when more evaporation occurs. The Metropolitan North Georgia Water Planning District encourages the community to conserve water during drought events and provides this information through its website (https://northgeorgiawater.org/conserve-our-water/) and public outreach events within the communities they serve.

Map 58: Water Withdrawal, Metro Atlanta, GA Area

Map Source: Metropolitan North Georgia Water Planning District

4.2.4C – Unique & Varied Risk

Fulton County and its participating jurisdictions have significant agricultural areas at risk to drought. According to the 2017 Census of Agriculture (https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/Georgia/cp13121.pdf) Fulton County contains 195 farms, covering 12,228 acres of land. Crop sales accounted for $906,000 and livestock sales accounted for $1,364,000 in 2017. If a severe drought affects Fulton County in the future, the losses could be as much as $2,585,487 (adjusted for inflation to October 2021 according to the U.S. Bureau of Labor Statistics.

4.2.4D – Repetitive Loss Structures

Not applicable.

Photo Source: iStock by Getty Images

4.2(E) – Earthquake

4.2.1 – Hazard Description

An earthquake is the vibration of the earth's surface following a release of energy in the earth's crust. This energy can be generated by a sudden dislocation of the crust or by a volcanic eruption. Most destructive quakes are caused by dislocations of the crust. The crust may first bend and then, when the stress exceeds the strength of the rocks, break and snap to a new position. In the process of breaking, vibrations called "seismic waves" are generated. These waves travel outward from the source of the earthquake at varying speeds. The movement of these tectonic plates creates stress that can be released as earthquakes. An earthquake's point of initial rupture is called its focus or hypocenter; and the point of ground directly above the hypocenter is called the epicenter.

Earthquakes tend to reoccur along faults, which are zones of weakness in the crust. Even if a fault zone has recently experienced an earthquake, there is no guarantee that all the stress has been relieved. Another earthquake could still occur.

Faults are more likely to have earthquakes on them if they have more rapid rates of movement, have had recent earthquakes along them, experience greater total displacements, and are aligned so that movement can relieve accumulating tectonic stresses. A direct relationship exists between a fault's length and location and its ability to generate damaging ground motion at a given site. In some areas, smaller, local faults produce lower magnitude quakes, but ground shaking can be strong, and damage can be significant because of the fault's proximity to the area. In contrast, large regional faults can generate great magnitudes but, because of their distance and depth, may result in only moderate shaking in the area.

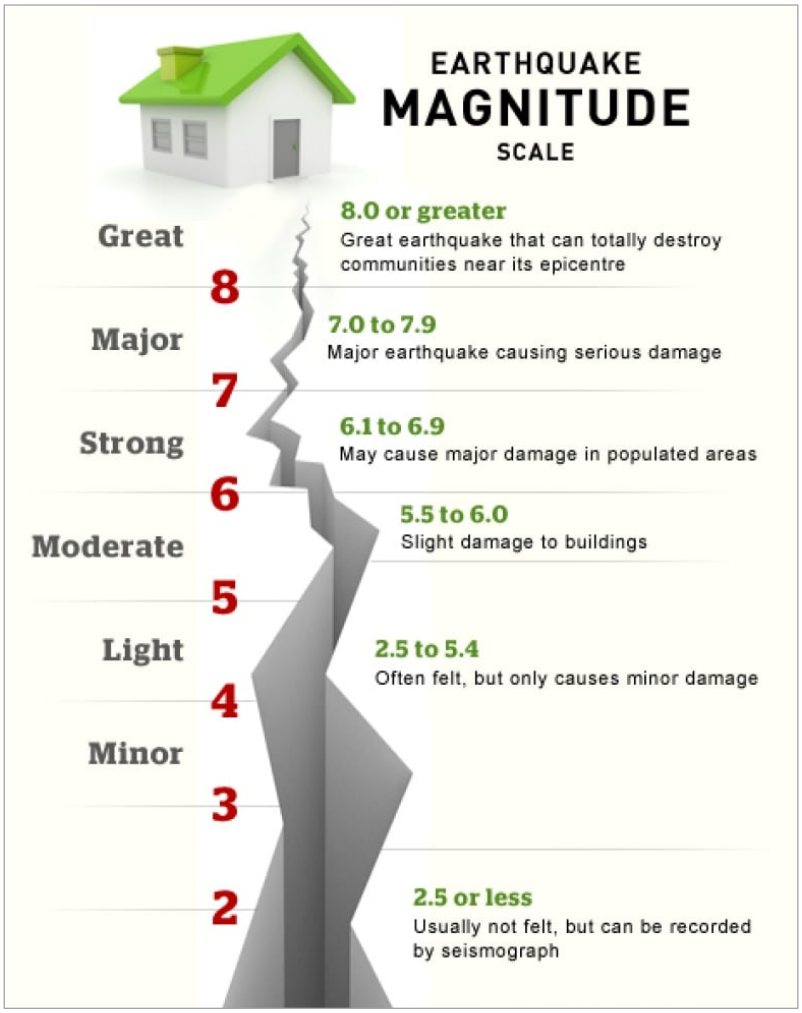
An earthquake's effect(s) can be compounded by the soil type underlying a community's buildings and infrastructure. If the soil is not composed of bedrock and consists of clays, silts, and other types of sand, the pressure generated by an earthquake can force brittle soil and water up toward the surface. These upward forced materials will then destabilize buildings and infrastructure, causing damage that can range from minor cracks to complete destruction. Smaller upward forced materials can destabilize slopes and building foundation further compounding the potential damage to a community.

Geologists classify faults by their relative hazards. Active faults, which represent the highest hazard, are those that have ruptured to the ground surface during the Holocene period (about the last 11,000 years). Potentially active faults are those that displaced layers of rock from the Quaternary period (the last 1,800,000 years). Determining if a fault is "active" or "potentially active" depends on geologic evidence, which may not be available for every fault. Although there are probably still some unrecognized active faults, nearly all the movement between the two plates, and therefore most of the seismic hazards, are on the well-known active faults. However, inactive faults, for which no displacements have been recorded, maintain the potential to reactivate or experience displacement along a branch sometime in the future.

There are numerous characteristics measured when observing earthquake activity; however, four of them—force, depth, peak ground acceleration and the distance to the epicenter—are most influential in determining damage. Two scales are used when referring to earthquake activity: the Richter Scale, which estimates the total force of the earthquake; and the Modified Mercalli Intensity Scale, which categorizes the observed damage from the earthquake.

The Richter Scale is a scientific measurement based on the magnitude of the earthquake. It provides seismic experts greater accuracy in comparing the strength of earthquakes across time and at different locations in all areas of the world. The measurements of the Richter Scale are further explained in the illustration below:

Illustration 4: Earthquake Magnitude Scale (Richter)



Data Source: UPSeis / Michigan Tech

The Modified Mercalli Intensity value assigned to a specific site after an earthquake has a more meaningful measure of severity to the nonscientist than the magnitude because intensity refers to the effects experienced at that place. The lower numbers of the intensity scale generally deal with the way the earthquake is felt by people. The higher numbers of the scale are based on observed structural damage. Structural engineers usually contribute information for assigning intensity values of VIII or above. The table below is an abbreviated description of the levels of Modified Mercalli intensity.

Table 32: Modified Mercalli Intensity Scale

Intensity	Shaking	Description / Damage
I	Not felt	Not felt except by a very few under especially favorable conditions.
II	Weak	Felt only by a few persons at rest, especially on upper floors of buildings.
III	Weak	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations like the passing of a truck. Duration estimated.
IV	Light	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V	Moderate	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum in clocks may stop.
VI	Strong	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plates. Damage slight.
VII	Very Strong	Damage negligible in buildings of good design and construction; slight to moderate in well-built, ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
VIII	Severe	Damage slight in specially designated structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
IX	Violent	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage greater in substantial buildings, with partial collapse. Buildings shifted off foundations.
X	Extreme	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundation. Rails bent.

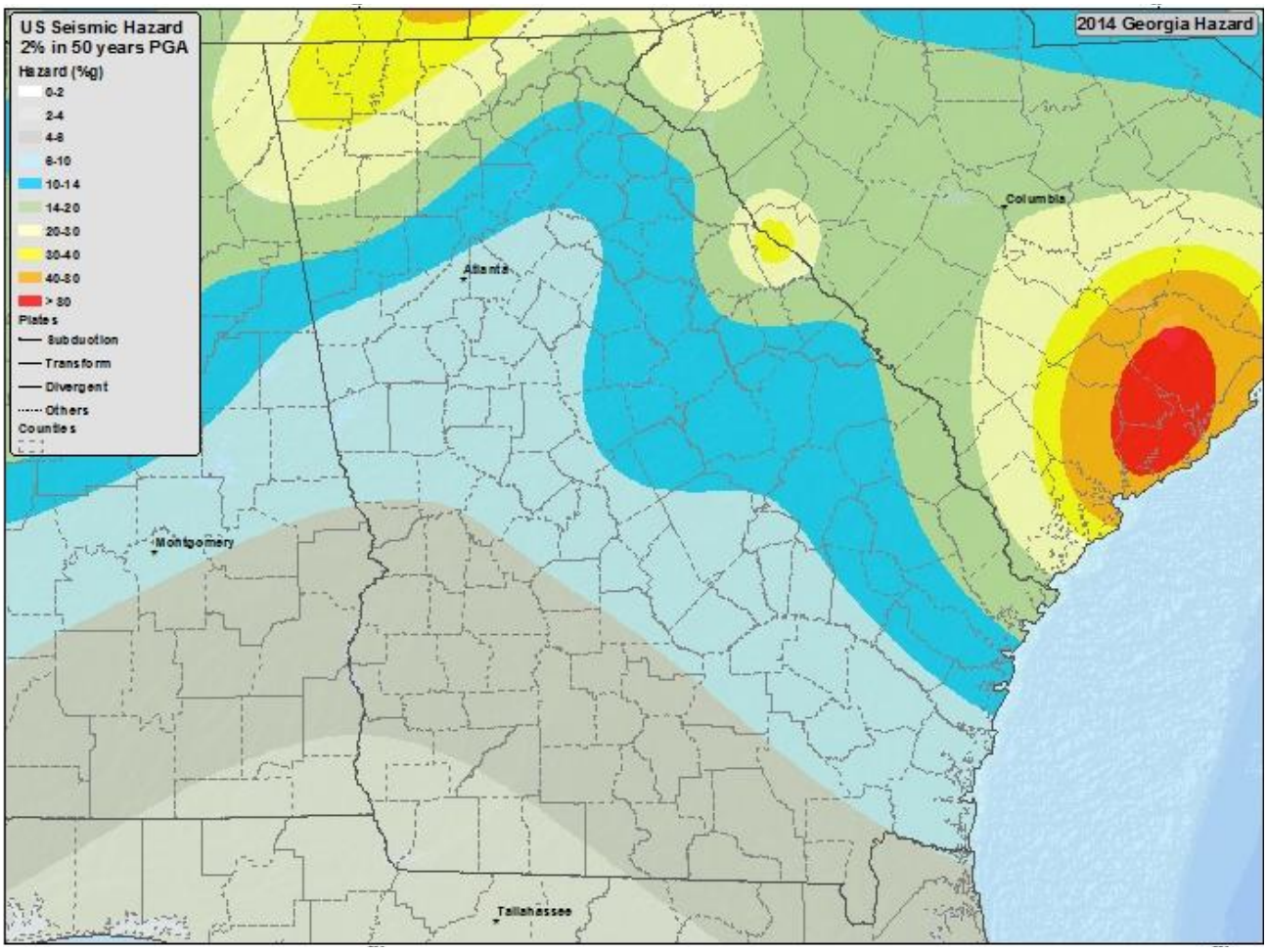
Data Source: The Severity of an Earthquake (abridged), USGS General Interest Publication 1989-288-913

Earthquakes can last from a few seconds to over five minutes; they may also occur as a series of tremors over several days. The actual movement of the ground in an earthquake is seldom the direct cause of injury or death. Casualties generally result from falling objects and debris, because the shocks shake, damage, or demolish buildings and other structures. Disruption of communications, electrical power supplies and gas, sewer and water lines should be expected. Earthquakes may trigger fires, dam failures, landslides, or releases of hazardous material, compounding their disastrous effects. Such secondary impacts could be magnified by the effects of climate change, though there are currently no models available to estimate them.

According to the U.S. Geological Survey (USGS), it is estimated that there are 500,000 detectable earthquakes in the world each year; 100,000 of those can be felt, and 100 of them cause damage. Earthquakes are much less common in the eastern United States than in California, with most events imperceptible by the public. This leads to a dangerous complacency that may be unwarranted.

The first earthquakes reported felt in Georgia were the great New Madrid series of 1811-1812. Most Georgians are largely unaware of the last large event that struck Charleston, South Carolina, in 1886, killing almost 60 people and causing complete devastation to the city. Unfortunately, earthquakes in the eastern United States are very efficient at transmitting seismic energy over large distances, such that the damage area of a magnitude 6.0 here is comparable to a magnitude 7.0 in the western United States.

Map 59: 2014 Seismic Hazard Map, State of Georgia

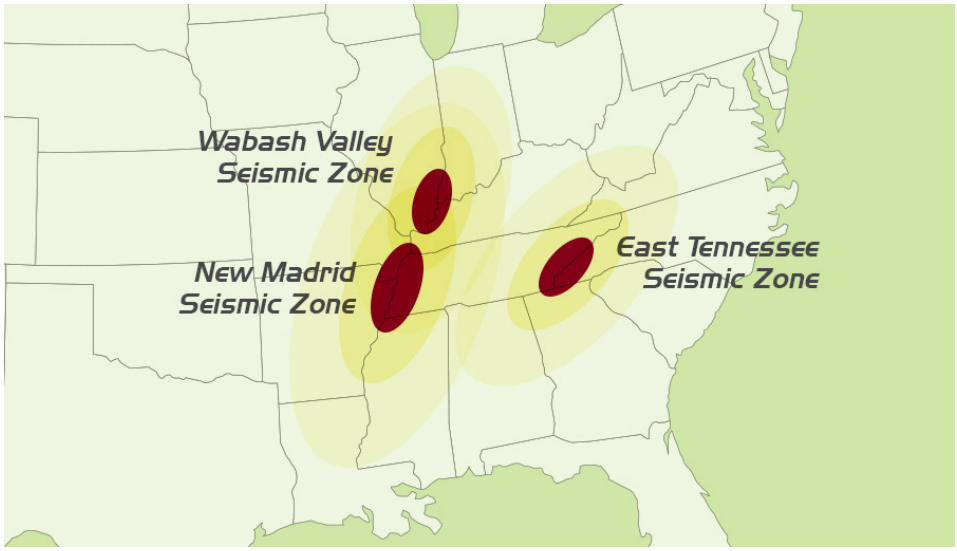


Map Source: USGS

4.2.2 – Location & Extent

Georgia and the Southeastern United States are not typically known for seismic activity. Earthquakes in northwestern Georgia are clustered along a northeast trending line that represents the southwest extension of the Southeastern Tennessee Seismic Zone. Based on seismicity, the Southeastern Tennessee Seismic Zone is second only to the New Madrid Seismic Zone in the Eastern United States for its size and rate of earthquake production. In both seismic zones, the earthquake hypocenters are at mid-crustal depths (14 ± 10 km) and outline a 150-mile-long narrow active zone.

Map 60: Seismic Zone of the Central United States

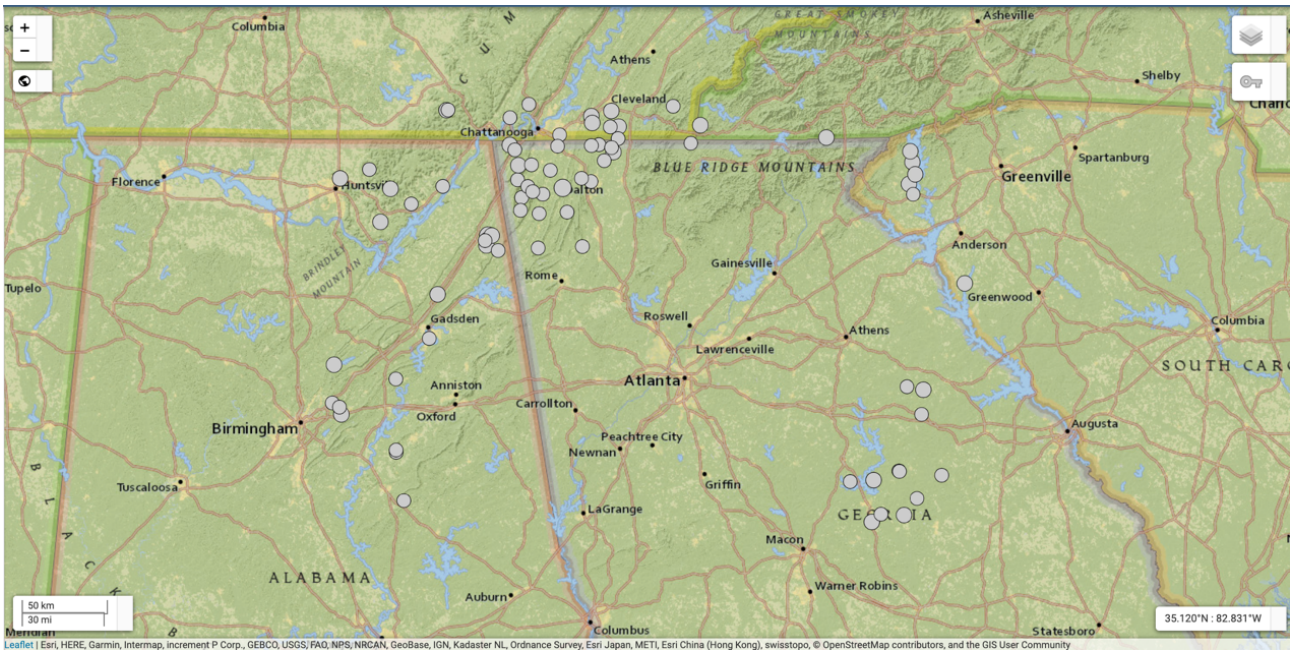


Map Source: Central United States Earthquake Consortium

These similarities and the existence of the great 1811-12 New Madrid earthquakes suggest that southeastern Tennessee, or Northwest Georgia, could also be the site of a similar great earthquake. This area currently experiences one magnitude 4.0 earthquake about every ten years. A magnitude 4.0 earthquake is generally perceived as a startling vibration that may rock objects off shelves and may cause some cracking of plaster.

According to the Georgia Earthquake Awareness Guide (2020), three levels of seismic activity are apparent in Georgia (http://geophysics.eas.gatech.edu/GTEQ/EMGuide/GEMA_Earthquake_Guide_2021.pdf). The least active area is the Coastal Plain of South Georgia, where one significant earthquake has been experienced in the last 30 years, the 1976 Reidsville earthquake. The northern half of Georgia has experienced moderate seismicity, with a magnitude-four earthquake about every ten years. When the details of the seismicity contained in the more frequent smaller earthquakes are included in a hazard assessment, two areas of northern Georgia stand out as being unusually active. These are the central Georgia seismic zone and the extension of the Southeastern Tennessee Seismic Zone across northwest Georgia. The maximum damage from an earthquake will occur in the epicenter area and thus the counties located in these two zones have the greatest earthquake hazard in Georgia." An online query of the USGS database for 79 earthquakes greater than 2.5 in intensity from 1956-2017 within approximately 250 miles of Fulton County, revealed the greatest activity in northwest Georgia into Alabama, Tennessee, and North Carolina.

Map 61: Georgia Area Earthquake >2.5 Intensity, January 1, 1956 – November 1, 2020

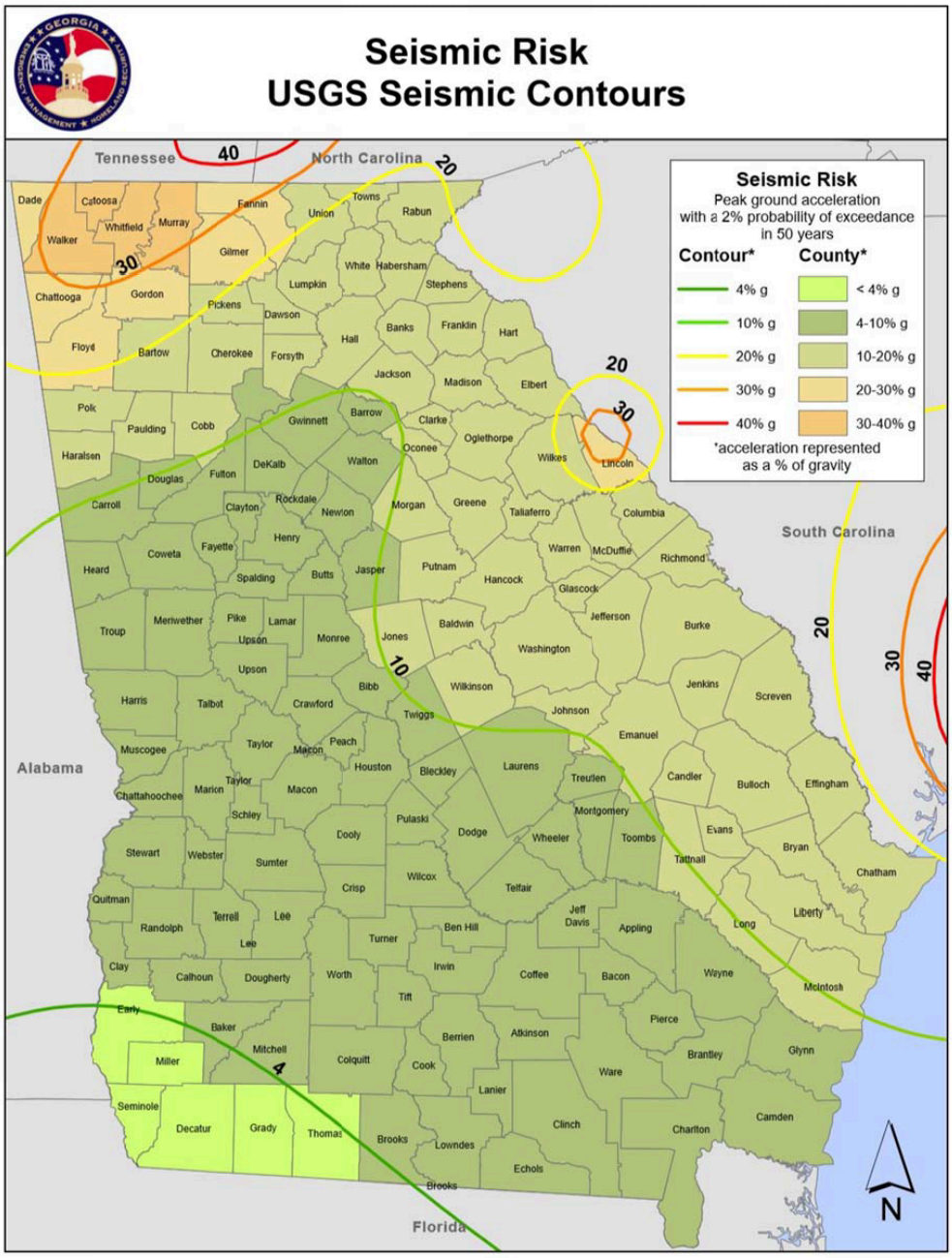


Map Source: USGS

Earthquakes large enough to cause damage can be felt in most, if not all, of Georgia's counties. Earthquakes may be felt in any area of Georgia, but the northwestern Georgia counties of Bartow, Catoosa, Chattoga, Dada, Fannin, Floyd, Gilmer, Gordon, Murray, Pickens, Rabun, Towns, Union Walker, and Whitfield, have experienced earthquakes in the past. The Georgia Hazard Mitigation Strategy, Standard and Enhanced Plan (2019), states that Georgia has been seismically active, but no earthquakes were reported, nor seismic disasters declared, between 1952 and 2017.

The following map depicts the State of Georgia's seismic risk.

Map 62: Georgia Seismic Risk Map



Map Source: Georgia Hazard Mitigation Strategy, Standard and Enhanced Plan (2019-2024)
(https://gema.georgia.gov/sites/gema.georgia.gov/files/related_files/document/2019%20Georgia%20Hazard%20Mitigation%20Strategy.pdf)

4.2.3 – Previous Occurrences

Data from USGS shows that no earthquakes have been recorded in Fulton County.

4.2.3A – Probability of Future Events, Earthquake

Calculating future probability is not the only predictor of future occurrences. While there has been no record of earthquakes in the planning area, Fulton County may experience **occasional** earthquakes.

4.2.4 – Vulnerability & Impact

The entire planning area is vulnerable to an earthquake incident occurring within or even outside County/State lines. Earthquakes cannot be reliably predicted, increasing vulnerability.

Vulnerability of Population

The entire population of Fulton County is vulnerable to the hazard of earthquake.

Vulnerability of Systems

Table 33: Vulnerability of Systems to Earthquakes, Fulton County

Vulnerability of Systems to Earthquakes, Fulton County	
Community Lifeline System	**Vulnerability**
Safety and Security	Moderate vulnerability. First responders may be exposed to earthquake impacts, including hazardous materials releases. Resources may be expended responding to calls for assistance.
Food, Water, Shelter	Moderate vulnerability. Water may be contaminated by debris and hazardous materials releases. Shelters may be damaged or without power. Shelters may be required to open.
Health and Medical	High vulnerability. Facilities may be damaged. Water may be contaminated. Facilities may be without power. Resources may be expended responding to the community's healthcare needs.
Energy	High vulnerability. Power infrastructure may be damaged, rendering the community without electricity. Natural gas pipelines may be damaged, creating fire hazards and rendering the community without natural gas service.
Communications	High vulnerability. Communication infrastructure may be damaged. Responder communication systems may be overloaded due to response demands. Landline and cellular networks may be overloaded by calls.
Transportation	High vulnerability. Roads and railroads may be damaged or blocked by debris. Air travel may be delayed or cancelled by damage at airports.
Hazardous Materials	High vulnerability. Earthquake impacts can cause hazardous materials releases from fixed sites, pipelines, and transportation accidents.

There is no data from previous earthquakes to estimate possible losses in Fulton County. With earthquakes potentially impacting all areas of the County, the loss estimations are based on 100 percent of the County being impacted and factoring in the known value of structures across all occupancy types. All jurisdictions throughout Fulton County are susceptible to the effects of the earthquake. The GEMA-HS #3a Worksheet referenced in Appendix I provides information on the estimated number of structures and people susceptible to all hazards, including earthquake.

4.2.4A – Critical Facilities & Infrastructure

Earthquakes do pose a risk to critical facilities and infrastructure within Fulton County or its participating jurisdictions. A complete list of critical facilities and infrastructure can be found in Appendix C.

4.2.4B – Land Use & Development Trends

Currently, Fulton County and its participating jurisdictions have no land use or development trends related to earthquakes.

4.2.4C – Unique & Varied Risk

The entire planning area has the potential to be affected by the profiled hazard, whether directly or indirectly. There are no significant differences between Fulton County and its participating jurisdictions in terms of risks and vulnerabilities associated with earthquakes. Earthquakes potentially can negatively affect all of Fulton County.

4.2.4D – Repetitive Loss Structures

Not applicable.

Photo Source: iStock by Getty Images

4.2(F) – Flood

4.2.1 – Hazard Description

Flooding, as defined by the National Weather Service (NWS), is the rising and overflowing of a body of water onto normally dry land. It can result from any overflow of inland or tidal waters, or an unusual accumulation or runoff of surface waters from any source. Flooding is loosely classified as inland, riverine, or coastal.

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. Other factors that affect the dynamics of this type of flood include slope, width, and vegetation in place along the watercourse banks. The slope that a flash flood traverses has a definite relationship to the overall speed in which the water will travel. The incline on which the water moves affects the width of the flooding area. Generally, the faster the water moves, the narrower that channel will be created, since the water digs the channel deeper as it flows. When water flows over shallower slope, it tends to spread out more, decreasing its potential to cause mass damage but still considered dangerous. Finally, the type of vegetation located along the flood's path can prevent further erosion of the channel banks. A structure that lies along a flood channel with no surrounding vegetation is at risk of having its foundation undercut, which can cause structural damage, or in some cases, a building's complete collapse. Riverine or alluvial, flooding occurs when excessive rainfall over an extended period causes a river to exceed its capacity. Typical causes of flooding, both inland and riverine, include tropical cyclonic systems, frontal systems, and isolated thunderstorms combined with other environmental variables such as changes to the physical environment, topography, ground saturation, soil types, basin size, drainage patterns, and vegetative cover. The rate of onset and duration of flooding events depends on the type of flooding (typical flood or flash flood). The

spatial extent of a flooding event depends on the amount of water overflow but can usually be mapped because of existing floodplains.

As depicted in the following illustration, a floodplain is a flat or nearly flat land adjacent to a river or stream that experiences occasional or periodic flooding environment, topography, ground saturation, soil types, floodplains, or Special Flood Hazard Areas (SFHAs), are made when floodwaters exceed the capacity of the main channel or escape the channel by eroding its banks. The sediments (rock and debris) that build up over time from the floodplain's floor. Floodplains also include a floodway, which consists of the water channel and adjacent areas that carry flood flows and the flood fringe, which are areas covered by the flood but do not experience a strong current.

Illustration 5: Characteristics of a Floodplain

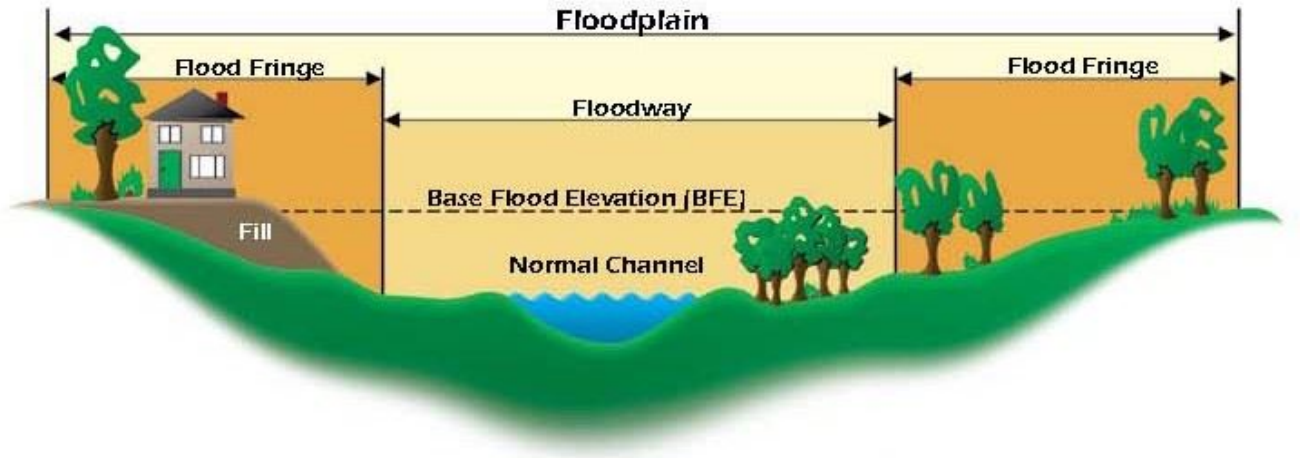


Illustration Source: www.co.mille-lacs.mn.u

In its common usage, floodplains refer to areas inundated by the 100-year flood, i.e., the flood that has a 1% chance of being equaled or exceeded in any given year and the 500-year flood, i.e., the flood that has a 0.2% chance of being equaled or exceeded in any given year. The 100-year flood is the national minimum standard to which communities regulate their floodplains through the National Flood Insurance Program (NFIP).

The NFIP aims to reduce the impact of flooding on private and public structures. It does so by providing affordable insurance to property owners, renters, and businesses and by encouraging communities to adopt and enforce floodplain management regulations. These efforts help mitigate the effects of flooding on new and improved structures. Overall, the program reduces the socio-economic impact of disasters by promoting the purchase and retention of general risk insurance and flood insurance.

The adverse impacts of flooding can include structural damage; agricultural crop loss; the death of livestock; loss of access to critical facilities due to roads being washed out or overtopped; unsanitary conditions resulting from materials such as dirt, oil, solvents, and chemicals being deposited during the recession; infestations of disease-carrying mosquitoes; mold and mildew, which pose a severe health risk to small children and the elderly; and temporary backwater effects in sewers and drainage systems. Raw sewage is a breeding ground for bacteria, such as E. coli and other disease-causing agents. A boil order may need to be issued to protect people and animals from contaminated water.

Of equal concern is the long-term psychological effect that flooding has on the people impacted by it. They must contend with the loss of life, property, livelihood, etc., as they cope with the aftermath. The clean-up can take months. The cost to restore a home may be too much, especially for the unprepared or uninsured. Plus, there is the looming fear that it may flood again. The resulting stress on floodplain residents takes its toll in the form of aggravated physical and mental health problems.

Unfortunately, the risks from future floods are significant, given expanded development in coastal areas and floodplains, unabated urbanization, land-use changes, and climate change. Because of this, flooding may intensify in many regions across the country, even in areas where total precipitation is projected to decline. According to FEMA, water, and flooding account for about 40% of the Presidential declared disasters in the United States.

4.2.2 – Location & Extent

Flash flooding is unpredictable and, therefore, can occur anywhere inside the planning area. A flash flood is a dynamic event in which a high volume of water moves through an area at high velocity during a short period of time. This type of flooding can be challenging to predict and occur with little or no warning. In many cases, a flash flood can move through an area a mile from where rain has occurred, thereby increasing people's damage within the flood's path.

Flash floods are created due to rainfall as rainwater runs into small channels where it begins to collect. As these channels merge, the amount of water increases and picks up speed and force. This collection of water becomes a wall of water that can wash vegetation, structures, and debris. The debris then increases the amount of force available and increases the flood's destructive power.

In Georgia, flooding is greatly dependent upon precipitation amounts and is highly variable across the state. Georgia's climate is primarily affected by latitude, proximity to the Atlantic Ocean and the Gulf of Mexico, and topography. Certain seasons are more prone to present 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 because of frontal systems. In contrast, central and coastal Georgia receive maximums in the mid-to-late summer because of tropical cyclones and convective thunderstorm activity.

Fulton County lies in north-central Georgia in the foothills of the Appalachian Mountains. The warm southern climate produces plentiful hardwood and pine forests, making the area a beautiful place to live. Fulton County encompasses 528.7 square miles and stretches over 70 miles from one end to the other. North Fulton includes the cities of Alpharetta, Johns Creek, Milton, Mountain Park, Roswell, and Sandy Springs. South Fulton includes the cities of College Park, East Point, Fairburn, Hapeville, Palmetto, City of South Fulton, Chattahoochee Hills, and Union City. The City of Atlanta lies between them. The Chattahoochee River, the source of drinking water for most of Fulton County, is one of the smallest water sources in the country relative to the size of the population it supports.

The FEMA Flood Insurance Study for Fulton County and participating jurisdictions (Revised June 19, 2020) indicates that the topography of the County varies from flat land and gently rolling hills to rugged hilly formations. Nearly level floodplains occur along the Chattahoochee River and many of its tributaries. Also, the County lies within the Atlanta Plateau, which is part of the Piedmont physiographic province. Surface soils are prevailingly sandy, and the subsoils are prevailingly clayey. Red-yellow podzolic soils predominate in the Piedmont Province. In many areas of steep land, loose rock fragments are scattered over the surface and outcrops of bedrock are common.

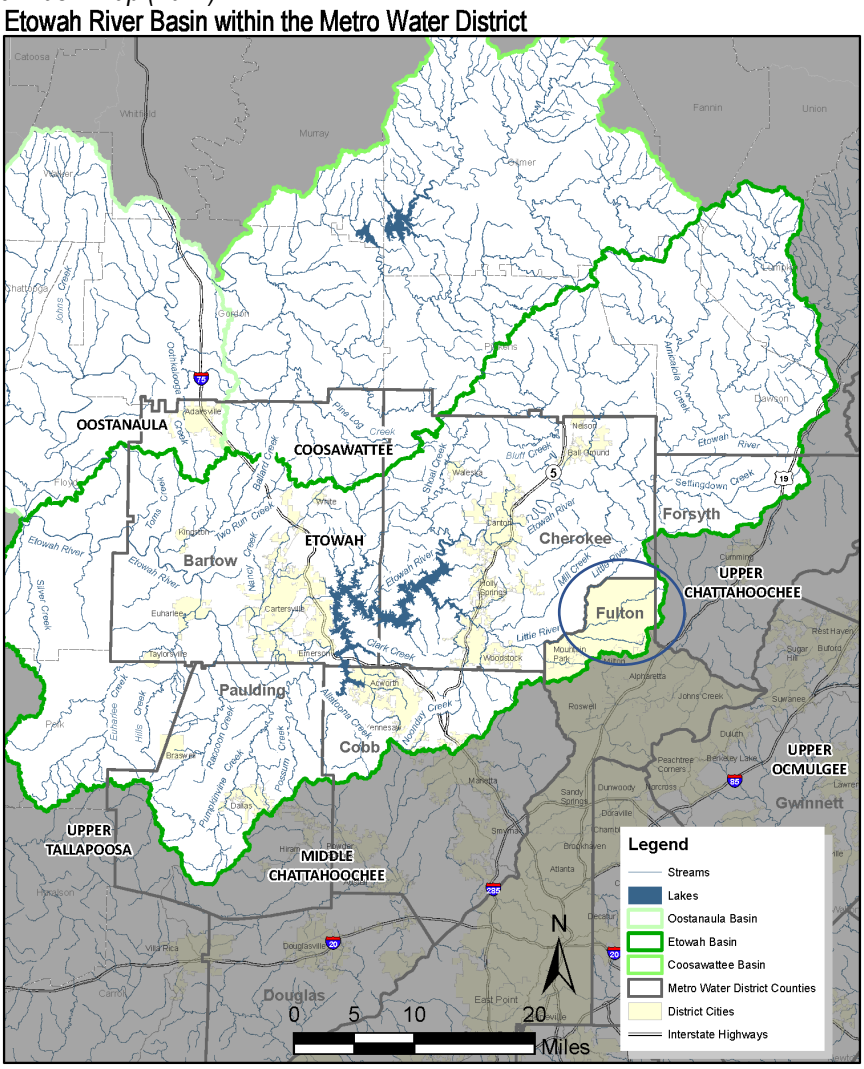
The Metropolitan North Georgia Water Planning District, which serves Fulton County and its participating jurisdictions, is located on the eastern subcontinental divide. The planning district comprises three distinct river systems (Apalachicola, Chattahoochee, and Flint ACF; Alabama, Coosa, Tallapoosa ACT; and Altamaha River), six river basins, and nine separate 8- digit Hydrologic Unit Code (HUC-8) Basins. Those major river systems are the Chattahoochee, Coosa, Flint, Ocmulgee, Oconee, and Tallapoosa River Basins. Those river systems create the following river basin watershed within the County: Etowah (Cities of Milton and Mountain Park); Upper Chattahoochee (Cities of Alpharetta, Johns Creek, and Sandy Springs); Middle Chattahoochee/Lake Harding (Fulton County, Cities of Chattahoochee Hills, East Point, Fairburn, Palmetto, South Fulton, and Union City); Upper Ocmulgee (Cities of Atlanta and Hapeville); and Upper Flint (City of College Park).

The overview and topography of each Watershed that flows in or near Fulton County and its participating jurisdictions is as follows:

Etowah River Basin – At 1,183 miles, it is the largest river basin in the Metropolitan North Georgia Water Planning District. The Etowah River Basin covers six counties, including Fulton, and its 15 cities, including Mountain Park and Milton. Lake Allatoona, located on the mainstem of the Etowah River in the center of this basin, is managed by the U.S. Army Corps Engineers and is a significant recreational destination and water supply source within the district, state, and Southeast U.S.

The Etowah River has its headwaters in the Blue Ridge Mountains north of the Metro Water District northwest of Dahlonega in Lumpkin County. The Etowah River flows southwest to the confluence of the Oostanaula River in Rome, Georgia in Floyd County (Figure ER-1). The Etowah River is entirely within the Piedmont and Valley Ridge provinces, which consist of a series of rolling hills and occasional isolated mountains; however, there are six physiographic districts, making the topography and hydrology highly variable. More information about the Etowah River Basin can be found online at http://northgeorgiawater.org/wp-content/uploads/2017/05/Attachment_5_Etowah_RBP.pdf.

Map 63: Etowah River Basin Map (2017)



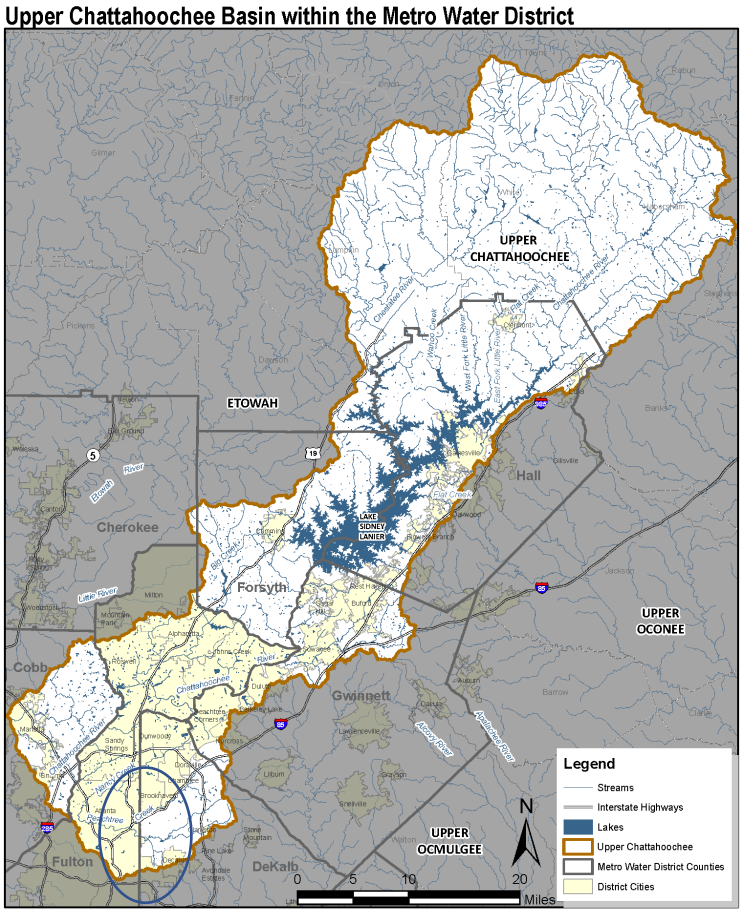
Map Source: Metropolitan North Georgia Water Planning District – Etowah River Basin Profile, http://northgeorgiawater.org/wp-content/uploads/2017/05/Attachment_1_UpperChatt_RBP.pdf

Upper Chattahoochee River Basin – The Upper Chattahoochee River Basin includes portions of the Gainesville Ridge, Central Highlands, and the Winder Slope physiographic districts. The Upper Chattahoochee River Basin covers 29 cities, including Alpharetta, Johns Creek, and Sandy Springs, and seven (7) counties, including Fulton County. The river basin has its headwaters in the Blue Ridge Mountains northeast of the Metro Water District, flowing southwest to the confluence of the Chattahoochee River with Peachtree Creek. Approximately 43 percent, or 680 square miles, of this HUC-8 Basin is located upstream of the Metro Water District before it occupies a relatively narrow corridor through the center of the Metro Water District, averaging about 40 miles wide, starting in the northeast corner and extending to the southwest corner.

The Chattahoochee River (which includes the Upper Chattahoochee River Basin) joins the Flint River in southern Georgia to form the Apalachicola River, which flows to the Gulf of Mexico. The main tributaries feeding the Upper Chattahoochee River Basin through the Metro Water District include the Chestatee River, Wahoo Creek, Suwanee Creek, Big Creek, Sope Creek, Rottenwood Creek and Peachtree Creek. In contrast to the mainstem Chattahoochee River, all the natural tributaries remain free flowing within this basin. Groundwater availability is limited due to geologic conditions, which restrict the potential yield for water supply. More information about the Upper Chattahoochee River Basin can be found online at http://northgeorgiawater.org/wp-content/uploads/2017/05/Attachment_1_UpperChatt_RBP.pdf.

Note: Fulton County's previous MJHMP (2016) mentions that Peachtree Creek is one of the most affected areas in the County. Flood stage is 17.0 feet deep, and due to the heavy urbanization in the area, it often exceeds this mark during heavy storms. Peachtree Creek reacts very quickly when heavy rains occur. As is typical with smaller streams in urban areas, a heavy rain can cause the stream to rise in a matter of hours or even minutes. Also, as is typical with smaller urban streams, high water peaks and falls quickly; thus, streamflow at Peachtree Creek can go from base flow to flooding and back to near base flow in a single day.

Map 64: Upper Chattahoochee River Basin Map (2017)

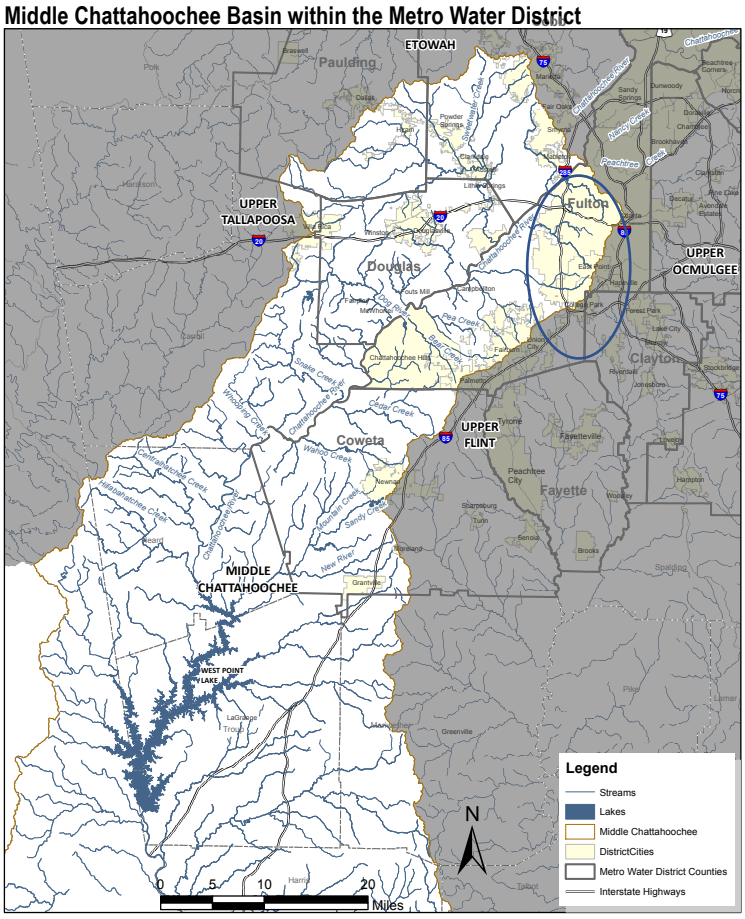


Map Source: Metropolitan North Georgia Water Planning District, Upper Chattahoochee River Basin Profile, http://northgeorgiawater.org/wp-content/uploads/2017/05/Attachment_1_UpperChatt_RBP.pdf

Middle Chattahoochee River Basin – The Middle Chattahoochee River Basin starts just south of Peachtree Creek in Atlanta and flows southwest, past West Point Lake, to downstream of Lake Harding near Columbus on the Georgia/Alabama state line. The Middle Chattahoochee River Basin covers 915 square miles within the district, which represents 19 percent of the overall district area and 30 percent of the Middle Chattahoochee HUC-8 River Basin area itself. It covers six (6) counties, including Fulton, and 18 cities, including Atlanta (a portion), Chattahoochee Hills, East Point, Fairburn, Palmetto, South Fulton, and Union City.

The Chattahoochee River flows to the Gulf of Mexico after joining with the Flint River to form the Apalachicola River in southern Georgia. West Point Lake is the second major reservoir on the Chattahoochee River system, located just south of the Metro Water District. The Chattahoochee River within the Metro Water District portion of the Middle Chattahoochee River Basin and most of its tributaries remain unimpounded. The main tributaries feeding the Middle Chattahoochee River Basin through the Metro Water District include Proctor Creek, Sweetwater Creek, Anneewakee Creek, Camp Creek, Utoy Creek, Mountain Creek, Cedar Creek, Sandy Creek, and New River. More information about the Middle Chattahoochee River Basin can be found online at http://northgeorgiawater.org/wp-content/uploads/2017/05/Attachment_2_MiddleChat_RBP.pdf.

Map 65: Middle Chattahoochee River Basin Map (2017)

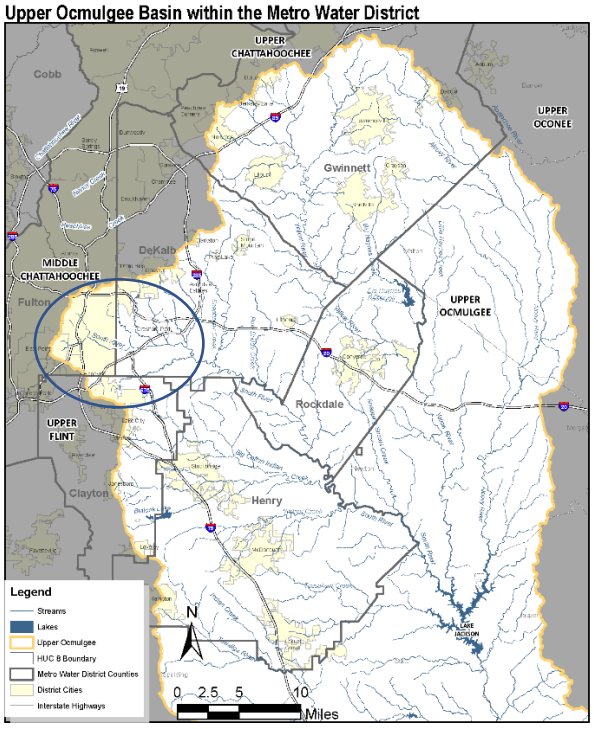


Map Source: Metropolitan North Georgia Water Planning District, Middle Chattahoochee River Basin Profile, http://northgeorgiawater.org/wp-content/uploads/2017/05/Attachment_2_MiddleChat_RBP.pdf

Upper Ocumlgee River Basin – The Upper Ocmulgee River Basin encompasses 982 square miles, including six counties, of which one is Fulton, and includes portions of 30 cities, including Atlanta and Hapeville. Approximately 100 miles of Interstate 85, Interstate 75, Interstate 285, and Interstate 20 traverse the basin. The Ocmulgee streams and tributaries are classified as drinking or fishing, with the majority designated for fishing. The Upper Ocmulgee River Basin is entirely within the Piedmont province, which consists of a series of rolling hills and occasional isolated mountains. The Upper Ocmulgee River Basin includes portions of the Gainesville Ridge, Washington Slope, and Winder Slope physiographic districts.

The headwaters of the Upper Ocmulgee River Basin originate in Clayton, DeKalb, Fulton, and Gwinnett Counties and drain to the southeast through portions of Henry and Rockdale Counties. The Alcovy River, South River, Towaliga River, and Yellow River are the main tributaries draining to this portion of the Metro Water District. This river basin includes one 8-digit HUC, ten 10-digit HUCs and forty 12-digit HUCs. While there are multiple smaller reservoirs, such as Big Haynes Creek, Blalock Lake, Lake Jodeco and Stone Mountain Lake in this basin, there are no major impoundments; however, Lake Jackson, a 4,570-acre Georgia Power-managed project, is located just outside of and downstream of the Metro Water District. As such, it is influenced by the land cover and watershed conditions found within the Upper Ocmulgee River Basin. Jackson Lake is not supporting its designated use of recreation due to fish consumption guidelines for legacy polychlorinated biphenyl (PCB) contamination, which is attributed to urban runoff and nonpoint source pollution. More information about the Upper Ocmulgee River Basin can be found online at http://northgeorgiawater.org/wp-content/uploads/2017/05/Attachment_2_MiddleChat_RBP.pdf

Map 66: Upper Ocmulgee River Basin Map (2017)

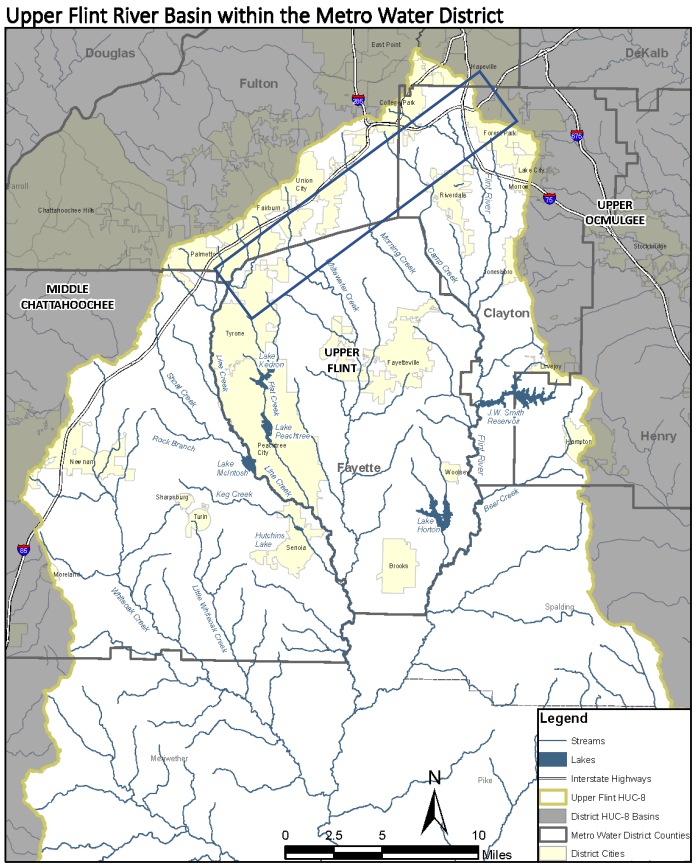


Map Source: Metropolitan North Georgia Water Planning District, Upper Ocmulgee River Basin Profile http://northgeorgiawater.org/wp-content/uploads/2017/05/Attachment_3_Ocmulgee_RBP.pdf

Upper Flint River Basin – The Upper Flint River Basin lies entirely within the Piedmont province and includes only the Greenville Slope district. It is characterized by rolling topography that decreases gradually in elevation from about 1,000 feet in the northeast to 600 feet in the southwest. Those flowing to the southwest occupy shallow, open valleys with broad, rounded divides while those flowing to the southeast occupy narrower, deeper valleys with narrow, rounded divides (Clark and Zisa, 1976). The Flint River is entirely within the Piedmont province, which consists of a series of rolling hills and occasional isolated mountains. The Upper Flint River Basin includes portions of the Gainesville Ridge, Greenville Slope, Washington Slope, and Winder Slope physiographic districts. The Upper Flint River Basin five counties, including Fulton and twenty-five (25) cities including the Cities of College Park, Fairburn, and Union City.

The Upper Flint River Basin originates in Atlanta and drains to all of Fayette County and portions of Clayton, Coweta, Douglas, and Henry Counties. It eventually drains to the Gulf of Mexico at Apalachicola Bay in Florida. The river basins main tributaries are Line, Morning, White Oak and Whitewater Creeks. The existing reservoirs in the Upper Flint River Basin are primarily smaller impoundments on tributaries to the Flint River that were developed for drinking water supply. More information about the Upper Flint River Basin can be found online at http://northgeorgiawater.org/wp-content/uploads/2017/05/Attachment_4_UpperFlint_RBP.pdf.

Map 67: Upper Flint River Basin Map (2017)



Map Source: Metropolitan North Georgia Water Planning District, Upper Flint River Basin Profile http://northgeorgiawater.org/wp-content/uploads/2017/05/Attachment_4_UpperFlint_RBP.pdf

The proceeding table shows the current USGS Streamflow Data for Rivers/Lakes/Streams within Fulton County.

Table 34: USGS Streamflow Data, Fulton County (Non-Storm Conditions, November 2021)

USGS Streamflow Data for Fulton County (Non-Storm Conditions, November 2021)						
Station Number	**Station Name**	**Gage height, feet**	**Discharge, ft 3/s**	**Long-Term Median Flow as of 11/4/21**	**Reservoir Elevation above datum, feet**	**Temperature Water, deg C**
02203603	South River at Springdale Road, at Atlanta, GA	2.51	-	-	-	12.4
02203655	South River at Forrest Park Road, at Atlanta, GA	3.09	13.2	9.50	-	12.0
02334654	Chattahoochee R 0.5 MI US McGinnis FY Suwanee, GA	-	-	-	-	16.1
02335400	Chattahoochee R 0.39 MI DS GA140, Alpharetta, GA	-	-	-	-	13.6

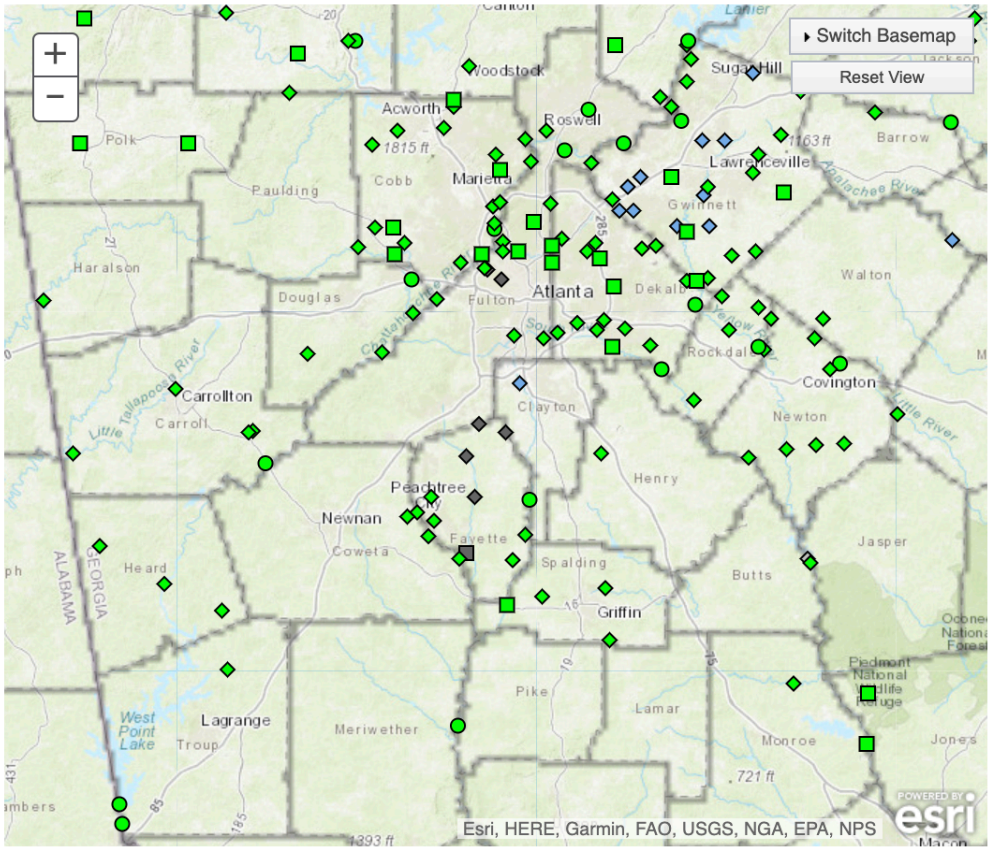
USGS Streamflow Data for Fulton County (Non-Storm Conditions, November 2021)						
Station Number	Station Name	Gage height, feet	Discharge, ft 3/s	Long-Term Median Flow as of 11/4/21	Reservoir Elevation above datum, feet	Temperature Water, deg C
02335405	Chattahoochee R 0.47 MI DS GA140, Alpharetta, GA	-	-	-	-	13.6
02335450	Chattahoochee River Above Roswell, GA	4.09	2,000	1,300	-	14.5
02335700	Big Creek Near Alpharetta, GA	2.61	90.9	49.0	-	12.4
02335757	Big Creek Below Hog Wallow Creek at Roswell, GA	2.95	89.9	60.0	-	-
02335777	Chattahoochee R 0.27 MI US Willoe CR, Roswell, GA	-	-	-	-	14.6
02335778	Chattahoochee R 0.25 MI US Willeo CR, Roswell, GA	-	-	-	-	14.1
02335779	Chattahoochee R 0.18 MI US Willeo CR, Roswell, GA	-	-	-	-	14.2
02335790	Willeo Creek at GA 120, Near Roswell, GA	1.47	11.3	7.60	-	-
02335810	Chattahoochee River at Morgan Falls Dam, GA	-	-	864.80	-	-
02335815	Chattahoochee River Below Morgan Falls Dam, GA	812.43	1,990	1,340	-	15.0
02335880	Chatt R AT Powers FY & I-285 NR Atlanta, GA	4.75	2,440	1,390	-	13.7
02335990	Chattahoochee River at US 41, At Atlanta, GA	5.74	-	-	-	-
02336000	Chattahoochee River at Atlanta, GA	4.29	2,480	1,550	-	13.7
02336300	Peachtree Cree At Atlanta, GA	2.60	47.2	36.0	-	11.7
02335405	Chattahoochee R 0.47 MI DS GA140, Alpharetta, GA	-	-	-	-	13.6

USGS Streamflow Data for Fulton County (Non-Storm Conditions, November 2021)						
Station Number	Station Name	Gage height, feet	Discharge, ft 3/s	Long-Term Median Flow as of 11/4/21	Reservoir Elevation above datum, feet	Temperature Water, deg C
02335450	Chattahoochee River Above Roswell, GA	4.09	2,000	1,300	-	14.5
02336313	Woodall Creek at Defoors Ferry Rd, At Atlanta, GA	0.52	1.21	.86	-	11.9
02336360	Nancy Creek at Rickenbacker Drive, At Atlanta, GA	0.75	14.5	14.0	-	11.5
02336410	Nancy Creek at West Wesley Road, At Atlanta, GA	1.99	23.8	20.0	-	11.4
02336490	Chattahoochee River at GA 280, Near Atlanta, GA	6.62	2,510	1,419	-	-
02336526	Proctor Creek at Jackson Parkway, At Atlanta, GA	3.27	6.41	4.30	-	11.5
02336728	Utoy Creek at Great Southwest Pkwy NR Atlanta, GA	3.17	38.8	11.0	-	17.1
02337170	Chattahoochee River Near Fairburn, GA	-	-	-	-	14.1

Data Source: USGS National Water Information System, Current Condition for Georgia – Streamflow (https://waterdata.usgs.gov/ga/nwis/current/?type=flow&group_key=county_cd)

Map 68: Fulton County Stream Gauge Locations, Non-Storm Conditions as of November 5, 2021

AHPS Observed Gauge Map



○ Probability and forecasts available
◇ Observations only available
□ Forecasts available

1497 total gauges
Show all locations in flood (1)

- 0 Gauges: Major Flooding
- 0 Gauges: Moderate Flooding
- 1 Gauges: Minor Flooding
- 6 Gauges: Near Flood Stage
- 1040 Gauges: No Flooding
- 344 Flood Category Not Defined
- 1 At or Below Low Water Threshold
- 78 Gauges: Observations Are Not Current
- 27 Gauges: Out of Service

Show all locations

Map Source: National Weather Service (NWS)

In terms of the extent, or range of magnitude, floods can vary greatly in the planning area, i.e., from localized drainage to dangerous flash floods with significant depths and high velocities. According to the 2020 Fulton County Flood Insurance Study, "The June 19, 2020, Physical Map revision to the FIS incorporates a "Rainfall runoff model [that] was developed for Little Creek River watershed. The USACEs (HEC-HMS) version 3.5 (HEC-2009) was used to approximate peak discharges along the approximate streams. As per the Natural Resources Conservation Services (NRCS) Technical Report 55 (TR-55) methodology, soil infiltration and rainfall losses were defined based on curve numbers and rainfall to runoff transformation based on the SCS unit hydrograph. The topography utilized for the City of Milton was provided by the community's LAS LiDAR files. Additionally, Forsyth and Cherokee Counties 2ft contour data were utilized to account for the contributing drainage areas outside of the City's limits. The cumulative drainage areas along the studied streams were delineated utilizing ArcHydro in the Environmental Science and Research Institute's (ESRI) ArcGIS software and a 5 ft cell size grid digital elevation model (DEM) created from the City of Milton terrain. The sub basins were created to facilitate calculation of peak flood discharges at critical locations to account for significant hydrologic changes due to stream confluences or at major road crossings."

The following tables provide information related to the peak discharges included in the 2020 Fulton County Flood Insurance Study–Summary of Discharges.

Figure 1: 2020 Fulton County Flood Insurance Study – Summary of Discharges

Table 6: Summary of Discharges

Flooding Source and Location	Drainage Area (square miles)	10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual -Chance	0.2 Percent-Annual Chance
AUTRY MILL CREEK					
At the confluence with Chattahoochee River	2.41	762	1,321	1, 446	2,012
At Old Alabama Road	3.15	2,380	4,403	5,160	7,784
BALL MILL CREEK					
At the confluence with Chattahoochee River	3.63	2,440	4,460	5,280	8,047
Just upstream of Wildwood Valley Road	3.15	2,380	4,403	5,160	7,784
BEAR CREEK					
At the confluence with Chattahoochee River	25.08 2	991 4	721 5	420 7	367
Approximately 1.2 miles upstream of Woodruff Road	20.93 2	688 4	251 4	889 6	657
Just downstream of the confluence of Little Bear Creek	18.08 2	460 3	897 4	489 6	657
Just upstream of the confluence of Little Bear Creek	11.16 1	855 2	952 3	416 4	681
At State Highway154/ Cascade Palmetto Highway	8.01 1	525 2	435 2	828 3	888
At Bishop Road	2.76	813	1,313	1,541	2,142
BETHEL BRANCH	100.80	4,790	8,300	10,124	14,304
At the confluence with Kimberly Creek	1.47	1,099	1,556	1,760	2,251

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
BIG CREEK					
At the confluence with Chattahoochee River	100.80	4,790	8,300	10,124	14,304
Approximately 1280 feet downstream of the confluence of Foe Killer Creek	100.10	4,503	8,277	10,025	14,123
Approximately 580 feet downstream of the confluence of Big Creek Tributary 9	94.74	3,808	8,177	9,764	13,682
Approximately 190 feet downstream of the confluence of Long Indian Creek	93.24	4,850	8,148	9,765	11,572
Approximately 95 feet upstream of McGinnis Ferry Road	80.11	4,484	7,331	8,570	10,678
BIG CREEK TRIBUTARY 9					
At the confluence with Big Creek	1.26	575	863	1,033	1,404
Approximately 245 feet upstream of U.S. Highway 19/ State Highway 400	0.82	464	792	943	1,346
Approximately 1,865 feet upstream of Morrison Parkway	0.18	286	415	471	608
BIG CREEK TRIBUTARY 10					
At the confluence with Big Creek	1.61	1,245	1,989	2,325	3,168
At the limit of detailed study	1.24	1,207	1,835	2,094	2,576
BIG CREEK TRIBUTARY 11					
At the confluence with Big Creek	1.17	1,102	1,452	1,592	1,919
Approximately 265 feet downstream of Westside Parkway	0.45	919	1,264	1,393	1,686
BIG CREEK TRIBUTARY 15					
At the confluence with Big Creek	3.7	1,819	2,775	3,004	3,698
Approximately 370 feet upstream of Cingular Way	0.17	244	354	402	519
BIG CREEK TRIBUTARY 15.2					
At the confluence with Big Creek Tributary 15	0.27	1,321	2,160	2,548	3,550

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
BOAT ROCK CREEK					
At the confluence with Chattahoochee River	2.38	790	1,259	1,473	2,033
Approximately 1,700 feet upstream of Fulton Industrial Boulevard/ State Highway 70	2.01	715	1,141	1,338	1,849
Approximately 1,300 feet upstream from Reynolds Road	0.71	452	701	820	1,120
Just downstream of the confluence of Lake on Boat Rock Creek	0.20	375	527	597	762
BROADNAX CREEK					
Approximately 4,800 feet upstream of the confluence with Morning Creek	5.32	1,271	2,009	2,333	3,195
At Peters Road	4.22	1,109	1,756	2,044	2,805
At Oakley Road	1.35	597	944	1,106	1,523
CALDWELL BRANCH					
At the confluence with Utoy Creek	1.83	1,040	1,260	1,350	1,950
At Village Drive	1.37	960	1,480	1,720	2,410
CAMP CREEK					
At the confluence with Chattahoochee River	45.16	7,569	13,511	14,515	21,530
At Cascade-Palmetto Highway	44.31	7,530	13,449	14,449	21,433
At Stonewall-Tell Road	40.09	7,245	12,974	13,944	20,706
At Merk Road	29.99	6,806	12,112	13,006	19,218
At Butner Road	22.37	6,039	10,524	11,273	16,487
At Old Fairburn Road	18.04	5,662	9,751	10,435	15,148
CAMP CREEK (BIG CREEK TRIBUTARY 16)					
At the confluence with Big Creek	6.18	2,475	3,966	4,633	6,307
Approximately 665 feet Downstream of Windward Parkway	5.96	2,462	3,857	4,494	6,120
CAMP CREEK (BIG CREEK TRIBUTARY 16) TRIBUTARY 2					
At the confluence with Camp Creek	0.93	779	1,144	1,307	1,711
Approximately 195 feet Upstream of State Highway 400/ U.S. Highway 19	0.40	756	1,111	1,268	1,659

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
CAMP CREEK TRIBUTARY 12					
At the confluence with Camp Creek	2.63	1,004	1,733	1,817	2,419
Just downstream of Camp Creek Parkway	2.11	830	1,362	1,442	1,959
Just upstream of Camp Creek Parkway	2.11	1,144	2,090	2,250	3,361
At Erin Road	0.75	425	804	868	1,317
CAMP CREEK TRIBUTARY 14					
At Tell Road	1.28	910	*	1,680	3,180
CAMP CREEK TRIBUTARY 16					
At the confluence with Camp Creek	0.34	80	123	133	241
Approximately 1785 feet upstream of Old Fairburn Road Southwest	0.24	71	108	120	206
CAMP CREEK TRIBUTARY 17					
At the confluence with Camp Creek	0.98	315	507	647	950
Approximately 85 feet upstream of Southmeadow Parkway West	0.73	110	238	269	446
CAMP CREEK TRIBUTARY 18					
At the confluence with Camp Creek	2.56	991	1,485	1,619	2,314
At the confluence of Camp Creek Tributary 18.1	2.42	946	1,420	1,543	2,281
At Ben Hill Road	1.90	911	1,253	1,349	1,934
At the confluence of Camp Creek Tributary 18.2	1.63	1,072	1,487	1,596	2,261
CAMP CREEK TRIBUTARY 18.1					
At the confluence with Camp Creek Tributary 18	0.35	360	511	560	793
CAMP CREEK TRIBUTARY 18.2					
At the confluence with Camp Creek Tributary 18	0.15	124	194	214	343

*Data Not Available

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
CANEY CREEK					
At the confluence with Big Creek	4.52	303	532	643	1,302
Approximately 2,625 feet upstream of Douglas Road	1.12	1,000	1,540	1,791	2,430
CATER CREEK					
At Pleasant Hill Road	0.59	463	699	810	1,087
At Surrey Trail	0.32	242	392	468	659
CEDAR BRANCH					
At the confluence with Bear Creek	1.79	630	1,021	1,204	1,680
CEDAR CREEK					
At county boundary	7.04	1,411	2,255	2,622	3,609
Approximately 800 feet upstream of Atlanta Newman Road	5.95	1,277	2,045	2,382	3,285
Just below dam	3.29	900	1,450	1,699	2,357
At Water Works Road	1.14	482	784	929	1,302
CENTER HILL TRIBUTARY	*	*	*	*	*
CHATTAHOOCHEE RIVER					
Approximately 550 feet downstream of the confluence of Sandy Creek	1,653.00	28,921	38,007	41,867	51,043
Approximately 2,750 feet downstream of the confluence of Willeo Creek	1,370.00	21,822	28,246	30,923	37,156
CHATTAHOOCHEE RIVER TRIBUTARY 74					
At the confluence with Chattahoochee River	3.86	2,576	3,669	4,175	5,964
Approximately 20 feet upstream of Coles Way	3.23	2,331	3,323	3,778	5,349
CHICKEN CREEK					
At Birmingham Highway	22.55	1,660	2,600	2,940	3,860
At Freemanville Road	18.76	1,840	2,730	3,100	4,000
Just upstream of confluence of Chicken Creek Tributary	12.04	1,220	1,720	1,920	2,410
At dam	9.58	1,050	1,520	1,690	2,130
At Hopewell Road	5.60	380	620	700	1,100
At Hamby Road	5.05	370	650	750	1,540
Chicken Creek Tributary					
At the confluence with Chicken Creek	6.72	1,372	2,195	2,553	3,517
At Hopewell Road	3.44	924	1,488	1,743	2,417

*Data Not Available

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
CLEAR CREEK					
At the confluence with Peachtree Creek	7.34	2,326	3,547	4,093	5,295
Approximately 2,240 feet upstream of Buford Highway	5.25	2,141	3,274	3,792	4,930
Approximately 20 feet from the Norfolk Southern Railroad	4.70	1,215	1,908	2,207	2,855
COOPER SANDY CREEK					
At New Providence Road	9.91	1,050	1,700	2,160	3,360
At the confluence with Chattahoochee River	9.17	4,942	7,784	9,004	12,977
At Birmingham Highway	6.96	1,000	1,580	2,000	3,040
At Freemanville Road	6.11	880	1,470	1,930	2,970
At Bethany Road	4.68	740	1,360	1,820	2,770
At Providence Road	3.48	710	1,380	1,830	2,640
At Hopewell Road	1.88	630	1,200	1,440	1,940
At Cogburn Road	0.97	430	760	890	1,180
At Cogburn Road Crooked Creek	0.97	430	760	890	1,180
CROOKED CREEK					
At the confluence with the Chattahoochee River	9.17	4,492	7,784	9,004	12,977
Approximately 30 feet upstream of Spalding Drive	8.83	4,904	7,743	8,960	12,904
Approximately 435 feet upstream of Spalding Drive	8.83	5,855	7,851	8,716	11,447
CROSSVILLE BRANCH					
At the confluence with Hog Wallow Creek	2.44	1,142	2,085	2,299	3,688
Approximately 1,545 feet upstream of Grace Hill Drive	0.39	347	569	617	950
CROSSVILLE BRANCH TRIBUTARY 1					
At the confluence with Crossville Branch	0.41	409	843	949	1,413
DEEP CREEK					
At the confluence with Chattahoochee River	29.97	6,619	12,650	13,688	20,989
At Cascade-Palmetto Highway	29.33	6,574	12,572	13,605	20,873
At Butner Road	26.99	6,339	12,142	13,145	20,208
At Jones Road	11.25	3,088	5,984	6,483	9,997
Just downstream of the confluence of Koweta Creek	7.48	2,629	5,066	5,484	8,420
At Koweta Road	4.86	2,196	4,119	4,445	6,755
Just downstream of High Point Road	4.39	1,330	2,032	2,341	3,144

Table 6– Summary of Discharges *(Continued)*

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
DEEP CREEK (Continued)					
Just upstream of the confluence of High Point Creek	3.06	1,179	1,771	2,036	2,710
Approximately 4,000 feet downstream of Lakeside Drive	1.09	807	1,170	1,334	1,737
At Lakeside Drive	0.81	724	1,038	1,181	1,529
DEMOONEY CREEK					
At the confluence with Camp Creek	1.68	716	1,115	1,300	1,773
Approximately 3,350 feet above the confluence with Camp Creek	0.78	501	768	895	1,212
At Shannon Lore Drive	0.39	483	692	789	1,022
DRY BRANCH					
At the confluence with White Oak Creek	3.86	990	1,591	1,861	2,578
At Sardis Road	1.31	523	850	1,005	1,408
EAST FORK WHETSTONE CREEK	*	*	*	*	*
EMPIRE PARK TRIBUTARY	*	*	*	*	*
ENON CREEK					
At the confluence with Camp Creek	3.89	1,117	1,747	2,029	2,765
At Enon Road	2.99	956	1,499	1,745	2,384
At Butner Road	1.52	641	1,011	1,184	1,628
FARLEY BRANCH					
At the confluence with Headland Branch	1.09	642	943	991	1,644
At the confluence of Farley Branch Tributary 1	0.87	514	731	841	1,568
At the confluence of Farley Branch Tributary 2	0.36	395	603	674	1,009
FARLEY BRANCH TRIBUTARY 1					
At the confluence with Farley Branch	0.37	208	341	383	593
FARLEY BRANCH TRIBUTARY 2					
At the confluence with Farley Branch	0.12	115	150	196	691
FEDERAL PRISON CREEK					
At the confluence with South River	2.33	1,437	1,877	1,964	2,409

*Data Not Available

Table 6 – Summary of Discharges *(Continued)*

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
FEDERAL PRISON CREEK					
Approximately 750 feet upstream of South River Industrial Boulevard	2.05	1,481	1,984	2,082	2,718
Approximately 0.4 mile downstream of Forrest Park Road	1.68	1,212	1,618	1,693	2,184
Approximately 0.4 mile upstream of Constitution Road	1.00	840	1,121	1,170	1,443
Approximately 1.2 miles upstream of Constitution Road	0.38	402	529	553	722
FLINT WEST FORK TRIBUTARY 1	*	*	*	*	*
FOE KILLER CREEK					
At the confluence with Big Creek	11.99	4,404	7,590	8,236	11,377
Approximately 100 feet upstream of Alpharetta Highway/ State Highway 9/ State Highway 20	9.43	4,109	7,476	8,197	11,529
Just downstream of the confluence of Hughes Creek	7.00	4,241	7,068	7,677	10,716
FOE KILLER CREEK TRIBUTARY 7					
At the confluence with Foe Killer Creek	2.95	968	1,472	1,703	2,294
Approximately 622 feet downstream of Mid Broadwell Road	0.44	551	841	975	1,318
FUR CREEK					
At the confluence with South Fork Camp Creek	1.71	467	644	690	1,346
At Pelot Drive	1.60	301	441	487	1,158
At the confluence of Fur Creek Tributary 1	0.84	419	521	558	842
HEADLAND BRANCH					
At the confluence with South Utoy Creek	5.19	3,833	5,421	5,809	8,141
At Connally Drive	0.93	442	586	618	948
At Headland Drive	0.78	390	489	515	909
At the confluence of Headland Branch Tributary 2	0.50	302	517	570	858
At Plantation Drive	0.16	107	144	153	202

*Data Not Available

Table 6– Summary of Discharges *(Continued)*

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
HEADLAND BRANCH TRIBUTARY 2					
At the confluence with Headland Branch	0.13	137	206	215	243
HIGH POINT CREEK					
At the confluence with Deep Creek	1.33	529	859	1,016	1,422
HOG WALLOW CREEK					
At the confluence with Big Creek	4.06	2,706	4,032	4,308	5,657
Approximately 60 feet upstream of Charles Place	3.74	2,601	3,852	4,112	5,362
Approximately 732 feet upstream of Alpine Drive	0.77	797	1,228	1,315	1,721
HUGHES CREEK					
At the confluence with Foe Killer Creek	1.21	1,739	2,746	3,188	4,294
Approximately 50 feet downstream of Houze Road	0.44	842	1,328	1,546	2,095
INTRENCHMENT CREEK	*	*	*	*	*
JOHNS CREEK					
At the confluence with the Chattahoochee River	13.18	4,285	6,559	7,009	7,700
Approximately 156 feet upstream of the confluence of Johns Creek Tributary 7	9.44	4,173	6,403	6,840	7,569
Approximately 170 feet downstream of the confluence of Johns Creek Tributary 11	7.04	3,076	4,396	4,692	5,734
Approximately 40 feet upstream of Finley Road	2.93	1,353	2,608	2,869	3,626
Approximately 650 feet upstream of Smoketree Terrace	0.18	116	179	193	263
JOHNS CREEK TRIBUTARY 3					
At the confluence with Johns Creek	0.54	556	954	1,243	1,661
Approximately 2,555 feet upstream of Bannergate Drive	0.16	287	421	525	675
JOHNS CREEK TRIBUTARY 4					
At the confluence with Johns Creek	1.52	1,513	2,239	2,389	3,162
Approximately 1434 feet upstream of Candacraig Road	0.19	375	534	570	738

*Data Not Available

Table 6– Summary of Discharges *(Continued)*

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
JOHNS CREEK TRIBUTARY 4.2					
At the confluence with Johns Creek Tributary 4	0.93	1,019	1,612	1,748	2,404
JOHNS CREEK TRIBUTARY 6					
At the confluence with Johns Creek	0.18	271	416	447	599
JOHNS CREEK TRIBUTARY 7					
At the confluence with Johns Creek	0.21	357	535	557	668
JOHNS CREEK TRIBUTARY 8					
At the confluence with Johns Creek	0.77	619	805	840	992
Approximately 300 feet downstream of Parsons Road	0.42	738	1,021	1,110	1,418
JOHNS CREEK TRIBUTARY 10					
At the confluence with Johns Creek	0.59	373	649	719	935
Approximately 1,770 feet upstream of Mortons Crossing	0.16	820	1,169	1,247	1,592
JOHNS CREEK TRIBUTARY 11					
At the confluence with Johns Creek	1.03	1,543	2,288	2,425	3,217
JOHNS CREEK TRIBUTARY 11.3					
At the confluence with Johns Creek Tributary 11	0.18	340	490	523	684
JOHNS CREEK TRIBUTARY 12					
At the confluence with Johns Creek	0.87	434	674	729	992
Approximately 1543 feet downstream of Medlock Bridge Road	0.64	150	232	251	342

Table 6– Summary of Discharges *(Continued)*

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
JOHNS CREEK TRIBUTARY 4.2					
At the confluence with Johns Creek Tributary 4	0.93	1,019	1,612	1,748	2,404
JOHNS CREEK TRIBUTARY 6					
At the confluence with Johns Creek	0.18	271	416	447	599
JOHNS CREEK TRIBUTARY 7					
At the confluence with Johns Creek	0.21	357	535	557	668
JOHNS CREEK TRIBUTARY 8					
At the confluence with Johns Creek	0.77	619	805	840	992
Approximately 300 feet downstream of Parsons Road	0.42	738	1,021	1,110	1,418
JOHNS CREEK TRIBUTARY 10					
At the confluence with Johns Creek	0.59	373	649	719	935
Approximately 1,770 feet upstream of Mortons Crossing	0.16	820	1,169	1,247	1,592
JOHNS CREEK TRIBUTARY 11					
At the confluence with Johns Creek	1.03	1,543	2,288	2,425	3,217
JOHNS CREEK TRIBUTARY 11.3					
At the confluence with Johns Creek Tributary 11	0.18	340	490	523	684
JOHNS CREEK TRIBUTARY 12					
At the confluence with Johns Creek	0.87	434	674	729	992
Approximately 1543 feet downstream of Medlock Bridge Road	0.64	150	232	251	342

Table 6– Summary of Discharges *(Continued)*

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
JOHNS CREEK TRIBUTARY 13					
At the confluence with Johns Creek	4.88	1,969	4,123	4,622	6,428
Approximately 182 feet downstream of the confluence with Johns Creek Tributary 13.3	1.03	969	1,604	1,752	2,514
JOHNS CREEK TRIBUTARY 13.1					
At the confluence with Johns Creek Tributary 13	0.45	734	1,157	1,245	1,672
JOHNS CREEK TRIBUTARY 13.3					
At the confluence with Johns Creek Tributary 13	0.43	289	466	520	738
KIMBERLY BRANCH					
At the confluence with Kimberly Creek	0.67	500	753	872	1,169
At Creel Road	0.56	430	655	763	1,030
At Hallie Mill Road	0.08	136	210	248	340
At Kimberly Mill Road	5.82	1,880	2,768	3,151	4,128
Just upstream of the confluence of Kimberly Branch	5.09	1,665	2,473	2,824	3,722
At Flat Shoals Road	4.01	1,569	2,298	2,618	3,422
KIMBERLY CREEK					
Just downstream of the confluence of Bethel Branch	3.63	1,478	2,168	2,470	3,232
Just upstream of the confluence of Bethel Branch	2.16	831	1,292	1,502	2,044
At Old Bill Cook Road	2.06	808	1,256	1,462	1,990
Kings Lake Creek					
At the confluence with Utoy Creek	2.93	996	1,543	1,790	2,429
At Wrights Lake dam	1.22	653	998	1,158	1,563
KINGS LAKE CREEK					
At the confluence with Utoy Creek	2.93	996	1,543	1,790	2,429
At Wrights Lake Dam	1.22	653	998	1,158	1,563
LENOX ROAD TRIBUTARY	*	*	*	*	*
LINE CREEK					
At the confluence with Deep Creek	12.67	3,000	5,694	6,156	9,399
At Hall Road	10.18	2,697	5,156	5,577	8,568

*Data Not Available

Table 6– Summary of Discharges *(Continued)*

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
LINE CREEK (Continued)					
At McClure Road	5.42	2,139	4,081	4,411	6,727
At White Mill Road	2.86	1,604	2,955	3,128	4,767
Just upstream of the confluence of Duncan Memorial Park Tributary	1.29	768	1,143	1,314	1,743
At Rivertown Road	0.53	398	613	716	973
LINE CREEK SOUTH					
At county boundary	4.21	1,042	1,673	1,956	2,706
At Oakley Industrial Boulevard	0.81	394	643	764	1,075
LITTLE BEAR CREEK					
At the confluence with Bear Creek	6.63	1,364	2,182	2,539	3,497
LITTLE PEA CREEK					
At the confluence with Pea Creek	2.46	1,310	*	2,400	4,590
At Brazell Road	2.34	1,270	*	2,350	4,450
At Cochran Mill Road	1.53	1,010	*	1,830	3,500
At Dam	0.24	355	*	650	1,230
LITTLE RIVER	*	*	*	*	*
LONG INDIAN CREEK					
At the confluence with Big Creek	3.09	1,153	1,748	2,125	2,934
Approximately 750 feet upstream of State Bridge Road	0.56	860	1,305	1,507	2,012
LONG ISLAND CREEK					
At the confluence with Chattahoochee River	6.54	4,468	6,232	6,979	9,535
Approximately 45 feet upstream of Lake Forrest Drive	2.14	3,459	4,161	4,655	5,965
Approximately 1,130 feet upstream of Kingsport Drive	1.20	2,352	2,655	2,963	3,264
LONGINO CREEK					
At the confluence with White Oak Creek	6.03	1,210	1,940	2,261	3,121
Just upstream of the confluence of Moss Creek	3.31	904	1,456	1,705	2,365
At Old Phillips Road	1.33	528	858	1,014	1,420
MARSH CREEK					
At the confluence with Chattahoochee River	5.46	5,754	8,734	10,038	14,446

*Data Not Available

Table 6 – Summary of Discharges *(Continued)*

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
MARSH CREEK (Continued)					
Approximately 170 feet downstream of the confluence of Marsh Creek Tributary 5	2.61	2,635	3,473	3,765	5,037
Approximately 810 feet upstream of Mabry Road	1.25	1,419	1,981	2,105	2,429
MARSH CREEK TRIBUTARY 5					
At the confluence with Marsh Creek	0.67	565	779	893	1,153
Approximately 120 feet upstream of Glenlake Parkway	0.47	540	674	702	761
MIDDLE BRANCH SOUTH RIVER					
At the confluence of North Fork South River	2.91	745	920	968	1,134
Just downstream of Lakewood Avenue	2.71	694	859	904	1,039
Just upstream of Lakewood Avenue	2.71	1,116	1,630	1,801	2,784
MIMMS CREEK					
At the confluence with South Fork Camp Creek	1.62	1,606	2,301	2,445	3,314
At the confluence of Mimms Creek Tributary 1	1.45	1,365	1,914	2,041	2,956
At North Commerce Drive	1.10	868	1,361	1,487	2,150
MIMMS CREEK TRIBUTARY 1					
At the confluence with Mimms Creek	0.35	853	1,197	1,275	1,656
MIMMS CREEK TRIBUTARY 2					
At the confluence with Mimms Creek Tributary 1	0.10	237	329	332	364
MORNING BRANCH					
Just downstream of Lake Feldwood Dam	1.13	544	796	931	1,308
At Feldwood Road	0.81	536	813	944	1,271
Approximately 1,800 feet upstream of Feldwood Road	0.51	354	557	655	904
MORNING CREEK					
Just upstream of the confluence of Windham Creek	11.49	2,701	3,986	4,527	5,928
At Bethsaida Road	10.41	2,646	3,895	4,417	5,760

TABLE 2 - SUMMARY OF DISCHARGES (continued)

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cubic feet per second) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance Existing	1-Percent-Annual-Chance Future	0.2-Percent-Annual-Chance
LITTLE NOONDAY CREEK						
At confluence with Noonday Creek	7.20	4,901	6,802	7,724	7,907	9,474
At Canton Road Northeast/ State Highway 754	6.53	4,823	6,700	7,587	7,754	9,386
At Blackwell Road Northeast	5.21	4,255	6,140	6,981	7,147	8,764
At Worley Drive Northeast	4.75	4,187	6,146	6,982	7,159	8,757
At Piedmont Road Northeast	1.85	2,259	3,243	3,624	3,761	4,379
At Liberty Hill Road Northeast	0.89	878	1,265	1,417	1,447	1,742
LOST MOUTAIN CREEK						
At confluence with Wildhorse Creek	1.00	754	1,201	1,311	*	1,805
Approximately 734 Feet upstream os lost mountain	0.67	676.8	1,030	1,099	*	1,373
LUTHER WARD BRANCH						
At confluence with Mud Creek	5.70	2,425	4,081	4,847	5,549	6,394
At Villa Rica Road Southwest	3.00	1,489	2,890	3,422	3,912	4,451
At Luther Ward Road Southwest	2.30	1,541	2,404	2,860	3,404	3,879
MILAM BRANCH						
At confluence with Queen Creek	1.00	1,076	1,757	1,891	*	2,447
Approximately 125 feet upstream of Sheraton Way Southwest	0.75	763	1,230	1,327	*	1,725
At Dodgen Road	0.62	641	1,042	1,129	*	1,478
At Lane Drive	0.29	304	492	534	*	698
At Gamer Road	0.19	237	371	400	*	514
MILL CREEK No. 1						
At confluence with Powder Springs Creek	2.30	1,251	2,011	2,338	2,794	3,026
At Wright Road Southwest	1.90	1,121	1,804	2,078	2,516	2,693
At Poplar Springs Road Southwest	0.50	452	697	796	950	1,016

*Data not available

Table 6 – Summary of Discharges *(Continued)*

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
MORNING CREEK (Continued)					
Just upstream of the confluence of Kimberly Creek	4.17	1,542	2,276	2,597	3,411
At Flat Shoals Road	3.67	1,430	2,111	2,411	3,170
Just downstream of the confluence of Morning Branch	2.80	742	1,068	1,180	1,438
MOSS CREEK					
At the confluence with Logino Creek	2.12	695	1,124	1,323	1,843
Just downstream of Rico Lake Dam	1.03	454	740	877	1,230
Mountain Park Creek					
At the confluence with Rocky Creek	2.23	1,329	2,043	2,304	3,585
MOUNTAIN PARK CREEK					
At the confluence with Rocky Creek	2.23	1,329	2,043	2,304	3,585
Approximately 50 feet downstream of Mountain Park Road	1.01	756	1,258	1,344	1,745
MOZLEY PARK TRIBUTARY					
At the confluence with Proctor Creek	1.31	766	1,099	1,212	1,746
NANCY CREEK					
At the confluence with Peachtree Creek	37.95	4,623	7,156	8,363	11,470
Approximately 2,220 feet upstream of Peachtree Dunwoody Road	18.23	3,434	3,763	3,908	4,247
NANCY CREEK TRIBUTARY 8	*	*	*	*	*
NISKEY CREEK					
At the confluence with Utoy Creek	2.37	779	1,451	1,565	2,361
NORTH FORK CAMP CREEK					
At the confluence with Camp Creek	5.39	2,014	3,293	3,628	5,348
At U.S. Highway 285	3.27	2,006	2,932	3,124	3,875
Approximately 1,000 feet upstream of Stone Hogan Road Connector	2.61	1,709	2,526	2,698	3,323

*Data Not Available

Table 6– Summary of Discharges *(Continued)*

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
NORTH FORK CAMP CREEK (Continued)					
Just downstream of Stone Hogan Road Connector	1.47	439	764	847	1,405
At the confluence of North Fork Camp Creek Tributary 4	1.06	333	515	569	1,117
Just downstream of Meadow Lark Lane	0.32	243	326	361	863
NORTH FORK CAMP CREEK TRIBUTARY 2					
At the confluence with North Fork Camp Creek	1.14	1,451	2,209	2,401	3,450
NORTH FORK CAMP CREEK TRIBUTARY 2.1					
At the confluence with North Fork Creek Tributary 2	0.14	103	138	152	236
NORTH FORK CAMP CREEK TRIBUTARY 3					
At the confluence with North Fork Camp Creek	0.11	52	81	88	135
NORTH FORK CAMP CREEK TRIBUTARY 4					
At the confluence with North Fork Camp Creek	0.12	89	141	156	224
Approximately 170 feet downstream of Cherry Blossom Lane	0.06	43	49	51	64
NORTH FORK CAMP CREEK TRIBUTARY 5					
At the confluence with North Fork Camp Creek	0.23	108	177	200	413
NORTH FORK CAMP CREEK TRIBUTARY 6					
At the confluence with North Fork Camp Creek	*	*	*	*	*
NORTH FORK FLINT RIVER					
At the confluence of North Fork Flint River Tributary 1	0.49	853	1,278	1,387	2,057
At Willingham Drive	0.32	776	1,047	1,147	1,681
NORTH FORK FLINT RIVER TRIBUTARY 1					
At the confluence with North Fork Flint River	0.11	263	382	384	493

*Data Not Available

Table 6– Summary of Discharges *(Continued)*

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
NORTH FORK PEACHTREE CREEK					
At the confluence with Peachtree Creek	38.60	5,094	7,868	8,983	12,429
NORTH FORK SOUTH RIVER					
At the confluence with South River	5.68	2,569	3,500	3,811	5,410
Just upstream of the confluence of Middle Branch South River	2.77	708	738	746	764
Approximately 900 feet downstream of Claire Drive	1.59	1,334	1,703	1,828	2,416
Approximately 640 feet downstream of Claire Drive	1.59	828	936	973	1,158
NORTH UTOY CREEK					
At the confluence with Utoy Creek	12.27	3,635	5,903	6,979	9,438
Approximately 1,095 feet upstream of Lynhurst Drive	5.98	2,255	3,552	4,152	5,570
Approximately 930 feet upstream of Beecher Road	3.47	1,740	2,679	3,090	4,015
PEA CREEK					
At the confluence with Chattahoochee River	14.27	3,550	*	6,500	12,400
At Cochran Mill Road	8.37	2,620	*	4,800	9,100
At Northcutt Road	4.16	1,760	*	3,250	6,200
PEACHTREE CREEK					
At the confluence with the Chattahoochee River	130.89	12,328	15,706	17,193	20,667
Approximately 230 feet downstream of the confluence with Woodall Creek	92.74	9,685	12,383	13,555	16,349
At U.S. Highway 75	69.40	7,906	10,138	11,097	13,424
PERIMETER CREEK	*	*	*	*	*
PINE GROVE BRANCH					
At the confluence with Pine Grove Creek	0.34	219	557	627	935
Approximately 325 feet upstream of Plantation Drive	0.18	392	649	705	976
PINE GROVE CREEK					
At the confluence with Willeo Creek	1.73	931	1,540	1,666	2,413

*Data Not Available

Table 6– Summary of Discharges *(Continued)*

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
PINE GROVE CREEK (Continued)					
Approximately 175 feet upstream of Lake Charles Drive	0.54	282	460	499	687
POOLE CREEK	*	*	*	*	*
PROCTOR CREEK					
At the confluence with Chattahoochee River	16.05	3,989	6,635	7,745	10,169
Approximately 1,090 feet upstream of Francis Place	5.98	2,441	3,279	3,620	4,680
Approximately 204 feet upstream of Martin Luther King Junior Drive	0.68	595	914	1,055	1,366
RED MILL CREEK					
At the confluence with Deep Creek	1.26	512	833	985	1,380
Approximately 6,200 feet above the confluence with Deep Creek	0.72	368	602	716	1,009
RIVERSIDE CREEK NO. 1					
At the confluence with Chattahoochee River	2.50	1,854	2,777	3,094	4,673
Approximately 50 feet upstream of Wickerberry Lane	1.14	997	1,864	2,042	2,902
Approximately 285 feet upstream of Coleman Road	0.18	284	456	493	672
RIVERSIDE CREEK NO. 2					
At the confluence with Chattahoochee River	2.17	706	1,142	1,343	1,871
At Riverside Drive	1.88	649	1,051	1,238	1,727
Approximately 900 feet upstream of Riverside Drive	0.38	567	920	1,086	1,518
ROCKY CREEK					
Just downstream of Lake Cheerful Dam	6.84	320	660	1,040	2,110
Approximately 160 feet downstream of Oakhaven Drive	5.70	783	1,277	1,380	2,693
Approximately 110 feet downstream of the confluence of Mountain Park Creek	4.80	1,849	2,949	3,201	4,739
SANDY CREEK					
Just upstream of Bolton Road	3.77	1,628	2,273	2,495	3,546

*Data Not Available

Table 6 – Summary of Discharges *(Continued)*

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
SANDY CREEK (Continued)					
Just downstream of U.S. Highway 285	1.83	830	1,200	1,330	1,951
SEVEN BRANCHES					
At the confluence with Chattahoochee River	3.04	2,517	3,816	4,087	5,671
Approximately 3,030 feet upstream of Calibre Creek Parkway	0.50	131	347	396	705
SHANNON CREEK					
At the confluence with Windham Creek	2.15	871	1,339	1,552	2,098
At Flat Shoals Road	1.68	789	1,203	1,393	1,875
Approximately 0.5 mile upstream of Flat Shoals Road	0.91	599	901	1,042	1,393
SMITH CREEK					
At the confluence with North Fork Camp Creek	1.03	259	575	651	1,042
At U.S. Highway 285/ State Highway 407	0.80	336	504	546	766
At the confluence of Smith Creek Tributary 1	0.66	160	295	325	484
At Duke of Gloucester	0.24	118	158	169	211
SMITH CREEK TRIBUTARY 1					
At the confluence with Smith Creek	0.06	40	70	80	150
SOUTH FORK CAMP CREEK					
At the confluence with Camp Creek	8.42	3,478	4,720	5,020	6,979
At the confluence of Mimms Creek	7.93	3,773	5,138	5,471	7,611
At U.S. Highway 285	6.31	2,507	3,616	3,871	5,814
At the confluence of Fur Creek	5.68	2,362	3,355	3,585	5,437
At Camp Creek Parkway	3.53	1,990	2,689	2,857	4,005
At Herschel Road	2.59	1,812	2,418	2,584	3,553
Approximately 200 feet downstream of Rugby Lane	1.30	620	861	933	1,984
Approximately 1,600 feet upstream of West Lyle Avenue	0.25	243	389	430	664
SOUTH FORK CAMP CREEK TRIBUTARY 1					
At the confluence with South Fork Camp Creek	0.18	374	497	525	663

Table 6 – Summary of Discharges *(Continued)*

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
TRICKUM CREEK					
Approximately 1,000 feet upstream of Landrum Road	2.27	725	1,172	1,378	1,919
UTOY CREEK					
At the confluence with Chattahoochee River	29.82	6,317	10,475	12,440	17,175
Approximately 165 feet downstream of the confluence of Wildwood Lake Tributary	26.31	5,894	9,594	11,379	15,796
At the confluence of North Utoy Creek and South Utoy Creek	22.15	5,382	8,659	10,330	14,052
WHETSONE CREEK					
Just downstream of the Confluence of East Fork Whetstone Creek	1.89	1,646	2,336	2,634	3,208
Approximately 130 feet upstream of Marietta Road	0.56	532	766	868	1,065
WHITE OAK CREEK					
At the confluence with Chattahoochee River	16.42	2,325	3,685	4,249	5,800
Just downstream of the confluence of Dry Branch	13.18	2,042	3,244	3,749	5,128
Just upstream of the confluence of Dry Branch	9.32	1,665	2,653	3,077	4,223
Just upstream of the confluence of Longino Creek	2.21	712	1,152	1,355	1,886
At Barnes Road	0.94	430	701	832	1,169
WHITEWATER CREEK					
At State Highway 92/ Spence Road	4.28	1,310	2,002	2,307	3,099
Approximately 0.9 mile upstream from State Highway 92/ Spence Road	3.37	1,248	1,875	2,153	2,863
At U.S. Highway 85	1.57	828	1,240	1,429	1,901
Approximately 0.31 miles downstream of Jonesboro Road	0.58	574	829	948	1,234
WILDWOOD LAKE TRIBUTARY	*	*	*	*	*
WILLEO CREEK					
At the confluence with Chattahoochee River	19.70	4,145	7,057	7,698	11,092
WINDHAM CREEK					
At the confluence with Morning Creek	6.48	1,675	2,551	2,930	3,921

*Data Not Available

Table 6 – Summary of Discharges *(Continued)*

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
SOUTH RIVER TRIBUTARY 8					
At the confluence with South River	0.50	577	749	783	939
SOUTH RIVER TRIBUTARY 9					
At the confluence with South River	0.10	204	412	479	802
South Utoy Creek					
At the confluence with Utoy Creek	11.42	3,761	6,067	7,156	9,687
Approximately 1,015 feet downstream of Childress Drive	9.81	3,359	5,368	6,299	8,425
Approximately 475 feet upstream of Harbin Road	7.92	3,154	5,016	5,865	7,804
SOUTH UTOY CREEK					
At the confluence with Utoy Creek	11.42	3,761	6,067	7,156	9,687
Approximately 1015 feet downstream of Childress Drive	9.81	3,359	5,368	6,299	8,245
Approximately 475 feet upstream of Harbin Road	7.92	3,154	5,016	5,865	7,804
Approximately 940 feet upstream of the Confluence of Headland Branch	3.09	3,117	4,528	4,896	6,589
Approximately 515 feet downstream of Confluence of South Utoy Creek Tributary 8	0.68	1,401	1,968	2,106	2,809
Approximately 500 feet upstream of McClelland Avenue/ Langford Parkway	0.12	197	308	337	501
SOUTH UTOY CREEK TRIBUTARY 2					
At the confluence with South Utoy Creek	0.62	384	549	601	831
At the confluence of South Utoy Creek Tributary 2.1	0.32	239	385	400	678
SOUTH UTOY CREEK TRIBUTARY 2.1					
At the confluence with South Utoy Creek Tributary 2	0.13	114	161	174	241
SOUTH UTOY CREEK TRIBUTARY 4					
At the confluence with South Utoy Creek	0.24	168	390	429	607
At Mulberry Street	0.14	70	110	117	162

Table 6 – Summary of Discharges *(Continued)*

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
SOUTH UTOY CREEK TRIBUTARY 5					
At the confluence with South Utoy Creek	0.18	220	313	325	374
SOUTH UTOY CREEK TRIBUTARY 6					
At the confluence with South Utoy Creek	0.33	304	456	599	905
SOUTH UTOY CREEK TRIBUTARY 6.1					
At the confluence with South Utoy Creek Tributary 6	0.10	267	384	412	569
SOUTH UTOY CREEK TRIBUTARY 7					
At the confluence with South Utoy Creek	0.52	264	405	442	617
SOUTH UTOY CREEK TRIBUTARY 8					
At the confluence with South Utoy Creek	0.18	240	303	316	382
STRICKLAND CREEK					
At the confluence with Foe Killer Creek	1.66	1,158	1,478	1,637	3,091
Approximately 55 feet upstream of Houze Road	0.87	753	992	1,118	2,053
Approximately 740 feet upstream of Strickland Road	0.11	268	455	495	694
SULLIVAN CREEK					
At Riverdale Road	3.06	1,300	2,000	2,300	3,000
At Sullivan Road	1.32	1,100	1,600	1,800	2,400
At Embassy Drive	0.29	380	560	650	880
SUN VALLEY CREEK					
At the confluence with Fur Creek	0.33	209	265	282	498
At Acapulco Way	0.26	261	324	337	592
SUN VALLEY CREEK TRIBUTARY 1	*	*	*	*	*
TANYARD CREEK					
At the confluence with Peachtree Creek	4.61	1,593	2,335	2,663	3,388
Approximately 3,340 feet upstream of CSX Railroad	3.01	860	1,205	1,354	1,675

*Data Not Available

Table 6– Summary of Discharges *(Continued)*

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
SOUTH FORK CAMP CREEK TRIBUTARY 3					
At the confluence with South Fork Camp Creek	0.25	223	299	322	386
SOUTH FORK CAMP CREEK TRIBUTARY 5					
At the confluence with South Fork Camp Creek	0.08	61	103	113	151
SOUTH FORK CAMP CREEK TRIBUTARY 6					
At the confluence with South Fork Camp Creek	0.11	86	130	142	182
SOUTH FORK CAMP CREEK TRIBUTARY 7					
At the confluence with South Fork Camp Creek	0.79	1,208	1,681	1,800	2,463
SOUTH FORK CAMP CREEK TRIBUTARY 8					
At the confluence with South Fork Camp Creek	0.38	429	624	678	991
SOUTH FORK PEACHTREE CREEK					
At mouth the confluence with Peachtree Creek	30.40	4,845	7,390	8,728	12,044
SOUTH RIVER					
At the county boundary	26.04	9,885	15,128	17,579	22,046
Approximately 2,170 feet upstream of Browns Mill Road	11.82	6,925	10,398	11,902	15,121
At U.S. Highway 85	4.40	2,382	3,558	4,063	5,125
Approximately 313 feet upstream of Springdale Road Southwest	2.37	1,577	2,334	2,663	3,382
SOUTH RIVER TRIBUTARY 5					
At the confluence with South River	0.12	189	247	264	323
SOUTH RIVER TRIBUTARY 6					
At the confluence with South River	0.78	862	1,649	1,917	3,326
SOUTH RIVER TRIBUTARY 7					
At the confluence with South River	0.21	234	381	415	740

TABLE 2 - SUMMARY OF DISCHARGES (continued)

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cubic feet per second) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance Existing	1-Percent-Annual-Chance Future	0.2-Percent-Annual-Chance
PINEY GROVE CREEK						
Approximately 2,630 feet upstream of Sewell Mill Creek	5.41	2,889	4,546	5,308	5,348	7,484
Approximately 3,050 feet upstream of Casteel Road Northeast	3.74	2,894	4,673	5,468	5,492	7,818
At Post Oak Tritt Road	2.50	2,342	3,950	4,682	4,697	6,434
Approximately 340 feet upstream of Hembree Road Northeast	1.98	2,198	3,859	4,540	4,557	6,350
Approximately 170 feet upstream of Davis Road Northeast	0.28	334	507	584	596	782
PITNER CREEK						
At confluence with Little Allatoona Creek	1.80	1,053	1,592	1,778	2,091	2,296
At County Line Road	1.63	936	1,465	1,638	1,934	2,174
At Burnt Hickory Road Northwest	0.90	210	336	373	440	624
At Brookstone Walk	0.72	88	220	284	392	558
At Fords Road	0.35	420	797	901	1,046	1,213
POORHOUSE CREEK						
At confluence with Rottenwood Creek	3.61	2,480	2,920	3,080	3,110	3,460
Approximately 420 feet upstream of Cobb Parkway Southeast/ U.S. Highway 41/State Highway 3	2.98	2,810	3,460	3,650	3,760	4,120
At Dobbins Patrol Road	2.61	2,970	4,310	4,890	4,990	6,320
POPLAR CREEK						
At confluence with Rottenwood Creek	3.30	1,920	2,287	2,426	*	2,859
At Cobb Parkway	2.30	2,230	3,300	3,690	*	5,140
At Spring Road Southeast	1.15	1,290	1,820	2,040	2,040	2,640
At Pinecrest Circle	0.33	538	788	896	*	1,166

* Data not available

Data Source: National Flood Insurance Program (NFIP)

Fulton County's previous MJHMP (2016) states that all participating jurisdictions participate in the National Flood Insurance Program (NFIP). The initial FIRM dates were initiated for the planning area on the following dates:

- Fulton County (CID number 135160), November 20, 1970
- City of Alpharetta (CID number 130084), February 15, 1978
- City of Atlanta (CID number 135157, which encompasses both Fulton and DeKalb Counties), October 14, 1977
- City of Chattahoochee Hills (CID number 135174), May 7, 2001
- City of College Park (CID number 130086, which encompasses both Fulton and Clayton Counties), September 15, 1978
- City of East Point (CID number 130087), March 17, 1977
- City of Fairburn (CID number 130314), September 28, 1979
- City of Hapeville (CID number 130502), August 24, 1993
- City of Johns Creek (CID number 130678), June 18, 2010
- City of Milton (CID number 130673), November 2, 1971
- City of Mountain Park (CID 130254), February 16, 1983
- City of Palmetto (CID number 130239, which encompasses both Fulton and Coweta Counties), November 1, 1979
- City of Roswell (CID 130088), December 15, 1977
- City of Sandy Springs (CID 130669), May 7, 2021
- City of South Fulton (CID 135177), September 18, 2013
- City of Union City (CID number 130316), September 28, 1979

***Note**: The City of Chattahoochee Hill's is identified on the Fulton County, Georgia, FIRM panels (13121C0295 E, 0315, 0405, 0409,0410, 0415, 0416, 0417, 0418, 0419,0428, 0429, 0430, 0433, 0436, 0437,0438, 0439, 0441, 0443 E) dated May 7, 2001.*

***Note**: The City of Johns Creek has adopted Fulton County's FIS and accompanying FIRM panels dated May 7, 2001.*

***Note**: The City of Sandy Spring's has adopted the Fulton County FIS and FIRM dated May 7, 2001. The FIRM panels for Sandy Springs are 13121C 0044E, 0063E, 0064E,0132E, 0134E, 0139E, 0140E, 0141E,0142E, 0143E, 0144E, 0151E, 0152E,0153E, 0154E, 0160E, 0161E*

***Note:** During the last plan update (2016), the City of South Fulton transitioned from an unincorporated jurisdiction within Fulton County to an incorporated City on May 1, 2017. However, though they are now identified as a participating jurisdiction in the FEMA Community Status Book for Communities Participating in NFIP, they will use the Fulton County floodplain maps to identify the floodplain in their jurisdiction.*

The FEMA Community Status Book Report for Communities Participating in the NFIP (https://www.fema.gov/cis/GA.pdf) still indicates the digital FIRMs for Fulton County and its participating jurisdictions were updated on the following dates:

- Fulton County (CID number 135160), City of East Point (CID number 130087), City of Chattahoochee Hills (CID number 135174), City of College Park (CID number 130086, which encompasses both Fulton and Clayton Counties), City of Fairburn (CID number 130314), City of Hapeville (CID number 130502), City of Johns Creek (CID number 130678), City of Palmetto (CID number 130239, which encompasses both Fulton and Coweta Counties), City of Sandy Springs (CID 130669), City of South Fulton (CID 135177),and City of Union City (CID number 130316), September 18, 2013
- City of Atlanta (CID number 135157, which encompasses both Fulton and DeKalb Counties), August 15, 2019
- City of Alpharetta (CID number 130084), City of Milton (CID number 130673), and City of Roswell (CID 130088) June 19, 2020

The following information provides flooding sources, the most current Special Flood Hazard Areas (SFHAs), and flood insurance rate zones developed by FEMA for Fulton County, effective September 13, 2013. SFHAs represent the areas subject to inundation by a 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. The following tables provide a summary of increases, decreases, and net charges of SFHA's for the County and the Cities of Alpharetta, Atlanta, Chattahoochee Hills, East Point, Fairburn, Hapeville, Johns Creek, Milton, Mountain Park, Palmetto, Roswell, Sandy Springs, and Union City, GA from both the Fulton County Flood Risk Report (May 2013) – Georgia Department of Natural Resources, Environmental Protection Division; and the Etowah Watershed, Georgia 03150104 Flood Risk Report (January 29, 2019) – Federal Emergency Management Agency (FEMA).

***Note**: At the time of this plan update, The Fulton County Risk Report (May 2013) is an indeterminate period with no record of an updated version. Therefore, SFHA Summary information referenced in The Fulton County Risk Report (May 2013) – Georgia Department of Natural Resources, Environmental Protection Division is for the following jurisdictions: Fulton County and the Cities of Alpharetta, Atlanta, Chattahoochee Hills, College Park, East Point, Fairburn, Hapeville, Johns Creek, Palmetto, Sandy Springs, and Union City, GA. The City of South Fulton was not included in The Fulton County Risk Report (May 2013) – Georgia Department of Natural Resources, Environmental Protection Division, because they were not incorporated as a new jurisdiction until 2017.*

A. SFHA Summary, Fulton County

SFHA Summary, Fulton County				
Area of Study	Total Area (mi²)	Increase (mi²)	Decrease (mi²)	Net Change (mi²)
Within SFHA	6.8	1.3	1.4	-0.1
Within Floodway	5.9	0.4	0.3	0.1

Data Source: Fulton County Flood Risk Report (May 2013) – Georgia Department of Natural Resources, Environmental Protection Division
***Note**: Although the Flood Risk Database may contain changes since the last FIRM information outside Fulton County, the figures in this table only represent information within the Fulton County.*

B. SFHA Summary, Fulton County, Unincorporated Areas

SFHA Summary, Fulton County, Unincorporated Areas				
Area of Study	Total Area (mi²)	Increase (mi²)	Decrease (mi²)	Net Change (mi²)
Within SFHA	-	-	-	-
Within Floodway	-	-	-	-

Data Source: Etowah Watershed, Georgia 03150104 Flood Risk Report (January 29, 2019), Federal Emergency Management Agency (FEMA)

C. SFHA Summary, City of Alpharetta

SFHA Summary, City of Alpharetta				
Area of Study	Total Area (mi²)	Increase (mi²)	Decrease (mi²)	Net Change (mi²)
Within SFHA	-	-	-	-
Within Floodway	-	-	-	-

Data Source: Etowah Watershed, Georgia 03150104 Flood Risk Report (January 29, 2019), Federal Emergency Management Agency (FEMA)

D. SFHA Summary, City of Atlanta

SFHA Summary, City of Atlanta				
Area of Study	Total Area (mi²)	Increase (mi²)	Decrease (mi²)	Net Change (mi²)
Within SFHA	4.4	0.9	2.2	-1.3
Within Floodway	2.6	0.5	0.5	0.0

Data Source: Fulton County Flood Risk Report (May 2013) – Georgia Department of Natural Resources, Environmental Protection Division
***Note:** Although the Flood Risk Database may contain changes since the last FIRM information outside of City of Atlanta, the figures in this table only represent information within the City of Atlanta.*

E. SFHA Summary, City of Chattahoochee Hills

SFHA Summary, City of Chattahoochee Hills				
Area of Study	Total Area (mi²)	Increase (mi²)	Decrease (mi²)	Net Change (mi²)
Within SFHA	3.3	0.6	0.8	-0.3
Within Floodway	2.1	0.2	0.1	0.0

Data Source: Fulton County Flood Risk Report (May 2013) – Georgia Department of Natural Resources, Environmental Protection Division
***Note:** Although the Flood Risk Database may contain changes since the last FIRM information outside of City of Chattahoochee Hills, the figures in this table only represent information within the City of Chattahoochee Hills.*

F. SFHA Summary, City of College Park

SFHA Summary, City of College Park				
Area of Study	Total Area (mi²)	Increase (mi²)	Decrease (mi²)	Net Change (mi²)
Within SFHA	0.4	0.2	0.3	-0.1
Within Floodway	0.1	0.1	0.0	0.1

Data Source: Fulton County Flood Risk Report (May 2013) – Georgia Department of Natural Resources, Environmental Protection Division
***Note:** Although the Flood Risk Database may contain changes since the last FIRM information outside of City of College Park, the figures in this table only represent information within the City of College Park.*

G. SFHA Summary, City of East Point

SFHA Summary, City of East Point				
Area of Study	Total Area (mi²)	Increase (mi²)	Decrease (mi²)	Net Change (mi²)
Within SFHA	0.4	0.3	0.4	-0.1
Within Floodway	0.3	0.2	0.1	0.1

Data Source: Fulton County Flood Risk Report (May 2013) – Georgia Department of Natural Resources, Environmental Protection Division
***Note:** Although the Flood Risk Database may contain changes since the last FIRM information outside of the City of East Point., the figures in this table only represent information within the City of East Point.*

H. SFHA Summary, City of Fairburn

SFHA Summary, City of Fairburn				
Area of Study	Total Area (mi²)	Increase (mi²)	Decrease (mi²)	Net Change (mi²)
Within SFHA	0.4	0.1	0.3	-0.2
Within Floodway	0.3	0.0	0.0	0.0

Data Source: Fulton County Flood Risk Report (May 2013) – Georgia Department of Natural Resources, Environmental Protection Division
***Note:** Although the Flood Risk Database may contain changes since the last FIRM information outside of City of Fairburn, the figures in this table only represent information within the City of Fairburn.*

I. SFHA Summary, City of Hapeville

SFHA Summary, City of Hapeville				
Area of Study	Total Area (mi²)	Increase (mi²)	Decrease (mi²)	Net Change (mi²)
Within SFHA	0.4	0.1	0.3	-0.2
Within Floodway	0.3	0.0	0.0	0.0

Data Source: Fulton County Flood Risk Report (May 2013) – Georgia Department of Natural Resources, Environmental Protection Division
***Note:** Although the Flood Risk Database may contain Changes since the last FIRM information outside of City of Hapeville, the figures in this table only represent information within the City of Hapeville.*

J. SFHA Summary, City of Johns Creek

SFHA Summary, City of Johns Creek				
Area of Study	Total Area (mi²)	Increase (mi²)	Decrease (mi²)	Net Change (mi²)
Within SFHA	1.1	0.5	0.2	0.3
Within Floodway	0.8	0.3	0.1	0.2

Data Source: Fulton County Flood Risk Report (May 2013) – Georgia Department of Natural Resources, Environmental Protection Division
***Note:** Although the Flood Risk Database may contain changes since the last FIRM information outside of City of Johns Creek, the figures in this table only represent information within the City of Johns Creek.*

K. SFHA Summary, City of Milton

SFHA Summary, City of Milton				
Area of Study	Total Area (mi²)	Increase (mi²)	Decrease (mi²)	Net Change (mi²)
Within SFHA	0.1	0.1	0	0.1
Within Floodway	0.2	0.1	0.1	0

Data Source: Etowah Watershed, Georgia 03150104 Flood Risk Report (January 29, 2019), Federal Emergency Management Agency (FEMA).

L. SFHA Summary, City of Mountain Park

SFHA Summary, City of Mountain Park				
Area of Study	Total Area (mi²)	Increase (mi²)	Decrease (mi²)	Net Change (mi²)
Within SFHA	-	-	-	-
Within Floodway	-	-	-	-

Data Source: Etowah Watershed, Georgia 03150104 Flood Risk Report (January 29, 2019), Federal Emergency Management Agency (FEMA).

M. SFHA Summary, City of Roswell

SFHA Summary, City of Roswell				
Area of Study	Total Area (mi²)	Increase (mi²)	Decrease (mi²)	Net Change (mi²)
Within SFHA	-	-	-	-
Within Floodway	-	-	-	-

Data Source: Etowah Watershed, Georgia 03150104 Flood Risk Report (January 29, 2019), Federal Emergency Management Agency (FEMA)

N. SFHA Summary, City of Sandy Springs

SFHA Summary, City of Sandy Springs				
Area of Study	Total Area (mi²)	Increase (mi²)	Decrease (mi²)	Net Change (mi²)
Within SFHA	1.2	0.2	0.4	-0.2
Within Floodway	0.9	0.2	0.2	0.0

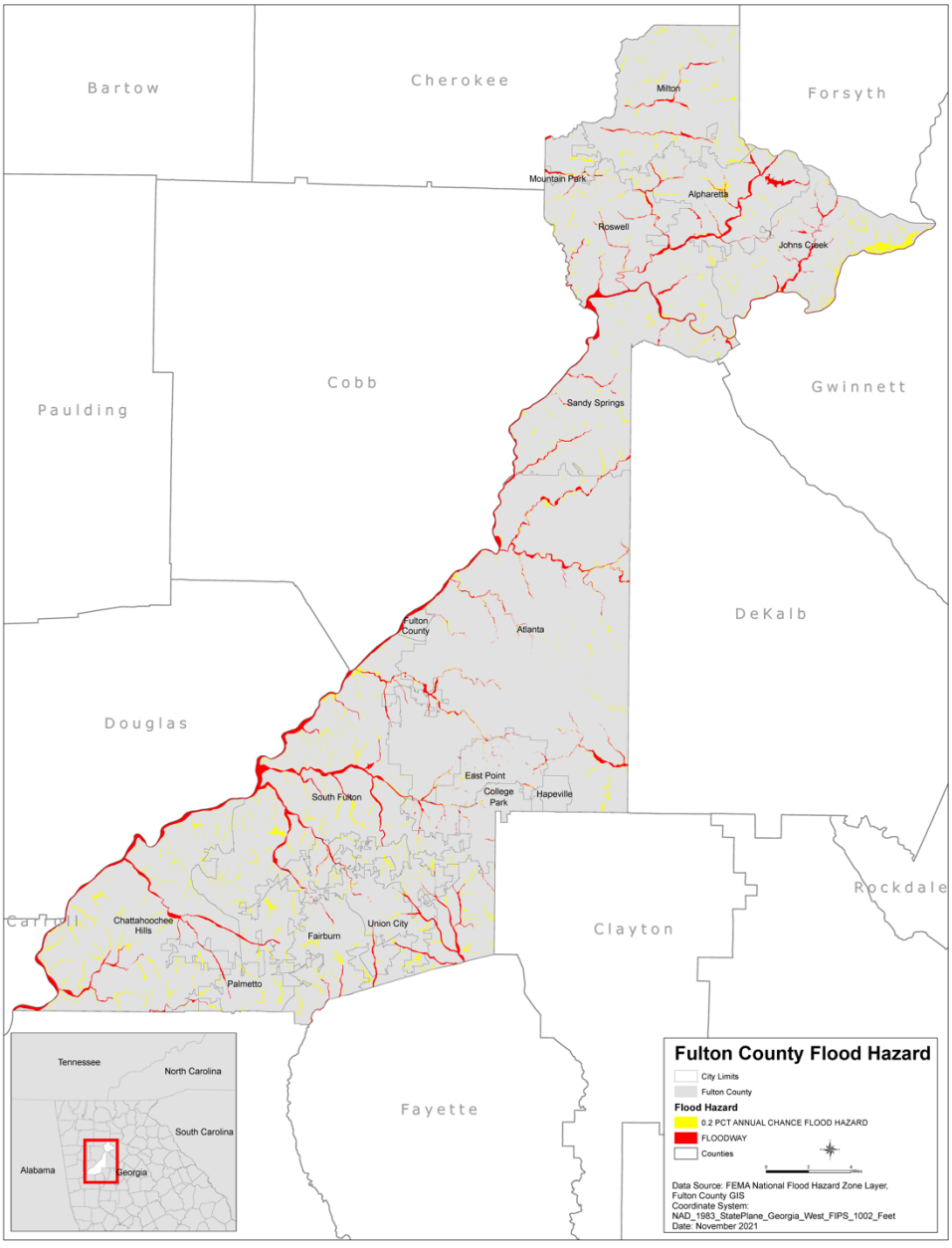
Data Source: Fulton County Flood Risk Report (May 2013) – Georgia Department of Natural Resources, Environmental Protection Division
***Note:** Although the Flood Risk Database may contain changes since the last FIRM information outside of City of Sandy Springs, the figures in this table only represent information within the City of Sandy Springs.*

O. SFHA Summary, Union City

SFHA Summary, Union City				
Area of Study	**Total Area (mi²)**	**Increase (mi²)**	**Decrease (mi²)**	**Net Change (mi²)**
Within SFHA	0.6	0.1	0.3	-0.2
Within Floodway	0.5	0.0	0.0	0.0

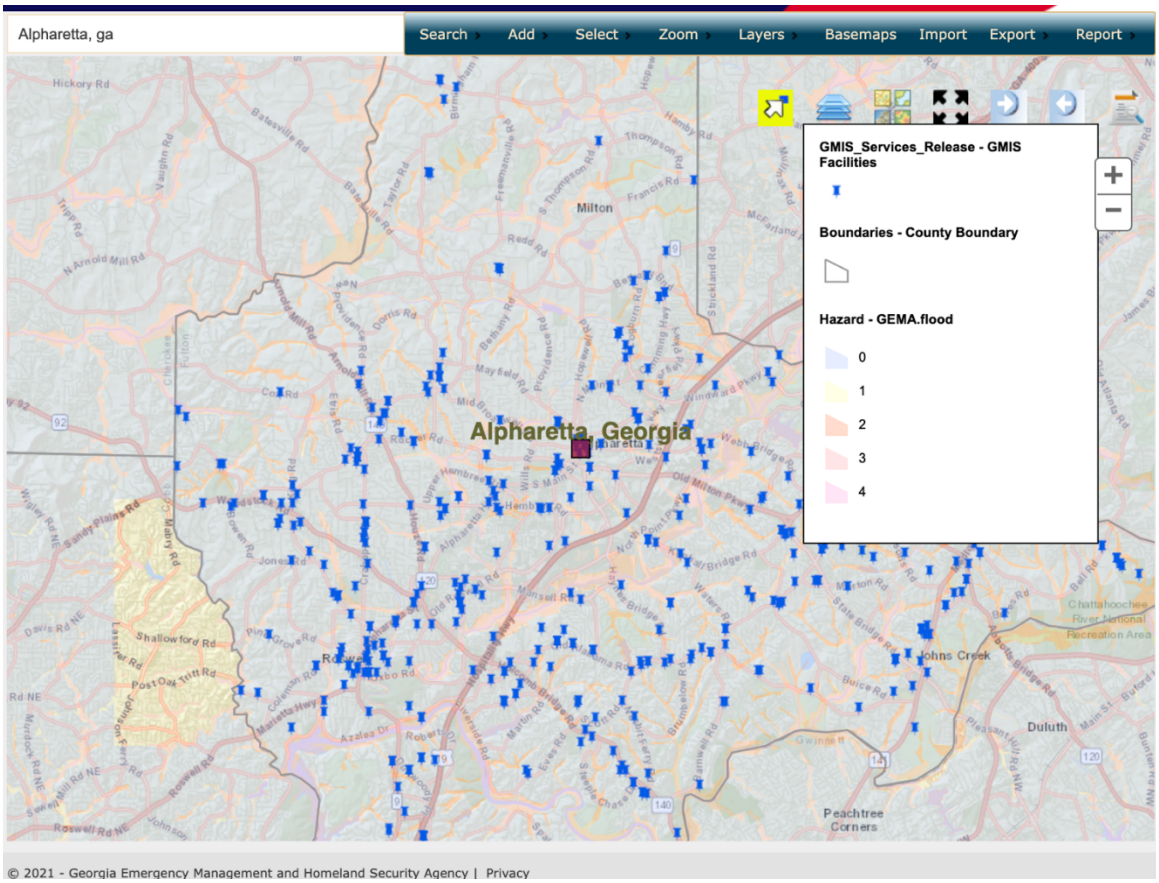
Data Source: Fulton County Flood Risk Report (May 2013) – Georgia Department of Natural Resources, Environmental Protection Division
***Note:** Although the Flood Risk Database may contain changes since the last FIRM information outside of Union City, the figures in this table only represent information within Union City.*

Map 69: Fulton County, GA – Critical Facilities and Floodplain Map



Map Source: Fulton County GIS Department

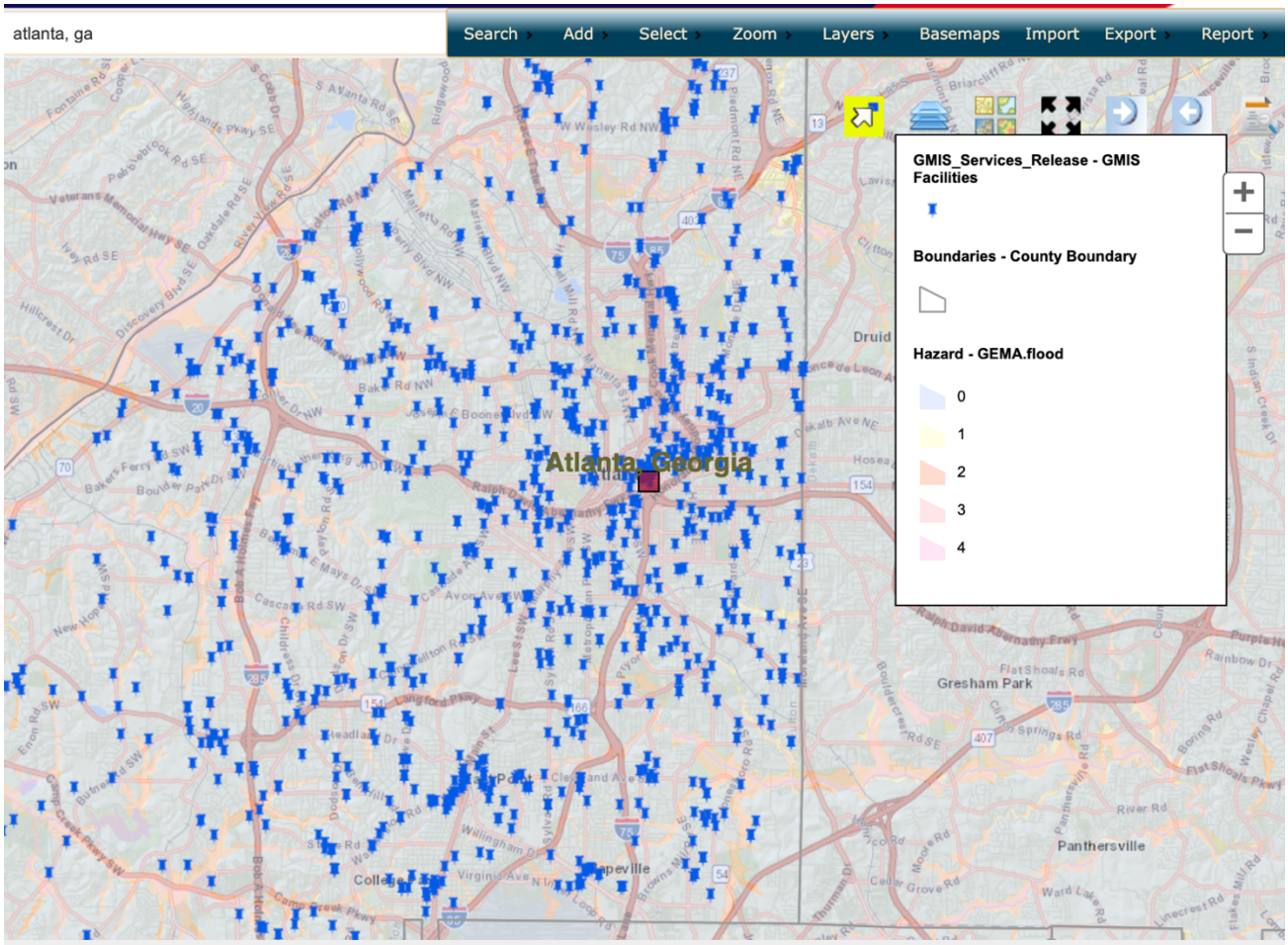
Map 70: City of Alpharetta, GA GMIS Map with Flood Layer



Map Source: Georgia Mitigation Information System (GMIS), https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex

***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit GEMHSA.*

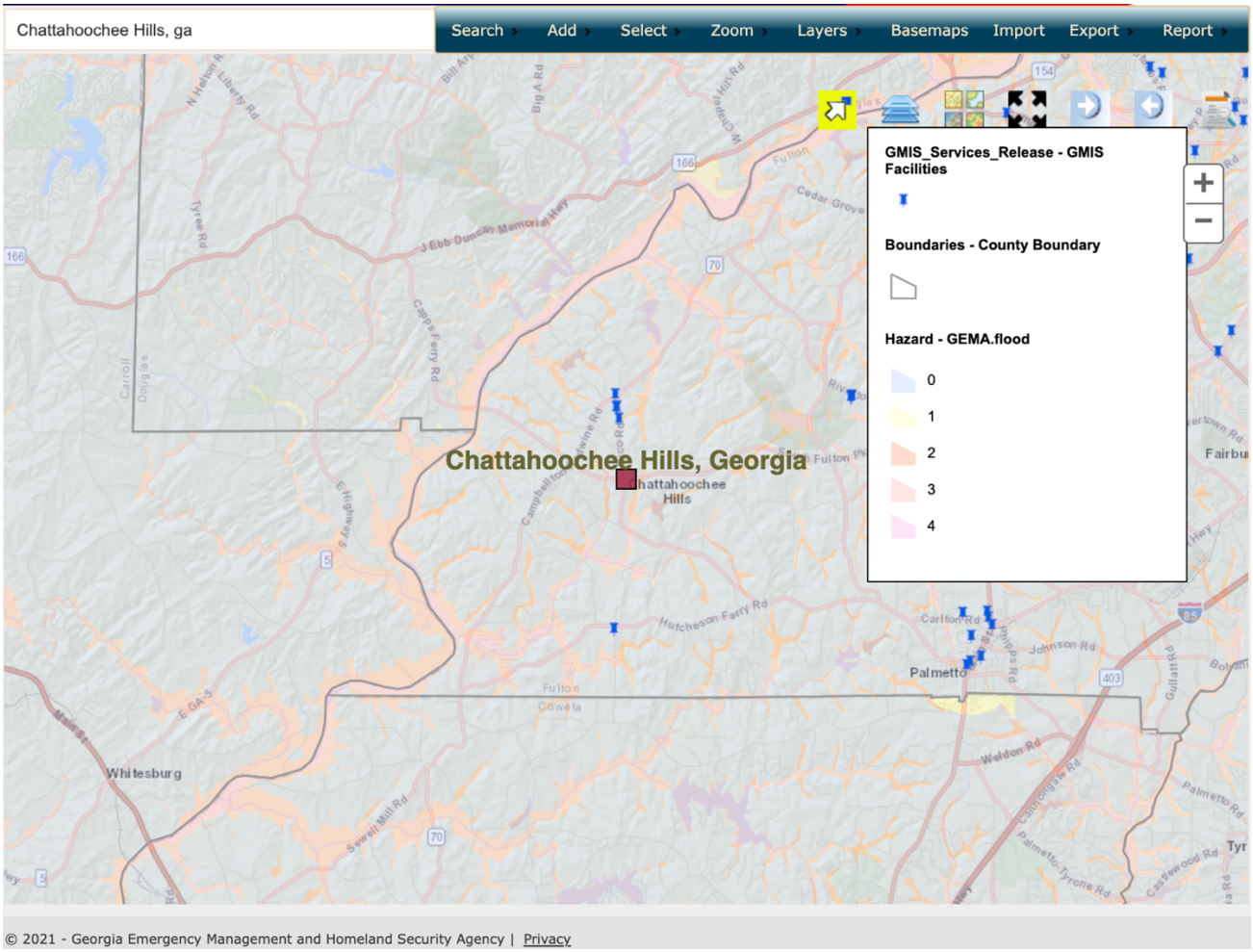
Map 71: City of Atlanta, GA GMIS Map with Flood Layer



Map Source: Georgia Mitigation Information System (GMIS), https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex

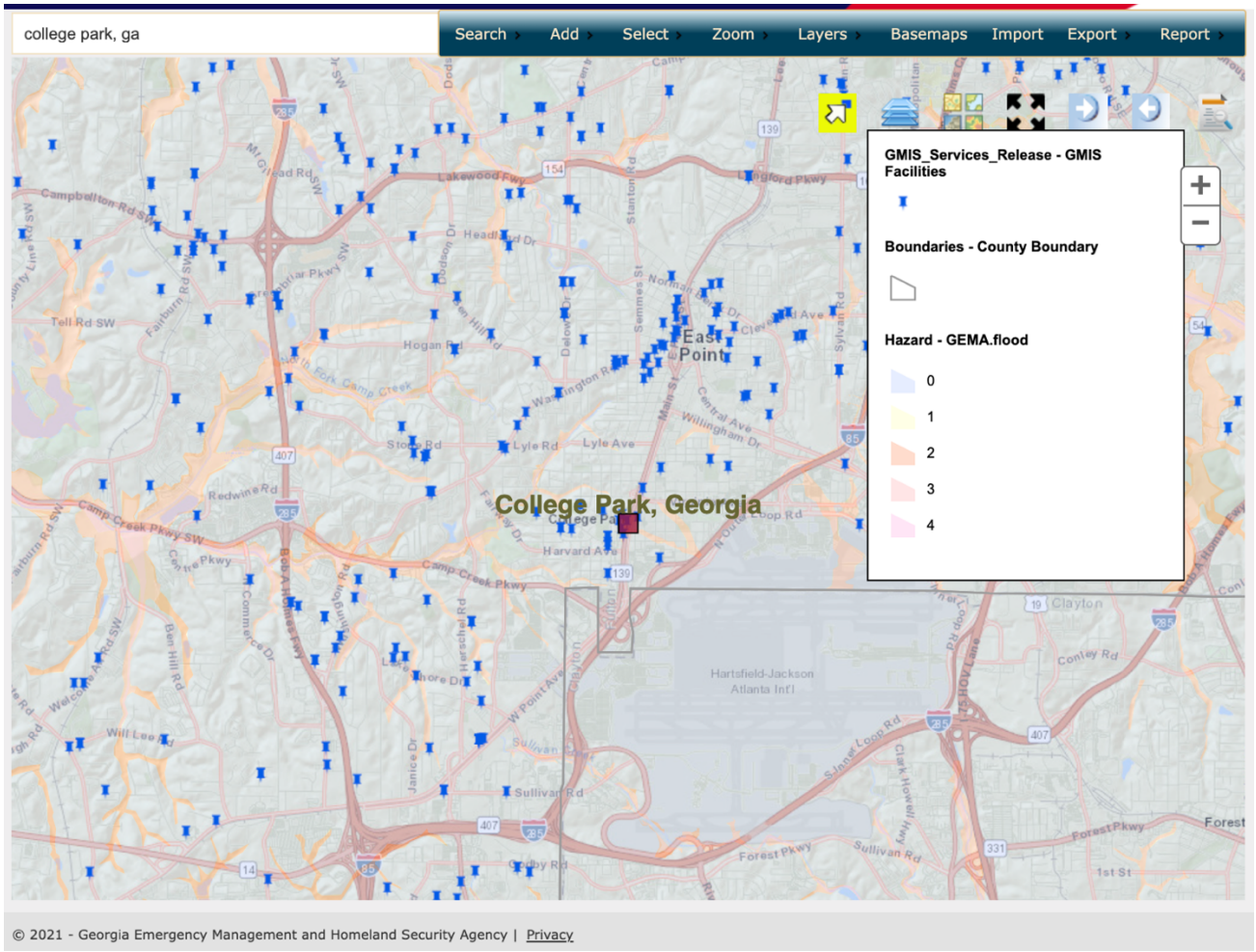
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit GEMHSA.*

Map 72: City of Chattahoochee Hills, GA GMIS Map with Flood Layer



Map Source: Georgia Mitigation Information System (GMIS),
https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit GEMHSA.*

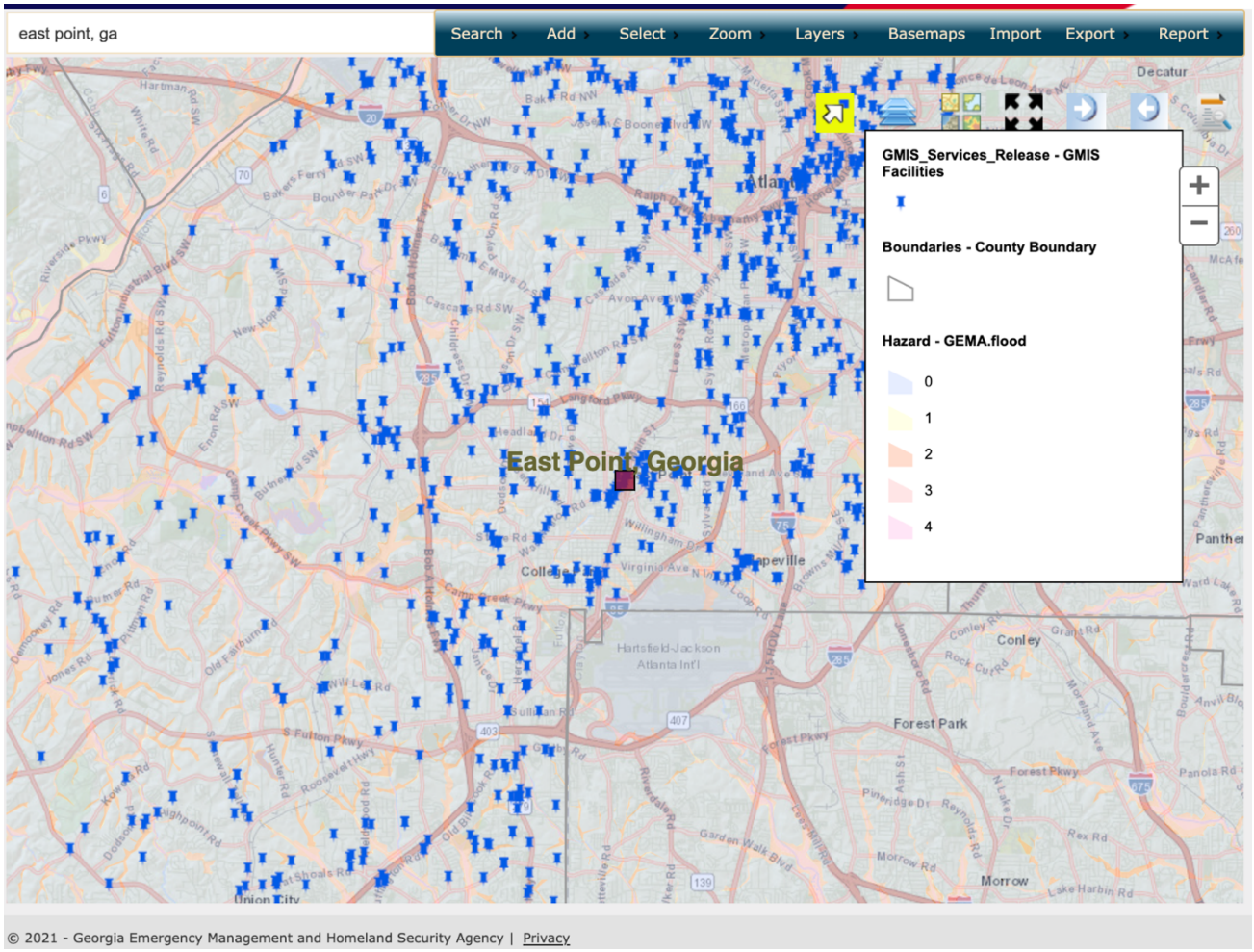
Map 73: City of College Park, GA GMIS Map with Flood Layer



Map Source: Georgia Mitigation Information System (GMIS), https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex

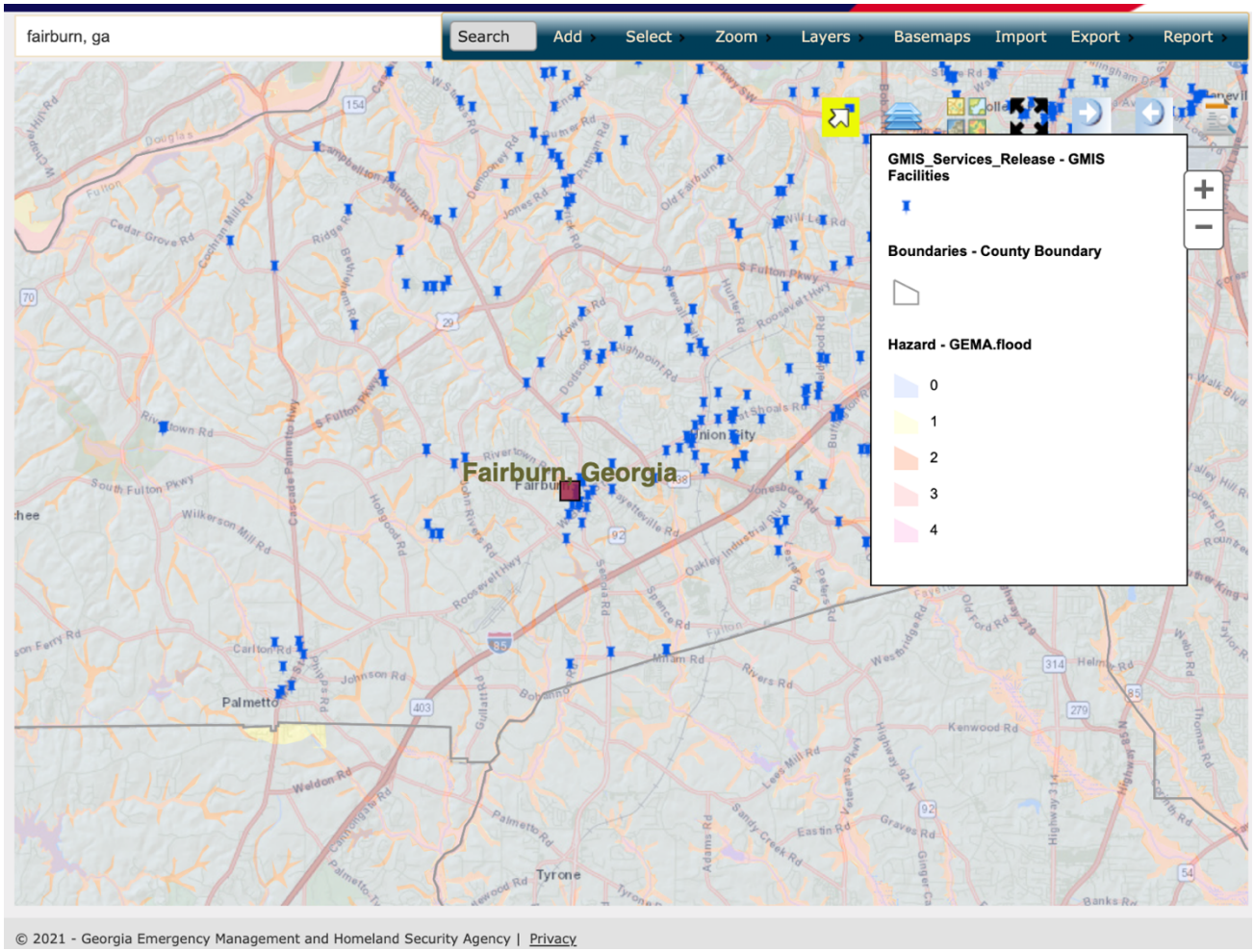
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit GEMHSA.*

Map 74: City of East Point, GA GMIS Map with Flood Layer



Map Source: Georgia Mitigation Information System (GMIS),
https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit GEMHSA.*

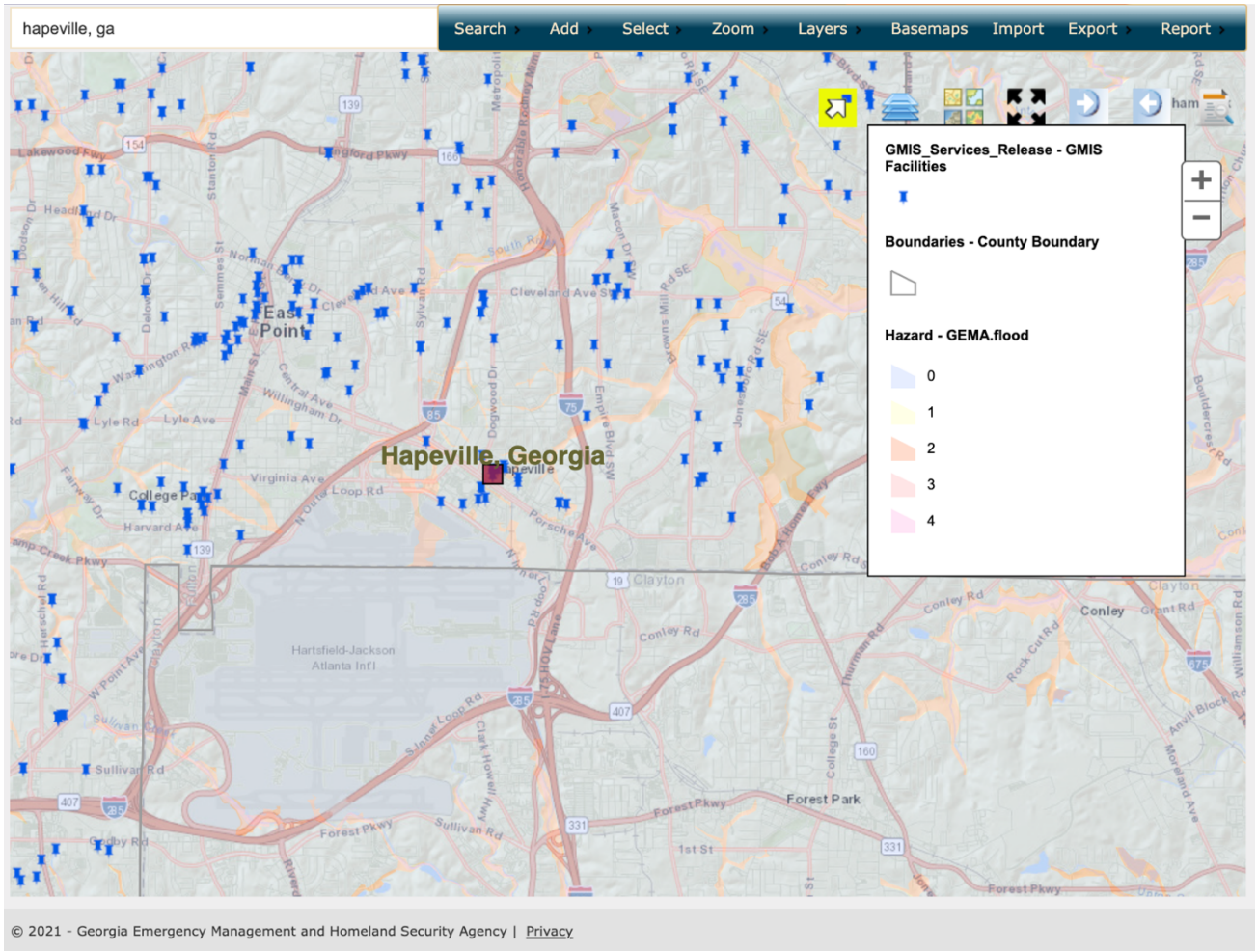
Map 75: City of Fairburn, GA GMIS Map with Flood Layer



Map Source: Georgia Mitigation Information System (GMIS), https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex

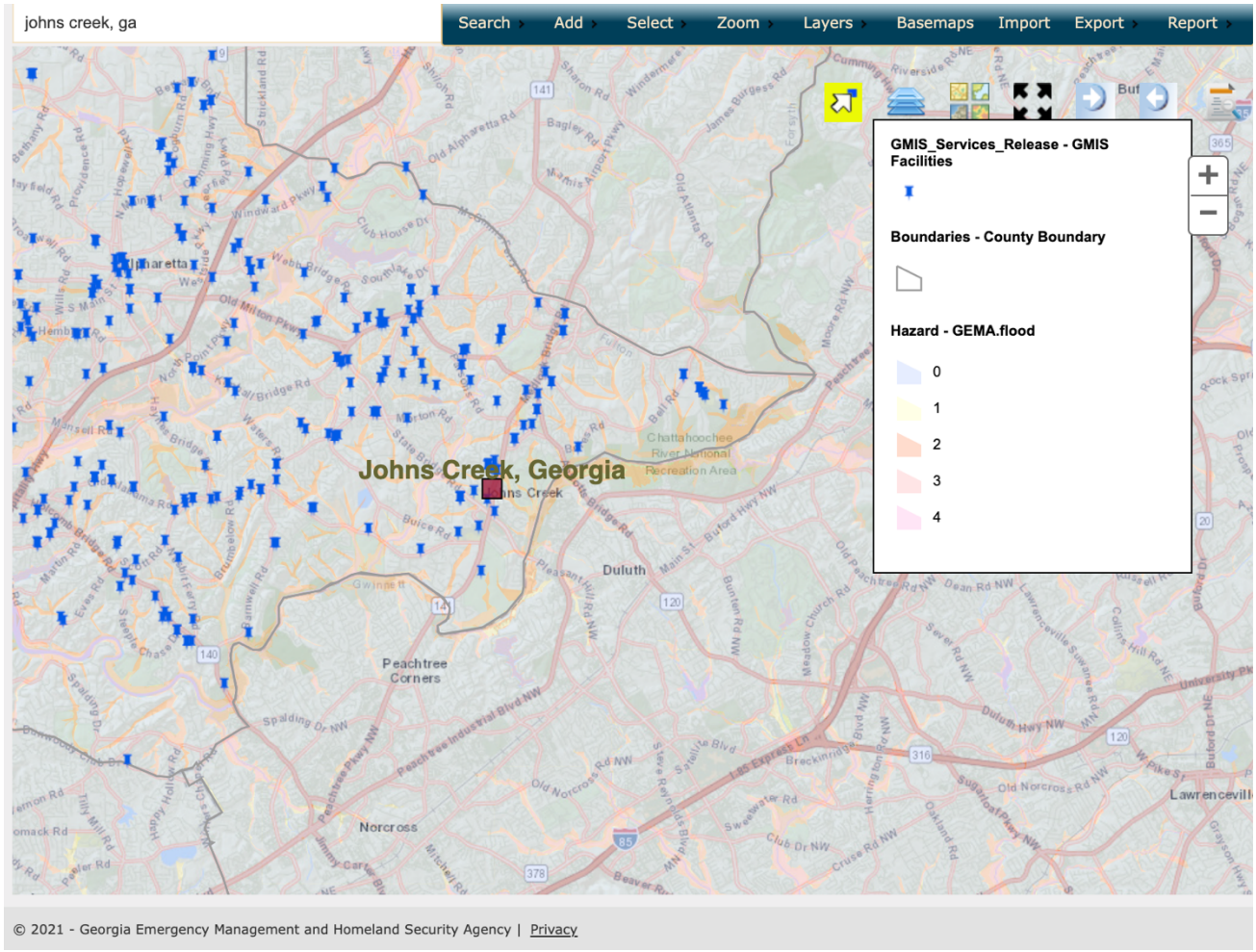
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit GEMHSA.*

Map 76: City of Hapeville, GA GMIS Map with Flood Layer



Map Source: Georgia Mitigation Information System (GMIS),
https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit GEMHSA.*

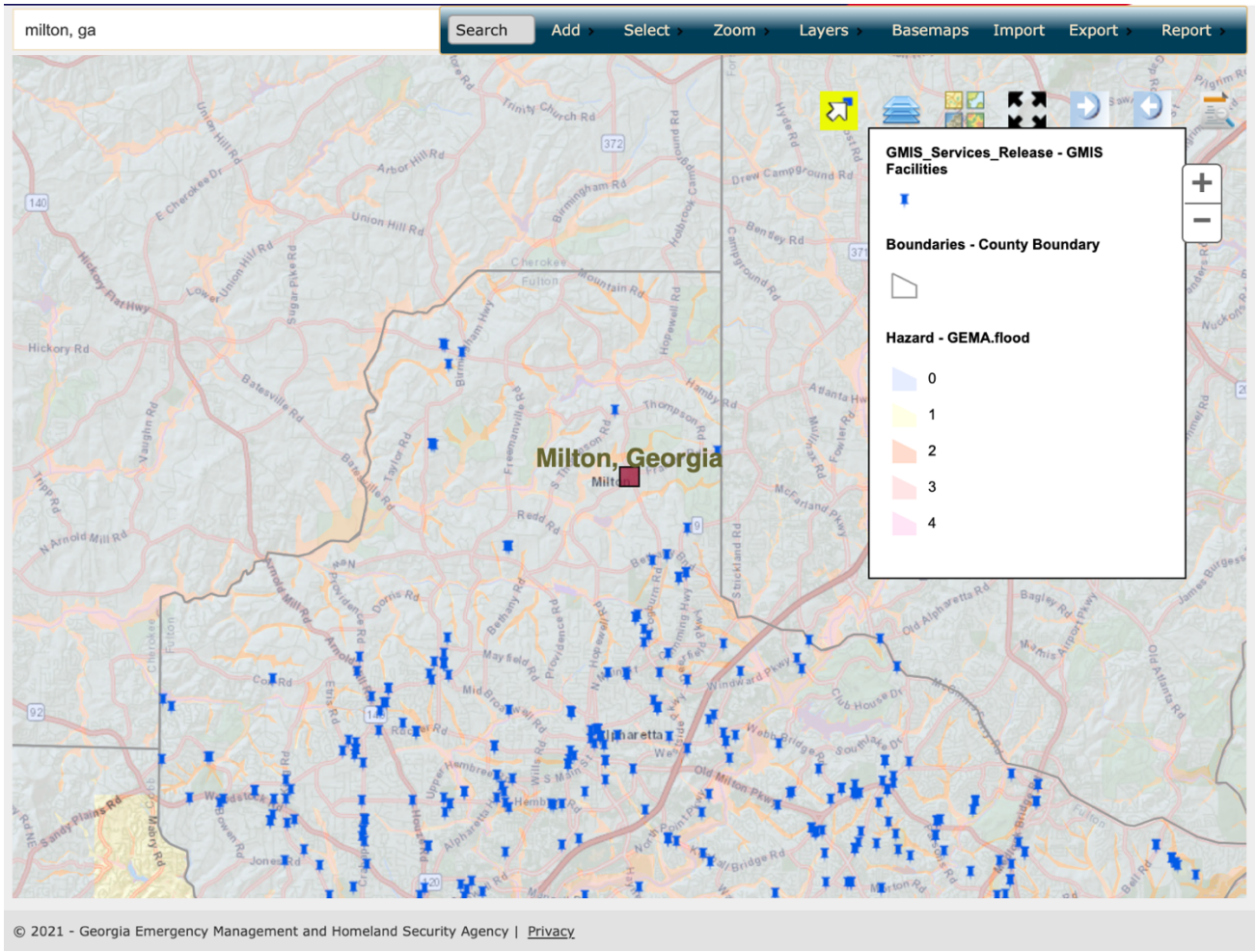
Map 77: City of Johns Creek, GA GMIS Map with Flood Layer



Map Source: Georgia Mitigation Information System (GMIS), https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex

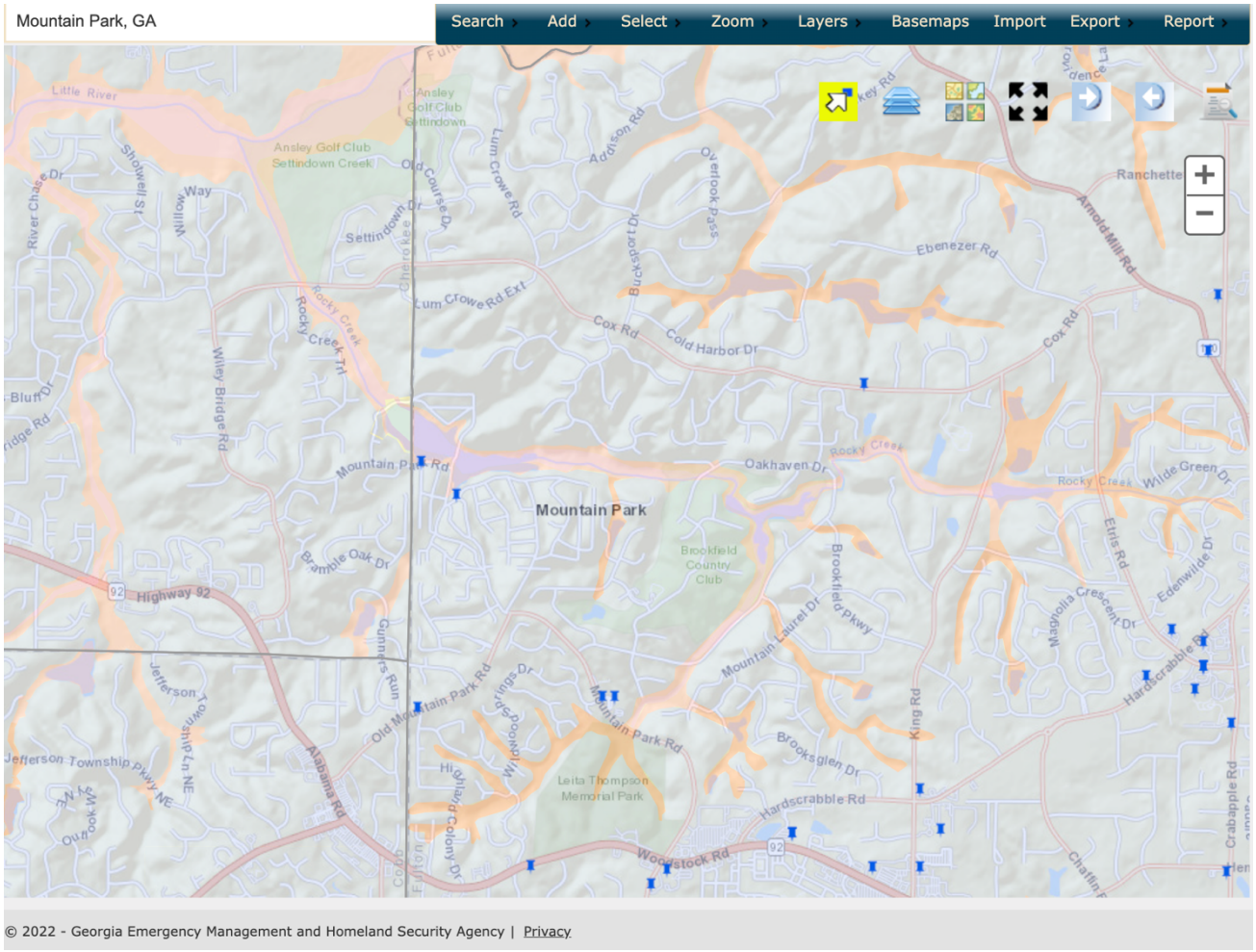
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit GEMHSA.*

Map 78: City of Milton, GA GMIS Map with Flood Layer



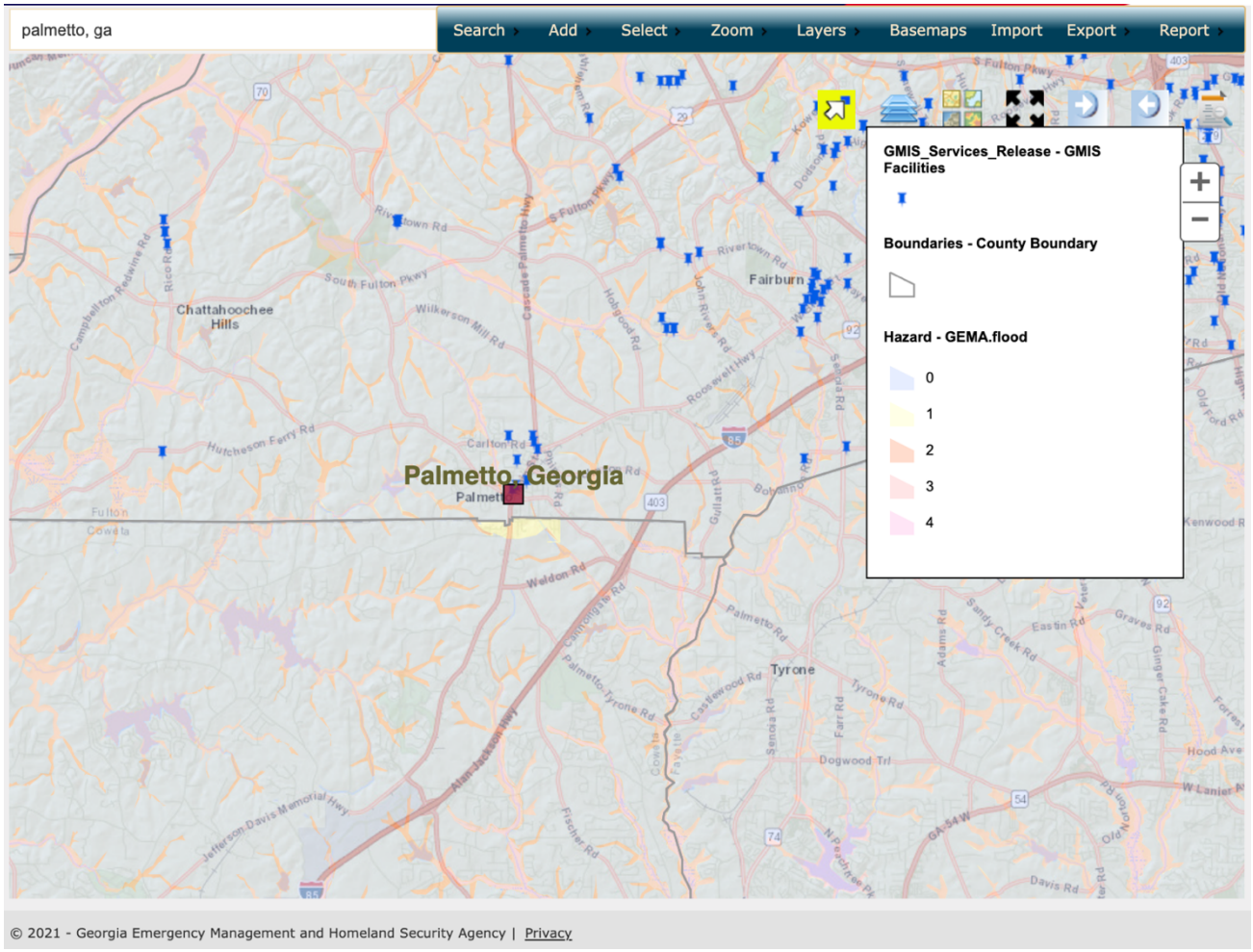
Map Source: Georgia Mitigation Information System (GMIS),
https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit GEMHSA.*

Map 79: City of Mountain Park, GA GMIS Map with Flood Layer



Map Source: Georgia Mitigation Information System (GMIS),
https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit GEMHSA.*

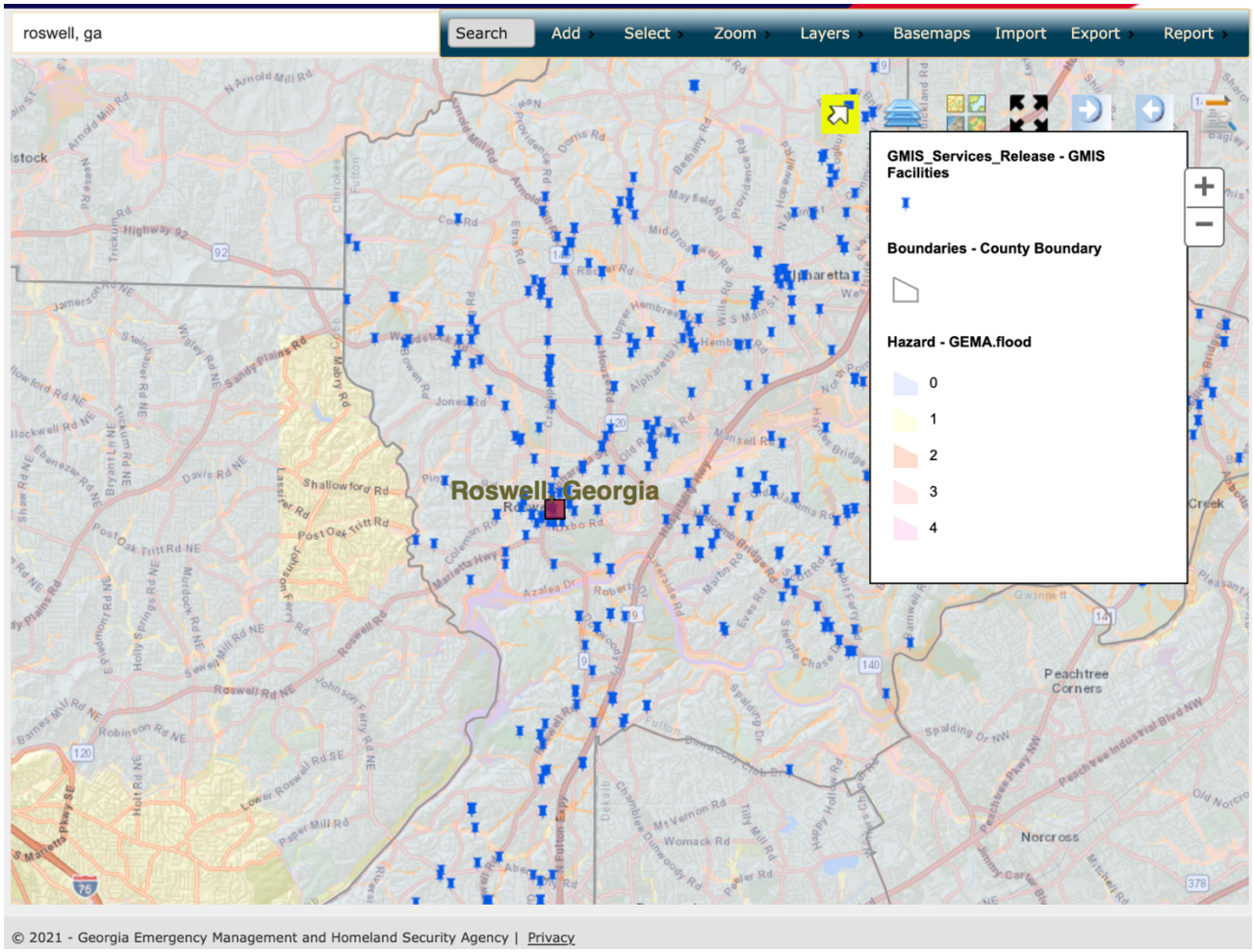
Map 80: City of Palmetto, GA GMIS Map with Flood Layer



Map Source: Georgia Mitigation Information System (GMIS), https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex

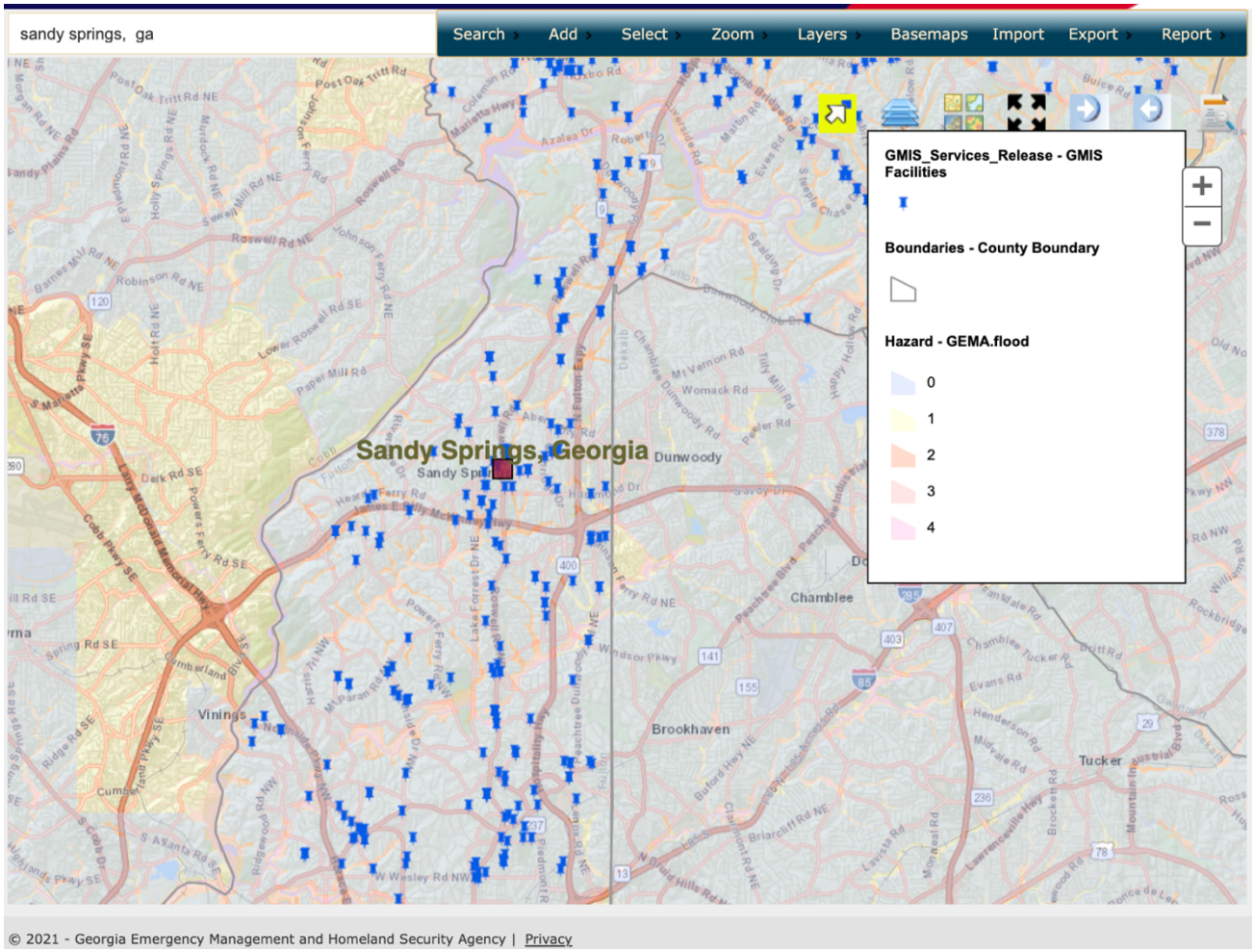
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit GEMHSA.*

Map 81: City of Roswell, GA GMIS Map with Flood Layer



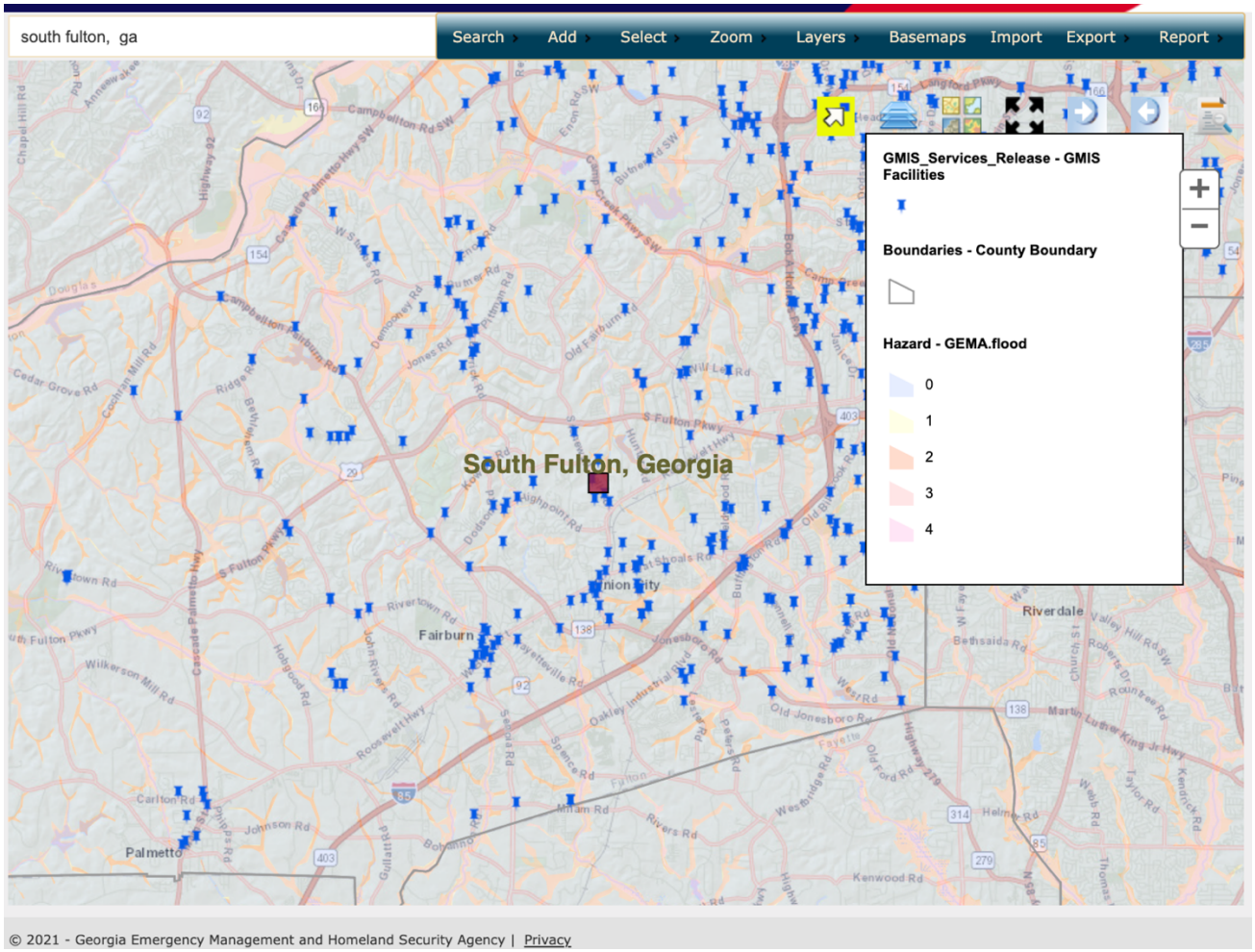
Map Source: Georgia Mitigation Information System (GMIS),
https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit GEMHSA.*

Map 82: City of Sandy Springs, GA GMIS Map with Flood Layer



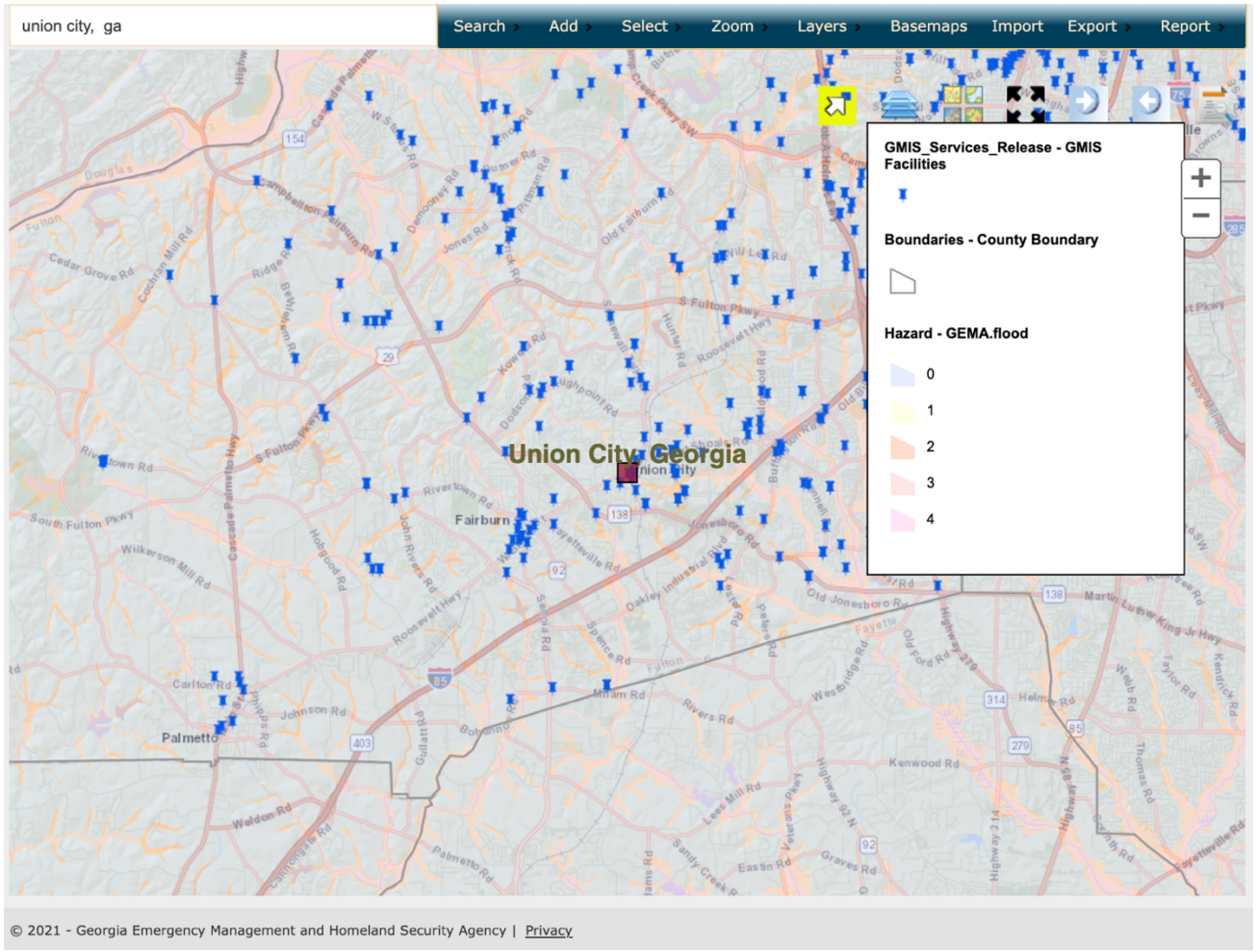
Map Source: Georgia Mitigation Information System (GMIS),
https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit GEMHSA.*

Map 83: City of South Fulton, GA GMIS Map with Flood Layer



Map Source: Georgia Mitigation Information System (GMIS),
https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit GEMHSA.*

Map 84: Union City, GA GMIS Map with Flood Layer



Map Source: Georgia Mitigation Information System (GMIS),
https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit GEMHSA.*

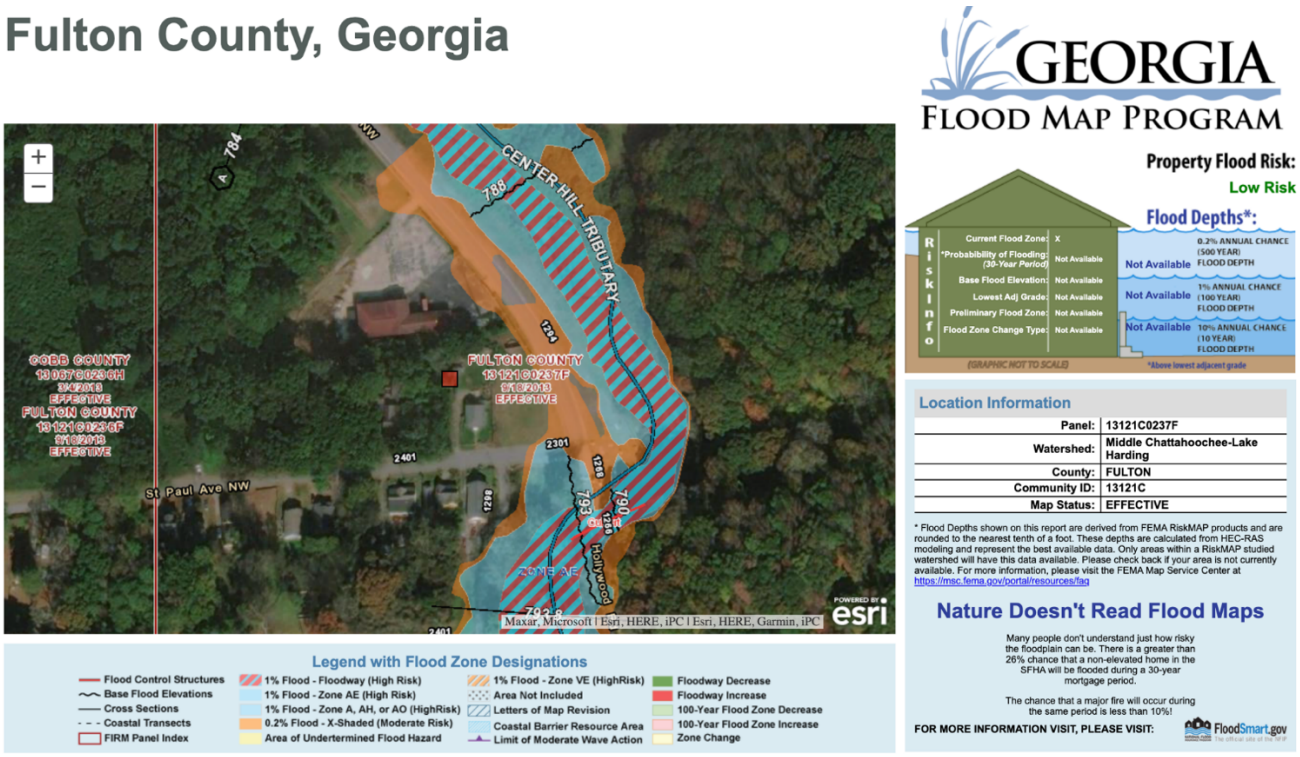
The following table explains the Floodplain Insurance Rate Map (FIRM) flood zone classifications associated with the preceding maps. Fulton County's jurisdictional FEMA DFIRM maps can be found on the following pages.

Table 35: Flood Zone Classifications

Flood Zone Classifications	
Zone	**Description**
A	An area inundated by 1% annual chance flooding, for which no BFEs have been determined. (100-Year Floodplain)
AE	An area inundated by 1% annual chance flooding, for which BFEs have been determined. (100-Year Floodplain)
Shaded X	Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood; an area inundated by 0.2% annual chance flooding
Unshaded X	Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level; Zone X is the area determined to be outside the 500-year flood and protected by levee from 100- year flood

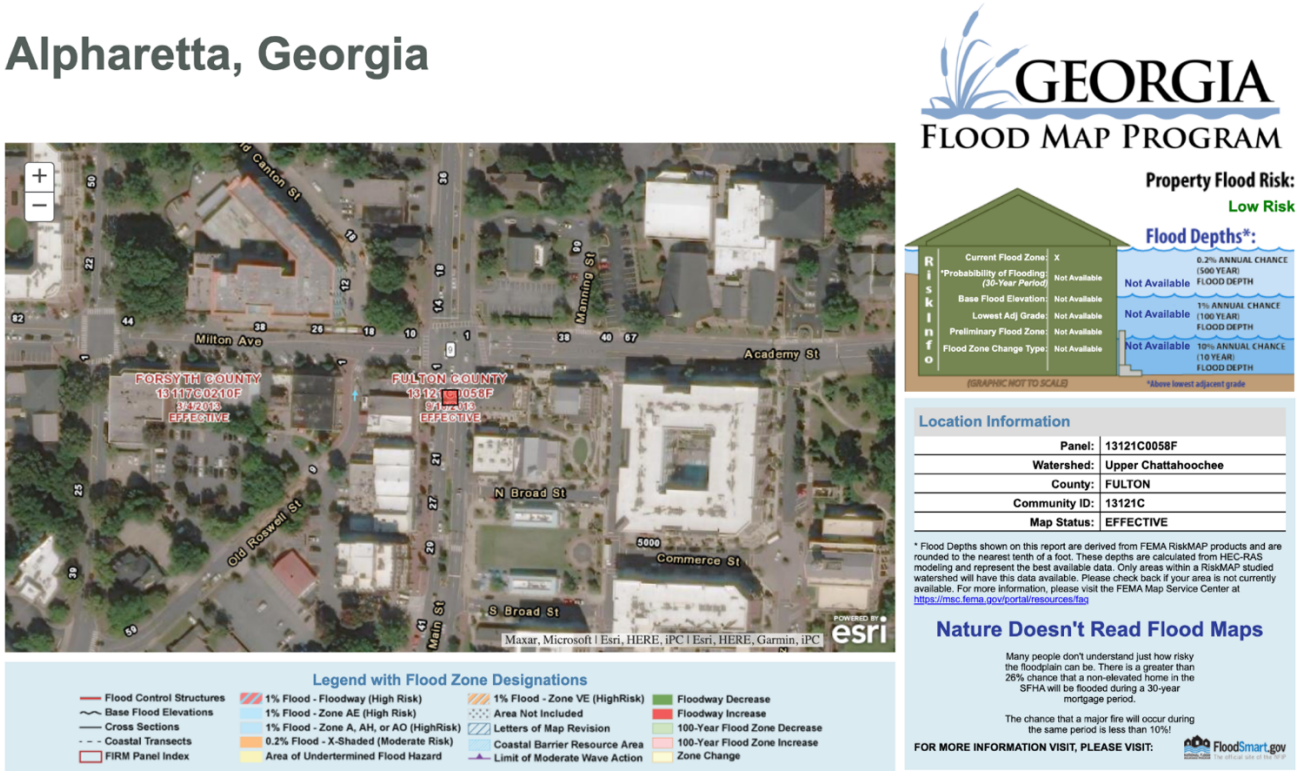
Data Source: FEMA Flood Zone Designations, https://snmapmod.snco.us/fmm/document/fema-flood-zone-definitions.pdf
***Note:** For the following FEMA National Flood Hazard Layer (NFHL) maps, the A and AE zones have been combined as they are both considered 100-year floodplains.*

Map 85: Georgia DFIRM Map – Fulton County, GA



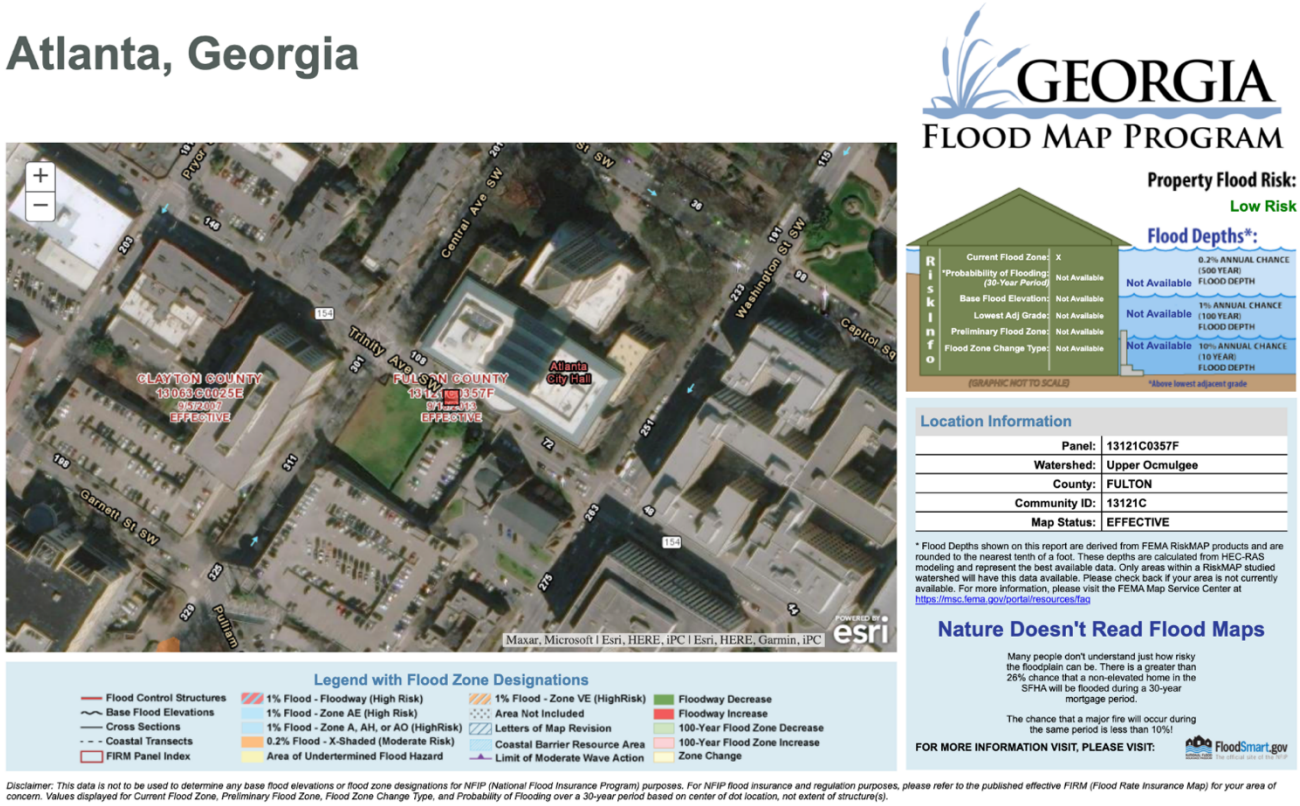
Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

Map 86: Georgia DFIRM Map – Alpharetta, GA



Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

Map 87: Georgia DFIRM Map – Atlanta, GA

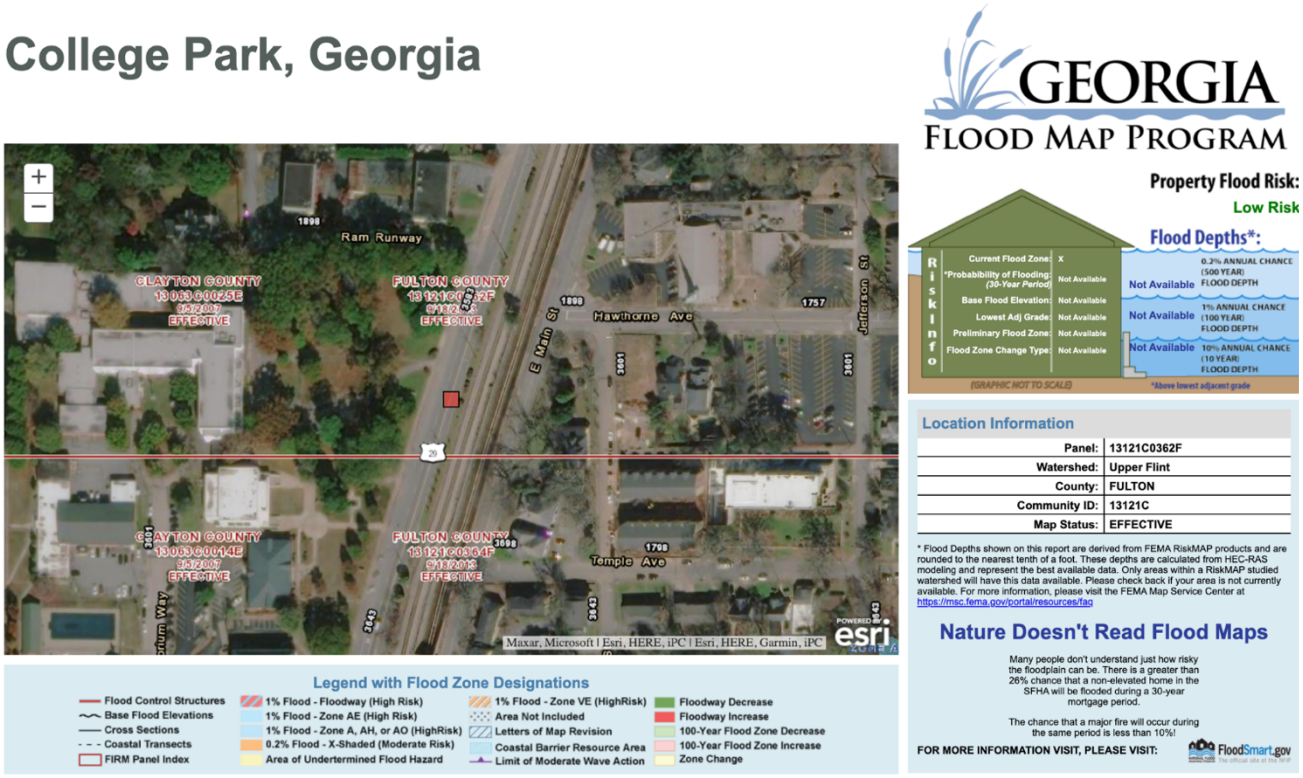


Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

Map 88: Georgia DFIRM Map – Chattahoochee Hills, GA

Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

Map 89: Georgia DFIRM Map – College Park, GA



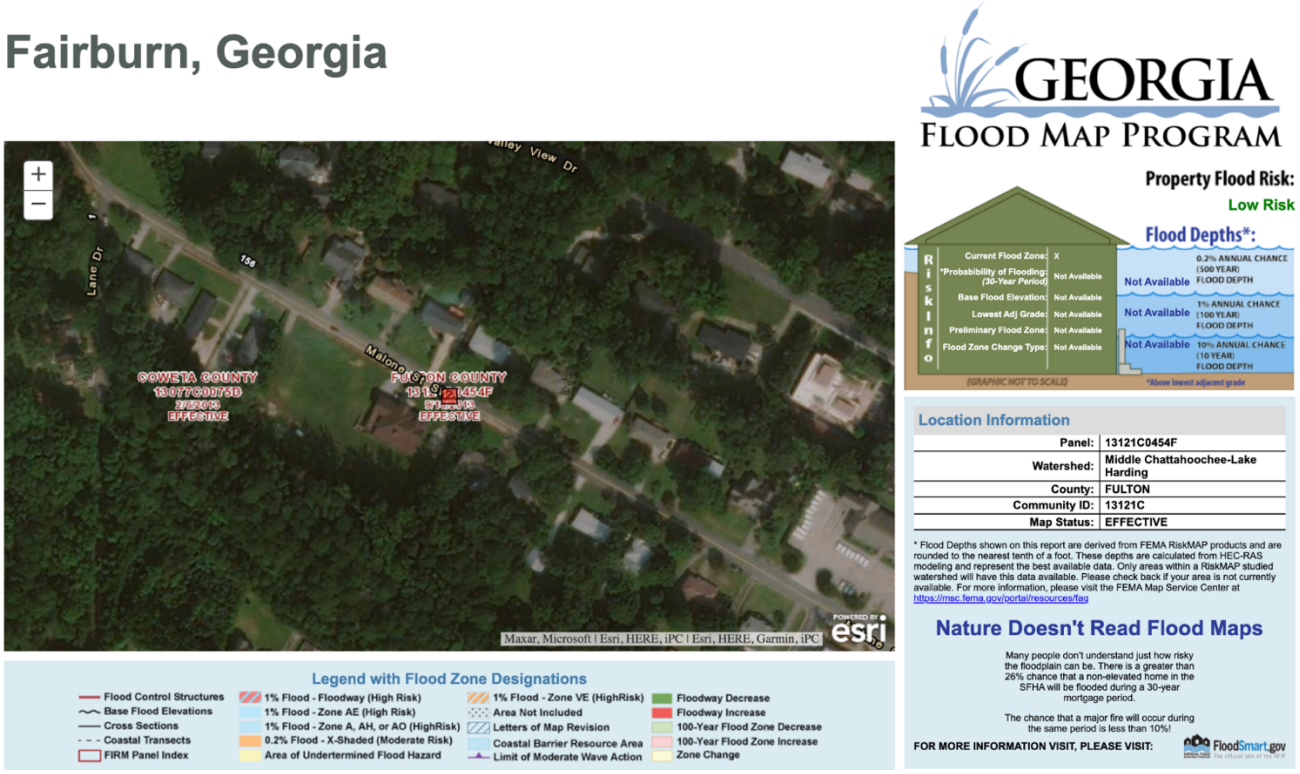
Disclaimer: This data is not to be used to determine any base flood elevations or flood zone designations for NFIP (National Flood Insurance Program) purposes. For NFIP flood insurance and regulation purposes, please refer to the published effective FIRM (Flood Rate Insurance Map) for your area of concern.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

Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

Map 90: Georgia DFIRM Map – East Point, GA

Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

Map 91: Georgia DFIRM Map – Fairburn, GA

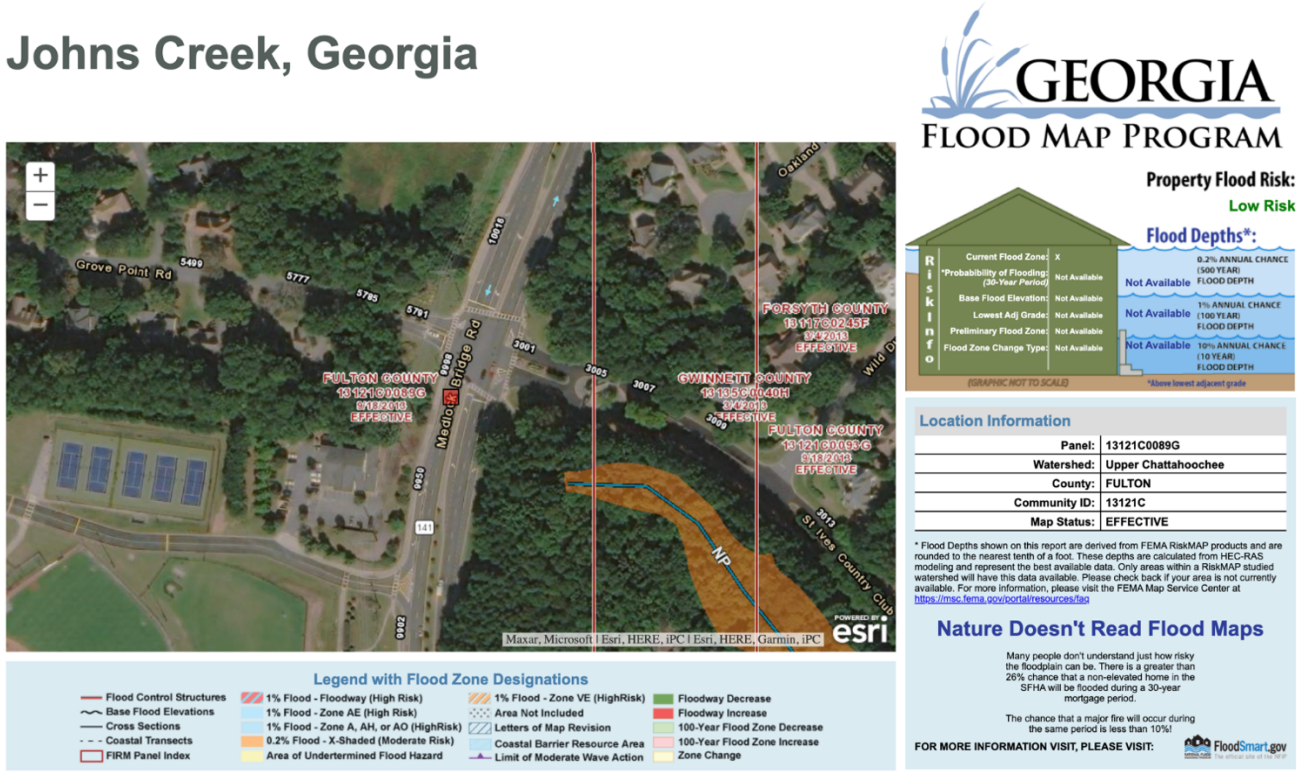


Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

Map 92: Georgia DFIRM Map – Hapeville, GA

Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

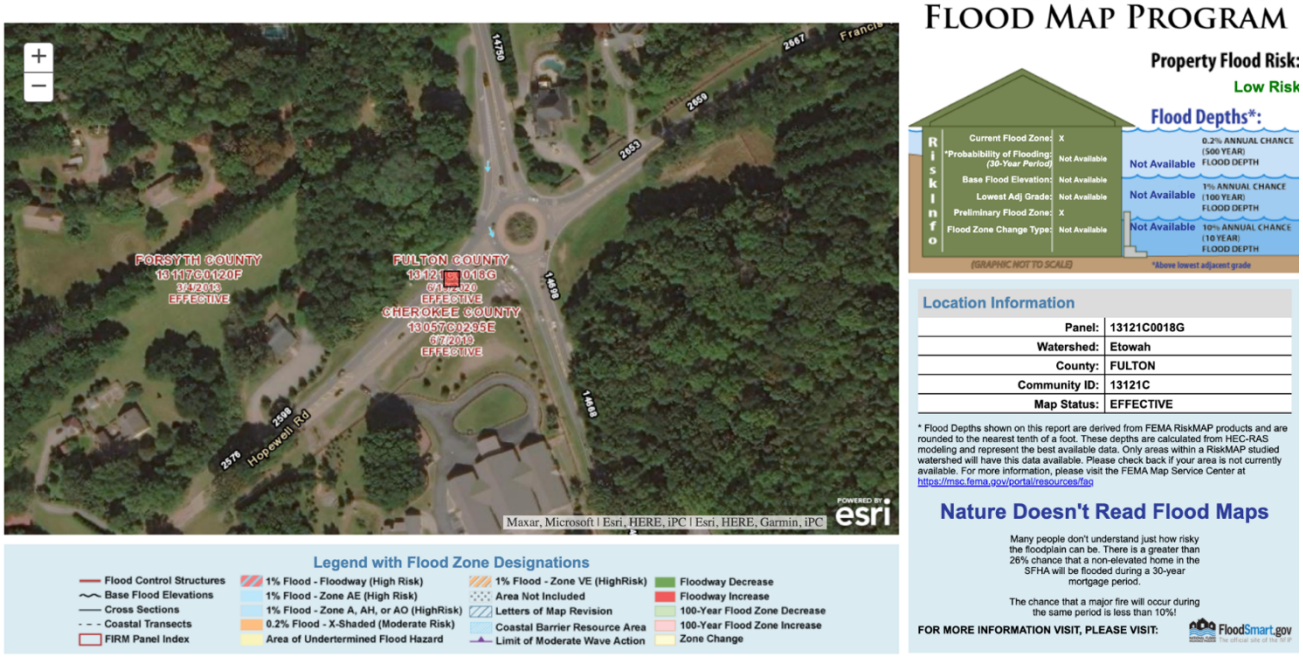
Map 93: Georgia DFIRM Map – Johns Creek, GA



Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

Map 94: Georgia DFIRM Map – Milton, GA

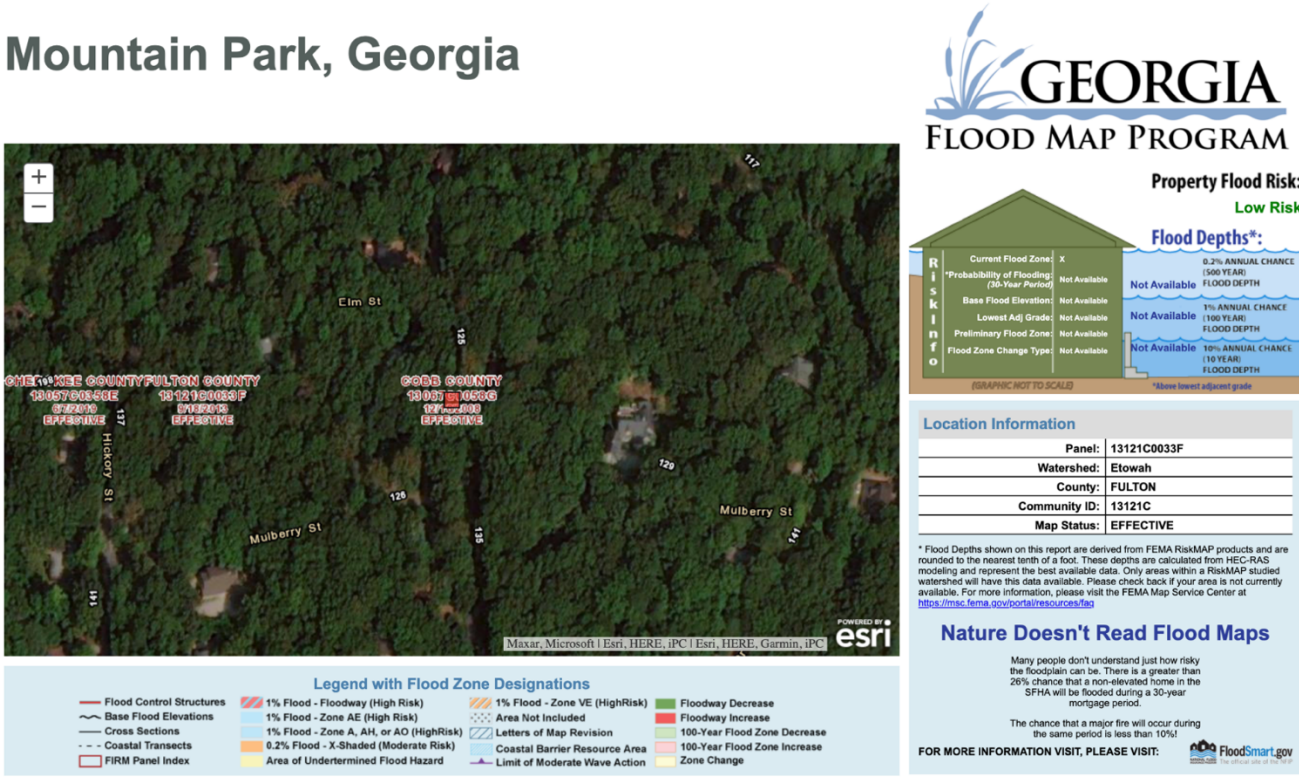
Milton, Georgia



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

Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

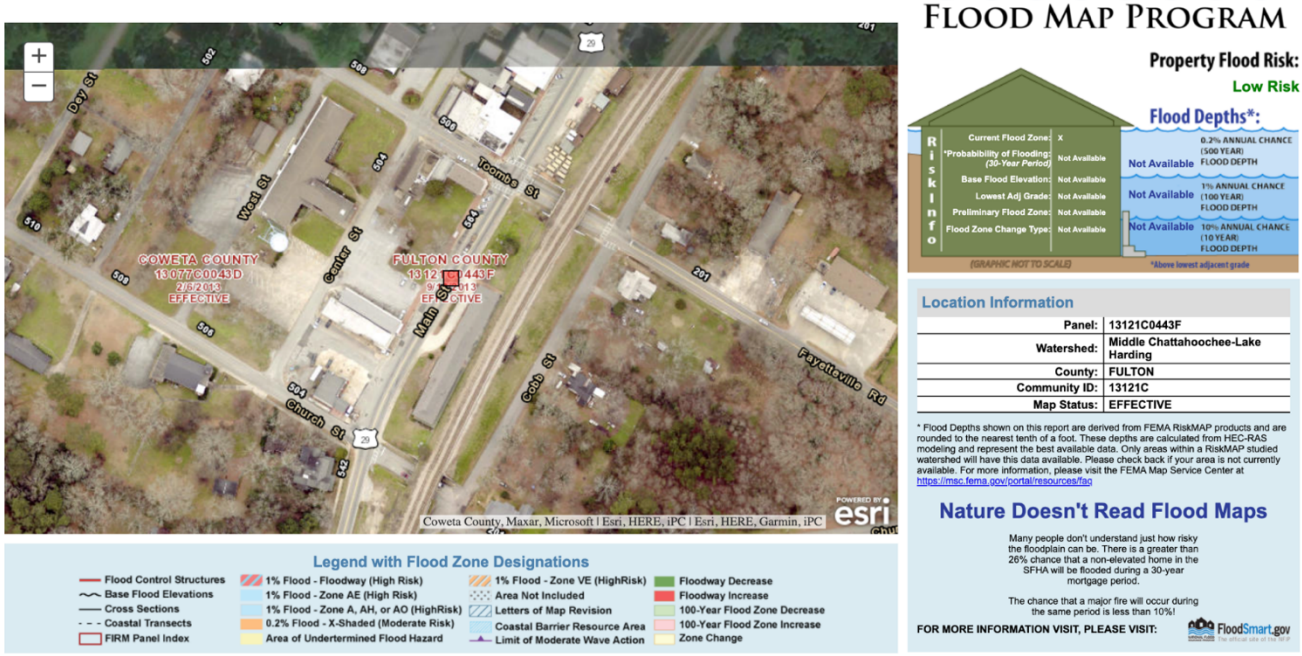
Map 95: Georgia DFIRM Map – Mountain Park, GA



Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

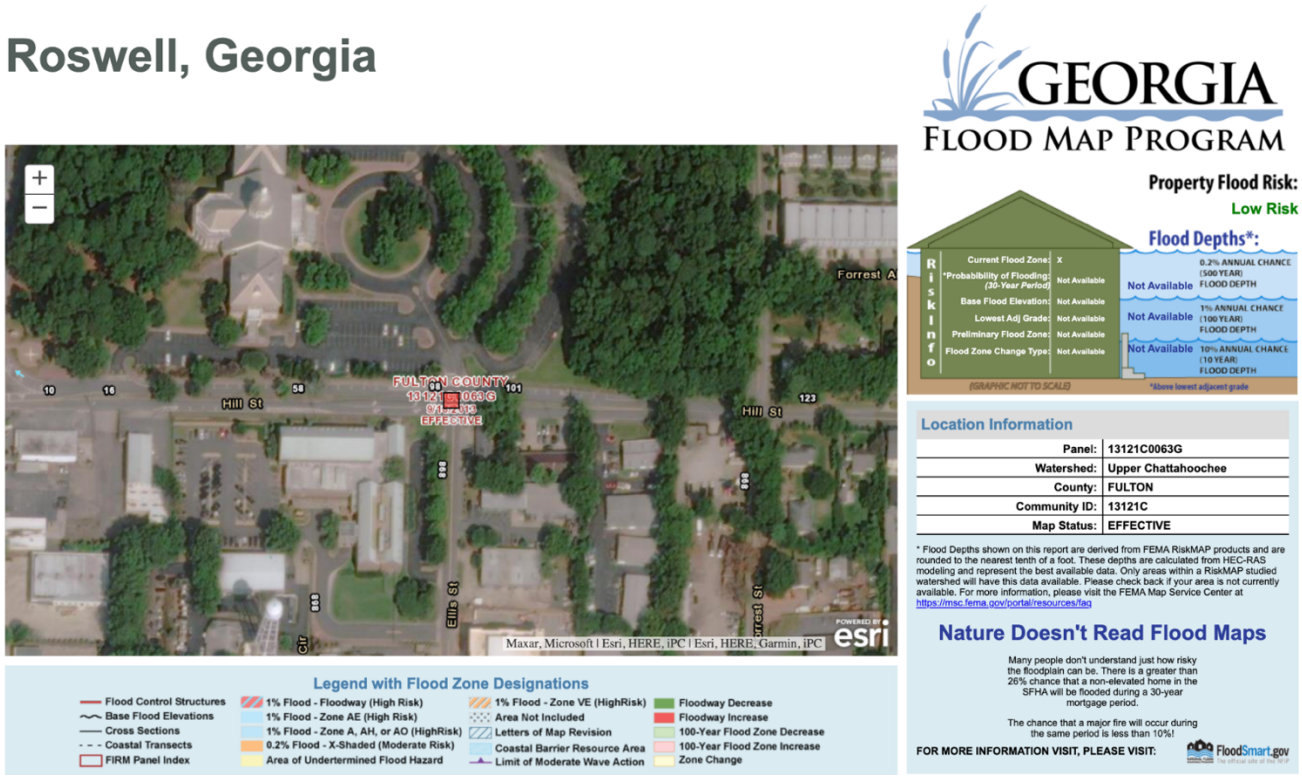
Map 96: Georgia DFIRM Map – Palmetto, GA

Palmetto, Georgia



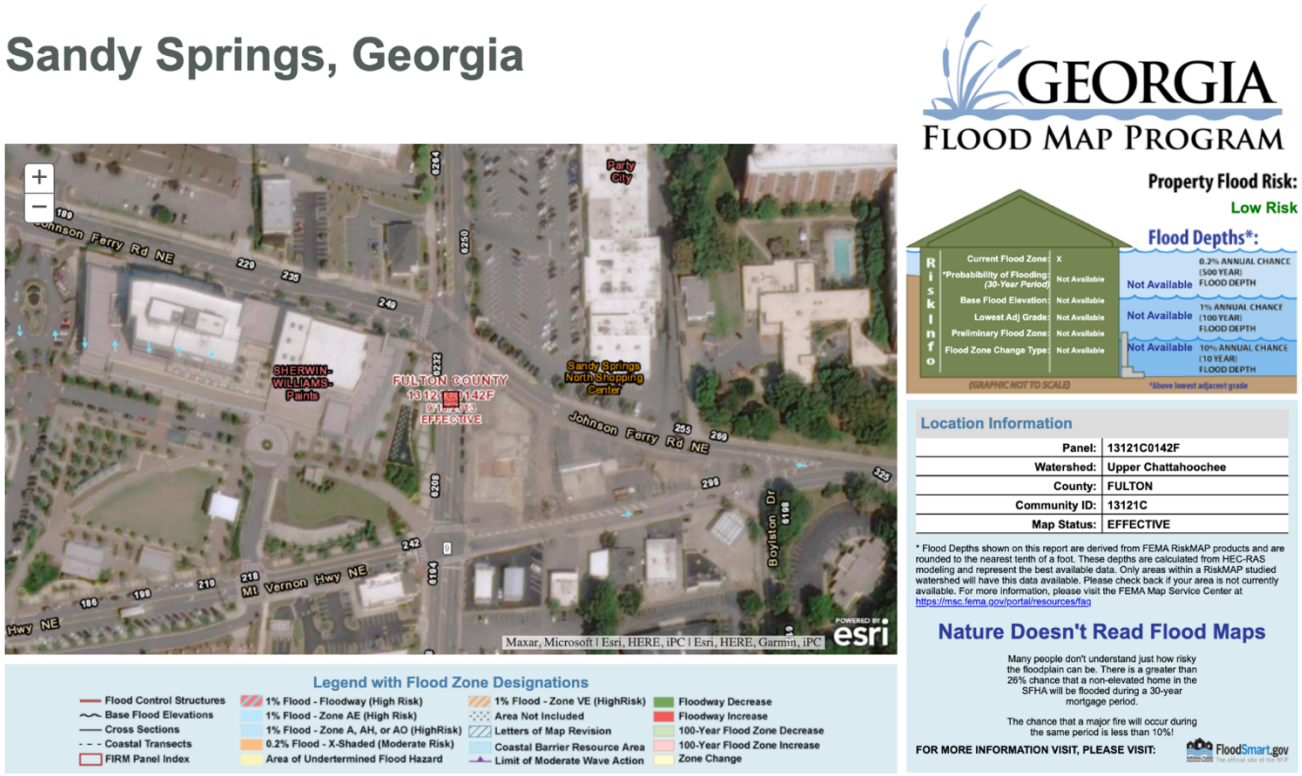
Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

Map 97: Georgia DFIRM Map – Roswell, GA



Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

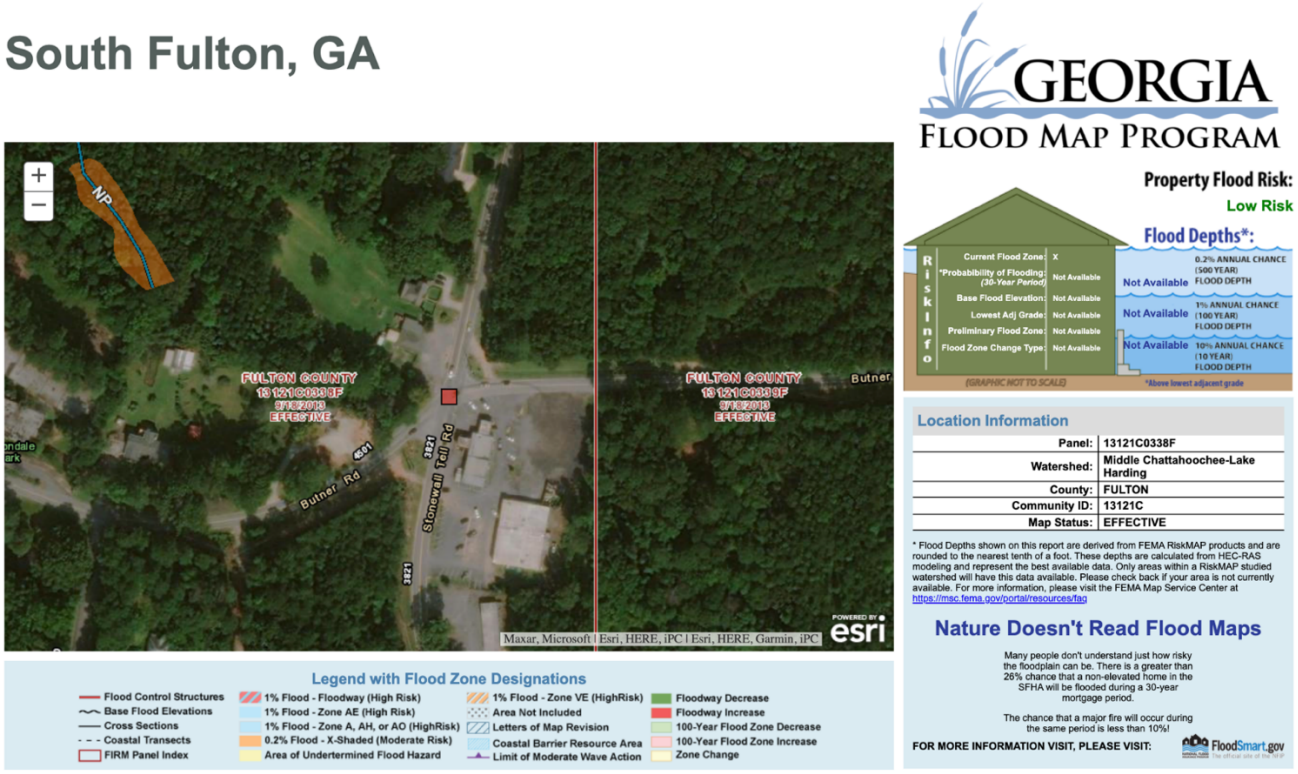
Map 98: Georgia DFIRM Map – Sandy Springs, GA



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

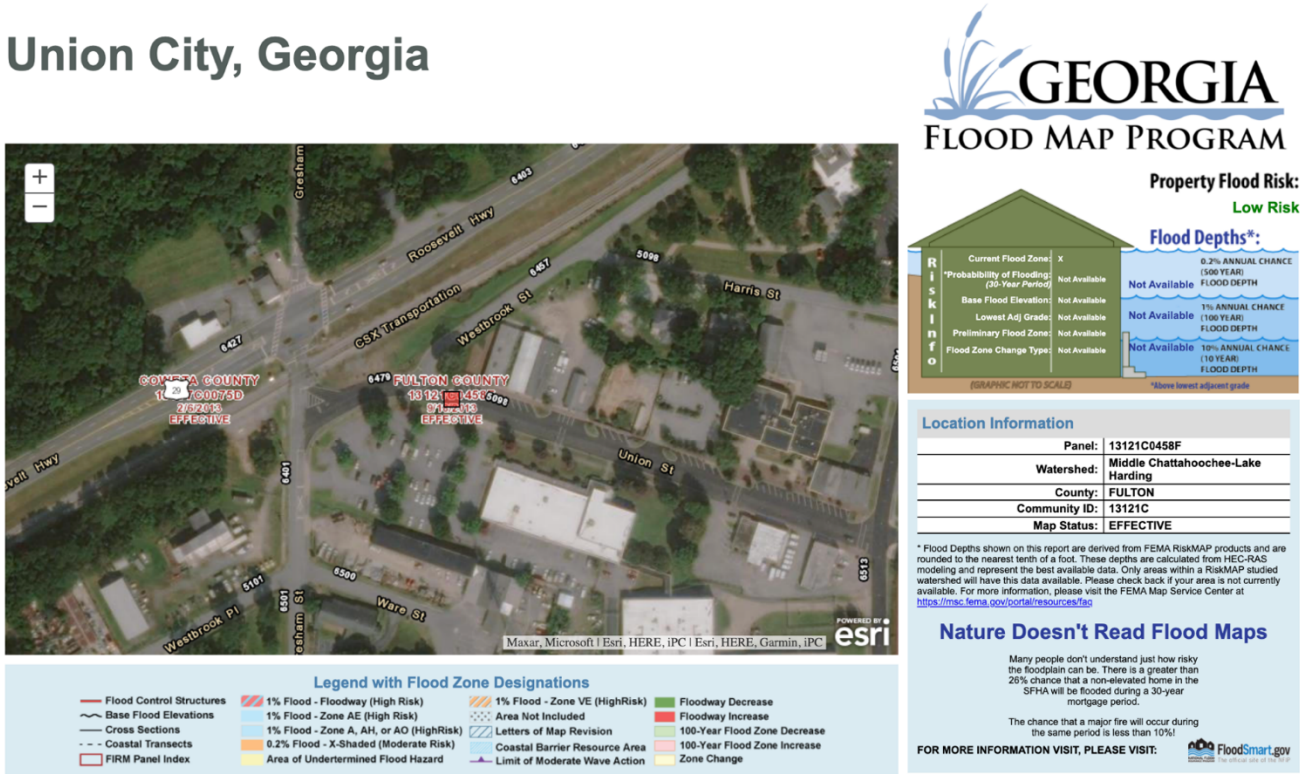
Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

Map 99: Georgia DFIRM Map – South Fulton, GA



Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

Map 100: Georgia DFIRM Map – Union City, GA



Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

4.2.3 – Previous Occurrences

In the past, there has been a history of flood events within Fulton County. As mentioned in the previous MJHMP plan (2016), between 1954 and 2015, FEMA included the State of Georgia in 18 flood-related major disaster (DR) or emergency (EM) declarations classified as one or a combination of the following disaster types: severe storms, tornadoes, straight-line winds, heavy rains, high winds, tropical storm, rain, and mudslide. Generally, these disasters cover a wide region of Georgia; therefore, they may have impacted many counties. Fulton County was included in four of these flood-related declarations.

To gain a better understanding of previous occurrences, and accurately calculate future probability, the following information was taken into consideration. From January 1, 2016, to December 31, 2020, NOAA/NCEI recorded 29 flood (flood/flash flood) events in Fulton County.

Table 36: Flood Events, Fulton County

Flood Events, Fulton County					
Location	Date	Event Type	Injuries/ Deaths	Property Damage	Crop Damage
Atlanta	04/05/2017	Flash Flood	0/0	0.00K	0.00K
Atlanta	04/05/2017	Flash Flood	0/0	0.00K	0.00K
Bolton	04/05/2017	Flash Flood	0/0	0.00K	0.00K
Atlanta	06/20/2017	Flash Flood	0/0	20.00K	0.00K
Sandy Springs	08/09/2017	Flash Flood	0/0	0.00K	0.00K
Sandy Springs	08/09/2017	Flash Flood	0/0	0.00K	0.00K
North Roswell	07/13/2018	Flash Flood	0/0	0.00K	0.00K
Alpharetta	07/11/2019	Flash Flood	0/0	15.00K	0.00K
Newtown	07/12/2019	Flash Flood	0/0	0.00K	0.00K
Atlanta	08/05/2019	Flash Flood	0/0	0.00K	0.00K
Birmingham	02/06/2020	Flash Flood	0/0	0.00K	0.00K
Birmingham	02/06/2020	Flash Flood	0/0	0.00K	0.00K
Roswell	02/06/2020	Flash Flood	0/0	0.00K	0.00K
Birmingham	02/06/2020	Flash Flood	0/0	0.00K	0.00K
Sandy Springs	02/06/2020	Flash Flood	0/0	0.00K	0.00K
Sandy Springs	08/03/2020	Flash Flood	0/0	10.00K	0.00K
Sandy Springs	08/03/2020	Flash Flood	0/0	0.00K	0.00K
Sandy Springs	09/17/2020	Flash Flood	0/0	0.00K	0.00K
Atlanta	09/17/2020	Flash Flood	0/0	0.00K	0.00K
Atlanta	10/10/2020	Flash Flood	0/0	0.00K	0.00K
FT McPherson	10/10/2020	Flash Flood	0/0	0.00K	0.00K
FT McPherson	10/10/2020	Flash Flood	0/0	0.00K	0.00K
Atlanta	10/10/2020	Flash Flood	0/0	0.00K	0.00K
FT McPherson	10/10/2020	Flash Flood	0/0	0.00K	0.00K

Flood Events, Fulton County					
Location	Date	Event Type	Injuries/ Deaths	Property Damage	Crop Damage
Atlanta	10/10/2020	Flash Flood	0/0	0.00K	0.00K
Adamsville	10/10/2020	Flash Flood	0/0	0.00K	0.00K
Atlanta	10/24/2020	Flash Flood	0/0	5.00K	0.00K
Adamsville	10/24/2020	Flash Flood	0/0	10.0K	0.00K
Adamsville	10/24/2020	Flash Flood	0/0	0.00K	0.00K
Total – 29 Flood/Flash Flood Events			**0/0**	**$60,000**	**$0**

Data Source: NOAA/NCEI Storm Events Database

Fulton County has river gauges location within: Alpharetta, Atlanta, East Point, Hapeville, Roswell, Sandy Springs, The following illustrations show each jurisdiction's historic data for all gauges within Fulton County:

Illustration 9: Big Creek Near Alpharetta, City of Alpharetta

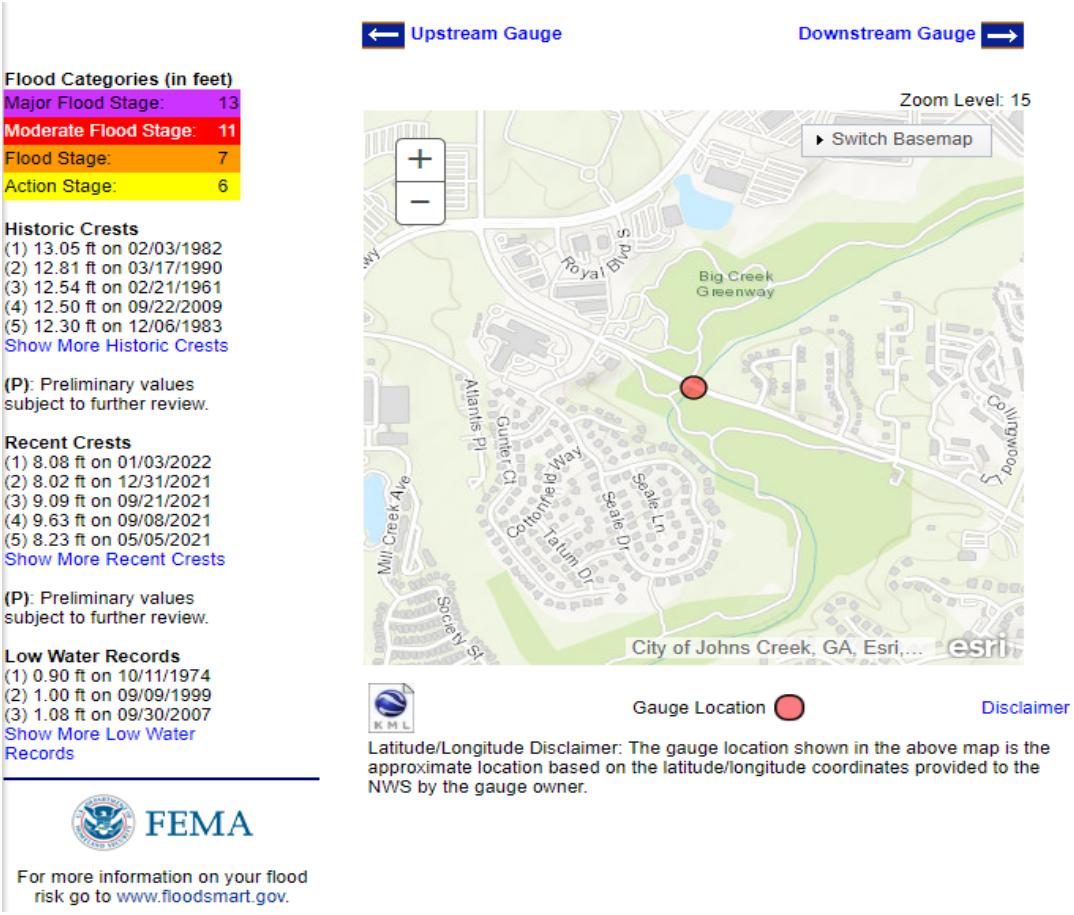


Illustration 10: Big Creek Near Roswell, City of Roswell

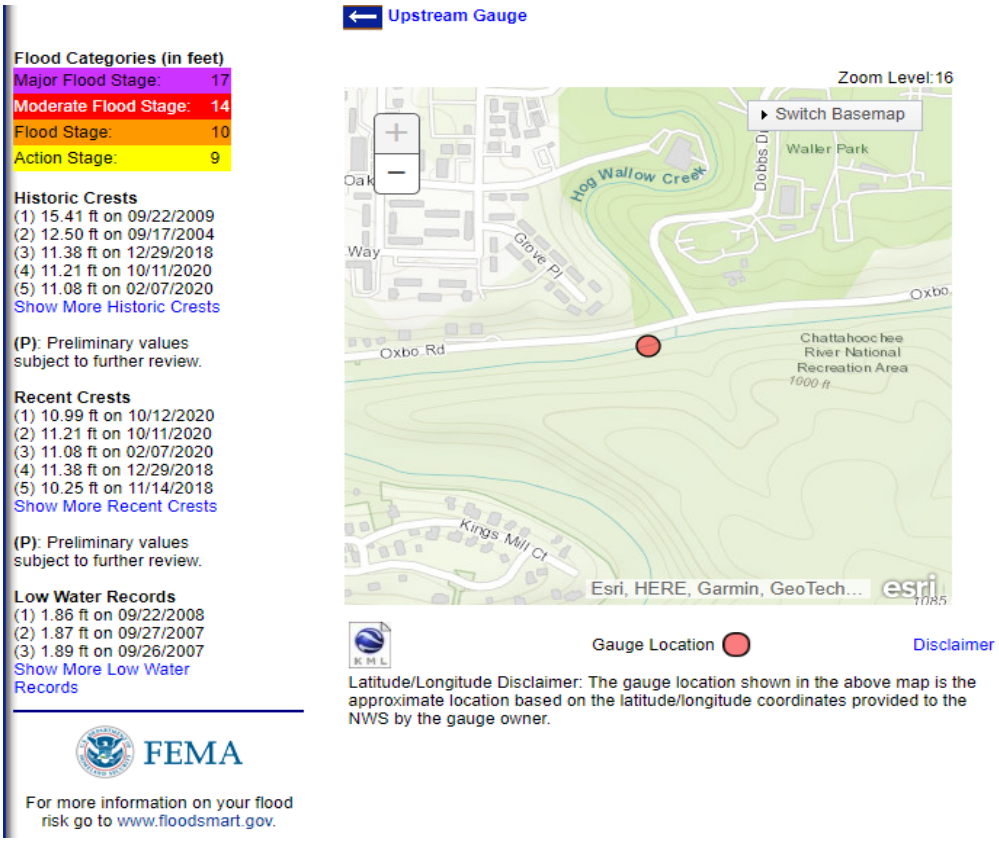


Illustration 11: Chattahoochee River Near Roswell, City of Roswell

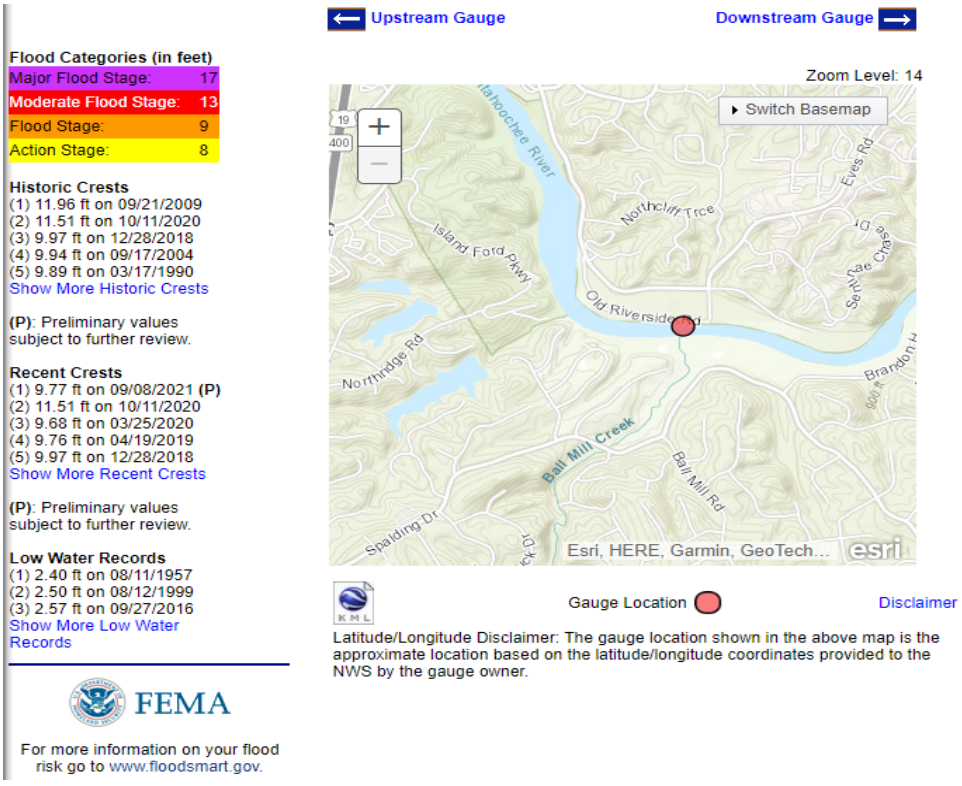


Illustration 12: Willeo Creek Near Roswell, City of Roswell

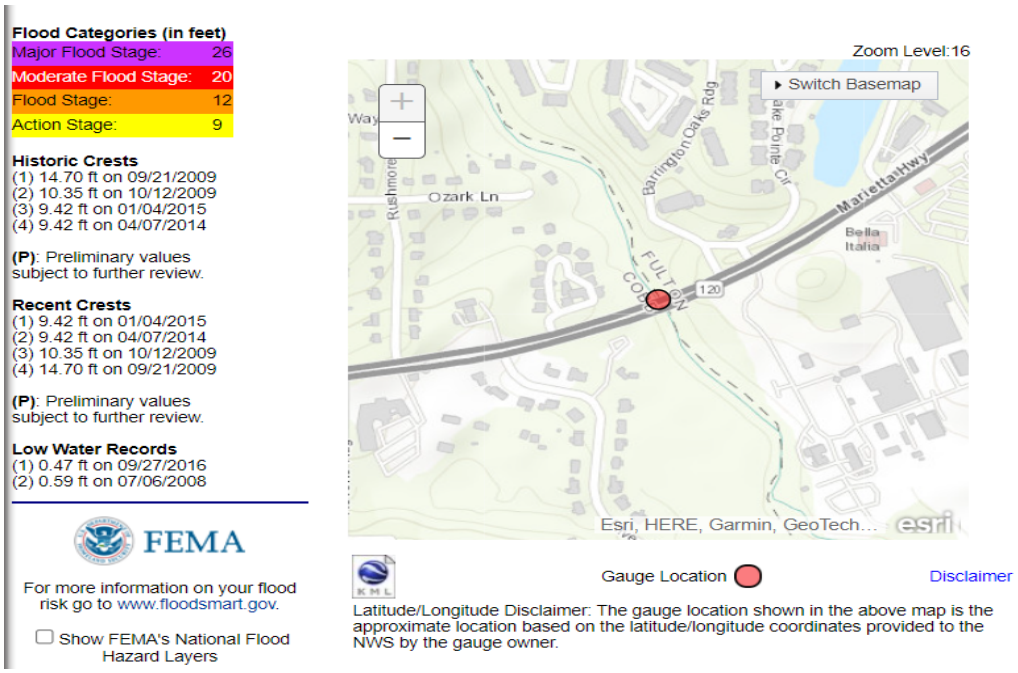


Illustration 13: Chattahoochee River Below Morgan Falls Dam TW, City of Sandy Springs

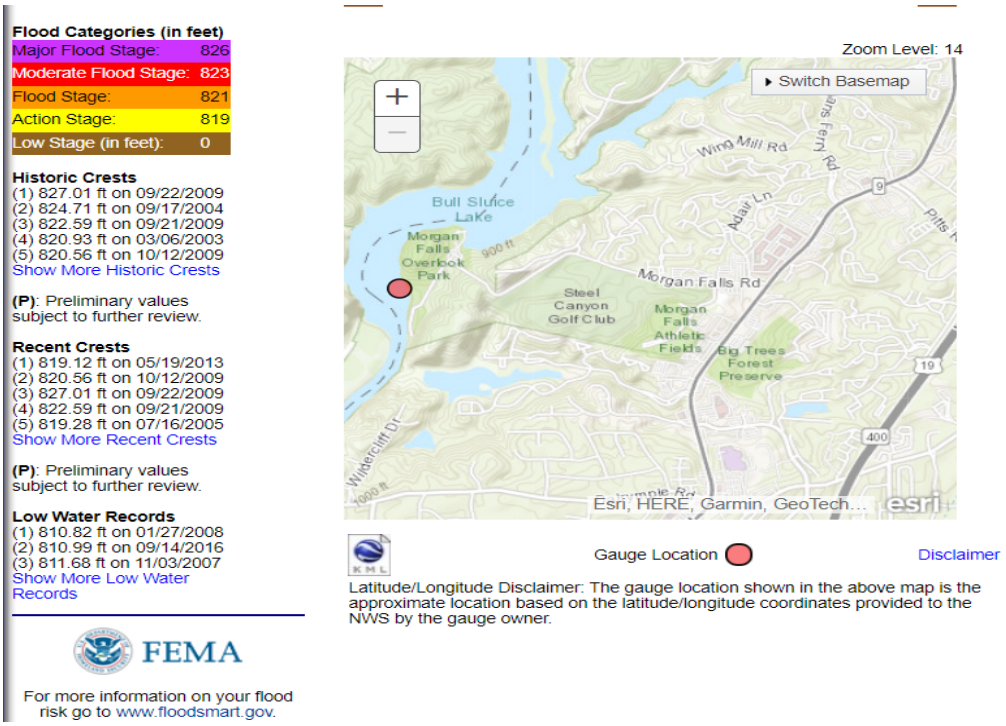


Illustration 14: Chattahoochee River Near Vinings/Sandy Springs, City of Sandy Springs

Illustration 15: Nancy Creek at Buckhead, City of Atlanta

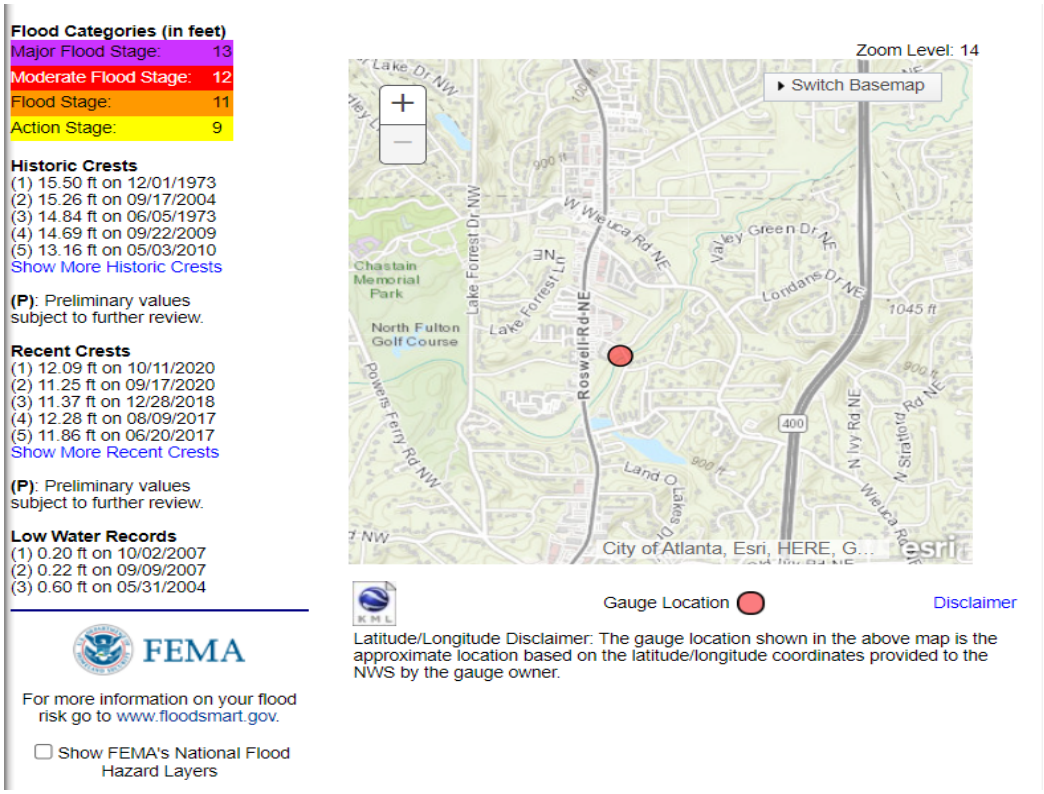


Illustration 16: Chattahoochee River at Vinings, City of Atlanta

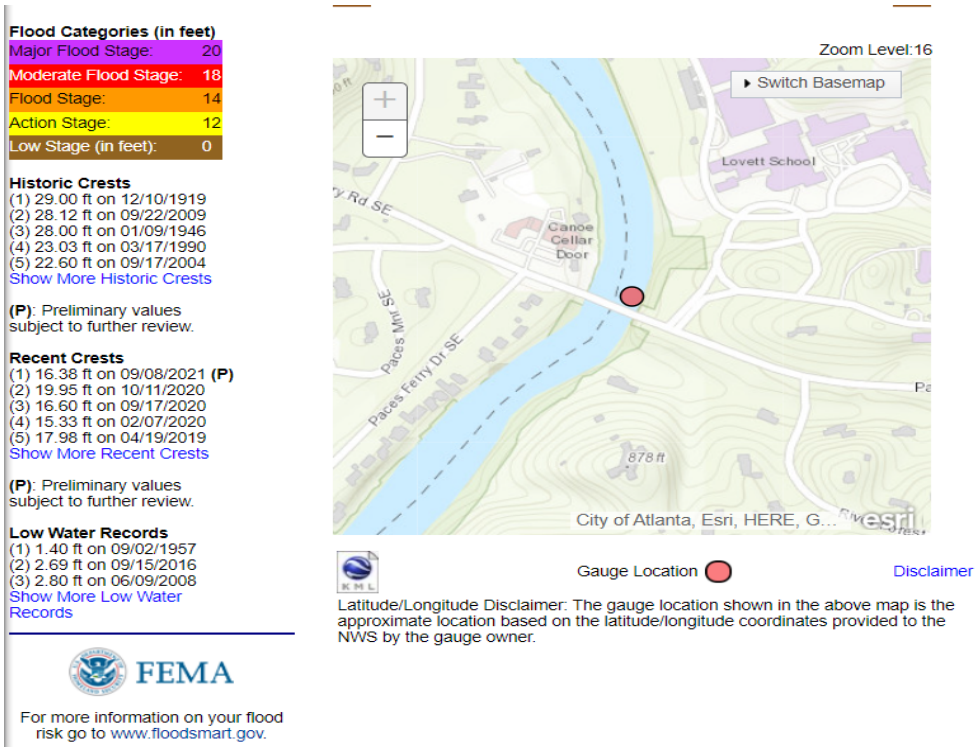


Illustration 17: Nancy Creek Near Atlanta, City of Atlanta

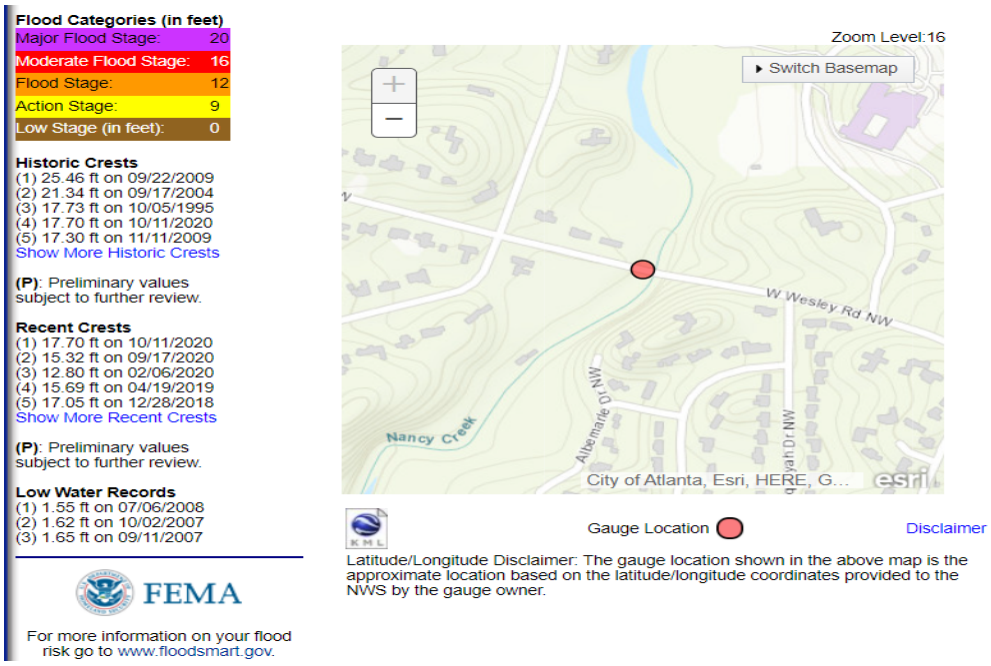


Illustration 18: Chattahoochee River at Atlanta South Cobb Drive, City of Atlanta

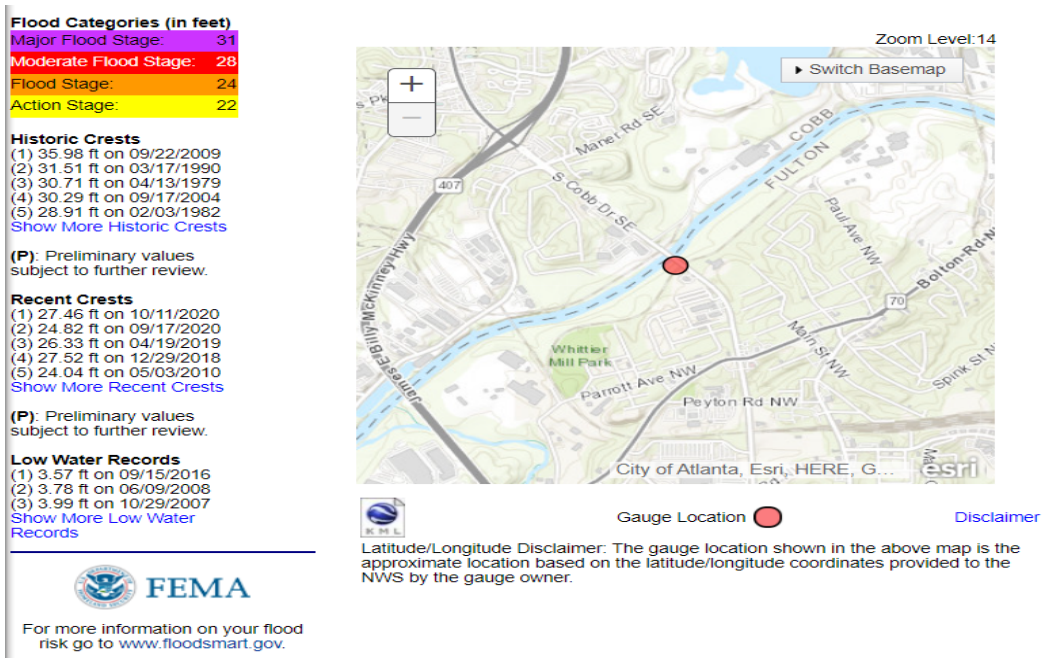


Illustration 19: Woodall Creek Near Atlanta, City of Atlanta

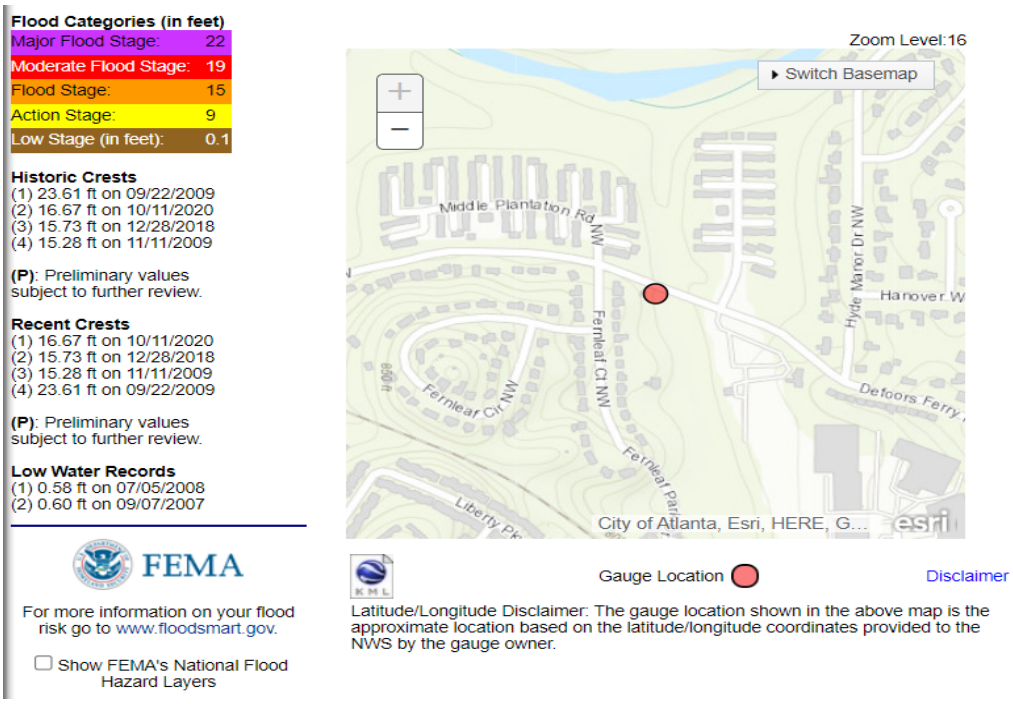


Illustration 20: Peachtree at Atlanta, City of Atlanta

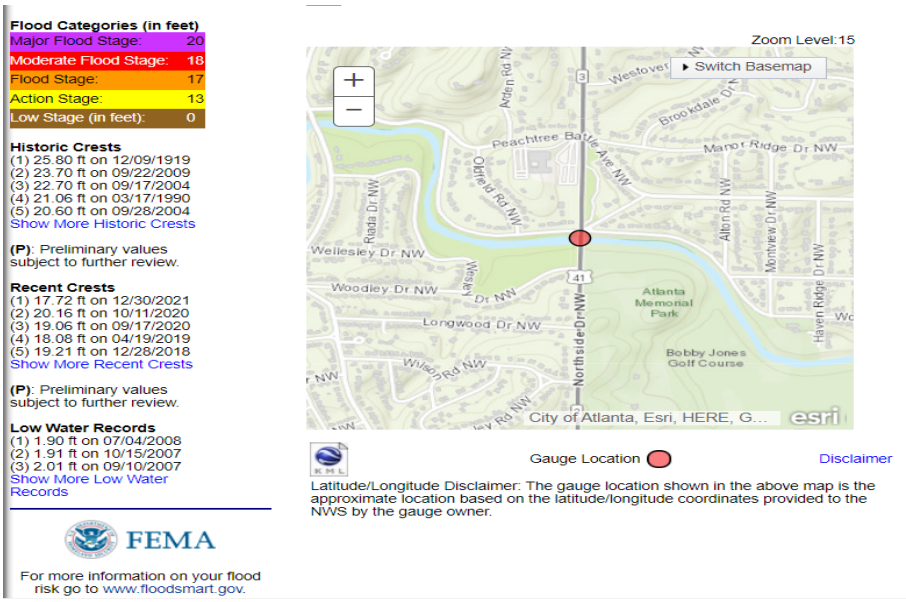


Illustration 21: Proctor Creek Near Atlanta, City of Atlanta

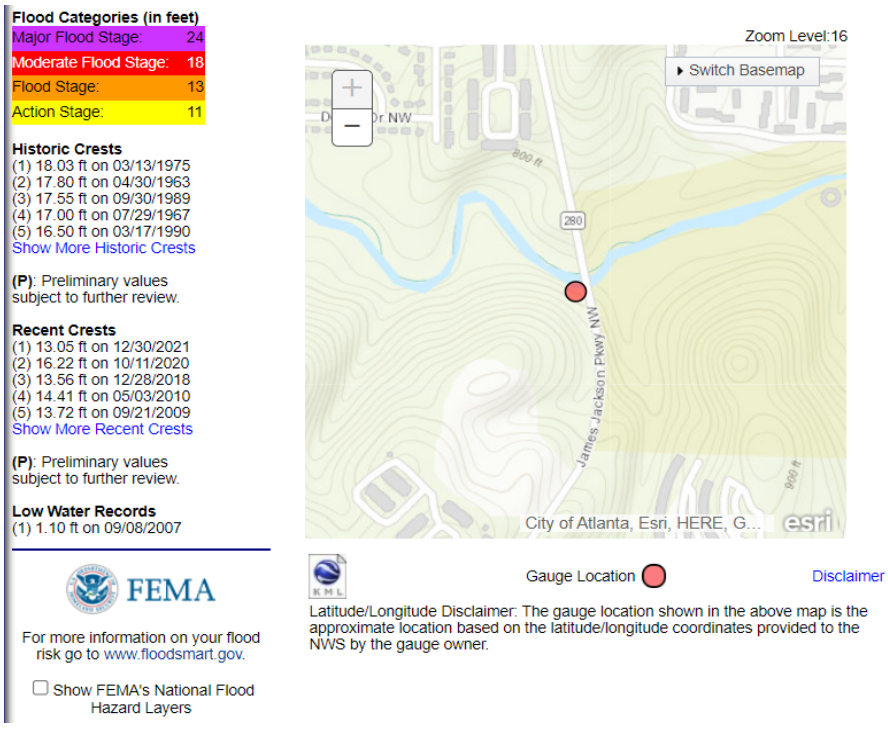


Illustration 22: South River Near East Point, City of East Point

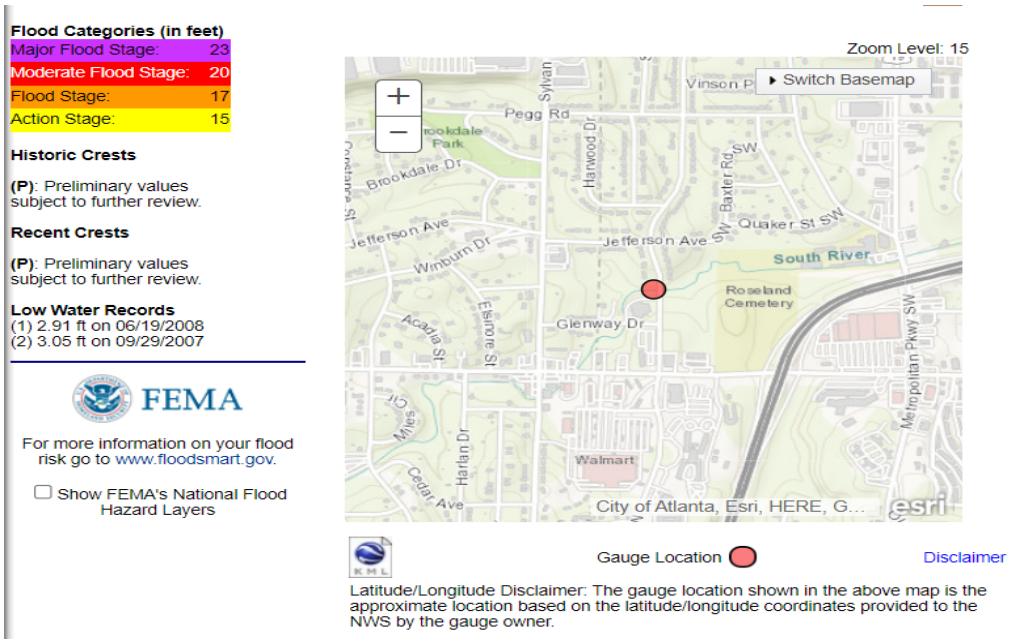


Illustration 23: South River Near Hapeville, City of Hapeville

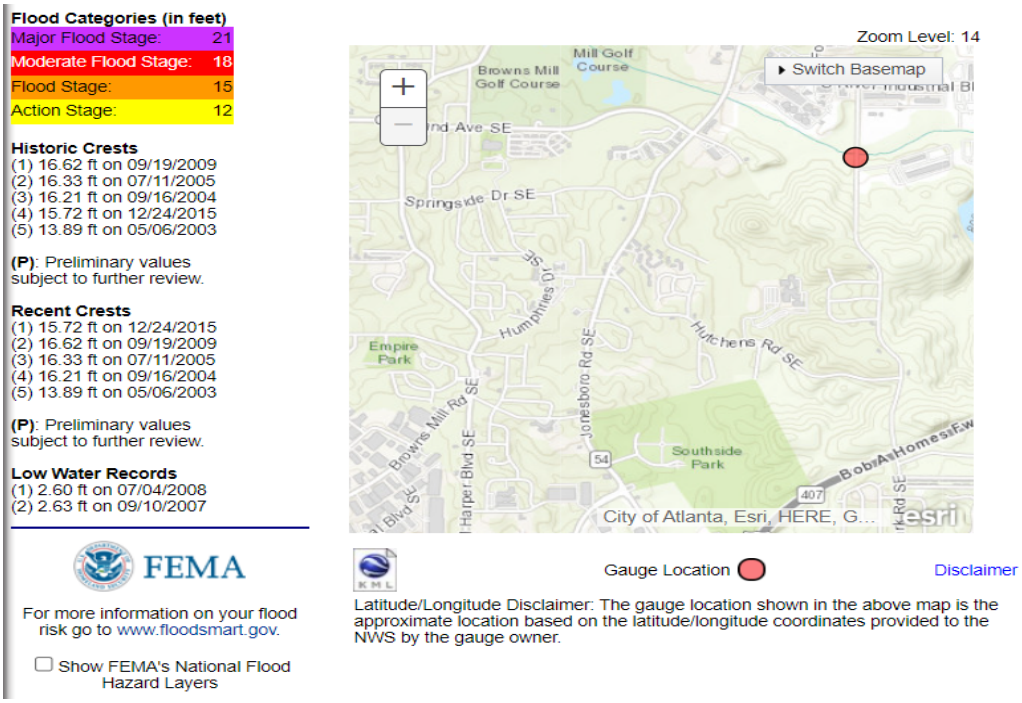
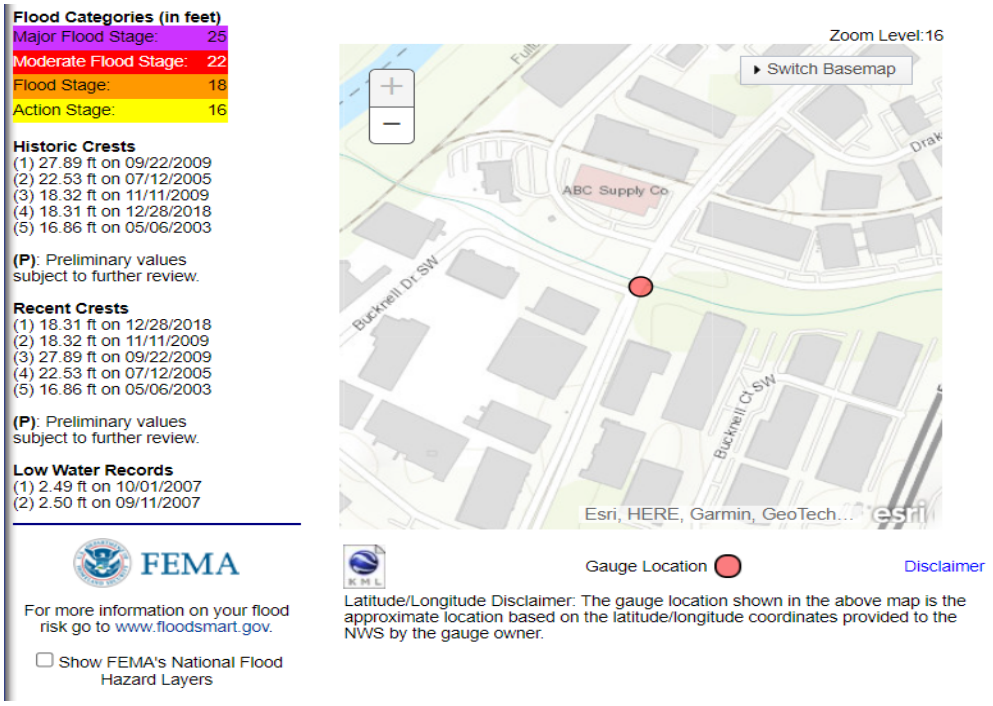


Illustration 24: Utoy Creek Near West Atlanta, City of Atlanta



The following river gauges have been discontinued:

Illustration 25: Proctor Creek Tributary Near Atlanta, City of Atlanta

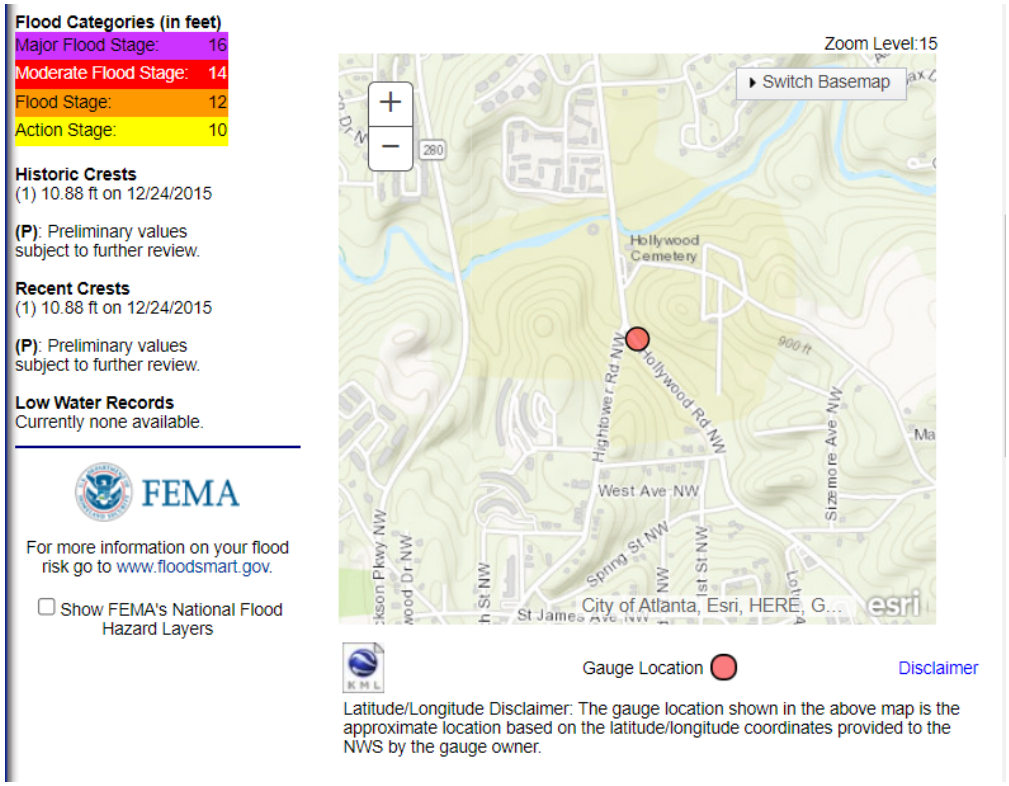
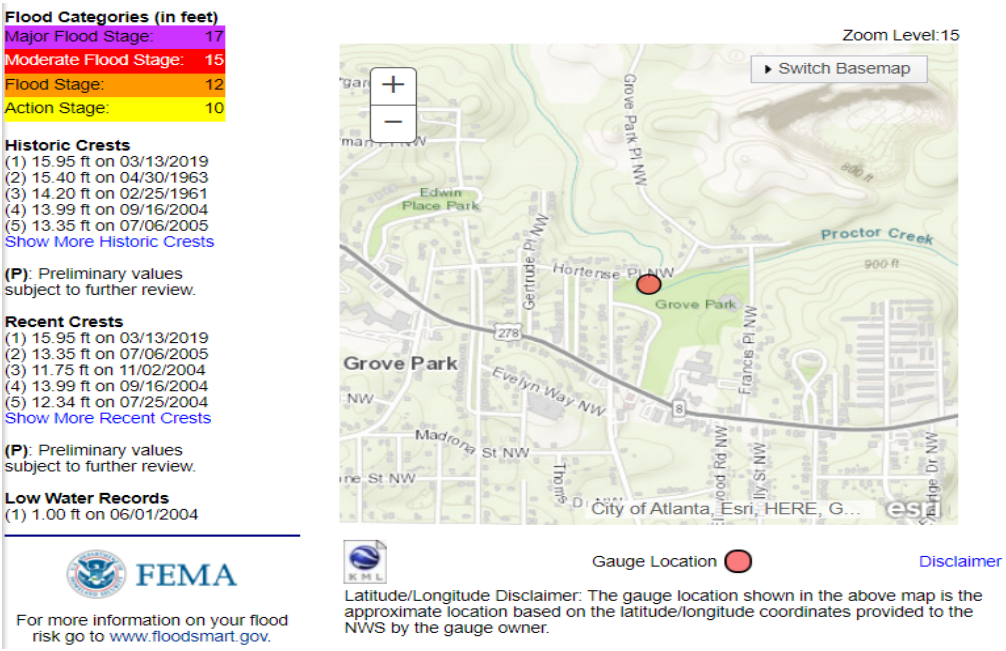


Illustration 26: Proctor Creek Near Atlanta, City of Atlanta



College Park, Johns Creek, Milton, Mountain Park, Chattahoochee Hills, Fairburn, Union City, South Fulton and Palmetto do not have any river gauges within the jurisdiction's limits. The following illustrations show the flood depths for each jurisdiction not containing river gauges as well as Fulton County as a whole:

Illustration 27: Flood Depths – Union City

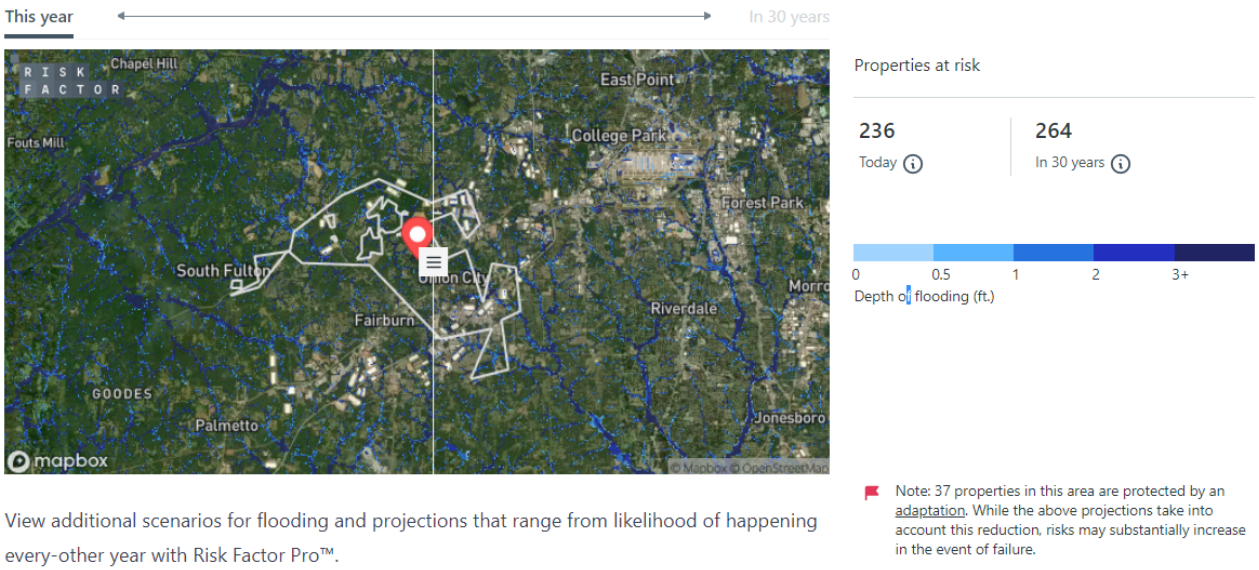
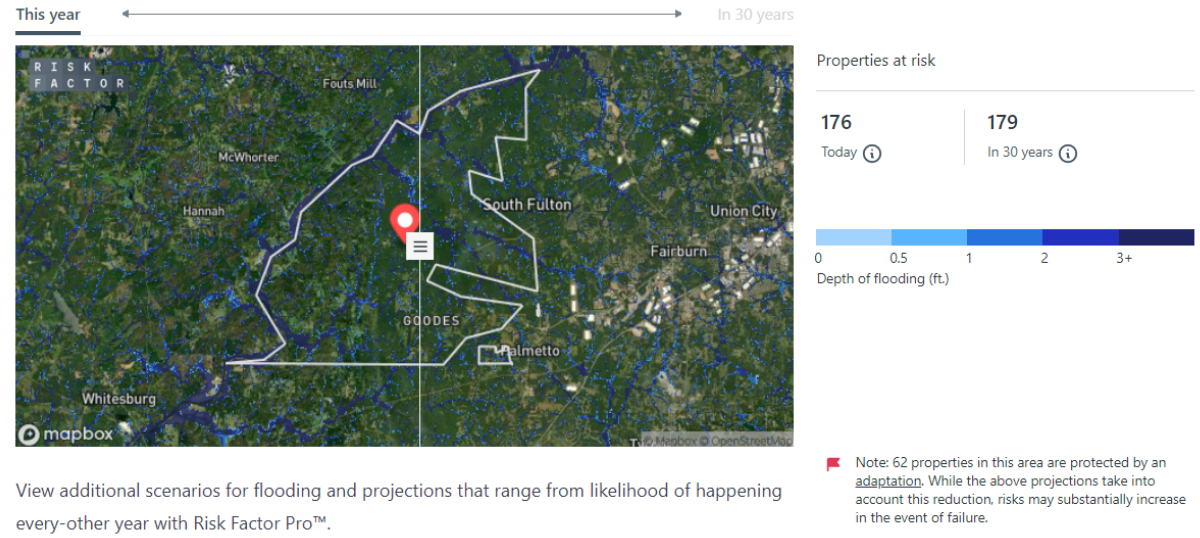
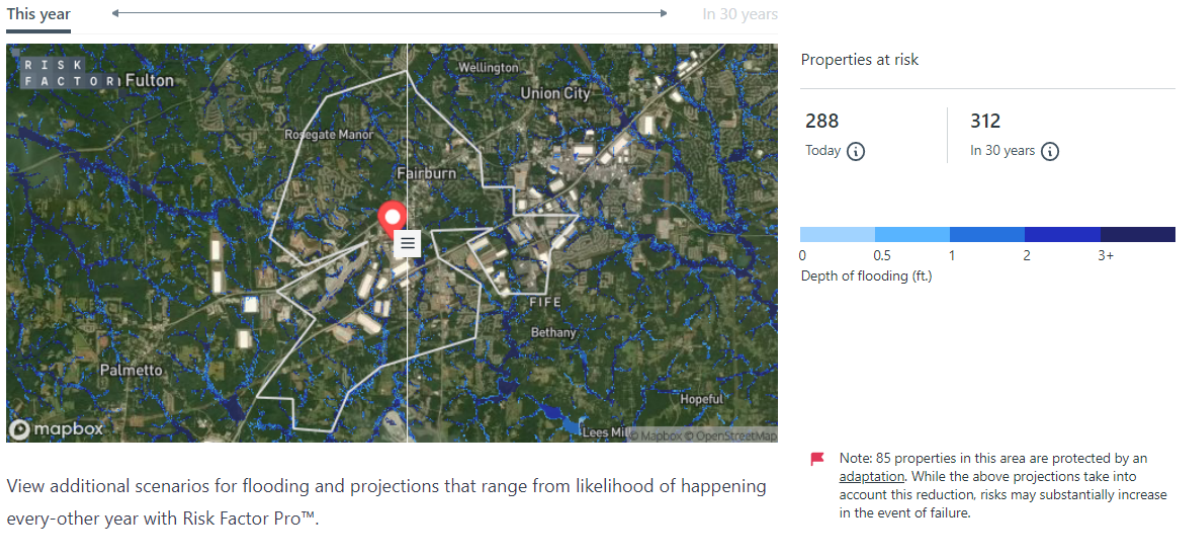


Illustration 28: Flood Depths – Chattahoochee Hills



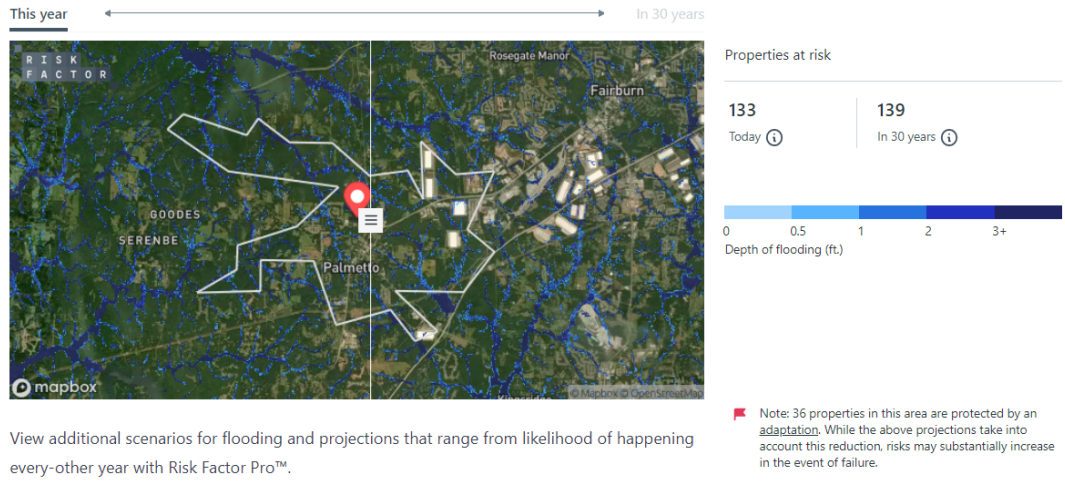
View additional scenarios for flooding and projections that range from likelihood of happening every-other year with Risk Factor Pro™.

Illustration 29: Flood Depths – Fairburn



View additional scenarios for flooding and projections that range from likelihood of happening every-other year with Risk Factor Pro™.

Illustration 30: Flood Depths – Palmetto



View additional scenarios for flooding and projections that range from likelihood of happening every-other year with Risk Factor Pro™.

Illustration 31: Flood Depths – Fulton County

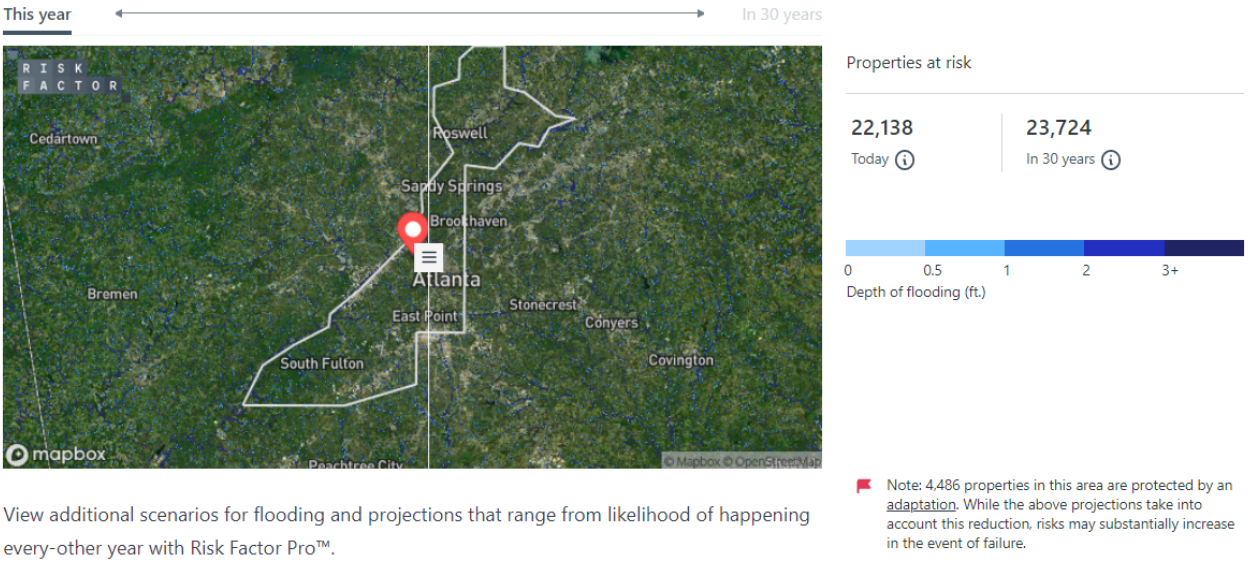


Illustration 32: Flood Depths – College Park

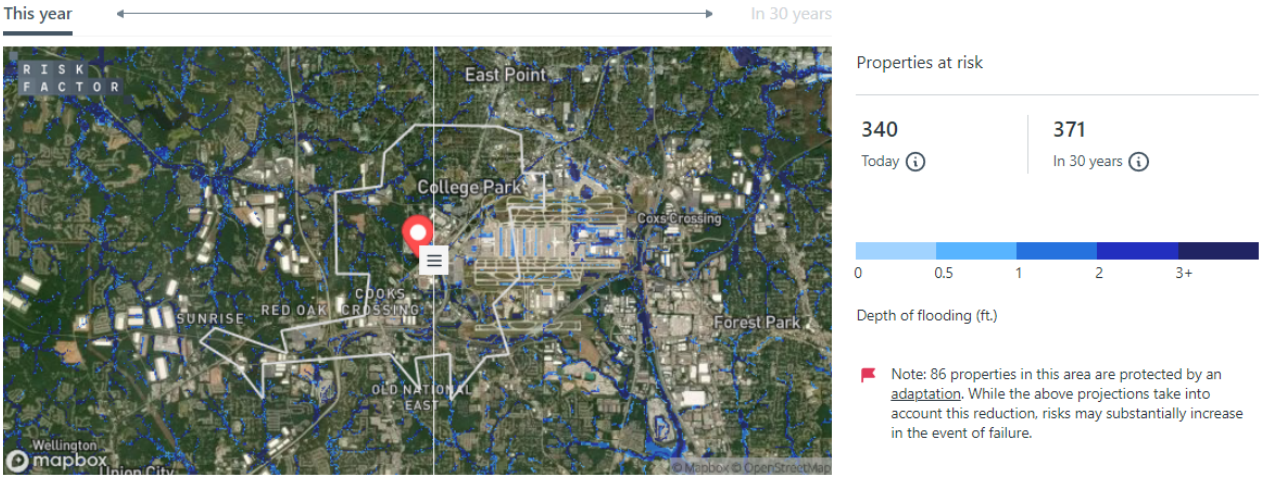


Illustration 33: Flood Depths – Johns Creek

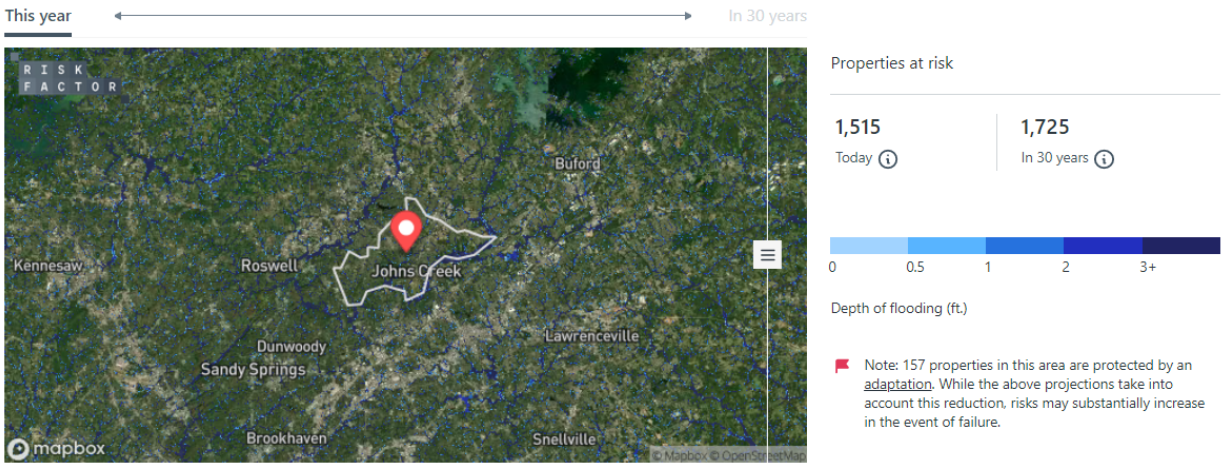


Illustration 34: Flood Depths – Milton

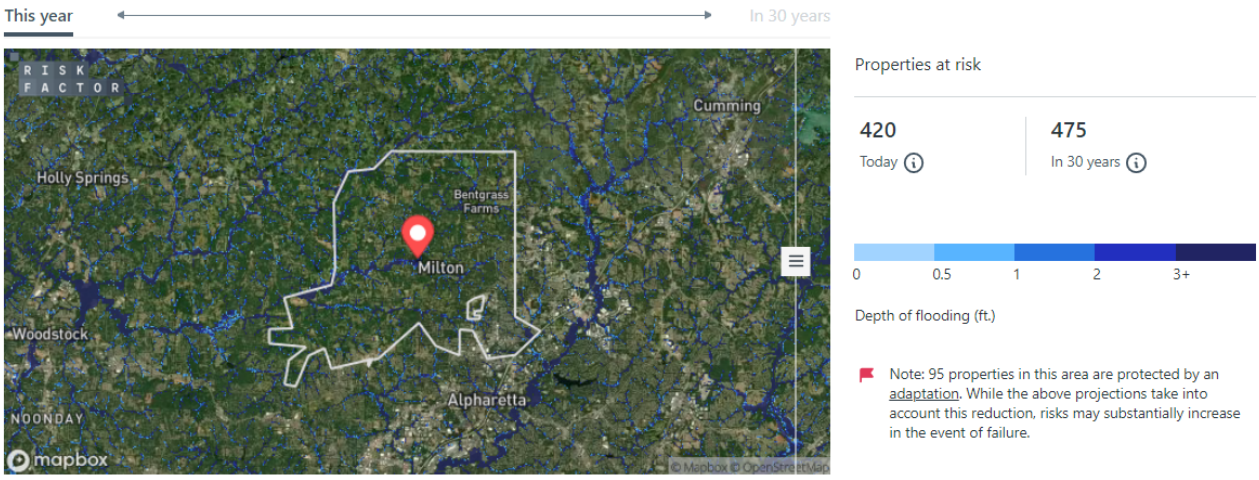


Illustration 35: Flood Depths – Mountain Park

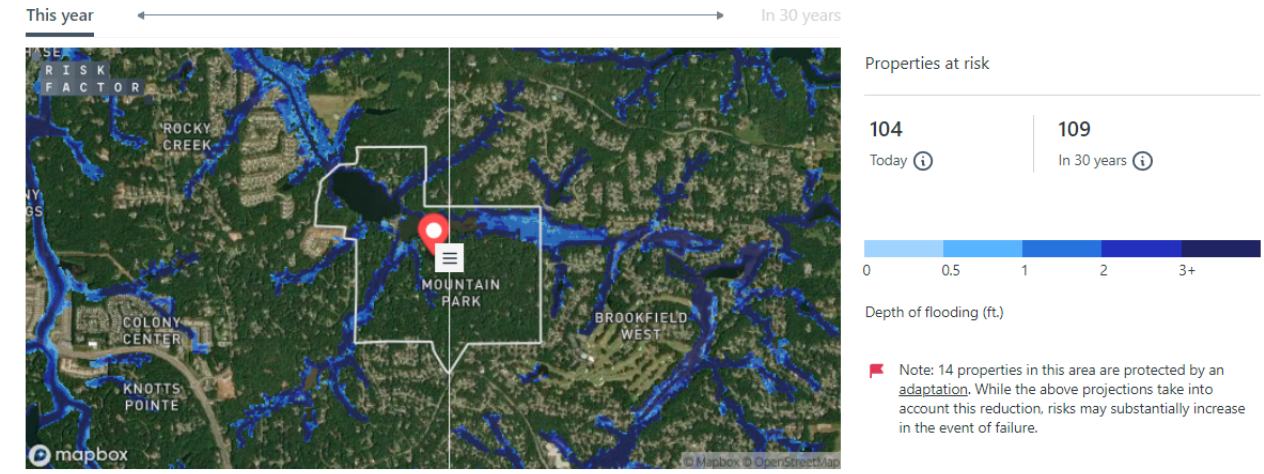
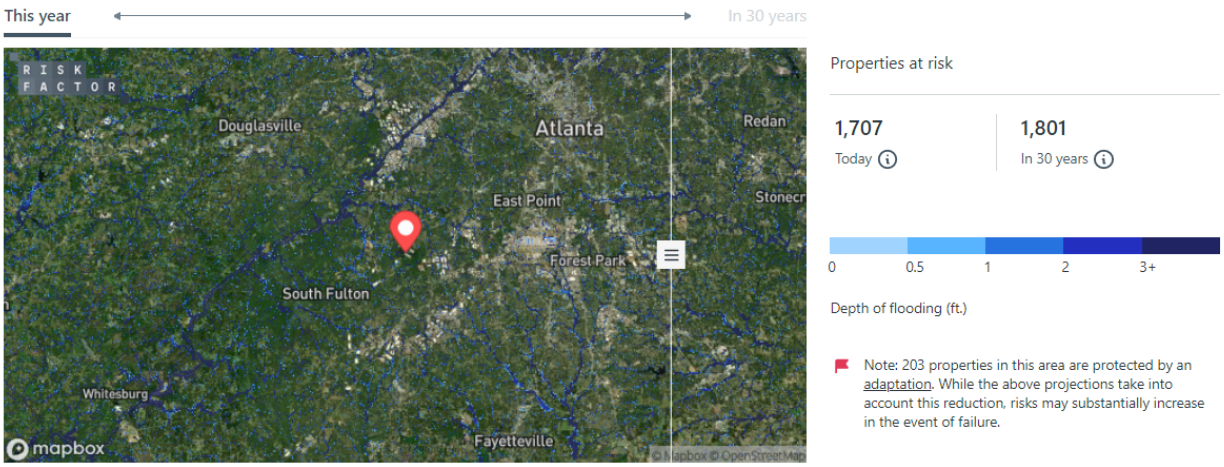


Illustration 36: Flood Depths – South Fulton



The following details the NOAA/NCEI reports of recent and historical flooding events in Fulton County.

April 5, 2017, Atlanta and Bolton, Flash Flooding – Another strong short wave, the second in the three days, rotated through a large and deeper upper-level trough over the eastern U.S. A deep surface low and strong cold front moved through the state combining with moderate instability and strong low-level shear to produce another round of widespread severe weather across north and central Georgia, including tornadoes. A local news station broadcast a video of water flowing over the roadway near the intersection or Shallowford Rd and Sherbrooke Drive NE. A USGS stream gage on Peachtree Creek at Northside Drive in Atlanta quickly reached moderate flood stage of 18 feet. The creek crested at 18.24 feet at 3:00 PM EST. A parking lot near the corner of Peachtree Road and Fairhaven Circle experienced flooding. Woodward Way was reportedly covered with a couple feet of water and approached the foundation of several unelevated homes. Portions of Hanover West Drive and backyards of some residences on Peachtree Battle Avenue were inundated with a few feet of water. Local news media reported that five City of Atlanta employees were rescued from the roofs of their vehicles after the work trucks, carrying road barricades, were overwhelmed by the flood waters. The rising water was from nearby Peachtree Creek near the intersection of Peachtree Battle Avenue and Woodward Way. Also, a USGS stream gage on Nancy Creek at West Wesley Road in Atlanta quickly reached flood stage of 12 feet. The creek crested at 12.30 feet at 6:30 PM EST. Minor flooding of residential yards occurred along the creek upstream and downstream from the gage, including Nancy Creek Road and Ridge Valley Court. Portions of the Westminster Schools athletic fields upstream from the gage also flooded. There were no injuries or deaths associated with the event, and no damage was reported.

June 20, 2017, Atlanta, Flash Flooding – A stalled frontal boundary and anomalously moist air mass produced high rainfall amounts for several days, beginning June19th. Multiple waves of precipitation including many training storms dropped high rainfall amounts over the metro Atlanta area and along the 1-20. Rainfall amounts were generally 4-6 inches, with isolated amounts approaching 8 inches. Flash flooding resulted, especially within the Nancy Creek, North Fork Peachtree Creek, and Yellow River basins.

The Public and Broadcast Media reported flash flooding that resulted from heavy rain over the area. Flash Flooding inundated the Buford Connector near Monroe Drive and Armour Drive. Ottley Drive under the Marta service bridge was also flooded and impassable, leaving cars stranded. Radar estimates indicate that rainfall amounts of 4 to 5 inches occurred over the area. There were no injuries or deaths associated with the event, and no damage was reported.

August 9, 2017, Sandy Springs, Flash Flooding – Scattered thunderstorms along a stationary front produced isolated reports of flash flooding and wind damage across portions of north and central Georgia. Broadcast Media reported the Windsor Parkways Bridge over Nancy Creek had several feet of water over it. The Nancy Creek Gage at Buckhead (NCKG1) and at Chamblee went into minor flood stage at 7:45am EST and 6:30am EST, respectively. Emergency Manager reported a property on Northside Drive became inundated with flood waters from the adjacent Nancy Creek. The water was rapidly moving across the front yard and driveways, cutting off access to the property. There were no injuries or deaths associated with the event, and no damage was reported.

July 13, 2018, North Roswell, Flash Flooding – A very moist and moderately unstable atmosphere combined with strong daytime heating to produce isolated severe thunderstorms each afternoon into the evening hours. The public reported minor street flooding on Crabapple Road in Roswell. Fulton 911 reported Houze Road and Highway 9 at Oxbo Road were closed due to flooding. Radar estimates indicate that between 3 to 4 inches of rain fell in the Roswell area, with locally higher amounts. There were no injuries or deaths associated with the event, and no damage was reported.

July 11 - 12, 2019, Alpharetta and Newtown, Flash Flooding – Deep, rich moisture streamed northward into the region as a tropical low developed over the Gulf of Mexico. This moist and moderately unstable

atmosphere, combined with surface heating resulted in widespread afternoon and evening showers and thunderstorms and an isolated report of severe weather. Rainfall amounts of 5-6 inches impacted the north Atlanta metro area, producing isolated flash flooding. Quickly accumulating rainfall produced flash flooding of Foe Killer Creek. The creek rose out of its banks, flooding basements and backyards along Maple Lane in Alpharetta. Radar estimates indicate that 5-6 inches of rainfall occurred over a localized area, with potentially higher amounts. The USGS river gage on Big Creek at Kimball Bridge Road (APHG1) rose above Minor Flood stage because of heavy rainfall and excessive runoff in the area. The river rose above flood stage at approximately 1:00 AM EDT and fell below flood stage at 12:55 AM EDT the following day. Big Creek crest at 9.44 feet at 11:30 AM EDT on July 12, 2019. There were no injuries or deaths associated with the event, and damages were reported at $15,000.

August 5, 2019, Atlanta, Flash Flooding – A persistent, weak upper-level trough and stationary frontal boundary over the region combined with strong afternoon heating to produce isolated strong to severe thunderstorms over parts of north Georgia. Heavy rainfall produced isolated flooding in Atlanta. A social media post reported street flooding under the overpass at Marietta Street NW and North Avenue NW, near Georgia Tech. Radar estimates indicate that downpours produced rainfall amounts of 1.5 to 2 inches over a short period of time, causing the flooded roadway. There were no injuries or deaths associated with the event, and no damage was reported.

February 6, 2020, Birmingham and Roswell, Flash Flooding – A line of thunderstorms ahead of a strong cold front moved into northwest Georgia in the pre-dawn hours and swept across north and central Georgia through the morning into the afternoon producing numerous reports of damaging thunderstorm winds and an isolated tornado. Storms along the front also produced heavy rainfall, ranging from 1.5 to 4 inches, with higher amounts up to 6 inches, particularly over north Georgia. These rainfall amounts produced flash flooding over north and central Georgia. The Emergency Manager reported one lane closed on Birmingham Highway near Birmingham Road due to flooding of a nearby creek. Radar estimates indicate that 3 to 5 inches of rain have occurred over the area, falling on already wet soils and resulting in flash flooding. Also, the Emergency Manager reported Longstreet and Lively Roads closed due to flooding of Chicken Creek Tributary and Chicken Creek, respectively. Radar estimates indicate that 3 to 5 inches of rain occurred over the area, falling on already wet soils and resulting in flash flooding. The Emergency Manager reported Westbrook Road was closed due to flooding of a Chicken Creek tributary. Radar estimates indicate that 3 to 5 inches of rain occurred over the area, falling on already wet soils and resulting in flash flooding. In Roswell, the Emergency Manager reported Willeo Road closed between the intersection with Azalea Drive and the Chattahoochee Nature Center due to flooding of the Chattahoochee River. Radar estimates indicate that 3 to 4 inches of rain occurred over the area in a short period of time, falling on wet soils and resulting in flash flooding. There were no injuries or deaths associated with the event, and no damage was reported.

August 3, 2020, Sandy Springs, Flash Flooding – Widespread thunderstorms along and ahead of a stationary front across north and central Georgia resulted in scattered severe thunderstorms with numerous reports of damaging thunderstorm winds and several reports of large hail. Localized flash flooding occurred in Fulton and DeKalb counties following a quick 3 to 5 inches of rain. The Emergency Manager reported a washed-out driveway bridge along Valley Road NW due to a rapidly rising creek. The road was covered with floodwater at multiple points. Radar estimates indicate that 3 to 4 inches of rain occurred in the area in a short period of time. Also, water was reported over the roadway near the intersection of Roswell Road and Lakemoore Road. Additionally, water from Nancy Creek inundated yards of homes off Rickenbaker Drive. There were no injuries or deaths associated with the event, and no damage was reported.

September 17, 2020, Sandy Springs and Atlanta, Flash Flooding – A weakening Tropical Storm Sally moved into Georgia on September 16th, spreading heavy rainfall amounts and producing damaging winds in north and central Georgia. Rainfall amounts of 2 to 8 inches occurred, with the axis of heaviest rainfall extending from near Columbus to Macon, to Augusta. The highest winds were observed in the metro Atlanta area as Sally's convective bands moved through late on September 16th. The Emergency

Manager reported flooding near the intersection of Windsor Parkway and Northland Drive due to high water through Nancy Creek. Additionally, a river gage located on Nancy Creek at Rickenbacker Drive NE (NCKG1) rose above flood stage because of the flooding, and nearby residents reported water approaching foundations of homes along the creek. In Atlanta, the Emergency Manager reported that much of the Peachtree Battle Area - Atlanta Memorial Park along Peachtree Creek is underwater due to heavy rain and flooding of the creek. The nearby USGS river gage on Peachtree Creek (AANG1) crested at 19.06 feet in moderate flood stage. Radar estimates indicate that 4 to 5 inches of rain occurred over the area, causing the flash flooding. There were no injuries or deaths associated with the event, and no damage was reported.

October 10, 2020, Atlanta, Ft. McPherson, and Adamsville, Flash Flooding – During the afternoon and evening of October 10th, as the remnants of Hurricane Delta passed northwest of Georgia, moisture from the Gulf of Mexico spread across the area. Several weak tornadoes occurred in north and central Georgia in addition to pockets of heavy rainfall and flooding across the Atlanta metropolitan area and portions of northeast Georgia. The Emergency Manager reported water rescues due to flash flooding at the intersection of Joseph E. Boone Boulevard and Vine Street. Radar estimates indicate that 3 to 5 inches of rain occurred in the area, resulting in the flash flooding. Also, the Emergency Manager reported water rescues due to flash flooding at Humphries Street SW, Cooper Street SW, McDaniel Street, SW, Smith Street, and at the intersection of University Avenue and Pryor Street SW. Radar estimates indicate that 3 to 5 inches of rain occurred in the area, resulting in the flash flooding. The Emergency Manager reported water rescues due to flash flooding at the intersection of Delowe Drive and Arthur B. Langford Parkway. Radar estimates indicate that 3 to 5 inches of rain occurred in the area, resulting in the flash flooding. The Emergency Manager also reported a water rescue due to flash flooding in the 200 block of North Avenue NW. Radar estimates indicate that 3 to 5 inches of rain occurred in the area, resulting in the flash flooding. The Emergency Manager reported water rescues due to flood water from Proctor Creek at the intersection of Troy Street NW and Joseph E Boone Drive NW. Radar estimates indicate that 3 to 5 inches of rain occurred in the area, resulting in the flash flooding. Also, the Emergency Manager reported water rescues due to flash flooding in the 2200 block of Verbana Street. Radar estimates indicate that 3 to 5 inches of rain occurred in the area, resulting in the flash flooding. There were no injuries or deaths associated with the event, and no damage was reported.

October 24, 2020, Atlanta and Adamsville, Flash Flooding – A generally light-rain wedge set up for the state of Georgia causing localized flash flooding in the city of Atlanta as rain focused and trained over the area. Rainfall amounts of 2.5 to 5 inches were common in the Cobb, Fulton, DeKalb, and Gwinnett counties, with Fulton reporting water entering buildings and a couple water rescues. The Emergency Manager reported several inches of water inundated apartment buildings on Center Street NW, leading to evacuations. Radar estimates indicate that 3 to 5 inches of rain fell over the area, causing the flash flooding. The Emergency Manager also reported water rescues of two vehicles on Verbena Street. Radar estimates indicate that 3 to 5 inches of rain fell over the area, causing the flash flooding. Finally, the Emergency Manager reported a few inches of water had inundated three buildings just east of Interstate 285 in the Ivan Hill area. Radar estimates indicate that 3 to 5 inches of rain fell over the area, causing the flash flooding. There were no injuries or deaths associated with the event, and damages were reported at $15,000.

Note: *Three* ***major*** *flood events occurred in 2005 (1) and 2009 (2). The following NOAA/NCEI narratives provide the details pertaining to these events.*

July 11, 2005, Fulton (Zone/ Countywide), Flash Flooding/Flooding – Heavy rain, associated with the remnants of Hurricane Dennis (moving north-northwest through western Alabama and eastern Mississippi), affected nearly all north and central Georgia from the afternoon of Sunday, July 10th through the morning hours of Monday, July 11th. Initially, rain was widespread light to moderate. Rainfall amounts between 4:00 PM and 8:00 PM averaged one to two inches across most of the area. After 8:00 PM on the 10th, and especially after midnight on the 11th, the rain became increasingly organized in an approximately

50-mile wide south-to-north oriented tropical feeder band that extended from near Americus on the southern end to near Chatsworth on the north end. Repeated showers with torrential rainfall tracked over the same areas for hours and hours between 8:00 PM EDT on the 10th and 10:00 AM EDT on the 11th. Areas under the feeder band experienced incredible rainfall amounts. Average rainfall amounts within the feeder band were six to eight inches for the 12-hour period, but some 10-12-inch rainfall amounts were observed across much of Fayette, eastern Coweta, western Fulton, eastern Douglas, and southern Fulton counties. The heavy rain resulted in widespread flooding, river flooding, and some flash flooding. Many rivers and creeks across the area rose above flood stage, and in several cases to record or near record flood stages observed only during previous tropical storm/hurricane events, namely Tropical Storm Alberto in July 1994, and Hurricanes Ivan and Jeanne in September 2004. Portions of Cascade Road near Interstate-285 were flooded and impassable for several hours during the night. In addition, a nearby golf course was also submerged by flood waters during the event.

Also, the National Weather Service River gages recorded significant flooding on both the main branch of Peachtree Creek in north Atlanta and Proctor Creek in southwest Atlanta. Peachtree Creek reached its flood stage of 17.0 feet at 245 am EDT, crested at 19.1 feet at 600 am EDT, then fell below flood stage at 1238 pm EDT. Flooding of Woodward Way and the Bobby Jones Golf Course along with some homes in the adjacent areas occur at this stage. Proctor Creek rose above its flood stage of 11.0 feet at 358 am EDT, crested at 12.26 feet at 430 am EDT, then fell below its flood stage at 934 am EDT. Minor flooding of adjacent roads and homes occurs when this stage is reached. In addition, a dam breakage occurred in North Fulton County causing areas downstream to be flooded. There were no injuries or deaths associated with the event, and damages were reported at $10,000.

September 16-19,2009, Atlanta and Ocee, Flash Flooding/Flooding – A broad cutoff upper low, which had been located over central Texas, was beginning to move very slowly east by the 16th. This upper low, in combination with unusually deep tropical moisture across the region for mid-September, began an extensive period of showers and thunderstorms with very heavy rain. The deep tropical moisture was largely the result of a persistent 850 mb flow from the Gulf of Mexico. The pattern changed very little for nearly a week as the upper low drifted very slowly east, completely cutoff from the main belt of westerlies, which were located well to the north in southern Canada. The first flash flood event of an extended period of historical and record flooding across north and central Georgia, began on the 15th in Gilmer County. A few storms became strong to marginally severe as well. A historical, record, and catastrophic flood event began to unfold during this period, mostly in the west central Georgia area, including the western and northwestern suburbs of Atlanta. Major flooding was noted in many other areas of north and central Georgia, including the eastern suburbs of Atlanta, northwest Georgia, and parts of central Georgia. The culprit was a very stagnant upper atmospheric pattern featuring a weak upper low that developed in early September across south Texas and slowly migrated east-northeast through September 22nd, until a more significant upper trough dropping south into the southern plains finally moved the pesky upper low northeast of Georgia. In addition, an unusually deep tropical flow was noted throughout this period. Precipitable water values exceeded 2.0 inches across the area during this time, resulting in extremely efficient rain producing cells. Persistent heavy rain showers and thunderstorms began to plague the area on the 16th and persisted daily across parts of north and central Georgia. *Flooding:* The repeated rainfall across the same areas primed the stage for the record, historical, and catastrophic flood event that unfolded from the 21st into the 22nd. On the 19th, the bulk of the flood and flash flooding was confined to the western and northern suburbs of Atlanta, especially early on the 19th, when a good 6-hour period of heavy showers and thunderstorms trained across south Fulton, Cobb, Cherokee, Forsyth, DeKalb, and Gwinnett counties, dumping five to seven inches of rain in these areas. Flooding along the upper portion of Peachtree Creek was observed during the evening of September 16th from persistent heavy rain and thunderstorms during the afternoon and evening hours. The lower portion of Peachtree Creek, where the USGS gage is located, did not flood during this event. Damage was confined to minor debris removal in areas adjacent to the creek. The USGS stream gage located on Big Creek at Kimball Bridge Road, near Alpharetta, reached flood stage of 7.0 feet at 430 pm EDT. The creek crested at 7.17 feet at 530 pm EDT, then fell below flood stage at 722 pm EDT. Damage was confined to minor debris removal adjacent

to the creek, especially along the Alpharetta Greenway. Also, Fulton County Emergency Management personnel reported that general flooding continued for another hour or so after late morning and early afternoon flash flooding subsided. The damage was generally confined to the southern and central portion of the county. An apartment complex on Cleveland Avenue in the Hapeville area was flooded, affecting the homes of 17 people. The homes of 42 people across the county were affected by the flooding. Additional monetary damage was primarily in the form of flooded apartments. There were no injuries or deaths associated with the event, and property damages were reported at $52,000.

September 21,2009, Sandy Springs and Rico, Flash Flooding/Flood – A historical, record, and catastrophic flood event unfolded during this period, mostly in the west central Georgia area, including the western and northwestern suburbs of Atlanta. Major flooding was noted in many other areas of north and central Georgia, including the eastern suburbs of Atlanta, northwest Georgia, and parts of central Georgia. The culprit was a very stagnant upper atmospheric pattern featuring a weak upper low that developed in early September across south Texas and slowly migrated east-northeast through September 22nd, and until a more significant upper trough dropping south into the southern plains finally moved the pesky upper low northeast of Georgia. In addition, an unusually deep tropical flow was noted throughout this period. Precipitable water values exceeded 2.0 inches across the area during much of this period, resulting in extremely efficient rain producing cells. Persistent heavy rain showers and thunderstorms began to plague the area on the 16th and persisted daily through the 21st across parts of north and central Georgia. However, the catastrophic flooding unfolded when a sea breeze moving northwest merged with existing outflow boundaries and higher terrain across the western suburbs of Atlanta to result in persistent heavy thunderstorms for a period of at least 12 hours that trained across the same counties west of Atlanta, generally affecting Carroll, Douglas, Paulding, and Fulton counties. As the activity progressed across the state, significant flooding unfolded further east, including Fulton County, and the city of Atlanta, DeKalb, and Gwinnett counties. Incredible rainfall amounts of 15 to over 20 inches were noted across parts of Fulton, DeKalb, and Gwinnett. Rainfall amounts of 8 to 12 inches were noted in other spotty areas of northwest, north central, and central Georgia during this period. The excessive rainfall on top of saturated ground resulted in some of the worst flooding ever reported in the Atlanta and north Georgia area. Some of the worst flooding was observed along Sweetwater Creek near the Fulton, Fulton, Douglas County line.

The excessive rainfall on top of saturated ground resulted in some of the worst flooding ever reported in the Atlanta and north Georgia area. Eleven deaths were recorded during the event, mostly vehicle-related deaths at night from washed out bridges and roads because of swollen creeks. Property damages estimated to be at least $0.5 Billion, with hundreds of homes and businesses destroyed by flood waters. Bridges on several state and local highways were washed out and some will take months to even a year to replace. Eighteen counties (Bartow, Carroll, Chattooga, Cherokee, Cobb, Coweta, DeKalb, Douglas, Fulton, Gwinnett, Heard, Newton, Paulding, Rockdale, Stephens, and Walker) received a presidential disaster declaration because of the historic floods. Twenty-one counties were declared eligible for public assistance, including several central Georgia counties that were affected by flash flooding earlier in the period. Hundreds of homes were flooded and destroyed as the waters of Sweetwater Creek rose more than 20 feet above flood level. Many main stem and secondary creeks, streams, and rivers across north and central Georgia, particularly in northwest and west central Georgia, reached record flood levels. Many of these same creeks, streams, and rivers remained in flood for several days. In some cases, record flood levels were recorded. The following is a list of new record flood levels set on several creeks, streams, and rivers in north and west Georgia. Noonday Creek near Woodstock rose to 19.6 feet on the 21st at 5:30 pm EDT. The previous record was 16.30 feet set on July 11, 2005. Nickajack Creek at Mableton reached 19.30 feet on the 22nd at 2:15 am EDT. The previous record was 16.60 feet set on July 11, 2005. The North Fork of Peachtree Creek at Atlanta rose to 18.07 feet on the 21st at 715 pm EDT. The previous record was 17.70 feet set on September 16, 2004. Utoy Creek near Atlanta rose to 27.04 feet on the 22nd at 10:00 am EDT. The previous record was 16.86 feet set on May 6, 2003. The Chattahoochee River at Whitesburg rose to 29.61 feet on the 21st at 7:45 pm EDT. The previous record was 29.11 feet on December 11, 1919. Suwanee Creek at Suwanee rose to 14.30 feet on the 21st at 645 pm EDT. The previous record was 12.04 feet set on October 5, 1996. The Yellow River at Lithonia rose to 25.50 feet on

the 22nd at 5:15 am EDT. The previous record was 17.53 feet set on May 7, 2003. The Yellow River near Conyers below Milstead rose to 22.54 feet on the 22nd at 5:00 pm EDT. The previous record was 16.36 feet set on July 8, 2005. The Chattahoochee River at Franklin rose to 29.98 feet on the 22nd at 5:00 pm EDT. The previous record was 28.40 feet set on December 15, 1919. The Sweetwater Creek at Austell rose to 30.17 feet on the 22nd at 10:00 pm EDT. The previous record was 21.81 feet on July 12, 2005. The following rivers reached flood levels that were within the top five all time levels at these locations. Peachtree Creek in Atlanta rose to 23.89 feet on the 21st at 9:15 pm EDT. The record is 25.80 feet recorded on December 20th, 1919. Nancy Creek in Atlanta reached 14.69 feet on the 21st at 9:30 pm EDT. The record is 15.50 feet on December 1, 1973. The Chattahoochee River at Vinings reached 28.10 feet on the 22nd at 12:00 am EDT. The record is 29.0 feet set on December 10, 1919. The South Fork of the Peachtree Creek reached 15.21 feet on the 22nd at 12:00 am EDT. The record is 29.0 feet set on December 10, 1976. The Chattahoochee River at Campbellton reached 30.55 feet on the 22nd at 3:00 pm EDT. The record is 31.60 feet set on December 10, 1919.

Several USGS stream gages in Fulton County indicated that significant flooding was commencing across Fulton County, especially the central and northern portion of the county. Peachtree Creek at Northside Drive reached its flood stage of 17 feet at 3:53 am EDT. Nancy Creek at Rickenbacker Drive reached its flood stage of 11 feet at 4:44 am EDT. The Chattahoochee River near Vinings and Paces Ferry Road reached its flood stage of 14 feet at 5:01 am EDT. Many homes, apartments, businesses, and roads experienced at least moderate flooding by the end of this period. The heavy rain caused some trees to fall in waterlogged soil, causing minor power outages in the Sandy Springs area. In some cases, all-time recorded levels were recorded. There were no injuries or deaths associated with the event, and $4.50M worth of property damage was reported.

Fulton County Participating Jurisdictions Flood Event Narratives
***Note**: The NOAA/NCEI Storm Events Database did not have any incidences of storm data records related to flood/flash flood for the Cities of Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton from January 1, 1970 – July 31, 2021.*

City of Alpharetta: Based on information obtained from NOAA/NCEI, there were only three incidents of flooding/ flash flooding occurred in the City of Alpharetta between January 1, 1970, and July 31, 2021. NOAA/NCEI details of the events are provided below:

July 3, 2001, Alpharetta, Flooding – A storm spotter reported localized street flooding in the vicinity of Georgia Highway 9 and Hembree Road. There were no injuries or deaths associated with the event, and no damage was reported.

March 21, 2006, Alpharetta, Flash Flooding – A historical, record, and catastrophic flood event unfolded during this period, mostly in the west central Georgia area, including the western and northwestern suburbs of Atlanta. Major flooding was noted in many other areas of north and central Georgia, including the eastern suburbs of Atlanta, northwest. The river gage on Big Creek near Alpharetta recorded a stage of 7.0 feet at 12:07 am EST and had reached 7.1 feet by 12:30 am EST. Flood stage is 7.0 feet. The river crested near 8.2 feet at 5:00 am EST and then fell below flood stage on the 22nd at 1258 pm EST. Minor flooding along Big Creek occurred between Alpharetta and Roswell in North Fulton County. The flooding affected the Alpharetta Greenway and about 200 feet of the Greenway had to be closed. Water also encroached into the park downstream of the gage near Roswell along Georgia Highway 9 and Riverside Road. Only minor debris cleanup was required in this situation. There were no injuries or deaths associated with the event, and $0.25K worth of property damage was reported.

July 11, 2019, Alpharetta, Flash Flooding – Deep, rich moisture streamed northward into the region as a tropical low developed over the Gulf of Mexico. This moist and moderately unstable atmosphere, combined with surface heating resulted in widespread afternoon and evening showers and thunderstorms and an isolated report of severe weather. Rainfall amounts of 5-6 inches impacted the north Atlanta metro area, producing isolated flash flooding. Quickly accumulating rainfall produced flash flooding of Foe Killer

Creek. Quickly accumulating rainfall produced flash flooding of Foe Killer Creek. The creek rose out of its banks, flooding basements and backyards along Maple Lane in Alpharetta. Radar estimates indicate that 5-6 inches of rainfall occurred over a localized area, with potentially higher amounts. There were no injuries or deaths associated with the event, and $15,000 worth of property damage was reported.

City of Atlanta: Based on information obtained from NOAA/NCEI, there were only 32 incidents (including the 2009 flood) of flooding/ flash flooding occurring in the City of Atlanta between January 1, 1970, and July 31, 2021. NOAA/NCEI details of the events are provided below:

July 23, 1997, Atlanta, Flash Flooding – The NOAA Storm Event Database Episode Narrative for this event stated flash flooding associated with the remnants of Hurricane Danny caused several roadways to be closed. Six inches of water on roadways resulted in a multi-car pileup and traffic backups. There were no injuries or deaths associated with the event, and $2,000 worth of property damage was reported.

November 21, 1997, Atlanta, Flash Flooding – Thunderstorms produced sudden heavy rains over the Atlanta metro area. The area mostly affected was from Lakewood Freeway through downtown Atlanta to Northside Drive on the north side of Atlanta. I-75 from Lakewood through downtown was flooded. High water blocked all northbound and two southbound lanes of the I-75/I-85 connector stranding 40 cars. Motorists were forced to climb onto car tops and wait to be rescued by police and firefighters. More than 60 streets were closed due to high water. A foot of standing water was also reported on Scott Blvd and Memorial Drive in Decatur. Peachtree Creek near Peachtree Battle and Northside Drive in Atlanta overflowed its banks and flooded the basements of homes. Rainfall amounts during the evening hours ranged from 2 1/2 to 3 inches across much of the two-county area. There were no injuries or deaths associated with the event, and $45,000 worth of property damage was reported.

July 6, 1999, Atlanta, Flash Flooding – Thunderstorms dumped around 3 inches of rain in 1 to 2 hours over central Fulton County. Some roads became impassable in a few areas, but there was no damage reported. There were no injuries or deaths associated with the event, and no (crop or property) damage was reported.

August 24, 2000, Atlanta, Flooding – The Atlanta Journal and Constitution reported that street flooding was observed during a heavy thunderstorm on Monroe Drive and Piedmont Avenue in Midtown Atlanta. Around 1 inch of rain fell in the area in less than 30 minutes. There were no injuries or deaths associated with the event, and no (crop or property) damage was reported.

September 21, 2000, Atlanta, Flooding – *The Atlanta Journal and Constitution* reported street flooding in downtown Atlanta at the intersection of 14th Street and Northside Drive. There were no injuries or deaths associated with the event, and no (crop or property) damage was reported.

June 3, 2001, Atlanta, Flooding – An amateur radio operator, and the public, reported street flooding in the West End and Buckhead areas. There were reports of cars stalled and over 6 inches of water on roads in low-lying areas. There were no injuries or deaths associated with the event, and no (crop or property) damage was reported.

March 30, 2002, Atlanta, Flooding – The public reported street flooding in the Buckhead community. Rainfall reports in this area indicated that from 2.50 to 3.00 inches of rain had fallen during the afternoon and evening, with 1.50 inches just in the 40-minute period between 900 pm and 940 pm EST. There were no injuries or deaths associated with the event, and no (crop or property) damage was reported.

May 3, 2002, Atlanta, Flooding – An amateur radio operator relayed reports of street flooding in downtown Atlanta and in Buckhead just north of Atlanta on Piedmont and Edgewood Road. There were no injuries or deaths associated with the event, and no (crop or property) damage was reported.

May 4, 2002, Atlanta, Flash Flooding – The Fulton County Emergency Manager reported that minor flooding of Peachtree Creek occurred as heavy rain fell within a period of three to four hours. Woodward Street was rendered impassable for several hours with over 18 inches of water flowing over it. Flooding

was also reported on Hanover West Drive, where water flooded the yards of several homes in low-lying areas near the creek. The Cross Creek Golf Course was flooded as well. Nevertheless, no homes or businesses were flooded and thus no monetary value was assessed because of the flooding. There were no injuries or deaths associated with the event, and no (crop or property) damage was reported.

September 21, 2002, Atlanta, Flooding – The Fulton County Emergency Management Director reported that very heavy rain from a thunderstorm, moving southwest through the Atlanta metropolitan area, resulted in extensive flooding of homes and related property in the southwest Atlanta, East Point, and College Park areas. Rainfall more than 3 inches occurred in one hour or less throughout this area. The flooding was largely caused by clogged up drainage systems, trash, and other debris which collected along a fence which fell as water pooled against it. Several homes were flooded as the result of this collapsed fence which acted much like a collapsed dam and a wall-of-water rushing downstream. Approximately 500 homes were flooded and damaged, with home damage apportioned as $956,000 in Atlanta, $134,435 in College Park, and $130,000 in East Point. Thirty-seven of these homes were declared uninhabitable by the county inspector as water rose to more than 18 inches deep in the homes and above electrical outlets, rendering them unsafe to inhabit. Water rose to eight feet deep in one home and 4-foot-deep water was common. Up to 20 residents had to be rescued by boat. More than 75% of these homes sustained major damage, deemed as more than $3500 damage, with the remaining 25% sustaining minor damage, deemed as more than $2300 but less than $3500 in damage. In addition to the damaged homes, at least a dozen cars were inundated and ruined in the flash flood and more than $90,000 of city and county overtime fees were required for clean-up and repair. The flash flooding also resulted in numerous stranded vehicles on Interstate-75 and Interstate-20 near downtown as well as other roads in the immediate areas surrounding downtown Atlanta. Illustrating the extent of the very heavy rainfall was a rise on Peachtree Creek on the north side of Atlanta from 3 feet to more than 17 feet in just a couple of hours. The Governor of Georgia declared the area as a disaster area and was able to provide $1.2 million dollars of assistance to the residents affected. Also, an amateur radio operator and Fox 5 News of Atlanta reported that there was street flooding and ponding of water in low-lying areas from downtown Atlanta to areas just southwest of downtown Atlanta. There were no injuries or deaths associated with the event, and $1.48 million in property damage was reported.

December 24, 2002, Atlanta, Flash Flooding – The National Weather Service official river gage readings showed a rise of Peachtree Creek at Northside Drive from less than 10 feet to 17.3 feet in a 1-to-2-hour time frame. Flood stage is 17.0 feet. This was the result of rainfall up to 2.5 inches in 6 hours or less. Only minor nuisance flooding of low-lying streets and areas, such as the Cross Creek Golf Course, near the creek was observed, with no monetary damage reported. There were no injuries or deaths associated with the event, and no (crop or property) damage was reported.

May 6, 2003, Atlanta, Flash Flooding – Very heavy rain forced Peachtree Creek in North Atlanta to rise quickly to flood stage. The creek crested at 18.5 feet around 4:00 am EDT, 1.5 feet above the flood stage of 17.0 feet. Flooding of nearby roads, including Woodward Way resulted. In addition, the lower levels of several nearby apartments were also flooded. There were no injuries or deaths associated with the event, and $250,000 of property damage was reported.

May 16, 2003, Atlanta, Flash Flooding – The Fulton County 911 center, as well as local television news media reported that persistent thunderstorms in the hours after midnight resulted in flooding of several streets and roads in the Buckhead and Midtown Atlanta area. Several streets in the Buckhead area had to be closed. Flooding problems were also observed on Interstate 285 at Interstate 20 and on the I-75/I-85 downtown connector, as well as on several downtown Atlanta streets. A mudslide forced the closure of Northside Drive at Deering Road. More than a foot of mud was reported in the road. Another mudslide occurred adjacent to the 17th Street Bridge project and trapped two people in their vehicles. Several apartments at the Gables Cityscape in Midtown Atlanta were also flooded during the storm. In addition, Peachtree and Nancy Creeks both quickly exceeded flood stage, with Peachtree Creek rising over 10 feet in less than an hour. The creek crested at 18.5 feet, which is 1.5 feet above the 17.0-foot flood stage.

There were no injuries or deaths associated with the event, and $300,000 of property damage was reported.

May 18, 2003, Atlanta, Flash Flooding – The official National Weather Service River gauge readings showed that Peachtree Creek once again quickly rose above the flood stage of 17 feet in about a two-hour period. The creek crested at 17.5 feet around 4:30 am EDT. As usual, flooding of nearby roads, property, and the Cross Creek Country Club Golf Course resulted. Flooding on Nancy Creek also occurred. The Atlanta Police Department reported that several roads were flooded in Midtown and Buckhead. The Fulton County 911 center also reported that Westbrook Road at Hopewell Road was flooded out. There were no injuries or deaths associated with the event, and no (crop or property) damage was reported.

June 13, 2003, Atlanta, Flash Flooding – The Georgia Tech Police Department, as well as the Atlanta Police Department, local news media, and amateur radio operators, reported considerable flooding of streets throughout the downtown Atlanta area, including portions of the Interstate 75/85 Downtown Connector. Some roads had to be briefly closed because of water flowing over the roads and there was at least one incident of a road collapse in the downtown area. Afternoon rush hour traffic was brought to a standstill on the Interstate 75/85 Downtown Connector and Georgia Highway 166 (Lakewood Freeway/Langford Parkway). There were no injuries or deaths associated with the event, and no (crop or property) damage was reported.

June 30, 2003, Atlanta, Flash Flooding – The public reported that extensive flooding was occurring on the campus and grounds of Georgia Tech University north of Atlanta near the Interstate-75/Interstate-85 split. Water was 2 feet deep on some roads and parking lots on the campus. To the northwest, more flash flooding was noted. A resident on Northside Parkway off Interstate-75 reported up to seven feet of water in their yard, which was a result of an adjacent creek overflowing its banks. There were no injuries or deaths associated with the event, and $5,000 of property damage was reported.

July 1, 2003, Atlanta, Flash Flooding – The Fulton County 911 center reported several times during the afternoon that heavy rainfall caused Peachtree Creek to be forced quickly above flood stage of 17 feet. Cheshire Bridge on La Vista Road was flooded and impassible, largely caused by a log jam of water against the bridge. Several roads and some homes along and near the creek were also flooded during the incident. A National Weather Official River gage showed that Peachtree Creek had risen above the flood stage of 17.0 feet, with a stage of 17.8 feet recorded. Several roads and homes adjacent to the creek were flooded. In addition, a log jam of water against the Cheshire Bridge on La Vista Road caused the road to be impassable and closed. There were no injuries or deaths associated with the event, and $5,000 of property damage was reported.

July 10, 2003, Atlanta, Flash Flooding – Local Atlanta television media reported that several roads in and just east of midtown Atlanta were flooded and impassable. There were no injuries or deaths associated with the event, and no (crop or property) damage was reported.

July 25, 2004, Atlanta, Flash Flooding – A storm survey conducted by the Service Hydrologist from the National Weather Service in Peachtree City concluded that Proctor Creek on the west side of Atlanta in Atlanta rose to four feet out of its banks during a very heavy thunderstorm. The water flooded Grove Park with one to three feet of water flowing through the park, including a playground and a soccer field. No significant property damage or injuries were reported. There were no injuries or deaths associated with the event, and no (crop or property) damage was reported.

March 31, 2005, Atlanta, Flash Flooding – The official river gage at Peachtree Creek rose to 17.8 feet, which is 0.8 feet above the flood stage. Flooding results along Woodward Way and at the Bobby Jones Golf Course adjacent to the creek. Water also rises in the yards of several homes and apartments adjacent to the creek. There were no injuries or deaths associated with the event, and no (crop or property) damage was reported.

July 7, 2005, Atlanta, Flash Flooding – Rainfall of four to six inches fell across much of the Atlanta Metropolitan area between 6:00 pm and 11:00 pm EDT. Official National Weather Service River gages showed that Peachtree Creek in north Atlanta reached its flood stage of 17 feet at 1020 pm EDT and Proctor Creek in southwest Atlanta reached its flood stage of 11 feet at 923 pm EDT. Peachtree Creek crested at 19.1 feet, over two feet above flood stage, at 1:15 am EDT July 7th. Proctor creek also rose above its flood stage and crested at 13.4 feet at 10:15 pm EDT, which is over two feet above flood stage. Flooding of nearby roads and property occurs when these stages are reached, especially the 19-foot flood stage on Peachtree Creek which impacts several roads, a golf course, and several homes in the area. Repeated rounds of thunderstorms between 7:00 pm and 10:00 pm resulted in additional flooding of several streets in the Atlanta area. Atlanta's Hartsfield-Jackson International Airport recorded 5.14 inches of rain for the day, the sixth largest one-day rainfall total recorded at the location. There were no injuries or deaths associated with the event, and $5,000 of property damage was reported.

July 12, 2009, Atlanta, Flash Flooding – Northwest flow aloft persisted across the southeast United States as the result of a large subtropical high anchored over the southern Plains. A cold front was approaching the area from the northwest. The front, combined with disturbances in the northwest flow aloft, brought another round of showers and thunderstorms to the area during the maximum heating hours of afternoon and evening. While the thunderstorms remained below severe limits, frequent cloud-to-ground lightning and heavy rain were common in north Georgia. Some lightning fires were reported, a few trees were blown down, and flash flooding was observed in parts of metropolitan Atlanta. During the early morning hours of the 13th, a mesoscale convective complex moved southeast out of Tennessee into north central and west central Georgia. While these thunderstorms were not severe, frequent cloud-to-ground lightning was observed once again, affecting one home shortly after midnight in Floyd County and another in Fayette County around 5:30 am EDT. The USGS stream gage at the South Fork of Peachtree Creek reached its flood stage of 12.0 feet at 2045 EDT. The creek rose to a stage of 12.6 feet at 9:15 pm EDT, then fell back below flood stage at 10:00 pm EDT. The Fulton County Emergency Management Director reported high water in the area. Several homes in the Virginia Highland area of far eastern Fulton County, near the DeKalb County line had flooded basements. Minor flooding was also observed along Piedmont Road slightly further north. The North Fork of Peachtree Creek rose above action stage but did not reach flood stage during this event. There were no injuries or deaths associated with the event, and $30,000 of property damage was reported.

August 28, 2009, Atlanta, Flash Flooding – An upper-level low pressure area persisted in the mid-south and was drifting slowly eastward. A cold front was slowly approaching the area from the west. Deep tropical moisture was pulled northward in advance of the upper low and cold front. Widespread showers and thunderstorms were noted in north-south oriented bands...which drifted slowly east across the state during the day. Some flash flooding was observed, especially in the Atlanta area. Flooding was observed on both the South Fork and North Forks of Peachtree Creek as the river gage at both locations exceeded flood stage during the indicated period. The flooding was observed just upstream from where the creeks merge into Peachtree Creek just northeast of downtown Atlanta. The creeks crested between 12.5 and 13.0 feet. The flood stage at both locations is 12.0 feet. Minor flooding was observed in the vicinity of the creeks. Damage was confined to minor debris cleanup. There were no injuries or deaths associated with the event, and $1,000 of property damage was reported.

September 16-19,2009, Atlanta, Flash Flooding/Flooding – A broad cutoff upper low, which had been located over central Texas, was beginning to move very slowly east by the 16th. This upper low, in combination with unusually deep tropical moisture across the region for mid-September, began an extensive period of showers and thunderstorms with very heavy rain. The deep tropical moisture was largely the result of a persistent 850 mb flow from the Gulf of Mexico. The pattern changed very little for nearly a week as the upper low drifted very slowly east, completely cutoff from the main belt of westerlies, which were located well to the north in southern Canada. The first flash flood event of an extended period of historical and record flooding across north and central Georgia, began on the 15th in Gilmer County. A few storms became strong to marginally severe as well. A historical, record, and catastrophic flood event

began to unfold during this period, mostly in the west central Georgia area, including the western and northwestern suburbs of Atlanta. Major flooding was noted in many other areas of north and central Georgia, including the eastern suburbs of Atlanta, northwest Georgia, and parts of central Georgia. The culprit was a very stagnant upper atmospheric pattern featuring a weak upper low that developed in early September across south Texas and slowly migrated east-northeast through September 22nd, until a more significant upper trough dropping south into the southern plains finally moved the pesky upper low northeast of Georgia. In addition, an unusually deep tropical flow was noted throughout this period. Precipitable water values exceeded 2.0 inches across the area during this time, resulting in extremely efficient rain producing cells. Persistent heavy rain showers and thunderstorms began to plague the area on the 16th and persisted daily across parts of north and central Georgia. *Flooding:* The repeated rainfall across the same areas primed the stage for the record, historical, and catastrophic flood event that unfolded from the 21st into the 22nd. On the 19th, the bulk of the flood and flash flooding was confined to the western and northern suburbs of Atlanta, especially early on the 19th, when a good 6-hour period of heavy showers and thunderstorms trained across south Fulton, Cobb, Cherokee, Forsyth, DeKalb, and Gwinnett counties, dumping five to seven inches of rain in these areas. Flooding along the upper portion of Peachtree Creek was observed during the evening of September 16th from persistent heavy rain and thunderstorms during the afternoon and evening hours. The lower portion of Peachtree Creek, where the USGS gage is located, did not flood during this event. Damage was confined to minor debris removal in areas adjacent to the creek. The USGS stream gage located on Big Creek at Kimball Bridge Road, near Alpharetta, reached flood stage of 7.0 feet at 4:30 pm EDT. The creek crested at 7.17 feet at 530 pm EDT, then fell below flood stage at 722 pm EDT. Damage was confined to minor debris removal adjacent to the creek, especially along the Alpharetta Greenway. Also, Fulton County Emergency Management personnel reported that general flooding continued for another hour or so after late morning and early afternoon flash flooding subsided. The damage was generally confined to the southern and central portion of the county. An apartment complex on Cleveland Avenue in the Hapeville area was flooded, affecting the homes of 17 people. The homes of 42 people across the county were affected by the flooding. Additional monetary damage was primarily in the form of flooded apartments. There were no injuries or deaths associated with the event, and property damages were reported at $52,000.

January 24, 2010, Atlanta, Flash Flooding – A complex and dynamic weather pattern was in place across the eastern half of the U.S. A very deep full-latitude trough was sweeping through the eastern U.S. from January 24th into the 25th. A warm front was located across South Georgia, with an occluded front moving across north Georgia. Meanwhile, a stronger Canadian was located back to the northwest across the central and southern plains. Deep Gulf moisture was being drawn northward into central Georgia ahead of these weather systems. The main concern during this period was once again heavy rain and flooding as repeated rounds of showers and a few thunderstorms tracked from southwest to northeast in bands, which moved only slowly east during the day. Rainfall of two to three inches was common across central Georgia, with three-to-four-inch rainfall amounts common across much of north Georgia. The heaviest rain fell across northwest Georgia, where some rainfall amounts near 5.0 inches were observed. The heavy rain on saturated ground renewed flooding of many creeks, streams, and rivers across the area. Flash flooding, however, was limited. In addition, RAWS stations in far northwest Georgia at Cohutta in Whitfield County and Chatsworth in Murray County recorded winds gusts of 51 and 43 mph, respectively, during the late morning and early afternoon hours. However, no damage was reported. The USGS stream gage on the upper portion of Peachtree Creek near the merger of the North and South Fork of Peachtree Creek indicated that minor flooding was occurring. Damage was confined to minor debris removal from areas adjacent to the creek. There were no injuries or deaths associated with the event, and property damages were reported at $3,000.

January 21, 2012, Atlanta, Flash Flooding – An area of low pressure over the Southern Plains moved quickly east and toward the Southern Appalachians during the day. Moisture and instability increased across the Southeast as a warm front lifted north of the region. Thunderstorms developed in the warm sector ahead of the approaching cold front, and many became severe. Three tornadoes touched down with this system, along with multiple reports of hail and wind damage. Flash flooding was also reported in

the Atlanta Metropolitan area because of heavy rainfall. Around seven roads had minor flooding due to tributaries and streams in the upper South River and Intrenchment Creek basins overflowing. There were at least six inches of water temporarily blocking the roads. There were no injuries or deaths associated with the event, and property damages were reported at $3,000.

April 5, 2017, Atlanta, Flash Flooding – Another strong short wave, the second in the three days, rotated through a large and deeper upper-level trough over the eastern U.S. A deep surface low and strong cold front moved through the state combining with moderate instability and strong low-level shear to produce another round of widespread severe weather across north and central Georgia, including tornadoes. A local news station broadcast a video of water flowing over the roadway near the intersection or Shallowford Rd and Sherbrooke Drive NE. A USGS stream gage on Peachtree Creek at Northside Drive in Atlanta quickly reached Moderate flood stage of 18 feet. The creek crested at 18.24 feet at 3:00 PM EST. A parking lot near the corner of Peachtree Road and Fairhaven Circle experienced flooding. Woodward Way was reportedly covered with a couple feet of water and approached the foundation of several unelevated homes. Portions of Hanover West Drive and backyards of some residences on Peachtree Battle Avenue were inundated with a few feet of water. Local news media reported that five City of Atlanta employees were rescued from the roofs of their vehicles after the work trucks, carrying road barricades, were overwhelmed by the flood waters. The rising water was from nearby Peachtree Creek near the intersection of Peachtree Battle Avenue and Woodward Way. Also, a USGS stream gage on Nancy Creek at West Wesley Road in Atlanta quickly reached flood stage of 12 feet. The creek crested at 12.30 feet at 6:30 PM EST. Minor flooding of residential yards occurred along the creek upstream and downstream from the gage, including Nancy Creek Road and Ridge Valley Court. Portions of The Westminster Schools athletic fields upstream from the gage also flooded. There were no injuries or deaths associated with the event, and no damage was reported.

June 20, 2017, Atlanta, Flash Flooding – A stalled frontal boundary and anomalously moist air mass produced high rainfall amounts for several days, beginning June19th. Multiple waves of precipitation including many training storms dropped high rainfall amounts over the metro Atlanta area and along the 1-20. Rainfall amounts were generally 4-6 inches, with isolated amounts approaching 8 inches. Flash flooding resulted, especially within the Nancy Creek, North Fork Peachtree Creek, and Yellow River basins. The Public and Broadcast Media reported flash flooding that resulted from heavy rain over the area. Flash Flooding inundated the Buford Connector near Monroe Drive and Armour Drive. Ottley Drive under the Marta service bridge was also flooded and impassable, leaving cars stranded. Radar estimates indicate that rainfall amounts of 4 to 5 inches occurred over the area. There were no injuries or deaths associated with the event, and no damage was reported.

August 5, 2019, Atlanta, Flash Flooding – A persistent, weak upper-level trough and stationary frontal boundary over the region combined with strong afternoon heating to produce isolated strong to severe thunderstorms over parts of north Georgia. Heavy rainfall produced isolated flooding in Atlanta. A social media post reported street flooding under the overpass at Marietta Street NW and North Avenue NW, near Georgia Tech. Radar estimates indicate that downpours produced rainfall amounts of 1.5 to 2 inches over a short period of time, causing the flooded roadway. There were no injuries or deaths associated with the event, and no damage was reported.

September 17, 2020, Atlanta, Flash Flooding – A weakening Tropical Storm Sally moved into Georgia on September 16th, spreading heavy rainfall amounts and producing damaging winds in north and central Georgia. Rainfall amounts of 2 to 8 inches occurred, with the axis of heaviest rainfall extending from near Columbus to Macon, to Augusta. The highest winds were observed in the metro Atlanta area as Sally's convective bands moved through late on September 16th. The Emergency Manager reported that much of the Peachtree Battle Area - Atlanta Memorial Park along Peachtree Creek is underwater due to heavy rain and flooding of the creek. The nearby USGS river gage on Peachtree Creek (AANG1) crest at 19.06 feet in Moderate Flood Stage. Radar estimates indicate that 4 to 5 inches of rain occurred over the area, causing the flash flooding. There were no injuries or deaths associated with the event, and no damage was reported.

October 10, 2020, Atlanta, Ft. McPherson, and Adamsville, Flash Flooding – During the afternoon and evening of October 10th, as the remnants of Hurricane Delta passed northwest of Georgia, moisture from the Gulf of Mexico spread across the area. Several weak tornadoes occurred in north and central Georgia in addition to pockets of heavy rainfall and flooding across the Atlanta metropolitan area and portions of northeast Georgia. The Emergency Manager reported water rescues due to flash flooding at the intersection of Joseph E. Boone Boulevard and Vine Street. Radar estimates indicate that 3 to 5 inches of rain occurred in the area, resulting in the flash flooding. Also, the Emergency Manager reported water rescues due to flash flooding at Humphries Street SW, Cooper Street SW, McDaniel Street, SW, Smith Street, and at the intersection of University Avenue and Pryor Street SW. Radar estimates indicate that 3 to 5 inches of rain occurred in the area, resulting in the flash flooding. The Emergency Manager reported water rescues due to flash flooding at the intersection of Delowe Drive and Arthur B. Langford Parkway. Radar estimates indicate that 3 to 5 inches of rain occurred in the area, resulting in the flash flooding. The Emergency Manager also reported a water rescue due to flash flooding in the 200 block of North Avenue NW. Radar estimates indicate that 3 to 5 inches of rain occurred in the area, resulting in the flash flooding. The Emergency Manager reported water rescues due to flood water from Proctor Creek at the intersection of Troy Street NW and Joseph E Boone Drive NW. Radar estimates indicate that 3 to 5 inches of rain occurred in the area, resulting in the flash flooding. Also, the Emergency Manager reported water rescues due to flash flooding in the 2200 block of Verbana Street. Radar estimates indicate that 3 to 5 inches of rain occurred in the area, resulting in the flash flooding. There were no injuries or deaths associated with the event, and no damage was reported.

October 24, 2020, Atlanta and Adamsville, Flash Flooding – A generally light-rain, wedge set up for the state of Georgia caused localized flash flooding in the city of Atlanta as rain focused and trained over the area. Rainfall amounts of 2.5 to 5 inches were common in the Cobb, Fulton, DeKalb, and Gwinnett counties, with Fulton reporting water entering buildings and a couple water rescues. The Emergency Manager reported several inches of water inundated apartment buildings on Center Street NW, leading to evacuations. Radar estimates indicate that 3 to 5 inches of rain fell over the area, causing the flash flooding. The Emergency Manager also reported water rescues of two vehicles on Verbena Street. Radar estimates indicate that 3 to 5 inches of rain fell over the area, causing the flash flooding. Finally, the Emergency Manager reported a few inches of water had inundated three buildings just east of Interstate 285 in the Ivan Hill area. Radar estimates indicate that 3 to 5 inches of rain fell over the area, causing the flash flooding. There were no injuries or deaths associated with the event, and damages were reported at $15,000.

City of East Point: Based on information obtained from NOAA/NCEI, there were only two incidents of flooding/ flash flooding occurred in the City of East Point between January 1,1970, and July 31, 2021. NOAA/NCEI details of the events are provided below:

September 1, 1998, East Point, Flash Flooding – East Point Police reported several streets were flooded and vehicles stranded during torrential rains. There were no injuries or deaths associated with the event, and $16,000 of property damage was reported.

May 6, 2003, East Point, Flash Flooding – The public reported significant flooding in the East Point area as a creek rose four feet out of its banks flooding homes and apartments in the area. The water rose to the second level of some homes. Several apartments in southwest Atlanta and Buckhead were also flooded with up to one foot of water in some of the apartments. There were no injuries or deaths associated with the event, and $375,000 of property damage was reported.

City of Hapeville: Based on information obtained from NOAA/NCEI, there were one (1) incident of flooding/ flash flooding occurred in the City of Hapeville between January 1, 1970, and July 31, 2021. NOAA/NCEI details of the events are provided below:

June 4, 2009, Hapeville, Flooding – A broad upper trough was located across the southeast and south-central U.S. A nearly stationary cold front extended from the Tennessee Valley into the mid-south. A warm,

humid, unstable air mass remained across the region. Scattered to numerous showers and a few thunderstorms were noted across all north and central Georgia. Some brought heavy rainfall resulting in minor flooding and street flooding during the afternoon, especially in the Atlanta and Columbus metropolitan areas. The Fulton County Emergency Management Director reported that heavy rain resulted in a small unnamed tributary, located just west of Interstate 85 and between Georgia Highway 166/Langford Parkway and Langston Drive, rising out of its banks and flooding an adjacent home. The flooding to the home was confined to the yard, crawl space, garage, and a parked car. Further examination determined that the flooding was the result of a collapsed culvert pipe caused by heavy runoff and debris buildup in the area. There were no injuries or deaths associated with the event, and $20,000 property damage was reported.

City of Roswell: Based on information obtained from NOAA/NCEI, there were two incidents of flooding/ flash flooding occurred in the City of Roswell between January 1, 1970, and July 31, 2021. NOAA/NCEI details of the events are provided below:

May 3, 2010, Roswell, Flash Flooding – A deep upper-level trough was shifting slowly east from the central U.S. into the eastern U.S. A leading cold front was located from New York to Alabama. A summerlike subtropical ridge across the southeast U.S. was slowly shifting off the southeast U.S. coast. The highly meridional flow had allowed an unusually deep tropical air mass to spread far northward across the eastern half of the U.S. This weather system had been responsible for widespread catastrophic flooding in western and middle Tennessee during the previous three days. As the system moved toward Georgia, it began to weaken considerably, and the main dynamics lifted northeast more toward the mid-Atlantic. Nonetheless, the slow movement of the system brought several rounds of showers and thunderstorms to the area with two-day rainfall of 3-4 inches. Flash flooding was observed in several counties on the northwest and west side of Atlanta, some of the same counties that experienced catastrophic flooding during late September 2009. Flash flooding during this event was far less significant. Severe weather was isolated and confined to east central Georgia toward the end of the event on the 3rd. Several creeks across Fulton County reached or exceeded flood stage during this period. This information was verified by USGS stream gages on the creeks. Proctor Creek at Jackson Parkway in Atlanta reached its flood stage of 13.0 feet at 6:55 am EDT. The creek continued to rise and crested at 14.4 feet at 8:15 am EDT. Flood stage on Peachtree Creek at Northside Drive of 18.0 feet was reached at 8:15 am EDT. The creek continued to rise and crested at 19.2 feet at 12:15 pm EDT. On Nancy Creek at Rickenbacker Drive, major flood stage of 13.0 feet was reached at 11:05 am EDT. The creek eventually crested at 13.2 feet at 12:00 pm EDT before finally beginning to fall. The Fulton County Emergency Management Director reported that at least 50 homes were affected by the flood waters of Nancy and Peachtree Creeks. A swift water rescue was required along Nancy Creek where a female had to be removed from the top of a home on Fairfield Road approximately four miles west of North Atlanta. Flood waters covered portions of Cochran Mill Road, Cascade-Palmetto Highway, and Vandiver Road at Amen Road in central Fulton County, all a result of local creeks out of their banks. Portions of Interstate-20 west of Atlanta were closed during the height of the flooding. There were no injuries or deaths associated with the event, and $500,000 worth of property damage was reported.

May 19, 2013, Roswell, Flash Flooding – An upper-level low was located over southern Kentucky on the morning of the 19th, with a shortwave trough extending into northern Georgia. Tropical moisture prevailed over Georgia as well. Widespread showers with embedded thunderstorms developed across a portion of north Georgia early in the morning and moved slowly south. Rainfall amounts of 3 to 7 inches occurred in less than 6 hours prior to 7:00 AM EST in an area from Dawsonville to Gainesville to Lawrenceville to Roswell. Significant flash flooding occurred with major damage to roads and bridges near Flowery Branch. Another 3 to 7 inches of rain occurred in 6 hours after 7:00 AM EST in a portion of northwest Georgia from Trenton to Lafayette to Calhoun and Cartersville to Rome and Summerville. Both heavy rain events caused widespread flash flooding and minor river flooding. As the instability increased during the day, the thunderstorms became more intense. Many of the thunderstorms were able to reach severe levels during the afternoon hours, causing primarily wind damage, with only isolated reports of large hail. The USGS

stream gage on the Big Creek at Kimball Bridge Road near Alpharetta reached flood stage of 7 feet. The creek crest at 10.3 feet. Minor flooding occurred. The USGS stream gage on the Chattahoochee River near Berkeley Lake and Norcross reached flood stage of 12 feet. The river crest at 12.4 feet. Minor flooding occurred. The Chattahoochee River rose out of its banks and flooded the paddocks and access road to the stables at the Huntcliff River Club near Sandy Springs. Emergency officials evacuated 20 horses from the stables. There were no injuries or deaths associated with the event, and $10,000 worth of property damage was reported.

July 13, 2018, North Roswell, Flash Flooding – A very moist and moderately unstable atmosphere combined with strong daytime heating to produce isolated severe thunderstorms each afternoon into the evening hours. The public reported minor street flooding on Crabapple Road in Roswell. Fulton 911 reported Houze Road and Highway 9 at Oxbo Road were closed due to flooding. Radar estimates indicate that between 3 to 4 inches of rain fell in the Roswell area, with locally higher amounts. There were no injuries or deaths associated with the event, and no damage was reported.

February 6, 2020, Roswell, Flash Flooding – A line of thunderstorms ahead of a strong cold front moved into northwest Georgia in the pre-dawn hours and swept across north and central Georgia through the morning into the afternoon producing numerous reports of damaging thunderstorm winds and an isolated tornado. Storms along the front also produced heavy rainfall, ranging from 1.5 to 4 inches, with higher amounts up to 6 inches, particularly over north Georgia. These rainfall amounts produced flash flooding over north and central Georgia. The Emergency Manager reported Willeo Road closed between the intersection with Azalea Drive and the Chattahoochee Nature Center due to flooding of the Chattahoochee River. Radar estimates indicate that 3 to 4 inches of rain occurred over the area in a short period of time, falling on wet soils and resulting in flash flooding. There were no injuries or deaths associated with the event, and no damage was reported.

City of Sandy Springs: Based on information obtained from NOAA/NCEI, there were six (6) incidents (including the 2009 flood) of flooding/ flash flooding occurred in the City of Sandy Springs between January 1, 1970, and July 31, 2021. NOAA/NCEI details of the events are provided below:

June 16, 2003, Sandy Springs, Flash Flooding – Fox 5 News of Atlanta reported that extensive flooding was occurring along Northridge Crossing Drive in the area between Sandy Springs and Dunwoody near the De Kalb County border. Several town homes had to be evacuated as water rose to the level of mailboxes. Several roads in the north and central portion of the county were flooded with water flowing across the roads. Flooding on Roswell Road resulted in a large sinkhole at one point in the road and washed out a portion of the road in another location. Peachtree Creek quickly rose to flood stage of 17 feet in a three-hour period, resulting in the usual flooding of roads, homes, businesses, and other property near the creek. There were no injuries or deaths associated with the event, and $500,000 worth of property damage was reported.

September 21,2009, Sandy Springs, Flash Flooding/Flood – A historical, record, and catastrophic flood event unfolded during this period, mostly in the west central Georgia area, including the western and northwestern suburbs of Atlanta. Major flooding was noted in many other areas of north and central Georgia, including the eastern suburbs of Atlanta, northwest Georgia, and parts of central Georgia. The culprit was a very stagnant upper atmospheric pattern featuring a weak upper low that developed in early September across south Texas and slowly migrated east-northeast through September 22nd, and until a more significant upper trough dropping south into the southern plains finally moved the pesky upper low northeast of Georgia. In addition, an unusually deep tropical flow was noted throughout this period. Precipitable water values exceeded 2.0 inches across the area during much of this period, resulting in extremely efficient rain producing cells. Persistent heavy rain showers and thunderstorms began to plague the area on the 16th and persisted daily through the 21st across parts of north and central Georgia. However, the catastrophic flooding unfolded when a sea breeze moving northwest merged with existing outflow boundaries and higher terrain across the western suburbs of Atlanta to result in persistent heavy thunderstorms for a period of at least 12 hours that trained across the same counties west of Atlanta,

generally affecting Carroll, Douglas, Paulding, and Fulton counties. As the activity progressed across the state, significant flooding unfolded further east, including Fulton County, and the city of Atlanta, DeKalb, and Gwinnett counties. Incredible rainfall amounts of 15 to over 20 inches were noted across parts of Fulton, DeKalb, and Gwinnett. Rainfall amounts of 8 to 12 inches were noted in other spotty areas of northwest, north central, and central Georgia during this period. The excessive rainfall on top of saturated ground resulted in some of the worst flooding ever reported in the Atlanta and north Georgia area. Some of the worst flooding was observed along Sweetwater Creek near the Fulton, Fulton, Douglas County line.

The excessive rainfall on top of saturated ground resulted in some of the worst flooding ever reported in the Atlanta and north Georgia area. Eleven deaths were recorded during the event, mostly vehicle related deaths at night from washed out bridges and roads because of swollen creeks. Property damages are estimated to be at least $0.5 Billion, with hundreds of homes and businesses destroyed by flood waters. Bridges on several state and local highways were washed out and some will take months to even a year to replace. Eighteen counties (Bartow, Carroll, Chattooga, Cherokee, Cobb, Coweta, DeKalb, Douglas, Fulton, Gwinnett, Heard, Newton, Paulding, Rockdale, Stephens, and Walker) received a presidential disaster declaration because of the historic floods. Twenty-one counties were declared eligible for public assistance, including several central Georgia counties that were affected by flash flooding earlier in the period. Hundreds of homes were flooded and destroyed as the waters of Sweetwater Creek rose more than 20 feet above flood level. Many main stem and secondary creeks, streams, and rivers across north and central Georgia, particularly in northwest and west central Georgia, reached record flood levels. Many of these same creeks, streams, and rivers remained in flood for several days. In some cases, record flood levels were recorded. The following is a list of new record flood levels set on several creeks, streams, and rivers in north and west Georgia. Noonday Creek near Woodstock rose to 19.6 feet on the 21st at 5:30 pm EDT. The previous record was 16.30 feet set on July 11, 2005. Nickajack Creek at Mableton reached 19.30 feet on the 22nd at 215 am EDT. The previous record was 16.60 feet set on July 11, 2005. The North Fork of Peachtree Creek at Atlanta rose to 18.07 feet on the 21st at 715 pm EDT. The previous record was 17.70 feet set on September 16, 2004. Utoy Creek near Atlanta rose to 27.04 feet on the 22nd at 10:00 am EDT. The previous record was 16.86 feet set on May 6, 2003. The Chattahoochee River at Whitesburg rose to 29.61 feet on the 21st at 7:45 pm EDT. The previous record was 29.11 feet on December 11, 1919. Suwanee Creek at Suwanee rose to 14.30 feet on the 21st at 6:45 pm EDT. The previous record was 12.04 feet set on October 5, 1996. The Yellow River at Lithonia rose to 25.50 feet on the 22nd at 5:15 am EDT. The previous record was 17.53 feet set on May 7, 2003. The Yellow River near Conyers below Milstead rose to 22.54 feet on the 22nd at 5:00 pm EDT. The previous record was 16.36 feet set on July 8, 2005. The Chattahoochee River at Franklin rose to 29.98 feet on the 22nd at 5:00 pm EDT. The previous record was 28.40 feet set on December 15, 1919. The Sweetwater Creek at Austell rose to 30.17 feet on the 22nd at 10:00 pm EDT. The previous record was 21.81 feet on July 12, 2005. The following rivers reached flood levels that were within the top five all time levels at these locations. Peachtree Creek in Atlanta rose to 23.89 feet on the 21st at 9:15 pm EDT. The record is 25.80 feet recorded on December 20th, 1919. Nancy Creek in Atlanta reached 14.69 feet on the 21st at 9:30 pm EDT. The record is 15.50 feet on December 1, 1973. The Chattahoochee River at Vinings reached 28.10 feet on the 22nd at 12:00 am EDT. The record is 29.0 feet set on December 10, 1919. The South Fork of the Peachtree Creek reached 15.21 feet on the 22nd at 12:00 am EDT. The record is 29.0 feet set on December 10, 1976. The Chattahoochee River at Campbellton reached 30.55 feet on the 22nd at 3:00 pm EDT. The record is 31.60 feet set on December 10, 1919.

Several USGS stream gages in Fulton County indicated that significant flooding was commencing across Fulton County, especially the central and northern portion of the county. Peachtree Creek at Northside Drive reached its flood stage of 17 feet at 3:53 am EDT. Nancy Creek at Rickenbacker Drive reached its flood stage of 11 feet at 444 am EDT. The Chattahoochee River near Vinings and Paces Ferry Road reached its flood stage of 14 feet at 5:01 am EDT. Many homes, apartments, businesses, and roads experienced at least moderate flooding by the end of this period. The heavy rain caused some trees to fall in waterlogged soil, causing minor power outages in the Sandy Springs area. In some cases, all time

recorded levels were recorded. There were no injuries or deaths associated with the event, and $4.50M worth of property damage was reported.

December 24, 2015, Sandy Springs, Flash Flooding – Persistent, deep, and strong southwesterly upper-level flow across the eastern U.S. resulted in an extremely moist and moderately unstable atmosphere over North and Central Georgia. A stalled frontal boundary and a series of short waves in the southwesterly upper flow resulted in multiple rounds of heavy rain, and strong to severe thunderstorms, with widespread flash flooding, damaging thunderstorms winds, hail, and an isolated tornado. A USGS stream gauge on the Peachtree Creek at Northside Drive in Atlanta reached flood stage of 17 feet. The creek crest at 19.4 feet. Significant flooding occurred upstream and downstream from the gauge. Parking lots near the section of Peachtree Road...Fairhaven Circle and Peachtree Memorial Drive began to flood. Woodward Way was completely flooded with several feet of water and around one foot of water was in some homes that have not been elevated. Sections of Sagamore Drive...Hanover West Drive...and Peachtree Battle Avenue and Circle were flooded with 1 to 4 feet of water. Around one foot of water was in some homes. Several evacuations were needed. There were no injuries or deaths associated with the event, and $300,000 worth of property damage was reported.

August 9, 2017, Sandy Springs, Flash Flooding – Scattered thunderstorms along a stationary front produced isolated reports of flash flooding and wind damage across portions of north and central Georgia. Broadcast Media reported the Windsor Parkways Bridge over Nancy Creek had several feet of water over it. The Nancy Creek Gage at Buckhead (NCKG1) and at Chamblee went into minor flood stage at 7:45am EST and 6:30am EST, respectively. Emergency Manager reported a property on Northside Drive became inundated with flood waters from the adjacent Nancy Creek. The water was rapidly moving across the front yard and driveways, cutting off access to the property. There were no injuries or deaths associated with the event, and no damage was reported.

August 3, 2020, Sandy Springs, Flash Flooding – Widespread thunderstorms along and ahead of a stationary front across north and central Georgia resulted in scattered severe thunderstorms with numerous reports of damaging thunderstorm winds and several reports of large hail. Localized flash flooding occurred in Fulton and DeKalb counties following a quick 3 to 5 inches of rain. The Emergency Manager reported a washed-out driveway bridge along Valley Road NW due to a rapidly rising creek. The road was covered with floodwater at multiple points. Radar estimates indicate that 3 to 4 inches of rain occurred in the area in a short period of time. Also, water was reported over the roadway near the intersection of Roswell Road and Lakemoore Road. Additionally, water from Nancy Creek inundated yards of homes off Rickenbaker Drive. There were no injuries or deaths associated with the event, and no damage was reported.

September 17, 2020, Sandy Springs, Flash Flooding – A weakening Tropical Storm Sally moved into Georgia on September 16th, spreading heavy rainfall amounts and producing damaging winds in north and central Georgia. Rainfall amounts of 2 to 8 inches occurred, with the axis of heaviest rainfall extending from near Columbus to Macon, to Augusta. The highest winds were observed in the metro Atlanta area as Sally's convective bands moved through late on September 16th. The Emergency Manager reported flooding near the intersection of Windsor Parkway and Northland Drive due to high water through Nancy Creek. Additionally, a river gage located on Nancy Creek at Rickenbacker Drive NE (NCKG1) rose above flood stage because of the flooding, and nearby residents reported water approaching foundations of homes along the creek. There were no injuries or deaths associated with the event, and no damage was reported.

City of Union City: Based on information obtained from NOAA/NCEI, there were one (1) incidents of flooding/ flash flooding occurred in the City of Union City between January 1, 1970, and July 31, 2021. NOAA/NCEI details of the events are provided below:

July 10, 2005, Union City, Flash Flooding – The public reported that a small stream was overflowing Georgia Highway 279 or Old National Highway just south of Flat Shoals Road. The estimated water depth

in the area was one foot. The stream flows east from here into Camp Creek near Riverdale in Clayton County. There were no injuries or deaths associated with the event, and $0.5K worth of property damage was reported.

4.2.3A – Probability of Future Events, Flooding

Note: *The NOAA/NCEI Storm events database did not have any incidences of storm data records related to flood/flash flood for the Cities of Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton from January 1, 1970 – July 31, 2021. Therefore, the Cities Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton's Probability of Future Events is included with the Fulton County information.*

Fulton County and its participating jurisdictions can each expect a flash flood event with **180%** probability per year, or 1.8 events per year, as indicated in the following table. This number is based on historical events. As such, inland flooding is **highly likely** for Fulton County and its participating jurisdictions.

Table 37: Probability of Future Events, Flood, Fulton County

Probability of Future Events, Flood, Fulton County	
Event Year	**Event Count**
2016	0
2017	2*
2018	1*
2019	2*
2020	4*
Total Recorded Events =	**9**
Total Years =	**5**
Yearly Probability =	**180%**

Data Source: NOAA/NCEI Storm Events Database
**The flash flood event occurring on April 5, 2017, though shown as one event, impacted two locations (Atlanta and Bolton) within Fulton County.*
**The flash flood event occurring on July 11-12, 2019, though shown as one event, impacted two locations (Alpharetta and Newtown) within Fulton County.*
**The flash flood event occurring on February 6, 2020, though shown as one event, impacted two locations (Birmingham and Roswell) within Fulton County.*
**The flash flood event occurring on September 17, 2020, though shown as one event, impacted two locations (Sandy Springs and Atlanta) within Fulton County.*
**The flash flood event occurring on October 10, 2020, though shown as one event, impacted three locations (Atlanta, Ft. McPherson, and Adamsville) within Fulton County.*
**The flash flood event occurring on October 24, 2020, though shown as one event, impacted three locations (Atlanta and Adamsville) within Fulton County.*
**Fulton County and its participating jurisdictions can expect a flooding event with a 180% probability each year. This number was derived by dividing the number of recorded events by the year range used. Calculating future probably is not the only predictor of future occurrences. The qualitative chance of a thunderstorm impacting the planning area is highly likely.*

The City of Alpharetta can each expect a flooding/flash flood event with 6% probability per year, or 0.06 events per year, as indicated in the proceeding table. This number is based on historical events. Therefore, the City of Alpharetta has an **occasional** risk of experiencing a flash flood/flood event.

Table 38: Probability of Future Events, Flood, City of Alpharetta

Probability of Future Events, Flood, City of Alpharetta	
Event Year	**Event Count**
1970	0
1971	0
1972	0
1973	0

Probability of Future Events, Flood, City of Alpharetta	
Event Year	Event Count
1974	0
1975	0
1976	0
1977	0
1978	0
1979	0
1980	0
1981	0
1982	0
1983	0
1984	0
1985	0
1986	0
1987	0
1988	0
1989	0
1990	0
1991	0
1992	0
1993	0
1994	0
1995	0
1996	0
1997	0
1998	0
1999	0
2000	0
2001	1
2002	0
2003	0
2004	0
2005	0
2006	1
2007	0
2008	0
2009	0
2010	0
2011	1
2012	0

Probability of Future Events, Flood, City of Alpharetta	
Event Year	**Event Count**
2013	0
2014	0
2015	0
2016	0
2017	0
2018	0
2019	1
2020	0
Total Recorded Events =	**3**
Total Years =	**50**
Yearly Probability =	**6%**

Data Source: NOAA/NCEI Storm Events Database

The City of Atlanta can each expect a flooding/flash flood event with 64% probability per year, or 0.64 events per year, as indicated in the following table. This number is based on historical events. Therefore, the City of Atlanta has a **highly likely** risk of experiencing a flash flood/flood event.

Table 39: Probability of Future Events, Flood, City of Atlanta

Probability of Future Events, Flood, City of Atlanta	
Event Year	**Event Count**
1970	0
1971	0
1972	0
1973	0
1974	0
1975	0
1976	0
1977	0
1978	0
1979	0
1980	0
1981	0
1982	0
1983	0
1984	0
1985	0
1986	0
1987	0
1988	0
1989	0
1990	0
1991	0
1992	0
1993	0
1994	0
1995	0
1996	0
1997	2
1998	0
1999	1
2000	2
2001	1
2002	5
2003	7
2004	1
2005	2
2006	0
2007	0

Probability of Future Events, Flood, City of Atlanta	
Event Year	**Event Count**
2008	0
2009	3
2010	1
2011	0
2012	1
2013	0
2014	0
2015	0
2016	0
2017	2
2018	0
2019	1
2020	3
Total Recorded Events =	**32**
Total Years =	**50**
Yearly Probability =	**64%**

Data Source: NOAA/NCEI Storm Events Database

The City of East Point can each expect a flooding/flash flood event with 4% probability per year, or 0.04 events per year, as indicated in the subsequent table. Therefore, the City of East Point has an **occasional** risk of experiencing a flash flood/flood event.

Table 40: Probability of Future Events, Flood, City of East Point

Probability of Future Events, Flood, City of East Point	
Event Year	Event Count
1970	0
1971	0
1972	0
1973	0
1974	0
1975	0
1976	0
1977	0
1978	0
1979	0
1980	0
1981	0
1982	0
1983	0
1984	0
1985	0
1986	0
1987	0
1988	0
1989	0
1990	0
1991	0
1992	0
1993	0
1994	0
1995	0
1996	0
1997	0
1998	1
1999	0
2000	0
2001	0
2002	0
2003	1
2004	0
2005	0
2006	0
2007	0

Probability of Future Events, Flood, City of East Point	
Event Year	**Event Count**
2008	0
2009	0
2010	0
2011	0
2012	0
2013	0
2014	0
2015	0
2016	0
2017	0
2018	0
2019	0
2020	0
Total Recorded Events =	**2**
Total Years =	**50**
Yearly Probability =	**4%**

Data Source: NOAA/NCEI Storm Events Database

The City of Hapeville can each expect a flooding/flash flood event with 2% probability per year, or 0.02 events per year, as indicated in the subsequent table. This number is based on historical events. Therefore, inland flooding (flooding/flash flooding) is **occasional** for the City of Hapeville.

Table 41: Probability of Future Events, Flood, City of Hapeville

Probability of Future Events, Flood, City of Hapeville	
Event Year	**Event Count**
1970	0
1971	0
1972	0
1973	0
1974	0
1975	0
1976	0
1977	0
1978	0
1979	0
1980	0
1981	0
1982	0
1983	0
1984	0

Probability of Future Events, Flood, City of Hapeville	
Event Year	Event Count
1985	0
1986	0
1987	0
1988	0
1989	0
1990	0
1991	0
1992	0
1993	0
1994	0
1995	0
1996	0
1997	0
1998	0
1999	0
2000	0
2001	0
2002	0
2003	0
2004	0
2005	0
2006	0
2007	0
2008	0
2009	1
2010	0
2011	0
2012	0
2013	0
2014	0
2015	0
2016	0
2017	0
2018	0
2019	0
2020	0
Total Recorded Events =	**1**
Total Years =	**50**
Yearly Probability =	**2%**

Data Source: NOAA/NCEI Storm Events Database

The City of Roswell can each expect a flooding/flash flood event with 8%% probability per year, or 0.08 events per year, as indicated in the subsequent table. This number is based on historical events. Therefore, the City of Roswell has an **occasional** risk of experiencing a flash flood/flood event.

Table 42: Probability of Future Events, Inland Flood, City of Roswell

Probability of Future Events, Flood, City of Roswell	
Event Year	Event Count
1970	0
1971	0
1972	0
1973	0
1974	0
1975	0
1976	0
1977	0
1978	0
1979	0
1980	0
1981	0
1982	0
1983	0
1984	0
1985	0
1986	0
1987	0
1988	0
1989	0
1990	0
1991	0
1992	0
1993	0
1994	0
1995	0
1996	0
1997	0
1998	0
1999	0
2000	0
2001	0
2002	0
2003	0

Probability of Future Events, Flood, City of Roswell	
Event Year	**Event Count**
2004	0
2005	0
2006	0
2007	0
2008	0
2009	0
2010	1
2011	0
2012	0
2013	1
2014	0
2015	0
2016	0
2017	0
2018	1
2019	0
2020	1
Total Recorded Events =	**4**
Total Years =	**50**
Yearly Probability =	**8%**

Data Source: NOAA/NCEI Storm Events Database

The City of Sandy Springs can each expect a flooding/flash flood event with 12%% probability per year, or 0.12 events per year, as indicated in the following table. This number is based on historical events. Therefore, the City of Sandy Springs has an **occasional** risk of experiencing a flash flood/flood event.

Table 43: Probability of Future Events, Flood, City of Sandy Springs

Probability of Future Events, Flood, City of Sandy Springs	
Event Year	**Event Count**
1970	0
1971	0
1972	0
1973	0
1974	0
1975	0
1976	0
1977	0
1978	0
1979	0
1980	0

Probability of Future Events, Flood, City of Sandy Springs	
Event Year	Event Count
1981	0
1982	0
1983	0
1984	0
1985	0
1986	0
1987	0
1988	0
1989	0
1990	0
1991	0
1992	0
1993	0
1994	0
1995	0
1996	0
1997	0
1998	0
1999	0
2000	0
2001	0
2002	0
2003	1
2004	0
2005	0
2006	0
2007	0
2008	0
2009	1
2010	0
2011	0
2012	0
2013	0
2014	0
2015	1
2016	0
2017	1
2018	0
2019	0
2020	2

Probability of Future Events, Flood, City of Sandy Springs	
Event Year	Event Count
Total Recorded Events =	6
Total Years =	50
Yearly Probability =	12%

Data Source: NOAA/NCEI Storm Events Database

The City of Union City can each expect a flooding/flash flood event with 2% probability per year, or 0.02 events per year, as indicated in the subsequent table. This number is based on historical events. Therefore, the City of Union City has an **occasional** risk of experiencing a flash flood/flood event.

Table 44: Probability of Future Events, Flood, Union City

Probability of Future Events, Flood, Union City	
Event Year	Event Count
1970	0
1971	0
1972	0
1973	0
1974	0
1975	0
1976	0
1977	0
1978	0
1979	0
1980	0
1981	0
1982	0
1983	0
1984	0
1985	0
1986	0
1987	0
1988	0
1989	0
1990	0
1991	0
1992	0
1993	0
1994	0
1995	0
1996	0

Probability of Future Events, Flood, Union City	
Event Year	Event Count
1997	0
1998	0
1999	0
2000	0
2001	0
2002	0
2003	0
2004	0
2005	1
2006	0
2007	0
2008	0
2009	0
2010	0
2011	0
2012	0
2013	0
2014	0
2015	0
2016	0
2017	0
2018	0
2019	0
2020	0
Total Recorded Events =	**1**
Total Years =	**50**
Yearly Probability =	**2%**

Data Source: NOAA/NCEI Storm Events Database

4.2.4 – Vulnerability & Impact

Certain areas in Fulton County are exposed to 100-year floodplains. The likelihood of flooding is equal throughout each participating jurisdiction, and as depicted in Section 4.2.3A, at 0.63 events per year. Therefore, inland flooding is considered **highly likely** for Fulton County and its participating jurisdictions.

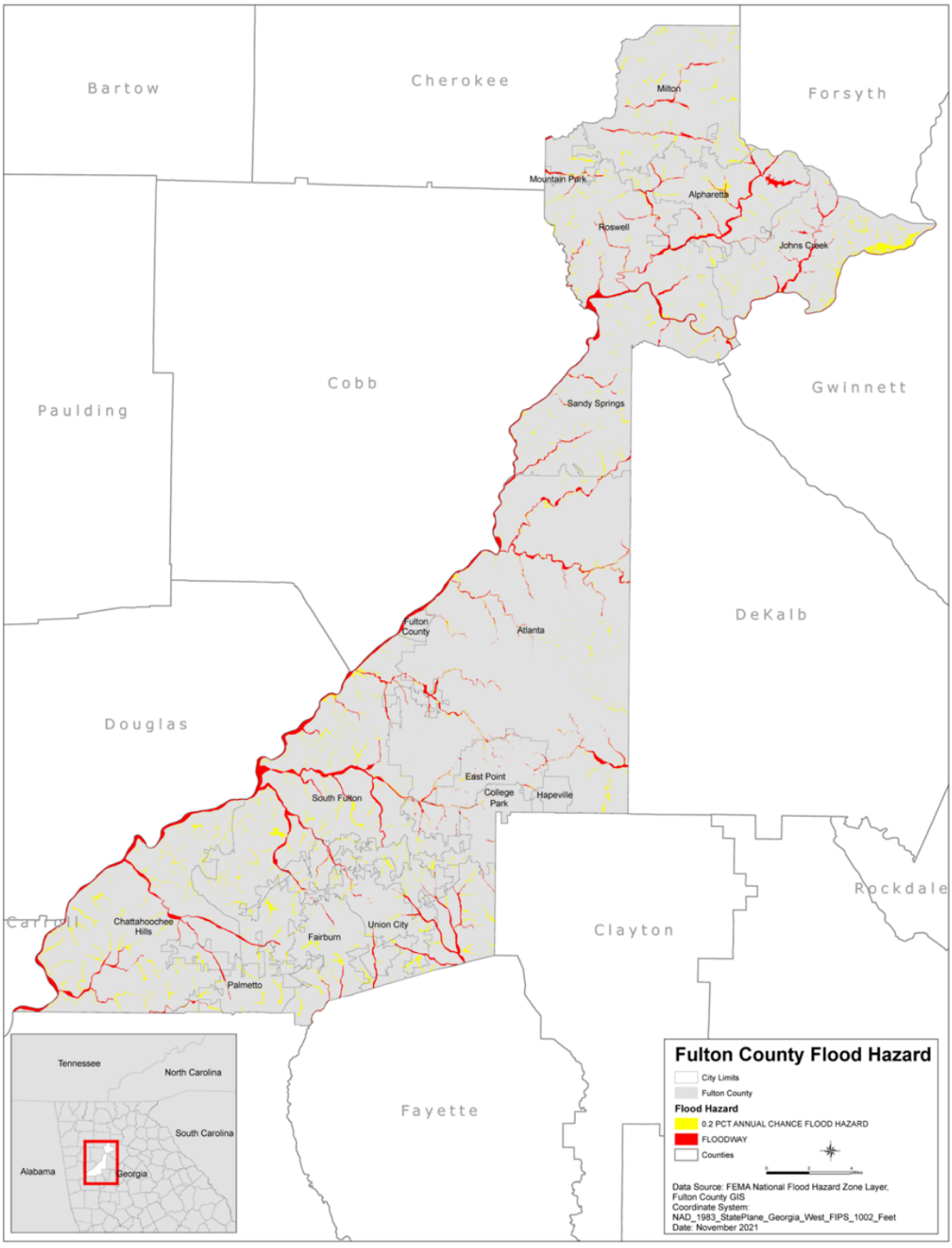
The proceeding maps provide additional insight into the hazard of flood, inland, for Fulton County and its participating jurisdictions.

Hazard Risk Analysis

For this plan, the Carl Vinson Institute of Government at the University of Georgia used Hazus-MH to model a flooding event in Fulton County. Riverine losses were determined from the 1% flood boundaries downloaded from the FEMA Flood Map Service Center in December 2021. 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-MH to calculate the riverine flood loss estimates. The following map illustrates the riverine inundation boundary associated with the 1% annual chance.

Map 101: Fulton County, GA Critical Facilities & Flood Map, 2021 (includes SFHA Type Flood Zones)



Map Source: Fulton County GIS Department

Vulnerability Analysis

Buildings in Fulton 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 hypothetical 1% flooding event was simulated to impact Fulton County and its participating jurisdictions using the Hazus-MH system. The simulated event generated damage to 3,625 buildings in Fulton County and its participating jurisdictions for a total of $379,377,242 in damage.

The following tables provide a summary of the potential flood-related building damage in Fulton County (by jurisdiction) that might be experienced from the 1% flood.

The following maps show the potential loss ratios of total building exposure to losses sustained to buildings from the 1% flood by 2010 census block and illustrates the relationship of building locations to the 1% flood inundation boundary.

Table 45: Riverine 1% Losses, City of Alpharetta

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
CITY OF ALPHARETTA					
Residential	18,434	172	$6,831,446,280	$16,331,611	0.24%
Government	23	2	$10,685,830	$39,033	0.37%
Industrial	55	1	$103,923,300	$107,314	0.10%
Religious	15	1	$45,835,410	$1,526,016	3.33%
Commercial	1,435	7	$1,366,915,100	$2,633,153	0.19%

Table 46: Riverine 1% Losses, City of Atlanta

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
CITY OF ATLANTA					
Religious	386	3	$239,606,080	$907,081	0.38%
Commercial	4,587	27	$3,235,577,310	$3,961,574	0.12%
Industrial	797	15	$776,729,910	$2,611,868	0.34%
Government	238	6	$117,531,040	$163,131	0.14%
Education	127	2	$139,132,390	$85,166	0.06%
Residential	128,573	1,683	$41,037,866,010	$183,721,682	0.45%

Table 47: Riverine 1% Losses, City of Chattahoochee Hills

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
CITY OF CHATTAHOOCHEE HILLS					
Residential	1,489	14	$351,720,200	$516,510	0.15%
Government	5	1	$409,200	$1,343	0.33%
Agricultural	10	1	$1,749,360	$2,016	0.12%

Table 48: Riverine 1% Losses, City of College Park

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
CITY OF COLLEGE PARK					
Residential	2,425	71	$509,063,670	$2,839,015	0.56%
Commercial	216	1	$132,008,780	$66,183	0.05%
Government	101	3	$31,351,960	$174,363	0.56%

Table 49: Riverine 1% Losses, City of East Point

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
CITY OF EAST POINT					
Commercial	368	6	$180,869,760	$135,450	0.07%
Residential	10,814	150	$1,546,355,850	$6,934,885	0.45%
Industrial	143	3	$347,328,370	$176,226	0.05%

Table 50: Riverine 1% Losses, City of Fairburn

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
CITY OF FAIRBURN					
Residential	4,879	14	$1,022,918,930	$336,626	0.03%

Table 51: Riverine 1% Losses, City of Hapeville

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
CITY OF HAPEVILLE					
Commercial	157	18	$77,460,630	$662,253	0.85%
Industrial	23	3	$20,890,630	$1,372,232	6.57%
Residential	2,003	101	$288,932,710	$3,364,759	1.16%

Table 52: Riverine 1% Losses, City of Johns Creek

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
CITY OF JOHNS CREEK					
Agricultural	1	1	$31,660	$5,345	16.88%
Residential	25,126	213	$9,092,659,720	$20,941,509	0.23%

Table 53: Riverine 1% Losses, City of Milton

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
CITY OF MILTON					
Residential	12,019	96	$5,245,532,210	$17,027,748	0.32%

Table 54: Riverine 1% Losses, City of Mountain Park

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
CITY OF MOUNTAIN PARK					
Residential	287	1	$66,080,850	$103,724	0.16%

Table 55: Riverine 1% Losses, City of Palmetto

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
CITY OF PALMETTO					
Residential	1,490	4	$273,187,400	$143,945	0.05%

Table 56: Riverine 1% Losses, City of Roswell

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
CITY OF ROSWELL					
Religious	40	2	$25,310,890	$70,617	0.28%
Government	23	5	$11,613,490	$162,412	1.40%
Residential	27,842	287	$9,515,452,330	$29,834,320	0.31%
Commercial	1,535	6	$690,281,740	$394,133	0.06%

Table 57: Riverine 1% Losses, City of Sandy Springs

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
CITY OF SANDY SPRINGS					
Government	53	1	$24,134,620	$49,562	0.21%
Commercial	806	3	$893,180,740	$202,551	0.02%
Residential	27,094	358	$11,777,000,090	$51,906,492	0.44%

Table 58: Riverine 1% Losses, City of South Fulton

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
CITY OF SOUTH FULTON					
Agricultural	7	1	$891,970	$27,185	3.05%
Commercial	306	6	$201,922,650	$272,389	0.13%
Residential	37,045	312	$5,851,946,670	$13,113,977	0.22%

Table 59: Riverine 1% Losses, Union City

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
UNION CITY					
Residential	6,723	7	$1,211,792,910	$230,448	0.02%

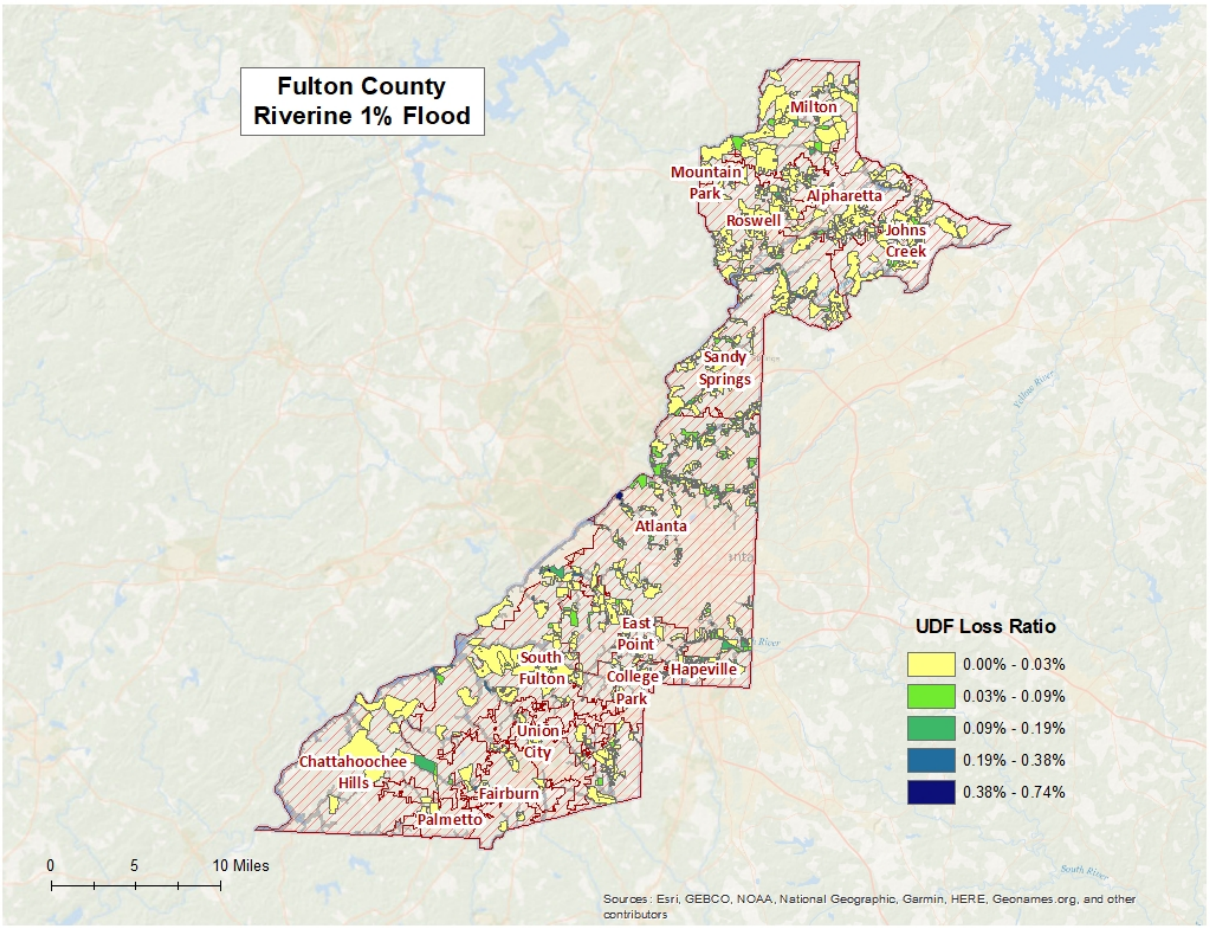
Table 60: Riverine 1% Losses, Fulton County Unincorporated

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
FULTON COUNTY UNINCORPORATED					
Industrial	458	14	$1,249,124,720	$15,940,103	1.28%
Commercial	95	3	$57,404,780	$281,292	0.49%

Table 61: Riverine 1% Losses, Fulton County Total

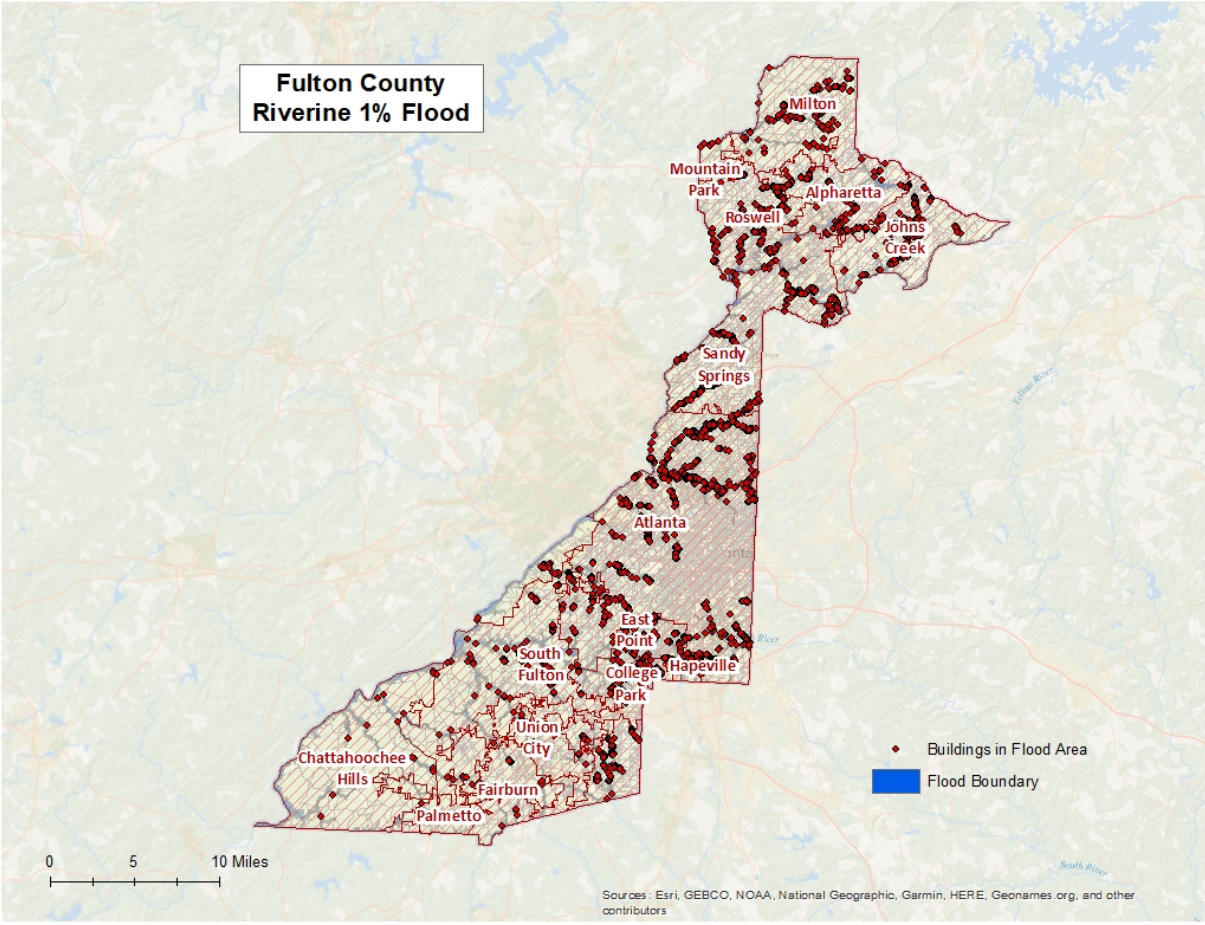
Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction
318,253	3,625	$104,603,858,150	$379,377,242

Map 102: Fulton County Potential Loss Ratios of Total Building Exposure to Losses Sustained to Buildings from the 1% Riverine Flood by 2010 Census Block



Map Source: Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan

Map 103: Fulton County Riverine 1% Flood



Map Source: Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan

Vulnerability of Population

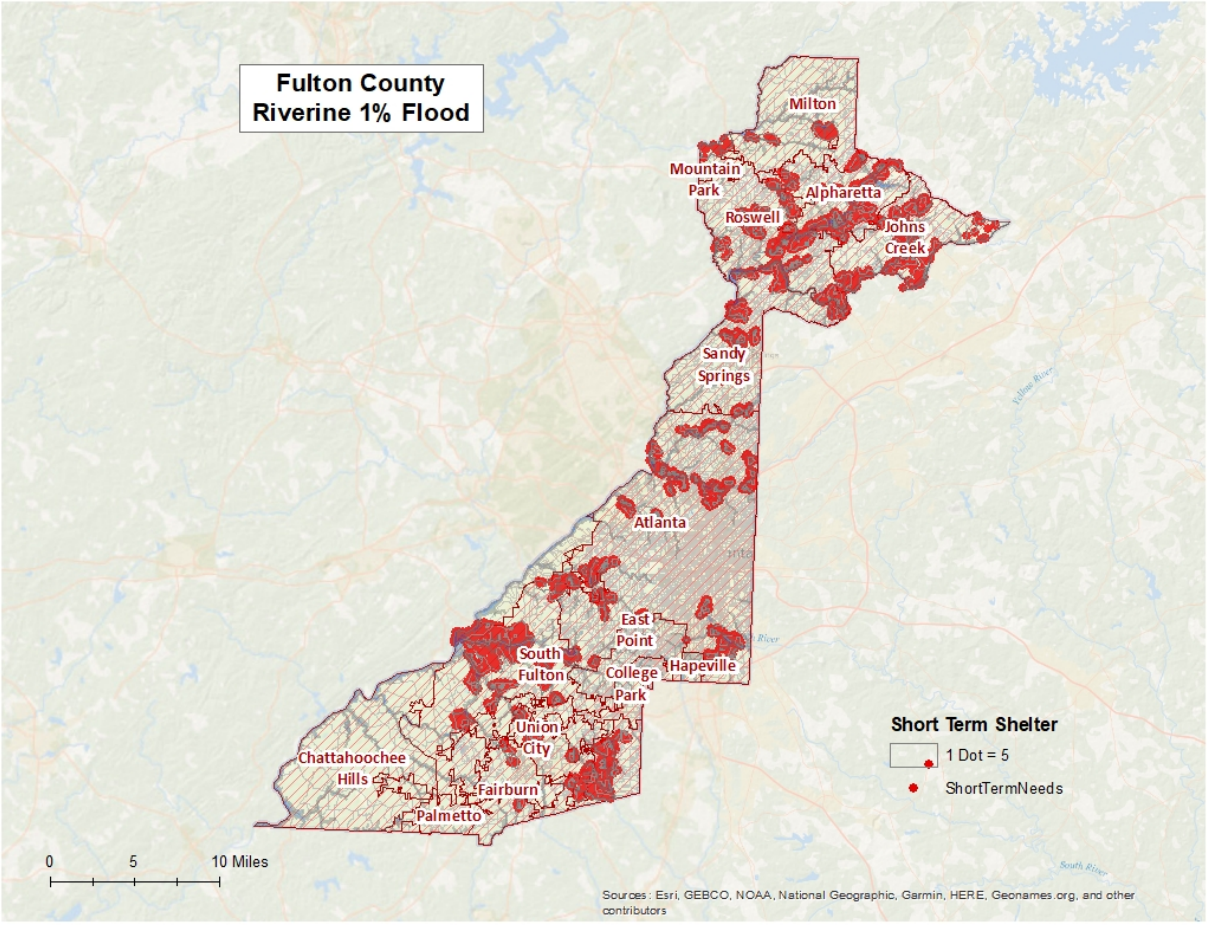
If evacuation orders are not heeded, or floodwaters rise quickly enough, residents within the planning area can be swept away by floodwater currents, become trapped on rooftops or other points of high elevations, and even sustain injury or death. Depending upon the conditions, this will expose them to the elements and deprive them of basic needs and services.

As previously described in the *Vulnerability of Facilities, Critical Facilities Inventory,* still water that is long-lasting and slow to drain will encourage the growth of mold and other bio-hazardous material, rendering a facility unusable. Extra care, assessment, and sanitization are required before residents can re-inhabit a facility, or they may face serious health concerns. Long-term care facilities housing vulnerable populations can take longer to evacuate.

Additionally, the potential presence of mold after a flood requires extra care to be taken before Fulton County's population can re-inhabit a long-term care facility.

The Hazus-MH simulation considered the likely impacts of the Fulton County 1% riverine flooding event. The simulation estimated 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 11,945 households might be displaced due to the flood. Displacement includes households evacuated within or very near to the inundated area. Displaced households represent 35,836 individuals, of which 28,880 may require short term publicly provided shelter.

Map 104: Riverine 1% Estimated Flood Shelter Requirements



Map Source: Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan

Vulnerability of Systems

Table 62: Vulnerability of Systems to Flooding, Fulton County

Vulnerability of Systems to Flooding, Fulton County	
Community Lifeline System	**Vulnerability**
Safety and Security	Moderate vulnerability. First responders may be exposed to dangerous flooding. Resources may be expended due to requests for assistance.
Food, Water, Shelter	Moderate vulnerability. Crops may be damaged. Water may be contaminated. Shelters may be unavailable due to flooding. Shelters may be without power due to energy system infrastructure damage.
Health and Medical	Moderate vulnerability. Hospitals may be forced to engage in vertical or horizontal evacuations. Facilities may be damaged. Facilities may be without power due to energy system infrastructure damage.
Energy	Moderate vulnerability. Energy infrastructure may be damaged.
Communications	Moderate vulnerability. Communications infrastructure may be damaged.
Transportation	High vulnerability. Roads and railroads may be inaccessible or damaged.
Hazardous Materials	Moderate vulnerability Flooding may generate hazardous materials releases from fixed sites or transportation.

Critical facilities and infrastructure can be rendered unusable or permanently destroyed, producing a significant impact on a jurisdiction's ability to conduct its day-to-day operations. Considerable damage to residential and/or commercial structures can irrevocably damage a community and its economy by creating economic hardship. If a chemical facility is severely impacted, stored chemicals can potentially wash away with the floodwater and have detrimental effects on the local environment.

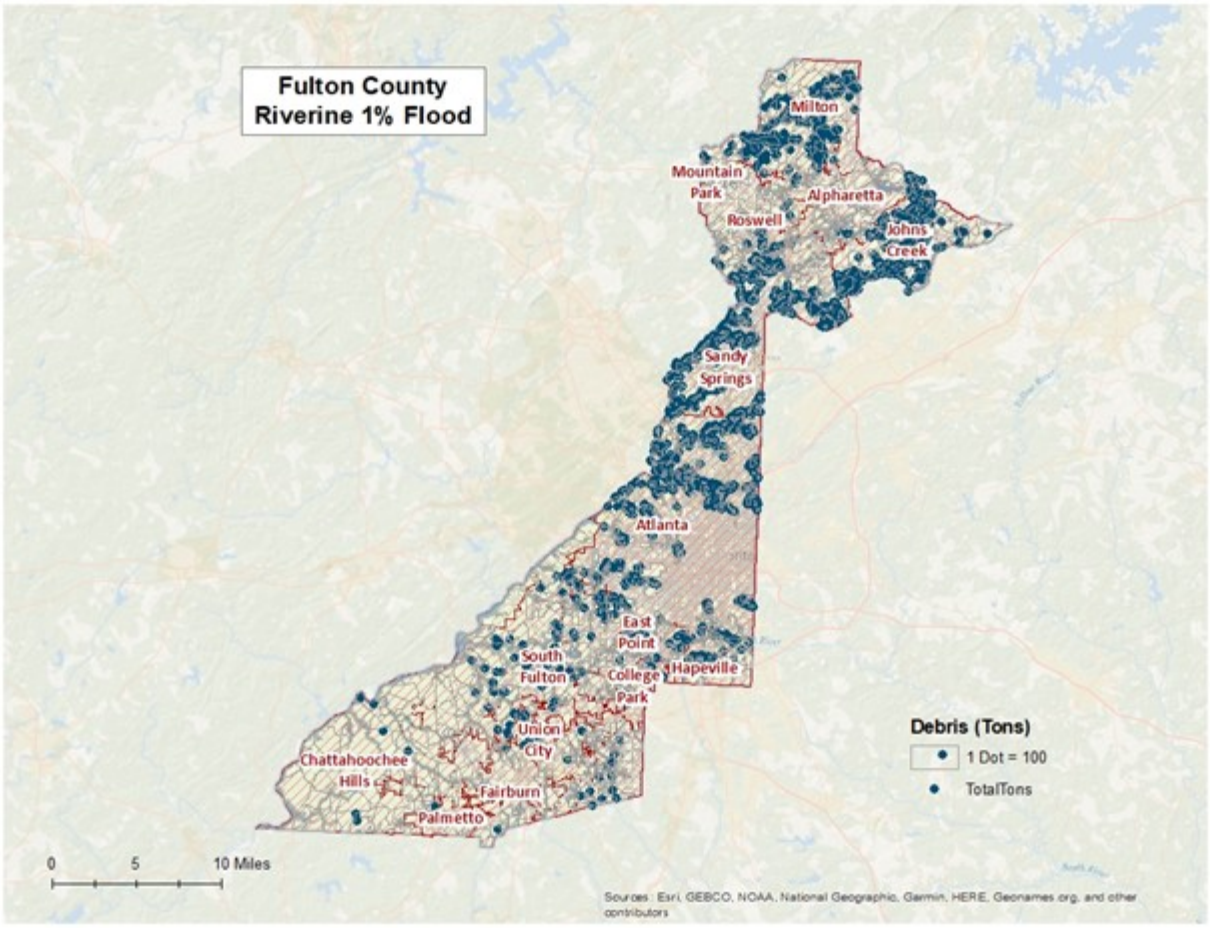
The Hazus-MH simulation estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories:

- 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-MH are unique to the Hazus-MH 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 169,732 tons of debris might be generated: 1) Finishes- 56,839 tons, 2) Structural – 54,480 tons, and 3) Foundations- 58,413 tons.

Map 105: Riverine 1% Flood Debris Weight (Tons)



Map Source: Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan

4.2.4A – Critical Facilities & Infrastructure

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 analysis identified three essential facilities that were subject to damage in the Fulton County riverine 1% probability floodplain.

Table 63: Riverine 1% Flood Damaged Essential Facilities

Name	Category	Facility
Fire Station 2 Hapeville	Fire Station	Hapeville
Parklane Elementary School	School	East Point
Continental Colony Elementary School	School	Atlanta

4.2.4B – Land Use & Development Trends

The FEMA Flood Insurance Study for Fulton County and participating jurisdictions (Revised June 19, 2020) stated the County has experienced rapid industrial, commercial, and residential growth in recent years. Numerous encroachments on the floodplain have occurred because of this development pressure.

With its growing population and continued urbanization, all of Fulton County is at risk of some type of flooding (riverine, flash, or urban). This is especially true for future development within the County's many 100-year and 500-year floodplains, or SFHAs. New construction in unmapped areas prone to flooding may further increase vulnerabilities and potential losses. However, Fulton County's current land-use regulations require the consideration of flood hazards during the development review process.

4.3.4C – Unique & Varied Risk

In Fulton County, flash flooding can affect the entire planning area or only a portion, or portions, of it. Unfortunately, there is no accurate method of predicting the location or extent of a flash flood's impact—namely, whether it will affect one participating jurisdiction, any number of, or all participating jurisdictions.

Additionally, it is not possible to predict any varying probability between the participating jurisdictions, except for varying risk as it is proportionate to a participating jurisdiction's demographics. Logically, participating jurisdictions with a greater population are at a higher risk than participating jurisdictions with a lower population.

Although this plan addresses Fulton County's vulnerability to flooding, it is not possible to calculate all components of risk at a jurisdictional level. Based on the 100-year riverine flood map, Fulton County is at risk for a 100-year riverine flood. Flood depth grid mapping was not available within the risk maps generated by the Georgia Flood Map Program.

Table 64: Unique & Varied Risk

Unique & Varied Risk	
Jurisdiction	**Risk Characteristics**
Fulton County	Parts of the jurisdiction are in a 100-yr floodplain.
City of Alpharetta	Parts of the jurisdiction are in a 100-yr floodplain.
City of Atlanta	Parts of the jurisdiction are in a 100-yr floodplain.
City of Chattahoochee Hills	Parts of the jurisdiction are in a 100-yr floodplain.
City of College Park	Parts of the jurisdiction are in a 100-yr floodplain.

City of East Point	Parts of the jurisdiction are in a 100-yr floodplain.
City of Fairburn	Parts of the jurisdiction are in a 100-yr floodplain.
City of Hapeville	Parts of the jurisdiction are in a 100-yr floodplain.
City of Johns Creek	Parts of the jurisdiction are in a 100-yr floodplain.
City of Milton	Parts of the jurisdiction are in a 100-yr floodplain.
City of Mountain Park	Parts of the jurisdiction are in a 100-yr floodplain.
City of Palmetto	Parts of the jurisdiction are in a 100-yr floodplain.
City of Roswell	Parts of the jurisdiction are in a 100-yr floodplain.
City of Sandy Springs	Parts of the jurisdiction are in a 100-yr floodplain.
City of South Fulton	Parts of the jurisdiction are in a 100-yr floodplain.
City of Union City	Parts of the jurisdiction are in a 100-yr floodplain.

Note: *Flood depth grid mapping was not available within the risk maps generated by the Georgia Flood Map Program.*

4.2.4D – Repetitive Loss Structures

Fulton County's previous MJHMP (2016) mentioned that as of July 2010, Fulton County had 38 residential repetitive loss structures within the planning area. Since that time, jurisdictions within Fulton County have been working to mitigate their exposure to flood hazards. For example, Atlanta and Roswell have been successfully engaged in acquiring properties with known repetitive losses, and other jurisdictions, including East Point and Sandy Springs, are taking similar actions.

However, there are Repetitive Loss (RL) properties, and subsequently, NFIP-insured properties within Fulton County. The following table, provided by AFCEMA, indicates the locations, number of losses, and number of policies.

Table 65: Repetitive Loss Properties, Fulton County & All Participating Jurisdictions

Repetitive Loss Properties, Fulton County & All Participating Jurisdictions								
Community Name	Community Number	Occupancy 1	Mitigate	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	Y	Y	Y	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
COLLEGE PARK, CITY OF	130086	SINGLE FMLY	YES	Y	N	N	N	N
FULTON COUNTY *	135160	OTHR-NONRES	NO	Y	N	N	N	N
SANDY SPRINGS, CITY OF	130669	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	Y	Y	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	Y	Y	N
COLLEGE PARK, CITY OF	130086	OTHR-NONRES	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
COLLEGE PARK, CITY OF	130086	2-4 FAMILY	YES	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N

Repetitive Loss Properties, Fulton County & All Participating Jurisdictions								
Community Name	Community Number	Occupancy 1	Mitigate	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
FULTON COUNTY *	135160	SINGLE FMLY	YES	Y	Y	Y	Y	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	YES	Y	N	Y	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	OTHER RESID	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	OTHR-NONRES	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	Y	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	OTHR-NONRES	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N

Repetitive Loss Properties, Fulton County & All Participating Jurisdictions								
Community Name	Community Number	Occupancy 1	Mitigate	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
ATLANTA, CITY OF	135157	OTHR-NONRES	NO	Y	N	N	N	N
FULTON COUNTY *	135160	ASSMD CONDO	YES	Y	Y	N	Y	N
SANDY SPRINGS, CITY OF	130669	SINGLE FMLY	NO	Y	Y	N	Y	N
FULTON COUNTY *	135160	SINGLE FMLY	YES	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	N	Y	N
SANDY SPRINGS, CITY OF	130669	SINGLE FMLY	NO	Y	Y	N	Y	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	Y	N	Y	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	OTHR-NONRES	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	OTHR-NONRES	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	BUSI-NONRES	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N

Repetitive Loss Properties, Fulton County & All Participating Jurisdictions								
Community Name	Community Number	Occupancy 1	Mitigate	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	OTHR-NONRES	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	YES	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	Y	N	Y	N
EAST POINT, CITY OF	130087	SINGLE FMLY	YES	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	Y	N	Y	N
COLLEGE PARK, CITY OF	130086	ASSMD CONDO	YES	Y	Y	N	Y	N
COLLEGE PARK, CITY OF	130086	OTHER RESID	YES	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	OTHER RESID	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	YES	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	OTHER RESID	NO	Y	Y	N	Y	N

Repetitive Loss Properties, Fulton County & All Participating Jurisdictions								
Community Name	Community Number	Occupancy 1	Mitigate	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
ATLANTA, CITY OF	135157	ASSMD CONDO	NO	Y	Y	N	Y	N
COLLEGE PARK, CITY OF	130086	OTHER RESID	YES	Y	Y	Y	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	Y	Y	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	Y	Y	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	ASSMD CONDO	YES	Y	Y	Y	Y	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
COLLEGE PARK, CITY OF	130086	OTHER RESID	YES	Y	Y	Y	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	Y	Y	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N

Repetitive Loss Properties, Fulton County & All Participating Jurisdictions								
Community Name	Community Number	Occupancy 1	Mitigate	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
EAST POINT, CITY OF	130087	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	2-4 FAMILY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	Y	N	N
ATLANTA, CITY OF	135157	OTHER RESID	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	Y	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	Y	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	Y	Y	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	OTHER RESID	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N

Repetitive Loss Properties, Fulton County & All Participating Jurisdictions								
Community Name	Community Number	Occupancy 1	Mitigate	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	OTHR-NONRES	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	OTHER RESID	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	OTHER RESID	NO	Y	N	N	N	N
EAST POINT, CITY OF	130087	SINGLE FMLY	NO	Y	N	N	N	N
SANDY SPRINGS, CITY OF	130669	SINGLE FMLY	NO	Y	N	Y	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	OTHR-NONRES	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	ASSMD CONDO	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	Y	N	N

Repetitive Loss Properties, Fulton County & All Participating Jurisdictions								
Community Name	Community Number	Occupancy 1	Mitigate	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	Y	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	Y	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	Y	Y	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	N	Y	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	Y	Y	Y	N
ATLANTA, CITY OF	135157	ASSMD CONDO	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	ASSMD CONDO	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	N	Y	N	N
FULTON COUNTY *	135160	SINGLE FMLY	YES	Y	Y	N	Y	N

Repetitive Loss Properties, Fulton County & All Participating Jurisdictions								
Community Name	Community Number	Occupancy 1	Mitigate	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	Y	Y	Y	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	ASSMD CONDO	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	Y	Y	N
FULTON COUNTY *	135160	OTHR-NONRES	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N

Repetitive Loss Properties, Fulton County & All Participating Jurisdictions								
Community Name	Community Number	Occupancy 1	Mitigate	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	Y	Y	N
ATLANTA, CITY OF	135157	OTHR-NONRES	NO	Y	N	N	N	N
EAST POINT, CITY OF	130087	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
EAST POINT, CITY OF	130087	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
EAST POINT, CITY OF	130087	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
COLLEGE PARK, CITY OF	130086	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N

Repetitive Loss Properties, Fulton County & All Participating Jurisdictions								
Community Name	Community Number	Occupancy 1	Mitigate	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	Y	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	YES	Y	N	Y	N	N
ROSWELL, CITY OF	130088	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	BUSI-NONRES	NO	Y	N	Y	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	2-4 FAMILY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N

Repetitive Loss Properties, Fulton County & All Participating Jurisdictions								
Community Name	Community Number	Occupancy 1	Mitigate	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
EAST POINT, CITY OF	130087	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
EAST POINT, CITY OF	130087	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	Y	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
SANDY SPRINGS, CITY OF	130669	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
SANDY SPRINGS, CITY OF	130669	SINGLE FMLY	NO	Y	N	N	N	N

Repetitive Loss Properties, Fulton County & All Participating Jurisdictions								
Community Name	Community Number	Occupancy 1	Mitigate	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ALPHARETTA, CITY OF	130084	SINGLE FMLY	NO	Y	Y	N	Y	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
SANDY SPRINGS, CITY OF	130669	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ALPHARETTA, CITY OF	130084	SINGLE FMLY	NO	Y	Y	N	Y	N

Repetitive Loss Properties, Fulton County & All Participating Jurisdictions								
Community Name	Community Number	Occupancy 1	Mitigate	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ROSWELL, CITY OF	130088	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	OTHR-NONRES	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N

Repetitive Loss Properties, Fulton County & All Participating Jurisdictions								
Community Name	Community Number	Occupancy 1	Mitigate	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
ROSWELL, CITY OF	130088	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	Y	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	YES	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N

Repetitive Loss Properties, Fulton County & All Participating Jurisdictions								
Community Name	Community Number	Occupancy 1	Mitigate	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	Y	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	YES	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	N	Y	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	Y	Y	Y	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ROSWELL, CITY OF	130088	SINGLE FMLY	NO	Y	N	N	N	N

Repetitive Loss Properties, Fulton County & All Participating Jurisdictions								
Community Name	Community Number	Occupancy 1	Mitigate	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	N	Y	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	Y	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	N	Y	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	N	Y	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	OTHR-NONRES	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	Y	Y	N

Repetitive Loss Properties, Fulton County & All Participating Jurisdictions								
Community Name	Community Number	Occupancy 1	Mitigate	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	Y	Y	N
ATLANTA, CITY OF	135157	BUSI-NONRES	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	Y	Y	N
ATLANTA, CITY OF	135157	OTHR-NONRES	NO	Y	N	Y	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	YES	Y	N	Y	N	N
SANDY SPRINGS, CITY OF	130669	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N

Repetitive Loss Properties, Fulton County & All Participating Jurisdictions								
Community Name	Community Number	Occupancy 1	Mitigate	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
SANDY SPRINGS, CITY OF	130669	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	OTHER RESID	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
JOHNS CREEK, CITY OF	130678	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	BUSI-NONRES	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N

Repetitive Loss Properties, Fulton County & All Participating Jurisdictions								
Community Name	Community Number	Occupancy 1	Mitigate	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
COLLEGE PARK, CITY OF	130086	OTHER RESID	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	Y	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	OTHER RESID	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	2-4 FAMILY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	OTHER RESID	NO	Y	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ROSWELL, CITY OF	130088	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N

Repetitive Loss Properties, Fulton County & All Participating Jurisdictions								
Community Name	Community Number	Occupancy 1	Mitigate	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
CHARLTON COUNTY*	130292	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	Y	Y	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	Y	N	Y	N
JOHNS CREEK, CITY OF	130678	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
FULTON COUNTY *	135160	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
SANDY SPRINGS, CITY OF	130669	OTHER RESID	NO	Y	N	N	N	N
SANDY SPRINGS, CITY OF	130669	OTHER RESID	NO	Y	N	N	N	N
EAST POINT, CITY OF	130087	SINGLE FMLY	NO	Y	N	N	N	N

Repetitive Loss Properties, Fulton County & All Participating Jurisdictions								
Community Name	Community Number	Occupancy 1	Mitigate	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
COLLEGE PARK, CITY OF	130086	SINGLE FMLY	NO	N	Y	N	Y	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	Y	N	N
JOHNS CREEK, CITY OF	130678	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	Y	N	N
SANDY SPRINGS, CITY OF	130669	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	Y	N	N
ROSWELL, CITY OF	130088	SINGLE FMLY	NO	Y	N	N	N	N

Repetitive Loss Properties, Fulton County & All Participating Jurisdictions								
Community Name	Community Number	Occupancy 1	Mitigate	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
EAST POINT, CITY OF	130087	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
EAST POINT, CITY OF	130087	SINGLE FMLY	NO	Y	N	N	N	N
JOHNS CREEK, CITY OF	130678	SINGLE FMLY	NO	Y	N	N	N	N
ROSWELL, CITY OF	130088	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N
ATLANTA, CITY OF	135157	SINGLE FMLY	NO	Y	N	N	N	N

Data Source: Georgia Emergency Management Agency (GEMA)

4.2.5 - Hazus Models

Refer to Appendix E - Hazard Risk Analyses Supplement.

Photo Source: iStock by Getty Images

4.2(GH) – Geological Hazards

4.2.1 – Hazard Description

Geological hazards are any geological or hydrological processes that pose a threat to humans and natural properties. Every year, severe natural events destroy infrastructure and cause injuries and deaths. Geologic hazards may include volcanic eruptions and other geothermal related features, earthquakes, landslides and other slope failures, mudflows, sinkhole collapses, snow avalanches, flooding, glacial surges and outburst floods, tsunamis, and shoreline movements. For mitigation planning purposes, landslides and sinkholes will be discussed in this section of the 2022 Fulton County MJHMP.

Landslides

Landslides are the downward and outward movement of slopes. Landslides include a wide range of ground movement such as rock falls, deep failure of slopes, and shallow debris flows. Although gravity acting on and over steepened slopes is the primary reason for a landslide, landslides are often prompted by the occurrence of other disasters. Other contributing factors include erosion, steep slopes, precipitation (rain and snow), and earthquakes.

Slope material often becomes saturated with water and may develop a mudflow. If the ground is saturated, the water weakens the soil and rock by reducing cohesion and friction between particles. Cohesion, which is the tendency of soil particles to "stick" to each other, and friction affect the strength of the material in the slope and contribute to a slope's ability to resist-down slope movement. Saturation also increases the weight of the slope materials and, like the addition of material on the upper portion of a slope, increases the gravitational force on the slope. Undercutting of a slope reduces the slope's resistance to the force of gravity by removing much-needed support at the base of the slope.

Alternating cycles of freeze and thaw can result in a slow, virtually imperceptible loosening of rock, thereby weakening the rock and making it susceptible to slope failure. The resulting slurry of rock and mud can pick up trees, houses, and cars, and block bridges and tributaries, causing flooding along its path.

Additionally, removal of vegetation can leave a slope much more susceptible to superficial landslides because of the loss of the stabilizing root systems.

Landslides, according to the U.S. Geological Survey (USGS), are common to almost every state in the country, and cause over $1 billion in damages and 25-50 deaths each year.

Sinkholes

A sinkhole, as explained by USGS, is a depression in the ground that has no natural external surface drainage. Basically, this means that when it rains, all the water stays inside the sinkhole and typically drains into the subsurface.

Sinkholes are most common in what geologists call "karst terrain." These are regions where the types of rock below the land surface can naturally be dissolved by groundwater circulating through them. Soluble rocks include salt beds and domes, gypsum, and limestone and other carbonate rock. (Florida, for instance, is an area largely underlain by limestone and is highly susceptible to sinkholes.)

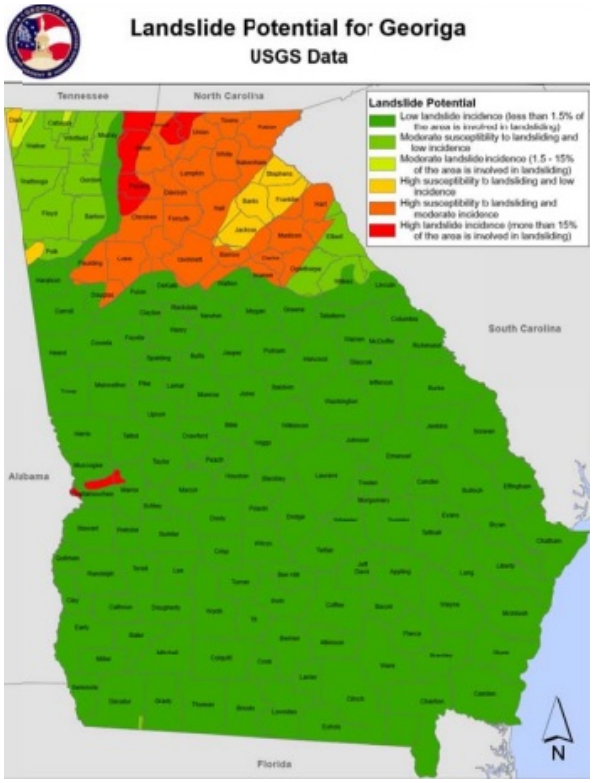
When water from rainfall moves down through the soil, these types of rock begin to dissolve. This creates underground spaces and caverns.

Sinkholes are dramatic because the land usually stays intact for a period until the underground spaces just get too big. If there is not enough support for the land above the spaces, then a sudden and sometimes catastrophic collapse of the land surface can occur.

4.2.2 – Location & Extent

Landslides: According to the 2019 Georgia Hazard Mitigation Strategy, most of Fulton County has landslide incidence. Areas north of Interstate 285, including Alpharetta, Johns Creek, Milton, Roswell, and Sandy Springs have a high susceptibility for landslides and a moderate incidence.

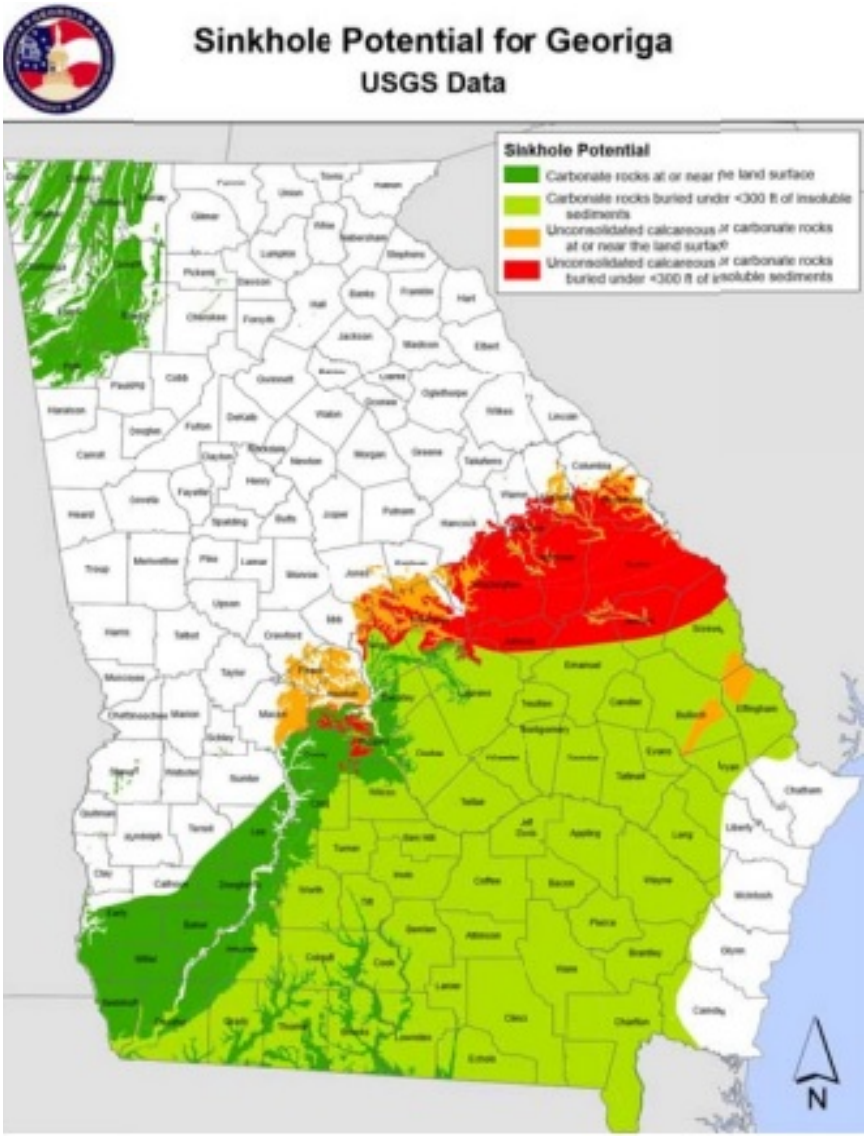
Map 106: Landslide Potential for Georgia



Map Source: 2019 Georgia Hazard Mitigation Strategy

Sinkholes: According to the 2016 Fulton County MJHMP, groundwater accounts for only 1% of the total water source in the County. The figure shows that the Fulton County is not underlain by evaporates or carbonates. Per the 2019 Georgia Hazard Mitigation Strategy, Fulton County has a low sinkhole potential.

Map 107: Sinkhole Potential for Georgia



Map Source: 2019 Georgia Hazard Mitigation Strategy

4.2.3 – Previous Occurrences

Information regarding geological hazard events is not readily available in the public domain. The USGS shows no major landslide events occurring in Fulton County since 2016. However, review of the article "A Few of the Metro's Biggest Sinkholes" from *The Atlanta Journal Constitution* revealed the following events (https://www.ajc.com/news/photos-few-metro-atlanta-biggest-sinkholes/BQo0BCR60jFobPgCvJ7zyI/).

Table 66: Fulton County Sinkhole Events

Fulton County Sinkhole Events		
Date	**Location**	**Description**
8/1955	Ponce de Leon Ave. and Penn Ave., Atlanta	A sinkhole extending 42-1/2' deep and 25' in diameter damaged Ponce de Leon Ave. and Penn Ave. in Atlanta.
6/6/1993	35 14th St. NE, Atlanta	Heavy rains caused a massive sinkhole to develop in the parking lot of the Marriott Suites hotel in Midtown Atlanta. The event caused two fatalities.
6/12/1997	Cleveland Ave., East Point	A sinkhole destroyed a building on Cleveland Ave. in East Point.
5/3/1999	Peachtree Dunwoody Rd, Sandy Springs	A broken watermain eroded the foundation of Peachtree Dunwoody Rd., just south of Spalding Dr. in Sandy Springs creating a large sinkhole.
5/28/1999	2300 Peachtree Road, Atlanta	A water main break created a sinkhole on the southbound side of 2300 Peachtree Rd. in Atlanta.
7/26/1999	John Wesley Dobbs Ave. and Fort St. just below the I-85/I-75 Connector, Atlanta	A subcontractor using a boring technique struck a water main causing a huge crater of a hole and buckled the street in a ripple effect toward the interstate.
5/8/2003	Lakewood Ave, Atlanta	Heavy rains created a 15' x 7' sinkhole on Lakewood Ave. in Atlanta.
7/29/2004	Chattahoochee Ave, Atlanta	Cracked storm and sewer lines created a sinkhole on Chattahoochee Ave. near Logan Circle in Atlanta.
5/10/2005	Peachtree St, Atlanta	A valve broke during a water main repair causing a sinkhole on Peachtree St. in Atlanta.
2/5/2008	14th St. NW and Spring Street NW, Atlanta	A sinkhole damaged 14th St. NW in Atlanta and partially swallowed a dump truck. There were no injuries.
10/8/2008	Centennial Olympic Park Drive at West Peachtree Place, Atlanta	A water main break caused a 20' x 8' x 10' sinkhole to develop, damaging two lanes of Centennial Olympic Park Dr. in Atlanta.
6/10/2013	Peachtree Dunwoody Rd. and Starlight Dr, Sandy Springs	A pipe burst causing a sinkhole in the Starlight Hills neighborhood at Peachtree Dunwoody Rd. and Starlight Dr. in Sandy Springs.
1/27/2014	Valley Heart Drive, Atlanta	Freezing weather caused a water pipe to burst, creating a sinkhole on Collier Drive between Valley Heart Drive and Chalmers Drive in Atlanta.
9/12/2014	West Wieuca Road NW, Atlanta	Flooding caused a sinkhole to form in the eastbound lane of West Wieuca Rd NW near Dudley Lane at Chastain Park in Atlanta.

4.2.3A – Probability of Future Events

Based upon data from the USGS and historical records, events involving geological hazards are **highly likely** to occur. The USGS indicates a higher probability for landslides than sinkholes. However, more events involving sinkholes have occurred recently than landslides.

4.2.4 – Vulnerability & Impact

Geological hazards represent a threat to life and property. The USGS states that 25-50 people die in the United States each year due to landslides. Most landslide fatalities are from rock falls, debris flows, or volcanic debris flows (called lahars). Lahars are not a threat in Fulton County. However, rock falls and debris flows are a threat.

Vulnerability of Facilities

FEMA's National Risk Index (NRI) estimates annual losses of $44,677 in Fulton County due to geological hazards. Areas north of Interstate 285, including Alpharetta, Johns Creek, Milton, Roswell, and Sandy Springs have a high susceptibility for landslides and a moderate incidence. Therefore, facilities in these areas are more vulnerable to landslides.

Vulnerability of Population

FEMA's NRI estimates 0.01 deaths in Fulton County due to geological hazards. Homes and populations in the aforementioned areas north of Interstate 285 are more vulnerable to landslides.

Vulnerability of Systems

Table 67: Vulnerability of Systems to Geological Hazards, Fulton County

Vulnerability of Systems to Geological Hazards, Fulton County	
Community Lifeline System	**Vulnerability**
Safety and Security	Low vulnerability. Resources may be expended responding to requests for assistance. Communications may be hindered by infrastructure damage.
Food, Water, Shelter	Low vulnerability. Water and power delivery may be interrupted damaged infrastructure. Shelters may be damaged.
Health and Medical	Low vulnerability. Water and power service be interrupted by damaged infrastructure. Communications may be hindered by infrastructure damage. Resources may be expended responding to the community's healthcare needs.
Energy	Low vulnerability. Delivery of power and natural gas may be interrupted by infrastructure damage.
Communications	Low vulnerability. Infrastructure may be damaged.
Transportation	High vulnerability. Road and railroads may be impassible or damaged.
Hazardous Materials	Low vulnerability. Fixed sites that store or generate hazardous materials may be damaged, resulting in a release.

Transportation is the primary system affected by geological hazards. Roads can be damaged, destroyed, or made impassable due to landslides and sinkholes.

4.2.4A – Critical Facilities & Infrastructure

Areas north of Interstate 285, including Alpharetta, Johns Creek, Milton, Roswell, and Sandy Springs have a high susceptibility for landslides and a moderate incidence. Therefore, critical facilities and infrastructure in these areas are more vulnerable to landslides. A complete list of critical facilities and infrastructure can be found in Appendix C.

4.2.4B – Land Use & Development Trends

Because the population of Fulton County continues to grow and development projects are underway, people, facilities, and systems within the planning area are increasingly vulnerable to geological hazards. The USGS states that landslides are commonly the result of building roads and structures without grading of slopes, poorly planned alteration of drainage patters, and disturbing old landslides. These factors should be considered carefully for future land use and development.

4.2.4C – Unique & Varied Risk

Table 68: Unique & Varied Risk

Unique & Varied Risk	
Jurisdiction	**Risk Characteristics**
Fulton County	Areas north of Interstate-285 are at a high susceptibility and a moderate incidence of landslides.
City of Alpharetta	High susceptibility and a moderate incidence of landslides.
City of Atlanta	Low landslide susceptibility.
City of Chattahoochee Hills	Low landslide susceptibility.
City of College Park	Low landslide susceptibility.
City of East Point	Low landslide susceptibility.
City of Fairburn	Low landslide susceptibility.
City of Hapeville	Low landslide susceptibility.
City of Johns Creek	High susceptibility and a moderate incidence of landslides.
City of Milton	High susceptibility and a moderate incidence of landslides.
City of Mountain Park	High susceptibility and a moderate incidence of landslides.
City of Palmetto	Low landslide susceptibility.
City of Roswell	High susceptibility and a moderate incidence of landslides.
City of Sandy Springs	High susceptibility and a moderate incidence of landslides.
City of South Fulton	Low landslide susceptibility.
City of Union City	Low landslide susceptibility.

4.2.4D – Repetitive Loss (RL) Properties

There are no repetitive loss properties associated with this hazard in the planning area.

Photo Source: iStock by Getty Images

4.2(EH) – Extreme Heat

4.2.1 – Hazard Description

According to the National Weather Service (NWS), extreme heat, also known as a heat wave, is a period of abnormally hot weather generally lasting more than two days. Heat waves can occur with or without high humidity. They have the potential to cover a large area, exposing a high number of people to hazardous heat-related conditions (https://www.weather.gov/safety/heat-during).

Heat can be taxing on the body. During extremely hot weather, the body's ability to cool itself is challenged. According to the Centers for Disease Control and Prevention (CDC), an average of 702 heat-related deaths occurred annually in the United States between 2004-2018 (https://www.cdc.gov/mmwr/volumes/69/wr/mm6924a1.htm). The National Highway Traffic Safety Administration (NHTSA) reports that children dying from heatstroke in cars, either because they were left or became trapped, has increased in recent years. Since 1998, over 900 child hot car deaths have occurred in the United States (https://www.nhtsa.gov/child-safety/you-can-help-prevent-hot-car-deaths).

Heat cramps may be the first sign of heat-related illness and are characterized heavy sweating and by painful muscle cramps and spasms usually in the legs and abdomen. Heat exhaustion symptoms include heavy sweating, weakness, clammy skin, fast or weak pulse, muscle cramps, dizziness, nausea and vomiting, headache, and fainting. A heat stroke is the most dangerous heat-related illness. It is characterized by a throbbing headache, confusion, nausea, dizziness, body temperature greater than 103ºF, fainting, and loss of consciousness. The CDC identifies the following six groups as being especially vulnerable to extreme heat (https://www.cdc.gov/disasters/extremeheat/specificgroups.html):

Older Adults (age 65+): Older adults do not adjust as well as young people to sudden temperature change. They are more likely to have a chronic medical condition that changes normal body responses to

heat. Older adults are more likely to take prescription medicines that affect the body's ability to control its temperature or sweat.

Infants and Children: Infants and young children rely on others to keep them cool and hydrated when it is hot outside. The NHTSA reports that child hot-car deaths have increased in recent years. In 2018 and 2019, a record 53 children died of vehicular heat strokes each year. Most hot car deaths – 53% - happen because someone forgets a child in a car. About 46% of the time when a child was forgotten, the caregiver meant to drop the child off at a daycare or preschool. Nearly 75% of children who are forgotten, and die are less than 2 years old.

Individuals with Chronic Conditions: People with chronic conditions are less likely to sense and respond to changes in temperature. They may be taking medications that can make the effect of extreme heat worse. Conditions like heart disease, mental illness, poor blood circulation, and obesity are risk factors for heat-related illness.

Low-income Individuals: People with limited income are less likely to have access to air conditioning. Individuals with low income also are much more likely to be unable to afford their energy bills, especially during summer months when costs are higher.

Athletes: People who exercise in extreme heat are more likely to become dehydrated and experience heat-related illness.

Outdoor workers: People who work outdoors are more likely to become dehydrated and get heat-related illness.

Extreme heat also has a negative impact on infrastructure systems, particularly transportation and utilities. Extreme heat may damage roads, bridges, and railroads. Higher temperatures can cause pavement to soften and expand. This can create rutting and potholes, particularly in high-traffic areas and can place stress on bridge joints. High temperatures cause rail tracks to expand and buckle. Periods of extreme heat can affect aircraft performance and may cause airplanes to face cargo restrictions, flight delays, and cancellations.

Heat waves will also generate a greater demand on local utility systems' ability to deliver water and power. Demands for electricity commonly increase to keep homes, workspaces, and food storage areas cool. This demand can strain the electrical grid. Water resources are often strained due to power generation. Crops also require more water during extreme heat events and can be damaged.

Climate change is having an impact on the frequency of extreme heat. According to the Climate Science Special Report, the annual average temperature over the contiguous United States has increased by 1.2°F for the period 1986–2016 relative to 1901–1960 and by 1.8°F based on a linear regression for the period 1895–2016. Annual average temperature over the contiguous United States is projected to rise. Increases of about 2.5°F are projected for the period 2021–2050 relative to 1976–2005, implying recent record-setting years may be "common" in the next few decades. Much larger rises are projected by the late century (Vose, R.S., D.R. Easterling, K.E. Kunkel, A.N. LeGrande, and M.F. Wehner, 2017: Temperature changes in the United States. In: Climate Science Special Report: Fourth National Climate Assessment, Volume I [Wuebbles, D.J., D.W. Fahey, K.A. Hibbard, D.J. Dokken, B.C. Stewart, and T.K. Maycock (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, pp. 185-206, doi: 10.7930/J0N29V45).

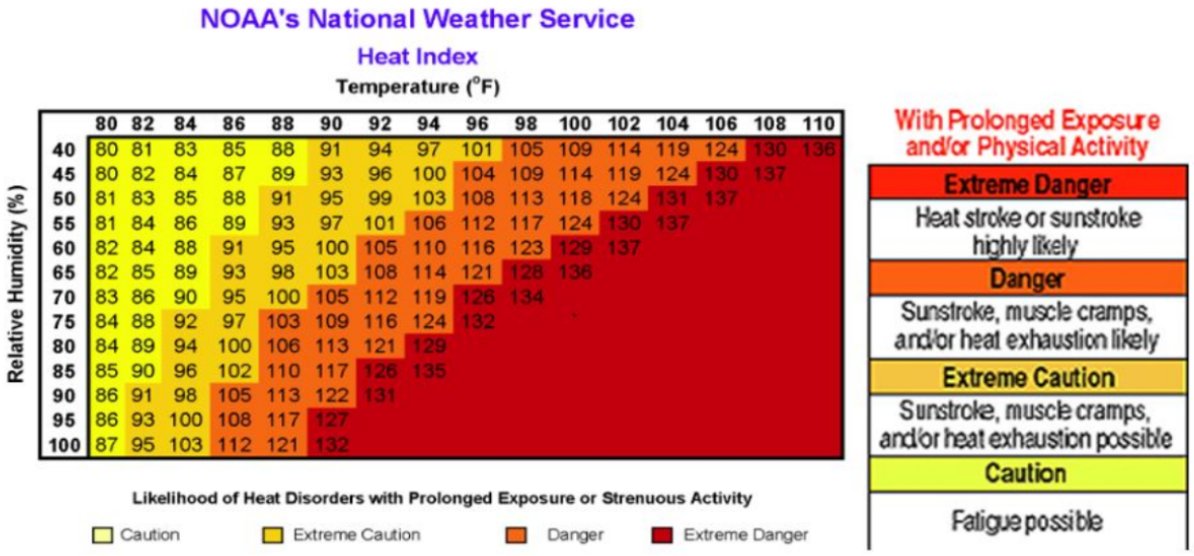
4.2.2 – Location & Extent

Extreme heat can occur anywhere in Fulton County. Areas in the City of Atlanta may be more prone to extreme heat due to the heat island effect. According to the U.S. Environmental Protection Agency (EPA), heat islands are urbanized areas that experience higher temperatures due to structures such as buildings, roads, and other infrastructure absorbing and re-emitting the sun's heat more than natural landscapes

such as forests and water bodies (https://www.epa.gov/heatislands). Extreme heat is much more likely to occur in the summer and it often comes in waves that last over a period of days.

In order to measure the extent of Excessive Heat, the National Weather Service, uses the Heat Index (HI), a chart that accurately measures the apparent temperature of the air as it increases with the relative humidity. The Heat Index can be used to determine what effects the temperature and humidity can have on the population. To determine the Heat Index, you need the temperature and the relative humidity.

Illustration 7 : NWS Heat Index Graphic



Source: National Weather Service

The hottest temperature recorded in Atlanta was 106ºF on June 30, 2012. This broke the previous record of 105ºF, which was set on July 17, 1980. The following table shows Atlanta's hottest two-week periods since 1980 (https://www.cbs46.com/news/remembering-a-brutal-atlanta-heat-wave-40-years-ago/article_780140f4-c752-11ea-a853-0bacf77ae1fa.html.)

Table 69: Hottest Two-Week Periods in Fulton County

Hottest Two-Week Periods in Fulton County	
Dates	**Average High Temperature**
July 4-17, 1980	99.3ºF
August 9-22, 2007	99.3ºF
July 17-30, 1993	98.8ºF
July 12-25, 1995	98.2ºF
June 28-July 11, 2012	97.9ºF

Data Source: CBS 46, Atlanta, GA

4.2.3 – Previous Occurrences

The NOAA/NCEI database shows 11 heat or excessive heat events and one (1) heat-related death for the combined North Fulton and South Fulton Zones between January 1950, and December 31, 2021. These occurred in September 2002 and August 2007. Unfortunately, the NOAA/NCEI criteria for reporting these events is not clear so the numbers are most likely not

representative of all the extreme heat events occurring within the specified the period. Additional reliable data pertaining to previous occurrences is not available.

4.2.3A – Probability of Future Events

As previously stated, reliable data for extreme heat events is not available. However, given the typical climate for the planning area, the likelihood of extreme heat occurring in Fulton County is **highly likely.**

4.2.4 – Vulnerability & Impact

All areas of Fulton County are susceptible to extreme heat. The City of Atlanta, as previously explained, may be more susceptible to extreme heat due to the heat island effect.

Vulnerability of Facilities

Critical facilities are not vulnerable to extreme heat. However, extreme heat can drive individuals with inadequate means of staying cool to seek refuge in facilities to stay cool. These facilities, known as cooling centers, may be pre-identified critical facilities or become critical facilities to protect individuals from the effects of extreme heat.

Vulnerability of Population

Individuals in the CDC's six vulnerable groups to extreme heat, i.e., Older Adults (age 65+), Infants and Children, Individuals with Chronic Conditions, Low-income Individuals, Athletes, and Outdoor Workers, are of special concern. Information pertaining to the vulnerable population, less the latter two, is represented in the following table.

Table 70: Vulnerability of Population, Fulton County

Vulnerability of Population, Fulton County		
Characteristic	**Percentage of Population**	**Number of Population**
Older Adults (aged 65+)	12.0%	127,672
Infants and Children (<5 years old)	5.8%	61,708
Chronic Conditions (<65 years old)	7.2%	76,603
Poverty	13.8%	146,823

Data Source: U.S. Census Bureau, Fulton County Population Estimates, July 1, 2019 (https://www.census.gov/quickfacts/fultoncountygeorgia)

Vulnerability of Systems

Table 71: Vulnerability of Systems to Extreme Heat, Fulton County

Vulnerability of Systems to Extreme Heat, Fulton County	
Community Lifeline System	**Vulnerability**
Safety and Security	Moderate vulnerability. Personnel may be exposed to extreme heat for extended periods of time. Resources may be expended responding to requests for assistance.
Food, Water, Shelter	Moderate vulnerability. Water may become scarce. Agriculture can be damaged by extreme heat. Shelters may experience power outages due to increased demand on energy providers.

Health and Medical	Moderate vulnerability. Healthcare facilities may experience power outages due to increased demand on energy providers. Healthcare resources may be expended responding to the community's healthcare needs.
Energy	High vulnerability. Increased demand for energy may create an energy shortfall, which will create power outages. Power outages will expose more people to extreme heat.
Communications	Low vulnerability. Communication infrastructure may be damaged by extreme heat.
Transportation	Moderate vulnerability. Roads, bridges, and rail lines may be damaged by extreme heat. Air travel may be delayed or cancelled due to safety concerns.
Hazardous Materials	Low vulnerability. Extreme heat will have little effects on contained hazardous materials.

4.2.4A – Critical Facilities & Infrastructure

Extreme heat poses a limited risk to critical facilities and infrastructure within Fulton County, mainly due to the potential for energy disruptions. A complete list of critical facilities and infrastructure can be found in Appendix C.

4.2.4B – Land Use & Development Trends

Because the population of Fulton County continues to grow and development projects are underway, people and facilities within the planning area are increasingly vulnerable to the short- and long-term effects of extreme heat. Structures such as buildings, roads, and other infrastructure absorb and re-emit the sun's heat more than natural landscapes such as forests and water bodies. More development will expose more areas and more people to the heat island effect.

4.2.4C – Unique & Varied Risk

The urban areas inside the City of Atlanta are more susceptible to the effects of extreme heat. This is due to the heat island effect.

4.2.4D – Repetitive Loss (RL) Properties

There are no repetitive loss properties associated with this hazard inside the planning area.

Photo Source: iStock by Getty Images

4.2(SW) – Severe Weather

4.2.1 – Hazard Description

Meteorologists generally define severe weather as any aspect of the weather that poses risk to life and/or property and requires the intervention of authorities. Severe weather can happen at any time, and in any part of the country, and may present itself in a variety of ways. Severe weather usually applies to local, intense, and often damaging storms such as thunderstorms, hailstorms, and tornadoes, but can also describe more widespread events such as tropical systems. For mitigation planning purposes, this section provides general and historical information about three specific severe weather elements: thunderstorms (including thunderstorm wind), lightning, and hail.

Thunderstorms: A thunderstorm forms when warm, moist air near the Earth's surface is forced upward through some catalyst (convection or frontal weather system). As the air rises, it cools, condenses, and forms cumulonimbus clouds that can reach up to 40,000 feet in altitude. When the rising air reaches its dew point, water droplets (rain) and ice (hail) form and begin falling the long distance through the clouds towards the ground. As the droplets fall, they collide with other droplets and become larger. The falling droplets create a downdraft of air that spreads out at the Earth's surface, resulting in strong, oftentimes damaging winds. The collision of the water and ice particles in the cloud(s) form a large electrical field, discharging as dangerous cloud-to-ground or ground-to-cloud lightning.

There are four ways in which thunderstorms can organize: single cell, multi-cell cluster, multi-cell lines (squall lines), and supercells. The average single-cell thunderstorm develops rapidly, is approximately 15 miles in diameter, and lasts less than 30 minutes at a single location. Multi-cell clusters and multi-cell lines, which can also form relatively quickly, can travel for distances exceeding 600 miles. Supercells are usually associated with severe weather phenomena. Regardless of the type of thunderstorm, warm, humid conditions are most favorable for their development.

A thunderstorm is classified as "severe" by NWS when it contains one or more of the following: hail one inch or greater, winds gusting more than 50 knots (57.5 mph), and/or a tornado. In these instances, Severe Thunderstorm Watches or Severe Thunderstorm Warnings will be issued by the national/local weather authorities.

A Severe Thunderstorm Watch is issued by NOAA's Storm Prediction Center when conditions are favorable for severe thunderstorms. A watch can cover parts of a state or several states. A Severe Thunderstorm Warning, on the other hand, is issued by local NOAA NWS Forecast office meteorologists and is specific to a designated area. Warnings, which can cover parts of counties or even several counties, mean severe weather has been reported by spotters or indicated by radar and that there is a serious threat to life and property.

According to NOAA, many hazardous weather events are associated with thunderstorms. Under the right conditions, rainfall from thunderstorms causes flash flooding, which kills more people each year than hurricanes, tornadoes, or lightning. Lightning is responsible for many fires around the world each year and causes fatalities. Hail up to the size of softballs damages cars and windows, and kills livestock caught out in the open.

Thunderstorm wind, as defined in NOAA/NCEI's Storm Data Preparation document, is "wind, arising from convection (occurring within 30 minutes of lightning being observed or detected), with speeds of at least 58 mph, or winds of any speed (non-severe thunderstorm winds below 58 mph) producing a fatality, injury, or damage. Strong, i.e., up to more than 120 mph, straight-line winds associated with thunderstorms knock down trees, power lines and mobile homes.

Downbursts, including dry or wet microbursts or macrobursts, are classified as Thunderstorm Wind events. In some cases, the downburst may travel several miles from the parent thunderstorm, or the parent thunderstorm may have dissipated. A gustnado is a small and usually weak whirlwind that forms as an eddy in thunderstorm outflows. It does not connect with any cloud-base rotation and is not a tornado. Since their origin is associated with cumuliform clouds, gustnadoes are classified as Thunderstorm Wind events.

Tornadoes, which can develop from severe thunderstorms, are addressed in Section 4.2(T) – Tornado.

Lightning: Lightning is one of the more dangerous weather hazards in the United States. The NWS describes lightning as a giant spark of electricity in the atmosphere or between the atmosphere and the ground. As the rapid discharge between positive and negative regions of a thunderstorm, lightning flashes are composed of a series of strokes (with an average of about four). The length and duration of each lightning strike vary, but typically average around 30 microseconds. People and objects can be directly struck by lightning, or damage can occur indirectly when the current (up to 100 million volts of electrical potential) passes through or near them.

Per the NWS, lightning strikes the U.S. about 25 million times a year, killing an average of 51 people and accounting for hundreds of injuries including serious burns. Interestingly, lightning is hotter than the surface of the sun and can reach temperatures around 50,000° Fahrenheit. Lightning is also responsible for millions of dollars of property damage annually, including damage to buildings, communications systems, powerlines, and electrical systems. Moreover, lightning causes forest and brush fires, as well as deaths and injuries to livestock and other animals.

According to the National Lightning Safety Institute (NLSI), lightning triggers more than 26,000 fires in the U.S. each year. The Institute estimates property damage, increased operating costs, production delays, and lost revenue from lightning and secondary effects to be $6-7 billion dollars/year.

Hail: Often associated with thunderstorms, hail forms when updrafts carry raindrops into extremely cold areas of the atmosphere and form ice. The frozen precipitation falls to the ground when it becomes heavy enough to overcome the strength of the updraft. Hailstones can range from the size of a pea to the size of

a grapefruit, and they can span a variety of shapes, though most are spherical. They are usually less than two inches in diameter and can fall at speeds of 120 mph.

The largest recorded hailstone in the U.S. was nearly as big as a volleyball and fell on July 23, 2010, in Vivian, South Dakota. It was eight inches in diameter and weighed almost two pounds.

On average, hail causes nearly $1 billion in damage in the U.S. each year to crops and property including automobiles, aircraft, and structures. According to the NOAA's Severe Storms database, there were 6,045 major hailstorms in 2017 resulting in $1.8 billion in property and crop damage. Hail also poses a safety threat to both humans and animals. In fact, NOAA estimates that 24 people in the U.S. are injured each year with some injuries significant enough to send them to the hospital.

4.2.2 – Location & Extent

Severe weather is a common occurrence across the U.S., including the State of Georgia. According to SHELDUS™/NCEI data referenced in the 2019 Georgia Hazard Mitigation Strategy, an average of 331 severe weather events occurred across the State between 1952 and 2017. These events in total caused 990 injuries, 168 fatalities, and more than $1.2 billion in damages. Over the period from 1997 to 2017, the historic occurrence jumped to 499 severe weather events per year, which equates to a significant chance of a severe weather occurrence in any given year.

Severe weather is not spatially confined to any location in Georgia. The entire State of Georgia, including Fulton County, is equally at risk of severe weather, namely thunderstorms (including thunderstorm wind), hail, and lightning. Severe weather frequently occurs when cold fronts collide with warm air moving north into Fulton County from the Gulf of Mexico. These collisions can spawn intense thunderstorms as well as tornadoes. This is especially true during the spring and autumn months when the atmosphere is most likely to be unstable. However, severe weather can happen at any time of year.

Wind events (high wind, strong wind, and thunderstorm wind) are common in Fulton County. Between January 1, 2016, and December 31, 2020, NOAA/NCEI recorded 41 wind events in Fulton County that met severe criteria. Between January 1, 2016, and December 31, 2020, NOAA/NCEI recorded 10 hail events in Fulton County that met severe criteria. Since severe thunderstorm winds and hail are not isolated to a particular area, the entirety of Fulton County, including all assets located within the County, can be considered at risk. This includes its entire population, all critical facilities, buildings (commercial, residential, etc.), and infrastructure.

Wind observations or measurements are required for determining the probability of wind damage and the estimation of wind energy. To help with the planning, design, and construction of buildings for residential and commercial purposes, as well as mitigation efforts, the American Society of Civil Engineers (ASCE) calculates Average Hazard Wind Scores. The wind speeds correspond with the assigned hazard score with values ranging from one to five, as shown in the following table.

Table 72: American Society of Civil Engineers (ASCE) Average Hazard Wind Score(s)

ASCE Average Hazard Wind Scores	
Wind Score(s)	**Wind Speeds (mph)**
1	<90
2	91-100
3	101-110
4	111-120
5	>120

Data Source: ASCE

As documented in the 2019 Georgia Hazard Mitigation Strategy, Fulton County has an average ASCE wind score of 1 with wind speeds < 90 MPH. Winds associated with strong to severe thunderstorms contribute significantly to the rating. Potential impacts from localized wind events include, but are certainly not limited to, the following:

- Significant debris generation
- Residential and commercial property loss
- Economic impact from business interruption or loss of tourism
- Agricultural loss
- Displaced residents requiring temporary shelter
- Loss of critical infrastructure function, including roads blocked by debris, downed powerlines, and interruption of communication services

It is important to note how climate change affects the intensity and frequency of wind events (and their potential impacts). It is uncertain and is being studied. For Georgia, until the impacts are better understood, the anticipated intensity and frequency of wind events will likely remain close to historical averages. However, damage to life and property will likely increase due to population and financial growth across the state, including Fulton County.

Lightning occurs with every thunderstorm. Given the common nature of thunderstorms in Fulton County, the entire planning area 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 2008-2017, the State of Georgia averaged approximately 641,790 cloud-to-ground lightning flashes per year. According to the National Oceanic Atmospheric Administration (NOAA), 113 people died between 1959 and 2016 due to lightning strikes in the State of Georgia. This ranks 13th in the county.

The following table describes the Lightning Activity Intensity Levels as defined by the Vaisala U.S. National Lightning Detection Network.

Table 73: Lightning Activity Intensity Levels

Lightning Activity Intensity Levels	
LAL Level	**Description**
LAL 1	No thunderstorms
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.

Data Source: Vaisala U.S. National Lightning Detection Network

As for hail, there have been reports of stones 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. Such destruction can result in significant financial and personal losses.

The following table explains the Modified NOAA/TORRO Hailstorm Intensity Scale.

Table 74: Modified NOAA/TORRO Hailstorm Intensity Scale

Modified NOAA/TORRO Hailstorm Intensity Scale				
Code	**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 damage to crops
H2	Potentially Damaging	0.60 - 0.80	Dime/Grape	Significant damage to crops
H3	Severe	0.80 - 1.20	Nickel to Quarter	Severe damage to crops, damage to glass and plastic, 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	Damage to tiled roofs, significant risk of personal injury
H6	Destructive	2.00 - 2.40	Egg	Aircraft bodywork dented; brick walls pitted
H7	Very Destructive	2.40 - 3.00	Tennis Ball	Severe roof damage, risk of serious injuries to persons not protected
H8	Very Destructive	3.00 - 3.50	Baseball to Orange	Severe damage to aircraft bodywork
H9	Super Hailstorms	3.50 - 4.00	Grapefruit	Extensive structural damage, risk of severe injury or fatal injuries to persons not protected
H10	Super Hailstorms	4.00 +	Softball and up	Extensive structural damage, risk of severe injury or fatal injuries to persons not protected

Data Source: NOAA/TORRO

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 of Georgia, and subsequently, for the entire planning area.

4.2.3 – Previous Occurrences

There is an extensive history of severe weather occurring within Fulton County. Following is NOAA/NCEI documentation pertaining to several major events that took place between 1984 and 2020.

May 2, 1984, Thunderstorm Event: A line of thunderstorms moved across Fulton County, causing widespread damage. Thunderstorm winds downed hundreds of trees and caused roof damage to numerous buildings. Falling trees caused considerable damage to many homes and cars. Several windows were blow out of the Veterans Affairs Building in Downtown Atlanta. Wind gusts to 72 miles per hour were recorded at the Atlanta Airport. The winds blew a fiberglass bench from the 21st floor of the Peachtree Summit Building in Downtown Atlanta, landing on a car on Interstate 75/85, killing a 67-year-old woman in the back seat of a car. The event caused five injuries across Fulton County.

February 10, 1990, Thunderstorm Event: Thunderstorms ripped across metropolitan Atlanta and caused considerable damage. Countless incidents of wind damage occurred, and many areas were impassable as numerous trees fell under the force of winds. A local television station's doppler radar indicated that the winds in the storms averaged near 72 miles per hour over metropolitan Atlanta, with some winds over 80 miles per hour. Trees fell on many homes and businesses over the area causing roof and structure damage, along with damage to many vehicles and signs. Extensive power outages occurred as the winds and falling trees tore down utility lines and snapped poles. The event cause one fatality and one injury in Fulton County.

July 10, 2003, Thunderstorm Event: The Fulton County Emergency Management Director, as well as *The Atlanta-Journal Constitution*, reported that a large, 100-year-old oak tree fell on a sport utility vehicle (SUV) stopped in traffic in the Virginia-Highland neighborhood of midtown Atlanta. Three of the four people in the vehicle were killed instantly when the tree fell on the vehicle, including a 37-year-old mother and her two boys, one three years old and the other only six months old. The husband in the front seat was uninjured. There were several other reports of trees and even some power lines down during the thunderstorm which left up to 30,000 residents of Atlanta without power during the evening. The event caused approximately $35,000 in property damage.

September 16, 2004, High Wind Event: Several Atlanta area newspapers reported massive damage to trees, power lines, and structures throughout the county. Hundreds of trees and dozens of power lines were down throughout the county. Several homes sustained damage when large trees fell on the structures and several vehicles were damaged. A man was injured when a tree fell on his vehicle on Piedmont Avenue. In the city of East Point alone, at least 35 trees were reported down, and 30 percent of the homes were without power for several hours. Widespread power outages were reported countywide. The event caused approximately $750,000 in property damage.

March 15, 2008, Hail Event: The Fulton County Emergency Management Director observed baseball-sized hail across downtown Atlanta. Because of the extensive damage caused by the tornado the previous evening, it was hard to distinguish what damage was caused by the hail, but chards of glass were reported to have been spread across much of the downtown area. In addition, the public reported golf ball-sized hail southwest of Six Flags, just south of Interstate-20 in western Fulton County, including the area around Fulton Industrial Boulevard, and an off duty National Weather Service employee observed penny-sized hail just southeast of downtown Atlanta in the Grant Park area. An amateur radio operator relayed a report of penny to quarter-sized hail in Centennial Olympic Park. The event cause approximately $5,000,000 in property damage.

April 13, 2009, High Wind Event: The public reported that several trees were down in the northern portion of the County. A tree had fallen on a home at 125 West Spalding Drive in Sandy Springs causing extensive damage to the home. An individual was killed on Nacoochee Drive near the Peachtree Battle Shopping Center in Buckhead, approximately five miles north of Atlanta, when a tree fell across the cab of his truck. The Atlanta ASOS, 10-15 miles south of the area with the heaviest damage, recorded a wind gust of 45 knots at 953 am EDT. Higher winds may well have been observed in the northern part of the County. The event caused approximately $250,000 in property damage.

April 15, 2011, Hail Event: The public observed quarter to golf ball-sized hail near and southwest of Sandy Springs in north Fulton County. Hail as large as ping-pong balls was also observed around Roswell. The event cause approximately $4,270,000 in property damage.

May 26, 2011, Thunderstorm Event: The Fulton County Emergency Management Director and the public reported that at least a dozen trees were down across the north part of the county in the Buckhead and Sandy Springs areas. Several roads were blocked from downed trees, especially across the northern part of the county. Two females in their 60s were killed when a large tree fell on their Mazda Miata sports car while traveling on West Paces Ferry Road at Nancy Creek Road, approximately four miles west-northwest of Buckhead. A downed tree limb on the MARTA tracks near the Arts Center Station caused

delays for southbound trains. Several power lines were also down across the area with thousands of residents across the county left without power for several hours, many even into the next day. In addition, a UPS truck was set on fire when a large tree fell on the vehicle. The event caused approximately $100,000 in property damage.

October 31, 2019, Thunderstorm Event: The Fulton County Emergency Manager reported that a very large tree was blown down onto Mt. Paran Road NW between Jett Road NW and Rebel Trail NW. The tree fell onto a vehicle driven by a City of Atlanta Watershed employee, crushing the vehicle and killing the occupant. The event cause approximately $40,000 in property damage.

September 16, 2020, High Wind Event: A 30-year-old male was killed when a portion of a large oak tree, estimated to be a century old, split off and fell onto a home on Linda Way in southwest Atlanta. One person in the home was rescued alive by fire-fighters and another was able to escape on their own from the home. The event caused approximately $200,000 in property damage.

4.2.3A – Probability of Future Events, Severe Weather

The following table provides a summary of the severe weather events recorded by NOAA/NCEI for Fulton County through the period, 2016 – 2020.

Table 75: Probability of Future Events, Severe Weather

Probability of Future Events, Severe Weather				
Event Year	Event Count			
	Hail	Thunderstorm Wind	Wind (High Wind and Strong Wind)	Total
2016	0	8	3	11
2017	1	8	1	10
2018	5	11	1	17
2019	0	14	0	14
2020	5	11	1	17
Total Events =	**11**	**52**	**6**	**69**
Total Years =	**5**	**5**	**5**	**5**
Yearly Probability =	**220%**	**1040%**	**120%**	**1380%**

Data Source: NOAA/NCEI Storm Events Database

The following narratives provide more specific details on severe weather event records included in the NOAA/NCEI database from January 1, 2016, to December 31, 2020. The events below were included because they include one or more of the following criteria: at least one death, at least one injury, and/or at least $20,000 in property or crop damage.

April 30, 2016, Thunderstorm Event: The Fulton County Emergency Manager reported a tree blown down on a house on Laurel Avenue SW with an entrapment. No injuries were reported. The Fulton County Fire Department reported numerous trees and power lines blown down around the intersection of Moores Mill Road and W. Wesley Road. The event cause approximately $80,000 in property damage.

June 17, 2016, Thunderstorm Event: The public reported trees and power lines blown down at Peyton Road N.W. and Hollywood Road N.W. One tree fell on a car; however, no injuries were reported. Large limbs were blown down throughout the Riverside neighborhood in this vicinity. The event caused approximately $25,000 in property damage.

July 6, 2016, Thunderstorm Event: The Fulton County Office of Emergency Management and local broadcast media reported trees blown down along West Paces Ferry Road near the Governor's Mansion, on the Georgia Tech Campus, and along Confederate Avenue. Power was knocked out to around 10,000 customers across the county. The event cause approximately $20,000 in property damage.

April 5, 2017, Hail Event: The Fulton County Emergency Manager relayed a report from the Fire Chief of golf ball size hail in Chattahoochee Hills area around the intersection of Wilkerson Mill Road and Cascade-Palmetto Road. The event cause approximately $4,100,000 in property damage.

May 28, 2017, Thunderstorm Event: The local broadcast media reported trees blown down in Atlanta. One fell onto the 12th Street West Apartment Homes on 12th Street between West Peachtree Walk and Crescent Avenue another fell onto a truck on 6th Street at Durant Place. No injuries were reported. The event cause approximately $25,000 in property damage.

March 19, 2018, Thunderstorm/Hail Event: Numerous reports of trees and power lines blown down were received from the Fulton County Emergency Manager, 911 center and the local broadcast media. One large tree was blown down onto power lines and a vehicle on Mary George Avenue NW and an on-duty Atlanta Police Department officer was injured when another large tree was blown down onto his patrol car in the 2000 block of Northside Drive NW. About a dozen trees were blown down near the intersection of South Fulton Parkway and Cochran Mill Road and numerous trees and power lines were blown down around the Campbellton Road and Ridge Road. An amateur radio operator reported golf ball-size hail around the intersection of Campbellton Road and Fulton Industrial Boulevard. An amateur radio operator reported golf ball-size hail at the Senoia Road exit on I-85. The public reported quarter-size hail along Stonewall Tell Road. The event cause approximately $2,106,500 in property damage.

June 11, 2018, Thunderstorm Event: Atlanta/Fulton County Fire/Rescue reported a large tree blown down onto a house on West Wieuca Road N.E. in Chastain Park. No injuries were reported. The event cause approximately $30,000 in property damage.

July 21, 2018, Thunderstorm Event: The Fulton County 911 center and the public reported numerous trees blown down across far northeastern Fulton County in the Johns Creek area. The public reported quarter size hail. A report of trees blown down onto a house and another onto power lines was received from the Grant Park area. The event cause approximately $35,000 in property damage.

June 22, 2019, Thunderstorm Event: Several reports were received on social media from the Peachtree Heights neighborhood of trees and power lines blown down. A few locations include West Wesley Road NW near Habersham Road NW, Muscogee Avenue near Rivers Road, and around the duck pond at Lakeview Avenue and Parkside Drive. The event cause approximately $20,000 in property damage.

June 23, 2019, Thunderstorm Event: A microburst occurred over the northern portion of Hartsfield-Jackson Atlanta International Airport. Wind speeds of 65 to 75 mph were estimated across the northern ramps with wind damage noted in the FedEx ramps. Several cargo containers were moved, as well as 2 aircraft. The Automated Surface Observing System (ASOS) located approximately 1.5 miles south of the FedEx ramps recorded a 58-mph wind gust at 3:45pm. Damage was also reported to several vehicles in the Delta Airlines parking lot. A lightning strike forced the closing of a runway for 2 hours to repair a 2 foot by 2-foot hole in the runway surface. The event cause approximately $50,000 in property damage.

October 31, 2019, Thunderstorm Event: The Fulton County Emergency Manager reported that a very large tree was blown down onto Mt. Paran Road NW between Jett Road NW and Rebel Trail NW. The tree fell onto a vehicle driven by a City of Atlanta Watershed employee, crushing the vehicle and killing the occupant. The Fulton County Emergency Manager reported an arbor blown over and minor damage to a structure on the southwest side of Lake Windward. The event cause approximately $50,000 in property damage.

June 22, 2020, Thunderstorm Event: The public reported a portion of a large tree blown down onto a house near the intersection of Dodson Drive and Head Road, damaging the kitchen, patio, and carport of the home. No injuries were reported. The event caused approximately $25,000 in property damage.

July 21, 2020, Thunderstorm Event: The public reported several trees blown down across eastern Fulton County from the Sandy Springs area to East point. Fallen trees blocked the road along Spalding Drive near Peachtree Dunwoody Road. A large oak tree fell onto a home along Old Jonesboro Road. The event caused approximately $20,000 in property damage.

August 3, 2020, Thunderstorm Event: The Fulton County Emergency Manager and the public several trees blown down across the county from the Princeton Lakes area across Sandy Springs to north of Dunwoody. The event cause approximately $25,000 in property damage.

Given this information, the likelihood of severe weather occurring in Fulton County is **highly likely.**

4.2.4 – Vulnerability & Impact

The entire planning area is vulnerable to the effects of severe weather, i.e., thunderstorms (including thunderstorm wind.

Thunderstorm Wind Impacts

Between January 2016, and December 2020, Fulton County recorded 52 severe thunderstorm winds events. Of these events, the range of magnitude was between 55 and 80 miles per hour. Based on the Beaufort Scale (as shown here) Fulton County and its participating jurisdictions can expect ten (10) thunderstorm wind events per year ranging from Beaufort Scale 10 – "Whole Gale" to Beaufort Scale 12 – "Hurricane Force."

Illustration 4: Beaufort Scale

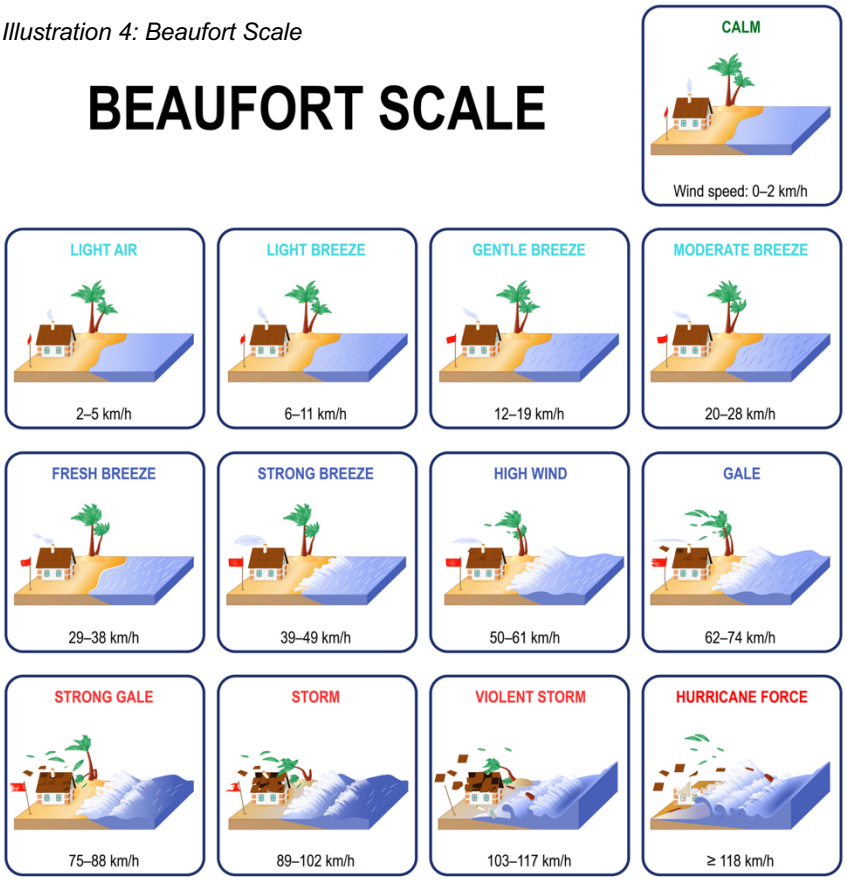


Illustration Source: iStock by Getty Images

Lightning Impacts

Lightning can cause electrocution, fires, and down trees. Lightning is present in all thunderstorms. Therefore, all thunderstorms, regardless of severity, present a threat to life and property.

Hail Impacts

Between January 2016, and December 2020, Fulton County has recorded 11 severe hail events. Based on the hailstorm average and future probability identified in Table 75, Fulton County and its participating jurisdictions can expect two severe hail events each year.

Vulnerability of Facilities

Structural vulnerability to severe weather, specifically thunderstorm wind, lightning, and hail, is the same throughout the entire planning area. Wind events create flying debris that can significantly damage infrastructure and buildings. Strong enough wind can cause structural damage to older, less well-constructed buildings, even toppling or leveling them. FEMA Code 361 "Tornado Safe Room" will provide more-than-sufficient protection and resistance to any form of severe storm as they are designed and constructed above the standard metrics of a severe thunderstorm. Lightning can strike anything, and a single bolt has the potential to damage electrical infrastructure or ignite a fire. Hail can be costly by damaging rooftops, outdoor equipment, and windows.

Between January 2016, and December 2020, severe weather events cost Fulton County and its participating jurisdictions an average of $1,466,200 each year. The range of single incidents in that period is $0 to $4,100,000.

Fulton County and its participating jurisdictions' critical structures are valued at $12,219,697,510. Since severe weather can threaten the entire planning area equally, all structures are considered exposed to the hazard of severe weather.

Vulnerability of Population

Fulton County's susceptibility to severe weather is the same throughout the planning area. Individuals with high vulnerability to severe weather have increased risk to impacts due to functional and access needs. Low-income individuals are also more vulnerable to severe weather. In its reported titled, "A Disaster in the Making, Addressing the Vulnerability of Low-Income Communities to Extreme Weather," the Center for American Progress argues that low-income people are disproportionately affected by extreme weather due to shoddy housing construction and the age of affordable housing (https://www.americanprogress.org/wp-content/uploads/2013/08/LowIncomeResilience-2.pdf). Old, or poorly constructed facilities are not a good shelter as flying debris can easily break windows or cause structural damage. Either of these instances have the potential for severe injuries or kill anyone taking shelter in an older or less well-constructed building. Low-income individuals also experience greater difficulties in recovering from severe weather events.

Vulnerability of Systems

Table 76: Vulnerability of Systems to Severe Weather, Fulton County

Vulnerability of Systems to Severe Weather, Fulton County	
Community Lifeline System	**Vulnerability**
Safety and Security	High vulnerability. First responders may be exposed to the impacts of severe weather events. Facilities may be damaged. Resources may be expended responding to calls for assistance. Communications may be disrupted due to infrastructure damage and/or system overload.
Food, Water, Shelter	Moderate vulnerability. Crops may be damaged. Shelters may be damaged. The delivery of energy services to shelters may be interrupted by damaged infrastructure. Communications may be disrupted due to infrastructure damage and/or systems overload.
Health and Medical	Moderate vulnerability. Facilities may be damaged. The delivery of energy and communications may be disrupted by infrastructure damage.
Energy	High vulnerability. The delivery of power and natural gas may be disrupted due to infrastructure damage.

Communications	High vulnerability. System overload or infrastructure damage may cause communications to be disrupted. Landline and cellular networks may be overloaded.
Transportation	High vulnerability. Roads and railroads may be damaged or impassible. Air travel may be delayed or cancelled due to safety concerns.
Hazardous Materials	Moderate vulnerability. Fixed sites that store or generate hazardous materials may be damaged causing a release.

Fulton County and its participating jurisdictions' assets and systems' vulnerability to severe weather is the same throughout the planning area. Systems, in this case, being regular day-to-day operations of businesses and citizens countywide. Systems also include electrical, water, and gas systems that are in the County.

Severe weather events can destroy and damage multiple structures and points of infrastructure. They have the potential to significantly impact a community's power grid, compounding the effects of other hazards such as extreme heat, tornadoes, and winter storms. Lightning strikes can destroy or damage a community asset, but since they are typically isolated and rarely hit anything, it is unlikely to impact a more extensive system. Hail damage is typically superficial and does not hamper a community's assets, systems, or activities.

4.2.4A – Critical Facilities & Infrastructure

All critical facilities and infrastructure within Fulton County are equally at risk since severe weather indiscriminately affects the entire planning area. A complete list of critical facilities and infrastructure can be found in Appendix C.

4.2.4B – Land Use & Development Trends

Considering the entire planning area is at risk of severe weather, increased development and population growth can reasonably translate to increased damage due to the hazard. There are various characteristics of structures like roof profile, type and strength of windows, and nature of the structural system, making them more (or less) vulnerable to the effects of high winds. Modern building codes are instrumental in ensuring that structures can withstand all but the most extreme weather events.

4.3.4C – Unique & Varied Risk

Severe weather, chiefly thunderstorm wind, lightning, and hail, can affect a portion or all the planning area. Logically, a participating jurisdiction with a greater population is at higher risk than one with a smaller population.

Although this plan addresses vulnerability to severe weather, it is nearly impossible to calculate all components of risk at a jurisdictional level. To predict unique and varied risks for Fulton County and its participating jurisdictions, one needs a comprehensive catalog of wind resilience ratings, hail impact ratings, and grounding capacity for all infrastructure. Such information is not currently available.

4.2.4D – Repetitive Loss Structures

Not applicable.

Photo Source: iStock by Getty Images

4.2(T) – Tornado

4.2.1 – 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 more than 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 tremendous amounts 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.

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. The altered scale adjusted the wind speed values per F level and introduced a rubric for estimating damage. An EF0 – EF1 tornado could lightly damage structures to the extent they would become unsafe to use until repaired. An EF2 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.

Table 77: Fujita Scale, Enhanced Fujita Scale

Fujita Scale		EF Scale	
Fujita Scale	**3-Second Gust Speed (mph)**	**EF Scale**	**3-Second Gust Speed (mph)**
F0	45-78	EF0	65-85
F1	79-117	EF1	86-109
F2	118-161	EF2	110-137
F3	162-209	EF3	138-167
F4	210-261	EF4	168-199
F5	262-317	EF5	200-234

4.2.2 – Location & Extent

Tornadoes are nature's most violent storms, and they are Georgia's No. 1 weather-related killer. They can strike anywhere in Fulton County and its participating jurisdictions, placing the entire planning area at risk. This includes the County's entire population and all critical facilities, buildings (commercial, residential, etc.) and infrastructure. Therefore, Fulton County should not only 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.

While a tornado will only cause damage along its specific path, the damage can range from minor to catastrophic. This is attributed to the tornado's intensity, size, and duration, as well as the types of structures involved. For example, structures made of light materials such as mobile homes and outbuildings are more susceptible to damage than those made of brick and concrete.

The following illustration shows the level of loss/damage associated with each tornado category of the EF scale.

Illustration 6: Enhanced Fujita Scale, Damage

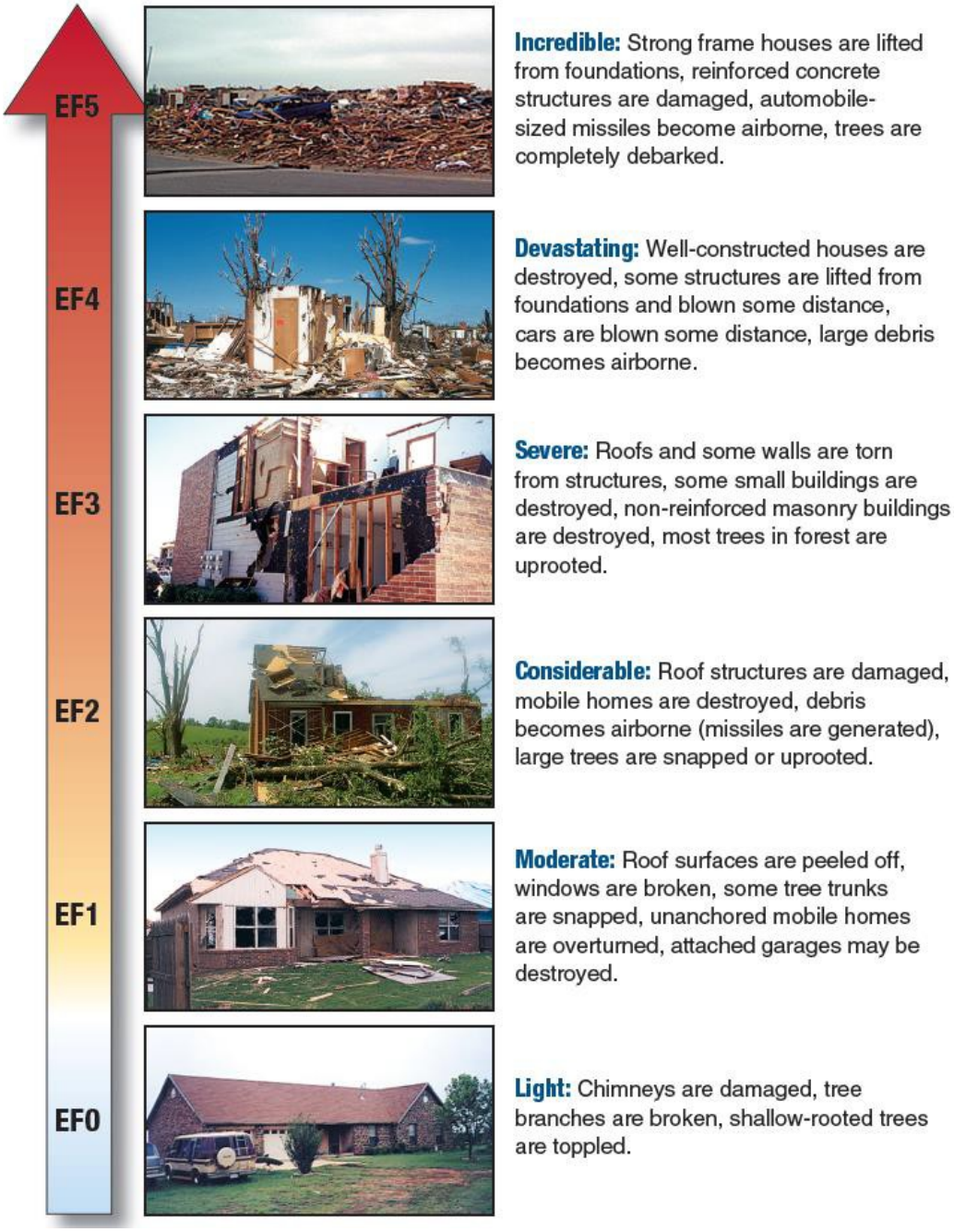


Illustration Source: FEMA

4.2.3 – Previous Occurrences

According to NOAA/NCI, there have been 36 tornadoes in Fulton County between 1950 and 2020. These tornadoes generated six fatalities, 247 injuries, and approximately $302,446,000 of property damage. The following events are four of the most significant tornadoes in Fulton County history.

March 24, 1975: Known as the "Governor's Tornado," this was the most significant tornado event in Fulton County's history. At 8:30p.m., a tornado touched down near Fulton County Airport, Brown Field.

The F3 tornado rapidly moved northwest, hitting an industrial area, two large apartment complexes, several businesses, and hundreds of homes. The tornado also struck the Governor's Mansion located off West Paces Ferry Road. Three people in Fulton County were killed, and 152 people were injured. The tornado caused approximately $250,000,000 in property damage.

December 5, 1954: An F2 tornado struck Fulton County just before midnight. The tornado affected the Sylvan Hills community in southwestern Atlanta and passed near Fort McPherson. Several homes were damaged. One person was killed and 40 people were injured. The tornado caused approximately $25,000 in property damage.

March 14, 2008: A ground and aerial survey conducted by the National Weather Service Forecast Office in Peachtree City, Georgia in cooperation with the Atlanta Police Department, confirmed that an EF2 tornado tracked through the heart of the city of Atlanta causing millions of dollars of damage to buildings, including several high-rise businesses and/or hotel buildings, within the downtown Atlanta area.

The tornado first touched down near the intersection of Simpson and Burbank Streets in the Vine City neighborhood just west of downtown Atlanta. The tornado then tracked near due east over the center of the Georgia World Congress Center, about 100 yards north of the Georgia Dome, which was concurrently hosting an SEC basketball conference, across the CNN Omni Hotel Complex and the Phillips Arena, where an NBA basketball game was underway, across the Equitable Bank tower, across the Interstate 75/85 Downtown Connector at the Edgewood Exit, and then into the Cotton Mill Lofts across the Oakland Cemetery located near the Fulton/DeKalb County line. The tornado then weakened but continued into extreme western DeKalb County before finally lifting for good.

The tornado had a total path length of six miles, five of which fell within Fulton County, and a maximum path width of 200 yards. Maximum wind speeds were estimated at 130 mph, which is a high-end EF2. The tornado had a path width of 100 yards as it moved across the Georgia World Congress Center and CNN Omni Hotel complex and was ranked an EF1 at that point.

At least 50 homes were damaged by the tornado, as were several multi-story towers and commercial buildings near and east of Centennial Olympic Park. Windows were blown out of several of these high-rise tower buildings at multiple heights. Damage in residential and industrial areas ranged from roofing materials blown from homes and businesses to trees falling on structures and vehicles. The Cotton Mill Lofts experienced some of the most significant damage with the roof blown off and several exterior walls blown inward. Two sections of the fourth floor collapsed all the way into the basement of the building, trapping several people. Most of the injuries observed were associated with this damage.

Damaged buildings and structures in the downtown Atlanta area included two Hermes 65-foot-tall light towers at Centennial Olympic Park, the CNN Center/Omni Hotel, Ebenezer Baptist Church, Equitable Bank Building, Georgia-Pacific Building, Georgia World Congress Center, Grady Hospital, Jimmy Carter Presidential Library and Museum, Martin Luther King Center, Oakland Cemetery, SunTrust Building, Tabernacle, Ted's Montana Grill, Westin Peachtree Plaza Hotel, and Walton Building Barbershop.

In addition to the damage reports, a wind gust of 83 mph was measured at Atlanta Fire Station No. 13 at 447 Flat Shoals Road Southeast in Atlanta, and a wind gust of 65 mph was measured at Atlanta Fire Station No. 4 at 309 Edgewood Drive in Atlanta.

The tornado caused one death and 30 non-life-threatening injuries. The death occurred on Decatur Street across from the Martin Luther King MARTA station. The tornado generated approximately $25,000,000 in property damage.

January 10, 1972: An F2 tornado struck southeastern Fulton County at 10:25 a.m. The tornado traveled three miles, causing one fatality and nine injuries. The tornado generated $250,000 in property damage.

Since the last MJHMP update (2016), and more specifically from January 1, 2016 to December 31, 2020, there have been nine tornadoes to touch down in Fulton County. Information pertaining to these tornadoes, as documented by NOAA/NCEI, are shown in the table below.

Table 78: Tornado Events, Fulton County (January 1, 2016 – December 31, 2020)

Tornado Events, Fulton County (January 1, 2016 – December 31, 2020)						
Location	Date	Time	Magnitude	Injuries/ Deaths	Property Damage	Crop Damage
Bolton	11/30/2016	13:50	EF1	0/0	$25,000	$0
Ocee	11/30/2016	14:07	EF0	0/0	$1,000	$0
Rico	4/3/2017	10:28	EF1	0/0	$100,000	$0
Atlanta Hartsfield-Jackson International Airport	5/4/2017	20:12	EF0	0/0	$50,000	$0
Campbellton	3/19/2018	22:11	EF2	0/0	$750,000	$0
Fort McPherson	10/10/2018	17:33	EF0	0/0	$10,000	$0
Warsaw	4/19/2019	04:07	EF0	0/0	$40,000	$0
Red Oak	4/13/2020	01:36	EF0	0/0	$50,000	$0
Total – 8 Tornado Events				**0/0**	**$1,026,000**	**$0**

Data Source: NOAA/NCEI Storm Events Database

November 30, 2016, Bolton Tornado: A National Weather Service storm survey team found that an EF1 tornado with maximum winds of 90 mph moved along a path with a maximum width of 100 yards for 1.90 miles across portions of northern Fulton County. The tornado began along Margaret Mitchell Ct. NW just east of I-75 where several large pine trees were snapped. The tornado swept east northeast snapping or uprooting several larger pine trees around the intersection of Northside Parkway and Moores Mill Road NW. The tornado then turned more easterly snapping or uprooting several more trees along Marne Drive and Arden Road NW before ending around the intersection of West Paces Ferry Road and Habersham Road NW. [11/30/16: Tornado #4, County #1/1, EF1, Fulton, 2016:010].

November 20, 2016, Ocee Tornado: A National Weather Service storm survey team found that an EF0 tornado with maximum winds of 80 mph moved along a path with a maximum width of 100 yards for 1.10 miles across portions of northern Fulton County. The tornado began along Windward Parkway where two pine trees were uprooted. The tornado moved northeast to McGinnis Ferry Road where it crossed into Forsyth County. [11/30/16: Tornado #5, County #1/2, EF0, Fulton, 2016:011].

April 3, 2017, Rico Tornado: A National Weather Service survey team found that an EF-1 tornado, with maximum wind speeds of 90 mph and a maximum path width of 150 yards, touched down along Campbellton Redwine Road in a rural part of southwest Fulton County. A few trees were snapped onto the roadway and in an adjacent field. The tornado moved northeast crossing Upper Wooten Road and Rico Road snapping and uprooting trees before moving through a heavily wooded area north of Upper Wooten Road into an area of bike trails. Hundreds of trees were blown down across these bike trails. The tornado then crossed into Cochran Mill Park snapping a few trees and crossed Cochran Mill Road before lifting just south of Rivertown Road. [04/03/17: Tornado #2, County #1/1, EF-1, Fulton, 2017:034].

May 4, 2017, Atlanta Hartsfield-Jackson International Airport Tornado: A National Weather Service survey team found that an EF0 tornado with maximum wind speeds of 85 mph and a maximum path width of 50 yards touched down at the North Cargo Bay on the north side of the Atlanta Hartsfield-Jackson International Airport in far southern Fulton County. The tornado picked up 8-10 cargo bins ranging in weight from 250-500 pounds. Three-four of these bins landed on the roof of an adjacent building

approximately 60 feet in the air. The tornado travelled just over a tenth of a mile, snapping 2 trees and taking down a fence before ending. No injuries were reported. [05/04/17: Tornado #1, County #1/1, EF-0, Fulton, 2017:070].

March 19, 2018, Campbellton Tornado: A National Weather Service survey team found that an EF2 tornado with maximum wind speeds of 120 mph and a maximum path width of 315 yards touched down in the South Fulton community between Fairburn and Campbellton. Most of the damage was to two-story homes in the Chestnut Ridge subdivision. More than 50 homes sustained visible damage with at least half sustaining significant damage. The worst damage occurred along Jumpers Trace between Jodhpur Way Suffolk Lane. In this small area, numerous homes had large sections of their roofs removed along with large pieces of the exterior, upstairs, walls. Large trees along the northern and eastern edges of the neighborhood were snapped or uprooted. The tornado continued east for a short distance, ending after crossing Highway 92 just north of Jones Road, but not before it removed part of a roof on a house off the highway and shingles from the roofs of several houses along Winstar Lane. No injuries were reported. [03/19/18: Tornado #3, County #1/1, EF-2, Fulton, 2018:007].

October 10, 2018, Fort McPherson Tornado: A National Weather Service survey determined that an EF0 tornado with maximum wind speeds of 75-80 mph and a maximum path width of 100 yards touched down southwest of downtown Atlanta along Dill Avenue SW where several large trees were snapped. The tornado moved west northwest crossing Highway 29/Lee Street SW and snapping several more trees along Avon Avenue SW between Princess Avenue SW and Wyland Drive SW before lifting. [10/10/18: Tornado #3, County #1/1, EF-0, Fulton, 2018:014].

April 19, 2019, Warsaw Tornado: A National Weather Service survey determined that an EF0 tornado with maximum wind speeds 75 mph and a maximum path width of 150 yards touched down in the Johns Creek area of northeast Fulton County near Royal Lytham Court, snapping several large branches. the tornado moved northeast downing a large tree near the intersection of Prestwick Club Drive and Royal Birkdale Court. Continuing northeast, the tornado crossed Old Alabama Road snapping more trees and downing several power poles before moving onto the campus of Perimeter School where several tree limbs were broken before the tornado dissipated along the northern edge of the campus. No injuries were reported. [04/19/19: Tornado #1, County #1/1, EF-0, Fulton, 2019:025].

April 13, 2020, Red Oak Tornado: A weak EF-0 tornado briefly touched down in southwest Fulton County along Welcome All Terrace SW. A few trees were uprooted or snapped behind some homes along that street. The tornado continued northeast downing small limbs and lofting debris. NWS Radar detected lofted debris at about 1000 feet as the tornado crossed Delano Road. Ground evidence suggested that this was mostly small limbs and leaves as there wasn't widespread damage on the ground but more sporadic large limbs and an occasional tree down. The storm continued northeast crossing North Commerce drive where several trees were snapped or uprooted in between 2 large warehouses. No other damage was noted in the area. A debris signature continued to be present on radar. The storm crossed Interstate 285 and then Washington Rd where a large tree was downed causing minor damage to a house. Several trees were snapped behind a home along Janice Drive and along Karen Road before lifting. [04/13/20: Tornado #12, County #1/1, EF-0, Fulton, 2020:018].

4.2.3A – Probability of Future Events, Tornado

Fulton County and its participating jurisdictions can expect a tornado with a probability of **33.3%** per year, or 0.333 tornadoes per year. Thus, the likelihood of a tornado happening in the planning area is **likely.**

Table 79: Probability of Future Events, Tornado, Fulton County

Probability of Future Events, Tornado, Fulton County	
Event Year	**Event Count**
2016	2
2017	2
2018	2
2019	1
2020	1
Total Recorded Events =	**8**
Total Years =	**5**
Yearly Probability =	**160%**

Data Source: NOAA/NCEI Storm Events Database

4.2.4 – Vulnerability & Impact

The NWS recorded eight tornadoes in the planning area between January 1, 2016, and December 31, 2020. The range of magnitude was between EF0 and EF2. Based on yearly averages, Fulton County can expect to be impacted by one to two tornadoes a year. Lightweight structures, such as mobile homes, barns, and outbuildings, are more susceptible to tornado damage.

Vulnerability of Facilities

Fulton County's vulnerability to tornadoes is the same throughout the planning area. Most tornadoes are in the EF0 – EF2 class. Fulton County and its jurisdictions' critical structures are valued at $12,219,697,510. Since tornadoes threaten the entire planning area equally, all municipal structures are considered exposed and vulnerable.

There are 384,876 mobile homes in Fulton County. This is important to note because these structures are much more vulnerable to tornadoes than site-built homes. Mobile homes are not safe in any magnitude of tornado.

Building to modern wind standards and state codes provides significant protection from hazard events; however, a community in the direct path of a violent tornado (EF4-EF5) can do little to prevent significant property damage. Designing buildings to protect against extreme wind speeds, such as those associated with an EF4 or EF5, is extraordinarily challenging and cost prohibitive. Anything less than a FEMA Code 361-compliant structure is susceptible to significant damage or destruction.

It is estimated that approximately 5,086 buildings could be damaged, with estimated building losses of $278 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 Fulton County that were joined with Assessor records showing estimated property replacement costs. 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 following table.

Table 80: Estimated Building Loss by Occupancy Type, Fulton County

Estimated Building Loss by Occupancy Type, Fulton County		
Occupancy	**Buildings Damage**	**Building Losses**
Commercial	197	$36,277,92
Education	6	$140,840
Government	22	$923,321
Industrial	11	$565,602
Religious	23	$1,030,757
Residential	4,827	$239,400,784
Total	**5,086**	**$278,339,226**

Source: Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan

Vulnerability of Population

Fulton County and its participating jurisdictions' susceptibility to tornadoes is the same throughout the planning area. A strong to violent tornado (EF3-EF5) can cause many fatalities, injuries, and property damage. Even a lesser magnitude tornado can cause fatalities, injuries, and damage. Individuals with high vulnerability to tornadoes have increased risk to impacts due to functional and access needs. Low-income individuals are also more vulnerable to tornadoes. In its reported titled, "A Disaster in the Making, Addressing the Vulnerability of Low-Income Communities to Extreme Weather," the Center for American Progress argues that low-income people are disproportionately affected by extreme weather due to shoddy housing construction and the age of affordable housing." Old, or poorly constructed facilities are not a good shelter as flying debris can easily break windows or cause structural damage. Either of these instances have the potential for severe injuries or kill anyone taking shelter in an older or less well-constructed building. Low-income individuals also experience greater difficulties in recovering from tornadoes.

Vulnerability of Systems

Table 81: Vulnerability of Systems to Tornadoes, Fulton County

Vulnerability of Systems to Tornadoes, Fulton County	
Community Lifeline System	**Vulnerability**
Safety and Security	High vulnerability. First responders may be exposed to the impacts of severe weather events. Facilities may be damaged. Resources may be expended responding to calls for assistance. Communications may be disrupted due to infrastructure damage and/or system overload.
Food, Water, Shelter	High vulnerability. Crops may be damaged. Shelters may be damaged or destroyed. The delivery of energy services to shelters may be interrupted by damaged infrastructure. Communications may be disrupted due to infrastructure damage and/or systems overload.
Health and Medical	High vulnerability. Facilities may be damaged or destroyed. The delivery of energy and communications may be disrupted by infrastructure damage. Resources may be expended responding to the community's healthcare needs.
Energy	High vulnerability. The delivery of power and natural gas may be disrupted due to infrastructure damage.
Communications	High vulnerability. System overload or infrastructure damage may cause communications to be disrupted. Landline and cellular networks may be overloaded.

Vulnerability of Systems to Tornadoes, Fulton County	
Community Lifeline System	**Vulnerability**
Transportation	High vulnerability. Roads and railroads may be damaged or impassible. Air travel may be delayed or cancelled due to safety concerns.
Hazardous Materials	High vulnerability. Fixed sites that store or generate hazardous materials may be damaged causing a release.

Fulton County and its participating jurisdictions' community assets and systems' vulnerability to tornadoes is equal throughout the planning area. A small magnitude tornado will not significantly damage a community of its systems, such as power lines or water stations. A strong to violent tornado can impact a community for weeks, months, or years, and even eradicate a town or city. Significant damage to Fulton County and its participating jurisdictions would affect the community's economy and increase its social vulnerability.

4.2.4A – Critical Facilities & Infrastructure

All critical facilities and infrastructure are equally at risk since tornadoes indiscriminately affect the entire planning area. In the Hazus-MH simulation (see Section 4.2.5 for details), there were seven essential facilities located in the tornado path – five schools, one medical care facility, and one fire station. The following table outlines the specific facility and the amount of damage under the scenario.

Table 82: Estimated Essential Facilities Damage, Tornado, Fulton County

Estimated Essential Facilities Damage, Tornado, Fulton County	
Facility	**Amount of Damage**
Peyton Forest Elementary School	Major Damage
Georgia State University Campus – Atlanta	Major Damage
Centennial Academy	Minor Damage
KIPP WAYS Academy	Minor Damage
KIPP Atlanta College	Minor Damage
Emory University Hospital Midtown	Minor Damage
Fire Station 16 Atlanta	Minor Damage

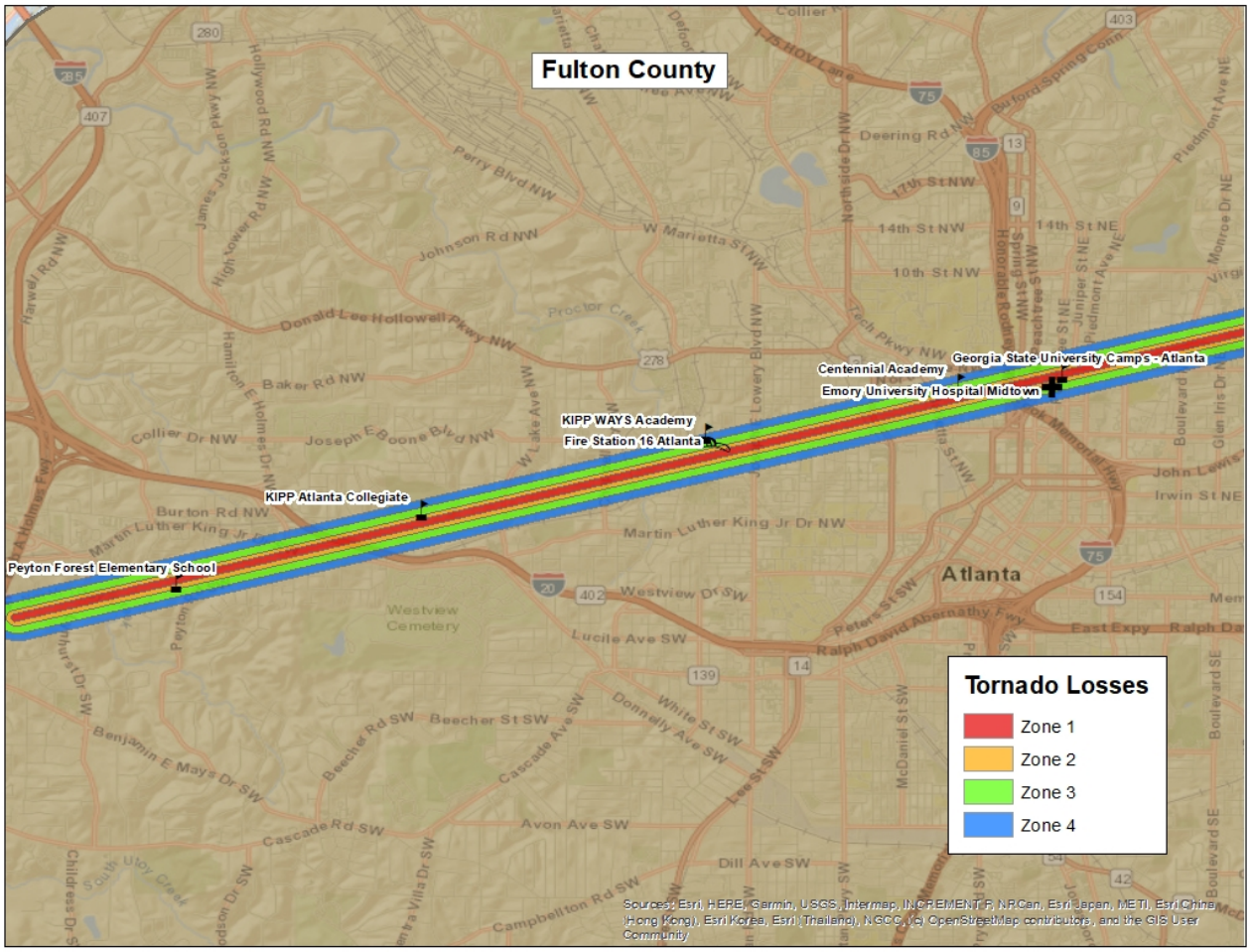
Source: Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan

According to the Georgia Department of Education, Peyton Forest Elementary School's enrollment was approximately 411 students, Centennial Academy's enrollment was approximately 756 students, KIPP WAYS Academy's enrollment was approximately 382 students, and KIPP Atlanta Collegiate's enrollment was approximately 803 students as of October 2021. Georgia State University Campus has students taking classes throughout the day. 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.

According to the Georgia Department of Public Health OASIS website, Emory University Hospital Midtown has 511 beds. The medical requirements of those patients already in the system, combined with injuries suffered during the storm event, could potentially overtax the medical infrastructure of Fulton County.

The following map displays the location of damage to essential facilities.

Map 110: Modeled Essential Facility Damage in Fulton County



Source: Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan

4.2.4B – Land Use & Development Trends

Considering the entire planning area is at risk of tornadoes, increased development and population growth can reasonably translate to increased damage due to the hazard. There are various characteristics of structures like roof profile, type and strength of windows, and nature of the structural system, making them more (or less) vulnerable to the effects of tornadoes. Modern building codes are instrumental in ensuring that structures can withstand all but the most extreme weather events. There are specific efforts focused on minimizing the impacts of tornadoes inside the planning area. Existing building codes do not require structures to exceed design wind speeds of 90 mph; however, construction must adhere to the Georgia State Minimum Standard Codes Uniform Codes Act and the International Building Code (2020 edition). The minimum standards established by these codes provide reasonable protection to persons and property within structures that comply with the regulations for most natural hazards.

4.2.4C – Unique & Varied Risk

Tornadoes can affect a portion or all the planning area. Logically, a participating jurisdiction with a greater population is at higher risk than one with a smaller population.

4.2.4D – Repetitive Loss Structures

Not applicable.

4.2.5 – Hazus Models

For this plan, the Carl Vinson Institute of Government at the University of Georgia used Hazus-MH to illustrate the potential impacts of tornadoes of this magnitude in Fulton County. The analysis used a hypothetical path based upon an EF3 tornado event running along the predominant direction of historical tornadoes (southeast to northwest). The tornado path was placed to travel through Atlanta. The selected widths were modeled after a re-creation of the Enhanced 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 following table depicts tornado path widths and expected damage.

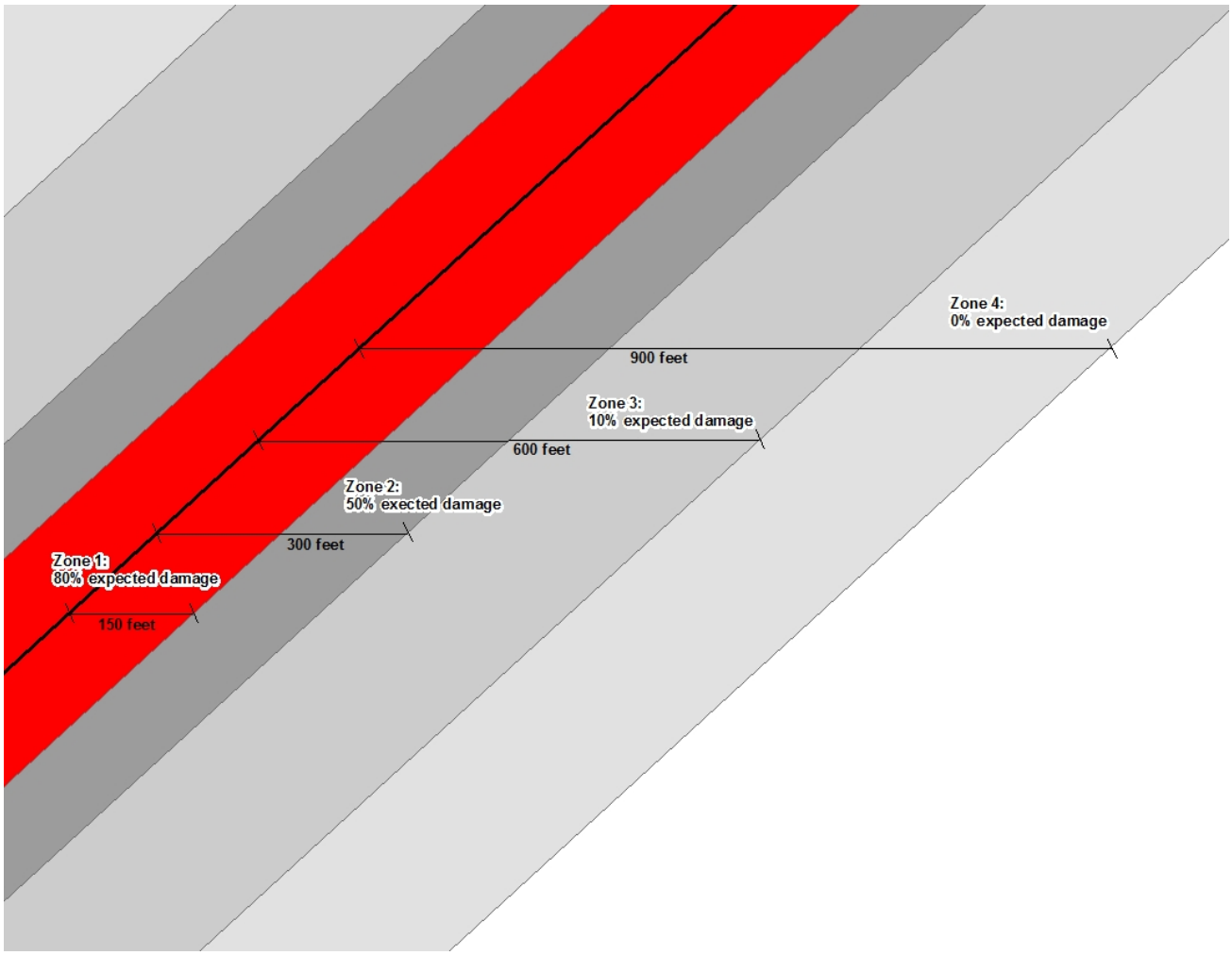
Table 83: Tornado Path Widths and Damage Curves, Fulton County

Tornado Path Widths and Damage Curves, Fulton County		
Enhanced Fujita Scale	**Path Width (feet)**	**Maximum Expected Damage**
EF-5	2400	100%
EF-4	1800	100%
EF-3	1200	80%
EF-2	600	50%
EF-1	300	10%
EF-0	300	0%

Source: Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan

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.

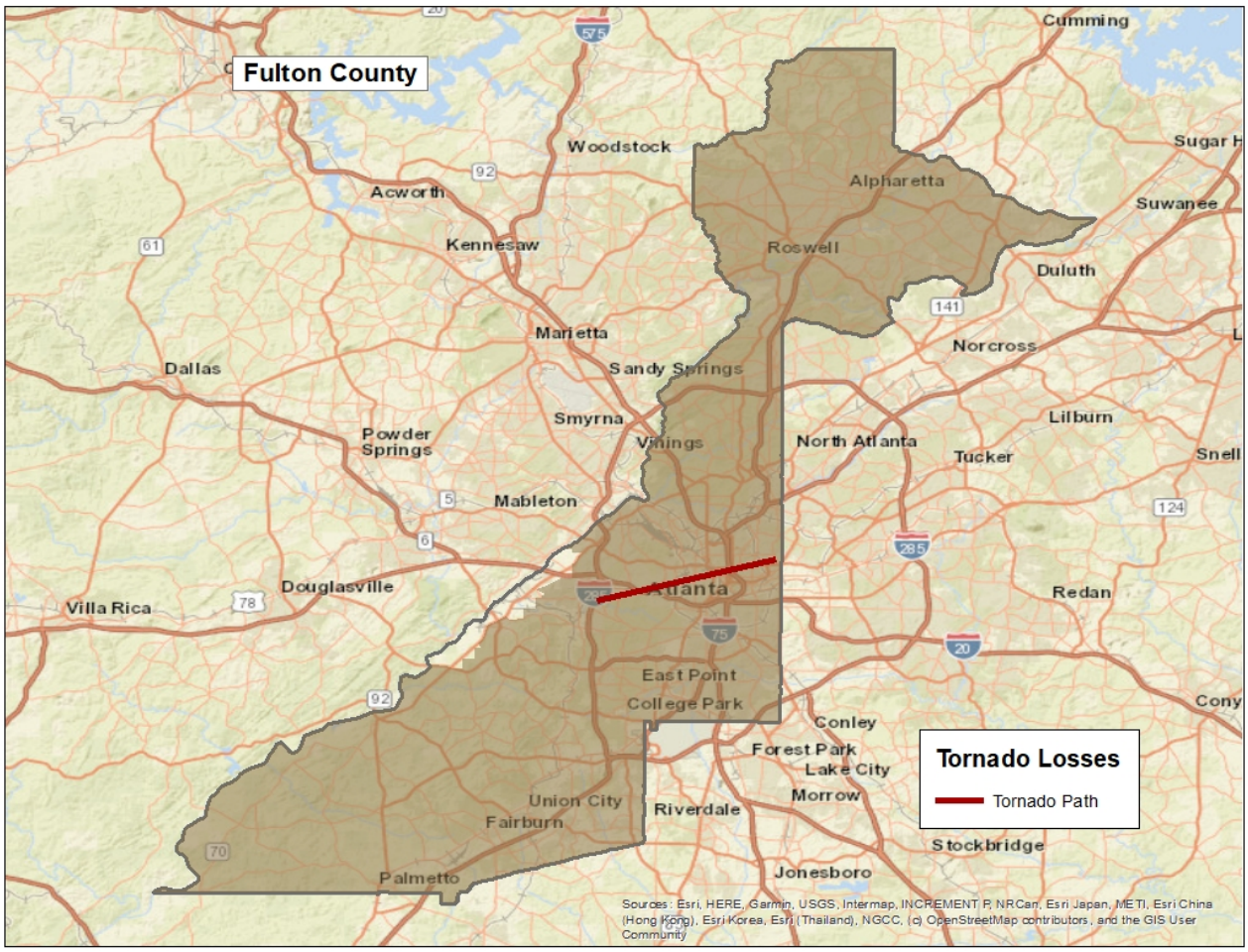
Figure 2: EF Scale Tornado Zone



Source: Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan

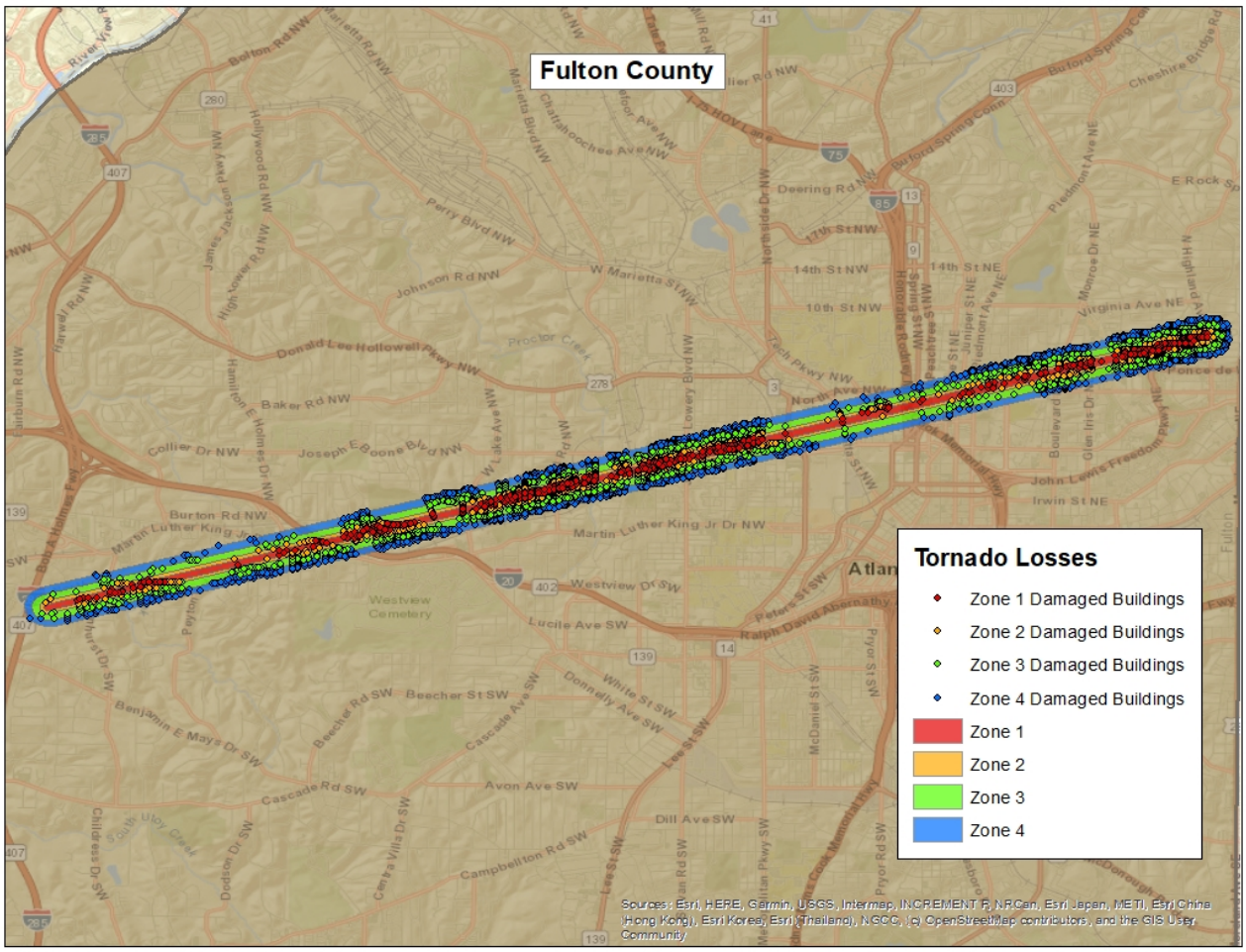
An EF3 tornado has four damage zones, depicted in the following table. Major damage is estimated within 150 feet of the tornado path. The outer buffer is 900 feet from the tornado path, within which buildings will not experience any damage. The selected hypothetical tornado path and damage curve buffers zones are shown in the following maps.

Map 108: Hypothetical EF3 Tornado Path in Fulton County



Source: Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan

Map 109: Modeled EF3 Tornado Damage Buffers in Fulton County



Source: Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan

For additional information specific to this hazard and Hazus modeling, see Appendix E - Hazard Risk Analyses Supplement.

Photo Source: NASA

4.2(TS) – Tropical Systems

4.2.1 – Hazard Description

A tropical weather system, as described by the National Weather Service (NWS), is one with organized convection (generally 100-300 miles in diameter) originating in the tropics or subtropics, having a non-frontal migratory character, and maintaining its identity for 24 hours or longer. It may or may not be associated with a detectable perturbation of the wind field.

Tropical systems include several types of tropical cyclones (the generic term for a non-frontal synoptic scale low-pressure systems over tropical or sub-tropical waters with organized convection, i.e., thunderstorm activity, and definite cyclonic surface wind circulation (Holland 1993). For this MJHMP update, tropical systems include tropical depressions, tropical storms, and hurricanes as defined below:

Tropical Depression: An organized system of clouds and thunderstorms with a defined circulation and maximum sustained winds of 38 mph (33 knots) or less.

Tropical Storm: An organized system of strong thunderstorms with a defined circulation and maximum sustained winds of 39 mph to 73 mph (34–63 knots).

Hurricane: An intense tropical weather system with a well-defined circulation, producing maximum sustained winds of 74 mph (64 knots) or greater. Hurricane intensity is classified into five categories using the Saffir-Simpson Hurricane Scale (see Illustration 3). Winds in a hurricane range from 74 to 95 mph for a Category 1 hurricane to greater than 156 mph for a Category 5 hurricane. Hurricanes reaching Category 3 are considered major hurricanes because of their potential for significant loss of life and property damage. Category 1 and 2 storms are still dangerous and require preventative measures.

Illustration 8: Saffir-Simpson Hurricane Scale

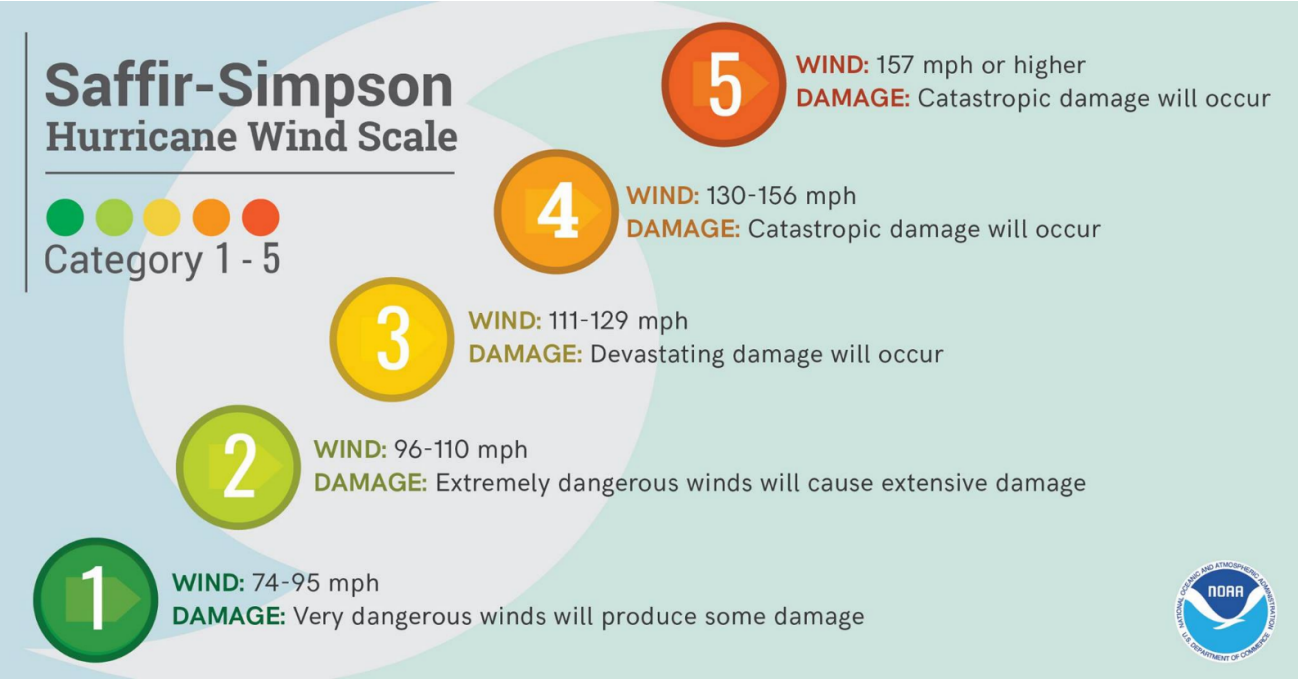


Illustration Source: NOAA

Wind speed is the determining factor in the Saffir-Simpson Scale, as storm surge values are highly dependent upon the slope of the continental shelf and the shape of the coastline in the landfall region. The following describes the characteristics of each category storm using the Saffir-Simpson Scale's Extended Table:

Category 1 Hurricane: Winds 74 –95 mph. Very dangerous winds will produce damage. People, livestock, and pets struck by flying or falling debris could be injured or killed. Older (mainly pre-1994 construction) mobile homes could be destroyed, especially if they are not anchored properly as they tend to shift or roll off their foundations. Newer mobile homes that are anchored properly can sustain damage involving the removal of shingle or metal roof coverings, and loss of vinyl siding, as well as damage to carports, sunrooms, or lanais. Some poorly constructed frame homes can experience major damage, involving loss of the roof covering and damage to gable ends as well as the removal of porch coverings and awnings. Unprotected windows may break if struck by flying debris. Masonry chimneys can be toppled. Well-constructed frame homes could have damage to roof shingles, vinyl siding, soffit panels, and gutters. Failure of aluminum, screened-in, swimming pool enclosures can occur. Some apartment building and shopping center roof coverings could be partially removed. Industrial buildings can lose roofing and siding especially from windward corners, rakes, and eaves. Failures to overhead doors and unprotected windows will be common. Windows in high-rise buildings can be broken by flying debris. Falling and broken glass will pose a significant danger even after the storm. There will be occasional damage to commercial signage, fences, and canopies. Large branches of trees will snap, and shallow rooted trees can be toppled. Extensive damage to power lines and poles will likely result in power outages that could last a few to several days.

Category 2 Hurricane: Winds 96-110 mph. Extremely dangerous winds will cause extensive damage. There is a substantial risk of injury or death to people, livestock, and pets due to flying and falling debris. Older (mainly pre-1994 construction) mobile homes have a very high chance of being destroyed and the flying debris generated can shred nearby mobile homes. Newer mobile homes can also be destroyed. Poorly constructed frame homes have a high chance of having their roof structures removed especially if they are not anchored properly. Unprotected windows will have a high probability of being broken by flying debris. Well-constructed frame homes could sustain major roof and siding damage. Failure of aluminum,

screened-in, swimming pool enclosures will be common. There will be a substantial percentage of roof and siding damage to apartment buildings and industrial buildings. Unreinforced masonry walls can collapse. Windows in high-rise buildings can be broken by flying debris. Falling and broken glass will pose a significant danger even after the storm. Commercial signage, fences, and canopies will be damaged and often destroyed. 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. Potable water could become scarce as filtration systems begin to fail.

Category 3 Hurricane: Winds 111-129 mph. Devastating damage will occur. There is a high risk of injury or death to people, livestock, and pets due to flying and falling debris. Nearly all older (pre-1994) mobile homes will be destroyed. Most post-1994 mobile homes will sustain severe damage with potential for complete roof failure and wall collapse. Poorly constructed frame homes can be destroyed by the removal of the roof and exterior walls. Unprotected windows will be broken by flying debris. Well-built frame homes can experience major damage involving the removal of roof decking and gable ends. There will be a high percentage of roof covering and siding damage to apartment buildings and industrial buildings. Isolated structural damage to wood or steel framing can occur. Complete failure of older metal buildings is possible, and older unreinforced masonry buildings can collapse. Numerous windows will be blown out of high-rise buildings resulting in falling glass, which will pose a threat for days to weeks after the storm. Most commercial signage, fences, and canopies will be destroyed. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to a few weeks after the storm passes.

Category 4 Hurricane: Winds 130 to 156 mph. Catastrophic damage will occur. There is a very high risk of injury or death to people, livestock, and pets due to flying and falling debris. Nearly all older (pre-1994) mobile homes will be destroyed. A high percentage of newer mobile homes also will be destroyed. Poorly constructed homes can sustain complete collapse of all walls as well as the loss of the roof structure. Well-built homes also can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Extensive damage to roof coverings, windows, and doors will occur. Large amounts of windborne debris will be lofted into the air. Windborne debris damage will break most unprotected windows and penetrate some protected windows. There will be a high percentage of structural damage to the top floors of apartment buildings. Steel frames in older industrial buildings can collapse. There will be a high percentage of collapse to older unreinforced masonry buildings. Most windows will be blown out of high-rise buildings resulting in falling glass, which will pose a threat for days to weeks after the storm. Nearly all commercial signage, fences, and canopies will be destroyed. Most trees will be snapped or uprooted, and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Long-term water shortages will increase human suffering. Most of the area will be uninhabitable for weeks or months.

Category 5 Hurricane: Winds 157 mph or higher. Catastrophic damage will occur. People, livestock, and pets are at very high risk of injury or death from flying or falling debris, even if indoors in mobile homes or framed homes. Almost complete destruction of all mobile homes will occur, regardless of age or construction. A high percentage of frame homes will be destroyed, with total roof failure and wall collapse. Extensive damage to roof covers, windows, and doors will occur. Large amounts of windborne debris will be lofted into the air. Windborne debris damage will occur to nearly all unprotected windows and many protected windows. Significant damage to wood roof commercial buildings will occur due to loss of roof sheathing. Complete collapse of many older metal buildings can occur. Most unreinforced masonry walls will fail which can lead to the collapse of the buildings. A high percentage of industrial buildings and low-rise apartment buildings will be destroyed. Nearly all windows will be blown out of high-rise buildings resulting in falling glass, which will pose a threat for days to weeks after the storm. Nearly all commercial signage, fences, and canopies will be destroyed. Nearly all trees will be snapped or uprooted, and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Long-term water shortages will increase human suffering. Most of the area will be uninhabitable for weeks or months.

It is important to note that while hurricanes pose the greatest threat to life and property, tropical storms and depressions can also be devastating. Floods from heavy rains can cause widespread damage and loss of life, as can hurricane-spawned tornadoes. Both are common occurrences of tropical systems, particularly those that develop in the Atlantic Ocean.

4.2.2 – Location & Extent

All of Fulton County is equally susceptible to inland tropical systems. However, the extent of the effects to the planning area depends on the strength and size of the tropical system and the speed at which it moves. The winds associated with tropical systems deteriorate rapidly after landfall. Fulton County is several hundred miles from the Gulf of Mexico and the Atlantic Ocean. So, the winds associated with tropical systems will typically weaken significantly before reaching the planning area. The stronger the system, the likelier Fulton County will be affected by damaging winds.

The speed in which the system moves is also a factor in the impacts of a tropical system. A faster moving system will have less time to weaken and therefore presents a greater risk of wind damage but will present less of a flooding threat. A slower moving system will present less of a damaging wind threat, but more of a flooding threat.

4.2.3 – Previous Occurrences

The NOAA/NCEI database only records tropical systems for Fulton County from 2002 to present. Between January 1, 2002, and December 31, 2020, Fulton County have had significant impacts from 16 tropical systems. Reliable data for the total number of deaths, injuries, property damage, and crop damage is not readily available. The following is a narrative of each event between 2002 and 2020.

September 14, 2002, (Tropical Storm Hanna): Tropical Storm Hanna moved inland near Mobile, Alabama around 5 pm EDT Saturday, September 14, 2002. The remnants of Hanna then moved northeast across central Alabama during the day Saturday and then across north Georgia Saturday evening into Sunday morning. The center of the remnants of Hanna passed near Carrollton, Georgia around 2 AM EDT Sunday morning, then exited the state near Clayton, Georgia Sunday morning, September 15th, around 10 am EDT. While the heaviest rain and wind associated with Hanna did not affect north and central Georgia area, a significant northwest -southeast oriented feeder band associated with Hanna moved across north and central Georgia during the mid and late afternoon Saturday. Wind gusts of 45 to 50 mph and very heavy tropical thunderstorms accompanied the feeder band. Numerous trees and power lines were blown down as the feeder band moved rapidly northeast through the afternoon. Many residents of north Georgia were left without power for at least a few hours. In the Atlanta metropolitan area alone, 48,000 residents were left without power. There were also scattered areas of urban and street flooding as up to 2 inches or more of rain fell in association with the feeder band in a one-to-two-hour period. The heaviest rain fell across the counties north of a line from Atlanta to Athens. Additional rain fell across the region Saturday night and Sunday morning, but was considerably less intense, confined mainly to central Georgia, and was not accompanied with damaging winds. Three-day rainfall totals in association with Hanna were more than 3 inches across much of northeast, east central, and the southern portions of middle Georgia. Athens reported 3.54 inches on September 14th alone, with a 3-day total of 5.03 inches. The average rainfall amount for north Georgia stations for the month was more than 7 inches and was nearly 5 inches for middle Georgia. These rainfall amounts are approximately 3.5 and 1.5 inches above normal, respectively. Several stations, particularly in north Georgia had more than 10 inches of rain during the month, with 12.47 inches at Carrollton, 11.23 inches at Embry, 11.02 inches at Alto, 10.10 inches at Hiawassee, and 10.06 inches at Taylorsville. Despite the heavy rainfall, flooding problems were minimal, since north and central Georgia had been in a 4-year drought.

July 1, 2003, (Tropical Storm Bill): Tropical Depression Bill, which was earlier Tropical Storm Bill, tracked across north and central Georgia during the day bringing heavy rain, flooding, wind damage, and

even an isolated tornado to the region. The storm, which formed in the Gulf of Mexico Sunday morning, June 29th, moved inland between New Orleans, Louisiana and Mobile, Alabama on Monday June 30th, then tracked northeast to near Tuscaloosa, Alabama by the morning of July 30th, then turned east-northeast and accelerated. The depression moved between Birmingham, Alabama and Atlanta, Georgia during the afternoon of July 1st, exiting northeast Georgia after midnight on July 2nd. Twenty-four rainfall totals of four to six inches were common on July 1st across much of north and portions of central Georgia, roughly north of a line from Columbus to Athens. Rainfall amounts were generally in the 1-to-2-inch range south of this line. There were numerous reports of flooding, especially in the Atlanta metropolitan area, and several roads were rendered impassable and closed. The ground across north and central Georgia was saturated from several weeks of above normal rainfall and the tropical storm rainfall just exacerbated the situation. As the center of circulation associated with the tropical depression tracked across north Georgia, a brief F1 tornado spin up occurred in Morgan County southwest of Madison in east central Georgia. There were also other isolated wind damage reports in areas east and southeast of Atlanta from Stockbridge to Madison to Athens.

September 6, 2004, (Hurricane Frances): Hurricane Frances, at one point a category four hurricane (on the Saffir-Simpson scale) with sustained winds of 145 mph, reached the east coast of Florida just north of West Palm Beach, Florida early on September 5th. The storm weakened to a Tropical Storm as it continued west-northwest across the Central Florida Peninsula reemerging over the northwest Gulf of Mexico early on September 6th. The storm then took on more of a northwestward movement, making landfall later the 6th near Saint Marks Florida along the Florida Panhandle Gulf Coast. Continuing north northwestward from this point, Tropical Storm Frances entered far southwest Georgia near Bainbridge late in the evening on the 6th. The storm continued moving north-northwest through far western Georgia on the 7th to near Atlanta around midnight on the 7th, then to near Chattanooga, Tennessee early on the 8th. By far the most significant problem with Frances for Georgia was strong, sustained winds of 35 to 40 mph with gusts more than 50 mph. Most of the high winds were concentrated in a large east-west oriented rain band that moved north across Georgia during the evening of the 6th and the early morning hours of the 7th. It was during this period that significant damage occurred across many Central, East Central, and North Central Georgia counties. The strongest winds and most significant damage occurred in the areas east and south of a line from Americus to Atlanta, to Athens. Many of the counties within this area suffered extensive wind damage. Dozens to hundreds of trees were blown down, also bringing down dozens to hundreds of power lines. Nearly 300,000 people were left without power during the storm, several thousand for several days. Dozens of homes suffered major damage throughout Central and North Central Georgia, with dozens more sustaining minor damage. The most significant damage took place in an area bounded by Macon, Atlanta, Greensboro, Dublin, Americus, and back to Macon. Damages in the millions were observed in several of these counties, including several large pecan orchards which were virtually destroyed. Estimated total damage with Frances $14.9 million to property and $26.5 million to crops (mostly pecan, but some peanut and cotton). Forty-one counties in the Peachtree City forecast area received a disaster declaration from the Federal Emergency Management Agency.

September 16, 2004, (Hurricane Ivan): A classic long-lived Cape Verde hurricane and at three times within its life cycle a category five hurricane, developed from a tropical wave which moved off the African coast on August 31st. The system became a tropical depression on September 2nd, and tropical storm on September 3rd, and a hurricane early on September 5th. Later that same day, it became a major hurricane. Ivan moved westward for several days and passed over the southern Windward islands, then moved west-northwest through the southern Caribbean passing just north of Venezuela and the Netherlands Antilles. The hurricane reached category five strength on September 9th as it neared Jamaica. The hurricane weakened to a category four storm as it passed near Jamaica. The storm maintained its category four strength as it turned slightly west of north until the 11th when it briefly strengthened once again to a category five storm. The storm passed near Grand Cayman and the west tip of Cuba from September 11th to the 12th as mostly a category four hurricane. The storm then turned to the northwest and moved through the Yucatan Channel. It briefly regained category five strength one more time as it moved through the Gulf but weakened to a category three hurricane by the time it struck

the U.S. Gulf Coast near Gulf Shores, Alabama around 2 am September 16th. From here, the weakening hurricane moved nearly due north to near Birmingham by the evening of the 16th. By this time, it had weakened to a tropical storm. The storm then turned northeast across northwest Georgia during the early morning hours of the 17th as it weakened to a tropical depression. Ivan brought tornadoes, high winds, and significant to record flooding to north and central Georgia. The track of Ivan across central and northeast Alabama also put much of central and eastern Georgia in the favorable quadrant for strong spiral feeder bands and tornadoes. Six tornadoes were confirmed with Ivan causing an estimated $3.4 million dollars in damages. These tornadoes consisted of two F1 tornadoes, one each in Madison and Wilkes County in northeast Georgia, with one F0 tornado reported in Cherokee, Madison, Spalding, and Upson counties. Numerous reports of funnel clouds and other tornado sightings were reported, but no other tornado touchdowns were confirmed. Flooding was extensive and widespread across the west central, north central, and northwest parts of the state. Average rainfall of 5-8 inches was reported in much of the area northwest of a Columbus, to Athens line, with some areas from Atlanta northwest to Trenton reporting more than 10 inches of rain. This rain fell just a little over a week from the 3-5 inches of rain which occurred from Tropical Storm Frances. Catastrophic and historical flooding occurred in the Atlanta area, where the excessive rainfall forced many creeks and rivers to record levels. Dozens of homes and businesses in Fulton, Cobb, DeKalb, and Cherokee counties were submerged in flood waters, some for several days thereafter. Extensive flooding was also reported further north and west, especially in Dade and Gilmer counties, where homes and vehicles were washed away by flood waters. Damage estimates from flooding in the Peachtree City forecast area were $40.9 million dollars. Overall, sustained high winds with Ivan affected less of north and central Georgia than was observed with Frances, just 10 days prior. However, with Ivan the problem was more with wind gusts than it was with sustained winds, such as were observed with Frances. Wind gusts of 50-60 mph were common with one main southeast-northwest oriented spiral rain band that swept across the area during the mid and late afternoon. This left many counties in north and central Georgia with downed trees, power lines, damages to homes, businesses, and vehicles, as well as widespread power outages. Strong winds continued well into the 18th across the north causing even more trees and some power lines to fall. Damages estimates from high winds were $14.3 million dollars. Another $5.0 million in damages was caused by river flooding in Cobb County which continued for several days after Ivan exited the area. Twenty-three counties in the Peachtree City, Georgia forecast area of north and central Georgia were given a Disaster Declaration (DR-1554-GA) by the Federal Emergency Management Agency.

September 26, 2004, (Hurricane Jeanne): Hurricane Jeanne was the third major southeast U.S. land-falling hurricane to affect Georgia within a three-week period, following just 10 days after Hurricane Ivan, which followed just 10 days after Hurricane Frances. Jeanne caused the least damage to north and central Georgia counties of the three tropical systems to affect the state during the month of September. High winds were limited mainly to the southeast portions of middle Georgia and flooding rains were limited to the Atlanta area and south middle Georgia counties. No tornadoes were observed with Jeanne as the favorable tornado-producing spiral feeder bands remained well east over the Carolinas and western Atlantic. Hurricane Jeanne developed on September 13th from a tropical wave over the Leeward Islands. Jeanne moved slowly across the Virgin Islands and Puerto Rico on the 15th, then slowly over the Dominican Republic and Haiti the 16th and 17th. Most of this time, the storm maintained only strong tropical storm strength. Jeanne then took a northward turn on the 18th and moved across the southeastern Bahamas as a tropical storm. From this point, Jeanne meandered through a slow clockwise loop from the 20th through 23rd, when the loop was finally completed. During this time the storm strengthened to a category two hurricane. Jeanne then began a slow westward track on the 23rd and strengthened to a category three hurricane. The storm then made landfall on the 25th, just north of West Palm Beach, Florida, at almost the exact same location as Hurricane Frances had done 20 days prior. Jeanne weakened to a tropical storm as it turned north-northwest across central Florida on the 26th and then weakened into a tropical depression as it moved into southern Georgia early on the 27th. The storm tracked from near Valdosta during the early morning hours of the 27th, reaching Macon around sunset on the 27th, then accelerating into northeast Georgia near Athens by midnight and out of the state early on

the 28th. High winds of 35 to 40 mph with some higher gusts were confined mainly to the central and southeast portions of middle Georgia, roughly southeast of a line from Macon to Sandersville. Rainfall of 4-6 inches was also common in much of middle Georgia, but flooding problems observed in these areas were minor. However, during the evening, a deformation zone developed on the northwest side of the center of circulation around Jeanne over the Atlanta metropolitan area. This unfortunately brought excessive rainfall of 4 to 8 inches to some of the same areas that received more than 10 inches of rain just 10 days prior with Ivan. Once again major to record flooding was observed along several creeks on the north side of Atlanta and subsequently the Chattahoochee River. Many homes that were in the stages of cleanup from Ivan, were severely impacted once again with major flooding. Overall damages from flooding and high winds were estimated at $5,000,000.

June 12, 2005, (Tropical Storm Arlene): Tropical Storm Arlene, which formed on June 8th near the northeast coast of Honduras, became a tropical storm on the 9th southwest of Grand Cayman. Arlene moved slowly northward and steadily intensified as it crossed western Cuba. The storm continued northward over the eastern Gulf of Mexico where it reached its peak intensity with a wind speed of 70 mph. The storm made landfall near Pensacola, Florida with 60 mph on the 10th. The storm moved slowly northward through central and western Alabama on the 11th and 12th. Damage to Georgia from the storm was minimal. While rain occurred in many areas, only one flash flooding event was reported in association with Arlene, namely in Towns County on the 12th.

July 6, 2005, (Tropical Storm Cindy): Tropical storm Cindy moved onshore near New Orleans, Louisiana around 6 am EDT July 6th. The remains of Cindy then moved northeast across southern Mississippi and central Alabama between Birmingham and Montgomery by 8 pm EDT on the 6th, then moved into north Georgia near Cedartown shortly after midnight then across north Georgia during the morning hours on July 7th. Areas north of Cedartown, to Atlanta, to Gainesville experienced many hours of light to moderate rain with average rainfall amounts from 3 pm EDT on the 6th to 7 am EDT on the 7th of one to two inches. However, the main problem with tropical storm Cindy was associated with spiral feeder bands that moved into west central Georgia shortly after 3 pm EDT July 6th and then tracked across west central, north central, and northeast Georgia during the evening hours. The timing of the arrival of the spiral bands into the area combined with peak heating to produce several bands of strong thunderstorms with tornadoes, damaging winds, flash flooding, and even some hail. The strongest thunderstorms, producing flash flooding and tornadoes, were confined to an area approximately 50 miles wide that extended from Franklin to Peachtree City, to McDonough, to Monroe, to Danielsville. Six tornadoes were confirmed during the evening hours including an F2 and two F1s in Henry County, and an F0 each in Meriwether, Coweta, and Fayette. The F2 tornado in Henry County caused extensive damage to the Atlanta Motor Speedway and adjacent Tara Field Airport and then traveled into southeast Clayton County causing damage to 70 homes. Numerous trees and power lines were down throughout many of the west central and Atlanta metropolitan counties, even where tornadoes did not occur. Power outages were widespread, and many residents of these areas were without power throughout the night.

Flash flooding was also a problem. The thunderstorms associated with the spiral bands of Cindy dumped torrential rainfall across Heard, Carroll, Fayette, Clayton, Fulton, De Kalb, Spalding, Henry, Rockdale, Gwinnett, Newton, Walton, Morgan, Clarke, Barrow, and Madison counties. Rainfall averaged three inches across most of these counties, with a band of rainfall more than five inches affecting northeast Coweta, northern Fayette, northern Clayton, southern Fulton, southern DeKalb, and much of Rockdale counties. Rainfall at Atlanta's Hartsfield-Jackson International Airport was 5.14 inches, which set a daily record for the calendar day and was the 6th largest one-day rainfall total ever recorded at that location. Flash flooding was particularly severe in Peachtree City, where an 18-year-old boy was swept to his death in a rain-swollen drainage ditch. Flash flooding was also reported in Meriwether, Upson, Coweta, Fulton, De Kalb, and Morgan counties were several creeks and streams exceeded their banks and several roads were washed out. A resident of Upson County was injured when he drove his truck into a rain-swollen stream that had washed out a road.

Estimated damages to North and Central Georgia in association with Tropical Storm Cindy were approximately $76,000,000. The majority of this was the result of tornado damage, but over $500,000 was flash flood or flood related. As noted above, there was also one flash flood-related death and one flash flood-related injury because of Tropical Storm Cindy.

July 10, 2005 (Hurricane Dennis): Hurricane Dennis, which began as a tropical depression near the southern Windward Islands on July 4th quickly gained strength as it tracked west-northwest across the Caribbean. It became a tropical storm on the 5th and a hurricane on the 6th as it moved near the southern end of Haiti. Hurricane Dennis made its first landfall near central Cuba as a category 4 storm on the Saffir-Simpson scale. The storm emerged into the Gulf of Mexico off the western end of Cuba on July 9th as a category 1 storm, then tracked northwest toward the Gulf Coast. Hurricane Dennis made its U.S. landfall near Pensacola, Florida around 3 pm on July 10th, then tracked north-northwest across western Alabama into northeast Mississippi and western Tennessee on July 11th. The effects of Dennis with respect to flooding were far reaching, especially on the east and north side of the storm. The first outer spiral band affected north and central Georgia during the afternoon and evening of July 9th. Numerous thunderstorms, some with very heavy rain tracked east to west across central and north Georgia. Rainfall amounts of two to four inches were reported on the south and west side of Atlanta. Flash flooding was reported in Carroll County where rainfall exceeded four inches in spots. Several roads were washed out. After a break in the rainfall overnight, widespread rain began to spread into the area from the south late in the morning on the 10th and overspread the entire region by late afternoon. Rainfall during the afternoon and early evening was mostly light to moderate with rainfall amounts prior to 8 pm were generally in the one-to-two-inch range. However, as the evening progressed, the rain became increasingly concentrated in a south-to-north oriented 50-mile-wide feeder band. The tropical feeder band set up from near Americus to Chatsworth and persisted over the same areas for a period of 12 to 15 hours. Torrential rainfall amounts fell in areas affected by the feeder band as very heavy tropical showers repeatedly tracked over the same areas. Rainfall amounts of six to eight inches were common within the feeder band, with 10–12-inch rainfall amounts reported across the southern and western portions of the Atlanta metropolitan area. Widespread flash flooding and flooding were reported, especially in Coweta, Douglas, Fayette, Fulton, and Cobb counties. Hundreds of roads were washed out and hundreds of homes experienced some degree of flooding, some major. Several rescues were required, particularly in Douglas and Cobb counties.

Wind was also a problem, but with the center of the storm tracking some 200 miles to the west of the area, sustained winds were mostly in the 20-25 mph range, with some gusts observed to near 40 mph. Several counties in west Georgia reported downed trees and power lines, with widespread power outages reported across the region.

Overall damage caused by Hurricane Dennis to north and central Georgia was approximately $12,000,000, most of which was the result of flash flooding or flooding. However, nearly $250,000 was attributed to strong winds. One death occurred because of strong winds during Hurricane Dennis.

August 29, 2005, (Hurricane Katrina): Hurricane Katrina, a horrific category 4 hurricane with winds of 140 mph made landfall just east of New Orleans around 8 am August 29th, continued north-northeast as a hurricane across eastern Mississippi during the day on the 29th, then moved into western and middle Tennessee by early morning on August 30th. While this storm will be most remembered for the extensive devastation that was done to southeast Louisiana, particularly New Orleans, and eastward along the Mississippi Gulf Coast, Katrina was a very large and powerful storm with far reaching effects to the east. By mid-afternoon on August 29th, strong spiral bands of showers and thunderstorms made their way into west Georgia. These spiral bands gradually propagated eastward through the state during the evening and overnight hours. Between 4 pm EDT and 1 am EDT, a total of 16 confirmed tornadoes touched down in north and central Georgia. The first tornado struck northern Heard County at 424 pm EDT, while the last tornado struck the town of Helen in the northeast Georgia mountains shortly after midnight at 1230 am EDT. All together there were three F2 tornadoes, three F1 tornadoes, and ten F0 tornadoes within north and central Georgia. These tornadoes resulted in one fatality and six injuries. Dozens of homes and businesses were destroyed with property damage estimated at $12,860,000. The poultry industry was

particularly hard hit, especially in west Georgia, where the tornadoes in Heard and Carroll counties destroyed over 300,000 chickens in nearly a dozen chicken houses. Strong thunderstorms with damaging winds were also reported in several counties that did not experience any tornadoes. Overall damage associated with Katrina in north and central Georgia was approximately $14,000,000.

Because of the distance of the core of Hurricane Katrina from Georgia, rainfall problems were minor, mostly isolated reports of street flooding. Unlike Tropical Storm Cindy and Hurricane Dennis, which affected the same areas during early July, no flash flooding in north or central Georgia during Katrina. Gusty west winds developed on August 30th as Katrina was dissipating over the Tennessee and Ohio Valley. However, wind gusts were mostly in the 20-30 mph range, which resulted in just isolated incidents of downed trees and power lines throughout the day across north and west Georgia.

The President of the United States issued an Emergency Declaration (EM-3218-GA) for all of Georgia, including Fulton County to support emergency protective measures for survivors of Hurricane Katrina from the Gulf Coast.

October 5, 2005, (Tropical Storm Tammy): Tropical storm Tammy developed just east of the central Florida coast on the 5th of October as the result of a complex interaction between an upper-level low and a tropical wave. The storm quickly strengthened from tropical depression status to a tropical storm early on the 5th about 20 miles east of Cape Canaveral, Florida. The storm moved north-northwest parallel to the Florida coast most of the 5th until it turned northwest and made landfall along the northeast Florida coast near Mayport, Florida late on the 5th. Its maximum sustained winds were only 50 mph. Tammy moved west across South Georgia and southwest Alabama on the 6th before becoming absorbed into an extratropical low-pressure area over the Florida Panhandle. The main effects of Tammy on north and central Georgia consisted of approximately two days of a steady light to moderate rain. However, from late on the 5th through much of the 6th, bands of heavier rain showers affected much of eastern Georgia. Two-day rainfall totals of three to five inches were common across east Georgia, mostly east of a line from Athens to Dublin. Areas immediately west of this line received generally one to two inches of rain, while the western most counties of Georgia against the Alabama border received less than one inch of rain in association with tropical storm Tammy. No tornadoes occurred and no wind damage or flooding was reported in north or central Georgia in association with Tammy. The rain that fell because of Tammy followed a period of nearly 40 days during which most of the region had received less than 0.10 inch of rain. Wind associated with this system across north and central Georgia was for the most part 15 mph or less.

September 14, 2007(Hurricane Humberto): Hurricane Humberto was the only hurricane to strike the U.S. coastline during the 2007 hurricane season. The hurricane, which rapidly strengthened from a tropical storm off the upper Texas coast late on the 12th, moved inland near the Texas-Louisiana border early on the 13th. The remnants of Hurricane Humberto then tracked across central Louisiana, central Mississippi, and into northern Alabama on the 14th. The center of the remnant of the track moved across extreme northwest Georgia, Dade, and Walker County, on the 14th. With north Georgia being located within the favorable right quadrant of the track, much needed rainfall fell across north central and northwest parts of the state, mainly northwest of a Rome to Gainesville line. Rainfall amounts of two to three inches were common within this area, with isolated five-to-six-inch rainfall amounts in parts of Whitfield and Murray counties. Further south, rainfall amounts were generally one inch or less. However, afternoon heating combined with the final feeder band associated with Humberto to bring a line of heavy showers and thunderstorms to north Georgia during the afternoon. A few trees were blown down and there were a couple of reports of hail. However, no significant damage was reported within Georgia because of the remnants of Humberto.

August 21, 2008, (Tropical Storm Fay): Tropical Storm Fay will be remembered from the catastrophic rainfall that it brought to much of Florida as well as being one of the longer-lived tropical systems to affect the U.S. Tropical Storm Fay formed from a tropical wave on August 15th along the east coast of Hispaniola. The storm moved west along the south coast of Cuba before reaching a weakness in the subtropical ridge

to its north causing it turn north northwestward into central Cuba by the 17th. Fay continued to track north-northwest through the Florida straits and Florida Keys on the 18th before turning northeast toward the Florida peninsula. The storm made landfall on August 19th in southwest Florida at Cape Romano as a tropical storm with winds of 60 mph. Fay continued to move very slowly northeast across the central Florida peninsula, well maintaining its strength along the way, reaching the northeast coast of Florida on August 21st. At this point, a strengthening subtropical ridge and surface high over the mid-Atlantic region forced Fay to take a sharp westward turn toward the Florida panhandle. The storm tracked west to west-northwest from the 22nd through the 25th into extreme southeast Louisiana before reaching the western end of the subtropical ridge and an approaching frontal system. Thus, Fay once again turned back toward the northeast across central Mississippi and central/northern Alabama before finally becoming absorbed into the mean flow and a frontal system located across the Tennessee Valley.

The slow movement of Fay and the proximity to the forecast area allowed for Fay's impacts on the Peachtree City forecast area to last several days. Outer rain bands affected the southern parts of the forecast area as early as the 20th. Outer rain bands continued to affect the southern counties as Fay tracked slowly west through the Florida Panhandle the 21st, 22nd, and 23rd. Some of these produced gusty winds and a few trees were blown down in the far southeastern counties, namely Toombs with three downed trees and Emanuel with two downed trees. While no tornadoes occurred at this point, tornado warnings were issued for several counties in the south central and southeast part of the forecast area. Widespread heavy rain also affected the southwest part of the forecast area on the 23rd as the system tracked west across the Florida Panhandle. As Fay stalled across southeast Louisiana on the 24th and began its move back to the northeast on the 25th, outer rain bands and thunderstorms started to move back into the area from the southwest during the afternoon of the 24th. Widespread heavy rain followed on the 25th and 26th, especially across the northwest half of the forecast area. As the remnant center of circulation moved into northern Alabama on the 26th, spiral bands of rotating thunderstorms tracked across north and central Georgia. Six confirmed tornado touchdowns were observed in north central and northeast Georgia because of Fay. These were the first tropical storm-related tornadoes to affect the Peachtree City forecast area since Hurricane Katrina on August 29, 2008. No lives were lost, but three injuries occurred when one of the associated tornadoes destroyed mobile homes in Jackson County. Two schools and dozens of homes were damaged in Hall County from other Fay associated tornadoes. Estimated combined damages for the five days that tropical storm Fay affected the north and central Georgia area were $1.89 million.

November 10, 2009, (Hurricane Ida): Hurricane Ida moved inland near Mobile, Alabama early on the 10th and then tracked east-northeast across southern Alabama, southern Georgia, and the Florida Panhandle before emerging off the east coast as a strong low-pressure system. The remnants of the hurricane combined with a cold air wedge across north Georgia to bring abundant Atlantic and Gulf moisture into the region. Twelve to 18-hour rainfall totals of 4-5 inches across north Georgia aggravated totally saturated soils from an on of the wettest September and October periods on record to result in widespread creek, stream, and river flooding. The generally light to moderate intensity of the rainfall and its persistence over a long period of time resulted in limited flash flooding. Damages from Hurricane Ida to Georgia were confined to minor flooding, mostly adjacent to rivers, creeks, and streams. Some locations experienced flooding subsequently for several days. Only 15 to 20 mph winds with some gusts to 25 mph were observed with the remnants of Ida as the tightly concentric wind field weakened rapidly with the inland movement. In addition, no tornadoes were observed with the remnants of Ida as it tracked across the region. Total damages from Ida within the Peachtree City, Georgia forecast area were well less than $100,000.

September 4, 2011, (Tropical Storm Lee): Tropical Storm Lee moved slowly onshore the Louisiana coast on Friday September 2nd and then grudgingly moved northeast through Sunday September 4th before finally becoming caught up in an eastward advancing upper trough and associated frontal system. The remnants of Lee tracked across central Mississippi, central and northern Alabama, and into northern Georgia on the 5th before moving northeast of the area early on September 6th. The remnants brought

beneficial modest rainfall amounts to the northwestern half of Georgia, with the heaviest rainfall falling in northwest Georgia, mainly northwest of a Rome to Dalton line. In this corner of the state, rainfall of five to seven inches was common over the two-day period, resulting in minor flooding. During the afternoon of the 5th, daytime heating combined with a pocket of strong shear associated with the remnants of Tropical Storm Lee and spawned numerous strong thunderstorms across north and central Georgia. Many of these exhibited strong low-level rotations prompting numerous tornado warnings during the afternoon and evening hours of the 5th. However, only one of these netted a tornado, an EF1 that tracked across much of eastern Cherokee county causing extensive damage to homes and businesses in that area. Damages were likely more than $11 million across eastern Cherokee County.

Tornado, thunderstorm wind, and flash flood damages related to Tropical Storm Lee are provided via those individual damage reports.

September 11, 2017, (Hurricane Irma): On the morning of August 30th Tropical Storm Irma developed rapidly over the eastern Atlantic Ocean, just west of the Cape Verde Islands. Tropical Irma quickly strengthened as it moved west, reaching hurricane strength by the morning of August 31st. Hurricane Irma continued to move steadily westward across the Atlantic Ocean, intensifying to category 4 storm on the Saffir-Simpson scale as it approached the northern Leeward Islands of the Lesser Antilles on September 4th. By the morning of the September 5th Hurricane Irma had reached category 5 and remained so into the morning of September 8th as it moved through the northern Antilles and approached the Bahamas. Irma continued moving west northwest as a category 4 storm before turning north over the Florida Straits and crossing the Florida Keys on the 9th and 10th. Hurricane Irma made landfall over southwest Florida as a category 4 storm during the evening of the 10th and travelled north northwest through western Florida before weakening to a category 1 hurricane as it crossed into southwest Georgia the afternoon of September 11th. Tropical Storm Irma crossed southwest Georgia through the day of the 11th before weakening to a tropical depression over north Alabama early on the morning of the 12th. Tropical storm strength winds produced widespread damage across central and north Georgia through the day of September 11th and into the early morning hours of the 12th. Isolated flash flooding associated with Tropical Storm Irma was reported as well.

The Fulton County Emergency Manager reported hundreds of trees and power lines blown down across the county. Thousands of customers were without electricity for varying periods of time. A wind gust of 47 mph was measured near Sandy Springs. Radar estimated rainfall amounts of 2 to 4 inches across the county with 3.6 inches measured near Buckhead. A 55-year-old male was killed in the Sandy Springs area when a large tree was blown over, crashing through his home. A wind gust of 52 mph was measured in the Fairburn area. Radar estimated rainfall amounts of 2 to 4 inches across the county with 3.9 inches measured on Utoy Creek. No injuries were reported. The event generated approximately $500,000 in property damage in Fulton County.

The President of the United State issued a Disaster Declaration (DR-4338-GA) for all of Georgia (DR-4338-GA). Fulton County was eligible for Public Assistance, Categories A-G.

October 28, 2020, (Tropical Storm Zeta): During the late evening of October 28th through the morning of October 29th, Tropical Storm Zeta swept rapidly across north Georgia producing widespread wind damage and isolated flooding across north and portions of central Georgia. Around 1.5 million customers lost electricity for some period, some for several days.

Winds gusted between 35 and 55 mph for several hours. A gust to 51 mph was recorded at Fulton County Airport (KFTY) at 3:27 AM EST and a gust of 36 mph was recorded near Milton High School. The Fulton County Emergency Manager reported numerous trees and power lines blown down across the county.

4.2.3A – Probability of Future Events

According to NOAA/NCEI, there were 16 tropical system events between January 1, 2002, and December 31, 2020. None were recorded in 2021. Based on that data, Fulton County has an 84% chance of

experiencing a tropical system every year. This means it is **highly likely** Fulton County will experience a tropical system every year.

Yearly weather patterns are variable and hard to predict over a long period of time, particularly as they relate to the effects of El Niño and La Niña. These weather patterns and others can impact the frequency and strength of tropical systems that affect Fulton County. During the first decade of the 2000s, 13 tropical systems affected the planning area. This was highlighted by an incredible five tropical systems in 2005. During the 2010s, only two tropical systems impacted Fulton County.

So, while historical data can be used to calculate the frequency of events, it should be considered unreliable due to the variability of weather patterns. The planning area can expect to see at least one tropical system every few years; with some years featuring multiple tropical systems.

4.2.4 – Vulnerability & Impact

All areas of Fulton County are equally susceptible to the impacts of tropical systems. These impacts include heavy rainfall and inland flooding, high winds, and system-spawned tornadoes (https://www.nhc.noaa.gov/prepare/hazards.php).

Heavy Rainfall and Inland Flooding

Tropical systems often produce widespread, torrential rains more than six inches which may result in deadly and destructive flooding. In fact, flooding is the major threat from tropical systems for people living inland. Rainfall amounts are not directly related to the strength of a tropical system but rather the speed and size of the storm, as well as the geography of the area. Slower moving and larger storms produce more rainfall. In addition, mountainous terrain enhances rainfall from a tropical system.

High Winds

Tropical storm-force winds are strong enough to be dangerous to those caught in them. Hurricane-force winds can destroy buildings and mobile homes. Debris, such as signs, roofing material, siding, and small items left outside become flying missiles during hurricanes. Winds can stay above hurricane strength well inland.

Tornadoes

Tropical systems can produce tornadoes. These tornadoes most often occur in thunderstorms embedded in rain bands well away from the center of the hurricane; however, they can also occur near the eyewall. Usually, tornadoes produced by tropical systems are relatively weak and short-lived, but still pose a significant threat.

Additional information specific to vulnerability and impact can be found in Section 4.2.5 - Hazus Models, where the possible effects of a hypothetical tropical storm event are explained.

4.2.4A – Critical Facilities & Infrastructure

Essential facilities are vulnerable to storm events, and the potential loss of functionality may have significant consequences to the community. Hazus-MH identified the essential facilities that may be moderately or severely damaged by winds. The Hazus-MH simulation (see Section 4.2.5 - Hazus Models) estimated impacts from the hypothetical tropical storm to critical facilities in Fulton County. The simulated event generated at least moderate damage to seven of the 327 critical facilities in Fulton County and its participating jurisdictions. It also resulted the loss of use for at least one day of each of the 327 critical facilities.

4.2.4B – Land Use & Development Trends

Because the population of Fulton County continues to grow and development projects are underway, people and facilities within the planning area are increasingly vulnerable tropical systems.

4.2.4C – Unique & Varied Risk

All areas in Fulton County are at risk for the impacts of tropical systems. Individual, facilities, infrastructure, and systems located in floodplains or with poor draining are at a higher risk of being impacted by flooding.

4.2.4D – Repetitive Loss (RL) Properties

There are no repetitive loss properties associated with this hazard in the planning area.

4.2.5 – Hazus Models

For this plan, the Carl Vinson Institute of Government at the University of Georgia performed an analysis using Hazus-MH to determine wind-related losses due to a tropical storm with winds of 68 miles per hour. Wind losses were determined from probabilistic models run for the Tropical Storm which equates to the 1% chance storm event.

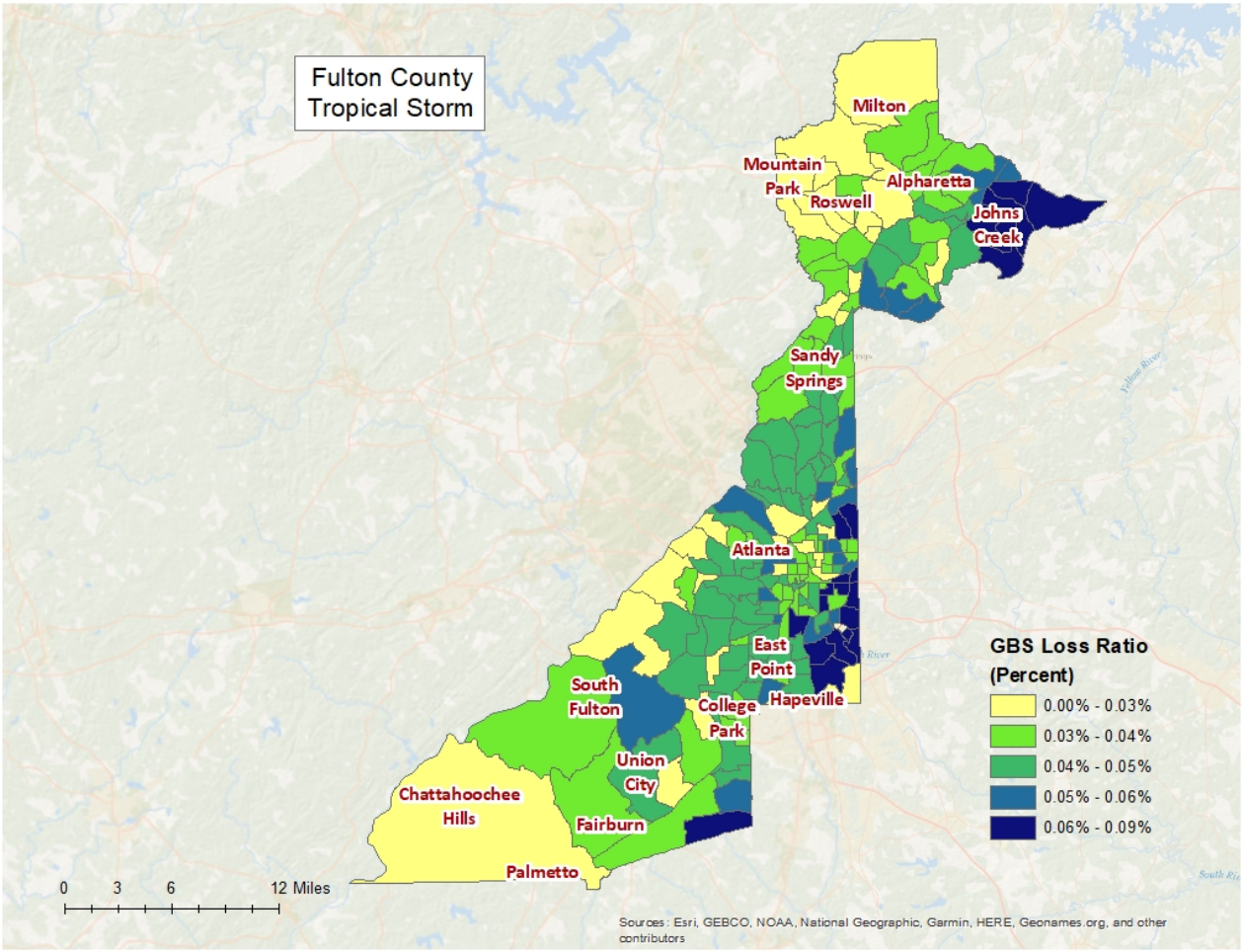
Vulnerability of Facilities

Structural vulnerability to tropical systems is variable throughout the planning area. All facilities are susceptible to high winds and tornadoes. Well-constructed buildings will be able to withstand wind and tornado impacts better than those constructed of weaker material.

A facility's vulnerability to flooding depends upon its location. Buildings in low-lying areas, or in areas with poor runoff are more likely to be damaged by flash flooding. Buildings located in floodplains are more vulnerable to flood damage from rivers, lakes, and streams.

The hypothetical tropical storm event with maximum wind speeds of 68 miles per hour was simulated to impact Fulton County using the Hazus-MH system. The simulated event generated damage to 179 buildings in Fulton County for a total of $47,591,960 in damage. This equates to a loss ratio of 0.04% in Fulton County and its participating jurisdictions. The total property loss, which considers property loss (infrastructure, contents, and inventory) as well as business interruption losses was $71,145,780.

Map 111: Tropical Storm, Building Wind Loss Ratios



Source: Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan

Vulnerability of Population

Fulton County's susceptibility to tropical systems is the same throughout the planning area. Individuals who live in floodplains, have low-income, or have functional and access needs are more vulnerable to the impacts of tropical systems. In its reported titled, "A Disaster in the Making, Addressing the Vulnerability of Low-Income Communities to Extreme Weather," the Center for American Progress argues that low-income people are disproportionately affected by extreme weather due to shoddy housing construction and the age of affordable housing (https://www.americanprogress.org/wp-content/uploads/2013/08/LowIncomeResilience-2.pdf). Old, or poorly constructed facilities are not a good shelter as flying debris can easily break windows or cause structural damage. Either of these instances have the potential for severe injuries or kill anyone taking shelter in an older or less well-constructed building. Low-income individuals also experience greater difficulties in recovering from the impacts of tropical systems.

The Hazus-MH simulation considered the likely impacts of a tropical storm with 68 mile per hour winds on Fulton County's population. In the simulation, the resulting damage is not enough to displace households or require temporary shelters.

Vulnerability of Systems

Table 84: Vulnerability of Systems to Tropical Systems, Fulton County

Vulnerability of Systems to Tropical Systems, Fulton County	
Community Lifeline System	**Vulnerability**
Safety and Security	Moderate vulnerability. Personnel may be exposed to flooding, winds, and tornadoes. Resources may be expended due to request for assistance.
Food, Water, Shelter	Moderate vulnerability. Flooding may cause water contamination. Shelters may experience power outages due to high winds, flooding, or tornadoes.
Health and Medical	Moderate vulnerability. Healthcare facilities may experience power outages due to high winds, flooding, or tornadoes. Flooding may cause water contamination. Healthcare resources may be expended responding to the community's healthcare needs.
Energy	High vulnerability. High winds, flooding, or tornadoes can cause power outages.
Communications	Moderate vulnerability. High winds, flooding, or tornadoes can damage communication infrastructure. Increased usage may decrease communication infrastructure bandwidth, causing difficulties in making telephone calls or accessing the internet.
Transportation	High vulnerability. Flooding can block and damage roads and rail lines. Winds and tornadoes can down trees, making roads impassable. Poor weather can cause flight delays and cancellations.
Hazardous Materials	Moderate vulnerability. Flooding can generate hazardous material releases. High winds and tornadoes can damage buildings or vehicles, causing hazardous materials releases.

The Hazus-MH simulation was used to estimate the debris amount that would be generated by high-velocity hurricane winds. Hazus-MH 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 following table. 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 85: Wind-related Debris Weight (Tons)

Wind-Related Debris Weight (Tons)					
Classification	**Brick, Wood, and Other**	**Reinforced Concrete and Steel**	**Eligible Tree Debris**	**Other Tree Debris**	**Total**
Tropical Storm	325	0	10,392	11,769	22,486

Source: Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan

Additional information pertaining to this hazard and Hazus modeling can be found in Appendix E - Hazard Risk Analyses Supplement.

Photo Source: David Tulis / AP

4.2(SWW) – Severe Winter Weather

4.2.1 – Hazard Description

A winter storm encompasses multiple effects caused by winter weather. Included are strong winds, ice storms, heavy or prolonged snow, sleet, and extreme temperatures. Winter storms can be increasingly hazardous in areas and regions that only see winter storms intermittently.

For mitigation planning purposes, this plan defines winter storms as a combination of the following winter weather effects as defined by NOAA and the National Weather Service (NWS).

Cold Wave/Extreme Cold: A cold wave is a weather phenomenon that is distinguished by a cooling of the air. Specifically, as described by NWS, a cold wave is a rapid fall in temperature within a 24-hour period requiring substantially increased protection to agriculture, industry, commerce, and social activities. As evidenced by past events across the U.S., extreme cold can cause impact to human life and property.

Ice Storm: An ice storm is used to describe occasions when damaging accumulations of ice are expected during freezing rain situations. Significant accumulations of ice pull down trees and utility lines resulting in loss of power and communication. These accumulations of ice make walking and driving extremely dangerous. Significant ice accumulations are usually accumulations of ¼" or greater.

Heavy Snow: This generally means snowfall accumulating to 4 inches or more in depth in 12 hours or less; or snowfall accumulating to 6 inches or more in depth in 24 hours or less. In forecasts, snowfall amounts are expressed as a range of values, e.g., "8 to 12 inches." However, in heavy snow situations where there is considerable uncertainty concerning the range of values, more appropriate phrases are used, such as "...up to 12 inches..." or alternatively "...8 inches or more." A blizzard, on the other hand, is

a storm with "considerable falling or blowing snow" and winds more than 35 mph and visibilities of less than 1/4 mile for at least three hours.

Winter Storm: A winter storm comes in the form of heavy snow, heavy freezing rain, or heavy sleet. Such hazardous storms may also include extremely low temperatures and increased wind.

Interestingly, NWS refers to winter storms as "deceptive killers." People are at greater risk to dangerous injuries, including frostbite and hypothermia due to the wind and cold. Most deaths caused by winter storms are from vehicle accidents due to ice and snow. Heart attacks brought on by overexertion from shoveling or clearing snow also increase during and after storms.

Aside from the inherent dangers of severe winter weather, rising temperatures and the melting of ice and snow can cause fast surface water runoff and potentially flash flooding.

Fortunately, significant winter storms form well in advance and can, therefore, be anticipated by weather experts. However, like other large storm fronts, the severity of winter storms is not as easily predicted. Snow and ice accumulations, as well as wind speed, will inevitably vary by location.

4.2.2 – Location & Extent

Severe winter weather can occur anywhere in Fulton County. The coldest temperature ever observed in Fulton County was -9ºF on February 13, 1899 (https://www.weather.gov/wrh/climate?wfo=ffc). The largest snowfall on record in Fulton County was 10.3" on January 23, 1940 (https://www.ajc.com/news/local/atlanta-worst-snowstorm-wasn-snowmageddon-snowjam-the-blizzard/S15Wm9pP966z5sCr5Ri6XL/).

4.2.3 – Previous Occurrences

NOAA/NCEI documented five severe winter weather events in Fulton County between January 1, 2016, and December 31, 2020. Following are the narratives from those occurrences.

January 22, 2016: Very cold air remained entrenched across the southeastern states as a deep surface low developed in the lower Mississippi Valley and swept northeast across the southern Appalachians. A wintry mix of some freezing rain and sleet, but mostly snow, covered north Georgia with snow flurries extending as far south as central Georgia. Strong pressure gradient winds associated with this low-pressure system produced northwest winds 20 to 25 mph with gusts of 30 to 40 mph across north and central Georgia during the day on the 23rd.

Numerous reports of .25 to .5 inches of snow were received from the Fulton County Emergency Manager, the broadcast media, the public and on social media in the Atlanta, Roswell, Morningside, Johns Creek, Sandy Springs, Alpharetta, Midtown, Palmetto and Brookwood areas. The Fulton County Emergency Manager reported trace amounts of sleet and the public reported .1 inches of freezing rain in Johns Creek.

January 6, 2017: During the afternoon of January 6th through the morning of January 7th a fast moving but strong storm system swept across the southeastern U.S. A cold airmass across north and central Georgia combined with rich moisture drawn north from the Gulf of Mexico to produce a mixture of rain, sleet, freezing rain and snow across north and portions of central Georgia.

County officials and the public reported around a quarter of an inch of freezing rain across the Atlanta Metropolitan area. Several reports of large branches and even trees brought down by ice were received. The ASOS at Fulton County Airport, Brown Field, reported .24 inches of freezing rain. A National Weather Service employee, Fulton County officials and the public reported around a quarter of an inch of freezing rain across the Atlanta Metropolitan area. Several reports of large branches and even trees brought down by ice were received.

December 8, 2017: With cold air in place across the southeastern U.S., a deep upper-level trough and associated surface low brought an extended period of moderate to heavy snow across parts of north Georgia beginning the morning of December 8th and continuing through the early morning of December 9th. The snowfall spread south and east overnight on the 8th into the morning of the 9th bringing light to moderate snowfall amounts to the remainder of north Georgia and portions of central Georgia. From the Atlanta metropolitan area northward and westward, many roads became impassable for several hours to over 2 days. Numerous trees and power lines were damaged or downed by the weight of the heavy, wet snow with many customers without electricity for hours if not days.

Between 2 and 5 inches of snow were estimated across the southern half of Fulton County. Reports from CoCoRaHS observers included 4 inches near East Point and 4.3 inches near Palmetto. Between 3 and 8 inches of snow were estimated across the county. The Fulton County Emergency Manager reported 7 inches in Milton.

January 16, 2018: A strong surface low and cold front associated with a large and deep upper-level trough, brought light to moderate snow to much of north and central Georgia from the afternoon of the January 16th through the morning of January 17th. With most of the precipitation post-frontal, temperatures were well below freezing (lower to mid-20s) as the snow occurred. This resulted in widespread icy and snow-packed roadways across the area, especially those that were not pre-treated by GDOT or Public Works.

Reports were received from CoCoRaHS observers, broadcast media and over social media of one to two inches of snow accumulation across the area.

February 8, 2020: A fast moving mid-level short wave swept through the region during the morning and early afternoon. With a cold airmass in place over north Georgia and ample mid-level moisture, moderate to heavy snow quickly accumulated across a large portion of north Georgia.

The local broadcast media reported 2.5 inches of snow in Roswell and the public reported 1.5 inches 1 mile north of Sandy Springs.

4.2.3A – Probability of Future Events

According to NOAA/NCEI, there were five severe winter weather events between January 1, 2016, and December 31, 2020. Based on that data, Fulton County has an 100% chance of experiencing a severe winter weather event every year. This means it is **highly likely** Fulton County will experience severe winter weather every year.

Yearly weather patterns are variable and hard to predict. Prevailing seasonal weather patterns often determine the overall frequency and severity of winter weather in each season. Many years in Fulton County see no major winter weather events. According to NOAA/NCEI data, there were no winter weather events in 2019 and 2012. Conversely, there were four winter weather events in 2010.

So, while historical data can be used to calculate the frequency of severe winter weather events, it should be considered unreliable due to the variability of weather patterns. The planning area can expect to see at least one winter weather event every year or two; with some years featuring multiple winter weather events.

4.2.4 – Vulnerability & Impact

All areas of Fulton County are equally susceptible to the impacts of severe winter weather. Higher elevations usually experience colder temperatures, so the Milton may be more prone to hazard-related impacts.

Extreme Cold Impacts

Extremely cold temperatures are a threat to anyone exposed to them. Extreme cold can cause frostbite and hypothermia. Bitterly cold temperatures can also burst water and create an excessive demand on providers to delivery energy for household heating. There are also fire dangers associated with home heating.

Heavy Snow Impacts

Heavy snow can paralyze communities. Roads can become hazardous which may cause accidents, disrupted flow of supplies, and challenges in the delivery of emergency and medical services. Large accumulations of snow can collapse roofs of buildings and knock down trees and power lines. Heavy snow can also isolate rural communities and kill livestock on farms.

Ice Storm Impacts

Ice storms can bring down trees and topple utility poles and communication towers. Ice can disrupt communications and power for days while utility companies repair extensive damage. Ice covered roads are dangerous and may cause accidents, disrupted flow of supplies, and challenges with the delivery of emergency and medical services.

Vulnerability of Facilities

Structural vulnerability to severe winter weather, though minimal, is the same throughout the entire planning area. Older buildings may be more vulnerable to roof and gutter damage due to heavy ice and snow.

Vulnerability of Population

Fulton County's susceptibility to severe winter weather is the same throughout the planning area. Individuals with high vulnerability to severe winter weather have increased risk to impacts due to functional and access needs. Older adults do not adjust as well as young people to sudden temperature change. They are more likely to have a chronic medical condition that changes normal body responses to cold temperatures. Older adults and individuals with chronic conditions are also more likely to take prescription medicines that affect the body's ability to control temperature.

Low-income individuals are also more vulnerable to severe winter weather. People with limited income are less likely to have access to an appropriate heating source. They are also more likely to be unable to afford their energy bills, especially during winter months when the cost is higher.

Vulnerability of Systems

Table 86: Vulnerability of Systems to Severe Winter Weather, Fulton County

Vulnerability of Systems to Severe Winter Weather, Fulton County	
Community Lifeline System	**Vulnerability**
Safety and Security	High vulnerability. Personnel may be exposed to extreme cold for extended periods of time. Travel for first responders may be hazardous due to ice and snow. Resources may be expended responding to requests for assistance.
Food, Water, Shelter	High vulnerability. Water service may become disrupted due to damaged water mains, pipes, and other infrastructure. Grocery stores may be closed or may be unable to restock shelves due to hazardous travel conditions or energy service disruptions. Shelters may be required to open. Shelters may experience power outages due to increased demand on energy providers or damaged infrastructure.

Vulnerability of Systems to Severe Winter Weather, Fulton County	
Community Lifeline System	**Vulnerability**
Health and Medical	Moderate vulnerability. Healthcare facilities may experience power outages due to infrastructure damage or an increased demand on energy providers. Healthcare resources may be expended responding to the community's healthcare needs.
Energy	High vulnerability. Service may be disrupted due to infrastructure damage. Providers may be challenged by an increased demand for energy.
Communications	High vulnerability. Communication infrastructure may be damaged by snow and ice.
Transportation	High vulnerability. Roads and bridges may become hazardous and/or damaged by extremely cold temperatures, snow, and ice. Air travel may be delayed or cancelled due to safety concerns.
Hazardous Materials	Moderate vulnerability. Severe winter weather will have little effect on fixed sites that store or produce hazardous materials. However, hazardous materials being transported may have a greater risk of being released due to an accident generated by hazardous roads.

4.2.4A – Critical Facilities & Infrastructure

Severe winter weather poses a significant risk to critical facilities and infrastructure within Fulton County, mainly due to the potential for energy disruptions and damage from snow and ice. A complete list of critical facilities and infrastructure can be found in Appendix C.

4.2.4B – Land Use & Development Trends

Because the population of Fulton County continues to grow and development projects are underway, people and facilities within the planning area are increasingly vulnerable to the short- and long-term effects of severe winter weather.

4.2.4C – Unique & Varied Risk

There are no unique or varied risks associated with severe winter weather in the planning area.

4.2.4D – Repetitive Loss (RL) Properties

There are no repetitive loss properties associated with this hazard in the planning area.

Photo Source: iStockphoto by Getty Images

4.2(WF) – Wildfire/Wildland Urban Interface Fire

4.2.1 – Hazard Description

The National Weather Service (NWS) defines a wildfire as "any free-burning, uncontainable wildland fire not prescribed for the area which consumes the natural fuels and spreads in response to its environment." Wildfires can occur naturally from a lightning strike; by human accident from a non-fully extinguished campfire; and on rare occasions, by human actions, or arson. The threat of wildfire increases in areas prone to intermittent drought, or that are generally arid and dry. Regardless of how they begin, wildfires can consume large areas including infrastructure, property, and resources.

There are three general types of wildfires—ground, surface, and crown. Ground fires, often referred to as underground or subsurface fires, occur in deep accumulations of organic matter such as humus, peat and similar dead vegetation that are dry enough to burn. These fires move very slowly and become difficult to fully extinguish or suppress. Occasionally, during prolonged drought, ground fires can smolder all winter underground and then emerge at the surface again in the spring. Surface fires burn only surface litter and duff, including leaves and fallen branches, and are the easiest of all fires to extinguish. Crown fires, on the other hand, are the most intense and most difficult to maintain. They burn trees up their entire length, and usually occur where there are strong winds, steep slopes, and a heavy fuel load (e.g., densely wooded forests).

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, that 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.

Aside from damaging or destroying property, or worse, claiming lives, wildfires put off dense smoke that can affect air quality and pose a serious health risk. This is especially true for the elderly or those, young and old, who have breathing conditions such as asthma or Chronic Obstructive Pulmonary Disorder (COPD). Experts agree that smoke inhalation is the number one cause of death related to fires.

Wildfires are also notorious for spawning secondary hazards long after the original fire is extinguished. Such hazards include flash flooding, debris flows, and landslides. 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.

4.2.2 – Location & Extent

As mentioned in the Georgia Hazard Mitigation Strategy Standard and Enhanced Plan, effective March 18, 2019 – March 17, 2024, 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.

Mentioned in its MJHMP update (2016), Fulton County has abundant fuel sources in various locations across the County. Along with those fuel source, the County has a high probability of experiencing droughts and severe weather (thunderstorm, lighting, and hail) events which can increase the potential of severe wildfire events significantly. As stated in the previous MJHMP (2016), another factor that has direct impact on wildfire formation and increase the risk for wildfires in Fulton County is topography. Topography can have a powerful influence on wildfire behavior. Slope, gulches, and hollows can greatly increase the rate of spread and hamper access. These slopes lend themselves to rapid spreading fires due to their angle. The greater the slope, the faster the flames move and the longer the flames. Wildfires can reach into overhanging canopies, allowing spread not only through the lower areas of the forest, but the ability to jump to other trees. More specifically, there are several municipalities at particular risk for Wildfire/Wildland Urban Interface Fire(s):

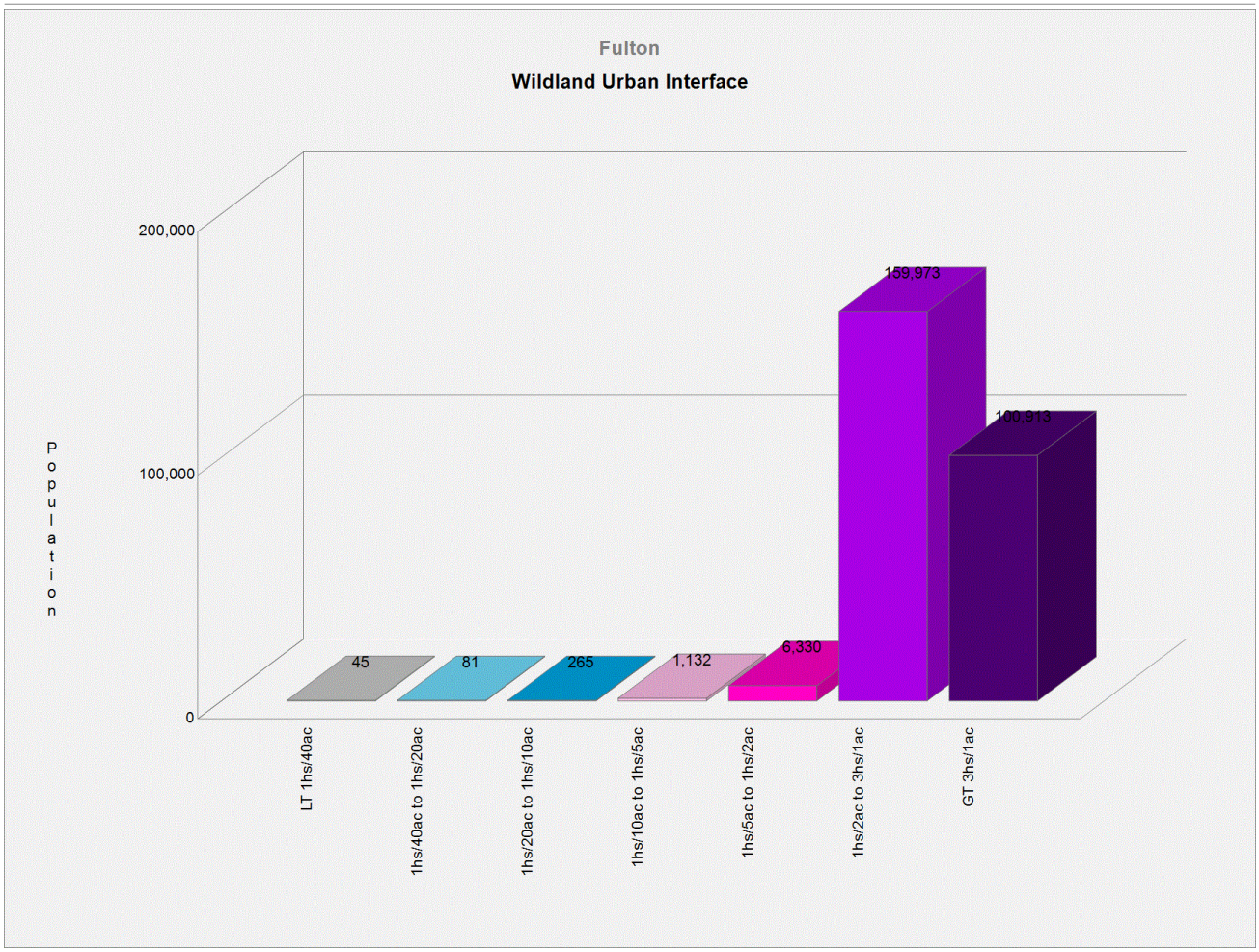
- **Union City**: Approximately 8,000 households are at risk for exposure to fire from urban interface.
- **Fairburn:** Approximately 5,000 are at risk for exposure to fire from urban interface.
- **Chattahoochee Hills:** This is a heavily forested, rural community which is also surrounded by forests managed by the State Forestry Division. There is also a high risk of wildfires in this jurisdiction and the land that surrounds it.

- **Sandy Springs and Roswell:** These communities are bordered by large national parks that are heavily wooded.
- **Johns Creek:** This community contains some areas belonging to the Chattahoochee National Park, creating some risk for structures in the area.
- **South Fulton** – This area contains heavily wooded areas that adjourn residential and business communities.

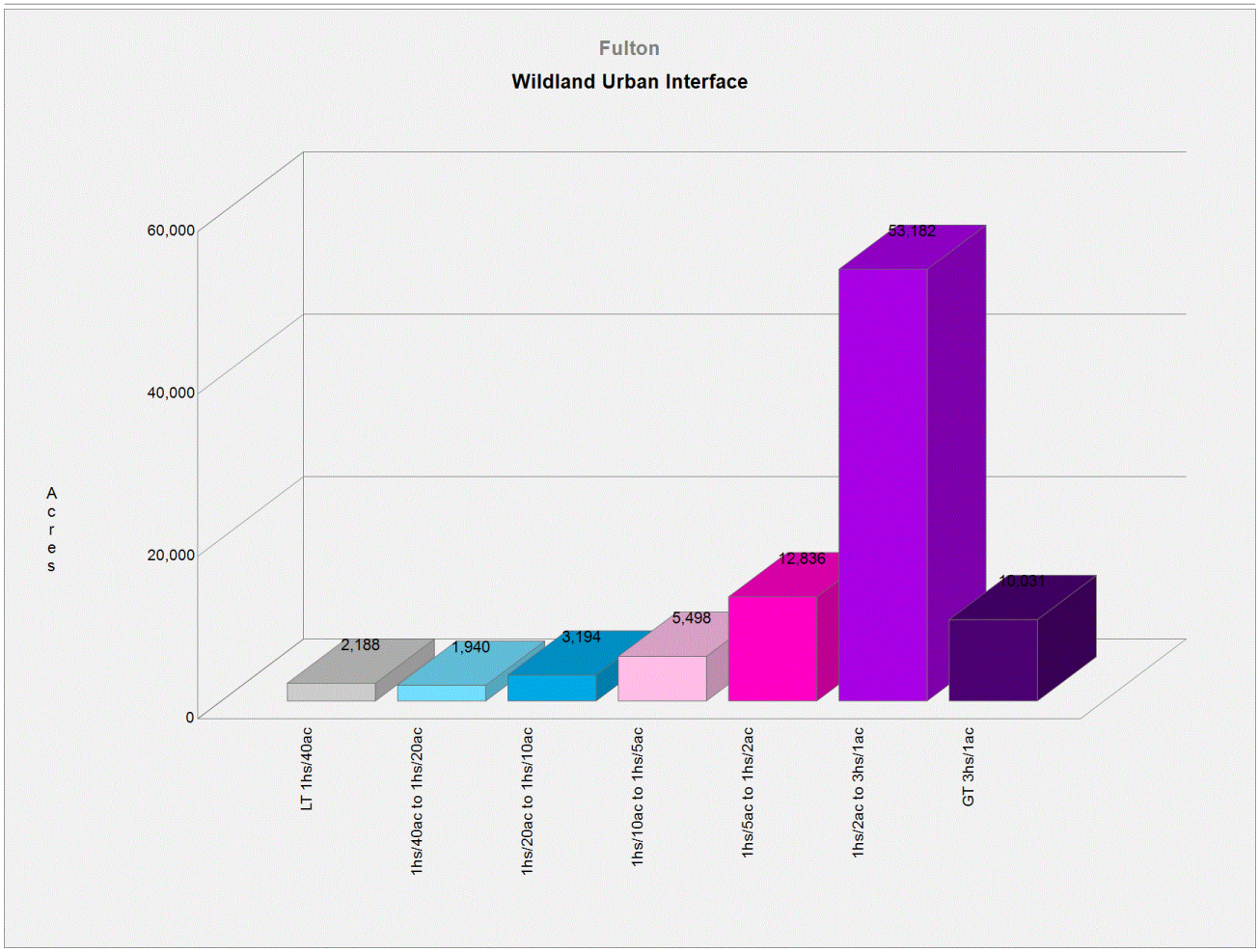
The Southern Wildfire Risk Assessment Summary Report estimates that 95.1% of the population of Fulton County and its participating jurisdiction(s) live within the WUI. The following datasets from the report, shows the total population for each WUI area within the planning area.

Housing Density	WUI Population	Percent of WUI Population	WUI Acres	Percent of WUI Acres
LT 1hs/40ac	45	0.0 %	2,188	2.5 %
1hs/40ac to 1hs/20ac	81	0.0 %	1,940	2.2 %
1hs/20ac to 1hs/10ac	265	0.1 %	3,194	3.6 %
1hs/10ac to 1hs/5ac	1,132	0.4 %	5,498	6.2 %
1hs/5ac to 1hs/2ac	6,330	2.4 %	12,836	14.4 %
1hs/2ac to 3hs/1ac	159,973	59.5 %	53,182	59.8 %
GT 3hs/1ac	100,913	37.6 %	10,031	11.3 %
Total	**268,739**	**100.0 %**	88,869	100.0 %

Data Source: Wildland Urban Interface (WUI), Southern Wildfire Risk Assessment Summary Report

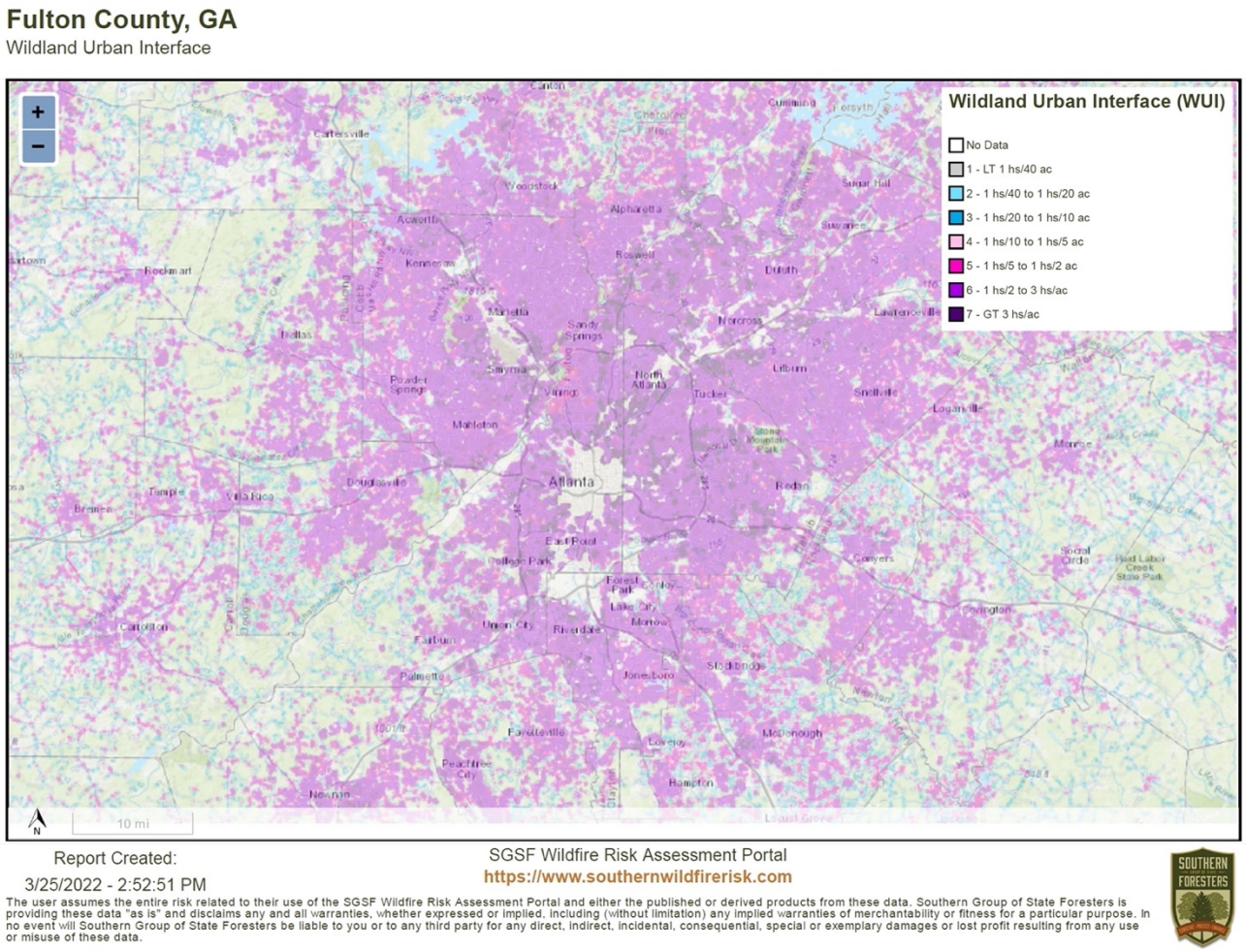


Data Source: Wildland Urban Interface (WUI), Southern Wildfire Risk Assessment Summary Report



Data Source: Wildland Urban Interface (WUI), Southern Wildfire Risk Assessment Summary Report

Map 112: Fulton County, Wildfire Urban Interface (WUI)



Map Source: SGSF Wildfire Risk Assessment Portal, https://www.southernwildfirerisk.com

Per the Georgia Forestry Commission, debris-burning is Georgia's number one cause of wildfires. 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 significant cause of debris-burn wildfires is when citizens or visitors consume in a location not permitted with weather that will only increase the fire. By not obtaining a permit and burning with improper weather conditions, citizens or visitors 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.

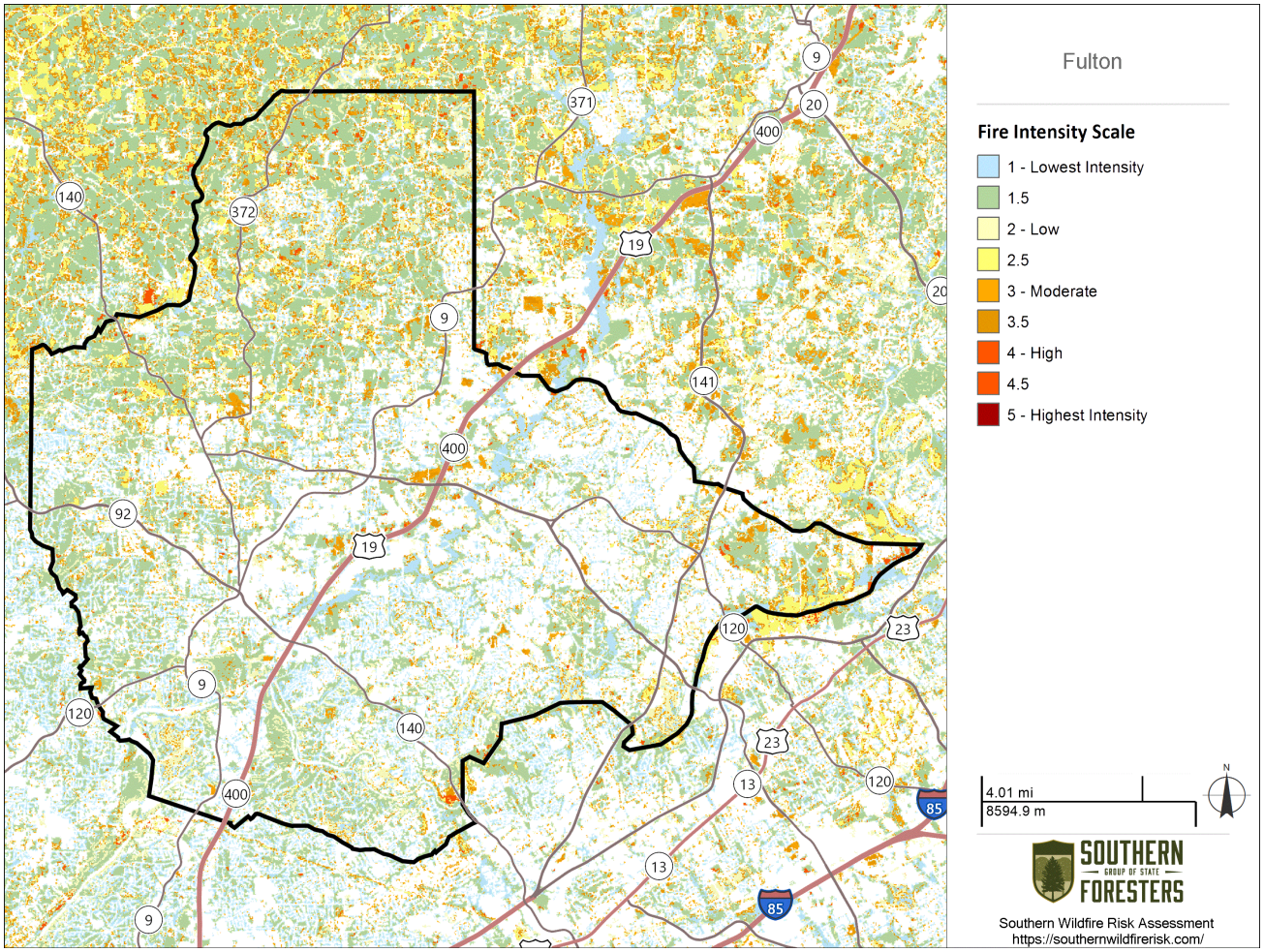
The Characteristic Fire Intensity Scale within the Southern Wildfire Risk Assessment Summary Report specially identifies areas where significant fuel hazards and associated dangerous fire behavior potential exist based on a weighted average of four percentile weather categories. Information specific to these areas is provided in the following table and map.

Table 87: Characteristic Fire Intensity Scale

Characteristic Fire Intensity Scale	
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 8 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 30 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	Very large flames up to 150 feet in length; profuse short-range spotting, frequent long-range spotting; strong fire-induced winds. Indirect attack marginally effective at the head of the fire. Great potential for harm or damage to life and property.

Source: Wildland Urban Interface (WUI), Southern Wildfire Risk Assessment Summary Report

Map 113: the Fire Intensity Scale Map of Fulton County

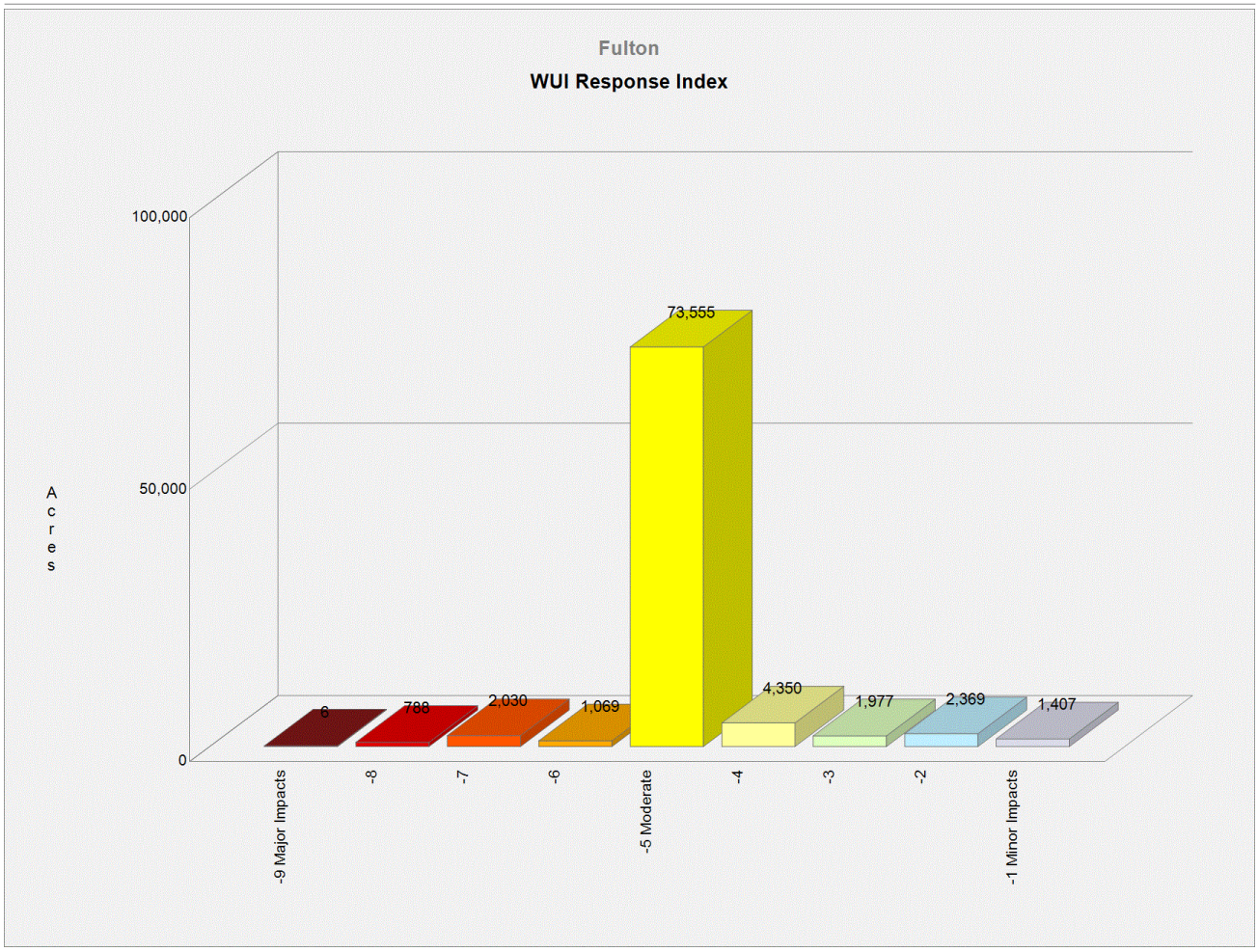


Source: SouthWrap Report for Fulton County, page 35

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. Following is information pertaining to the Characteristic Fire Intensity Scale as it relates to acreage within the planning area:

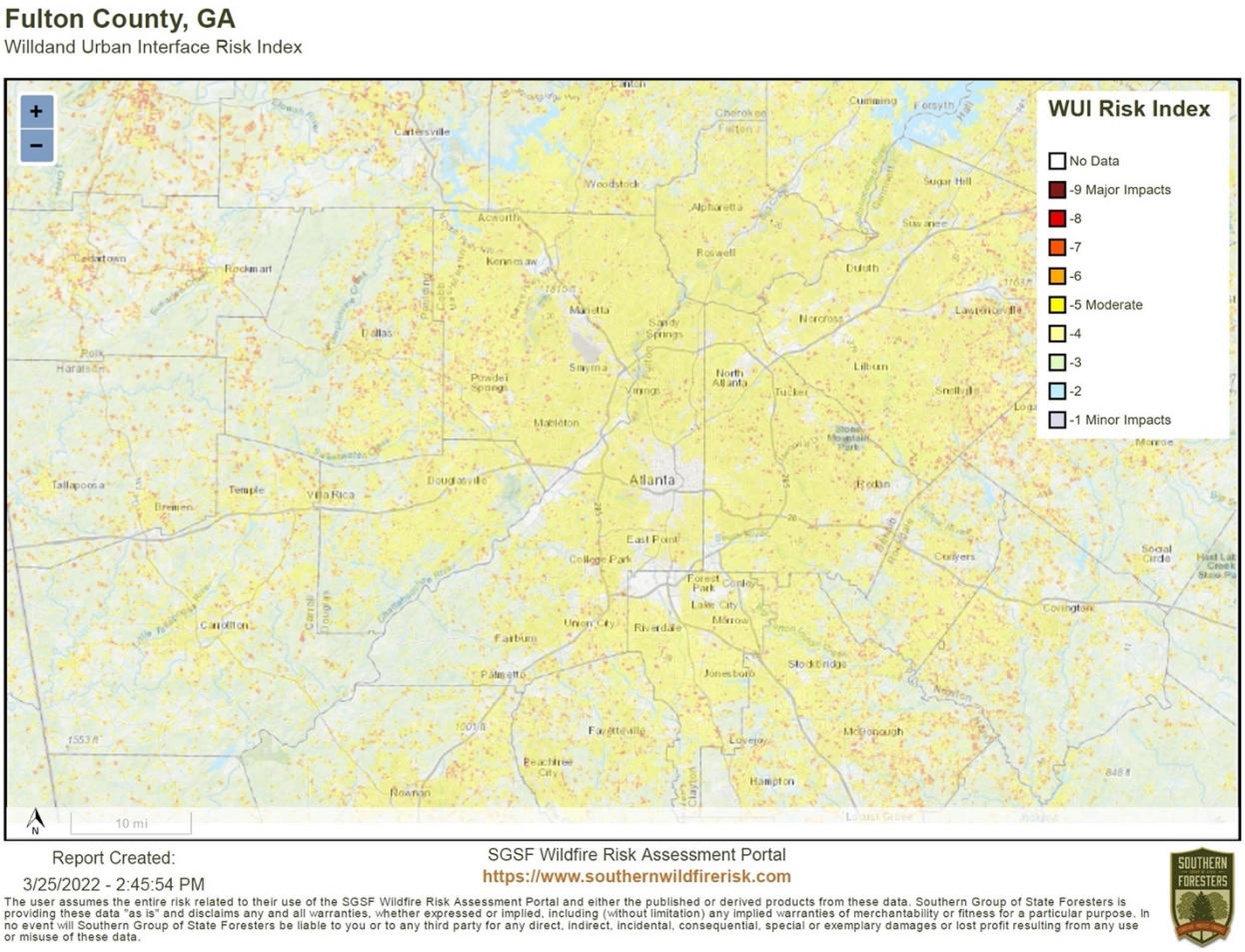
Class	Acres	Percent
-9 Major Impacts	6	0.0 %
-8	788	0.9 %
-7	2,030	2.3 %
-6	1,069	1.2 %
-5 Moderate	73,555	84.0 %
-4	4,350	5.0 %
-3	1,977	2.3 %
-2	2,369	2.7 %
-1 Minor Impacts	1,407	1.6 %
Total	**87,551**	**100.0 %**

Data Source: Wildland Urban Interface (WUI), Southern Wildfire Risk Assessment Summary Report



Data Source: Wildland Urban Interface (WUI), Southern Wildfire Risk Assessment Summary Report

Map 114: Fulton County, Wildland Urban Interface Risk Index



Map Source: SGSF Wildfire Risk Assessment Portal, https://www.southernwildfirerisk.com

The National Interagency Coordination Center (NICC), the focal point for coordinating the mobilization of resources for wildland fire and other incidents throughout the United States, reported that 14,236 acres burned in Georgia in 2018. Additionally, the Insurance Information Institute ranked Georgia as number four on its 'Top Ten States for Wildfires Ranked by Number of Fires and By Number of Acres Burned' in 2018. Georgia is listed behind Texas, California, and North Carolina, respectively, with 2,572 fires reported in the state. None of these fires occurred in Fulton County.

4.2.3 – Previous Occurrences

Fulton County's previous MJHMP (2016) states between 1954 and 2015, the State of Georgia was included in nine FEMA fire management assistance (FMA) declarations. Generally, these disasters cover a wide range of the State; therefore, the disaster may have impacted many counties. Fulton County was not included in any FMA declarations. The following wildfire events were summarized in the previous plan (2016):

February 22, 2011, South Fulton County, Wildfire: Firefighters battled a brush fire next to Banneker High School in South Fulton County. There were no reports of injuries from this event.

May 3, 2011, Fulton County, Wildfire: A brush fire was reported around Johnson Ferry Road and Riverside Drive which caused power outages in the area as well. Johnson Ferry Road was closed at Riverside in both directions. The fire was caused by a blown transformer and downed power lines across the roadway.

September 19, 2011, Fulton County, Wildfire: Fire crews battled a 45-to-50-acre brush fire near Old Jonesboro Road near Mt. Zion Road. Old Jonesboro Road was closed due to lack of visibility from the smoke. No injuries or damages were reported for this event.

The Fulton County Community Wildfire Protection Plan (CWPP), primarily for South Fulton. County is being prepared by the County as noted on the Georgia Forestry Commission (http://gatrees.net/forest-fire/CWPP/index.cfm).

While Fulton County is at moderate risk of wildfire (as mentioned in the Characteristics Fire intensity Scale, Southern Wildfire Risk Assessment Summary Report for Fulton County), especially in North and Southern portion of the County, NOAA/NCEI recorded no such events across the planning area from January 1, 2016, to July 31, 2021.

4.2.3A – Probability of Future Events

For Fulton 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 **occasional.** This is due to 1) the probability of many more wildfires that are relatively minor and extinguished quickly or otherwise burn out themselves, and 2) the fact that the CWPP (primarily for Southern Fulton County) remained in an indeterminate period during this MJHMP update.

4.2.4 – Vulnerability & Impact

Given the data deficiency described in Section 4.2.3A, the current impacts of wildfires throughout the planning area are unknown but have the potential, depending upon the circumstances, to be severe. AFCEMA will seek out the data to support this finding and will update this portion of the MJHMP as soon as possible. Meanwhile, The Fulton County Community Wildfire Protection Plan (CWPP), primarily for South Fulton. County is being prepared by the County as noted on the Georgia Forestry Commission (http://gatrees.net/forest-fire/CWPP/index.cfm).

Vulnerability of Facilities

A wildfire burning near a jurisdiction may cover it in soot, cause secondary fires from traveling coals, or directly engulf facilities, burning them to the ground. Facilities can be protected by creating defensible spaces or buffer zones, maintaining a fuel-free environment, and/or modifying structures to prevent the growth of a wildfire.

As previously mentioned, Fulton County and its participating jurisdictions' critical structures are valued at $12,219,697,510.

Vulnerability of Population

The greatest vulnerability of a jurisdiction's population is the inability to properly evacuate in an emergency. In particular, the population can be caught off guard due to slow or improper warning systems, erratic weather conditions, or apathy.

Fulton County has a population of 1,063,937 in 488,670 housing units that are at risk to wildfires. This information should be taken into consideration when trying to understand how many citizens will potentially be displaced from their homes due to the hazard.

Vulnerability of Systems

A variety of critical systems, including utilities, communications, and transportation can be severely impacted, if not rendered inoperable, in the event of a wildfire. This is equally true for large metropolitan areas, such as Atlanta, as well as smaller suburban areas such as Mountain Park. For example, power may be lost, cell service may be unavailable, and evacuation routes may become blocked by the fire or by other people attempting to leave the area. Such an impingement makes appropriate warning and information sharing paramount in mitigating wildfire risk for Fulton County and its participating jurisdiction(s).

Table 88: Vulnerability of Systems to Wildfires, Fulton County

Vulnerability of Systems to Wildfires, Fulton County	
Community Lifeline System	**Vulnerability**
Safety and Security	High vulnerability. First responders may be injured. Facilities and equipment may be damage. Communication may be disrupted. Transportation routes may be damaged or blocked. Resources may be expended. Essential government services may be disrupted. Secondary hazards (flooding, debris flows, landslides) may be created.
Food, Water, Shelter	High vulnerability. Livestock may be injured. Crops may be damaged. Homes, shelters, and lodging facilities may be damaged. Equipment may be damaged. Wastewater facilities may be damaged. Water supply may be contaminated.
Health and Medical	High vulnerability. Air quality may deteriorate. Facilities may be damaged. Communications may be disrupted. Resources may be expended. Personnel may be injured. Transportation routes may be damaged or blocked. Water supply may be contaminated.
Energy	Moderate vulnerability. Energy generation, transmission, and distribution systems may be damaged. Fuel storage resources may be damaged. Pipelines may be damaged. Fuel distribution sites may be damaged.
Communications	Moderate vulnerability. Wireless, cable, wireline, satellite, and internet systems may be damaged or overburdened. Physical warning systems may be damaged, disrupting the delivery of emergency alerts and warnings. Public safety answering points or dispatch centers may be damaged. Banking facilities may be damaged.
Transportation	Moderate vulnerability. Roads and bridges may be damaged or become impassible. Mass transit systems may be disrupted. Railroad resources may be damaged. Rail lines may be damaged or impassible, delaying routes. Air resources may be damaged. Air routes may be delayed.
Hazardous Materials	Moderate vulnerability. Oil/hazardous materials/toxic incidents may be generated from fixed or non-fixed sites. Facilities and resources may be damaged.

4.2.4A – Critical Facilities & Infrastructure

Wildfires have the potential to affect the entire planning area. A complete list of critical facilities and infrastructure can be found in Appendix C.

4.2.4B – Land Use & Development Trends

The population of Fulton County continues to grow, driving the need for additional housing and urban/suburban development. With this continuous population increase comes the increasing size of the wildland-urban interface (WUI). The expansion of the WUI in recent years has significant implications for wildfire management and its impact on Fulton County and its participating jurisdiction(s). The duration of 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. The WUI creates an environment in which fire can move readily between structural and vegetation fuels. Its expansion has increased the likelihood that wildfires will threaten structures and people within the County.

Fortunately, Fulton County has an opportunity to influence the wildland fire safety of new developments significantly. New development must be planned and constructed to provide for public safety in the event of a wildland fire emergency. It is equally essential for the citizens of Fulton County to work together to minimize the risk.

4.2.4C – Unique & Varied Risk

Wildfires can affect all, or a portion, of the entire planning area. Drought conditions and Severe Weather events (thunderstorm, lightning, and hail), also identified as a hazard in the plan, can add to this risk. The table below reflects the risk characteristics within the planning area.

Table 89: Unique & Varied Risk, Fulton County

Unique & Varied Risk, Fulton County	
Jurisdiction	**Risk Characteristics**
Fulton County	Low and medium risk WUI identified
City of Alpharetta	Low and medium risk WUI identified
City of Atlanta	Low and medium risk WUI identified
City of Chattahoochee Hills	Medium and high risk WUI identified
City of College Park	Low and medium risk WUI identified
City of East Point	Low and medium risk WUI identified
City of Fairburn	Medium and high risk WUI identified
City of Hapeville	Low and medium risk WUI identified
City of Johns Creek	Medium and high risk WUI identified
City of Milton	Low and medium risk WUI identified
City of Mountain Park	Low and medium risk WUI identified
City of Palmetto	Medium and high risk WUI identified
City of Roswell	Medium and high risk WUI identified
City of Sandy Springs	Medium and high risk WUI identified
City of South Fulton	Medium and high risk WUI identified
City of Union City	Medium and high risk WUI identified

4.2.4D – Repetitive Loss (RL) Properties

There are no repetitive loss properties associated with this hazard in the planning area.

Photo Source: National Park Service

4.2(DF) – Dam Failure

4.2.1 – Hazard Description

A dam is a barrier across flowing water that obstructs, directs, or slows down the flow, often creating a reservoir, lake, or impoundment. Most dams have a section called a spillway or weir, over or through, which water flows, either intermittently or continuously. Dams commonly come in two types, embankment (the most common) and concrete (gravity, buttress, and arch), as well as sizes. They also serve several purposes and provide essential benefits, including drinking water, irrigation, hydropower, flood control, and recreation.

Large or small, dams have a powerful presence that is frequently overlooked until a failure occurs. Dams fail in two ways: 1) a controlled spillway release done to prevent full failure, or 2) the partial or complete collapse of the dam itself. In each instance, an overwhelming amount of water, and potentially debris, is released. Dam failures are rare, but when they do occur, they can cause loss of life and immense damage to property, critical infrastructure, and the environment.

Possible reasons for dam failure include but are not limited to:

- Sub-standard construction materials/techniques
- Spillway design error
- Geological instability caused by changes to water levels during filling or poor surveying
- Sliding of a mountain into the reservoir
- Poor maintenance, especially of outlet pipes

- Human, computer, or design error
- Internal erosion, especially in earthen dams
- Earthquakes
- Terrorism

There are three classifications of dam failure: 1) hydraulic, 2) seepage, and 3) structural. Following is an explanation of each these failure classifications:

1. **Hydraulic:** This failure is a result of an uncontrolled flow of water over and around the dam structure as well as the erosive action on the dam and its foundation. The uncontrolled flow causing the failure is often classified as wave action, toe erosion, or gullying. Earthen dams are particularly
susceptible to hydraulic failure because earthen materials erode more quickly than other materials, such as concrete and steel. This type of failure constitutes approximately 40% of all dam failures.
2. **Seepage:** Seepage is the velocity of an amount of water controlled to prevent failure. This occurs when the seepage occurs through the structure to its foundation, where it begins to erode within. This type of failure accounts for approximately 4% of all dam failures.
3. **Structural:** A failure that involves the rupture of the dam or the foundation by water movement, earthquake, or sabotage. When weak materials construct dams (large, earthen dams) are the primary cause of this failure. Structural failure occurs with approximately 30% of dam failures.

There are now approximately 90,000 dams nationwide with an average age of 56 years. A high number of these dams have received less than favorable Dam Safety Action Classification (DSAC) ratings from the U.S. Army Corps of Engineers (USACE). In fact, as of 2016, the federal government said there were approximately 15,000 U.S. dams classified as having high-hazard potential (HHP), meaning that their failure could result in loss of life. The worst dam failure in the United States occurred in 1889 in Johnstown, Pennsylvania, when over 2,200 people died, with many more were left homeless.

According to USACE, dams are unique components of the U.S. infrastructure in that most dams are privately owned. Dam owners are solely responsible for keeping their dams safe and financing maintenance, repairs, and upgrades. Most dams are regulated for safety by state and federal governments, much the same way as are bridges, food, drugs, factories, etc. States regulate most dams in the U.S. (about 80%). The federal government regulates the remaining number.

4.2.2 – Location & Extent

Across the State of Georgia, there are roughly 5,500 dams holding back natural and manmade bodies of water, including lakes, rivers, ponds, etc. The following illustration, obtained from the Georgia Safe Dams Program, shows the characteristics of a typical embankment dam. Common deficiencies are presented in orange.

Illustration 9: Typical Embankment Dam

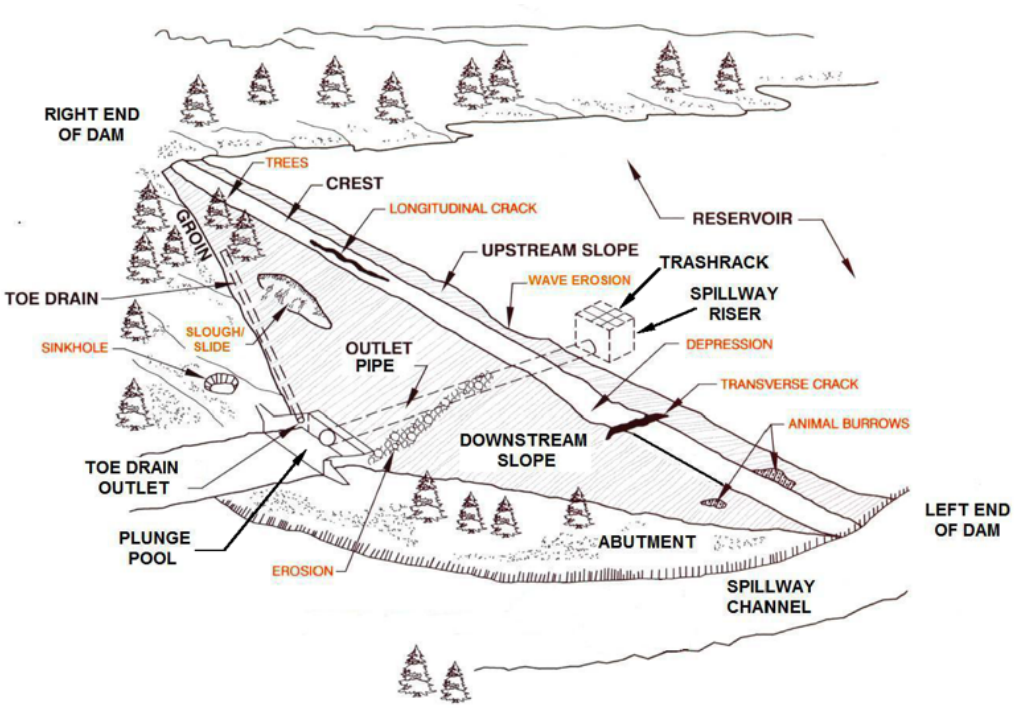


Illustration Source: Georgia Safe Dams Program

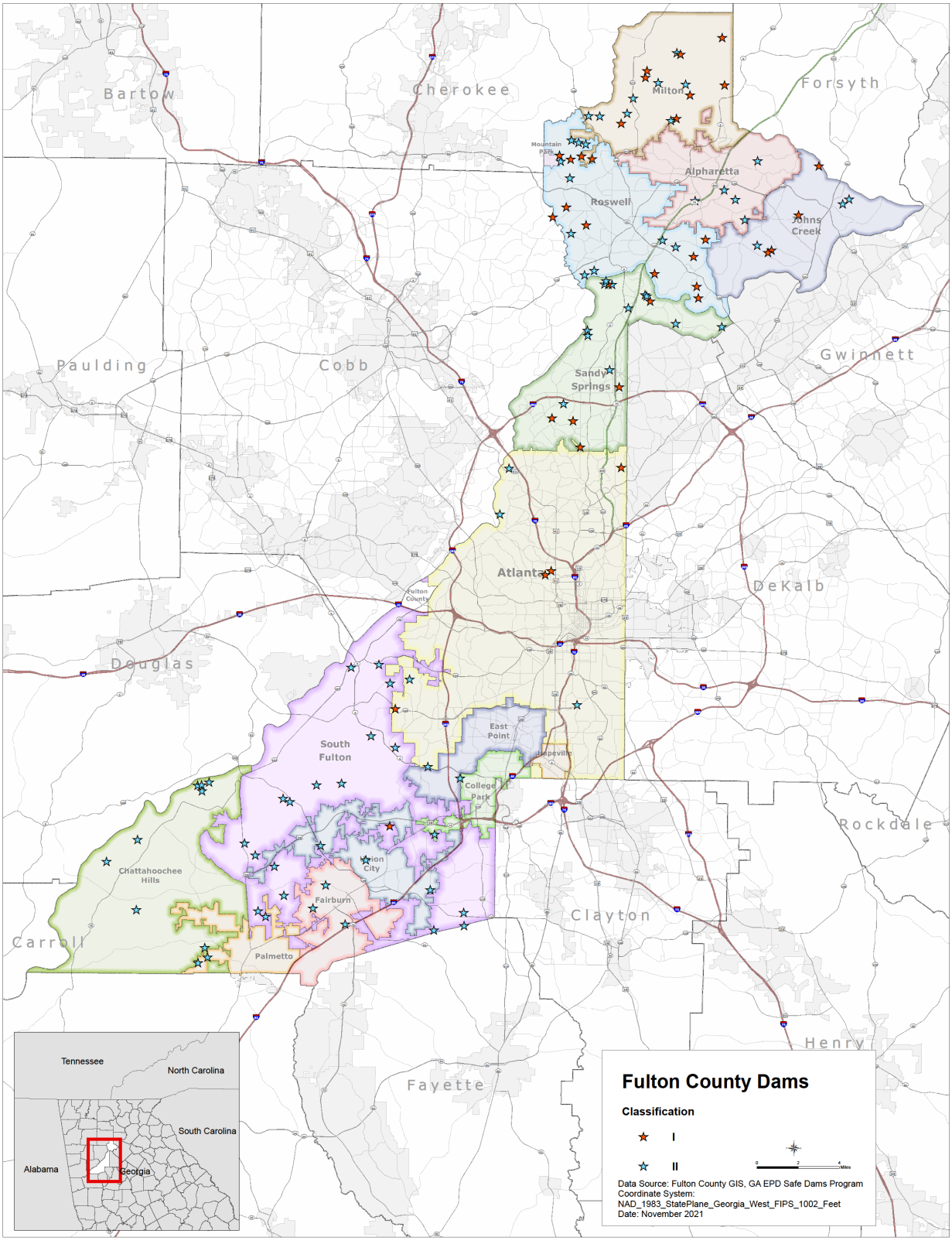
The National Inventory of Dams (NID) indicates that there are 150 dams in Fulton County. According to the Massachusetts Institute of Technology, the average lifespan of a dam is 50 years. NID data shows the average age of Fulton County's dams is 55 years. At least 55% of dams in Fulton County are over 50 years old. NID considers 56% of the dams in Fulton County to have a high-hazard potential. These dams present the potential for a serious hazard.

Given these numbers, the possibility of dam failure, and subsequently high-velocity flooding, clearly exists within the planning area. A dam failure within Fulton County could result in significant loss of life and damage to structures, roads, utilities, crops, and livestock. Economic losses could also result from a lowered tax base, lack of utility profits, disruption of commerce and governmental services, and extraordinary public expenditures for food relief and protection. The potential severity of a dam failure depends on the following factors:

- Size of the dam
- Nature of the failure
- Velocity of the floodwater released
- Density of the built environment and populations downstream
- Volume of water impounded by the dam

Currently, there is still not a standard scale to describe the extent of a dam failure based on the geographic location of the dam and the severity of a failure.

Map 115: Fulton County, Summary of Dams – Category I and II Dams Map



Map Source: Fulton County GIS, GA EPD Safe Dams Program

Georgia's Safe Dam Program, which is regulated by the Georgia Environmental Protection Division, is a part of the Georgia Safe Dams Act, O.C.G.A. Secs. 12-5-370 et seq (https://epd.georgia.gov/watershed-protection-branch/safe-dams-program). This program is responsible for developing and maintaining an inventory of dams, classifying dams, and ensuring the compliance of all regulated dams. A dam considered under this Act is a structure that must either be at least 25 feet tall (vertical height) or store at least 100 acre-feet (volume) at maximum storage.

Dams in the State of Georgia are ranked by "Dam Hazard Classification," which is determined by the potential for infrastructure and property damages downstream if a dam failure were to occur. Current Dam Hazard Classifications are:

- **Category I Dam:** Indicates the probable loss of life determined by the Georgia Safe Dam Program. This dam classification has specific rules and regulations that must be applied to its design and operation. A Category I dam is permitted, is required, and is regulated by the Georgia Environmental Protection Division (EPD).
- **Category II Dam:** Those dams where no occupied structures have been identified to be in the dam failure zone. With these dams, the Safe Dam Program is responsible for working with dam owners on their compliance with the Act and corresponding rules where necessary, taking enforcement actions against the owners who do not comply with the Act and Rules.

Following is a recent (2020) dam inventory produced by Georgia's Safe Dam Program.

Table 90: High-hazard Potential Dams, Fulton County

High-hazard Potential Dams, Fulton County	
Dam Name	**NID**
Irene Lake Dam	GA01912
Stonegate Lake Dam	GA03833
Daniels and Thomaselli Lake Dam	GA01975
Lake Forest Dam	GA03828
Seven Oaks Lake Dam	GA03827
Atlanta Res. #1 (Hemphill)	GA01494

Data Source: Georgia Safe Dams Program (December 17, 2020)

Table 91: Inventory of Dams, Fulton County

Inventory of Dams, Fulton County		
Dam Name	**Dam Hazard Classification**	**State ID**
Adams Lake Dam	II	060-056-00788
Anderson Lake Dam	II	060-141-04335
Atlanta Reservoir Dam No. 1	I	060-002-00009
Atlanta Reservoir Dam No. 2	I	060-003-00006
Atlanta-Fulton Reservoir #1 Dam	I	060-154-04466
Atlanta-Fulton Reservoir #2 Dam	I	060-195-05384
Audrey Lake Dam	II	060-182-04950
Bell Telephone Lake Dam	II	060-063-00891
Birmingham Highway Lake Dam	II	060-190-05266
Blue Heron Lake Dam	II	060-079-00939

Inventory of Dams, Fulton County		
Dam Name	**Dam Hazard Classification**	**State ID**
Brookfield West Lake Dam	II	060-140-04329
Browns Lower Lake Dam	II	060-068-00896
Brown's Middle East Lake Dam	II	060-067-00895
Browns Middle West Lake Dam	II	060-066-00894
Browns Upper Lake Dam	II	060-065-00893
Buckner Lake Dam	II	060-090-01063
Bullock-Habersham Lake Dam (Lower)	II	060-110-02146
C.G. Bartenfeld Lake Dam	II	060-099-01487
Cambridge Lake Dam	II	060-203-05951
Capital City Country Club Lake Dam	I	060-091-00105
Carmichael Lake Dam	II	060-069-00914
Carriage Lake Dam	I	060-124-02810
Cedar Grove Lake Dam	II	060-064-00892
Chattahoochee Nature Center Lake Dam West	II	060-183-04960
Cherokee Country Club Lake Dam # 1 (East)	II	060-112-02184
Cherokee Country Club Lake Dam # 2 Middle Lake	I	060-123-02736
Cherokee Country Club Lake Dam No. 3 (West)	II	060-113-02185
Chester Lake Dam	II	060-165-04653
City Lake Dam	II	060-041-00692
Clarence Duncan Park Lake Dam	II	060-174-04888
Cochran Lake Dam	II	060-052-00761
Cowart Lake Dam	II	060-029-00769
Crooked Creek Lake Dam	I	060-179-04900
Daniels & Thomaselli Lake Dam	I	060-106-02116
Demooney Lake Dam	II	060-107-02122
Dominey Lake Dam	II	060-057-00789
Dunmoor Lake Dam	II	060-159-04542
Dunwoody Country Club Lake Dam	II	060-118-02367
East Point Reservoir Dam	I	060-097-01292
Essex Properties North Lake Dam	II	060-151-04453
Frehejan Farms Lake Dam	II	060-051-00760
George Parsons Lake Dam	II	060-127-03812
Georgia Baptist Children's Home Lake Dam	II	060-072-00917
Gilham's Lake Dam	I	060-054-00770

Inventory of Dams, Fulton County		
Dam Name	**Dam Hazard Classification**	**State ID**
Glen Errol Lake Dam	II	060-202-05950
Glenlake Dam #2	II	060-129-03421
Glenover Drive Lake Dam	I	060-201-05797
Green Valley Lake Dam	II	060-085-00965
Hartrampf Lake Dam	II	060-108-02144
Horsehead Lake Dam	II	060-062-00890
Huntcliff Lake Dam	II	060-111-02183
IBM Lake Dam	II	060-169-04722
Irene Lake Dam	I	060-047-00763
Judy's Lake Dam	II	060-196-05474
Kimberly-Clark Lake Dam	II	060-104-02017
Lafitte Lake Dam	II	060-022-00465
Lake at Ansley Dam	I	060-193-05364
Lake Charles Dam	I	060-086-00966
Lake Clara Belle Dam	II	060-035-00678
Lake Forrest Dam	I	060-150-04550
Lake Frances Dam	I	060-083-00976
Lake Huntington Dam	II	060-012-00192
Lake North Dam	II	060-017-00344
Lakemont Estates Lake Dam	II	060-089-01012
Lakewood Fairgrounds Lake Dam	II	060-119-02382
Little River W/S Str. #34	I	060-040-00691
Little River W/S Str. #36	I	060-038-00681
Little River W/S Str. #24	I	060-053-00762
Little River W/S Str. #25	I	060-050-00759
Little River W/S Str. #27 Dam	I	060-055-00771
Little River W/S Str. #27 Dam	I	060-055-00771
Little River W/S Str. #39 Dam	I	060-009-00369
Little River W/S Str. #40	I	060-046-00764
Little River Watershed Structure No. 30	II	060-049-00758
Little River Watershed Structure No. 31	I	060-048-00757
Little River Watershed Structure No. 35	II	060-037-00680
Lower Nesbit Ferry Lake Dam	I	060-170-04783
Lower Wright's Lake Dam	II	060-015-00286
Martin's Landing Lake Dam	I	060-034-00837
McClure Lake Dam	II	060-078-00938
Morning Creek WPCP Polishing Pond Dam	II	060-115-02205

Inventory of Dams, Fulton County		
Dam Name	**Dam Hazard Classification**	**State ID**
Morrison Lake Dam	II	060-103-01946
Naturally Fresh Lake Dam	II	060-081-00962
Niskey Lake Dam	II	060-032-00676
North Pond Dam	II	060-021-00464
Northridge Lake Dam	I	060-011-00193
Orkin Lake Dam	II	060-042-00768
Overton Lake Dam	II	060-075-00935
Palmetto Reservoir Dam	II	060-074-00934
Peppertree Lake Dam	I	060-013-00235
Powers Lake Dam	I	060-117-02318
Preferred Land Lake Dam	II	060-084-00964
Princeton Lake Dam	II	060-087-00967
Pritchard Lake Dam	II	060-109-02145
Providence Lake Dam	II	060-036-00679
Providence Road Lake Dam	II	060-189-05263
Redding Lake Dam	II	060-094-01069
Rico Lake Dam	II	060-071-00916
Rivermeade Lake Dam	II	060-146-04385
Sawmill Branch Lake Dam	II	060-188-50147
Seven Oaks Lake Dam	I	060-156-04484
Smith Lake Dam	II	060-070-00915
Spalding Lake Dam	II	060-184-04986
Starke Lake Dam	II	060-149-04449
Stonegate Lake Dam	I	060-088-00968
Technology Park Pond "B" Lake Dam	II	060-160-04559
Technology Park Pond "C" Lake Dam	II	060-161-04560
Technology Park Pond "C" Lake Dam	II	060-161-04560
Tera Lee Lake Dam	I	060-030-00690
Trammel-Crow Lake Dam	II	060-153-04461
Turner Lake Dam	II	060-168-04654
Upper Chattahoochee Nature Center Lake Dam	II	060-177-04894
Upper Twin Lake Dam	II	060-005-00085
Vandivers Lake Dam	II	060-031-00675
Wildercliff Lake Dam	II	060-163-04602
Willow Lake Dam	I	060-125-02811
Willow Springs Lake Dam	I	060-010-00170

Data Source: Georgia Safe Dams Program – Updated November 22, 2019

4.2.3 – Previous Occurrences

According to the Association of State Dam Safety Officials, there have been no instances of dam failure in Fulton County. There is no single, comprehensive source of open-source information about a dam failure in the State of Georgia. Though some private dams may have been breached, no records have been found to indicate an emergency response related to it. The probability of a dam failure event occurring within the planning area is reduced due to the continued monitoring and compliance of the Georgia Safe Dam Program.

4.2.3A – Probability of Future Events, Dam Failure

Calculating future probability is not the only predictor of future occurrences. In the last five years, Fulton County and its participating jurisdictions do not have any documented cases of dam failure and incidences. Though the County has experienced occurrences that were listed in its MJHMP update (2016), the likelihood of a dam failure event happening in the planning area is considered **occasional.**

4.2.4 – Vulnerability & Impact

Fulton County and its participating jurisdictions have recorded no incidences of dam failure since the last MJHMP update (2016). Still, a dam failure could have a tremendous impact on the planning area, including the environment, much like a flood event.

Vulnerability of Facilities

Facilities during a dam failure will have a similar vulnerability to a flood event in the planning area. As mentioned within the flood hazard of this plan update, critical facilities and infrastructure can be rendered unusable or permanently destroyed, producing a significant impact on a jurisdiction's ability to conduct day-to-day operations. Fulton County and its participating jurisdictions' critical structures are valued at $12,219,697,510. Also, like a flood, a dam failure can cause considerable damage to residential and/or commercial structures that can irrevocably damage a community and its economy by creating economic hardship.

Vulnerability of Population

The greatest vulnerability of a jurisdiction's population is the inability to predict a dam failure due to it being uncontrollable by humans. Fulton County and its participating jurisdictions have a total population of 1,063,937 in 488,670 housing units that would be at risk for a dam failure in the planning area.

It is important to note that no injuries or deaths have occurred in Fulton County or its participating jurisdictions as a direct result of dam failure.

Vulnerability of Systems

Table 92: Vulnerability of Systems to Dam Failures, Fulton County

Vulnerability of Systems to Dam Failures, Fulton County	
Community Lifeline System	**Vulnerability**
Safety and Security	Moderate vulnerability. First responders may be exposed to flooding hazards or hazardous materials releases. Resources may be expended due to requests for assistance.
Food, Water, Shelter	Moderate vulnerability. Flooding may cause water contamination. Flooding may damage shelters or make roads to shelters impassible.
Health and Medical	Low vulnerability. Flooding may cause water contamination. Healthcare resources may be expended responding to the community's healthcare needs.

Energy	High vulnerability. Hydroelectrical power generation may be affected by a dam failure to an energy provider's resources. Infrastructure may be damaged by flooding.
Communications	Low vulnerability. Communication infrastructure may be damaged by flooding.
Transportation	Moderate vulnerability. Roads and rail lines may be damaged or impassible due to flooding.
Hazardous Materials	Moderate vulnerability. Hazardous materials may be released at fixed sites due to flooding.

4.2.4A – Critical Facilities & Infrastructure

Knowing that there are 150 dams in Fulton County and that 55% of them are over 50 years old (a dam's average lifespan), all critical facilities and infrastructure within the planning area are at risk of a dam failure event. This is especially true for homes, businesses, and critical facilities that are near a dam. The complete list of critical facilities and infrastructure can be found in Appendix C.

4.2.4B – Land Use & Development Trends

Development near dams will increase vulnerability to dam failures.

4.2.4C – Unique & Varied Risk

As dams continue to age, there is an increased potential of failure due to undesirable woody vegetation on the embankment, deteriorating concrete, and other structural factors that can cause issues over time. A failure could lead to widespread flooding, putting the entire planning area at risk, particularly those living near a dam.

4.2.4D Repetitive Loss Structures

Not applicable.

4.3 – Hazard Risk Summary

The table below outlines each participating jurisdictions' general risk to this plan's profiled hazards. The rankings are based on a composite evaluation of this plan's risk assessment, namely, a hazard's probability of occurring in the future, the vulnerability of a jurisdiction to a specific hazard, the intensity of past hazard impacts, and a joint evaluation of local experts and stakeholders.

Category	Range (Per Year)
Unlikely	0%
Occasional	1% -10%
Likely	11% - 50%
Highly Likely	51% - 100%

Table 93: Hazard Risk Summary, Fulton County

Hazard Risk Summary, Fulton County											
JURISDICTION	***NATURAL HAZARDS***										***HUMAN-CAUSED HAZARDS***
	Drought	**Earthquake**	**Flood**	**Geological Hazards**	**Extreme Heat**	**Severe Weather**	**Severe Winter Weather**	**Tornado**	**Tropical Systems**	**Wildfire/ Wildland Urban Interface Fire**	**Dam Failure**
Fulton County	295% Highly Likely	Occasional**	180% Highly Likely	Highly Likely	Highly Likely	Highly Likely*	Highly Likely	160% Highly Likely	84% Highly Likely	Occasional *****	Occasional ***
City of Alpharetta	295% Highly Likely	Occasional**	6% Occasional	Highly Likely	Highly Likely	Highly Likely*	Highly Likely	160% Highly Likely	84% Highly Likely	Occasional *****	Occasional ***
City of Atlanta	295% Highly Likely	Occasional**	64% Highly Likely	Highly Likely	Highly Likely	Highly Likely*	Highly Likely	160% Highly Likely	84% Highly Likely	Occasional *****	Occasional ***
City of Chattahoochee Hills	295% Highly Likely	Occasional**	Occasional ****	Highly Likely	Highly Likely	Highly Likely*	Highly Likely	160% Highly Likely	84% Highly Likely	Occasional *****	Occasional ***
City of College Park	295% Highly Likely	Occasional**	Occasional ****	Highly Likely	Highly Likely	Highly Likely*	Highly Likely	160% Highly Likely	84% Highly Likely	Occasional *****	Occasional ***
City of East Point	295% Highly Likely	Occasional**	4% Occasional	Highly Likely	Highly Likely	Highly Likely*	Highly Likely	160% Highly Likely	84% Highly Likely	Occasional *****	Occasional ***
City of Fairburn	295% Highly Likely	Occasional**	Occasional ****	Highly Likely	Highly Likely	Highly Likely*	Highly Likely	160% Highly Likely	84% Highly Likely	Occasional *****	Occasional ***

Hazard Risk Summary, Fulton County											
JURISDICTION	NATURAL HAZARDS										HUMAN-CAUSED HAZARDS
	Drought	Earthquake	Flood	Geological Hazards	Extreme Heat	Severe Weather	Severe Winter Weather	Tornado	Tropical Systems	Wildfire/ Wildland Urban Interface Fire	Dam Failure
City of Hapeville	295% Highly Likely	Occasional**	2% Occasional	Highly Likely	Highly Likely	Highly Likely*	Highly Likely	160% Highly Likely	84% Highly Likely	Occasional *****	Occasional ***
City of Johns Creek	295% Highly Likely	Occasional**	Occasional ****	Highly Likely	Highly Likely	Highly Likely*	Highly Likely	160% Highly Likely	84% Highly Likely	Occasional *****	Occasional ***
City of Milton	295% Highly Likely	Occasional**	Occasional ****	Highly Likely	Highly Likely	Highly Likely*	Highly Likely	160% Highly Likely	84% Highly Likely	Occasional *****	Occasional ***
City of Mountain Park	295% Highly Likely	Occasional**	Occasional ****	Highly Likely	Highly Likely	Highly Likely*	Highly Likely	160% Highly Likely	84% Highly Likely	Occasional *****	Occasional ***
City of Palmetto	295% Highly Likely	Occasional**	Occasional ****	Highly Likely	Highly Likely	Highly Likely*	Highly Likely	160% Highly Likely	84% Highly Likely	Occasional *****	Occasional ***
City of Roswell	295% Highly Likely	Occasional**	8% Occasional	Highly Likely	Highly Likely	Highly Likely*	Highly Likely	160% Highly Likely	84% Highly Likely	Occasional *****	Occasional ***
City of Sandy Springs	295% Highly Likely	Occasional**	12% Occasional	Highly Likely	Highly Likely	Highly Likely*	Highly Likely	160% Highly Likely	84% Highly Likely	Occasional *****	Occasional ***
City of South Fulton	295% Highly Likely	Occasional**	Occasional ****	Highly Likely	Highly Likely	Highly Likely*	Highly Likely	160% Highly Likely	84% Highly Likely	Occasional *****	Occasional ***
Union City	295% Highly Likely	Occasional**	2% Occasional	Highly Likely	Highly Likely	Highly Likely*	Highly Likely	160% Highly Likely	84% Highly Likely	Occasional *****	Occasional ***

**The hazard of Severe Weather considers the instances of thunderstorms, including thunderstorm wind, as well as lightning and hail, each with a varying degree of occurrence/probability.*
*** The hazard of earthquake is considered occasional but without a definite calculation of probability. This is due to there being no record/data of earthquake in the planning period since the last plan update (2016).*
**** Calculating future probability is not the only predictor of future occurrences. In the last five years, Fulton County and its participating jurisdiction do not have any documented cases of Dam Failure. Though the County has experienced occurrences that were listed in its MJHMP update (2016), the likelihood of a dam failure event happening in the planning area is considered* ***occasional.***

*****Note: The NOAA/NCEI Storm Events Database did not have any incidences of storm data records related to flood/flash flood for the Cities of Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton from January 1, 1970 – July 31, 2021. However, since flooding is possible, the Cities Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton's Probability of Future Events is considered* ***occasional.***

******The hazard of Wildfire/Wildland Urban Interface Fire is considered* ***occasional*** *but without a definite calculation of probability. This is due to there being no record/data of wildfire in the planning period since the last plan update (2016).*

4.4 – Excluded Hazards

Coastal Hazards

Coastal Hazards was excluded from Fulton County's previous MJHHMP (2016) and is not included as a hazard of concern with this plan update (2022).

***Note**: Human-caused hazards, though identified in the State of Georgia Multi-Hazard Mitigation Plan and Statewide Hazard Assessment, are, for the most part (i.e., except for Dam Failure), not included in Fulton County's previous MJHMP (2016) nor this plan update. This includes Communicable Disease, e.g., COVID-19.*

***Note**: Related to Communicable Disease, as of March 2020, the United States continues to combat the coronavirus (COVID-19) pandemic. The State of Georgia, like others, was placed under a "Public Health State of Emergency" which included a "Shelter in Place" order at one point. While such restrictions have since been lifted or expired, it is important to note that public health experts, in consultation with the Centers for Disease Control and Prevention (CDC), are still monitoring the situation and addressing the spread of new COVID-19 variants, e.g., Delta and Omicron. As of March 15, 2022, there have been 2.41 million cases of COVID-19 confirmed in Georgia, and unfortunately, 34,857 deaths. Of these numbers, Fulton County has seen 214,000 cases and lost 2,191 people to the virus and/or complications from it.*

More information about this pandemic can be found on Fulton County's website at https://www.Fultoncounty.org/communications/info-center/covid-19-updates.

4.5 – Special Consideration, Climate Change

Photo Source: Google

Climate change, as described by the National Aeronautics and Space Administration (NASA), is "a long-term change in the average weather patterns that have come to define Earth's local, regional and global climates."

Further, NASA states, "Changes observed in Earth's climate since the early 20th century are primarily driven by human activities, particularly fossil fuel burning, which increases heat-trapping greenhouse gas levels in Earth's atmosphere, raising Earth's average surface temperature. These human-produced temperature increases are commonly referred to as global warming. According to the U.S. Geological Survey (USGS), temperatures are rising at a faster pace than at any time in history.

Scientific observations, coupled with climate data records, provide evidence of climate change "key indicators." Among them are global land and ocean temperature increases; rising sea levels; ice loss at Earth's poles and in mountain glaciers; frequency and severity changes in extreme weather such as hurricanes, heatwaves, wildfires, droughts, floods, and precipitation; and cloud and vegetation cover changes, to name a few.

Many of the hazards identified within this update to Fulton County's MJHMP are, in one way or another, potentially affected by climate change.

Health Risks

Certain people are more vulnerable to emerging climate change impacts. Climate change raises health risks for people with existing physical or mental illness, children, and older adults, those who work outdoors, and those living in areas prone to flooding. Climate change can lead to weather events and conditions that are associated with health hazards such as 1) heat waves, which can cause heat-related illnesses, heat stroke, and other serious health problems, 2) extreme drought and flooding, 3) disruptions to agriculture, i.e., altered growing and storage conditions requiring changes in crop and livestock species or food production practices.

Given the potential for climate change to increase the frequency and magnitude of natural hazards, FEMA encourages states, regions, counties, and municipalities to consider climate change when mitigating hazards.

Section 5: Mitigation Strategy

Planning Process
Local Procedures & Resources
Planning Area
Hazard Risk Assessment
Mitigation Strategy
- Mitigation Capabilities
- Floodplain Programs
- Mitigation Goals
- Mitigation Projects
- Mitigation Evaluations & Prioritizations
- Planning Integration

5.1 – Mitigation Capabilities

Each type of plan stakeholder provides a set of capabilities, in some cases broad and in some cases narrow, by which they can increase the planning area's resiliency.

County and Municipal Governments

The broadest form of mitigation capabilities come from county and municipal governments. Their inherent legal authority allows them to institute the greatest regulatory and developmental changes.

Institutional Capability

Fulton County is a whole community that can implement the mitigation strategies identified herein. In addition, the County can promote the mitigation process, further educating the public about the hazards prevalent to the area, as well as the mitigation process necessary to mitigate those hazards.

In an emergency, county/municipality response is an extraordinary extension of responsibility and action, coupled with normal day-to-day activity. Normal governmental duties will be maintained, with emergency operations carried out by those agencies assigned specific emergency functions under the Fulton County Local Emergency Operations Plan, or LEOP.

Political Capability

During the process of developing this MJHMP update, opposition to mitigation measures was not evident from Fulton County and its participating jurisdictions, i.e., the cities of Alpharetta, Atlanta, Chattahoochee Hills, College Park, East Point, Fairburn, Hapeville, Johns Creek, Milton, Mountain Park, Palmetto, Roswell, Sandy Springs, South Fulton, and Union City, and the many plan stakeholders. The primary limiting factor is funding, which is made more difficult by the current situation in the local, state, and national economy.

Fulton County, through partnerships with the participating agencies, is well-organized and responsive to community needs. Leadership is informed and remains up to date on the hazards that threaten the area. Citizens who participated in the public meetings and presentations showed a genuine interest in doing things to promote a safer and more resilient community. All (the governing board, staff, and citizen population) appear willing to promote the economic efficiency and social utility of the mitigation measures contained in this plan, if appropriate funding can be identified.

Technical Capability

Fulton County and its participating jurisdictions have the basic technology needed to mitigate and respond to natural disasters. They are equipped with phone and fax lines and a functional Emergency Operations Center (EOC) in case of disaster. Most key persons are equipped with cell phones, which can act as a backup to landlines in case service is lost. The County is connected to the internet, which is a valuable source of information on approaching hazards and mitigation measures. The County sponsors a website where there is a link to the Atlanta-Fulton County Emergency Management Agency (https://www.afcema.com). The County's GIS (mapping) services are limited, but until municipal governments fully implement GIS standard services, appropriate state agencies, like the Georgia Mitigation Information System supported by GEMA, will provide the necessary support.

Fiscal Capability

The stakeholders of this mitigation plan are not unique in the issues felt by small governments to retain the staff and resources necessary to accomplish the strategies necessary to mitigate local hazards. However, they are aware of potential diverse funding sources available to communities for assisting in the fiscal needs required to implement local hazard mitigation plans, including both government and private programs.

While federal and state programs carry out the bulk of disaster relief programs that provide funds for mitigation, local governments can search for alternative funding sources to supplement the local hazard mitigation budget. The participants in the mitigation planning process are aware that before effective mitigation strategies can be applied, stable funding sources and effective incentives must be established on a per project basis to encourage participation by the private and public sectors.

5.1.1 – Authorities & Regulations

General Authority

Georgia State law provides the legal authority for local governments to implement regulatory measures. The basis for much of this authority is the local government power designed to protect public health, safety, and welfare. This authority enables local governments to enact and enforce ordinances, and to define and abate nuisances. Hazard mitigation is a form of protecting public health, safety, and welfare, and falls under the general regulatory powers of local government. This also extends to building codes and inspections, land use, acquisition, and floodplain development regulation.

Building Codes and Inspections

Building codes and inspections provide local governments with the means to maintain county structures that are resilient to natural hazards. Fulton County's adopted building construction codes are available online at https://www.fultoncountyga.gov/inside-fulton-county/fulton-county-departments/public-works/planning-zoning-and-permitting/permits-and-plan-review/inspection-request-information/inspection-codes. These codes were adopted and amended by the Georgia Department of Community Affairs (https://www.dca.ga.gov/local-government-assistance/construction-codes-industrialized-buildings/construction-codes) effective January 1, 2020.

Fulton County officials have the primary role of enforcement of the International Building Code (IBC) structural regulations. The Fulton County Inspections Office, https://www.fultoncountyga.gov/inside-fulton-county/fulton-county-departments/public-works/planning-and-inspections, is responsible for administering and enforcing all applicable building codes with regards to residential and commercial construction in the permitting of the unincorporated areas of Fulton County. This office also aids business and residents of the County so they may understand and meet the code requirements for their projects. To protect the health, safety, and welfare of the citizens in the permitting jurisdiction of the unincorporated areas of Fulton County, all construction must meet a series of requirements set forth by specific building codes. This includes new construction, additions to existing structures and remodeling. Since the early 1970, the Fulton County Development Standards (the original and amended Standards for Residential and Commercial Development) have undergone revisions by individual agencies/departments/divisions. The current version of these standards (June 2018 Revisions) have been revised to comply with federal, state, regional, and local criteria.

The following table reflects the Fulton County Building Codes as of March 31, 2021:

Table 94: County Building Codes (March 31, 2021)

Fulton County Building Codes (March 31, 2021)	
2020 Georgia State Amendments	International Building Code (IBC), 2018 Edition with 2020 Amendments
International Residential Code (IRC) for One- and Two-Family Dwellings, 2018 Edition with 2020 Amendments	International Fire Code (IFC), 2018 Edition with No Amendments
International Plumbing Code (IPC), 2018 Edition with 2020 Amendments	International Mechanical Code (IMC), 2018 Edition with 2020 Amendments
National Green Building Standard (NGBS), 2009 Edition with 2011 Amendments	International Fuel Gas Code (IFGC), 2018 Edition with 2020 Amendments
International Energy Conservation Code (IECC), 2015 Edition with 2020 Supplements & Amendments	2017 Edition of the National Electrical Code
2015 Edition of the International Property Maintenance Code	International Green Construction Code 2018 Edition
International Swimming Pool and Spa 2018 Edition	International Performance Code for Building and Facilities 2018

These codes prescribe minimum standards for building construction, which ensures that new buildings and structures are built to standards that are seismically sound, fire resistant and developed within flood-proofing measures. These codes also require appropriate hazard code updating and compliance when certain thresholds are met for remodel and renovation of existing buildings. These codes also authorize local governments to carry out building inspections to ensure local structures adhere to the minimum state building standards.

Land Use Planning

Through land use regulatory powers granted by the state, local governments can control the location, density, type and timing of land use and development in the community. Provisions of the land use plans are implemented through regulatory tools that include zoning and subdivision ordinances, and taxation. All participating municipal governments have direct land use planning programs through ordinances, codes, and zoning policies.

Taxation

Taxation can be a powerful mitigation tool by providing local governments with a way to guide development. Tax abatements may be used to encourage landowners and developers to integrate mitigation measures into the process of building new developments and retrofitting existing properties in the floodplain. These tools can be especially effective in encouraging the mitigation of existing structures.

5.1.2 – Floodplain Programs

Floodplain management is the operation of a community program of measures for reducing flood damage. These measures take a variety of forms; and generally, include zoning, subdivision, or building requirements, and special-purpose floodplain ordinances. The National Flood Insurance Program (NFIP) is aimed at reducing impact of flooding on private and public structures. This is achieved by providing affordable insurance for property owners and by encouraging communities to adopt and enforce floodplain management regulations. These efforts help mitigate the effects of flooding on new and improved structures. Overall, the program reduces the socio-economic impact of disasters by promoting the purchase and retention of Risk Insurance in general, and NFIP in particular.

Fulton County and its participating jurisdictions, i.e., Alpharetta, Atlanta, Chattahoochee Hills, College Park, East Point, Fairburn, Hapeville, Johns Creek, Milton, Mountain Park, Palmetto, Roswell, Sandy Springs, South Fulton, and Union City, participate in the NFIP. Some jurisdictions also participate in the Community Rating System (CRS) (Appendix I). There are currently 351 properties identified as Repetitive Loss (RL) or Severe Repetitive Loss (SRL). See Section 4 (FL) – Flood for additional information. The following table reflects the County's NFIP status as of February 2022, and its CRS status as of October 2021.

Table 95: NFIP & CRS Status, Fulton County

NFIP & CRS Community Status, Fulton County						
FEMA Community Status Book Report, Georgia – Communities Participating in the National Flood Program (02/04/2022)						
Jurisdiction	CID	CRS Rating	Initial FHBM Identified	Initial FIRM Identified	Current Effective Map Date	Registration/ Emer Date
Fulton County	135160	N/A	Unknown	11/20/70	09/18/13	10/29/71
City of Alpharetta	130084C	N/A	04/05/74	02/15/78	06/19/20	02/15/78
City of Atlanta	135157C	7	10/14/71	10/14/71	08/15/19	10/14/71
City of Chattahoochee Hills	135174	N/A	Unknown	05/07/01	09/18/13	07/30/08
City of College Park	130086	6	05/31/74	09/15/78	09/18/13	09/15/78
City of East Point	130087	7	06/28/74	08/15/90	04/17/12	08/15/90
City of Fairburn	130314	N/A	08/19/77	09/28/79	09/18/13	09/28/79
City of Hapeville	130502	N/A	Unknown	08/24/93	09/18/13	07/02/96
City of Johns Creek	130678	7	Unknown	06/18/10	09/18/13	08/18/09
City of Milton	130673	N/A	Unknown	11/02/71	06/19/20	08/10/07
City of Mountain Park	130315	N/A	01/13/78	02/16/83	09/18/13	04/07/83
City of Palmetto	130239	N/A	06/14/74	11/01/79	09/18/13	11/01/79
City of Roswell	130088C	7	06/07/74	12/15/77	06/19/20	12/15/77
City of Sandy Springs	130669	N/A	Unknown	05/07/01	09/18/13	05/10/07
City of South Fulton	135177F	N/A	Unknown	09/18/13	09/18/13	12/09/20
Union City	130316	N/A	04/04/75	09/28/79	09/18/13	09/28/79

Data Source: Federal Emergency Management Agency (FEMA), Community Status Book: https://www.fema.gov/flood-insurance/work-with-nfip/community-status-book; https://www.fema.gov/cis/GA.html

National Flood Insurance Program (NFIP) Considerations

As previously mentioned, Fulton County and all participating jurisdictions take part in the NFIP. The County's previous MJHMP (2016) indicated that 4,356 NFIP policies were in effect as of October 31, 2015, totaling $927,745,100 in coverage. According to FEMA, Fulton County has 3,742 policies in place at the time of this plan update, totaling 957,121,000. The following table provides information specific to those insurance policies.

Table 96: FEMA NFIP Insurance Report, Fulton County, GA – April 2021

FEMA NFIP Insurance Report, Fulton County, GA						
City/County Name	CID	Total Premium	No. Policies	Total Coverage	Total Claims Since 1978	Total Paid Since 1978
Fulton County	135160	$203,421	265	$76,624,600	See Total	See Total
City of Alpharetta	130084	$89,270	144	$44,958,000	19	$317,412.92
City of Atlanta	135137	$1,708,378	1652	$420,865,100	609	$34,608,460.82
City of Chattahoochee Hills	135174	$3,754	8	$2,410,000	No Data	No data
City of College Park	130086	$ 33,640	29	$6,623,100	49	$1,070,785.50
City of East Point	130087	$103,623	113	$26,584,900	31	$411,044.06
City of Fairburn	130314	$5,344	13	$3,666,000	2	$5,446.54
City of Hapeville	130502	$81,242	41	$9,679,700	6	$87,053.90
City of Johns Creek	130678	$96,869	188	$58,144,300	No Data	$49,575,295.65
City of Milton	130673	$35,025	66	$20,556,400	No Data	No Data
City of Mountain Park	130315	$4,141	5	$1,270,000	No Data	No Data
City of Palmetto	130239	$438	1	$280,000	No Data	No Data
City of Roswell	130088	$240,266	388	$112,188,300	47	$1,200,347.47
City of Sandy Springs	130669	$382,396	722	$144,758,500	187	$4,728,666.18
City of South Fulton	Unknown	No Data	No Data	No Data	No Data	No Data
City of Union City	130316	$6,962	12	$3,200,00	1	$27,919.22
Unknown	Unknown	$75,436	95	28,512,200	-	-
Total		**$3,070,205**	**3,742**	**$957,121,100**		**$42,487,915.42**

Data Source: Georgia Emergency Management Agency (GEMA)
Data Source: https://crsresources.org/files/100/maps/states/georgia_crs_map_october_2021.pdf

The County's Floodplain Administrator administers each NFIP participating community's floodplain program. NFIP Coordinators/Floodplain Administrators utilize, by adoption, federally created flood hazard maps to administer their programs and to actuarially rate new construction for flood insurance or development restrictions. Following is a brief description of the participating jurisdictions' Building Codes office information. Procedures can be found by visiting the jurisdictions' websites.

Table 97: Building Code Office Information & Procedures, Fulton County

Building Code Office Information, Fulton County					
Jurisdiction	**Name/POC**	**Title**	**Email Address**	**Phone**	**Website**
City of Alpharetta	Jill Bazinet, PE, CFM	Floodplain Manager	jbazinet@alpharetta.ga.us	678-297-6200	https://www.alpharetta.ga.us/government/departments/public-works/stormwater-program/floodplain-information
City of Atlanta	Craig Rethwilm, DWM	Floodplain Administrator	crethwilm@atlantaga.gov	404-546-3291	https://www.atlantawatershed.org/floodplainmgmt/
City of Chattahoochee Hills	Mike Morton	Community Development Director	mike.morton@chatthillsga.us	770- 463-6578	https://www.chatthillsga.us/departments/community_development.php
City of College Park	Raymond Cotton	Superintendent	rcotton@colleggeparkga.com	404-669-3778	https://www.collegeparkga.com/departments/public_works/storm_water
City of East Point	Reza Aral	Flood Plain Manager-Stormwater	raral@eastpointcity.org	404-270-7130	eastpointcity.org
City of Fairburn		City Engineer		770-683-4286	https://www.fairburn.com/community-development/engineering
City of Hapeville	Lemuel Eubanks	Water/Sewer Coordinator	leubanks@hapeville.org	404-669-2120	https://www.hapeville.org/80/Water-and-Sewer
City of Johns Creek	Gilbert Quinones	Land Development Manager	gilbert.quinones@johnscreekga.gov	678-512-3284	https://www.johnscreekga.gov/residents/community-development/stormwater-management/flood-plains
City of Milton	Ken Kagy, CFM	City Engineer	ken.kagy@cityofmiltonga.us	678-242-2543	www.cityofmiltonga.us
City of Mountain Park	Craig Carpenter	Code Enforcement	code.compliance@mountainparkgov.com	770-993-4231	https://mountainparkgov.com/your-government/staff
City of Palmetto	Frank West	Code Enforcement Officer	west@citypalmetto.com	770-990-4156	www.citypalmetto.com

Building Code Office Information, Fulton County					
Jurisdiction	**Name/POC**	**Title**	**Email Address**	**Phone**	**Website**
City of Roswell	Lenor M. Bromberg, PE, F.ASCE	Deputy Director of Community Development	engineering@roswellgov.com	770-641-3780	https://www.roswellgov.com/government/departments/community-development/engineering/floodplain-management
City of Sandy Springs	Jesus Davila, DFM, MSF-CECI	Land Development Manager	jdavila@sandyspringsga.gov	770-730-5600	https://www.sandyspringsga.gov/stormwater
City of South Fulton	Eric Glover	City Engineer	eric.glover@cityofsouthfultonga.gov	470-809-7752	https://www.cityofsouthfultonga.gov/2570/Planning-Zoning
Union City	Ellis Still	Director of Community Development	estill@unioncityga.org	770-515-7955	https://www.unioncityga.org

Unincorporated Fulton County enforces the local floodplain management ordinance that exceeds requirements set forth by NFIP. The Fulton County Community Development Agency and the Fulton County Water System also devote resources to enforce local floodplain management requirements. This ordinance exists as Section 58 of the Official Code of Fulton County, and in Chapters 409 and 418 of the Fulton County Development Standards. In Fulton County, for residential development, three (3) feet of freeboard is required between the lowest (habitable) finished floor elevation and the base flood elevation. Fulton County also regulates new development out of the regulatory floodway, and dam breach zones.

Fulton County has other floodplain management programs to:

- Determine Dam Breach Zones for high hazard Category 1 Dams
- Require stream buffers that far exceed minimum State of Georgia requirements
- Acquire chronically flooded homes
- Acquire vacant floodplain land
- Assist dam owners financially, to make their high hazard dams safe through Fulton County's Storage Volume Purchase Program

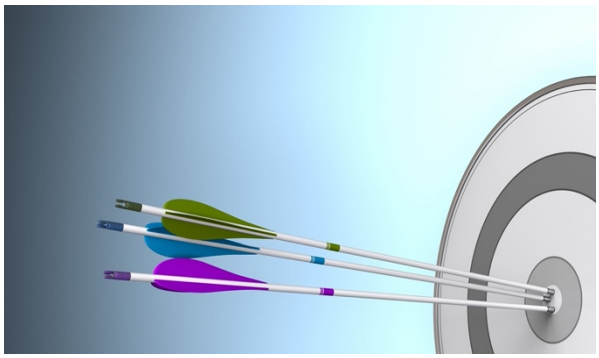
In Fulton County, new residential construction is prohibited within the floodplain and any other construction is restricted. This restriction is enforced through the building permit application process. When an individual or business applies for a construction permit, its location within or outside of an identified floodplain is noted and reviewed by Fulton County's Stormwater Management Division.

The Fulton County Stormwater Management Division reviews all plans requiring a land disturbance permit (LDP) for compliance with NFIP and local floodplain regulations. This includes construction adjacent to and within the floodplain. This process meets the minimum federal regulations set forth by the NFIP out of the regulatory floodway, and dam breach zones.

Fulton County has other floodplain management programs to:

- Determine Dam Breach Zones for high hazard Category 1 Dams
- Require stream buffers that far exceed minimum State requirements
- Acquire chronically flooded homes
- Acquire vacant floodplain land
- Assist Dam Owners financially, to make their high hazard dams safe through Fulton County's Storage Volume Purchase Program.

5.2 – Mitigation Goals



Goals for Fulton County and its participating jurisdiction(s) were established based upon results from the local and state risk assessments, stakeholder meetings, and input from non-planning team local jurisdiction and state officials. These goals represent Fulton County and its participating jurisdiction(s)' long-term vision for the continued reduction of hazard risks and the enhancement of mitigation capabilities.

GOAL 1: Reduce the risk from natural and human-caused hazard events utilizing community cooperation and an all-hazards approach.

GOAL 2: Pursue additional, complete, and accurate data in support of mitigation planning, disaster preparedness, disaster response, and disaster recovery operations.

GOAL 3: Integrate the hazard mitigation plan's findings into the planning and decision-making processes for all current and future emergency management and preparedness-related activities.

GOAL 4: Minimize the risk to life and property from a dam failure.

GOAL 5: Minimize the risk to life and property from a drought.

GOAL 6: Minimize the risk to life and property from an earthquake.

GOAL 7: Minimize the risk to life and property from extreme heat.

GOAL 8: Minimize the risk to life and property from flood.

GOAL 9: Minimize the risk to life and property from geological hazards, including landslides and sinkholes.

GOAL 10: Minimize the risk to life and property from severe weather, including thunderstorm wind, lightning, and hail.

GOAL 11: Minimize the risk to life and property from severe winter weather.

GOAL 12: Minimize the risk to life and property from a tornado.

GOAL 13: Minimize the risk to life and property from tropical systems.

GOAL 14: Minimize the risk to life and property from wildfire/wildland urban interface fire(s).

5.3 – Mitigation Projects

To support its mitigation goals, the Fulton County Mitigation Planning Committee (MPC) identified a comprehensive range of possible and unique mitigation projects and activities (see Table 100 in this plan update for details). The selected set carefully takes an all-hazards approach to mitigation while simultaneously addressing each of the plan's profiled hazards.

The County's previous MJHMP (2016) contained a risk assessment of identified hazards for the planning area and a mitigation strategy to address these hazards' risk and vulnerability. Accordingly, an open discussion took place with the MPC during the planning phase to determine the current mitigation action/priorities to include in this plan update. Among them, and considered a key part of the planning process, AFCEMA solicited participation from the County's participating jurisdictions and stakeholders to help identify mitigation activities/goals/projects for plan inclusion. Typically, mitigation activities/ goals/projects focus on strengthening infrastructure and facilities. Fulton County's cities and stakeholders' participation in the activities related to the mitigation strategy allowed for AFCEMA to learn more about each jurisdictions' needs, facilities, and infrastructure. A Mitigation Strategy Update Meeting, facilitated by AFCEMA and BOLDplanning, provided Fulton County's jurisdictions with information on how to offer valuable insight related to the identified hazards. Fulton County's mitigation planning points of contact (POCs) learned how BOLDplanning would assist them in providing input to update the mitigation projects from the previous plan as well as how and when to offer any new/proposed projects to include in the MJHMP update (2022).

Following this meeting, representatives from BOLDplanning worked with AFCEMA and the County's participating jurisdictions to provide updates relevant to previous mitigation projects, including the current status (completed, deferred, or carryover).

Of the mitigation projects and actions identified in the 2016 Fulton County MJHMP, it was determined that 27 were completed between 2016 and 2021, and therefore, will not carry over into the 2022 plan update. The following table provides a list of all 27 completed mitigation projects and actions, by jurisdiction, between 2016 and 2021.

Table 98: Completed Mitigation Projects/Actions by Jurisdiction (2016-2021), Fulton County

Completed Mitigation Projects/Actions by Jurisdiction (2016-2021), Fulton County			
Jurisdiction	**Project Number**	**Mitigation Action**	**Hazard(s) Addressed**
Alpharetta	**01.0001**	Complete dam reach analysis on Lake Windward	Flood
Alpharetta	**01.0003**	Update City GIS system with more accurate parcel data	All Hazards
Alpharetta	**01.0009**	Webb Bridge Park – Erosion control and stream bank restoration	Flood
Alpharetta	**01.0039**	Replace early warning software system	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems
Alpharetta	**01.0044**	Purchase a web-based severe weather monitoring service	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems
Alpharetta	**01.0046**	Replace the Fire Dept. boat for rescue and evacuation on Lake Windward	Flood

Completed Mitigation Projects/Actions by Jurisdiction (2016-2021), Fulton County			
Jurisdiction	**Project Number**	**Mitigation Action**	**Hazard(s) Addressed**
Alpharetta	**01.0047**	Replace chain saws and blades for removal of trees during an emergency	Severe Weather, Severe Winter Weather, Tornado, Tropical Storms
Alpharetta	**01.0048**	Replace rope and technical rescue equipment	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems
East Point	**20.0008**	Culvert improvements at 3030 and 3042 Dodson Drive	Flood
Hapeville	**30.0001**	Install surge protection for City Hall which houses server databases	Severe Weather
Hapeville	**30.0002**	Install surge protection at the Police Station which houses its own database servers	Severe Weather
Hapeville	**30.0003**	Install surge protection at Fire Station #2 (Comments: Lightning surges can damage older repeaters, which serve as their backup communications system.)	Severe Weather
Hapeville	**30.0004**	Install surge protection at the Community Services Building (Comments: This building houses IT Administration, Planning & Zoning, Public Works Administration, Plan Review Data and other data records; all GIS data is located at this building as well, which is on a server with no external backup.)	Severe Weather
Hapeville	**30.0006**	Improve drainage in the area of South Central Avenue by increasing the size of the underground storm drain (Comments: Flooding impacts the business district and floods on both sides of the railroad tracks. Businesses are moving out of the area causing economic harm to the City. It also results in flooding at the fire station located at 870 S. Central Ave. in which flood waters have flowed through the front garage door and out the back. The City would like to re-route the piping under the railroad. Refer to Hapeville flooding map for location of these choke points.)	Flood
Hapeville	**30.0007**	Perform curb modification on Oakdale Road, which currently has header rocks; installation of curb gutters will improve storm drainage	Flood
Johns Creek	**02.0001**	Signage for severe weather at parks and open spaces	All Hazards
Johns Creek	**02.0002**	Develop a Debris Management Plan (Comments: Johns Creek is currently drafting a Debris Management Program [note from 2016 plan])	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems

Completed Mitigation Projects/Actions by Jurisdiction (2016-2021), Fulton County			
Jurisdiction	**Project Number**	**Mitigation Action**	**Hazard(s) Addressed**
Milton	**56.0001**	Replace wooden wing walls on bridges with concrete wing walls; perform bank restoration and stabilization (Comments: When the creek swells, the water seeps in through wooden wing wall cracks which then flows behind the wall and erodes the embankment. Four bridges were significantly damaged in Sept. 2009, and received PDM funds to replace, but can only replace with wooden wing walls, so the problem will re-occur.)	Flood
Mountain Park	**35.0003**	Acquire generator for EOC/Fire Station building	Severe Weather, Tropical Systems
Sandy Springs	**59.0006**	Build retaining wall on Morgan Falls Rd where erosion is occurring where slope crosses the roadway and has lake below	Geological Hazards (Landslide), Severe Weather
Sandy Springs	**59.0007**	Build retaining wall on Lake Forest Rd to reduce debris sliding onto the roadway (Comments: This is an old settlement road that became a major road. Trees, boulders, and mud block can block the road following severe weather events blocking any access, including first responders, into the area.)	Geological Hazards (Landslide), Severe Weather
Fulton County	**99.0012**	Ensure that capital improvement plans include capital projects to implement the natural hazards element of the jurisdiction's comprehensive plan or projects identified in the Mitigation Strategy Section of this plan	All Hazards
Fulton County	**99.0023**	Evaluate all available notifications systems, including but not limited to, Outdoor Warning Sirens, Reverse 911, Code Red, Nixle, and all other public available systems for Atlanta-Fulton County	All Hazards
Union City	**50.0001**	Oakley Industrial Boulevard catch basins repair (Comments: Project to address flooding and stormwater runoff by construction of pipe and drainage structures.)	Flood
Union City	**50.0002**	Royal South Parkway tire cleanup around lake (Comments: Project to address flooding and stormwater runoff as well as assist in controlling mosquito population by construction of pipe and drainage structures.)	Flood
Union City	**50.0003**	Mall Boulevard and Londerry Way sinkhole (Comments: Project to address flooding and stormwater runoff by construction of pipe and drainage structures.)	Flood

Completed Mitigation Projects/Actions by Jurisdiction (2016-2021), Fulton County			
Jurisdiction	**Project Number**	**Mitigation Action**	**Hazard(s) Addressed**
Union City	**50.0004**	Improvements to drainage along roadways (Comments: Projects to address flooding and stormwater runoff by construction of pipe and drainage structures. Location already identified include but are not limited to locations along the following: Alexander Street and Roosevelt Highway, Lester Road, Westbrook and McKinley Street, Shannon Boulevard, and Dodson Road.)	Flood
Union City	**50.0004 [number duplicated in 2016 plan]**	Dredge Windham Creek that runs through the City to be wider and deeper to increase volume (Comments: Current creek capacity is insufficient. There is an increase volume directed toward it as a result of urbanization. The speed and volume of the flow causes erosion and exposes drainage pipes. NOTE: There are no populations downstream that would be affected by increased volume.)	Flood, Severe Weather, Tropical Systems
Union City	**50.0007**	Improve emergency responder communication interoperability by implementing an 800 MHz radio system	All Hazards

Note: *Union City completed two (2) additional mitigation projects/actions which were not identified in the 2016 Fulton County MJHMP. They are as follows:*

Union City	**Added after 2016 MJHMP update – no number assigned**	Elevate areas of Lester Rd where creeks cross the roadway (Comments: This project was placed in Mitigation Plan by previous DPW Directors with no specifics. There has been no recent flooding of Lester Rd. Will conduct a feasibility study to verify if this is a warranted concern. There are no projects or plans to elevate Lester Road at this time. Lester Rd is not currently experiencing flooding. Determine if proposal is a feasible solution.)	Flood, Severe Weather, Tropical Systems
Union City	**Added after 2016 MJHMP update – no number assigned**	Improve aging storm water infrastructure on Lester Rd which is circa 1950 and of insufficient capacity for storm water runoff (Comments: This project was placed in Mitigation Plan by previous DPW Directors with no specifics. There has been no recent flooding of Lester Rd. Will continue to monitor and make recommendations based on outcome. Previous flooding had been caused by blockages in creek bed restricting water flow. these obstructions have been removed.)	Flood, Severe Weather, Tropical Systems

During the planning process, Fulton County was able to enter all mitigation projects/actions from 2016 into the online BOLDplanning.com platform, fultoncounty.boldplanning.com, (shown below) as well as update each project's status, i.e., carryover, deferred, or discontinued, for the 2022 plan update. All newly proposed mitigation projects/actions for the next five-year plan cycle were entered into the online platform as well.

The list of mitigation projects and actions selected for this plan update is based upon the potential to reduce risk to life and property with an emphasis on new and existing infrastructure, ease of implementation, community and agency support, consistency with local jurisdictions' plans and capabilities, available funding, vulnerability, and total risk.

As with previous MJHMP updates, the planning area will continue to take a multi-jurisdictional approach to mitigation planning with this update and subsequent ones.

This plan update includes numerous carryover projects from Fulton County's previous MJHMP (2016), as they are still relevant, in progress, or ongoing. Also, the hazards, mitigation goals, objectives, and measures that were previously developed jointly between Fulton County and the Cities of Alpharetta, Atlanta, Chattahoochee Hills, College Park, East Point, Fairburn, Hapeville, Johns Creek, Milton, Mountain Park, Palmetto, Roswell, Sandy Springs, South Fulton, and Union City have been carried over to this plan update due to being deferred because of a lack of funding and/or resources to complete the mitigation projects/actions during the last five-year cycle. All priorities were reassessed using STAPLE+E for the 2022 plan update to ensure that the projects reflect current priorities. (See Section 5.4.1 – STAPLE+E for details.)

***Note**: Since the last plan update, the City of South Fulton became incorporated on May 1, 2017, as a new jurisdiction in Fulton County. With this new addition, the City of South Fulton will include mitigation projects and strategies in the 2022 plan update.*

The following tables provide information specific to each participating jurisdiction's proposed mitigation actions for the 2022 MJHMP update and the new planning period (2022-2027).

Table 100: Identified Mitigation Actions by Jurisdiction (2022-2027), City of Alpharetta

Identified Mitigation Actions by Jurisdiction (2022-2027), City of Alpharetta							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
1.0002	Acquire approximately 15 homes in the Mayfield Circle/ Maple Lane area near Foe Killer Creek	Carryover from 2016 Plan Update; In Progress	Community Development	Flood, Severe Weather, Tropical Systems	$12,000,000	HMGP, FMA, Local	2022-2027
1.0004	Complete Hazus-MH study of natural hazard impacts on the city	Carryover from 2016 Plan Update; In Progress	Public Works	All Hazards	$100,000	HMGP, Local	2022-2027
1.0005	Outreach education (e.g., letters, inform-ation packets) to all parcels impacted by SFHA/new RiskMaps (Comments: This project can only be completed after the parcel maps are updated.)	Carryover from 2016 Plan Update; In Progress	Engineering	Flood	$20,000	HMGP, Local	2022-2027
1.0006	Evaluate benefits of joining CRS with impact of new FEMA maps (Comments: This project can only be completed after the parcel maps are updated.)	Carryover from 2016 Plan Update; Deferred (Awaiting FEMA Flood Maps)	Engineering	Flood	$100,000	HMGP, Local	2022-2027
1.0007	Design and install master detention facility for water quality and flood control at Wills Park	Carryover from 2016 Plan Update; Deferred (Funding Not Available)	Engineering	Flood	$500,000	HMGP, Local	2022-2027

Identified Mitigation Actions by Jurisdiction (2022-2027), City of Alpharetta							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
1.0008	Foe Killer Creek – Design and implementation of projects to reduce elevated levels of bacteria	Included in 2016 Plan Update; Carry over to 2022 MJHMP Update	Public Works Department	Flood	$250,000	HMGP, Local	2022-2027
1.0010	Perform stream stabilization and repair erosion along stream corridors	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Engineering	Flood	$1,500,000	HMGP, Local	2022-2027
1.0011	Stream bank restoration Big Creek at Webb Bridge	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Engineering	Flood	$250,000	HMGP, Local	2022-2027
1.0012	Stream bank restoration Big Creek at Haynes Bridge Road	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Engineering	Flood	$225,000	HMGP, Local	2022-2027
1.0013	Stream bank restoration Foe Killer Creek – Squirrel Run to Rucker Road	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Engineering	Flood	$150,000	HMGP, Local	2022-2027
1.0014	Reinforce old culverts with skip line	Included in 2016 Plan Update; In Progress	Engineering	Flood	$250,000	HMGP, Local	2022-2027

Identified Mitigation Actions by Jurisdiction (2022-2027), City of Alpharetta							
Project Number	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion
1.0015	Improve stormwater drainage at Church Street	Included in 2016 Plan Update; In Progress (City currently working with contractor for private development to help improve flooding issues.)	Engineering	Flood	$200,000	HMGP, Local	2022-2027
1.0016	Improve stormwater drainage at Highway 9 at Canton Street	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Engineering	Flood, Severe Weather, Tropical Systems	$250,000	HMGP, Local	2022-2027
1.0017	Improve storm-water drainage at Southlake Drive culvert (Comments: Replace triple 4' CMP culvert to handle capacity; this area does not handle the 2-year flow) (Note: From 2016 plan but no update provided for 2022 update.)	Included in 2016 Plan Update; In Progress (GOT is currently widening State Route 9 which will improve the stormwater drainage issues associated with this area.)	Engineering	Flood	$600,000	HMGP, Local	2022-2027
1.0018	Improve storm-water drainage at Cape York Trace at Big Creek Trib (Comments: Replace single 4' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Public Works	Flood	$250,000	HMGP, Local	2022-2027

Identified Mitigation Actions by Jurisdiction (2022-2027), City of Alpharetta							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
1.0019	Improve storm-water drainage at Glenn Knoll Court at Long Indian Creek Trib (Comments: Replace triple 2' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Public Works	Flood	$250,000	HMGP, Local	2022-2027
1.0020	Improve storm-water drainage at Mid Broadwell at Foe Killer Creek Trib (Comments: Replace single 4.5' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Public Works	Flood	$250,000	HMGP, Local	2022-2027
1.0021	Improve storm-water drainage at Newport Bay Passage at Caney Creek Trib (Comments: Replace single 3.5' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Public Works	Flood	$250,000	HMGP, Local	2022-2027
1.0022	Improve storm-water drainage at Webb Bridge Court at Big Creek Trib (Comments: Replace double 8'x 6' and single 4.35'x 6;5' box culverts to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Public Works	Flood	$250,000	HMGP, Local	2022-2027

Identified Mitigation Actions by Jurisdiction (2022-2027), City of Alpharetta							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
1.0023	Improve storm-water drainage at McGinnis Ferry Road at Big Creek Trib (Comments: Replace single 6' RCP culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Public Works	Flood	$500,000	HMGP, Local	2022-2027
1.0024	Improve storm-water drainage at Pine Grove Drive at Big Creek Trib (Comments: Replace single 4' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available)	Public Works	Flood	$250,000	HMGP, Local	2022-2027
1.0025	Improve storm-water drainage at Arrowood Lane at Foe Killer Creek Trib (Comments: Replace single 6' RCP culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Public Works	Flood	$325,000	HMGP	2022-2027
1.0026	Improve storm-water drainage at Willis Road at Foe Killer Creek Tribe (Comments: Replace single 6' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Public Works	Flood	$350,000	HMGP, Local	2022-2027

Identified Mitigation Actions by Jurisdiction (2022-2027), City of Alpharetta							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
1.0027	Improve storm-water drainage at Northwinds Parkway at Big Creek Trib (Comments: Replace double 5' RCP culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Public Works	Flood	$400,000	HMGP, Local	2022-2027
1.0028	Improve stormwater drainage at Academy Street at Big Creek Trib (Comments: Replace single 9'x6' box culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Public Works	Flood	$500,000	HMGP, Local	2022-2027
1.0029	Improve storm-water drainage at Rock Mill Road at Big Creek Trib (Comments: Replace double 5'x5' box culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Public Works	Flood	$400,000	HMGP, Local	2022-2027
1.0030	Improve storm-water drainage at North Park Road at Cooper Sandy Creek (Comments: Replace single 4' RCP box culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Public Works	Flood	$250,000	HMGP, Local	2022-2027

Identified Mitigation Actions by Jurisdiction (2022-2027), City of Alpharetta							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
1.0031	Improve storm-water drainage at culverts without capacity to handle the 5-year storm (Comments: The city has identified seven locations.)	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Engineering	Flood	$2,000,000	HMGP, Local	2022-2027
1.0032	Improve storm-water drainage at culverts without capacity to handle the 10-year storm (Comments: The city has identified nine locations.)	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available)	Engineering	Flood	$3,000,000	HMGP, Local	2022-2027
1.0033	Improve storm-water drainage at culverts without capacity to handle the 25-year storm (Comments: The city has identified ten locations.)	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Engineering	Flood	$4,000,000	HMGP, Local	2022-2027
1.0034	Improve storm-water drainage at culverts without the capacity to handle the 50-year storm (Comments: The city has identified four locations.)	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Engineering	Flood	$5,000,000	HMGP, Local	2022-2027
1.0035	Detour roadway map for flood evacuation plans	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Public Safety	Flood	$100,000	HMGP, Emergency Management	2022-2027

Identified Mitigation Actions by Jurisdiction (2022-2027), City of Alpharetta							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
1.0036	Install traffic warning signs on all road crossings that are submerged during a 25-year flood or greater	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Public Safety	Flood	$100,000	HMGP, Public Works	2022-2027
1.0037	911 – Phone call warning alert system	Included in 2016 Plan Update; In Progress (Project Under Review)	Public Safety	All Hazards	$22,000	HMGP, Public Safety	2022-2027
1.0038	Variable message signage – for use during emergency situations that can be updated from the command center	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Public Safety	All Hazards	$15,000	HMGP, Public Works, Public Safety	2022-2027
1.0040	Replace early outdoor warning systems	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available)	Public Safety	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$483,000	HMGP, Public Works	2022-2027
1.0042	Install built-in surge protection at public safety buildings	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Public Safety	All Hazards	$150,000	HMGP, Public Works	2022-2027
1.0045	Purchase cones and brigades for pedestrian traffic on greenways	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Public Works	Flood	$5,000	HMGP, Public Works	2022-2027

Identified Mitigation Actions by Jurisdiction (2022-2027), City of Alpharetta							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
1.0049	Implement dam inspection on Lake Windward and upgrade dam components and safety measures	Included in 2016 Plan Update; In Progress (City is currently obtaining pricing to utilize an on-call contractor in partnership with the Windward HOA for the annual dam inspections and maintenance.)	Engineering	Dam Failure, Flood	$25,000 Annually	HMGP, Engineering	2022-2027
1.0050	Stream gauge with flow meter; rain gauge and stream height for Foe Killer Creek	Included in 2016 Plan Update; Deferred to 2022 MJHMP Due to Funding Not Available	Engineering	Flood	$14,500 Annually	HMGP, FMA, Local	2022-2027
1.0051	Maintain City GIS system with accurate parcel data	Initial Project 01.0003 (2016) Completed; Now a Maintenance Project (City has a company under contract to continuously provide services to update parcel data.)	Alpharetta IT dept.	All Hazards	$90,000	HMGP; FMA; Local Funds	2022-2027
1.0052	Purchase tactical mobile dispatch unit	N/A	N/A	All Hazards	$200,000	HMGP	2022-2027

Identified Mitigation Actions by Jurisdiction (2022-2027), City of Alpharetta							
Project Number	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion
1.0053	Update early warning software system	Initial Project 01.0039 (2016) Completed; Now a Maintenance Project (Software updates are required every five years.)	Public Safety	All Hazards	$5,000	HMGP, Local	2022-2027
1.0054	Replace chain saws and blades for removal of trees during an emergency	Initial project 01.0047 (2016) Completed; Now a Maintenance Project	Public Safety	All Hazards	$2,000	HMGP, Local	2022-2027
1.0055	Replace rope and technical rescue equipment	Initial Project 01.0048 (2016) Completed; Now a Maintenance/ Ongoing Project	Public Safety	All Hazards	$10,000	HMGP, Local	2022-2027

Summary: The City of Alpharetta identified a total of 45 mitigation actions (39 carryover from 2016, 1 unknown and 5 new/proposed) for the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan.

Table 101: Identified Mitigation Actions by Jurisdiction (2022-2027), City of Atlanta

Identified Mitigation Actions (2022-2027), City of Atlanta							
Project Number	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion
05.0023	Improve storm water drainage capacity and design in the area of Piedmont and Auburn Ave to allow better tie into the Claire Creek overflow	Deferred in 2016 Plan (Lack of Funding); Carryover from 2016 Plan	City of Atlanta Department of Water Management	Flood	$5,000,000	Federal/ State Grant; Local Funds	2022-2027

Identified Mitigation Actions (2022-2027), City of Atlanta							
Project Number	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion
05.0024	Station 21: Harden to improve wind and impact resistance; increase generator capacity (Comments: This is a heavy rescue special operations station; houses rescue boat, collapse rescue equipment, trench rescue equipment, and technical rescue equipment. ALS engine is stationed at this location. GSAR is housed at this station. Station has a large amount of plate glass, including bay doors. Bay doors are older and are not up to current code.)	Deferred in 2016 Plan (Lack of Funding); Carryover from 2016 Plan	Department of Water Management; Army Corp of Engineers	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$250,000-$1,000,000	HMGP, Local	2022-2027
05.0025	Station 8: Harden to improve wind and impact resistance; increase generator capacity (Comments: This is the Hazardous Materials station and contains HazMat-related personnel and equipment.)	Deferred in 2016 Plan (Lack of Funding); Carryover from 2016 Plan	Department of Water Management; Army Corp of Engineers	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$250,000-$1,000,000	HMGP, Local	2022-2027

Identified Mitigation Actions (2022-2027), City of Atlanta							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
05.0026	Station 1: Harden to improve wind and impact resistance; increase generator capacity (Comments: This station is the Decontamination Station and houses decontamination equipment. It also houses CBRNE equipment and serves as the backup station to the HazMat team in Station 8.)	Deferred in 2016 Plan (Lack of Funding); Carryover from 2016 Plan	Department of Water Management; Army Corp of Engineers	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$250,000-$1,000,000	HMGP, Local	2022-2027
05.0027	Stations 9, 20, 22, and 25: Harden to improve wind and impact resistance; increase generator capacity	Deferred in 2016 Plan (Lack of Funding); Carryover from 2016 Plan	Department of Water Management; Army Corp of Engineers	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$250,000-$1,000,000	HMGP, Local	2022-2027

Identified Mitigation Actions (2022-2027), City of Atlanta							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
05.0028	Improve wind resistance to roof of the Maddox Park B building which houses fleet operations; roof is not wind-rated (Comments: OEAM/DPR assessing the roof at Maddox Park building to determine if the roof will be replaced; numerous repairs were made in FY 12, 13, and 14.)	Carry Over to 2022 MJHMP Since the last plan update, DEAM/DPR is assessing the roof to determine it will be replaced	Parks and Recreation Department	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$1,000,000	HMGP; Local Funds	2022-2027

Identified Mitigation Actions (2022-2027), City of Atlanta							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
5.0029	R.M. Clayton Wastewater Treatment Plant: Flood-proof the plant through raising the height of the banks. (Comments: This plant flooded from Proctor Creek during the floods of Sept. 2009. It has received some PDM funds for repairs, but further mitigation is needed to improve flood-proofing of this facility. This facility serves East Point, College Park, and Hapeville. The plant cannot treat sewage and is causing environmental problems in West Point Lake. It also affects the communities' ability to draw water.)	Carryover from 2016 Plan Update; In Progress	Department of Water Management; Army Corp of Engineers	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$2,500,000	HMGP; FMA; Local Funds	2022-2027
05.0031	Acquire generator for emergency power for Fire Department Headquarters Building	Carry Over to 2022 MJHMP; In Progress	City of Atlanta Fire and Rescue; DEAM	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$1,300,000	HMGP; SCG; Local Funds	2022-2027

Identified Mitigation Actions (2022-2027), City of Atlanta							
Project Number	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion
05.0032	Retrofit old window glass at the Fire Department Headquarters Building for increased impact resistance	Carryover from 2016 Plan Update; In Progress	City of Atlanta Fire and Rescue; DEAM	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$1,500,000	HMGP; SCG; Local Funds	2022-2027
05.0033	Acquire generator for emergency power for 40 Fire Stations	Carryover from 2016 Plan Update; In Progress	City of Atlanta Fire and Rescue	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$4,000,000	HMGP; SCG; Local Funds	2022-2027
05.0034	Retrofit bay doors of [all 40] fire stations	Carryover from 2016 Plan Update; In Progress	City of Atlanta Fire and Rescue; DEAM	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$5,000,000	HMGP; SCG; Local Funds	2022-2027
05.0035	Retrofit all [40] fire stations with lightning rods	Carryover from 2016 Plan Update; In Progress	City of Atlanta Fire and Rescue; DEAM	Severe Weather	$800,000	HMGP; SCG; Local Funds	2022-2027
5.0036	Place [80] warning sirens in residential areas	Carryover from 2016 Plan Update; In Progress	City of Atlanta Fire and Rescue	Severe Weather	$4,000,000	HMGP; SCG; Local Funds	2022-2027

Identified Mitigation Actions (2022-2027), City of Atlanta							
Project Number	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion
5.0037	Acquire generator for emergency power for police facilities (Comments: Plan for immediate smaller rollout of the main precincts (6) – [previously slated for FY17].)	Carryover from 2016 Plan Update; In Progress	City of Atlanta Police Department	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$2,500,000	HMGP; DHS; Local Funds	2022-2027
5.0038	Relocate SWAT Offices & Storage, Classrooms, Ranger Offices & Storage, Gym, Explosive Bldg., and Equipment Facility at 1500 Key Rd outside of floodplain	Carryover from 2016 Plan Update; In Progress	City of Atlanta Police Department	Flood	$3,750,000	DHS; Local Funds	2022-2027
5.0039	Relocate Firing Range Facility at 1500 Key Rd outside of floodplain	Carryover from 2016 Plan Update; In Progress	City of Atlanta Police Department	Flood	$2,215,000	Local Funds	2022-2027

Identified Mitigation Actions (2022-2027), City of Atlanta							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
5.0040	Evaluate City of Atlanta Police facility at 1500 Key Road for flood potential [Revised from 2016 Fulton County MJHMP, which read, "Site at 1500 Key Road includes SWAT, flooding on the road severely impacts ability to respond; multiple pieces of critical tactical equipment are located there as well as police firing range."	Carryover from 2016 Plan Update; In Progress	City of Atlanta Public Works Department; City of Atlanta Police Department	Flood, Severe Weather, Severe Winter Weather, Tropical Storms	$1,500,000	Federal/ State Grant; Local Funds	2022-2027
05.0041	Install traffic warning signs on/at all road crossings at creeks and streams that are submerged during a 100-yr and 500-yr flood (or greater); approximately [80+] locations [at $600 per location]	Carryover from 2016 Plan Update; In Progress	City of Atlanta Public Works Department; City of Atlanta Department of Transportation	Flood	$100,000	Local Funds	2022-2027
5.0042	Install generators at Public Works facilities involving 25 sites (Fueling Operations for the City, Operations, and Vehicle Maintenance)	Carryover from 2016 Plan Update; In Progress	City of Atlanta Public Works Department	Flood, Severe Weather	$2,500,000	HMGP; Local Funds	2022-2027

Identified Mitigation Actions (2022-2027), City of Atlanta							
Project Number	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion
05.0078	Raise levee and other work along Chattahoochee River and Peachtree Creek to prevent flood water from Chattahoochee River raising into the R.M. Clayton Water Reclamation	Deferred from 2016 Plan due to a lack of funding and will be carried over to 2022 MJHMP	City of Atlanta Department of Water Management	Flood	$5,000,000	N/HMGP; FMA; Local Funds	2022-2027
05.0079	Acquire flood-prone properties in the FEMA-mapped floodplains throughout the City of Atlanta (Comments: 1 was remaining to acquire in 2016.)	Deferred from 2016 Plan due to a lack of funding and will be carried over to 2022 MJHMP	City of Atlanta Department of Water Management	Flood, Severe Weather, Tropical Systems	$200,000	Local Funds	2022-2027
05.0081	Educate the public about the risk of flooding and the importance of obtaining flood insurance (e.g., fliers, newsletters, information on DWM website); continue to update website as needed	Carryover from 2016 Plan Update; In Progress	City of Atlanta Department of Water Management	Flood, Severe Weather, Tropical Systems	$50,000 yearly	Local Funds	2022-2027
05.0082	Continue program for natural/ vegetative stabilization of stream banks (average 1300 feet per year) to secure infrastructure	Carryover from 2016 Plan Update; In Progress	City of Atlanta Department of Water Management	Flood, Severe Weather, Tropical Systems	$200,500 yearly	Local Funds	2022-2027

Identified Mitigation Actions (2022-2027), City of Atlanta							
Project Number	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion
05.0083	Relocate Parks NE and SE District Maintenance Depots (Comments: Additional space for welding and small equipment; looking for opportunity to aggregate both compounds together with fleet (recreation). Price could be $1.5 million for land and $3 million for construction of new site. DPR is looking for alternative sites that may allow for aggregating maintenance and service sites.)	Carryover from 2016 Plan Update; In Progress	City of Atlanta Parks and Recreation Department	Flood	$800,000 for Land and $1,500,000 for Design & Construction	Local Funds	2022-2027
05.0084	Tree Maintenance Program in Hazard and Urbanized Areas (Comments: Preventative maintenance plan for ROW could require significantly higher funding if implemented citywide. Emergency vehicles for Forestry could be purchased – knuckle boom - $200,000.)	Carryover from 2016 Plan Update; In Progress	City of Atlanta Parks and Recreation Department	Drought, Extreme Heat, Severe Weather	$300,000 Equipment; $400,000 annually	Local Funds	2022-2027

Identified Mitigation Actions (2022-2027), City of Atlanta							
Project Number	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion
05.0085	Reconstruct roofs and generators on shelter facilities (Comments: Generators located at Ben Hill, Old Adamsville. All need upgrades to produce full-service power restoration; generators needed at additional sites: Central, Rosel Fann, Bessie Branham, Peachtree Hills; $7,500,000+.)	Discontinue – No longer relevant	City of Atlanta Public Works Department; City of Atlanta Police Department	All Hazards	$250,000	Local Funds; Other Funding Opportunities	2022-2027
05.0087	Upgrade outdoor siren warning system speakers	Deferred in 2016 Plan (Lack of Funding); Carryover from 2016 Plan Update	Georgia Institute of Technology Office of Emergency Management	All Hazards	$186,000 for 6 speakers	Local Funds; Other Funding Opportunities	2022-2027
05.0088	Generators to supply power to fueling stations	Deferred in 2016 Plan (Lack of Resources/ Staff Time); Carryover from 2016 Plan Update	Atlanta Public Schools Office of Safety and Security	All Hazards	$100,000	Local Funds; Other Funding Opportunities	2022-2027
05.0089	Installation of above ground fuel storage tanks	Deferred in 2016 Plan (Lack of Resources/ Staff Time); Carryover from 2016 Plan Update	Atlanta Public Schools Office of Safety and Security	All Hazards	$100,000	Local Funds; Other Funding Opportunities	2022-2027

Identified Mitigation Actions (2022-2027), City of Atlanta							
Project Number	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion
05.0090	Potable Clean Water Conveyance/ Storage	Deferred in 2016 Plan (Lack of Resources/ Staff Time); Carryover from 2016 Plan Update	Atlanta Public Schools Office of Safety and Security	All Hazards	$300,000	Local Funds; Other Funding Opportunities	2022-2027
05.0091	High Impact Window Glass/treatment	Deferred in 2016 Plan (Lack of Resources/ Staff Time); Carryover from 2016 Plan Update	Atlanta Public Schools Office of Safety and Security	Severe Weather; Tornado, Tropical Systems	$1,000,000	Local Funds; Other Funding Opportunities	2022-2027
05.0092	Generators in support of Schools/ Buildings as Shelters	Deferred in 2016 Plan (Lack of Resources/ Staff Time); Carryover from 2016 Plan Update	Atlanta Public Schools Office of Safety and Security	All Hazards	$2,550,000	Local Funds; Other Funding Opportunities	2022-2027
05.0093	Install lightning detection equipment/ software for campus buildings and athletic fields	Deferred in 2016 Plan (Lack of Resources/ Staff Time); Carryover from 2016 Plan Update	Georgia State University Emergency Management	Severe Weather; Tornado, Tropical Systems	$30,000	Local Funds; Other Funding Opportunities	2022-2027
05.0094	Install tornado sirens throughout the Downtown Atlanta campus	Deferred in 2016 Plan (Lack of Resources/ Staff Time); Carryover from 2016 Plan Update	Georgia State University Emergency Management	Severe Weather; Tornado, Tropical Systems	$300,000	Local Funds; Other Funding Opportunities	2022-2027

Identified Mitigation Actions (2022-2027), City of Atlanta							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
05.0095	Forestry Compound Renovations	Proposed Project for 2022 Plan Update	City of Atlanta Parks and Recreation Department	Extreme Heat, Severe Weather, Severe Winter Weather (Any hazard that threatens loss of power.)	$125,000	Local/ Federal Funding	2022-2027
05.0096	Ben Hill Generator	Proposed Project for 2022 Plan Update	City of Atlanta Parks and Recreation Department	Extreme Heat, Severe Weather, Severe Winter Weather (Any hazard that threatens loss of power.)	$125,000	Local/ Federal Funding	2022-2027
05.0097	Emergency generators for Old Adamsville, Rosel Fann, and other recreation centers used as warming stations	Proposed Project for 2022 Plan Update	City of Atlanta Parks and Recreation Department	Extreme Heat, Severe Weather, Severe Winter Weather (Any hazard that threatens loss of power.)	$2,500,000	Local/ Federal Funding	2022-2027
05.0098	Watershed Improvement Projects	Proposed Project for 2022 Plan Update	City of Atlanta Department of Water Management	Flood	$596,000,000	Local/ Federal Funding	2022-2027

Identified Mitigation Actions (2022-2027), City of Atlanta							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
05.0099	Purchase and install back-up 250kw gas generator for IT Server Room	Proposed Project for 2022 Plan Update	City of Atlanta Department of Water Management	Severe Winter Weather (Any hazard that threatens loss of power.)	$287,500	Local/ Federal Funding	2022-2027
05.0100	Remove debris, stabilize piers and embankment, repair damage Fair Drive at South River Trib. Bridge ID: 121-0037-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	Est. Cost: $50,000	Local/ Federal Funding	2022-2027
05.0102	Remove debris, stabilize piers and embankment, repair damage Piedmont Ave. at Clear Creek. Bridge ID: 121-0038-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	Est. Cost: $50,000	Local/ Federal Funding	2022-2027
05.0103	Remove debris, stabilize piers and embankment, repair damage Cheshire Bridge Rd. at CSX Railroad (639814N). Bridge ID: 121-0038-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	Est. Cost: $50,000	Local/ Federal Funding	2022-2027

Identified Mitigation Actions (2022-2027), City of Atlanta							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
05.0104	Remove debris, stabilize piers and embankment, repair damage Dodson Dr. at South Utoy Creek. Bridge ID: 121-0319-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	Est. Cost: $75,000	Local/ Federal Funding	2022-2027
05.0105	Remove debris, stabilize piers and embankment, repair damage Moores Mill Rd. at Peachtree Creek. Bridge ID: 121-0325-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$75,000	Local/ Federal Funding	2022-2027
05.0106	Remove debris, stabilize piers and embankment, repair damage Paces Ferry Rd. at Nancy Creek. Bridge ID: 121-0329-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$75,000	Local/ Federal Funding	2022-2027
05.0107	Remove debris, stabilize piers and embankment, repair damage Ben E. Mays Rd. at North Utoy Creek. Bridge ID: 121-0338-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$75,000	Local/ Federal Funding	2022-2027

Identified Mitigation Actions (2022-2027), City of Atlanta							
Project Number	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion
05.0108	Remove debris, stabilize piers and embankment, repair damage Lynhurst Dr. at North Utoy Creek. Bridge ID: 121-0351-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$50,000	Local/ Federal Funding	2022-2027
05.0109	Remove debris, stabilize piers and embankment, repair damage Welcome All Rd. at Camp Creek. Bridge ID: 121-0362-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$50,000	Local/ Federal Funding	2022-2027
05.0110	Remove debris, stabilize piers and embankment, repair damage Macon Dr. at South River. Bridge ID: 121-0377-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$50,000	Local/ Federal Funding	2022-2027
05.0111	Remove debris, stabilize piers and embankment, repair damage Forrest Park Rd. at South River. Bridge ID: 121-0379-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$50,000	Local/ Federal Funding	2022-2027

Identified Mitigation Actions (2022-2027), City of Atlanta							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
05.0112	Remove debris, stabilize piers and embankment, repair damage Chattahoochee Ave. at Peachtree Creek Trib. Bridge ID: 121-0397-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$50,000	Local/ Federal Funding	2022-2027
05.0113	Remove debris, stabilize piers and embankment, repair damage Bohler Road at Peachtree Creek. Bridge ID: 121-0398-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$50,000	Local/ Federal Funding	2022-2027
05.0114	Remove debris, stabilize piers and embankment, repair damage Howell Mill Rd. at Peachtree Creek. Bridge ID: 121-0403-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$75,000	Local/ Federal Funding	2022-2027
05.0115	Remove debris, stabilize piers and embankment, repair damage Collier Rd. at Peachtree Creek Trib. Bridge ID: 121-0435-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$50,000	Local/ Federal Funding	2022-2027

Identified Mitigation Actions (2022-2027), City of Atlanta							
Project Number	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion
05.0116	Remove debris, stabilize piers and embankment, repair damage DeFoors Ferry Rd. at Peachtree Creek Trib. Bridge ID: 121-0438-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$75,000	Local/ Federal Funding	2022-2027
05.0117	Remove debris, stabilize piers and embankment, repair damage W. Paces Ferry Rd. at Nancy Creek. Bridge ID: 121-0440-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$75,000	Local/ Federal Funding	2022-2027
05.0118	Remove debris, stabilize piers and embankment, repair damage Northside Dr. at Nancy Creek. Bridge ID: 121-0442-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$75,000	Local/ Federal Funding	2022-2027
05.0119	Remove debris, stabilize piers and embankment, repair damage Powers Ferry Rd. at Nancy Creek. Bridge ID: 121-0448-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$75,000	Local/ Federal Funding	2022-2027

Identified Mitigation Actions (2022-2027), City of Atlanta							
Project Number	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion
05.0120	Remove debris, stabilize piers and embankment, repair damage Hollywood Rd. at Proctor Creek Trib. Bridge ID: 121-0574-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$75,000	Local/ Federal Funding	2022-2027
05.0121	Remove debris, stabilize piers and embankment, repair damage Stone Hogan Conn. At North Fork Camp Creek. Bridge ID: 121-0575-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$50,000	Local/ Federal Funding	2022-2027
05.0122	Remove debris, stabilize piers and embankment, repair damage Pryor Rd. at South River Trib. Bridge ID: 121-0581-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$50,000	Local/ Federal Funding	2022-2027
05.0123	Remove debris, stabilize piers and embankment, repair damage Claire Dr. at South River Trib. Bridge ID: 121-0582-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$50,000	Local/ Federal Funding	2022-2027

Identified Mitigation Actions (2022-2027), City of Atlanta							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
05.0124	Remove debris, stabilize piers and embankment, repair damage Bolton Rd. at Whetstone Creek. Bridge ID: 121-0683-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$75,000	Local/ Federal Funding	2022-2027
05.0125	Remove debris, stabilize piers and embankment, repair damage Randall Mill Rd. at Nancy Creek. Bridge ID: 121-5178-0	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$50,000	Local/ Federal Funding	2022-2027
05.0126	Marietta Blvd. Bridge – Failed section of deck with through hole, exposed rebar, failed expansion joint	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$250,000	Local/ Federal Funding	2022-2023

Identified Mitigation Actions (2022-2027), City of Atlanta							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
05.0127	Alston Bridge – Severe undermining of the culvert walls, roadway cracks, cracks on culvert wall CORRECTIVE ACTION: Repair cracks on culvert wall with high strength grout, repair settlement on culvert foundation, mill and repave roadway	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$76,000	Local/ Federal Funding	2022-2023
05.0128	MLK Drive Bridge – Multiple roadway spalls with exposed rebar, failed expansion joints CORRECTIVE ACTION: Repair deck with concrete at all failing spots; repair extension joints in kind	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$2,000,000	Local/ Federal Funding	2022-2023
05.0129	Centennial Park Bridge - Multiple Roadway spalls with exposed rebar, failed expansion joints. (This corrective action is to repair deck with concrete at all failing spots. Repair extension joints in kind.)	Proposed Project for 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Flood, Severe Weather (Any hazard that threatens bridge infra-structure and further deterioration.)	$2,000,000	Local/ Federal Funding	2022-2023

Identified Mitigation Actions (2022-2027), City of Atlanta							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
Refer to 05.0024, 05.0025, 05.0026, and 05.0027	Harden to improve wind and impact resistance; increase generator capacity. Focus on Station 1, 8, 9, 20, 21, 22, and 25. Station 21 is a heavy rescue special operations station. Houses rescue boat, collapse rescue equipment, trench rescue equipment, and technical rescue equipment. ALS engine is station at this location. GSAR is housed at this station. Station has large amount of plate glass, including bay doors. Bay doors are older and are not up to current code.	Carryover and combined from 2016 Plan Update; In Progress	City of Atlanta Fire and Rescue	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$500,000 per station	HMGP; SCG; Local Funds	2022-2027

Summary: Of the City of Atlanta's 68 identified mitigation actions for the 2022-2027 planning period, 33 are being carried over from 2016, 1 is being discontinued, and 34 are being added as "new" for the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan.

Table 102: Identified Mitigation Actions (2022-2027), City of Chattahoochee Hills

Identified Mitigation Actions (2022-2027), City of Chattahoochee Hills							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
65.001	Develop Storm Water Plan	Carryover from 2016 Plan Update; Deferred (Lack of Funding and Trained Staff)	Planning & Development	Severe Weather, Severe Winter Weather, Tropical Systems	$10,000	HMGP, Local	2023
65.002	Harden/retrofit City Hall [for EOC and daily operations] Comments: Generator acquired, and partial cost study done. Surplus/donation of equipment.)	Carryover from 2016 Plan Update; In Progress	Public Works	Severe Weather, Severe Winter Weather, Tropical Systems	$75,000	HMGP, EOC, Local	2024
65.003	Improve storm water run-off on Cap's Ferry (Comments: Developing plan utilizing outside contractor/advisor during 2016. Due to the proximity to the Chattahoochee River, the creek backs up and floods the road which, in turn, cuts off access to three counties.)	Carryover from 2016 Plan Update; In Progress	Public Works	Flood, Severe Weather, Severe Winter Weather, Tropical Systems	$1.2 million	HMGP, EOC, Local	2024

Identified Mitigation Actions (2022-2027), City of Chattahoochee Hills							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
65.004	Harden fire station with impact-resistant glass, garage doors and roof; upgrade station generator (Comments: Generator acquired and surplus/donation of equipment.)	Carryover from 2016 Plan Update; In Progress	Fire & Rescue	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$200,000	HMGP, SCG, Local	2023
65.005	Replacement of Garrett's Ferry Bridge (Comments: Engineering study already completed; research federal and state funding and options for replacement.)	Carryover from 2016 Plan Update; Deferred	Public Works	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$200,000	Local, Other Local Funding Sources	2024
65.006	Research/ publish mitigation "opportunities" for citizen (individual/ group) commitment (Comments: Identify/publish information about property insurance savings to property/home/ business owners to encourage individual/group participation in mitigation and support for public safety services/needs.)	Carryover from 2016 Plan Update; In Progress	Public Works	All Hazards	$2,500	Local, Other Local Funding Sources	2023

Summary: The City of Chattahoochee Hills identified a total of 6 mitigation actions (all 6 carry over from 2016 plan) for the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan.

Table 103: Identified Mitigation Actions (2022-2027), City of College Park

Identified Mitigation Actions (2022-2027), City of College Park							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
15.0001	Replace 3' box culvert off of Camp Creek Parkway with a more open design (Comments: Flooding on Camp Creek Parkway causes traffic problems in College Park. Long, low-slope trash rack would be a more cost-effective solution to the problem.)	Carry over from 2016 HMP	Georgia Department of Transportation	Flood, Severe Weather, Tropical Systems	$200,000	HMA, FMA, Local	2022-2027
15.0002	Storm sewer improvement project on Walker Avenue/Mercer Avenue	Carry over from 2016 HMP	Public Works	Flood	$500,000	Local	2022-2027
15.0002 [# duplicated in 2016 plan]	Storm sewer improvement project Cambridge Avenue (designed), Lyle/Vesta (not designed)	Carry over from 2016 HMP	Public Works	Flood	$1,000,000	HMA, Storm Water Utility Fund	2022-2027

Identified Mitigation Actions (2022-2027), City of College Park							
Project Number	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion
15.0003	Increase flow-through capacity of box culvert on Park Terrace (Comments: During heavy rains, the flow-through capacity is insufficient causing debris to accumulate and block water flow.)	Carry over from 2016 HMP	Public Works	Flood, Severe Weather, Tropical Systems	$100,000	HMA; Local	2022-2027
15.0004	Increase flow-through capacity of box culvert at the intersection of Harris and Rugby Avenue (Comments: During heavy rains, the flow-through capacity is insufficient, causing debris to accumulate and block water flow. Trash rack could be built upstream at Lyle Avenue where nearest house is at a higher elevation.)	Carry over from 2016 HMP	Public Works	Flood, Severe Weather, Tropical Systems	$100,000	HMA; Local	2022-2027
15.0005	Replace traffic lights with more weather-resistant mast arms	Carry over from 2016 HMP	Power Department	Severe Weather, Tornado, Tropical Systems	$150,000 each one replaced at Godby Road, two candidates on Roosevelt Highway	HMA; DOT; Local	2022-2027

Identified Mitigation Actions (2022-2027), City of College Park							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
15.0006	Retrofit the roof at the Power Department Building; replace generator (Comments: This building houses the City-owned power utility as well as the water and sewer department and the warehouse. The current generator is small and underpowered for current needs. The computer system that is housed at this location runs all their system data.)	Carry over from 2016 HMP	Power Department	Severe Weather, Tornado, Severe Winter Storm, Tropical Systems	$50,000	HMA ; Local	2022-2027
15.0007	Install Fur Creek structure at Herschel Park Drive to regulate flow	Carry over from 2016 HMP	Public Works	Flood	$100,000	HMA; Local	2022-2027
15.0008 (refer to 15.0005)	Construct new detention pond to regulate southwest branch of Fur Creek	Carry over from 2016 HMP	Public Works	Flood	$1,000,000	HMA; Local	2022-2027
15.0014	Improve Embassy Drive, T. Owen Smith Connector, Best Road, and Sullivan Road stormwater control by installing trash racks	Carry over from 2016 HMP	Public Works	Flood	$400,000	HMA; Storm Water Utility Fund	2022-2027

Identified Mitigation Actions (2022-2027), City of College Park							
Project Number	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion
15.0015	Replace 48" CMP with 7' by 7' culvert box to improve capacity of Janice Drive storm drainage	Carry over from 2016 HMP	Public Works	Flood	$100,000	HMA; Local	2022-2027
N/A	Increase flow-through capacity of box culvert on Lyle Road	Deferred from 2016 Plan; Carryover to 2022 Plan Update	City of College Park Public Works Department; Army Corp of Engineers	Flood	$150,000 - $250,000	HMGP; Storm Water Utility Fund; FMA	2022-2027
N/A	Storm Sewer improvement project Virginia Avenue (undesigned) – non-creek	Deferred from 2016 Plan; Carryover to 2022 Plan Update	City of College Park Public Works Department	Flood, Severe Weather; Tropical Systems	$250,000	HMGP; BRIC; Storm Water Utility Fund; FMA	2022-2027
N/A	Storm Sewer improvement project Best Road (undesigned)	Deferred from 2016 Plan; Carryover to 2022 Plan Update	Public Works Department	Flood	$150,000 - $200,000	HMGP; Storm Water Utility Fund; FMA	2022-2027
N/A	Storm Sewer improvement project Sullivan Road. (Comments: Flow study is required.)	Deferred from 2016 Plan (Lack of Funding/ Resources); Carryover to 2022 Plan Update	Public Works Department	Flood	$100,000 - $200,000	HMGP; FMA; Storm Water Utility Fund	2022-2027
N/A	Storm Sewer improvement project Janice Drive (undesigned)	Deferred from 2016 Plan (Due to Flooding); Carryover to 2022 Plan Update	City of College Park Public Works Department; City of South Fulton Public Works Department; GA EPD; Army Corp of Engineers	Flood	$500,000 - $1M	HMGP: Storm Water Utility Fund	2022-2027

Summary: The City of College Park identified a total of 16 mitigation actions. 11 of which were proposed in the 2016 plan with status unknown and 5 of which will carryover to 2022 Fulton County Multijurisdictional Hazard Mitigation Plan.

Table 104: Identified Mitigation Actions (2022-2027), City of East Point

Identified Mitigation Actions (2022-2027), City of East Point							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
20.0001	Coordinate with DOT regarding improved conveyance capacity and drainage on Camp Creek Pkwy between Washington Rd and Desert Dr (Comments: DOT is preparing to wide Camp Creek and it owns the draining infrastructure; however, there are design impacts that may affect he City that need to be coordinated.	Carryover from 2016 Plan; Include in 2022 Plan Update	Public Works	Flood, Severe Weather, Tropical Systems	$1,500,000	HMGP; FMA; DOT; Local Funds	1-2 years from Funds Availability
20.0002	Improve drainage capacity at Norman Berry Road	Carryover from 2016 Plan; Include in 2022 Plan Update	Public Works	Flood, Severe Weather, Tropical Systems	$2,500,000	HMGP; FMA; DOT; Local Funds	1-2 years from Funds Availability

Identified Mitigation Actions (2022-2027), City of East Point							
Project Number	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion
20.0003	Improve drainage design in the area of Martin St and Norman Berry due to insufficient infrastructure capacity (Comments: This area collects from 3 or 4 different points that drain into one location. Either a larger drain or rerouting of draining points to multiple locations are needed.)	Carryover from 2016 Plan; Include in 2022 Plan Update	Public Works	Flood, Severe Weather, Tropical Systems	$2,000	HMGP; Local Funds	1-2 years from Funds Availability
20.0004	Harden City EOC (2727 East Point St) by adding more impact-resistant glass	Discontinue – No longer relevant	City of East Point Public Works Department	Severe Weather, Tornado, Tropical Systems	$10,000	HMGP; EOC; Local Funds	N/A
20.0005	Drainage improvements in the Sun Valley/Camp Creek Watershed area	Carryover from 2016 Plan; Include in 2022 Plan Update	Public Works	Flood	$800,000	Local Funds	1-2 years from Funds Availability
20.0006	Drainage improvements at Lester St and Spring Avenue in the Utoy Watershed	Carryover from 2016 Plan; Include in 2022 Plan Update	Public Works	Flood	$800,000	HMGP; Local Funds	1-2 years from Funds Availability
20.0007	Drainage improvements at Randall St and East Forrest Ave	Carryover from 2016 Plan; Include in 2022 Plan Update	Public Works	Flood	$500,000	HMGP; Local Funds	1-2 years from Funds Availability

Identified Mitigation Actions (2022-2027), City of East Point							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
20.0009	Drainage improvements in the Jim's Creek area	Discontinue – No longer relevant	Public Works	Flood	$1,900,000	HMGP; Local Funds	2016
20.0010	North Martin St regional storage improvement	Discontinue – No longer relevant	City of East Point Public Works Department	Flood	N/A	HMGP; FMA: Local Funds	2016
20.0011	Calhoun Ave pipe replacement (Comments: There is major road flooding at the intersection of Calhoun Ave. and Norman Berry)	Discontinue – No longer relevant	Public Works	Flood	$670,000	HMA; FMA; Local Funds	2016
20.0012	South River unnamed tributary 3 improvements	Discontinue – No longer relevant	Public Works	Flood	Not Available	HMA; FMA; Local Funds	2016
20.0013	Pipe replacement on Norman Berry Dr near Maria Head Terrace	Discontinue – No longer relevant	Public Works	Flood	$180,000	HMA, FMA, Local Funds	2016

Identified Mitigation Actions (2022-2027), City of East Point							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
20.0014	Georgia Power Pond (Comments: There is secondary road flooding; alternate access to residences; coordinate with Meadow Lark improvements. The detention pond suggested is with the area of a Georgia Power easement in the Meadowlark Drive community. There is no direct association with Georgia Power Company project.)	Discontinue – Impacts addressed through other GP activities	Public Works	Flood	$280,000	HMA: Local Funds	2016
20.0015	Meadow Lark Lane Pipe Replacement (There is secondary flooding; alternate access to local residence)	Discontinue – Alternate road access	Public Works	Flood	$1,500,000	GMA; Local Funds	2016
20.0016	Grove Ave Pipe Replacement (Comments: There is secondary road flooding; alternate access to residences.)	Discontinue – Alternate road access	Public Works	Flood	$60,000	HMA; Local Funds	2016

Identified Mitigation Actions (2022-2027), City of East Point							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
20.0017	Promote public education of water-saving measures (Comments: Rebates/voucher for low-flow water fixtures, household water saving tips, etc.)	Discontinue – Accomplished through other initiative. No longer relevant.	Public Works	Drought	$13,000	HMA; FMA; Local	2016
20.0018	Implement water restrictions, prioritizing water use	Discontinue – No longer relevant	Public Works	Drought	$13,000	HMA; FMA; Local	2016
20.0019	Develop Emergency Notification Outreach program for senior population	Proposed	East Point Fire Department	All Hazards	Staff Time and Resources	Local Funds; Potential Federal/State Grants	2022-2024
20.0020	Annual update and review of communication plan (CodeRED)	Proposed	Public Works	All Hazards	Staff Time and Resources	Local Funds; Potential Federal/ State Grants	2022-2024
N/A	Improve drainage capacity in the 800 block of Cleveland Avenue; culvert improvement complete w/erosion improvement @ 871 Cleveland parking lot area (local funds); monitor and evaluate stream flow @ location mentioned	In Progress	Public Works	Flood	$300,000	Local Funds	1 – 2 years from funds availability

Summary: The City of East Point identified a total of 20 mitigation actions (7 carryover from 2016, 11 discontinued and 2 new/proposed) for the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan.

Table 105: Identified Mitigation Actions (2022-2027), City of Fairburn

Identified Mitigation Actions (2022-2027), City of Fairburn							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
25.0001	Improve drainage at the bridge at Rivertown Road and Malone by adding drain to tie into the storm water drainage. (debris backs up under the bridge at Malone)	Carryover to Plan Update 2022; Project in Development Phase; Goal is to Continue in Long-term Planning	City of Fairburn Engineering Department; City of Fairburn Public Works Department	Flood	$150,000	HMGP; FMA; Local Funds	2-5 years
25.0002	Acquire the upstream property (currently privately owned) on Rivertown Road to provide City access to clean and prevent debris in stream	No progress on this project since last Plan Update (2016); Carryover to 2022 Plan Update	City of Fairburn Engineering Department	Flood	$100,000	HMGP; FMA; Local Funds	2-5 years

Identified Mitigation Actions (2022-2027), City of Fairburn							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
25.0003	Acquire privately owned agriculture land to prevent further development that is consistent with current land use policies (Acquisition would be used to promote less dense land usage and expand nature preserve, which is consistent with the natural conservation projects already being implemented in the area.)	No progress on this project since last Plan Update (2016); Carryover to 2022 Plan Update	City of Fairburn Engineering Department	All Hazards	$100,000	HMGP; Local Funds	2-5 years

Summary: The City of Fairburn identified a total of 3 mitigation actions (all 3 are carried over from 2016) for the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan.

Table 106: Identified Mitigation Actions (2022-2027), City of Hapeville

Identified Mitigation Actions (2022-2027), City of Hapeville							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
30.0005	Revise the plan review process to ensure that site plan review is part of the interdepartmental plan review process	Discontinued – No longer relevant	Community Services	All Hazards	$2,000	Local	2016
30.0006	Replace current fire station that was built in the 1940's	Proposed project for the 2022 Plan Update	City of Hapeville Fire Department	Wildfire	$1,800,000	Grant funding and/or general funds	2022-2027
30.0007	Replace current fire station that was built in the 1960's; also, possibly add a training tower	Proposed project for the 2022 Plan Update	City of Hapeville Fire Department	Wildfire	$2,500,000	Grant funding and/or general funds	2022-2027
30.0008	Replace current administrative offices (a house that was built in 1924); also, look at putting in a conference/ training room that could double as EOC	Proposed project for 2022 Plan Update	City of Hapeville Fire Department	All Hazards	$1,800,000	Grant funding and/or General Funds	2022-2027

Summary: The City of Hapeville identified a total of 4 mitigation actions (1 of which is discontinued from 2016 and 3 new/proposed) for the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan.

Table 107: Identified Mitigation Actions (2022-2027), City of Johns Creek

Identified Mitigation Actions (2022-2027), City of Johns Creek							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
02.0003	Debris Removal Contract (Comments: Johns Creek is looking to establish a pre-event contract for disaster debris removal to include haulers, reduction, and site monitors.)	Included in 2016 Plan Update: Project is Ongoing/ Included in 2022 Plan Update	City of Jones Creek Emergency Management	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$3,600	Local Funds; Other Local Funding Sources	2022-2027
02.0004	Require mandatory water conservation measures during drought emergencies (Comments: Johns Creek will adopt ordinances specified by Fulton County to prioritize or control water use, particularly for emergency situations like firefighting and develop an ordinance to restrict the use of public water resources for non-essential usage, such as landscaping, washing cars, filling swimming pools, etc.)	Included in 2016 Plan Update; Project is In Progress/ Included in 2022 Plan Update	City of Jones Creek Emergency Management	Drought	Staff Time	HMGP; FMA; Local Funds	2022-2027

Identified Mitigation Actions (2022-2027), City of Johns Creek							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
02.0005	Create a program encouraging to take water-saving measures. (Comments: Johns Creek will encourage citizens to: install low-flow water saving shower-heads and toilets, turn water flow off while brushing teeth or during other cleaning activities, adjust sprinklers to water the lawn and not the sidewalk or street, run the dishwasher and washing machine only when they are full, check for leaks in plumping or dripping faucets, install rain-capturing devices for irrigation and encourage the installation of graywater systems in homes to encourage water reuse.)	Included in 2016 Plan; Progress is Ongoing/ Included in 2022 Plan Update	City of Jones Creek Emergency Management	Drought	Staff Time	HMGP; FMA; Local Funds	2021-2027
02.0006	Create the City flood plan	Proposed	Johns Creek Public Works/Storm Water Authority	Flood	$3,500	Federal/ State Grants; Local Funds	12 Months

Identified Mitigation Actions (2022-2027), City of Johns Creek							
Project Number	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion
02.0007	Update dam in the City of Johns Creek	Proposed	Johns Creek Public Works/Storm Water Authority	Flood	$3,500	Federal/State Grants; Local Funds	12 Months
02.0008	Create an evacuation plan for senior living facilities in Johns Creek	Proposed	Johns Creek EM; Local Senior Living Facilities; AFCEMA; Red Cross	All Hazards	$3,500	Federal/ State Grants; Local Funds	12 Months

Summary: The City of Johns Creek identified a total of 6 mitigation actions (3 carryover from 2016 and 3 new/proposed) for the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan.

Table 107: Identified Mitigation Actions (2022-2027), City of Milton

Identified Mitigation Actions (2022-2027), City of Milton							
Project Number	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion
56.0002	Continue development of GIS web mapping project to allow for-real time information of road and other hazard areas to be avoided	In-Progress / carry over to 2022 MJHMP	City of Milton Planning and Development Department	All Hazards	$20,000	HMGP; DHS; Local Funds	2022-2027
56.0003	Develop campaign strategy to increase participation in Nixle notification program	Discontinue – No longer relevant	City of Milton Planning and Development Department	All Hazards	In house staff and time	HMA; Local	2016
56.0004	Replace a malfunctioning 25-year-old generator at Station 43/alternate EOC site	Proposed for the 2022 Plan Update	City of Milton Fire Department	Flood, Severe Weather, Tropical Systems, Severe Winter Weather	$70,000	Federal/State Grants; Local Funds	Winter 2022/2023

Identified Mitigation Actions (2022-2027), City of Milton							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
56.0005	Purchase a generator for Public Works Department Building	Proposed Project for the 2022 Plan Update	City of Milton Public Works Department	Severe Weather; Tropical System; Flooding; Severe Winter Weather	$15,000	Federal/State Grants; Local Funds	Winter 2022/2023
56.0006	Test/improve LEOP and COOP plans	Proposed Project for the 2022 Plan Update	Milton Emergency Management/ Fire-Rescue	All Hazards	$10,000	Federal/State Grants; Local Funds	Winter 2022/2023
N/A	Replace current administrative office (a house that was built in 1924); also, look at putting in a conference/ training room that could double as EOC	Discontinue – No longer relevant	Milton Emergency Management/ Fire-Rescue	All Hazards	$200,000	Local Funds	2016
56.0007	Emergency Action Plans for dam safety to prepare public safety and public works personnel in the event of a dam failure. (This includes 18 dams, including at least 4 category 1 dams.)	Deferred from 2016 HMP due to lack of funding/Carry over to 2022 Plan Update	City of Milton Public Works Department; GEPD, Dam Safety Program	Dam Failure	$20,000	Federal/State Grants; Local Funds	2022-2027
N/A	Road/ Intersection improvements at common flood area, Birmingham and Freemanville Rd.	Discontinue – No longer relevant	City of Milton Public Works Department	Flood	$10,000,000	Local Funds; GDOT Funding	2016

Summary: The City of Milton identified a total of 8 mitigation actions (2 carryover from 2016, 2 are discontinued, 1 status unknown and 3 new/proposed) for the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan.

Table 109: Identified Mitigation Actions (2022-2027), City of Mountain Park

Proposed Mitigation Actions (2022-2027), City of Mountain Park							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
35.0001	Convert open storm water drainage ditches to underground piping system in areas were the ditching system passes the roadway (Comments: City has open ditch drainage system which causes problems in heavy rain events due to debris in the ditches. When the ditches get clogged, the water overflows onto the road and drivers cannot see where edge of road/ditch is.)	Included in 2016 Plan; In Progress; Carry over to 2022 Plan Update	City of Mountain Park Public Works Department	Flood, Severe Weather, Tropical Systems	$500,000	Federal/State Grants; Local Funds	2022-2027
35.0002	Improve storm water drainage ditches in areas that do not cross roadways to increase drainage system capacity	Included in 2016 Plan; In Progress; Carry over to 2022 Plan Update	City of Mountain Park Public Works Department	Flood, Severe Weather, Tropical Systems	$300,000	Federal/State Grants; Local Funds	2022-2027
35.0004	Install surge protection equipment and measures for the EOC/Fire Station	Included in 2016 Plan; In Progress; Carry over to 2022 Plan Update	City of Mountain Park Fire and Rescue	Severe Weather	$5,000	Federal/State Grants; Local Funds	2022-2027

Proposed Mitigation Actions (2022-2027), City of Mountain Park							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
35.0005	Flood-proof Fire Station including, raising generators and other mechanicals, installing drainage pumps, waterproofing foundation, and sealing foundation walls	Included in 2016 Plan; In Progress; Carry over to 2022 Plan Update	City of Mountain Park Fire and Rescue	Flood, Severe Weather, Tropical Systems	25,000	Federal/State Grants; EOC; SCG; FMA: Local Funds	2022-2027
[No # assigned in 2016 Plan]	Acquire property to relocate flood-prone Fire Station (Comments: This is a multi-purpose building that also functions as the City's EOC and designated special needs shelter.)	Included in 2016 Plan; Status N/A	City of Mountain Park Public Works	Flood, Severe Weather, Tropical Systems	$200,000	HMA; FMA; SCG; Local	2022-2027
35.0006	Enhance physical protection of City Hall for increased high wind resistance	Included in 2016 Plan; Status N/A	City of Mountain Park Public Works	Severe Weather, Tornado, Tropical Systems	$50,000	HMA; Local	2022-2027
35.0007	Acquire property at corner of Cardinal Rd and Mountain Park Rd to relocate the City Works building	Included in 2016 Plan; Status N/A	City of Mountain Park Planning, Public Works	Flood, Severe Weather, Severe Winter Weather, Wildfire/ Wildland Urban Interface Fire	$50,000	HMA; Local	2022-2027

Proposed Mitigation Actions (2022-2027), City of Mountain Park							
Project Number	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion
35.0008	Improve capacity of Lake Garrett by dredging accumulated sedimentation	Deferred from 2016 Plan; Carry over to 2022 Plan Update	City of Mountain Park Public Works Department	Flood, Severe Weather, Severe Winter Weather, Tropical Systems	$2.865 Million	Federal/State Grants; Local Funds	2022-2027
35.0009	Improve capacity of Lake Cherful by dredging accumulated sedimentation	Deferred from 2016 Plan; Carry over to 2022 Plan Update	City of Mountain Park Public Works Department	Flood, Severe Weather, Severe Winter Weather, Tropical Systems	$2.865 Million	Federal/State; Local Funds	2022-2027
35.0010	Harden spillway structure between Lake Cherful and Lake Garrett	Included in 2016 Plan; In Progress; Carry over to 2022 Plan	City of Mountain Park Public Works Department	Flood, Severe Weather, Severe Winter Weather, Tropical Systems	200,000	Federal/Grants; Local Funds	2022-2027
35.0011	Rehabilitate the flood plain on Oakhaven Dr. through acquisition of 10 structures in the flood plain; improve drainage in the area	Included in 2016 Plan; In Progress; Carry over to 2022 Plan	City of Mountain Park; City of Roswell	Flood, Severe Weather, Severe Winter Weather, Tropical Systems	$3,000,000	Federal/State Grants; Local Funds	2022-2027

Summary: The City of Mountain Park identified a total of 11 mitigation actions (8 carryover from 2016 and 3 are status unknown) for the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan.

Table 110: Identified Mitigation Actions (2022-2027), City of Palmetto

Identified Mitigation Actions (2022-2027), City of Palmetto							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
40.0001	Acquire generator for emergency power for Fire Department Headquarters Building	Deferred in 2016 Plan (Lack of Funding); Carryover to 2022 Plan Update	City of Palmetto Fire and Rescue	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$25,000	HMGP; EOC; SCG; Local Funds	2022-2027
40.0002	Retrofit old window glass at the Fire Department Headquarters building for increased impact resistance	Deferred in 2016 Plan (Lack of Funding); Carryover to 2022 Plan Update	City of Palmetto Fire and Rescue	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$10,000	HMGP; EOC; SCG; Local Funds	2022-2027
40.0003	Acquire generator for emergency power for Fire Station	Deferred in 2016 Plan (Lack of Funding); Carryover to 2022 Plan Update	City of Palmetto Fire and Rescue	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$25,000	HMGP; SCG; Local Funds	2022-2027
40.0004	Retrofit bay doors of Fire Station. (Bay doors are over 40 years old and of residential grade quality. They are of insufficient wind loading capacity and impact resistance.)	Deferred in 2016 Plan (Lack of Funding); Carryover to 2022 Plan Update	City of Palmetto Fire and Rescue	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$15,000	HMGP; SCG; Local Funds	2022-2027
40.0005	Retrofit current flat roof of City Hall for improved wind loading capacity	Deferred in 2016 Plan (Lack of Funding); Carryover to 2022 Plan Update	City of Palmetto Administration	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$55,000	HMGP; Local Funds	2022-2027

Identified Mitigation Actions (2022-2027), City of Palmetto							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
40.0006	Acquire generator for emergency power for Police Station	Deferred in 2016 Plan (Lack of Funding); Carryover to 2022 Plan Update	City of Palmetto Police Department	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$15,000	HMGP, DHS, Local Funds	2022-2027
40.0007	Retrofit Police Station for improved wind loading capacity	Deferred in 2016 Plan (Lack of Funding); Carryover to 2022 Plan Update	City of Palmetto Police Department	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$15,000	HMGP, DHS, Local Funds	2022-2027
40.0008	Harden Community Center, which functions as a first responder shelter; reinforce roof for wind loading capacity as well replace windows for wind resistance	Deferred in 2016 Plan (Lack of Funding); Carryover to 2022 Plan Update	City of Palmetto Administration	All Hazards	$110,000	HMGP; Local Funds	2022-2027
40.0009	Acquire stream in Palmetto Oaks to preserve as green space and improve flood plain management	Deferred in 2016 Plan (Lack of Funding); Carryover to 2022 Plan Update	City of Palmetto Administration	Flooding	$300,000	HMGP; FMA; Local Funds	2022-2027
40.0010	Acquire land on Mixon Ave to prevent further dense development as part of their green space expansion program	Deferred in 2016 Plan (Lack of Funding); Carryover to 2022 Plan Update	City of Palmetto Administration	Wildfire/ Wildland Urban Interface Fire; Tornado; Severe Weather	$150,000	HMGP; Local Funds	2022-2027

Identified Mitigation Actions (2022-2027), City of Palmetto							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
40.0011	Acquire emergency generator for Water Treatment Plant	Carryover from 2016 Plan; In Progress	City of Palmetto Public Works Department	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$25,000	HMGP, DHS, Local Funds	2022-2027
40.0012	Acquire Emergency Generator for City Hall	Carryover from 2016 Plan; In Progress	City of Palmetto Administration	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$25,000	HMGP, DHS, Local Funds	2022-2027
40.0013	Retrofit Water Treatment Plant with lightning protection	In progress – Carried over from 2016 MJHMP.	City of Palmetto Public Works Department	Severe Weather, Tornado, Tropical Systems	$25,000	HMGP, DHS, Local Funds	2022-2027
N/A	Install two outdoor warning sirens at location within the City	In Progress	City of Palmetto Administration	Severe Weather, Tornado	$75,000	HMGP, DHS, Local Funds	2022-2027

Summary: The City of Palmetto identifies a total of 14 mitigation actions (13 carryover from 2016 and 1 identified after 2016 plan; in progress) for the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan.

Table 111: Identified Mitigation Actions (2022-2027), City of Roswell

Identified Mitigation Actions (2022-2027), City of Roswell							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
45.0001	Install surge protection at the City fuel island	Discontinue – No longer relevant	Public Works	Severe Weather	$35,000	Local	2016
45.0002	Retrofit roof of the 911 Center which is susceptible to damage from high winds and water leakage (Comments: Retrofit glass with more impact-resistant glass.)	Discontinue – No longer relevant	Administration	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$180,000	HMA; EOC; Local	2016
45.00003	Add upstream detention and replace culvert at Warsaw Road near Willow Stream Townhomes (Comments: Area is in a shaded zone X floodplain. There is repeated flooding that affects homes and roadway.)	Deferred; Carry over to 2022 MJHMP	Public Works	Flood, Severe Weather, Tropical Systems	$350,000	HMA; Local	2022-2027
45.0004	Perform stream stabilization and repair erosion along Crossville Creek corridors	Deferred; Carry over to 2022 MJHMP	Public Works	Flood, Severe Weather, Severe Winter Weather, Tropical Systems	$125,000	HMA; Local	2022-2027

Identified Mitigation Actions (2022-2027), City of Roswell							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
45.0005	Add tamper-resistant fittings to all fire hydrants in water system boundary	Discontinue – Not relevant	Public Works	Fire	$10,000	HMA; Local	2016
99.0001	Rehabilitate the floodplain on Oakhaven Dr through acquisition of ten (10) structures in the floodplain; improve drainage in the area (Comments: Area is in a floodplain. There is repeated flooding that affects homes and roadway. Have had to have numerous rescues du to low-lying area. Too much water comes into area that cannot be dispersed. This project score has been dropped because of improvements to the dam overflow structure.)	Included in 2016 Plan; Discontinue – No longer relevant because of improvements to the dam overflow structure	Public Works	Flood, Severe Weather, Tropical Systems	$85,000	HMA; FMA; Local	2016
99.0002	Azalea Drive Roadway Elevation	Proposed	RDOT	Flood	$6,500,000	Local, State, and Federal Funding	2022 to 2024

Identified Mitigation Actions (2022-2027), City of Roswell							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
99.0003	Willeo Road Roadway Elevation	Proposed	RDOT	Flood	$4,800,000	Local, State, and Federal Funding	2022 to 2024
99.0004	Portable Generators for Traffic Signals	Proposed	RDOT	Severe Weather, Severe Winter Weather, Tropical Systems	$30,000	State & local funding	2022 to 2023
99.0005	Roswell Water Plant Emergency Power Generator	Proposed	PW	Severe Weather, Severe Winter Weather, Tropical Systems	$110,000	State & Local Funding	2022 to 2024
99.0006	Generator for Hembree Facility - Fire, Public Works, RDOT	Proposed	PW	Severe Weather, Severe Winter Weather, Tropical Systems	$110,000	State & Local Funding	2022 to 2023
99.0007	Storage Shed for Road Salt	Proposed	PW	Severe Winter Weather	$18,000	State & Local Funding	2022 to 2023
99.0008	Tree removal along the river corridor, Pine Grove Road, and other areas	Proposed	PW	Severe Weather, Severe Winter Weather	$85,000	State & Local Funding	2022 to 2024

Identified Mitigation Actions (2022-2027), City of Roswell							
Project Number	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion
99.0009	Roswell Area Park Flood Mitigation	Proposed	Parks & Rec	Flood, Severe Weather, Severe Winter Weather	$85,000	State & Local Funding	2023 to 2024
99.0010	Flooding on Oakhaven Drive (Brookfield West)	Proposed	PW	Flood, Severe Weather, Severe Winter Weather	$1,100,000	Federal/State Grant; Private Funding	2024 to 2026
99.0011	Stormwater control projects	Proposed	PW	Flood, Severe Weather, Severe Winter Weather	$1,000,000	State & Local Funding	2023 to 2024
99.0012	Woodstock Street and Woodstock Road Water Main Replacement Project	Proposed	PW	Wildfire/urban face, Winter Weather	$1,750,000	State & Local Funding	2024 to 2026
99.0013	Emergency Access for Riverwalk Condominium Complex	Proposed	Department of Transportation	Flood	$90,000	Federal/State Grant; Private Funding	2022 to 2023

Summary: The City of Roswell proposes a total of 18 mitigation actions (6 carryover from 2016, 4 projects discontinue and 12 new/proposed) for the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan.

Table 112: Identified Mitigation Actions (2022-2027), City of Sandy Springs

Identified Mitigation Actions (2022-2027), City of Sandy Springs							
Project Number*	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
59.0001	Purchase approximately 45 flooded homes in the Colewood Creek Basin (Comments: Homes are located in the floodplain and areas subject to flooding.)	Discontinue – No longer relevant	Public Works	Flood, Severe Weather, Tropical Systems	$1.4M	HMA; FMA; Local	2016
59.0002	Purchase approximately 35 flooded houses in Pine Forest along Nancy Creek Basin. (There are a total of about 600 homes in the floodplain. City wishes to purchase the most homes that are most at risk.)	Discontinue – No longer relevant	City of Sandy Springs Public Works Department	Flood, Severe Weather, Tropical Systems	$1.1M	HMGP; FMA; Local Funds	2016
59.0003	Acquire approximately ten (10) homes in the North Mill area and convert to open space (Comments: there is a total of about 600 homes in the floodplain. City wishes to purchase the most homes that are most at risk.)	Discontinue – No longer relevant	City of Sandy Springs Public Works	Flood, Severe Weather, Tropical Systems	$3M	HMA; FMA; Local Funds	2016

Identified Mitigation Actions (2022-2027), City of Sandy Springs							
Project Number*	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
59.0004	Reinforce old culverts with slip line (Comments: Current infrastructure is aging and rusting. the leaking pipes are causing secondary erosion to the substrate. This technique would reinforce pipes to keep from collapsing, which could damage homes that are built on or hear the top of the system.)	Discontinue – No longer relevant	Public Works	Flood, Severe Weather, Geological Hazards (Sinkholes), Tropical Systems	$3.5M	HMA; Local Funds	2016
59.0005	Rehabilitate City-owned detention ponds which have previously breached (Comments: Some of the detention ponds are located by creeks. Should the structure fail, it will release mud and debris into the creeks.)	Discontinue - No longer relevant	Public Works	Flood	$5M	HMA; Local Funds	2016
59.0008	Distributing tornado shelter location information	Discontinue – Addressed in proposed project	Fire & Communication	Severe Weather, Tornado, Tropical Systems	$10,000	HMA; FMA: Local	2016
59.0009	Supporting Severe Weather Awareness Week	Discontinue – Addressed in proposed project	Fire & Communications	Severe Weather, Tornado, Tropical Systems	$10,000	HMA; FMA; Local Funds	2016

Identified Mitigation Actions (2022-2027), City of Sandy Springs							
Project Number*	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
59.0010	All-hazards Education and Prevention Community Outreach Program	Proposed for 2022 Plan Update	City of Sandy Springs Fire Department; Emergency Management Department	All Hazards	$10,000	Federal, State, and Local Funds	Minimum of Twice Annually
59.0011	Severe Weather Awareness	Proposed for 2022 Plan Update	City of Sandy Springs Fire Department and Emergency Management Department	Flood, Severe Weather, Tornado, Tropical Systems	$10,000	Federal, State, and Local Funds	Minimum of Twice Annually
59.0012	Community Development Assistance Program - Flood Mitigation Project	Proposed for 2022 Plan Update	City of Sandy Springs Sustainability Department/ Community Development	Flood, Severe Weather, Severe Winter Weather	$7,000	Local Capital Improvement Funds	Analysis 1-2 Years; Planning Year 3; Implementation Years 4-5
59.0013	Reintegrating homes into floodplain	Proposed for 2022 Plan Update	City of Sandy Springs Sustainability Department/ Community Development	Flood	$100,000	Local Capital Improvement Funds	Analysis 1-2 Years; Planning Year 3; Implementation Years 4-5

Summary: The City of Sandy Springs identified a total of 11 mitigation actions (7 discontinue from 2016 and 4 new/proposed) for the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan.

Table 113: Identified Mitigation Actions (2022-2027), City of South Fulton

Identified Mitigation Actions (2022-2027), City of South Fulton							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
70.0001	Build a City of South Fulton Emergency Operations Center (EOC)	Proposed	City of South Fulton Emergency Management	All Hazards	$500,000	Federal/ State Grants; Local Funds	2022-2025
70.0002	Back-Up Power Emergency Shelters	Proposed	City of South Fulton Emergency Management/ City of South Fulton Public Works	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Using a 2000 KW generator, estimate $40K per unit, including accessories - 1 for Sandtown - $50K; 4 Welcome All - $200K	Federal/ State Grants; Local Funds	2022-2025
70.0003	Install a local Emergency Warning System	Proposed	City of South Fulton Emergency Management	All Hazards	$1,200,000	Federal/ State Grants; Local Funds	2022-2025
70.0004	Provide NOAA Weather Radios to low-income, high-risk citizens of the City of South Fulton	Proposed	City of South Fulton Emergency Management	All Hazards	$6,500-$10,000	Federal/ State Grants; Local Funds	2022-2025
70.0005	Create City of South Fulton Continuity of Operations Plan (COOP)	Proposed	City of South Fulton Emergency Management; City of South Fulton Administration and Departments (Public Works, Police, Fire, etc.)	All Hazards	$40,000 - $60,000	Federal/ State Grants; Local Funds	2022-2025

Identified Mitigation Actions (2022-2027), City of South Fulton							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
70.0006	Create City of South Fulton Local Emergency Operations Plan (LEOP)	Proposed	City of South Fulton Emergency Management; City of South Fulton Administration and Departments (Public Works, Police, Fire, etc.)	All Hazards	$40,000 - $60,001	Federal/ State Grants; Local Funds	2022-2025
70.0007	Annual Review of Hazard Mitigation Plan	Proposed	City of South Fulton Emergency Management; City of South Fulton Administration and Departments (Public Works, Police, Fire, etc.)	All Hazards	Staff Time & Resources	Federal/ State Grants; Local Funds	2022-2027
70.0008	Develop and implement a public awareness campaign encouraging residents to develop family disaster plans	Proposed	City of South Fulton Emergency Management; City of South Fulton Administration and Departments (Public Works, Police, Fire, etc.)	All Hazards	Staff Time & Resources	Federal/ State Grants; Local Funds	2022-2027

Summary: The City of South Fulton identified a total of 8 mitigation actions (all are new/proposed) for the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan.

Table114: Identified Mitigation Actions (2022-2027), Union City

Identified Mitigation Actions (2022-2027), Union City							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
50.0005	Remediation of Upper Dixie Lake Dam (Comments: [from 2016 Plan] see Appendix E – Studies, Reports, and Supplementary Documents for detailed options)	Carryover from 2016 Plan Update; Ongoing	Union City Public Works Department	Flood, Severe Weather, Tropical Systems	$250,000 - $1,300,000	Local, State, and Federal Funding	2022-2027
50.0006	Replace early warning system (Comments: City currently employs a siren system, which is older and only reaches a small percent of the population. Need a more targeted system such as Code Red or National Oceanic and Atmospheric Administration (NOAA) weather radios. This will be implemented in collaboration with the recommendations of the evaluation as described in this project.)	Carryover from 2016 Plan Update	Union City Fire and Rescue	Severe Weather, Tornado	$75,000	HMGP; Local Funds	2022-2027
50.0008	Emergency back-up power for facilities with critical operations: City Hall, Public Services, and IT	Carryover from 2016 Plan Update; Ongoing	Union City Administration	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$62,000	Local Funds	2022-2027

Summary: Union City identified a total of 3 mitigation actions (all 3 are carried over from 2016) for the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan.

Table114: Identified Mitigation Actions (2022-2027), Fulton County

Identified Mitigation Actions (2022-2027), Fulton County							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
99.0006	Enact and enforce a storm water management ordinance that maintains pre-development runoff rates for major developments	Discontinue – No longer relevant	Planning and Developing Department	Flooding	$150,000	HMGP	2016
99.0013	Consider updating zoning regulations to require various open space and landscaping standards for land development proposals	Discontinue – No longer relevant	Planning and Developing Department	All Hazards	$200,000	HMGP	2016
99.0016	Encourage the relocation of existing utility lines underground, and consider local regulations to require placement of all new utility lines underground, were feasible	Discontinue – No longer relevant	Planning and Developing Department	All Hazards	$200,000-$1,000,000	HMGP	2016

Identified Mitigation Actions (2022-2027), Fulton County							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
99.0003	Increase participation in the NFIP's Community Rating System including interjurisdictional coordination to ensure maximum use of shared credit for eligible activities; may include bi-annual interjurisdictional meeting to review shared credit activities	Discontinue – No longer relevant	Planning and Development Department	Flooding	$200,000-$1,000,000	HMGP	2016
99.0039	Implement outreach campaign to disseminate maps to the public as the maps are updated over the next 18 months	Discontinue – No longer relevant	Planning and Development Department	All Hazards	$200,000-$1,000,000	HMGP	2016
99.0014	Continue to enforce subdivision construction standards for drainage improvements	Discontinue – No longer relevant	Planning and Development Department	Flooding; Severe Weather; Tropical Systems	$200,000-$1,000,000	HMGP	2016
99.0026	Install automatic icing indicators on critical bridges and overpasses	Discontinue – No longer relevant	Fulton County Public Works Department	Severe Winter Storms	$200,000-$1,000,000	HMGP	2016
99.0044	Continue to implement and enforce dam maintenance ordinances throughout all jurisdictions	Discontinue – No longer relevant	Fulton County Public Works Department	Dam Failure	Staff Time and Resources	HMGP	2016

Identified Mitigation Actions (2022-2027), Fulton County							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
99.0041	Continue to build out development of web-based GIS mapping that allows residents to research and view their floodplain status	In-Progress	Atlanta - Fulton County Emergency Management Agency (AFCEMA)/Department of Information Technology - GIS	All Hazards	County Staff Time	General Fund and Grants	2021-2026
99.0004	Train local flood plain managers through programs offered through the State and FEMA's training center	On-going / Carry over from 2016 HMP	Atlanta - Fulton County Emergency Management Agency (AFCEMA)	Flooding	Staff Time and Resources	County General Fund/Grants	2021-2026
99.0005	Participate in the "Turn Around Don't Drown" program by acquiring signs in known flash flood locations	On-going / Carry over from 2016 HMP	Atlanta - Fulton County Emergency Management Agency (AFCEMA); All City Public Works Department	Flooding	$25,000-$35,000	County General Fund/Grants	2021-2026
99.0011	Update comprehensive plans, short-term work program, and capital improvements program (6-20 years) for future growth and development	On-going / Carry over from 2016 HMP	Fulton County Department of Real Estate & Asset Management	All Hazards	Staff Time and Resources; Consulting fees $150,000	County General Fund/Grants	2021-2026

Identified Mitigation Actions (2022-2027), Fulton County							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
99.0012	Ensure that capital improvement plans include capital projects to implement the natural hazards element of the jurisdiction's comprehensive plan or projects identified in the Mitigation Strategy Section of this plan	On-going / Carry over from 2016 HMP	Atlanta-Fulton County Emergency Management Agency /Fulton County Department of Real Estate & Asset Management (DREAM)	All Hazards	Staff Time & Resources	County General Fund/Grants	2021-2026
99.0017	Encourage replacement of traffic signals at major or priority intersections with mast arm design with emergency power; coordinate with State Transportation agencies for state- owned roadways that impact local jurisdictions	On-going / Carry over from 2016 HMP	Public Works Department	Flooding; Severe Weather; Tropical Systems; Tornado; Severe Winter Weather	$30,000	County General Fund/Grants	2021-2026
99.0020	Maintain risk assessment data in GIS, including flood zones, tornado tracks, sinkhole threat areas, dam inundation areas, disaster events, and comprehensive inventory of critical facilities within all jurisdictions	On-going / Carry over from 2016 HMP	Atlanta - Fulton County Emergency Management Agency (AFCEMA)/GIS	All Hazards	Staff Time & Resources	County General Fund/Grants	2021-2026

Identified Mitigation Actions (2022-2027), Fulton County							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
99.0021	Integrate FEMA HAZUS-MH applications for hazard loss estimations within local GIS programs. Maintain up-to-date data within GIS to apply the full loss estimation capabilities of HAZUS	On-going / Carry over from 2016 HMP	Atlanta - Fulton County Emergency Management Agency (AFCEMA)/GIS	All Hazards	Staff Time & Resources	HMGP	2021-2026
99.0022	Work with DNR, NCRS, and local GIS departments to maintain inundation mapping downstream of dams	On-going / Carry over from 2016 HMP	Atlanta - Fulton County Emergency Management Agency (AFCEMA)/Fulton County GIS/All Jurisdictions	Dam Failure	Staff Time & Resources	County General Fund/Grants	2021-2026
99.0024	Installation of warning and notification systems	On-going / Carry over from 2016 HMP	Atlanta - Fulton County Emergency Management Agency (AFCEMA)	All Hazards	$200,000	HMGP	2021-2026
99.0025	Develop a countywide multi-jurisdictionally coordinated notification plan for alert and notification of hazardous (or potentially hazardous) events	On-going / Carry over from 2016 HMP	Atlanta - Fulton County Emergency Management Agency (AFCEMA) / All Jurisdictions	All Hazards	$200,000	HMGP; FMA; Local Funds	2021-2026

Identified Mitigation Actions (2022-2027), Fulton County							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
99.0027	Implement a voluntary program of flood protection and property acquisition and relocation for high-risk residences and repetitive loss properties. Survey property owners to determine interest and assess cost.	On-going / Carry over from 2016 HMP	Fulton County Department of Real Estate & Asset Management	Flooding	Staff Time and Resources	HMGP; FMA; Local Funds	2021-2026
99.0028	Coordinate and provide educational outreach on mitigation strategies the private sector can take to reduce or eliminate the impact of hazards of their services and infrastructure.	On-going / Carry over from 2016 HMP	Atlanta - Fulton County Emergency Management Agency (AFCEMA) / All Jurisdictions	All Hazards	Staff Time and Resources	HMGP; FMA; Local Funds	Ongoing, Continuous through the five-year plan cycle
99.0029	Support resiliency of the County's private sector through information sharing, partnership building, training and education on mitigation principles and the AFCEMA Hazard Mitigation Plan	On-going / Carry over from 2016 HMP	Atlanta - Fulton County Emergency Management Agency (AFCEMA)	All Hazards	Staff Time and Resources	HMGP; Local Funds	2021-2026

Identified Mitigation Actions (2022-2027), Fulton County							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
99.0030	Establish pre-arranged memoranda of understanding (MOU) for facility sharing following disaster, and other equipment sharing. Establish cooperative assistance agreements	On-going / Carry over from 2016 HMP	Atlanta - Fulton County Emergency Management Agency (AFCEMA)	Flooding; Severe Weather; Tropical Systems; Tornadoes	Staff Time and Resources	HMGP; Local Funds	2021-2026
99.0031	Develop and implement plans to prevent flooding of water and waste water facilities	On-going / Carry over from 2016 HMP	Fulton County Public Works Department	Flooding	Staff Time and Resources	HMGP; Local Funds	2021-2026
99.0032	Participation in the National Weather Service's annual Flood Awareness Week	On-going / Carry over from 2016 HMP	Atlanta - Fulton County Emergency Management Agency (AFCEMA)	Flooding	Staff Time and Resources	HMGP; Local Funds	2021-2026
99.0033	Participation in the National Weather Service's annual Winter Weather Awareness week	On-going / Carry over from 2016 HMP	Atlanta - Fulton County Emergency Management Agency (AFCEMA)	Severe Winter Storms	Staff Time and Resources	HMGP; Local Funds	2021-2026
99.0034	Continue to participate in the National Oceanic and Atmospheric Administration (NOAA) weather radio program to distribute weather radios to vulnerable populations and high congregate areas	On-going / Carry over from 2016 HMP	Atlanta - Fulton County Emergency Management Agency (AFCEMA)	Tornadoes; Severe Winter Weather; Severe Weather	$55,000	HMGP	2021-2026

Identified Mitigation Actions (2022-2027), Fulton County							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
99.0035	Sponsor educational programs for residents to provide instruction for accessing government websites for preparedness information	On-going / Carry over from 2016 HMP	Atlanta - Fulton County Emergency Management Agency (AFCEMA)	All Hazards (All Jurisdictions)	Staff Time and Resources	Staff Time and Resources	2021-2026
99.0036	Continue to make presentations in the school system to educate students regarding natural hazards and preparedness	On-going / Carry over from 2016 HMP	Atlanta - Fulton County Emergency Management Agency (AFCEMA)	All Hazards	Staff Time and Resources	HMGP; Local Funds	2021-2026
99.0038	Increase jurisdictional participation in annual dissemination of flooding information and awareness to all residents as well as flood plain information to people and businesses in the flood plain	On-going / Carry over from 2016 HMP	Atlanta - Fulton County Emergency Management Agency (AFCEMA)	Flooding	N/A	HMGP; FMA; Local Funds	2021-2026
99.0040	Increase participation by jurisdictions in the Storm Ready program to become Storm Ready Partners	On-going / Carry over from 2016 HMP	Atlanta - Fulton County Emergency Management Agency (AFCEMA)	Severe Weather; Tropical Systems; Flooding	Staff Time and Resources	HMGP; Local Funds	2021-2026

Identified Mitigation Actions (2022-2027), Fulton County							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
99.0043	Increase participation by jurisdictions to implement water restrictions and promote public education and awareness through rebate/voucher programs for low flow	On-going / Carry over from 2016 HMP	Fulton County Public Works Department	Drought	Staff Time and Resources	Partnerships with Private Sector	2021-2026
99.0044	Continue to implement ordinances and/or comprehensive planning policies prohibiting new development in the 100 year floodplain	On-going / Carry over from 2016 HMP	Fulton County Department of Real Estate & Asset Management	Flooding	Staff Time and Resources	County/City General Funds	2021-2026
99.0046	Procure and install battery energy storage and rainwater harvesting systems at two critical county facilities – Louise Watley Library at Southeast Atlanta and Neighborhood Union Health Center.	Proposed	Fulton County Department of Real Estate & Asset Management	Severe Weather; Severe Winter Weather; Tornado; Tropical Systems; Flooding	$167,700	BRIC; HMGP	1-4 years
99.0047	Annual Review and Update of Continuity of Operations (COOP) Plan	Proposed	Atlanta -Fulton County Emergency Management Agency; Local Jurisdictions	All Hazards	Staff Time and Resources	Federal and State Grants; City/County General Fund	Ongoing, Continuous through the five-year plan cycle. Will be conducted annually beginning July 2023.

Identified Mitigation Actions (2022-2027), Fulton County							
Project Number	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**
99.0048	Annual Review of Hazard Mitigation Plan	Proposed	Atlanta -Fulton County Emergency Management Agency; Local Jurisdictions	All Hazards	Staff Time and Resources	Federal and State Grants; City/County General Fund	Ongoing, Continuous through the five-year plan cycle. Will be conducted annually beginning July 2023.
99.0049	Annual Review and Update of Local Emergency Operations Plan (LEOP)	Proposed	Atlanta -Fulton County Emergency Management Agency; Local Jurisdictions	All Hazards	Staff Time and Resources	Federal and State Grants; City/County General Fund	Ongoing, Continuous through the five-year plan cycle. Will be conducted annually beginning July 2023.

Summary: Fulton County identified a total of 37 mitigation actions (8 discontinue from 2016, 25 carry over from 2016, and 4 new/proposed) for the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan.

5.4 – Mitigation Project Evaluations & Prioritization

5.4.1 – STAPLE+E

Fulton County's primary hazard risks and thus, priorities, are the natural hazards of Drought, Earthquake, Extreme Heat, Flood, Geological Hazards, Severe Weather (including Thunderstorm Wind, Lightning, and Hail), Severe Winter Weather, Tornado, Tropical Systems, and Wildfire/Wildland Urban Interface Fire, as well as the human-caused hazard of Dam Failure.

A composite evaluation matrix was used to prioritize the planning area's mitigation projects and activities. The evaluation was conducted for each mitigation project and activity for each participating jurisdiction. All priorities were re-assessed using STAPLE+E for this plan update to ensure that the projects reflect current priorities. The composite evaluation matrix is comprised of the three factors detailed below.

The first factor is the STAPLE+E evaluation which is best for measuring feasibility and ease of implementation. The tables in Section 5.4.1 provide the STAPLE+E evaluation criteria and the evaluation itself.

The second factor is the effectiveness of the mitigation project. How well does it mitigate the impact of a particular hazard? This is determined by its ability to protect citizens, property, and systems. For instance, wires installed to pin down trees and other objects will reduce their ability to become uprooted or take flight during hazards of high wind but are not as effective at reducing impacts from tornadoes or strong winds as are properly constructed and reinforced buildings. This factor is rated as: Low = 0.5, Medium = 1, and High = 1.5.

The third factor is a hazard risk-based evaluation. It draws on the hazard risk summary found in Section 4.3 of this plan. Each risk rating is assigned a value based on the assessment (None = 0, Low = 5, Medium = 10, and High = 15).

$$(HRT) = (HR1 + HR2 + HRn)$$

The total evaluation score is based on the hazard risk total multiplied by the effectiveness factor, added to the STAPLE+E score.

Hazard Risk Total (HRT): The sum of values (low through high) of each hazard the project is designed to mitigate.

Mitigation Project Effectiveness (MPE): A multiplier based on the project's effectiveness to mitigate against a chosen hazard.

STAPLE+E Evaluation: A raw score comprised of positive and negative feasibility.

$$(Priority) = (STAPLE+E) + (MPE * HRT)$$

Upon completing the evaluations, a composite score is calculated and prioritized based on their total score (Low = 0 – 25, Medium = 26 – 50, High = > 50).

Table 98: STAPLE+E Criteria

STAPLE+E Criteria	
Evaluation Category	**Sources of Information**
Social	Mitigation actions are acceptable to the community if they do not adversely affect a particular segment of the population, do not cause relocation of lower income people, and if they are compatible with the communities' social and cultural values.
Technical	Mitigation actions are technically most effective if they provide long-term reduction of losses and have minimal secondary adverse impacts.
Administrative	Mitigation actions are easier to implement if the jurisdiction has the necessary staffing and funding.
Political	Mitigation actions can truly be successful if all stakeholders have been offered an opportunity to participate in the planning process and if there is public support for the action.
Legal	It is critical that the jurisdiction or implementing agency have the legal authority to implement and enforce a mitigation action.
Economic	Budget constraints can significantly deter the implementation of mitigation actions. Hence, it is important to evaluate whether an action is cost-effective, as determined by a cost-benefit review, and possible to fund.
Environmental	Sustainable mitigation actions that do not have an adverse effect on the environment, that comply with Federal, State, and local environmental regulations, and that are consistent with the community's environmental goals, have mitigation benefits while being environmentally sound.

Table 99: Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
01.0002	Acquire approximately 15 homes in the Mayfield Circle/Maple Lane area near Foe Killer Creek	Alpharetta	Flood, Severe Weather, Tropical Systems	Medium 31.5
01.0004	Complete Hazus-MH study of natural hazard impacts on the city	Alpharetta	All Hazards	Low 21
01.0005	Outreach education (e.g., letters, information packets) to all parcels impacted by SFHA/new RiskMaps (Comments: This project can only be completed after the parcel maps are updated.)	Alpharetta	Flood	Low 21
01.0006	Evaluate benefits of joining CRS with impact of new FEMA maps (Comments: This project can only be completed after the parcel maps are updated.)	Alpharetta	Flood	Low 13.5
01.0007	Design and install master detention facility for water quality and flood control at Wills Park	Alpharetta	Flood	Low 22
01.0008	Foe Killer Creek – Design and implementation of projects to reduce elevated levels of bacteria	Alpharetta	Flood	Low 23
01.0010	Perform stream stabilization and repair erosion along stream corridors	Alpharetta	Flood	Low 22
01.0011	Stream bank restoration Big Creek at Webb Bridge	Alpharetta	Flood	Low 22
01.0012	Stream bank restoration Big Creek at Haynes Bridge Road	Alpharetta	Flood	Low 22
01.0013	Stream bank restoration Foe Killer Creek – Squirrel Run to Rucker Road	Alpharetta	Flood	Low 22
01.0014	Reinforce old culverts with skip line	Alpharetta	Flood	Low 22
01.0015	Improve stormwater drainage at Church Street	Alpharetta	Flood	Low 22
01.0016	Improve stormwater drainage at Highway 9 at Canton Street	Alpharetta	Flood, Severe Weather, Tropical Systems	Low 22

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
01.0017	Improve stormwater drainage at Southlake Drive culvert (Comments: Replace triple 4' CMP culvert to handle capacity; this area does not handle the 2-year flow) (Note: From 2016 plan but no update provided for 2022 update.)	Alpharetta	Flood	Low 22
01.0018	Improve stormwater drainage at Cape York Trace at Big Creek Trib (Comments: Replace single 4' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22
01.0019	Improve stormwater drainage at Glenn Knoll Court at Long Indian Creek Trib (Comments: Replace triple 2' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22
01.0020	Improve stormwater drainage at Mid Broadwell at Foe Killer Creek Trib (Comments: Replace single 4.5' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22
01.0021	Improve stormwater drainage at Newport Bay Passage at Caney Creek Trib (Comments: Replace single 3.5' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22
01.0022	Improve stormwater drainage at Webb Bridge Court at Big Creek Trib (Comments: Replace double 8'x 6' and single 4.35'x 6;5' box culverts to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22
01.0023	Improve stormwater drainage at McGinnis Ferry Road at Big Creek Trib (Comments: Replace single 6' RCP culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22
01.0024	Improve stormwater drainage at Pine Grove Drive at Big Creek Trib (Comments: Replace single 4' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22
01.0025	Improve stormwater drainage at Arrowood Lane at Foe Killer Creek Trib (Comments: Replace single 6' RCP culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22
01.0026	Improve stormwater drainage at Willis Road at Foe Killer Creek Trib (Comments: Replace single 6' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22
01.0027	Improve stormwater drainage at Northwinds Parkway at Big Creek Trib (Comments: Replace double 5' RCP culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22
01.0028	Improve stormwater drainage at Academy Street at Big Creek Trib (Comments: Replace single 9'x6' box culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
01.0029	Improve stormwater drainage at Rock Mill Road at Big Creek Trib (Comments: Replace double 5'x5' box culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22
01.0030	Improve stormwater drainage at North Park Road at Cooper Sandy Creek (Comments: Replace single 4' RCP box culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22
01.0031	Improve stormwater drainage at culverts without capacity to handle the 5-year storm (Comments: The City has identified seven locations.)	Alpharetta	Flood	Low 22
01.0032	Improve stormwater drainage at culverts without capacity to handle the 10-year storm (Comments: The City has identified nine locations.)	Alpharetta	Flood	Low 22
01.0033	Improve stormwater drainage at culverts without capacity to handle the 25-year storm (Comments: The City has identified ten locations.)	Alpharetta	Flood	Low 13.5
01.0034	Improve stormwater drainage at culverts without the capacity to handle the 50-year storm (Comments: The City has identified four locations.)	Alpharetta	Flood	Low 22
01.0035	Detour roadway map for flood evacuation plans	Alpharetta	Flood	Low 13.5
01.0036	Install traffic warning signs on all road crossings that are submerged during a 25-year flood or greater	Alpharetta	Flood	Low 13.5
01.0037	911 – Phone call warning alert system	Alpharetta	All Hazards	Low 22
01.0038	Variable message signage – for use during emergency situations that can be updated from the command center	Alpharetta	All Hazards	Low 14.5
01.0040	Replace early outdoor warning systems	Alpharetta	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Low 21
01.0042	Install built-in surge protection at public safety buildings	Alpharetta	All Hazards	Low 22
01.0045	Purchase cones and brigades for pedestrian traffic on greenways	Alpharetta	Flood	Low 13.5

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
01.0049	Implement dam inspection on Lake Windward and upgrade dam components and safety measures	Alpharetta	Dam Failure, Flood	Low 21
01.0050	Stream gauge with flow meter; rain gauge and stream height for Foe Killer Creek	Alpharetta	Flood	Low 21
1.0051	Maintain City GIS system with accurate parcel data	Alpharetta	All Hazards	Low 19.5
1.0052	Purchase tactical mobile dispatch unit	Alpharetta	All Hazards	Low 18.5
1.0053	Update early warning software system	Alpharetta	All Hazards	Low 13.5
1.0054	Replace chain saws and blades for removal of trees during an emergency	Alpharetta	All Hazards	Low 13.5
1.0055	Replace rope and technical rescue equipment	Alpharetta	All Hazards	Low 13.5
05.0023	Improve storm water drainage capacity and design in the area of Piedmont and Auburn Ave to allow better tie into the Claire Creek overflow (Comments: This is an area of identified need as part of the Combined Sewer Overflow (CSO) Remediation Plan, which can be found online at http://www.cleanwateratlanta.org).	Atlanta	Flood	Medium 32
05.0024	Station 21: Harden to improve wind and impact resistance; increase generator capacity (Comments: This is a heavy rescue special operations station; houses rescue boat, collapse rescue equipment, trench rescue equipment, and technical rescue equipment. ALS engine is stationed at this location. GSAR is housed at this station. Station has a large amount of plate glass, including bay doors. Bay doors are older and are not up to current code.)	Atlanta	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 39.5
05.0025	Station 8: Harden to improve wind and impact resistance; increase generator capacity (Comments: This is the Hazardous Materials station and contains HazMat-related personnel and equipment.)	Atlanta	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 39.5

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
05.0026	Station 1: Harden to improve wind and impact resistance; increase generator capacity (Comments: This station is the Decontamination Station and houses decontamination equipment. It also houses CBRNE equipment and serves as the backup station to the HazMat team in Station 8.)	Atlanta	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 39.5
05.0027	Stations 9, 20, 22 and 25: Harden to improve wind and impact resistance; increase generator capacity	Atlanta	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 39.5
05.0028	Improve wind resistance of roof to the Maddox Park building which houses fleet operations; roof is not wind-rated (Comments: OEAM/DPR assessing the roof at Maddox Park building to determine if the roof will be replaced; numerous repairs were made in FY 12, 13, and 14.)	Atlanta	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 38.5
05.0029	R.M. Clayton Wastewater Treatment Plant – Flood-proof the plant through raising the height of the banks. (Comments: This plant flooded from Proctor Creek during the floods of Sept. 2009. It has received some PDM funds for repairs, but further mitigation is needed to improve flood-proofing of this facility. This facility serves East Point, College Park, and Hapeville. The plant cannot treat sewage and is causing environmental problems in West Point Lake. It also affects the communities' ability to draw water.)	Atlanta	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 32
05.0031	Acquire generator for emergency power for Fire Department Headquarters Building	Atlanta	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 26
05.0032	Retrofit old window glass at the Fire Department Headquarters Building for increased impact resistance	Atlanta	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 32.5

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
05.0033	Acquire generator for emergency power for 40 Fire Stations	Atlanta	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 33.5
05.0034	Retrofit bay doors of [all 40] fire stations	Atlanta	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 33.5
05.0035	Retrofit all [40] fire stations with lightning rods	Atlanta	Severe Weather	Medium 26
05.0036	Place [80] warning sirens in residential areas	Atlanta	Severe Weather	Medium 30
05.0037	Acquire generator for emergency power for [15] police facilities (Comments: Plan for immediate smaller rollout of the six (6) main precincts.)	Atlanta	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 31.5
05.0038	Relocate SWAT Offices & Storage, Classrooms, Ranger Offices & Storage, Gym, Explosive Bldg., and Equipment Facility at 1500 Key Rd outside of Floodplain	Atlanta	Flood	Medium 32.5
05.0039	Relocate Firing Range Facility at 1500 Key Rd outside of floodplain	Atlanta	Flood	Medium 32.5
05.0040	Evaluate City of Atlanta Police facility at 1500 Key Road for flood potential [Revised from 2016 Fulton County MJHMP, which read “Site at 1500 Key Road includes SWAT, flooding on the road severely impacts ability to respond; multiple pieces of critical tactical equipment are located there as well as police firing range”.]	Atlanta	Flood, Severe Weather, Severe Winter Weather, Tropical Systems	Low 17.5
05.0041	Install traffic warning signs on/at all road crossings at creeks and streams that are submerged during a 100-yr and 500-yr flood (or greater); approximately [80+] locations [at $600 per location)	Atlanta	Flood	Medium 30

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
05.0042	Install generators at Public Works facilities involving 25 sites (Fueling Operations for the City, Operations, and Vehicle Maintenance)	Atlanta	Flood, Severe Weather	Medium 38.5
05.0078	Raise levee and other work along Chattahoochee River and Peachtree Creek to prevent flood water from the Chattahoochee River raising into the R.M. Clayton Water Reclamation	Atlanta	Flood	Medium 39.5
05.0079	Acquire flood-prone properties located in the FEMA-mapped floodplains throughout the City of Atlanta (Comments: 1 was remaining to acquire in 2016.)	Atlanta	Flood, Severe Weather, Tropical Systems	Medium 39.5
05.0081	Educate the public about the risk of flooding and the importance of obtaining flood insurance (e.g., fliers, newsletters, information on DWM website); continue to update website as needed	Atlanta	Flood, Severe Weather, Tropical Systems	Medium 32
05.0082	Continue program for natural/ vegetative stabilization of stream banks (average 1300 feet per year) to secure infrastructure	Atlanta	Flood, Severe Weather, Tropical Systems	Medium 32
05.0083	Relocate Parks NE and SE District Maintenance Depots (Comments: Additional space for welding and small equipment; looking for opportunity to aggregate both compounds together with fleet (recreation). Price could be $1.5 million for land and $3 million for construction of new site. DPR is looking for alternative sites that may allow for aggregating maintenance and service sites.)	Atlanta	Flood	Medium 39.5
05.0084	Tree Maintenance Program in Hazard and Urbanized Areas (Comments: Preventative maintenance plan for ROW could require significantly higher funding if implemented citywide. Emergency vehicles for Forestry could be purchased – knuckle boom - $200,000.)	Atlanta	Drought, Extreme Heat, Severe Weather	Low 24.5
05.0085	Reconstruct roofs and generators on shelter facilities (Comments: Generators located at Ben Hill, Old Adamsville. All need upgrades to produce full-service power restoration; generators needed at additional sites: Central, Rosel Fann, Bessie Branham, Peachtree Hills; $7,500,000+.)	Atlanta	All Hazards	Medium 32
05.0087	Upgrade outdoor siren warning system speakers	Atlanta	All Hazards	Low 23.5
05.0088	Generators to supply power to fueling stations	Atlanta	All Hazards	Medium 38.5

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
05.0089	Installation of above ground fuel storage tanks	Atlanta	All Hazards	Medium 32
05.0090	Potable Clean Water Conveyance/ Storage	Atlanta	All Hazards	Medium 31
05.0091	High Impact Window Glass/treatment	Atlanta	Severe Weather, Tornado, Tropical Systems	Medium 31
05.0092	Generators in support of Schools/Buildings as Shelters	Atlanta	All Hazards	Medium 39.5
05.0093	Install lightning detection equipment/ software for campus buildings and athletic fields	Atlanta	Severe Weather, Tornado, Tropical Systems	Low 24.5
05.0094	Install tornado sirens throughout the Downtown Atlanta campus	Atlanta	Severe Weather, Tornado, Tropical Systems	Medium 32
05.0095	Forestry Compound Renovations	Atlanta	Extreme Heat, Severe Weather, Severe Winter Weather (Any hazard that threatens loss of power.)	Low 24.5
05.0096	Ben Hill Generator	Atlanta	Extreme Heat, Severe Weather, Severe Winter Weather (Any hazard that threatens loss of power.)	Medium 38.5
05.0097	Emergency generators for Old Adamsville, Rosel Fann, and other recreation centers used as warming stations	Atlanta	Extreme Heat, Severe Weather, Severe Winter Weather (Any hazard that threatens loss of power.)	Medium 38.5

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
05.0098	Watershed Improvement Projects	Atlanta	Flood	Medium 31
05.0099	Purchase and install back-up 250kw gas generator for IT Server Room	Atlanta	Severe Winter Weather (Any hazard that threatens loss of power.)	Medium 39.5
05.0100	Remove debris, stabilize piers and embankment, repair damage Fair Drive at South River Trib. Bridge ID: 121-0037-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0101	Remove debris, stabilize piers and embankment, repair damage Piedmont Ave. at Clear Creek. Bridge ID: 121-0038-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0102	Remove debris, stabilize piers and embankment, repair damage Cheshire Bridge Rd. at CSX Railroad (639814N). Bridge ID: 121-0038-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0103	Remove debris, stabilize piers and embankment, repair damage Dodson Dr. at South Utoy Creek. Bridge ID: 121-0319-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0104	Remove debris, stabilize piers and embankment, repair damage Moores Mill Rd. at Peachtree Creek. Bridge ID: 121-0325-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
05.0105	Remove debris, stabilize piers and embankment, repair damage Paces Ferry Rd. at Nancy Creek. Bridge ID: 121-0329-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0106	Remove debris, stabilize piers and embankment, repair damage Ben E. Mays Rd. at North Utoy Creek. Bridge ID: 121-0338-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0107	Remove debris, stabilize piers and embankment, repair damage Lynhurst Dr. at North Utoy Creek. Bridge ID: 121-0351-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0108	Remove debris, stabilize piers and embankment, repair damage Welcome All Rd. at Camp Creek. Bridge ID: 121-0362-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0109	Remove debris, stabilize piers and embankment, repair damage Macon Dr. at South River. Bridge ID: 121-0377-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0110	Remove debris, stabilize piers and embankment, repair damage Forrest Park Rd. at South River. Bridge ID: 121-0379-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
05.0112	Remove debris, stabilize piers and embankment, repair damage Chattahoochee Ave. at Peachtree Creek Trib. Bridge ID: 121-0397-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0113	Remove debris, stabilize piers and embankment, repair damage Bohler Road at Peachtree Creek. Bridge ID: 121-0398-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0114	Remove debris, stabilize piers and embankment, repair damage Howell Mill Rd. at Peachtree Creek. Bridge ID: 121-0403-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0115	Remove debris, stabilize piers and embankment, repair damage Collier Rd. at Peachtree Creek Trib. Bridge ID: 121-0435-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0116	Remove debris, stabilize piers and embankment, repair damage DeFoors Ferry Rd. at Peachtree Creek Trib. Bridge ID: 121-0438-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0117	Remove debris, stabilize piers and embankment, repair damage W. Paces Ferry Rd. at Nancy Creek. Bridge ID: 121-0440-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
05.0118	Remove debris, stabilize piers and embankment, repair damage Northside Dr. at Nancy Creek. Bridge ID: 121-0442-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0119	Remove debris, stabilize piers and embankment, repair damage Powers Ferry Rd. at Nancy Creek. Bridge ID: 121-0448-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0120	Remove debris, stabilize piers and embankment, repair damage Hollywood Rd. at Proctor Creek Trib. Bridge ID: 121-0574-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0121	Remove debris, stabilize piers and embankment, repair damage Stone Hogan Conn. At North Fork Camp Creek. Bridge ID: 121-0575-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0122	Remove debris, stabilize piers and embankment, repair damage Pryor Rd. at South River Trib. Bridge ID: 121-0581-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0123	Remove debris, stabilize piers and embankment, repair damage Claire Dr. at South River Trib. Bridge ID: 121-0582-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
05.0124	Remove debris, stabilize piers and embankment, repair damage Bolton Rd. at Whetstone Creek. Bridge ID: 121-0683-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0125	Remove debris, stabilize piers and embankment, repair damage Randall Mill Rd. at Nancy Creek. Bridge ID: 121-5178-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0126	Marietta Blvd. Bridge – Failed section of deck with through hole, exposed rebar, failed expansion joint	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0127	Alston Bridge – Severe undermining of the culvert walls, roadway cracks, cracks on culvert wall CORRECTIVE ACTION: Repair cracks on culvert wall with high strength grout, repair settlement on culvert foundation, mill and repave roadway	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0128	MLK Drive Bridge – Multiple roadway spalls with exposed rebar, failed expansion joints CORECTIVE ACTION: Repair deck with concrete at all failing spots; repair extension joints in kind.	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
05.0129	Centennial Park Bridge – Multiple roadway spalls with exposed rebar, failed expansion joints. (The corrective action is to repair deck with concrete at all failing spots. Repair extension joints in kind.)	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
65.0001	Develop Storm Water Plan	Chattahoochee Hills	Severe Weather, Severe Winter Weather, Tropical Systems	Medium 35.5
65.0002	Harden/retrofit City Hall [for EOC and daily operations] (Comments: Generator acquired, and partial cost study done. Surplus/donation of equipment.)	Chattahoochee Hills	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 34.5
65.0003	Improve storm water run-off on Cap's Ferry (Comments: Developing plan utilizing outside contractor/advisor during 2016. Due to the proximity to the Chattahoochee River, the creek backs up and floods the road which, in turn, cuts off access to three counties.)	Chattahoochee Hills	Flood, Severe Weather, Tropical Systems	Medium 32
65.0004	Harden fire station with impact-resistant glass, garage doors and roof; upgrade station generator (Comments: Generator acquired; surplus/donation of equipment.)	Chattahoochee Hills	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 34.5
65.0005	Replacement of Garrett's Ferry Bridge (Comments: Engineering study already completed; research federal and state funding and options for replacement.)	Chattahoochee Hills	Severe Weather, Tornado, Tropical Systems	Low 22
65.0006	Research/publish mitigation "opportunities" for citizen (individual/group) commitment (Comments: Identify/publish information about property insurance savings to property/home/business owners to encourage individual/group participation in mitigation and support for public safety services/needs.)	Chattahoochee Hills	All Hazards	Low 13.5
15.0001	Replace 3' box culvert off of Camp Creek Parkway with a more open design (Comments: Flooding of Camp Creek Parkway causes traffic problems in College Park. Long, low-slope trash rack would be a more cost-effective solution to the problem.)	College Park	Flood, Severe Weather, Tropical Systems	Medium 47
15.0002	Storm sewer improvement project on Walker Avenue/Mercer Avenue	College Park	Flood	Medium 27

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
15.0002 [# duplicated in 2016 Plan)	Storm sewer improvement project Cambridge Avenue (designed), Lyle/Vesta (not designed)	College Park	Flood	Low 27
15.0003	Increase flow-through capacity of box culvert on Park Terrace (Comments: During heavy rains, the flow-through capacity is insufficient causing debris to accumulate and block water flow.)	College Park	Flood, Severe Weather, Tropical Systems	Medium 26
15.0004	Increase flow-through capacity of box culvert at the intersection of Harris and Rugby Avenue (Comments: During heavy rains, the flow-through capacity is insufficient, causing debris to accumulate and block water flow. Trash rack could be built upstream at Lyle Avenue where nearest house is at a higher elevation.)	College Park	Flood, Severe Weather, Tropical Systems	Medium 28
15.0005	Replace traffic lights with more weather-resistant mast arms	College Park	Severe Weather, Tornado, Tropical Systems	Medium 42
15.0006	Retrofit the roof at the Power Department Building; replace generator (Comments: This building houses the City-owned power utility as well as the water and sewer department and the warehouse. The current generator is small and underpowered for current needs. The computer system that is housed at this location runs all their system data.)	College Park	Severe Weather, Tornado, Severe Winter Storm, Tropical Systems	Medium 43
15.0007	Install Fur Creek structure at Herschel Park Drive to regulate flow	College Park	Flood	Medium 43
15.0008 (refer to 15.0005)	Construct new detention pond to regulate southwest branch of Fur Creek	College Park	Flood	Medium 43
15.0014	Improve Embassy Drive, T. Owen Smith Connector, Best Road, and Sullivan Road stormwater control by installing trash racks	College Park	Flood	Medium 26
15.0015	Replace 48” CMP with 7’ by 7’ culvert box to improve capacity of Janice Drive storm drainage	College Park	Flood	Low 25
N/A	Increase flow-through capacity of box culvert on Lyle Road	College Park	Flood	Medium 28

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
N/A	Storm Sewer improvement project Virginia Avenue (undesigned) – non-creek	College Park	Flood, Severe Weather, Tropical Systems	Medium 43
N/A	Storm Sewer improvement project Best Road (undesigned)	College Park	Flood	Medium 28
N/A	Storm Sewer improvement project Sullivan Road. (Comments: Flow study is required.)	College Park	Flood	Low 22
N/A	Storm Sewer improvement project Janice Drive (undesigned)	College Park	Flood	Medium 27
20.0001	Coordinate with DOT regarding improved conveyance capacity and drainage on Camp Creek Pkwy between Washington Rd and Desert Dr (Comments: DOT is preparing to widen Camp Creek and it owns the draining infrastructure; however, there are design impacts that may affect the City that need to be coordinated.)	East Point	Flood, Severe Weather, Tropical Systems	Low 24
20.0002	Improve drainage capacity on Norman Berry Rd	East Point	Flood, Severe Weather, Tropical Systems	Low 16.5
20.0003	Improve drainage design in the area of Martin St and Norman Berry due to insufficient infrastructure capacity (Comments: This area collects from 3 or 4 different points that drain into one location. Either a larger drain or rerouting of draining points to multiple locations are needed.)	East Point	Flood, Severe Weather, Tropical Systems	Low 15
20.0004	Harden City EOC (2727 East Point St) by adding more impact-resistant glass	East Point	Severe Weather, Tornado, Tropical Systems	Medium 31.5
20.0005	Drainage improvements in the Sun Valley/Camp Creek Watershed area	East Point	Flood	Low 17.5
20.0006	Drainage improvements at Lester St and Spring Avenue in the Utoy Watershed	East Point	Flood	Low 22.5
20.0007	Drainage improvements at Randall St and East Forrest Ave	East Point	Flood	Medium 31
20.0009	Drainage improvements in the Jim's Creek area	East Point	Flood	Low 24

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
20.0010	North Martin St regional storage improvement	East Point	Flood	Low 16.5
20.0011	Calhoun Ave pipe replacement (Comments: There is major road flooding; regional improvements for downstream flooding problems.)	East Point	Flood	Low 24
20.0012	South River unnamed tributary 3 improvements	East Point	Flood	Low 16.5
20.0013	Pipe replacement on Norman Berry Dr near Maria Head Terrace	East Point	Flood	Low 24
20.0014	Georgia Power Pond (Comments: There is secondary road flooding; alternate access to residences; coordinate with Meadow Lark improvements. The detention pond suggested is within the area of a Georgia Power easement in the Meadowlark Drive community. There is no direct association with Georgia Power Company project.)	East Point	Flood	Low 24
20.0015	Meadow Lark Lane Pipe Replacement	East Point	Flood	Low 24
20.0016	Grove Ave Pipe Replacement (Comments: There is secondary road flooding; alternate access to residences.)	East Point	Flood	Low 23
20.0017	Promote public education of water-saving measures (Comments: Rebates/vouchers for low-flow water fixtures, household water savings tips, etc.)	East Point	Drought	Low 23.5
20.0018	Implement water restrictions, prioritizing water use	East Point	Drought	Low 23.5
20.0019	Develop Emergency Notification Outreach program for senior population	East Point	All Hazards	Low 16.5
20.0020	Annual update and review of communication plan (CodeRED)	East Point	All Hazards	Low 16.5
N/A	Improve drainage capacity in the 800 block of Cleveland Avenue; culvert improvement complete w/erosion improvement @ 871 Cleveland parking lot area (local funds); monitor and evaluate stream flow @ location mentioned	East Point	Flood	Medium 32
25.0001	Improve drainage at the bridge at Rivertown Road and Malone by adding drain to tie into the storm water drainage (debris backs up under the bridge at Malone)	Fairburn	Flood	Low 22

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
25.0002	Acquire the upstream property (currently privately owned) on Rivertown Road to provide City access to clean and prevent debris in stream	Fairburn	Flood	Medium 41.5
25.0003	Acquire privately owned agriculture land to prevent further development that is consistent with current land use policies (Acquisition would be used to promote less dense land usage and expand nature preserve, which is consistent with the natural conservation projects already being implemented in the area.)	Fairburn	All Hazards	Medium 41.5
30.0005	Revise site plan review process to ensure that site plan review is part of the interdepartmental plan review process	Hapeville	All Hazard	Medium 27
30.0006	Replace current fire station that was built in the 1940's	Hapeville	Wildfire	Medium 26
30.0007	Replace current fire station that was built in the 1960's; also, possibly add a training tower	Hapeville	Wildfire	Medium 28
30.0008	Replace current administrative offices (a house that was built in 1924); also, look at putting in a conference/training room that could double as EOC	Hapeville	All Hazards	Medium 28
02.0003	Debris Removal Contract (Comments: Johns Creek is looking to establish a pre-event contract for disaster debris removal to include haulers, reduction, and site monitors)	Johns Creek	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 26
02.0004	Require mandatory water conservation measures during drought emergencies. (Comments: Johns Creek will adopt ordinances specified by Fulton County to prioritize or control water use, particularly for emergency situations like firefighting and develop an ordinance to restrict the use of public water resources for non-essential usage, such as landscaping, washing cars, filling swimming pools, etc.)	Johns Creek	Drought	Low 25
02.0005	Create a program encouraging to take water-saving measures. (Comments: Johns Creek will encourage citizens to: install low-flow water saving showerheads and toilets, turn water flow off while brushing teeth or during other cleaning activities, adjust sprinklers to water the lawn and not the sidewalk or street, run the dishwasher and washing machine only when they are full, check for leaks in plumping or dripping faucets, install rain-capturing devices for irrigation and encourage the installation of graywater systems in homes to encourage water reuse.)	Johns Creek	Drought	Low 25

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
02.00056	Create the City flood plan	Johns Creek	Flood	Medium 28
02.0007	Update dam in the City of Johns Creek	Johns Creek	Flood	Medium 31.5
02.0008	Create an evacuation plan for senior living facilities in Johns Creek	Johns Creek	All Hazards	Low 25
56.0002	Continue development of GIS web mapping project to allow for real-time information of road and other hazard areas to be avoided	Milton	All Hazards	x
56.0003	Develop campaign strategy to increase participation in Nixle notification program	Milton	All Hazards	Low 17.5
56.0004	Replace a malfunctioning 25-year-old generator at Station 43/alternate EOC site	Milton	Severe Weather, Tropical Systems, Flood, Severe Winter Weather	Low 23.5
56.0005	Purchase a generator for Public Works Department Building	Milton	Flood, Severe Weather, Severe Winter Weather, Tropical Systems	Medium 34.5
56.0006	Test/improve LEOP and COOP plans	Milton	All Hazards	Low 17.5
N/A	Replace current administrative offices (a house that was built in 1924); also, look at putting in a conference/training room that could double as EOC	Milton	All Hazards	Low 13.5
N/A	Emergency Action Plans for dam safety to prepare public safety and public works personnel in the event of a dam failure. (This includes 18 dams, including at least 4 Category 1 dams.)	Milton	Dam Failure	Low 24.5
35.0001	Convert open storm water drainage ditches to underground piping system in areas were the ditching system passes the roadway (Comments: City has open ditch drainage system which causes problems in heavy rain events due to debris in the ditches. When the ditches get clogged, the water overflows onto the road and drivers cannot see where edge of road/ditch is.)	Mountain Park	Flood, Severe Weather, Tropical Systems	Low 20.5

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
35.0002	Improve storm water drainage ditches in areas that do not cross roadways to increase drainage system capacity	Mountain Park	Flood, Severe Weather, Tropical Systems	Medium 26
35.0004	Install surge protection equipment and measures for the EOC/Fire Station	Mountain Park	Severe Weather	Medium 26
35.0005	Flood-proof Fire Station including raising generators and other mechanicals, installing drainage pumps, waterproofing foundation, and sealing foundation walls	Mountain Park	Flood, Severe Weather, Tropical Systems	Medium 26
[No # assigned in 2016 Plan]	Acquire property to relocate flood-prone Fire Station (Comments: This is a multi-purpose building that also functions as the City's EOC and designated special needs shelter.)	Mountain Park	Flood, Severe Weather, Tropical Systems	Medium 32.5
35.0006	Enhance physical protection of City Hall for increased high-wind resistance	Mountain Park	Severe Weather, Tornado, Tropical Systems	Medium 30.5
35.0007	Acquire property at corner of Cardinal Rd and Mountain Park Rd to relocate the City Works Building	Mountain Park	Flood, Severe Weather, Severe Winter Weather, Wildfire/Wildland Urban Interface Fire	Medium 31.5
35.0008	Improve capacity of Lake Garrett by dredging accumulated sedimentation	Mountain Park	Flood, Severe Weather, Tropical Systems	Medium 26
35.0009	Improve capacity of Lake Cherful by dredging accumulated sedimentation	Mountain Park	Flood, Severe Weather, Severe Winter Weather, Tropical Systems	Medium 26
35.0010	Harden spillway structure between Lake Cherful and Lake Garrett	Mountain Park	Flood, Severe Weather, Tropical Systems	Medium 26

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
99.0011	Rehabilitate the flood plain on Oakhaven Dr. through acquisition of 10 structures in the flood plain; improve drainage in the area (Comments: Area is in a flood plain. There is repeated flooding that affects homes and the roadway; have had numerous rescues due to low-lying area. Too much water comes into area that cannot be dispersed.)	Mountain Park	Flood, Severe Weather, Tropical Systems	Medium 33.5
40.0001	Acquire generator for emergency power for Fire Department Headquarters Building	Palmetto	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 28
40.0002	Retrofit old window glass at the Fire Department Headquarters building for increased impact resistance	Palmetto	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 35.5
40.0003	Acquire generator for emergency power for Fire Station	Palmetto	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 28
40.0004	Retrofit bay doors of Fire Station (Comments: Bay doors are over 40 years old and of residential grade quality. They are of insufficient wind loading capacity and impact resistance.)	Palmetto	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 35.5
40.0005	Retrofit current flat roof of City Hall for improved wind loading capacity	Palmetto	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 35.5
40.0006	Acquire generator for emergency power for Police Station	Palmetto	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Low 20.5

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
40.0007	Retrofit Police Station for improved wind loading capacity	Palmetto	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 28
40.0008	Harden Community Center, which functions as a first responder shelter; reinforce roof for wind loading capacity as well replace windows for wind resistance	Palmetto	All Hazards	Medium 35.5
40.0009	Acquire stream in Palmetto Oaks to preserve as green space and improve flood plain management	Palmetto	Flood	Medium 28
40.0010	Acquire land on Mixon Ave to prevent further dense development as part of their green space expansion program	Palmetto	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 20.5
40.0011	Acquire emergency generator for Water Treatment Plant	Palmetto	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 28
40.0012	Acquire emergency generator for City Hall	Palmetto	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 28
40.0013	Retrofit Water Treatment Plant with lightning protection	Palmetto	Severe Weather, Tornado, Tropical Systems	Medium 28
40.0014	Install two outdoor warning sirens at locations within the City	Palmetto	Severe Weather, Tornado	Medium 36.5
45.0001	Install surge protection at the City fuel island	Roswell	Severe Weather	Medium 30.5

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
45.0002	Retrofit roof of the 911 Center which is susceptible to damage from high winds and water leakage (Comments: Retrofit glass with more impact-resistant glass.)	Roswell	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 27
45.0003	Add upstream detention and replace culvert at Warsaw Road near Willow Stream Townhomes (Comments: Area is in shaded zone X floodplain. There is repeated flooding that affects homes and roadway.)	Roswell	Flood, Severe Weather, Tropical Systems	Medium 26
45.004	Perform stream stabilization and repair erosion along Crossville Creek corridors	Roswell	Flood, Severe Weather, Severe Winter Weather, Tropical Systems	Low 24
45.0005	Add tamper-resistant fittings to all fire hydrants in water system boundary	Roswell	Wildfire/Wildland Urban Interface Fire	Medium 28
45.0006	Rehabilitate the floodplain on Oakhaven Dr through acquisition of ten (10) structures in the floodplain; improve drainage in the area (Comments: Area is in a floodplain. There is repeated flooding that affects homes and roadway. Have had to have numerous rescues due to low-lying area. Too much water comes into area that cannot be dispersed. This project score has been dropped because of improvements to the dam overflow structure.)	Roswell	Flood, Severe Weather, Tropical Systems	Medium 32
99.0002	Azalea Drive Roadway Elevation	Roswell	Flood	Medium 27
99.0003	Willeo Road Roadway Elevation	Roswell	Flood	Medium
99.0004	Portable Generators for Traffic Signals	Roswell	Severe Weather, Severe Winter Weather, Tropical Systems	Low 25
99.0005	Roswell Water Plant Emergency Power Generator	Roswell	Severe Weather, Severe Winter Weather, Tropical Systems	Medium 26

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
99.0006	Generator for Hembree Facility - Fire, Public Works, RDO	Roswell	Severe Weather, Severe Winter Weather, Tropical Systems	Medium 26
99.0007	Storage Shed for Road Salt	Roswell	Severe Winter Weather	Medium 26
99.0008	Tree removal along the river corridor, Pine Grove Road, and other areas	Roswell	Severe Weather, Severe Winter Weather	Low 18.5
99.0009	Roswell Area Park Flood Mitigation	Roswell	Flood, Severe Weather, Severe Winter Weather	Medium 26
99.0010	Flooding on Oakhaven Drive (Brookfield West	Roswell	Flood, Severe Weather, Severe Winter Weather	Medium 26
99.0011	Stormwater control projects	Roswell	Flood, Severe Weather, Severe Winter Weather	Medium 26
99.0012	Woodstock Street and Woodstock Road Water Main Replacement Project	Roswell	Fire, Winter Weather	Low 18.5
99.0013	Emergency Access for Riverwalk Condominium Complex	Roswell	Flood	Low 23
59.0001	Purchase approximately 45 flooded homes in the Colewood Creek Basin (Comments: Homes are located in the floodplain and areas subject to flooding.)	Sandy Springs	Flood, Severe Weather, Tropical Systems	Medium 27
59.0002	Purchase approximately 35 flooded houses in Pine Forest along Nancy Creek Basin (Comments: Development is built in the floodplain. It is a 40-50-year-old development, which was built pre-FIRM.)	Sandy Springs	Flood, Severe Weather, Tropical Systems	Medium 27
59.0003	Acquire approximately ten (10) homes in the North Mill area and convert to open space (Comments: There is a total of about 600 homes in the floodplain. City wishes to purchase the most homes that most at risk.)	Sandy Springs	Flood, Severe Weather, Tropical Systems	Medium 27

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
59.0004	Reinforce old culverts with slip line (Comments: Current infrastructure is aging and rusting. The leaking pipes are causing secondary erosion to the substrate. This technique would reinforce pipes to keep from collapsing, which could damage homes that are built on or near the top of the system.)	Sandy Springs	Flood, Severe Weather, Tropical Systems, Geological Hazards (Sinkholes)	Medium 30
59.0005	Rehabilitate City-owned detention ponds which have previously breached (Comments: Some of the detention ponds are located by creeks. Should the structure fail, it will release mud and debris into the creeks.)	Sandy Springs	Flood	Medium 26
59.0008	Distributing tornado shelter location information	Sandy Springs	Severe Weather, Tornado, Tropical Systems	Medium 30
59.0009	Supporting Severe Weather Awareness Week	Sandy Springs	Severe Weather, Tornado, Tropical Systems	Medium 34
59.0010	All-hazards Education and Prevention Community Outreach Program	Sandy Springs	Drought, Flood, Tornado, Wildfire/Wildland Urban Interface Fire	Medium 34
59.0011	Severe Weather Awareness	Sandy Springs	Flood, Tornado, Tropical Systems	Medium 34
59.0012	Community Development Assistance Program (flood mitigation project)	Sandy Springs	Flood, Severe Weather, Severe Winter Weather	Medium 28
59.0013	Reintegrating homes into floodplain	Sandy Springs	Flood	Medium 26
70.0001	Build a City of South Fulton Emergency Operations Center (EOC)	South Fulton	All Hazards	Medium 36.5
70.0002	Back-up Power for Emergency Shelters	South Fulton	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 29

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
70.0003	Install a local Emergency Warning System	South Fulton	All Hazards	Medium 36.5
70.0004	Provide NOAA weather radios to low-income, high-risk citizens of the City of South Fulton	South Fulton	All Hazards	Medium 36.5
70.0005	Create City of South Fulton Continuity of Operations Plan (COOP)	South Fulton	All Hazards	Medium 29
70.0006	Create City of South Fulton Local Emergency Operations Plan (LEOP)	South Fulton	All Hazards	Medium 29
70.0007	Annual review of Hazard Mitigation Plan	South Fulton	All Hazards	Low 21.5
70.0008	Develop and implement a public awareness campaign encouraging residents to develop family disaster plans	South Fulton	All Hazards	Low 21.5
50.0005	Remediation of Upper Dixie Lake Dam (Comments [from 2016 Plan] see Appendix E – Studies, Reports, and Supplementary Documents for detailed options)	Union City	Flood, Severe Weather, Tropical Systems	Medium 27
50.0006	Replace early warning system (Comments: City currently employs a siren system, which is older and only reaches a small percent of the population. Need a more targeted system such as Code Red or National Oceanic and Atmospheric Administration (NOAA) weather radios. This will be implemented in collaboration with the recommendations of the evaluation as described in this project.)	Union City	Severe Weather, Tornado	Medium 28
50.0008	Emergency back-up power for facilities with critical operations: City Hall, Public Services, and IT	Union City	Severe Weather, Severe Winter Weather, Tropical Systems, Tornado	Medium 26
99.0006	Enact and enforce a storm water management ordinance that maintains pre-development runoff rates for major developments	Fulton County	Flooding	Medium 29
99.0013	Consider updating zoning regulations to require various open space and landscaping standards for land development proposals	Fulton County	All Hazards	Medium 29
99.0016	Encourage the relocation of existing utility lines underground, and consider local regulations to require placement of all new utility lines underground, were feasible	Fulton County	All Hazards	Medium 29

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
99.0003	Increase participation in the NFIP's Community Rating System including interjurisdictional coordination to ensure maximum use of shared credit for eligible activities; may include bi-annual interjurisdictional meeting to review shared credit activities	Fulton County	Flooding	Medium 24
99.0039	Implement outreach campaign to disseminate maps to the public as the maps are updated over the next 18 months	Fulton County	All Hazards	Medium 24
99.0014	Continue to enforce subdivision construction standards for drainage improvements	Fulton County	Flooding; Severe Weather; Tropical Systems	Medium 31
99.0026	Install automatic icing indicators on critical bridges and overpasses	Fulton County	Severe Winter Storms	Medium 24
99.0044	Continue to implement and enforce dam maintenance ordinances throughout all jurisdictions	Fulton County	Dam Failure	Medium 29
99.0041	Continue to build out development of web-based GIS mapping that allows residents to research and view their floodplain status	Fulton County	All Hazards	Low 24
99.0004	Train local flood plain managers through programs offered through the State and FEMA's training center	Fulton County	Flooding	Medium 30
99.0005	Participate in the "Turn Around Don't Drown" program by acquiring signs in known flash flood locations	Fulton County	Flooding	Low 24
99.0011	Update comprehensive plans, short-term work program, and capital improvements program (6-20 years) for future growth and development	Fulton County	All Hazards	Medium 31
99.0012	Ensure that capital improvement plans include capital projects to implement the natural hazards element of the jurisdiction's comprehensive plan or projects identified in the Mitigation Strategy Section of this plan	Fulton County	All Hazards	Medium 30
99.0017	Encourage replacement of traffic signals at major or priority intersections with mast arm design with emergency power; coordinate with State Transportation agencies for state- owned roadways that impact local jurisdictions	Fulton County	Flooding; Severe Weather; Tropical Systems; Tornado; Severe Winter Weather	Medium 33

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
99.002	Maintain risk assessment data in GIS, including flood zones, tornado tracks, sinkhole threat areas, dam inundation areas, disaster events, and comprehensive inventory of critical facilities within all jurisdictions	Fulton County	All Hazards	Medium 28
99.0021	Integrate FEMA HAZUS-MH applications for hazard loss estimations within local GIS programs. Maintain up-to-date data within GIS to apply the full loss estimation capabilities of HAZUS	Fulton County	All Hazards	Medium 27
99.0022	Work with DNR, NCRS, and local GIS departments to maintain inundation mapping downstream of dams	Fulton County	Dam Failure	Medium 28
99.0024	Installation of warning and notification systems	Fulton County	All Hazards	Medium 28
99.0025	Develop a countywide multi-jurisdictionally coordinated notification plan for alert and notification of hazardous (or potentially hazardous) events	Fulton County	All Hazards	Medium 32
99.0027	Implement a voluntary program of flood protection and property acquisition and relocation for high-risk residences and repetitive loss properties. Survey property owners to determine interest and assess cost.	Fulton County	Flooding	Medium 26
99.0028	Coordinate and provide educational outreach on mitigation strategies the private sector can take to reduce or eliminate the impact of hazards of their services and infrastructure.	Fulton County	All Hazards	Low 24
99.0029	Support resiliency of the County's private sector through information sharing, partnership building, training and education on mitigation principles and the AFCEMA Hazard Mitigation Plan	Fulton County	All Hazards	Low 25
99.003	Establish pre-arranged memoranda of understanding (MOU) for facility sharing following disaster, and other equipment sharing. Establish cooperative assistance agreements	Fulton County	Flooding; Severe Weather; Tropical Systems; Tornadoes	Medium 26
99.0031	Develop and implement plans to prevent flooding of water and waste water facilities	Fulton County	Flooding	Medium 27
99.0032	Participation in the National Weather Service's annual Flood Awareness Week	Fulton County	Flooding	Low 24
99.0033	Participation in the National Weather Service's annual Winter Weather Awareness week	Fulton County	Severe Winter Storms	Medium 32

Proposed Mitigation Actions (2022-2027), STAPLE+E Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
99.0034	Continue to participate in the National Oceanic and Atmospheric Administration (NOAA) weather radio program to distribute weather radios to vulnerable populations and high congregate areas	Fulton County	Tornadoes; Severe Winter Weather; Severe Weather	Medium 27
99.0035	Sponsor educational programs for residents to provide instruction for accessing government websites for preparedness information	Fulton County	All Hazards	Medium 26
99.0036	Continue to make presentations in the school system to educate students regarding natural hazards and preparedness	Fulton County	All Hazards	Medium 26
99.0038	Increase jurisdictional participation in annual dissemination of flooding information and awareness to all residents as well as flood plain information to people and businesses in the flood plain	Fulton County	Flooding	Low 25
99.004	Increase participation by jurisdictions in the Storm Ready program to become Storm Ready Partners	Fulton County	Severe Weather; Tropical Systems; Flooding	Low 25
99.0043	Increase participation by jurisdictions to implement water restrictions and promote public education and awareness through rebate/voucher programs for low flow	Fulton County	Drought	Low 25
99.0044	Continue to implement ordinances and/or comprehensive planning policies prohibiting new development in the 100 year floodplain	Fulton County	Flooding	Medium 32
99.0046	Procure and install battery energy storage and rainwater harvesting systems at two critical county facilities – Louise Watley Library at Southeast Atlanta and Neighborhood Union Health Center.	Fulton County	Severe Weather; Severe Winter Weather; Tornado; Tropical Systems; Flooding	Medium 27
99.0047	Annual Review and Update of Continuity of Operations (COOP) Plan	Fulton County	All Hazards	Medium 32
99.0048	Annual Review of Hazard Mitigation Plan	Fulton County	All Hazards	Medium 33
99.0049	Annual Review and Update of Local Emergency Operations Plan (LEOP)	Fulton County	All Hazards	Medium 27

Additional, priority-related information pertaining to the proposed mitigation actions (2022-2027) can be found in Appendix D – Mitigation Project Prioritization.

5.5 – Planning Integration

Mitigation does not end at plan approval. Plan approval is only the beginning. The successful implementation of any number of mitigation activities and projects requires the coordination and collaboration of local agencies, departments, and organizations, among others. Each group has varying decision-making processes and authorities governing their actions. This plan, once approved, must be integrated into their decision-making processes as a tool for improving their respective resiliencies.

Fulton County intends to incorporate the 2022 MJHMP into other planning documents, e.g., Comprehensive Plan(s), the County and all participating jurisdictions utilize. Where applicable, portions of the previous MJHMP were considered for incorporation into other local plans and programs. This includes some form of incorporation into the Fulton County, GA Comprehensive Plan Update (December 2018), which focuses on land use and community development.

Portions of the 2022 Fulton County MJHMP may also be integrated into the Fulton County Local Emergency Operations Plan (LEOP), emergency plans for the Cities of Alpharetta, Atlanta, Chattahoochee Hills, College Park, East Point, Fairburn, Hapeville, Johns Creek, Milton, Mountain Park, Palmetto, Roswell, Sandy Springs, South Fulton and Union City, GA, and other existing or future public safety-related plans. This plan is not only useful for implementing mitigation activities and projects but also critical in creating development plans and capital improvement projects. The risk assessment in this plan can prevent unmanaged and dangerous development in identified hazard areas or other portions of the planning area that decrease a community's overall resiliency.

Democratic Governments and Boards

These organizations rely on agenda proposals, deliberation, and discussion, and voting to solidify their decision-making. This type of decision-making makes up most of Fulton County's participating jurisdictions and stakeholders.

This plan should be integrated into proposed agendas and cross-referenced during deliberation and discussion of the proposed activity. By using this plan's risk assessment, development and capital improvement projects can be appropriately implemented taking into consideration a community's resiliency.

The 2022 Fulton County MJHMP will be incorporated into existing planning mechanisms in varying processes. These processes will be tailored to the unique characteristics of the planning mechanism and the governing structure of Fulton County and its participating jurisdictions.

Budget Reviews

Fulton County budget runs on a January through December annual cycle. The County budgeting process begins in October, and it is presented to the Board in December and voted on in January. During this period, each adopting jurisdiction will review this (and future) hazard mitigation plans and conduct a feasibility and resiliency review of the suggested mitigation actions and projects.

AFCEMA will assist in the process as needed or requested by the jurisdiction(s), providing grants or other funding opportunities, technical assistance, and other relevant support.

Emergency Management Planning

Fulton County and all municipalities work together as a team during all four phases (Mitigation, Planning, Response and Recovery) of emergency management. Other governing bodies and partners are also included in emergency planning and response. Public input is always accepted and appreciated. Upon adoption of a hazard mitigation plan or other emergency management-related plans, AFCEMA will notify all participating jurisdictions of the next mitigation planning committee meeting date. At that meeting the

MPC will review mitigation projects and action selections. Each jurisdiction then approves a list of mitigation actions and projects they want to pursue according to the mechanism listed in the table on the following page. During the MPC meeting, AFCEMA will assist the jurisdictions in determining which grant program and path will be appropriate for the project. After selection, the jurisdictions return to AFCEMA for assistance on funding and managing the project. If additional funding is necessary, the jurisdictions will have to return to their community and pass a resolution to secure the funding. The resolution is subject to the process listed in the table on the following pages.

AFCEMA may provide technical assistance in every facet from project inception to completion as well as working with other external organizations for tasks such as grant writing, project monitoring, and project management where appropriate.

Appendix A: Reference Documents & Data Sources

Reference Documents:

City of Alpharetta Comprehensive Plan – Horizon 2040

City of Atlanta Comprehensive Plan – Plan A: Atlanta's 2021 Comprehensive Development Plan

City of Chattahoochee Hills Comprehensive Plan Update 2021

City of College Park Comprehensive Plan 2021

City of East Point Comprehensive Plan Update 2017

City of Fairburn Comprehensive Plan – Fairburn Plan 2040

City of Hapeville Comprehensive Plan/Livable Centers Initiative (LCI) Study Update

City of Johns Creek Comprehensive Plan 2018-2028

City of Milton Comprehensive Plan – Milton 2040

City of Mountain Park Comprehensive Plan Update 2021

City of Palmetto Comprehensive Plan Update 2017

City of Roswell Comprehensive Plan – Roswell 2040

City of Sandy Springs Comprehensive Plan – 2017 The Next Ten

City of South Fulton Comprehensive Plan – 2021 Our South Fulton

Union City Comprehensive Plan Update 2020

Code of Federal Regulations, https://www.govinfo.gov/app/collection/cfr

Disaster Mitigation Act of 2000, Robert T. Stafford Disaster Relief and Emergency Assistance Act (the "Stafford Act"), Public Law 93-288, as amended

Federal Meteorological Handbook No. 1, Surface Weather Observations and Reports, U.S. Department of Commerce/National Oceanic and Atmospheric Administration (NOAA), 2005

Fulton County Comprehensive Transportation Plan (CTP)

Georgia Hazard Mitigation Strategy Standard and Enhanced Plan, Effective March 18, 2019 – March 17, 2024

Guidelines and Specifications for Flood Hazard Mapping Partners, FEMA, 2002

Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan

Local Mitigation Plan Review Guide, FEMA, 2011

Local Mitigation Planning Handbook, FEMA, 2013

Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards, FEMA, 2013

Reference Documents (Cont'd.)

Multi-hazard Loss Estimation Methodology – Flood Model – Hazus-MH – User Manual, FEMA, 2012

Multi-hazard Loss Estimation Methodology – Flood Model – Hazus-MH – Technical Manual, FEMA, 2012

Multi-hazard Mitigation Planning Guidance Under the Disaster Mitigation Act of 2000, FEMA, 2008

National Mitigation Framework, U.S. Department of Homeland Security

Understanding Your Risks: Identifying Hazards and Estimating Losses (FEMA 386-2), FEMA, 2001

2016 Fulton County Multijurisdictional Hazard Mitigation Plan (adopted 2017)

2035 Fulton County Comprehensive Plan (2016-2035), 2019 Update

Data Sources:

Atlanta-Fulton County Emergency Management Agency (AFCEMA)

American Community Survey

Atlanta Regional Commission, https://www.atlantaregional.org

American Society of Civil Engineers (ASCE)

Carl Vinson Institute of Government, University of Georgia

Centers for Disease Control and Prevention (CDC)

Community Rating System (CRS)

Central U.S. Earthquake Consortium

Department of Homeland Security

Drought.gov, https://www.drought.gov

Environmental Protection Agency (EPA)

Federal Emergency Management Agency (FEMA)

FEMA Community Status Book Report for Communities Participating in the NFIP, https://fema.gov/cis/GA.pdf

FEMA Flood Zone Designations

FEMA Hazus Database

Fulton County Flood Insurance Study

Fulton County Government, https://www.fultoncountyga.gov

Data Sources (Cont'd.)

Fulton County Building Codes, https://www.fultoncountyga.gov/inside-fulton-county/fulton-county-departments/public-works/planning-zoning-and-permitting/permits-and-plan-review/inspection-request-information/inspection-codes

Georgia Department of Community Affairs (Building Codes), https://www.dca.ga.gov/local-government-assistance/construction-codes-industrialized-buildings/construction-codes

Georgia Department of Economic Development, https://www.georgia.gov

Georgia Environmental Protection Division

Georgia Emergency Management Agency (GEMA)

Georgia Flood Map Program, https://www.map.georgiafirm.com

Georgia Mitigation Information System (GMIS)

Georgia Municipal Association

Georgia Safe Dams Program

Metropolitan North Georgia Water Planning District

National Centers for Environmental Information (NCEI)

National Flood Insurance Program (NFIP)

National Fire Protection Association (NFPA)

National Inventory of Dams

National Oceanic and Atmospheric Administration (NOAA)

National Weather Service (NWS)

U.S. Army Corps of Engineers (USACE)

U.S. Census Bureau

U.S. Department of Agriculture (USDA)

U.S. Drought Monitor, https://droughtmonitor.unl.edu

U.S. Geological Survey (USGS)

Geographic Data Sources

BOLDplanning

FEMA Hazus-MH (2.2 SP1)

FEMA FIRM Maps

Geographic Data Sources (Cont'd.)

Atlanta-Fulton County Emergency Management Agency (AFCEMA), GIS Department

Fulton County Planning and Zoning Department

Fulton County School District(s)

Georgia Department of Transportation

Georgia Emergency Management Agency (GEMA), Georgia Hazard Mitigation Strategy Standard and Enhanced Plan, Effective March 18, 2019 – March 17, 2024

Georgia Flood Map Program

Georgia Mitigation Information System (GMIS)

Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan

NOAA/NWS Storm Prediction Center

Rain Gage Monitoring Sites, Fulton County Water System, Stormwater Management Division

University of Georgia, Carl Vinson Institute of Government

U.S. Drought Monitor

U.S. Geological Survey

2016 Fulton County Multijurisdictional Hazard Mitigation Plan

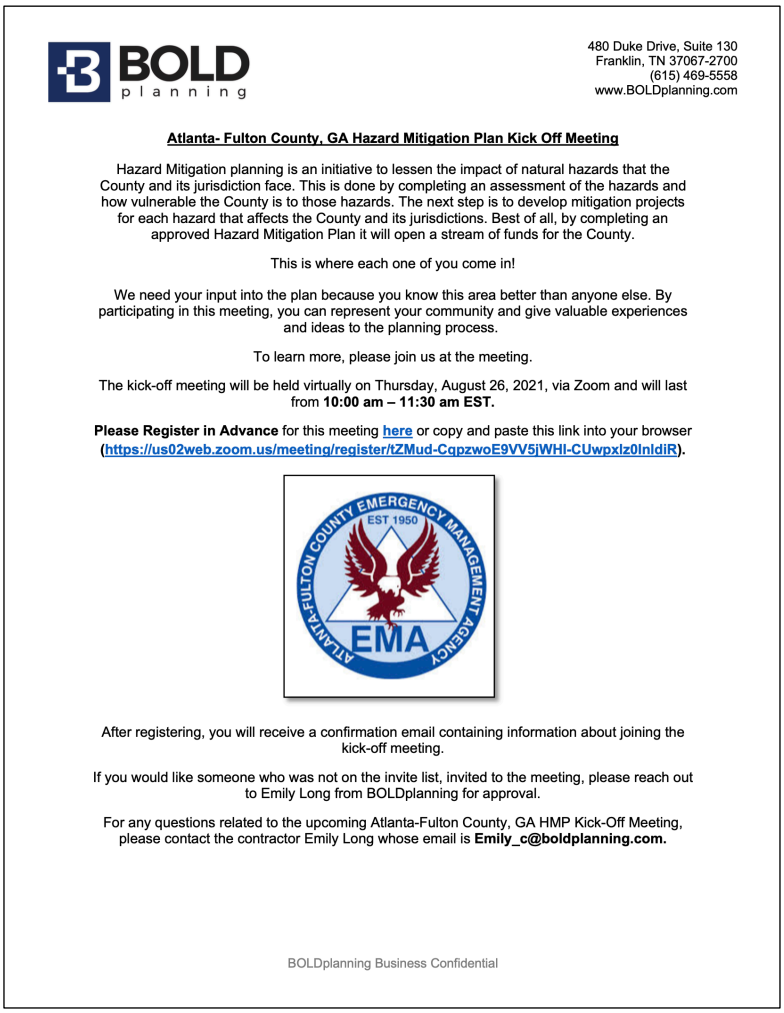
Appendix B: Public Participation

Throughout the planning process, stakeholders, including the public, were encouraged to take part in various meetings and surveys. Following is information pertaining to these activities:

Hazard Mitigation Plan Update Stakeholder Kick-Off and Information Gathering Virtual Meeting – August 26, 2021

Plan developer, BOLDplanning, hosted this meeting for AFCEA, all participating jurisdictions, and other plan stakeholders. Due to the ongoing COVID-19 pandemic, the meeting was held virtually via web conferencing rather than in person. This allowed everyone to safely participate and provide feedback from remote locations. Prior to the meeting, email announcements were sent to stakeholders representing various county departments and participating jurisdictions over a two-week period. Forty (40) stakeholder attendees participated in the meeting, and the Fulton County Mitigation Planning Committee, or MPC, was formed. The MPC reviewed the planning process, asked questions, and took on any/all assigned roles. BOLDplanning worked with the MPC to collect contact information as well as details specific to hazard history, critical facilities, etc.

Following is the invitation to the August 26, 2021 meeting.



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480 Duke Drive, Suite 130
Franklin, TN 37067-2700
(615) 469-5558
www.BOLDplanning.com

Atlanta- Fulton County, GA Hazard Mitigation Plan Kick Off Meeting

Hazard Mitigation planning is an initiative to lessen the impact of natural hazards that the County and its jurisdiction face. This is done by completing an assessment of the hazards and how vulnerable the County is to those hazards. The next step is to develop mitigation projects for each hazard that affects the County and its jurisdictions. Best of all, by completing an approved Hazard Mitigation Plan it will open a stream of funds for the County.

This is where each one of you come in!

We need your input into the plan because you know this area better than anyone else. By participating in this meeting, you can represent your community and give valuable experiences and ideas to the planning process.

To learn more, please join us at the meeting.

The kick-off meeting will be held virtually on Thursday, August 26, 2021, via Zoom and will last from **10:00 am – 11:30 am EST.**

Please Register in Advance for this meeting here or copy and paste this link into your browser (**https://us02web.zoom.us/meeting/register/tZMud-CqpzwoE9VV5jWHI-CUwpxIz0InIdiR**).

ATLANTA-FULTON COUNTY EMERGENCY MANAGEMENT AGENCY EST 1950 EMA

After registering, you will receive a confirmation email containing information about joining the kick-off meeting.

If you would like someone who was not on the invite list, invited to the meeting, please reach out to Emily Long from BOLDplanning for approval.

For any questions related to the upcoming Atlanta-Fulton County, GA HMP Kick-Off Meeting, please contact the contractor Emily Long whose email is **Emily_c@boldplanning.com.**

BOLDplanning Business Confidential

In attendance of the August 26, 2021 meeting were the following individuals.

SIGN IN SHEET

EVENT: __Fulton County, GA HMP Stakeholder Kickoff Meeting__ DATE / TIME: __August 26, 2021 /__8:40AM-9:38AM___

Zoom Meeting ID: **87309297291**	**Fulton County, GA** **Hazard Mitigation Plan Update Kick-off Meeting**	**08/26/2021** **08:40:34 AM**	**08/26/2021** **10:01:24 AM**

Number	Participant Name	Organization	Title	User Email	Join Time	Leave Time	Total Duration on Kickoff Call (Minutes)
1	Emily Long (BOLDplanning Meeting Room 6)	BOLDplanning, Inc.	Program Manager/Mitigation Project Lead	meeting6@boldplanning.com	8/26/21 8:43 AM	8/26/21 9:20 AM	81
2	Will Minkoff	BOLDplanning, Inc.	Program Support	will@boldplanning.com	8/26/21 8:43 AM	8/26/21 9:20 AM	65
3	Linda Young	BOLDplanning	Plan Contributor, Editor	linda@boldplanning.com	8/26/21 9:01 AM	8/26/21 9:06 AM	66
4	Andrea Smalls	College Park Fire and Rescue Department/City of College Park	Emergency Management Coordinator	andrea.smalls@collegeparkga. com	8/26/21 8:35 AM	8/26/21 11:24 AM	70
5	Andy Wheeler	Alpharetta Public Safety	EM Coordinator	acmorris@atlantaga.gov	8/26/21 9:01 AM	8/26/21 10:10 AM	76
6	Asher Morris	City of Atlanta	Emergency Preparedness Manager	cat.hofmann@afcema.com	8/26/21 8:54 AM	8/26/21 9:49 AM	74

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7	Cat Hofmann	AFCEMA	Division Chief	cat.hofmann@afcema.com	8/26/21 9:49 AM	8/26/21 10:09 AM	72
8	Catherine Mercier-Baggett	City of Sandy Springs	Sustainability Manager	sustainability@sandyspringsga.gov	8/26/21 8:54 AM	8/26/21 10:08 AM	70
9	Charles Kendrick	East Point Fire Department	Battalion Chief	Ckendrick@eastpointcity.org	8/26/21 8:35 AM	8/26/21 11:24 AM	76
10	Christian Coons	Johns Creek Fire Department	Fire Chief		8/26/21 8:59 AM	8/26/21 10:11 AM	70
11	Darby S Wulff	Wulff House	CEO	wulffdarby@gmail.com	8/26/21 8:57 AM	8/26/21 10:07 AM	
12	David Bloodworth	Hapeville Fire & Rescue	Fire Chief	dbloodworth@hapeville.org	8/26/21 8:55 AM	8/26/21 10:11 AM	70
13	Debra Williams	CAU Department of Public Safety	Chief of Police	dwilliams@cau.edu	8/26/21 8:57 AM	8/26/21 10:07 AM	
14	Destiny Ruffin	Atlanta-Fulton County Emergency Management Agency	Emergency Management Coordinator	destiny.ruffin@afcema.com	8/26/21 9:01 AM	8/26/21 10:10 AM	164
15	Fred Hammett	GA State University	Director	fhammett@gsu.edu	8/26/21 8:41 AM	8/26/21 11:24 AM	
16	Gabe Benmoussa	Milton Fire Rescue	Fire Chief	gabe.benmoussa@cityofmilton.ga.us	8/26/21 9:04 AM	8/26/21 10:08 AM	26

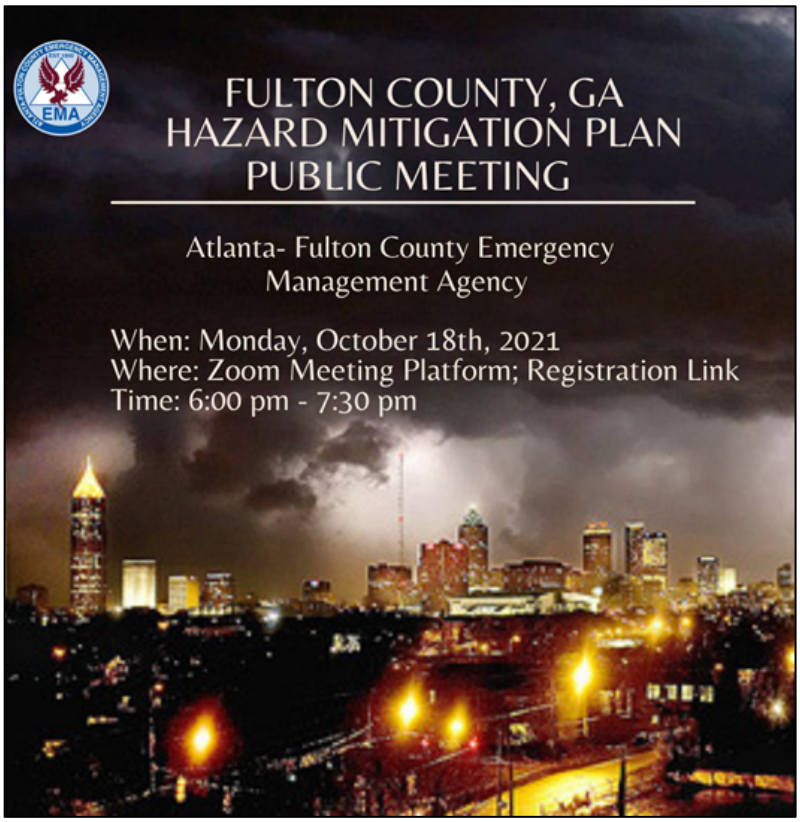
17	Greg Brett	City of Chattahoochee Hills	Chief of Fire, EMS and Emergency Mgmt		8/26/21 9:01 AM	8/26/21 9:27 AM	67
18	Henry Argo	City of Palmetto	Fire Chief/Director of EMS/ Emergency Management Coordinator	argo@citypalmetto.com	8/26/21 9:01 AM	8/26/21 10:08 AM	29
19	Hilda Moses	City of South Fulton Fire Rescue	Deputy Fire Chief CRR	hilda.moses@cityofsouthfulton g.gov	8/26/21 8:54 AM	8/26/21 9:03 AM	
20	Imani White	City of Sandy Springs/ SSFD	Executive Officer of EMA Preparedness	iwhite@sandyspringsga.gov	8/26/21 9:04 AM	8/26/21 9:25 AM	66
21	James Dame	City of Mountain Park/ Mountain Park Vol. Fire and Rescue	Interim Fire Chief	jdame@mpvfr.org	8/26/21 9:02 AM	8/26/21 10:08 AM	72
22	Jeffrey Collins	Union City Fire Department	Assistant Chief	jcollins@unioncityga.org	8/26/21 8:58 AM	8/26/21 8:58 AM	97
23	Jill Bazinet	City of Alpharetta	Development Services Engineer/Stormwater		8/26/21 8:58 AM	8/26/21 10:10 AM	68
24	Joey Overton	Hapeville Fire Department	Division Chief	joverton@hapeville.org	8/26/21 8:35 AM	8/26/21 10:12 AM	69
25	Joseph Chevalier	Morehouse School of Medicine Police Department	Director of Public Safety/Chief of Police	jchevalier@msm.edu	8/26/21 9:00 AM	8/26/21 10:07 AM	67
26	Keith Sanders	Sandy Springs	Fire Chief	ksanders@sandyspringsga.gov	8/26/21 8:56 AM	8/26/21 8:59 AM	68
27	Keith Sumas	Atlanta Public Schools	Emergency Management Coordinator	keith.sumas@atlanta.k12.ga.us	8/26/21 8:59 AM	8/26/21 9:01 AM	73
28	Lucy Herring	GEMA/HS	Hazard Mitigation Planning Specialist	lucy.herring@gema.ga.gov	8/26/21 9:03 AM	8/26/21 10:10 AM	88
29	Matt Marietta	City of Milton	Emergency Manager	matthew.marietta@cityofmiltonga.us	8/26/21 9:00 AM	8/26/21 10:07 AM	74
30	Matthew Kallmyer	Atlanta-Fulton County Emergency Management Agency	Director, AFCEMA	matthew.kallmyer@afcema.com	8/26/21 8:55 AM	8/26/21 10:08 AM	113
31	Michael Amberson	BoldPlanning	Support	michael.amberson_c@boldplanning.com	8/26/21 8:59 AM	8/26/21 10:25 AM	76
32	Nicholas Condrey	Hapeville Fire Department	Deputy Fire Chief/ EMS Operations	mwallace@unioncityga.org	8/26/21 8:55 AM	8/26/21 10:08 AM	72
33	Pabel Troche	Fulton County School District	Emergency Manager		8/26/21 8:59 AM	8/26/21 10:51 AM	73
34	Paul Hildreth	Alpharetta Department of Public Safety	Detective Sergeant		8/26/21 8:54 AM	8/26/21 10:11 AM	68
36	Sterling Jones	South Fulton Fire Rescue	Lieutenant	sterling.jones@cityofsouthfulton ga.gov	8/26/21 8:59 AM	8/26/21 10:10 AM	81
37	TANGELA ROWE	Roswell Fire Department	Deputy Fire Chief	tangela.rowe@cityofsouthfulton ga.gov	8/26/21 8:55 AM	8/26/21 10:07 AM	62
38	Tony Papoutsis	Morehouse College Police Department	Chief of Police	tpapoutsis@roswellgov.com	8/26/21 9:00 AM	8/26/21 10:08 AM	8
39	Valerie Dalton	Belvedere Civic Club	President	pdk-powell@comcast.net	8/26/21 8:50 AM	8/26/21 10:10 AM	53
40	Will Minkoff				8/26/21 8:43 AM	8/26/21 9:20 AM	61

Hazard Mitigation Plan – Mitigation Strategy Update Virtual Meeting – October 13, 2021

AFCEMA hosted this meeting for the Fulton County MPC and plan stakeholders to help them learn how to represent the jurisdictions in the planning process, i.e., provide valuable insight related to hazards within the County. Due to continued COVID-19 concerns, AFCEMA and BOLDplanning facilitated this meeting virtually via web conferencing. Eleven (11) stakeholder attendees participated. No members of the public were invited due to plan stakeholders gathering information to update the status of mitigation projects from the previous plan (2016). Meeting participants learned about the process for updating these projects and were encouraged to ask questions and/or express concerns.

Hazard Mitigation Plan Public Meeting – October 18, 2021

Like previous meetings, the Hazard Mitigation Plan Public Meeting was held virtually via web conferencing due to COVID-19 concerns. Its purpose was to gather all-important, hazard-related information from the community-at-large. The meeting was publicized through various communications outlets, including AFCEMA's website and the County's social media accounts. Fourteen (14) stakeholder attendees participated in the meeting; five of whom were from the public.



The following individuals participated in the October 18, 2021 (virtual) meeting.

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EVENT: __Fulton County, GA HMP Public Kickoff Meeting__ DATE / TIME: __October 18, 2021 /__6:00PM-7:16PM EST__

Zoom Meeting ID: 83973255731	Fulton County, GA Hazard Mitigation Plan Update Public Kick-off Meeting	10/18/2021 04:58:10 PM	10/18/2021 06:16:05 PM

Number	Participant Name	Organization	Title	User Email	Join Time	Leave Time	Total Duration on Kickoff Call (Minutes)
1	Emily Long (BOLDplanning Meeting Room 6)	BOLDplanning, Inc.	Mitigation Project Lead	meeting6@boldplanning.com	10/18/2021 04:58:08 PM	10/18/2021 06:16:03 PM	78
2	Tanya Scott	BOLDplanning, Inc.	Project Support	tanya.scott_c@boldplanning.com	10/18/2021 04:58:37 PM	10/18/2021 06:16:00 PM	78
3	Matthew Kallmyer	Atlanta-Fulton County EMA (AFCEMA)	Director	matthew.kallmyer@afcema.com	10/18/2021 04:59:09 PM	10/18/2021 06:16:01 PM	77
4	Destiny Ruffin	Atlanta-Fulton County EMA (AFCEMA)	Emergency Management Specialist	destiny.ruffin@afcema.com	10/18/2021 04:58:24 PM	10/18/2021 06:16:02 PM	78
5	Cat Hofmann	Atlanta-Fulton County EMA (AFCEMA)	Division Chief	cat.hofmann@afcema.com	10/18/2021 04:58:15 PM	10/18/2021 05:57:29 PM	60
6	Catherine Rowell	City of South Fulton, GA	Councilwoman	catherine.rowell@cityofsouthfultonga.gov	10/18/2021 04:58:19 PM	10/18/2021 05:56:56 PM	59
7	Joseph Barasoain	Fulton County, GA Department of Emergency Services	Director	joseph.barasoain@fultoncountyga.gov	10/18/2021 04:58:23 PM	10/18/2021 05:57:40 PM	58
8	Imani White	City of Sandy Springs	EMA Officer	iwhite@sandyspringsga.gov	10/18/2021 04:58:47 PM	10/18/2021 05:56:52 PM	59

1

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9	Matt Marietta	City of Milton, GA	Emergency Manager	matthew.marietta@cityofmiltonga.us	10/18/2021 04:59:10 PM	10/18/2021 05:56:47 PM	58
10	Andy Wheeler	Alpharetta Public Safety	EM Coordinator	awheeler@alpharetta.ga.us	10/18/2021 04:59:45 PM	10/18/2021 05:56:33 PM	57
11	Inga Kennedy	Planners for Environmental Quality (PEQ)	Founder	inga@bellsouth.net	10/18/2021 05:00:04 PM	10/18/2021 05:56:31 PM	57
12	Timothy Summers	Puroclean		tsummers@puroclean.com	10/18/2021 05:00:16 PM	10/18/2021 05:56:35 PM	57
13	Tangela Rowe	South Fulton Fire Rescue	Lieutenant	tangela.rowe@cityofsouthfultonga.gov	10/18/2021 05:00:52 PM	10/18/2021 05:57:21 PM	57
14	Gwendolyn Cummings	Fulton County, GA	Concerned Citizen	cummings_gwen@bellsouth.net	10/18/2021 05:01:28 PM	10/18/2021 05:46:27 PM	45
15	Stephanie M.	Fulton County, GA	Concerned Citizen	stephaniemaple88@yahoo.com	10/18/2021 05:01:44 PM	10/18/2021 05:56:59 PM	56
16	Vangie Watkins		Concerned Citizen	vangiewatkins@hotmail.com	10/18/2021 05:13:10 PM	10/18/2021 05:31:51 PM	19
17	Chayne Sparagowski	Atlanta-Fulton County EMA (AFCEMA)	EM Specialist	chayne.sparagowski@afcema.com	10/18/2021 05:16:05 PM	10/18/2021 05:57:20 PM	43
18	Nydia Murray	Fulton County, GA	Concerned Citizen	nydia.murray@comcast.net	10/18/2021 05:18:13 PM	10/18/2021 05:56:32 PM	39
19	Kelly Brokenburr	City of Atlanta, GA	Emergency Preparedness Senior Manager	ksbrokenburr@atlantaga.gov	10/18/2021 05:23:20 PM	10/18/2021 05:56:36 PM	39

2

Hazard Mitigation Plan Update Public Review Period – May 2, 2022 – May 16, 2022

During this time, AFCEMA and Fulton County's MPC invited the public to review a draft copy of the 2022 MJHMP prior to its submission to GEMA. Due to the COVID-19 pandemic, and government reopening/COVID-19 Safe Practices for Fulton County and its participating jurisdictions, the Public Review Period of the plan draft was also held virtually. MPC members and the public were encouraged to review a draft copy of the Fulton County MJHMP (update) posted to AFCEMA's website (https://www.fultoncountyga.gov/inside-fulton-county/fulton-county-departments/atlanta-fulton-emergency-management-agency/h‹azard-mitigation) before asking questions or voicing concerns. The MPC, stakeholders, and the public provided feedback and input on the plan draft by completing a feedback questionnaire.

Following the Public Comment Review Period, the results are as follows:

Views	Participants	Responses	Comments
490	12	12	32

The MPC, stakeholders, and the public provided feedback and input on the plan draft by completing a feedback questionnaire. Some of the relevant comments were incorporated into the appropriate sections of the plan.

Hazard Mitigation Plan Update Final Review Meeting – Weekly Meeting

AFCEMA and BOLDplanning also conducted weekly meetings via web conferencing, which provided the MPC and plan stakeholders a final opportunity to review the 2022 Fulton County MJHMP prior to GEMA submission. AFCEMA emailed the MPC and plan stakeholders in advance of the meeting, requesting final comments (via email) for consideration.

Hazard Mitigation Plan Update Adoption Signing – (Date TBD)

The 2022 Fulton County MJHMP adoption letters will be disseminated and signed by the participating jurisdictions. The signing of these resolutions codifies the adoption of the plan update by the participating jurisdictions.

In addition to these meetings, BOLDplanning launched two online Hazard Mitigation Plan (HMP) surveys specifically created for the planning area.

The first survey, the Fulton County, GA Hazard Mitigation Plan Survey, allowed for MPC members, plan stakeholders, and the public to provide input to hazards and potential hazard mitigation projects that are ongoing for the County. The second survey, the Fulton County, GA Hazard Mitigation Plan – Open Comment Survey, allowed all MPC members, plan stakeholders, and the public to provide feedback and input on the MJHMP update prior to its submission to the Georgia Emergency Management Agency (GEMA) and FEMA. The second survey, including a portion of the results, is shown on the following pages.

Fulton County, GA HMP Survey - Public

Overview: This survey is to give the public the ability to give input to the hazard mitigation project that is going on for Fulton County, Georgia. The jurisdictions include Fulton County, Georgia, and the Cities of Alpharetta, Georgia, Atlanta, Georgia, Chattahoochee Hills, Georgia, College Park, Georgia, East Point, Georgia, Fairburn, Georgia, Hapeville, Georgia, Johns Creek, Georgia, Milton, Georgia, Palmetto, Georgia, Roswell, Georgia, Sandy Springs, Georgia, South Fulton, Georgia, and Union City, Georgia.

Instructions: To complete the survey below, input your answers to each question and click the "Submit Your HMP Survey Now" button at the end to submit your answers. Please complete this survey by November 18, 2021.

If you have any questions about the survey or issues using the survey, please contact Emily Long at (615) 469-5558 (tel:(615) 469-5558) or email HELP@boldplanning.com (mailto:HELP@boldplanning.com).

Thank you so much for your participation; BOLDplanning and Atlanta-Fulton County, GA Emergency Management Agency (AFCEMA), greatly appreciate it!

What is your occupation?

_____

What is your city of residence?

_____

Where do you live?

Address or intersection:

_____

* Which Hazards is your area MOST at risk for?

- ☐ Dam Failure
- ☐ Drought
- ☐ Earthquake
- ☐ Flood
- ☐ Geological Hazard
- ☐ Heat Wave
- ☐ Severe Storms (including Lightning, Thunderstorms, Hail, and Wind)
- ☐ Severe Winter Storms
- ☐ Tornadoes
- ☐ Tropical Systems
- ☐ Wildfire/Wildland Urban Interface Fires

* Which Hazards is your area LEAST at risk for?

- ☐ Dam Failure
- ☐ Drought
- ☐ Earthquake
- ☐ Flood
- ☐ Geological Hazard
- ☐ Heat Wave
- ☐ Severe Storms (including Lightning, Thunderstorms, Hail, and Wind)
- ☐ Severe Winter Storms
- ☐ Tornadoes
- ☐ Tropical Systems
- ☐ Wildfire/Wildland Urban Interface Fires

Tell us about your concerns about the following hazards:

	No Concern	**Some Concern**	**Moderate Concern**	**Significant Concern**
Droughts	○ No Concern	○ Some Concern	○ Moderate Concern	○ Significant Concern
Earthquakes	○ No Concern	○ Some Concern	○ Moderate Concern	○ Significant Concern
Flood	○ No Concern	○ Some Concern	○ Moderate Concern	○ Significant Concern
Severe Storm (including Lightning, Thunderstorms, Hails, and Wind)	○ No Concern	○ Some Concern	○ Moderate Concern	○ Significant Concern
Severe Winter Storms	○ No Concern	○ Some Concern	○ Moderate Concern	○ Significant Concern
Tornadoes	○ No Concern	○ Some Concern	○ Moderate Concern	○ Significant Concern
Wildfires/Wildland Urban Interface Fires	○ No Concern	○ Some Concern	○ Moderate Concern	○ Significant Concern
Dam Failure	○ No Concern	○ Some Concern	○ Moderate Concern	○ Significant Concern
Heat Wave	○ No Concern	○ Some Concern	○ Moderate Concern	○ Significant Concern
Geological Hazards	○ No Concern	○ Some Concern	○ Moderate Concern	○ Significant Concern
Tropical Systems	○ No Concern	○ Some Concern	○ Moderate Concern	○ Significant Concern

* List historical instances when a weather event caused a disruption to your area.

* List areas in your community you are aware of that constantly face issues with bad weather. (Example: flooding, power outages, closed roads, etc).

Do you have suggestions for projects that can be done in your area so that weather-related disruptions do not happen? (Example: culverts or safe rooms)

Are there any hazards that were not listed, that you think should be included in the plan?

For updates on specific concerns in your area, and the opportunity to continue assisting with the planning process, please enter your email below. We will not share this information, but it will ensure that the County can contact you.

Name

Email

Name

Email

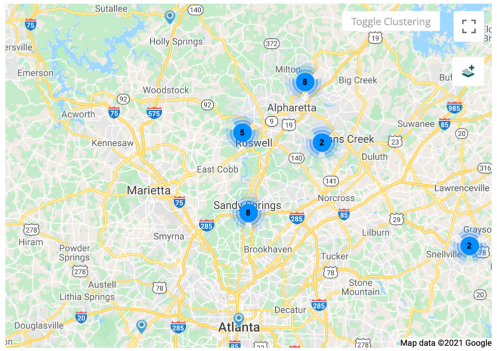
Address

Fulton County, GA HMP Stakeholder Survey

Project Engagement

VIEWS	PARTICIPANTS
150	42
RESPONSES	COMMENTS
720	146
SUBSCRIBERS	
25	

Where do you live?



* Which Hazards is your area MOST at risk for?

94%	Severe Storms (including Lightning, Thunderstorms, Hail, and Wind)	33 ✓
71%	Tornadoes	25 ✓
57%	Flood	20 ✓
57%	Severe Winter Storms	20 ✓
51%	Heat Wave	18 ✓
37%	Tropical Systems	13 ✓
26%	Drought	9 ✓
20%	Dam Failure	7 ✓
9%	Wildfire/Wildland Urban Interface Fires	3 ✓
3%	Earthquake	1 ✓
3%	Geological Hazard	1 ✓

35 Respondents

* Which Hazards is your area LEAST at risk for?

78%	Earthquake	29 ✓
68%	Wildfire/Wildland Urban Interface Fires	25 ✓
59%	Dam Failure	22 ✓
54%	Geological Hazard	20 ✓
22%	Drought	8 ✓
19%	Severe Winter Storms	7 ✓
19%	Tropical Systems	7 ✓
11%	Flood	4 ✓
8%	Heat Wave	3 ✓
3%	Tornadoes	1 ✓
0%	Severe Storms (including Lightning, Thunderstorms, Hail, and Wind)	0 ✓

37 Respondents

Appendix C: Critical Facilities & Infrastructure

NAME OF FACILITY	JURISDICTION
High Meadows Preschool and Extended Day Program	Alpharetta
A Fresh Start Preparatory School	Alpharetta
Generation Infocus @ Heards Ferry	Alpharetta
Dar-Un-Noor School	Alpharetta
APEC After School Enrichment @ Gullatt	Alpharetta
Alpharetta Elementary School	Alpharetta
CHI Montessori Academy INC	Alpharetta
Greenlit Training Program	Alpharetta
Milton High School	Alpharetta
Generation Infocus @ Dunwoody Springs	Alpharetta
Doleman Michelle A.	Alpharetta
Hopewell Middle School	Alpharetta
Manning Oaks Elementary School	Alpharetta
H.E.R.O. for Children Inc.	Alpharetta
Haverty Hollow	Alpharetta
Alpharetta High School	Alpharetta
Summit Hill Elementary School	Alpharetta
Cogburn Woods Elementary School	Alpharetta
Fellowship Christian School	Alpharetta
Culinary and Social Development Program	Alpharetta
Holcomb Bridge Middle School	Alpharetta
Dolvin Elementary School	Alpharetta
Aysha's Angels Academy	Alpharetta
Day-Star Christian Academy	Alpharetta
Autrey Mill Middle School	Alpharetta
Easter Seals Child Development Center Guice Educare	Alpharetta
State Bridge Crossing Elementary School	Alpharetta
Barnwell Elementary School	Alpharetta
Butner Learning Academy	Alpharetta
Daniels Sabrina R	Alpharetta
Haynes Bridge Middle School	Alpharetta
College Bound Early Learning Childcare Center	Alpharetta
Lake Windward Elementary School	Alpharetta
Beasley Cherrie D	Alpharetta
Camp H2O-Georgia Aquarium	Alpharetta
Webb Bridge Middle School	Alpharetta
Creek View Elementary School	Alpharetta
Taylor Road Middle School	Alpharetta
CHGA Supportive Services	Alpharetta
Chattahoochee High School	Alpharetta
Medlock Bridge Elementary School	Alpharetta
Atlanta Trilingual Academy	Alpharetta
Holloway Vanessa A	Alpharetta
Communities in Schools - Creekside High School	Alpharetta

Abdus-Saboor Myra F	Alpharetta
Agape Community Center at Trinity Presbyterian Church	Alpharetta
Freedom Park Preschool	Alpharetta
Connect Learning Academy	Alpharetta
Achievers Academy	Alpharetta
Concourse Athletic Club	Alpharetta
Get to Work Inc.	Alpharetta
Haygood Child Development Center	Alpharetta
Crowned Angels Child Development Center	Alpharetta
Ocee Elementary School	Alpharetta
Butner Learning Center & Exclusive Fitness	Alpharetta
Center for the Visually Impaired	Alpharetta
Active Learning Academy	Alpharetta
Angel's Paradise Academy	Alpharetta
Hawkins Kenya T	Alpharetta
Atlanta Workshop Players	Alpharetta
New Prospect Elementary School	Alpharetta
Elizabeth Burch Early Learning Center	Alpharetta
HEYO Honor Society- Student Connections	Alpharetta
Bright Horizons at Buckhead	Alpharetta
Amana Academy Elementary School	Alpharetta
Crabapple Crossing Elementary School	Alpharetta
Northwestern Middle School	Alpharetta
Prime Time - Ocee	Alpharetta
R. Kirk Landon Learning Center	Alpharetta
Robinson Yolanda N	Alpharetta
Mental Fitness @ Inman Middle School	Alpharetta
KIDazzle Child Care - LittleFlyers CDC	Alpharetta
LA Fitness Kids Klub @ Lenox / Buckhead	Alpharetta
Prime Time - The Villages of Carver Family YMCA	Alpharetta
The Youth Network @ PHCC	Alpharetta
The Atlanta Academy	Alpharetta
Jackson After School	Alpharetta
Norfolk Southern Children's Center	Alpharetta
Mothers Morning Out	Alpharetta
Stonewall Academy	Alpharetta
Quality Time Educational Media	Alpharetta
Preston Ridge Montessori School	Alpharetta
Next Level Scholars Atlanta LLC	Alpharetta
Kid's Time Learning Academy	Alpharetta
PALS/The Cathedral Preschool	Alpharetta
La O'wn Academy	Alpharetta
PRIME TIME - COGBURN WOODS	Alpharetta
Right at School at Ison Springs Elementary School	Alpharetta
Saint Brigid Day School	Alpharetta
Molly Learning Academy and Daycare	Alpharetta
Novaskye Youth Foundation	Alpharetta

Play-Well TEKnologies Summer Day Camp: Pace Academy	Alpharetta
Southwest Atlanta Christian Early Learning Center	Alpharetta
O2B Kids - Jones Bridge	Alpharetta
Pryor Ruth L	Alpharetta
Primrose School of Sandy Springs North	Alpharetta
Marcelin Roodlyne R	Alpharetta
Orbit Arts Academy Classes & Summer Camp	Alpharetta
Kids 'R Kids #18	Alpharetta
LA Fitness Kids Klub @ Alpharetta Winward	Alpharetta
Sheltering Arms - Elaine P. Draeger Model Teaching Center	Alpharetta
Lite House Partners Inc - Arcadia Parkway Village	Alpharetta
Success Souvenirs Child Development	Alpharetta
YMCA Afterschool at Brookview Elementary School	Alpharetta
Little Angels Learning Academy	Alpharetta
Progressive Steps	Alpharetta
Peachtree Park Prep Johns Creek	Alpharetta
The Bedford School	Alpharetta
KinderCareLearning Center #906	Alpharetta
Roswell Presbyterian Church Parents Morning Out	Alpharetta
Prime Time - Creekview	Alpharetta
Mental Fitness @ The Fairburn Youth Center	Alpharetta
Primrose School of Johns Creek Northwest	Alpharetta
Pace Academy	Alpharetta
Landmark Christian School	Alpharetta
Easter Seals Child Dev Ctr - Brookvalley	Alpharetta
Magnificent Early Learning Center 1	Alpharetta
Alpharetta City Hall	Alpharetta
Alpharetta -Police Department	Alpharetta
Fire Station 85 Alpharetta	Alpharetta
Fire Station 83 Alpharetta	Alpharetta
Fire Station 82 Alpharetta	Alpharetta
Fire Station 81 Alpharetta	Alpharetta
Fire Station 86 Alpharetta	Alpharetta
Fire Station 84 Alpharetta	Alpharetta
Hanuman Mandir Alpharetta Atlanta	Alpharetta
Legionaries of Christ	Alpharetta
Keepin' It Real Lightouse, Inc	Alpharetta
Ravi Zacharias International Ministries	Alpharetta
Bethesda Evangelical Missionary Church	Alpharetta
Abundant Life Community Church	Alpharetta
Alpharetta First Baptist Church	Alpharetta
Roswell Community Church	Alpharetta
Islamic Center of North Fulton	Alpharetta
Islamic Center of North Fulton	Alpharetta
Congregation Gesher L' Torah	Alpharetta
North American Mission Board of The Southern Baptist Convention Inc	Alpharetta
Saehan English Ministry Inc	Alpharetta

Christ the Shepherd Lutheran Church	Alpharetta
Church of St Thomas Aquinas	Alpharetta
Living Water Vineyard Church of Alpharetta Inc	Alpharetta
Alpharetta Presbyterian Church	Alpharetta
Alpharetta First United Methodist Church	Alpharetta
Lighthouse Church	Alpharetta
Union Hill Baptist Church	Alpharetta
Holy Trinity Christian Church	Alpharetta
Piedmont Atlanta Hospital, Inc.	Atlanta
Shepherd Center	Atlanta
Emory Saint Joseph's Hospital	Atlanta
Saint Joseph's Hospital of Atlanta	Atlanta
Atlanta Medical Center	Atlanta
Emory University Hospital Midtown	Atlanta
Select Specialty Hospital - Atlanta	Atlanta
Children's Healthcare of Atlanta at Hughes Spalding	Atlanta
Grady Health System/ Grady Memorial Hospital	Atlanta
Select Specialty Hospital - Midtown Atlanta	Atlanta
Piedmont Healthcare	Atlanta
Children's Healthcare of Atlanta at Scottish Rite	Atlanta
Northside Hospital System and Northside Hospital	Atlanta
WellStar Atlanta Medical Center	Atlanta
Hillside, Inc.	Atlanta
Davis Lola M	Atlanta
D-BAT/TOCA Buckhead	Atlanta
Alpharetta Presbyterian Dayschool	Atlanta
Haygood Preschool/Haygood "The Hut"	Atlanta
Atlanta First Day School	Atlanta
City of Atlanta - Out of School Time Programming at Pittman Park	Atlanta
Evolving Learning Academy	Atlanta
Epstein School The	Atlanta
Holy Spirit Preparatory School Early Learning Center	Atlanta
City of College Park Recreation @ Conley	Atlanta
Holy Spirit Preparatory Upper School	Atlanta
DOC B CARES Inc. The Stream Academy - John Hope Community Center	Atlanta
Global Tech Afterschool @ Genesis Innovation Academy	Atlanta
Building Kidz School of Roswell	Atlanta
Blossoming Minds Learning Academy	Atlanta
Banks Tasha V	Atlanta
Atlanta PAL	Atlanta
Ashley Cascade The Ascent Project	Atlanta
City of Atlanta - Out of School Time Programming at Butler Park	Atlanta
Atlanta Classical Academy Charter	Atlanta
APEC After School Enrichment @ Stonewall Tell	Atlanta
Easter Seals Child Development Center at Warsaw	Atlanta
Buckhead Gymnastics and Cheer	Atlanta
Brandon Elementary School	Atlanta

Haynes Day Care Center Inc	Atlanta
Early Birds Parents' Morning Out	Atlanta
Atlanta International School	Atlanta
Rivers, E. Elementary School	Atlanta
Carol's Daughter Learning Center	Atlanta
Chattahoochee Head Start Academy	Atlanta
City of Atlanta - Out of School Time Programming at C.T. Martin	Atlanta
City of Atlanta - Out of School Time Programming at James Orange	Atlanta
Morningside Elementary School	Atlanta
Early Journey Child Development Center	Atlanta
Creme de la Creme	Atlanta
Grady, Henry W. High School	Atlanta
Inman, Samuel Elementary School	Atlanta
Druid Hills Child Development Center	Atlanta
Christ the King School	Atlanta
Apostles Lutheran Day School	Atlanta
Couch Harriolyn L	Atlanta
APEC After School Enrichment @ Oakley	Atlanta
Hillside Program	Atlanta
APEC After School Enrichment @ Sandtown	Atlanta
Spalding Drive Charter Elementary School	Atlanta
City of Atlanta - Out of School Time Programming at Dunbar	Atlanta
Hidden Cove Summer Camp	Atlanta
Burn Boot Camp	Atlanta
Woodland Elementary School	Atlanta
Abrakadoodle - The Spanish Academy	Atlanta
Sandy Springs Middle School	Atlanta
Dunwoody Springs Elementary School	Atlanta
Hutchins Vanessa A	Atlanta
Tuxedo Elementary School	Atlanta
High Point Elementary School	Atlanta
Arthur M. Blank Early Learning Center at E.A. Ware	Atlanta
Sutton Sixth Grade Campus Middle School	Atlanta
Atlanta Jewish Academy Inc.	Atlanta
Smith Intermediate Elementary School	Atlanta
Echols Learning Academy	Atlanta
Smith Elementary School	Atlanta
Feed My Lambs Atlanta	Atlanta
Jackson Elementary School	Atlanta
Boys & Girls Clubs of Metro Atlanta-John H. Harland Unit	Atlanta
Ridgeview Middle School	Atlanta
Gymboree Play & Music (Johns Creek)	Atlanta
Carr Dorothy L	Atlanta
Adams Deidre Y	Atlanta
Easter Seals Child Dev Ctr - Mansell Court	Atlanta
Boyd Elementary School	Atlanta
Artportunity Knocks ASP @ Atlanta Heights Charter School	Atlanta

BEST MSHS	Atlanta
Coretta Scott King MSHS	Atlanta
Scott Elementary School	Atlanta
Early Start Learning Development Center	Atlanta
Artportunity Knocks @ HAES	Atlanta
North Atlanta High School	Atlanta
Brandon Primary Elementary School	Atlanta
Bass-Patterson Pamela D	Atlanta
Crabapple Montessori School	Atlanta
Blalock ES Elementary School	Atlanta
City of Atlanta - Out of School Time Programming at Collier Park	Atlanta
Bolton Academy Elementary School	Atlanta
City of Atlanta - Out of School Time Programming at J.D. Sims	Atlanta
Harvest Rain Academy	Atlanta
Givens Tiffany L	Atlanta
Gift of Love Early Learning Center	Atlanta
Howard, David T. Middle School	Atlanta
Hope-Hill Elementary School	Atlanta
Atlanta Music Project - The Gilbert House	Atlanta
Hill, C.W. Charter	Atlanta
Grant Park Academy of the Arts	Atlanta
A Step of Faith Christian Academy LLC	Atlanta
Arlington Christian School	Atlanta
Cook Elementary School	Atlanta
Centennial Place ESMS	Atlanta
Continental Colony	Atlanta
Bethune Elementary School	Atlanta
Bright Beginnings Children's Center	Atlanta
Kennedy Elementary School	Atlanta
Camp Village Inc. - Village IMAGE Printing	Atlanta
Carr Belinda	Atlanta
E-PLEX Afterschool/Academy/AMS Program	Atlanta
Alliance Theatre Winter and Summer Camp	Atlanta
Denham Theresa	Atlanta
Herndon, Alonzo Elementary School	Atlanta
Herndon, Alonzo Elementary School	Atlanta
Washington, Booker T. High School	Atlanta
Girls on the Run of Atlanta	Atlanta
APEC After School Enrichment @ Liberty Point	Atlanta
Jones Elementary School	Atlanta
Front Row Early Learning Academy	Atlanta
Boys & Girls Clubs of Metro Atlanta-Jesse Draper Unit	Atlanta
Grove Park Elementary School	Atlanta
Stanton, F.L. Elementary School	Atlanta
A Thru Z Childcare & Learning Center	Atlanta
Ellis Regina A	Atlanta
Turner MS Middle School	Atlanta

Lewis Invictus Academy Middle School	Atlanta
Early Enrichment Center	Atlanta
Douglass, Frederick High School	Atlanta
Boys & Girls Clubs of Metro Atlanta - At Promise Club	Atlanta
Usher Elementary School	Atlanta
Woodson, Carter G. Elementary School	Atlanta
Doctor Daycare Inc.	Atlanta
Oglethorpe Elementary School	Atlanta
Cherokee Town & Country Club Teepee	Atlanta
City of Atlanta - Out of School Time Programming at Central Park	Atlanta
Angels Academy	Atlanta
Brown Middle School	Atlanta
Finch Elementary School	Atlanta
ABC Learning Academy 24	Atlanta
Georgia State University Early College Program	Atlanta
Code Ninjas Milton	Atlanta
A Gift From Heaven Academy	Atlanta
Harris, Joel Chandler Elementary School	Atlanta
Harris, Joel Chandler Elementary School	Atlanta
Agape Community Center at St. Anne's Episcopal Church	Atlanta
Tuskegee Airmen Global Academy Elementary School	Atlanta
Creative Beginnings Pre-School Academy	Atlanta
Howard Cynthia H	Atlanta
High Museum Summer Art Camp	Atlanta
Gula Connie L	Atlanta
Atlanta Technical College Early Education Center	Atlanta
Dailey-Hazel Ione W	Atlanta
Building Blocks Learning Academy	Atlanta
Beecher Hills Elementary School	Atlanta
Active Youth Academy	Atlanta
Cascade Elementary School	Atlanta
ALHF- Seven Courts	Atlanta
Andrew P. Stewart Center	Atlanta
Fulton Leadership Academy Inc	Atlanta
Peyton Forest Elementary School	Atlanta
City of Atlanta - Out of School Time Programming at Grant Park	Atlanta
The Day School Of The Sandy Springs Christian Church	Atlanta
Berean Christian Junior Academy	Atlanta
Continental Colony Elementary School	Atlanta
Camp Village Inc. C.A.U.S.E. for Elegance	Atlanta
Therrell High School	Atlanta
Atlanta Dance and Music Academy	Atlanta
Airborne Gymnastics Club USA	Atlanta
Young Middle School	Atlanta
West Manor Elementary School	Atlanta
Dahjia's Learning Academy and Daycare	Atlanta
Happy Feet Soccer	Atlanta

Andrew P. Stewart Center at The Kindezi School at Gideons	Atlanta
Drama and Arts Academy	Atlanta
Harper-Archer Elementary School	Atlanta
Fain, Margaret Elementary School	Atlanta
Communities in Schools - West End Academy	Atlanta
Mays High School	Atlanta
Felton Felicia M	Atlanta
An Angel's Touch Learning Center II	Atlanta
APEC After School Enrichment @ Feldwood	Atlanta
Congregation B'nai Torah Preschool	Atlanta
Deerwood Elementary School	Atlanta
Ferreira Olivia	Atlanta
Adamsville Charter	Atlanta
Headstart Montessori	Atlanta
Boys & Girls Clubs of Metro Atlanta-Center for New Generation/Connally Elementary Unit	Atlanta
City of Atlanta - Out of School Time Programming at Grove Park	Atlanta
Hollis Innovation Academy	Atlanta
Fickett Elementary School	Atlanta
Benson Jane D.	Atlanta
APEC After School Enrichment @ EC West	Atlanta
Miles, Leonora P. Elementary School	Atlanta
Bright Generations Downtown	Atlanta
GERI'S ASP	Atlanta
Generation Infocus @ Hapeville Middle Charter School	Atlanta
Randolph Elementary School	Atlanta
Sandtown Middle School	Atlanta
Beautiful Mindz Academy	Atlanta
Gems Learning Academy	Atlanta
Bunche Middle School	Atlanta
Thomasville Elementary School	Atlanta
Create Your Dreams (C.Y.D)	Atlanta
A Smart Start Learning Academy	Atlanta
Huffman Teresa C	Atlanta
Chung's Taekwondo Academy	Atlanta
West Elementary School	Atlanta
Jackson, Maynard H. Jr High School	Atlanta
Parkside Elementary School	Atlanta
Atlanta Music Project - South Bend Center for Art and Culture	Atlanta
Benteen Elementary School	Atlanta
Afterschool Enrichment Program	Atlanta
Childcare Network #28	Atlanta
Waters ES Elementary School	Atlanta
Waters ES Elementary School	Atlanta
South Atlanta High School	Atlanta
Action! After School - Grace	Atlanta
Heritage Academy Elementary School	Atlanta

APEC After School Enrichment @ Campbell	Atlanta
Humphries Elementary School	Atlanta
Camp Hope	Atlanta
Abrakadoodle - The Gym at Peachtree Presbyterian	Atlanta
Dobbs Elementary School	Atlanta
Bach to Rock Alpharetta	Atlanta
Brooks Richelle	Atlanta
Chattahoochee Nature Center-Camp Kingfisher/Owlets Camp	Atlanta
Slaton Elementary School	Atlanta
King, Martin Luther Jr Middle School	Atlanta
C.O.T.M.H Cultural Academy of Illuminated Scholars	Atlanta
HIES Auxiliary Programs	Atlanta
Barack and Michelle Obama Academy Elementary School	Atlanta
Long Middle School	Atlanta
Forrest Hills Non-Trad	Atlanta
Cleveland Avenue Elementary School	Atlanta
Ahayah Academy	Atlanta
Georgia Camps/Mind Body Sports Summer Camps	Atlanta
Contact Point	Atlanta
Slater Elementary School	Atlanta
Carver High School	Atlanta
Carver Early College High School	Atlanta
Angels Round My Shelter (arms)	Atlanta
Grady Cassandra E	Atlanta
City of Atlanta - Out of School Time Programming at Anthony Flanagan	Atlanta
Dunbar Elementary School	Atlanta
APEC After School Enrichment @ Seaborn Lee	Atlanta
Gideons Elementary School	Atlanta
Globe's Learning Center	Atlanta
Alpharetta Christian Academy	Atlanta
Hutchinson Elementary School	Atlanta
Grady - Ponce de Leon Center Playroom	Atlanta
Alphabet House	Atlanta
E-Plex Preschool	Atlanta
Atlanta Speech School Incorporated	Atlanta
Perkerson Elementary School	Atlanta
City of Atlanta - Out of School Time Programming at Washington Park	Atlanta
E.Rivers Elementary	Atlanta
Boys & Girls Clubs of Metro Atlanta-Joseph B. Whitehead Unit	Atlanta
Sylvan Middle School	Atlanta
Price Middle School	Atlanta
First Presbyterian Church	Atlanta
Happy Children's Day Care	Atlanta
Byrd Kimberly D	Atlanta
Atlanta Mission	Atlanta
Westlake High School	Atlanta
D.O.V.E.S. Delivering Opportunities Thru Vocational Education Services Corp.	Atlanta

Amana Academy ASEP	Atlanta
Fulton Science Academy Private School	Atlanta
City of Atlanta - Out of School Time Programming at English Park	Atlanta
Garden Hills Elementary School	Atlanta
Arthur M. Blank Family Youth YMCA	Atlanta
North Fulton Private	Atlanta
Atlanta Technical College Institute for Males (AIM) High School Leadership	Atlanta
Heards Ferry Elementary School	Atlanta
Atlanta Kick Karate and CrossFit	Atlanta
IEXCEL	Atlanta
First Baptist Church Alpharetta	Atlanta
Riverwood High School	Atlanta
Atlanta Girls' School	Atlanta
Fabricate Studios	Atlanta
Sutton Middle School	Atlanta
Future Scholars Enrichment Program Inc.	Atlanta
Children's Ark Academy	Atlanta
Gymboree Play & Music	Atlanta
Abundant Grace Academy	Atlanta
Alpharetta International Academy	Atlanta
North Springs High School	Atlanta
East Point Parks and Recreation	Atlanta
Archer HS High School	Atlanta
Here For You Foundation - Oxford Village	Atlanta
Kimberly Elementary School	Atlanta
City of Atlanta - Out of School Time Programming at Old Adamsville	Atlanta
A World of Knowledge Preschool & Academy	Atlanta
Children Today Montessori Learning Center	Atlanta
Ed Isakson Alpharetta Family YMCA Afterschool Program	Atlanta
Thomas Day Care Center Inc	Atlanta
Williams Juaquita M	Atlanta
Prime Time - Palmetto Elementary School	Atlanta
The Youth Network Group	Atlanta
Temple Sinai Preschool	Atlanta
The Tutor Shop at Manning Oaks Elementary	Atlanta
The Legacy Centre Preschool Inc	Atlanta
Sae Han TaeKwondo	Atlanta
Prime Time - Hapeville	Atlanta
LaAmistad After School of Church of the Redeemer	Atlanta
Northwest Youth Power @ Magnolia	Atlanta
Mt. Pisgah Christian School - Early School Division	Atlanta
Ivy Bridge Academy After-school Debate Program - Autrey Mill Middle School	Atlanta
New Life Academy	Atlanta
North Fulton Child Development Center	Atlanta
Ivy Bridge Academy After-School Program - Creek View Elementary School	Atlanta
KinderCare Learning Center #1342	Atlanta
North Point Prep	Atlanta

Ready Set Fun	Atlanta
Johns Creek Christian Preschool	Atlanta
STAR House Foundation at Esther Jackson Elementary	Atlanta
Prime Time - Barnwell	Atlanta
Peachtree Summit Child Care Center	Atlanta
Karli Learning Academy Inc	Atlanta
Smith After School	Atlanta
Play-Well TEKnologies Summer Day Camp: Johns Creek Art Center	Atlanta
Precious Minds Learning Academy LLC	Atlanta
Perez-Rosas Rosa M	Atlanta
Morrow Irene	Atlanta
Medlock Bridge Montessori School	Atlanta
Northeast Intown YWCA	Atlanta
Jones Barbara J	Atlanta
Parker - Chase - East Roswell	Atlanta
Malone Aleyne D.	Atlanta
PRIME TIME - DOLVIN	Atlanta
Milton Montessori School at Bethany Bend	Atlanta
Kids 'R Special Inc.	Atlanta
John Lewis Invictus Academy	Atlanta
Kate's Club	Atlanta
International Preschools at Morningside LLC	Atlanta
It Takes A Village Learning Center	Atlanta
M.B.P.C.F. - Fresh Start	Atlanta
Lite House Partners Inc- Harrington Park	Atlanta
Park Schools Montessori	Atlanta
Kidzz Choice Academy Inc	Atlanta
Play-Well TEKnologies Summer Day Camp: City of Alpharetta	Atlanta
Kids Time Learning Academy #2	Atlanta
Prestige Learning Center	Atlanta
Prime Time - Summit Hill Elementary School	Atlanta
Lanette L. Suttles Child Development Center	Atlanta
Scott-Carter Romona M	Atlanta
International Charter School of Atlanta ASP After School Program	Atlanta
McNaughton Debrah C	Atlanta
Open Arms Lutheran Child Development Center of Buckhead	Atlanta
Oglesby Larisha	Atlanta
Mama Ronda Child Care Center	Atlanta
Kiddos Second Ponce	Atlanta
Ollie's Tots Learning Center LLC	Atlanta
Pine Grove Academy	Atlanta
Reef House Learning Center	Atlanta
Kinder Kollege Christian School	Atlanta
Robinson Deedrea A	Atlanta
Open Arms Lutheran Child Development Center	Atlanta
La Dee Da LLC	Atlanta
Ms. Niecy's Home Away From Home Learning Center	Atlanta

My First Academy	Atlanta
SMED - Students Making Educated Decisions	Atlanta
LA Fitness Kids Klub @ Sandy Springs	Atlanta
Kiddie Academy of Alpharetta	Atlanta
Prime Time - Findley Oaks	Atlanta
Lite House Partners Inc. - Village of College Park	Atlanta
Prime Time - River Eves Elementary School	Atlanta
Primrose School of Grant Park	Atlanta
Ivy Bridge Academy After-School Debate Program -River Eves Elementary School	Atlanta
Maylan International Academy Johns Creek	Atlanta
New Change Early Learning Center	Atlanta
Little Linguists International	Atlanta
Preferred School Care at Bolton Academy	Atlanta
Simmons Lundy J	Atlanta
Little Sunshine's Playhouse and Preschool	Atlanta
Precious Jewels Learning Academy	Atlanta
Karli World Academy Inc.	Atlanta
Little Scholars Academy of Atlanta	Atlanta
Maria's Casa LLC	Atlanta
Springmont School Inc.	Atlanta
Southern Elite Gymnastics	Atlanta
Krafchick Amy M.	Atlanta
Ready Set Go Early Learning Center	Atlanta
North Springs United Methodist Church	Atlanta
Jamboree Early Learning Center	Atlanta
Palmetto Youth League Inc.	Atlanta
RISPA LLC	Atlanta
Mental Fitness @ Chattahoochee Hill Charter	Atlanta
Prime Time - Park Lane Elementary School	Atlanta
Kids 'R' Kids #51	Atlanta
S.O.U.T.H Always LLC	Atlanta
Ivy Bridge Academy After-School Debate Program - Ocee Elementary School	Atlanta
Kidstop Daycare & Learning Center	Atlanta
Resurgence Hall	Atlanta
Preferred School Care at West Manor Elementary	Atlanta
Kotike Saritha B	Atlanta
Suluki Khayriyyah N	Atlanta
Kingdom Childcare and Learning 1 Inc	Atlanta
Little Creek Academy Preschool	Atlanta
Right at School at Crabapple Crossing Elementary	Atlanta
Saint John Child Development Center	Atlanta
Kids Academy & Early Learning Center LLC	Atlanta
International Charter School of Atlanta Afterschool Program	Atlanta
Prime Care Learning Center	Atlanta
JAC Preschool	Atlanta
KIDazzle Child Care and Learning Center	Atlanta
YMCA After School @ College Park Elementary	Atlanta

Orbit Arts Theatrical Productions & Summer Camps	Atlanta
Northside Hospital Child Development Center	Atlanta
Little Stars Learning Academy	Atlanta
Preferred School Care at Deerwood Academy	Atlanta
Y Afterschool @ Lake Forest Elementary	Atlanta
The Dojo American Karate	Atlanta
Primrose School of Midtown	Atlanta
Y Afterschool @ Woodland Elementary	Atlanta
The Dojo American Karate Center	Atlanta
Regina's Daycare	Atlanta
Lite House Partners Inc - Legends of Laura Creek	Atlanta
Preferred School Care at Parkside Elementary	Atlanta
Prime Time @ Hamilton E Holmes Elementary	Atlanta
Oak Hill Center	Atlanta
Lionheart School The	Atlanta
Little Sunshine's Playhouse & Preschool	Atlanta
The Dojo at Milton	Atlanta
The Suzuki School at Ponce City Market	Atlanta
Trinity AME Early Learning Center	Atlanta
The School for Creative Achievers @ The McConico Learning Center	Atlanta
Queen of Angels	Atlanta
Matthews Edna F	Atlanta
Inman Park Cooperative Preschool	Atlanta
LA Fitness Kids Klub - Ansley Mall	Atlanta
St. Francis Day School	Atlanta
Primrose School of Roswell North	Atlanta
Smart Yolande B	Atlanta
Kids 'R Kids #28	Atlanta
LA Fitness Kids Klub @ College Park	Atlanta
LifeTime Fitness - Atlanta	Atlanta
Little Champions Learning Center	Atlanta
Kids on Canton	Atlanta
Right at School at Heards Ferry Elementary School	Atlanta
Prime Time - State Bridge	Atlanta
Sylvan Hills Day Nursery- Gdch	Atlanta
Torah Tots Preschool	Atlanta
Suzuki School	Atlanta
Trinity Northwest Atlanta Early Learning Center-Trinity	Atlanta
Jacob's Ladder	Atlanta
Morningside Presbyterian Preschool	Atlanta
Precious Pearls Little Angels Academy	Atlanta
Johns Creek UMC Preschool	Atlanta
Shred415 Sandy Springs	Atlanta
Kids 'R' Kids #32	Atlanta
LA Fitness Kids Klub @ Atlantic Station	Atlanta
Jeannette Cathy Children's Center	Atlanta
Parkside @ Camp Creek	Atlanta

Prime Time - Medlock Bridge	Atlanta
Prime Time - Manning Oaks	Atlanta
Shred415	Atlanta
Johns Creek Montessori School of Georgia	Atlanta
Peachtree Presbyterian Church-The Nest	Atlanta
Prime Time - Northwood	Atlanta
Ivy Bridge Academy After-School Debate Program - Abbotts Hill Elementary School	Atlanta
Ivy Bridge Academy After-Debate Program - Dolvin Elementary School	Atlanta
Sheltering Arms - Oakley Township	Atlanta
SafeHaven Youth Enrichment Program	Atlanta
Peachtree Park Prep	Atlanta
Johnson Shunya D	Atlanta
Minnie Howell Child Development Center	Atlanta
Prime Time - Lake Windward	Atlanta
South Fulton Studios	Atlanta
Stephen's Loving Arms Childcare	Atlanta
Preschool at Northside Drive Baptist Church	Atlanta
Solomon's Temple Foundation	Atlanta
L5P AMP - CMC Little 5 Points	Atlanta
Play-Well TEKnologies Summer Day Camp: City of Johns Creek - New Town	Atlanta
Peachtree Presbyterian Preschool	Atlanta
Little Da Vinci International School	Atlanta
Sheltering Arms - Educare Atlanta	Atlanta
YMCA ASP at Woodson Park Academy	Atlanta
Samuel Nabrit Child Care Center	Atlanta
Rosser Patricia A	Atlanta
Sheltering Arms - Stonewall Tell	Atlanta
The S.E.E.D. Academy	Atlanta
Tichenor Norma	Atlanta
Turner Mary J	Atlanta
Sydney's Pampered Peach Daycare	Atlanta
Mahaffey Margarita I	Atlanta
LaAmistad After School at Peachtree Presbyterian Church	Atlanta
Watch Me Grow Learning Center Inc.	Atlanta
The Children's Campus at Georgia Tech	Atlanta
The Sunshine House #94	Atlanta
Villages @ Carver-The Ascent Project	Atlanta
Trinity Presbyterian Church of Atlanta Inc.	Atlanta
The Atlanta STEM Academy	Atlanta
Safe Haven YEP @ Cliftondale Elem.	Atlanta
Mount Pisgah Christian School	Atlanta
Jewish Kids Groups	Atlanta
King's Ridge Christian School	Atlanta
Pierce Dana E	Atlanta
IMHOTEP Academy	Atlanta
Kid's Time Early Learning Center #2	Atlanta
Mcclendon Shelia M	Atlanta

Zion Christian Academy	Atlanta
Play-Well TEKnologies Summer Day Camp: Johns Creek Shakerag	Atlanta
Montessori Scholars	Atlanta
Outdoor Activity Center	Atlanta
Ivy Bridge Academy After-School Debate Program - Fulton Academy of Science and Technology	Atlanta
St. Thomas Aquinas Preschool	Atlanta
Leapfrog Academy of Excellence	Atlanta
Precious Ones Preschool and Day Care Center	Atlanta
Lite House Partners Inc. - The Stations of Richmond Hill	Atlanta
Purpose Built Schools of Atlanta @ Slater Elementary	Atlanta
Ropheka Rock of the Word Ministries Incorporated	Atlanta
Pinnacle Pointe Daycare Academy	Atlanta
LA Fitness - Kids Klub	Atlanta
The Goddard School of Roswell	Atlanta
Mary E. Kelley School of Excellence	Atlanta
A Step at a Time Early Learning	Atlanta
A Step of Faith Christian Academy II	Atlanta
A. Philip Randolph Elementary	Atlanta
ABC Another Bright Creation Early Learning and Daycare Center	Atlanta
ABC Early Learning Academy Inc.	Atlanta
ABC Learning Academy	Atlanta
Alkin Academy	Atlanta
All Fired Up Art Camp	Atlanta
An Angel's Touch Learning Center	Atlanta
Appletree - ABC Preschool	Atlanta
Bridges from School to Work	Atlanta
Buckhead Christian School	Atlanta
Buckhead Preparatory School	Atlanta
Carrie Steele-Pitts Home Inc.	Atlanta
Chaya Mushka Children's House	Atlanta
Children's Campus at A & B	Atlanta
City of Atlanta - Out of School Time Programming at MLK Jr. Recreation & Aquatic Center	Atlanta
City of Atlanta - Out of School Time Programming at Peachtree Hills	Atlanta
Dance Theatre Summer Dance Camp	Atlanta
Discovery Montessori of Georgia	Atlanta
Echols JaKenna A.	Atlanta
Educationally Speaking Center for Learning Inc.	Atlanta
Family Care Center	Atlanta
Fruits of Love Early Learning Development LLC.	Atlanta
Future Foundation @ Banneker High School	Atlanta
Future Foundation @ Woodland Middle - After School	Atlanta
Georgia Camps/Mind Body Sports Summer Camps - Alpharetta	Atlanta
Gesher L' Torah Preschool	Atlanta
Grier Dorenda	Atlanta
Guidepost Montessori at Deerfield	Atlanta
Hapeville Elementary	Atlanta

Indelible Impressions Learning Center	Atlanta
Innovative Minds Learning Center	Atlanta
Isom Jennifer F.	Atlanta
Joly Colette F	Atlanta
Jump Start Gym	Atlanta
Kids Kondo Inkorporation	Atlanta
Kid's Time Early Learning Center Inc.	Atlanta
Lifetime Youth Learning Center	Atlanta
Lite House Partners Inc. - Preserve at Collier Ridge	Atlanta
Little House of Love Learning Center	Atlanta
Little Stars Academy	Atlanta
Loving Care Day Care Center	Atlanta
Mikros Enrichment Camp	Atlanta
Mitchell Clara	Atlanta
Musau Nyanga	Atlanta
My Little Lambs Christian Daycare	Atlanta
Nicholas House - Nick Activity Hour	Atlanta
Northbrook Preschool	Atlanta
Parents' Morning Out - PMO	Atlanta
Patterson-Epps Jonneise I	Atlanta
Perimeter Church	Atlanta
Power Up Martial Arts	Atlanta
Preferred (School) Care @ L.P. Miles Elementary	Atlanta
Premier Learning Centers	Atlanta
Prime Time - Hillside	Atlanta
Prime Time - Mimosa School	Atlanta
Prime Time - Wilson Creek	Atlanta
Primrose School of Buckhead	Atlanta
Primrose School of Sandy Springs	Atlanta
PRUMC Drop-In Ministries	Atlanta
Rahmani Azra	Atlanta
Saint Anne's Day School	Atlanta
School of Rock - Johns Creek	Atlanta
Seeds of Faith Christian Academy	Atlanta
Sheltering Arms - D. H. Stanton	Atlanta
Smith-Andrews Chrisangela Y	Atlanta
SNDC Nutrition and Enrichment Program	Atlanta
St. John the Evangelist Catholic School	Atlanta
Still Waters Youth Sinfo-Nia	Atlanta
The Alfred and Adele Davis Academy	Atlanta
The Spanish Academy Buckhead Campus	Atlanta
Timothy's Learning Center	Atlanta
Weinberg Early Learning Center at the Temple	Atlanta
Georgia State University Camps - Atlanta	Atlanta
Atlanta City Hall	Atlanta
South Fulton City Hall	Atlanta
Milton Library	Atlanta

Northside Library	Atlanta
Abernathy Arts Center	Atlanta
Sandy Springs Library	Atlanta
North Fulton Service Center (North Annex)	Atlanta
Northwest Library at Scotts Crossing	Atlanta
Joan P. Garner Library at Ponce de Leon	Atlanta
Center for Health & Rehabilitation	Atlanta
Auburn Avenue Research Library	Atlanta
Justice Center	Atlanta
Central Maintenance Facility	Atlanta
Washington Park Library	Atlanta
Hammond House Museum	Atlanta
West End Performing Arts Center	Atlanta
County Extension Office/East Point Education Center(Coop Extension Services)	Atlanta
Adams Park Library	Atlanta
Tom Lowe Shooting Range	Atlanta
Merk-Miles Transfer Facility and Recycling Center	Atlanta
Wolf Creek Library	Atlanta
Fire Station #11 Fulton Indust.	Atlanta
Adamsville Regional Health Center	Atlanta
Southeast Neighborhood Senior Center	Atlanta
Louise Watley Library at Southeast Atlanta	Atlanta
Hapeville Neighborhood Senior Center	Atlanta
Oak Hill Child, Adolescent & Family Center	Atlanta
Hapeville Library	Atlanta
DFACS South Service Center	Atlanta
Cedar Grove Community Building	Atlanta
Palmetto Library	Atlanta
Auburn Neighborhood Senior Center	Atlanta
Sandy Springs Recycle Center	Atlanta
Peachtree Branch Library	Atlanta
Fulton County Airport Brown Field	Atlanta
Roswell Neighborhood Senior Center	Atlanta
DFACS North Service Center (Bankhead)	Atlanta
Atlanta-Zone 2 -Police Department	Atlanta
Atlanta-Zone 1 -Police Department	Atlanta
Atlanta-Zone 4 -Police Department	Atlanta
Atlanta-Zone 3 -Police Department	Atlanta
Atlanta-Zone 5 -Police Department	Atlanta
Fire Station 21 Atlanta	Atlanta
Fire Station 26 Atlanta	Atlanta
Fire Station 19 Atlanta	Atlanta
Fire Station 15 Atlanta	Atlanta
Fire Station 27 Atlanta	Atlanta
Fire Station 23 Atlanta	Atlanta
Fire Station 8 Atlanta	Atlanta
Fire Station 38 Atlanta	Atlanta

Fire Station 1 Atlanta	Atlanta
Fire Station 16 Atlanta	Atlanta
Fire Station 22 Atlanta	Atlanta
Fire Station 7 Atlanta	Atlanta
Fire Station 14 Atlanta	Atlanta
Fire Station 17 Atlanta	Atlanta
Fire Station 5 Atlanta	Atlanta
Fire Station 25 Atlanta	Atlanta
Fire Station 9 Atlanta	Atlanta
Fire Station 31 Atlanta	Atlanta
Fire Station 10 Atlanta	Atlanta
Fire Station 2 Atlanta	Atlanta
Fire Station 30 Atlanta	Atlanta
Fire Station 20 Atlanta	Atlanta
Fire Station 24 Atlanta	Atlanta
Fire Station 11 Atlanta	Atlanta
Fire Station 28 Atlanta	Atlanta
Fire Station 29 Atlanta	Atlanta
Fire Station 3 Atlanta	Atlanta
Fire Station 34 Atlanta	Atlanta
Fire Station 4 Atlanta	Atlanta
Center for Spiritual Living	Atlanta
Grace Lutheran Church	Atlanta
Bethesda Christian Ministries	Atlanta
Atlanta Westside Presbyterian Church	Atlanta
Trinity Anglican Church (Westside)	Atlanta
The Midtown Bridge Church	Atlanta
Blueprint Church	Atlanta
Victory Tabernacle United Holy	Atlanta
Believers House Inc	Atlanta
Faithful Friends Baptist Church	Atlanta
Greater Springfield Baptist Church	Atlanta
Greater New Hope Baptist Church	Atlanta
From the Heart Church Ministries	Atlanta
Saint Peter Missionary Baptist Church	Atlanta
All Nations United Gospel Church	Atlanta
Growing Faith Ministries	Atlanta
Saint Mark African Methodist Episcopal Church	Atlanta
New Life Christian Bible Church	Atlanta
New Unity Missionary Baptist Church	Atlanta
Valley View Church of God in Christ	Atlanta
Valley View Church of God in Christ	Atlanta
Fountain of Hope Christian Church	Atlanta
Ebenezer United Church Inc	Atlanta
Masjid Al-Quran Inc	Atlanta
Divine House Of Praise	Atlanta
Last Chance Church	Atlanta

Overcoming Church of God Faith	Atlanta
Greater Bethel AME Church	Atlanta
Christ Church Presbyterian	Atlanta
Cathedral of Christ the King	Atlanta
Second Ponce De Leon Baptist Church	Atlanta
St Annes Episcopal Church	Atlanta
Center Congregational Church	Atlanta
The Diocese Not an Individual Church	Atlanta
Total Image Ministries	Atlanta
Haygood Memorial Methodist Church	Atlanta
Havuat Lev Shalem Inc	Atlanta
1027 Church	Atlanta
Morningside Baptist Church	Atlanta
The Temple	Atlanta
Buckhead Baptist Church	Atlanta
	Atlanta
Holy Spirit Catholic Church	Atlanta
The Gathering Oasis Church	Atlanta
St Dunstan's Episcopal Church	Atlanta
St Dunstans Episcopal Church	Atlanta
Wieuca Road Baptist Church	Atlanta
Chabad Of Downtown Universities	Atlanta
Springfield Missionary Baptist	Atlanta
Jehovah Jireh World Ministries	Atlanta
Destination Christian Temple Of Atlanta	Atlanta
Riverside Church Atlanta	Atlanta
Kingdom Assembly Of Grace And Truth	Atlanta
Word of God Ministries	Atlanta
Endeavor Church Atlanta	Atlanta
Collins Memorial	Atlanta
Northwest Baptist Church	Atlanta
Mount Ephraim Baptist Church	Atlanta
Pathway Christian Cathedral	Atlanta
New Life Pentecostal Way-Truth	Atlanta
Free Gospel Interdenominational Church	Atlanta
Free Gospel Interdenominational Church	Atlanta
Second Mt Vernon Baptist	Atlanta
Refreshing Word Fellowship Church of Atlanta	Atlanta
Inman Park Church	Atlanta
City Church Eastside	Atlanta
Druid Hills Presbyterian Church	Atlanta
Outreach Deliverance Ministry	Atlanta
Solid Rock Baptist Church	Atlanta
Kadampa Meditation Center Georgia	Atlanta
Atlanta Bah? ├¡'?┬Í Center	Atlanta
Bah? ├¡'?┬Ís Of Atlanta	Atlanta
Abundant Life Church of God in Christ	Atlanta

Mount Zion Second Baptist Church Inc	Atlanta
Welcome to CAC Wosem Atlanta	Atlanta
Our Lady Of Lourdes Catholic Church Atlanta Inc	Atlanta
Blueprint Church	Atlanta
BLUEPRINT CHURCH	Atlanta
Butler Street Baptist Church	Atlanta
Lutheran Church Of The Redeemer	Atlanta
Ponce Presbyterian Church	Atlanta
Basilica Of The Sacred Heart Of Jesus	Atlanta
St Luke's Episcopal	Atlanta
Big Bethel AME Church	Atlanta
First Congregational Church	Atlanta
Butler Street Christian Methodist Episcopal	Atlanta
Catholic Shrine Of The Immaculate Conception	Atlanta
Trinity United Methodist Church	Atlanta
Intown Atlanta Church Of Christ	Atlanta
Grace House - Lutheran & Episcopalian Campus Ministry	Atlanta
West Mitchell Street CME Church	Atlanta
West Mitchell Street CME Church	Atlanta
Friendship Baptist Church	Atlanta
Flipper Temple A M E Church	Atlanta
Vision Ministries Holiness Church	Atlanta
Simpson Street Church Of Christ Inc	Atlanta
Rivers of Life Ministries	Atlanta
Pilgrim Missionary Baptist Church	Atlanta
Faith Hope & Deliverance Temple	Atlanta
Greater Deliverance Baptist	Atlanta
Greater Deliverance Baptist	Atlanta
Pentecostal Temple R.C.	Atlanta
Bethel Community Church	Atlanta
Hunter Hill First Baptist Church	Atlanta
Sanctified Mount Zion Church of Nigeria in the United States. Inc.	Atlanta
NORTH AVENUE MISSIONARY BAPTIST CHURCH	Atlanta
Smith Chapel Full Gospel	Atlanta
GOD'S HOUSE OF PRAYERS	Atlanta
LUTHERAN CHURCH OF THE ATONEMENT	Atlanta
Holsey Temple C. M. E. Church	Atlanta
Holsey Temple C. M. E. Church	Atlanta
Holsey Temple C.M.E. Church	Atlanta
Greater Love Temple Ministries	Atlanta
Salem Bible Church	Atlanta
Redeeming Love Christian	Atlanta
ST PAUL OF THE CROSS	Atlanta
Refuge Temple Ministries, Inc.	Atlanta
Lindsay Street Baptist Church	Atlanta
Greater Fair Hill Baptist Church	Atlanta
Greater Vine City Baptist Church	Atlanta

Dawah Center of America	Atlanta
Abundant Love Unitarian Universalist	Atlanta
Community Masjid of Atlanta	Atlanta
West Hunter Street Baptist Church	Atlanta
Word Of Life Christian Ministries	Atlanta
Fairfield Baptist Church Of Worship Inc	Atlanta
Cornerstone Church	Atlanta
Faith Temple Christian Church	Atlanta
Greater Fortress Avenue Baptist	Atlanta
Mt Olive Baptist Church	Atlanta
Mount Olive Baptist Church	Atlanta
Providence Baptist Church	Atlanta
Greater New Light Baptist Church	Atlanta
Central Christian Church	Atlanta
Hillside International Truth Center	Atlanta
St Paul's Episcopal Church	Atlanta
Faith AME Zion Church	Atlanta
Faith AME Zion Church	Atlanta
New Life Atlanta Ministries LLC	Atlanta
Masjid Salaam	Atlanta
Masjid Al Salam Inc	Atlanta
Changing A Generation Full Gospel Baptist Church	Atlanta
Changing A Generation Full Gospel Baptist Church	Atlanta
Living In His Kingdom International Inc	Atlanta
Emmanuel Lutheran Church	Atlanta
Abundant Life Ministries Inc	Atlanta
Community Church Of God	Atlanta
Welcome All Missionary Baptist	Atlanta
Greater Elizabeth Bible Church	Atlanta
River of Life Christian Center	Atlanta
House Of Faith Christian Center Inc	Atlanta
Walkers Tabernacle Baptist Church	Atlanta
JADA International Ministries	Atlanta
Praise Christian Center	Atlanta
Deliverance Unlimited International	Atlanta
Deliverance Unlimited International	Atlanta
Muhammad Mosque	Atlanta
God's Acre Missionary Baptist Church	Atlanta
Ben Hill United Methodist Church	Atlanta
Ben Hill United Methodist Church	Atlanta
Mount Calvary Baptist Church	Atlanta
Emmanuel Christian Fellowship	Atlanta
Grace Fellowship	Atlanta
Southwest Congregational Church	Atlanta
International Ministries 2000	Atlanta
Holy Hill Church of God in Christ	Atlanta
Tabernacle Baptist Church	Atlanta

Mt Nebo Baptist Church	Atlanta
Haitian Ministry Theophile Church In Christ Inc.	Atlanta
Nipponzan Myohoji Atlanta Dojo	Atlanta
Abundant Life COGIC	Atlanta
Church Of Atlanta Lighthouse Inc	Atlanta
Bible Way Ministries	Atlanta
Icf Ministries	Atlanta
First Baptist Church	Atlanta
Love And Faith Mission Deliverance Church, Incorporated	Atlanta
The Holy Order Of Cherubim & Seraphim Movement Church	Atlanta
Holy Order of Cherubim & Seraphim Movement Church	Atlanta
St Paul United Methodist Church	Atlanta
PARK AVE BAPTIST CHURCH	Atlanta
St John the Wonderworker Orthodox Church	Atlanta
MT Carmel Baptist Church	Atlanta
New Dimension Church of God in Christ	Atlanta
Mt Pleasant Baptist Church	Atlanta
First Deliverance Church of Atlanta	Atlanta
Faith Baptist Church	Atlanta
Christ Centered Gospel Church	Atlanta
St Paul AME Church	Atlanta
St Paul Church	Atlanta
Central Holiness Church	Atlanta
Out of the Box Ministries	Atlanta
New shield of faith	Atlanta
Masjid Al-Mu'minun	Atlanta
New Hope Baptist Church	Atlanta
Greater Hopewell Cme Church	Atlanta
Greater Hopewell CME Church	Atlanta
Kingdom Difference Church	Atlanta
Sweet Honey in the Rock Restoration Church	Atlanta
New Pittsburg Kingdom Doors	Atlanta
The Beloved Community Church Of Atlanta, Inc.	Atlanta
Victory Outreach Church	Atlanta
Church Of Hope	Atlanta
Celestial Church of Christ	Atlanta
Celestial Church of Christ	Atlanta
True Deliverance Church	Atlanta
Crusselle Freeman Church Of The Deaf	Atlanta
Christ Full Of Grace And Truth Fellowship	Atlanta
Power Of Deliverance International Church	Atlanta
Powerhouse of Deliverance International	Atlanta
Chua Quang Minh	Atlanta
Southside Springfield Baptist Church Inc	Atlanta
New Life Tabernacle Cogic	Atlanta
Martin Street Church of God	Atlanta
Grace United Methodist Church	Atlanta

Eagles Nest Ministry	Atlanta
First Christian Community Episcopal Church	Atlanta
Mount Paran Church Of God	Atlanta
Mount Paran Church Of God	Atlanta
New Calvary Missionary Baptist Church	Atlanta
Woodland Hills Baptist Church	Atlanta
Timothy Pure Holiness Church	Atlanta
Chabad Intown	Atlanta
Saint Mark United Methodist Church	Atlanta
North Atlanta Church Of Christ	Atlanta
Reflections Ministries	Atlanta
Wheat Street Baptist Church	Atlanta
Butler Street Christian Methodist Episcopal Church	Atlanta
True Church of God Outreach Ministry	Atlanta
Congregation Beth Jacob	Atlanta
Holy Ghost Temple Church-God	Atlanta
LIFE Church of Atlanta	Atlanta
Atlanta Hope Center	Atlanta
Holy Spirit Catholic Church	Atlanta
New Hope AME Church	Atlanta
Word of God In Christ Gospel Church	Atlanta
Cosmopolitan AME Church	Atlanta
West Side Community C M E Church	Atlanta
First Mt Selah Baptist Church	Atlanta
Metro City Church	Atlanta
Believers Bible Christian Church	Atlanta
Linden CME Church	Atlanta
Peachtree Christian Church	Atlanta
Perfect Church	Atlanta
Prayer of Faith Church-God-Christ	Atlanta
Pathway Christian Church	Atlanta
Peaceway Spiritual Holiness Church	Atlanta
Iglesia El Buen Camino	Atlanta
Metro City Church	Atlanta
Episcopal Church Of Incarnation	Atlanta
Congregation Shearith Israel	Atlanta
Lutheran Church Of Atlanta	Atlanta
Westminster Presbyterian Church	Atlanta
Epworth Methodist Church	Atlanta
First Baptist Church Of Chattahoochee	Atlanta
LA Fitness Kids Klub at Camp Creek	Atlanta
Ebenezer Baptist Church	Atlanta
Congregation Beth Jacob	Atlanta
Church Of Epiphany	Atlanta
Operation PEACE After School Program	Atlanta
Briarcliff Baptist Church	Atlanta
Holy Spirit Church Atlanta Inc	Atlanta

Ascension Lutheran Church	Atlanta
Northside Park Baptist Church	Atlanta
The Greater Piney Grove Baptist Church Inc	Atlanta
Al-Farooq Masjid	Atlanta
EMBASSY CHURCH	Atlanta
Gathering Place Worship Center	Atlanta
Peachtree Baptist Church	Atlanta
Trough Faith We Can Inc.	Atlanta
Muhammad's Temple	Atlanta
Masjid Ash Shura	Atlanta
Five Points Islamic Center	Atlanta
Ikhra Center	Atlanta
Masjid Al-Etihad	Atlanta
Grace Midtown Church	Atlanta
Neighborhood Church	Atlanta
New Moriah Christian Ministries	Atlanta
St Martin Spiritual Church	Atlanta
Word of Life Outreach Ministries	Atlanta
New Era Missionary Baptist Convention of Georgia Inc	Atlanta
Showers of Blessings Outreach Ministries Inc	Atlanta
Chattahoochee Hills Elementary School	Chattahoochee Hills
Chattahoochee Hills Middle School	Chattahoochee Hills
Chattahoochee. Hills City Hall	Chattahoochee Hills
Love & Care Center	Chattahoochee Hills
Summit Hill Elementary	Chattahoochee Hills
Chattahoochee Hills -Police Department	Chattahoochee Hills
Fire Station Chattahoochee Hills	Chattahoochee Hills
Providence Baptist Church	Chattahoochee Hills
Sardis Baptist Church	Chattahoochee Hills
Hembree Springs Elementary	College Park
Main Street Academy (Lower Academy) Elementary School	College Park
Main Street Academy (Upper Academy) Middle School	College Park
Easter Seals Child Development Center-Sylvan	College Park
McNair Middle School	College Park
Bethune Elementary School	College Park
Ambitious Minds Academy	College Park
Andrew & Walter Young Family YMCA Preschool	College Park
Bright Futures Academy	College Park
Early Intervention Program	College Park
Love Nolan Elementary School	College Park
Buckhead Preparatory School	College Park
S.L. Lewis Elementary School	College Park
Banneker High School	College Park
Atlanta Children's Shelter Inc.	College Park
Highlands School	College Park
Another Chance of Atlanta Inc.	College Park
College Park Elementary School	College Park

Dor Bernadette	College Park
Stonewall Tell Elementary School	College Park
City of Atlanta - Out of School Time Programming at Adams Park	College Park
Cliftondale Elementary School	College Park
Berean Child Development Center	College Park
Ahava Early Learning Center	College Park
Seaborn Lee Elementary School	College Park
Holmes Iysha M	College Park
Wolf Creek Elementary School	College Park
Camp Creek Middle School	College Park
Grow Montessori School Inc.	College Park
Skyview High School	College Park
Heritage Elementary School	College Park
Feldwood Elementary School	College Park
McClarin High School	College Park
Blessed & Bright PMO @ North Springs UMC	College Park
The Tutor Shop @ State Bridge Crossing Elementary	College Park
The Atlanta Scholar Academy	College Park
Today's Kids Tomorrow's Leaders Inc.	College Park
We Rock the Spectrum Kid's Gym	College Park
The Tutor Shop @ Dolvin ES	College Park
S.A.Y. Yes Center	College Park
Johnson Diane Y	College Park
The Westside School	College Park
The Tutor Shop at Barnwell Elementary School	College Park
The Young Adult Guidance Center	College Park
Preferred School Care at Beecher Hills Elementary	College Park
The Sunshine House #96	College Park
Village Montessori School	College Park
The Goddard School	College Park
Visionary Learning Academy	College Park
The Goddard School	College Park
KidsGym USA	College Park
The School House Academy LLC	College Park
Inspiration Station Academy	College Park
Intown Jewish Preschool	College Park
Ivy Bridge Academy After-School Debate Program - Shakerag Elementary School	College Park
Mathnasium of Sandy Springs	College Park
Total Transformation	College Park
Vox Teen Communications	College Park
LaAmistad After School @ Centro Catholic HSCC	College Park
The Youth Network @ WP	College Park
The G.A.T.E.S. Academy	College Park
Wee Care Early Learning Center Inc.	College Park
SLAM Academy of Atlanta Culture Club	College Park
Two Gold Tae Kwon Do	College Park
WINGS at Bethune Elementary School	College Park

Tiny Treasures Academy	College Park
Tompkins Jr. Alonzo L	College Park
The Success Learning Academy 3	College Park
Love Bug Learning Center @ Greenbriar	College Park
Walk Leap Grow Early Learning Center	College Park
The Tutor Shop at Alpharetta Elementary School	College Park
Youth Sports League @ Mays High School	College Park
Omni International School Academy	College Park
The Hive @ Morris Brandon Primary	College Park
Trees Atlanta Inc.	College Park
Villages at Carver YMCA Day Camp	College Park
The Mills Academy	College Park
The Tutor Shop at Birmingham Falls Elementary	College Park
The Tutor Shop at Sweet Apple Elementary	College Park
Play-Well TEKnologies Summer Day Camp: Grant Park Cooperative PS- Cabbagetown	College Park
The Preschool PRUMC	College Park
The Timbers	College Park
The Goddard School Sandy Springs West	College Park
Price Natasha O	College Park
The Tutor Shop at Cogburn Woods Elementary	College Park
OADA Summer Camp at New Shield of Faith	College Park
The Preschool at Second-Ponce	College Park
Rosaleana's Community Development Center Inc.	College Park
Sundance Academy	College Park
The Academy of Union City	College Park
The Dojo American Karate Center	College Park
The Galloway School	College Park
The Learning Loft Academy LLC	College Park
The Tutor Shop @ Shakerag ES	College Park
The Tutor Shop @ Summit Hill ES	College Park
Tumbles	College Park
College Park City Hall	College Park
West End Library	College Park
College Park -Police Department	College Park
Fire Department College Park	College Park
Fire Station 2 College Park	College Park
Sword of the Spirit	College Park
Anointed Church of the Living God	College Park
Emmanuel Ministries International	College Park
Kingdom Builders Fellowship Church	College Park
Young Street Community Baptist Church	College Park
St Johns Episcopal Church	College Park
Providence Baptist Church	College Park
Breath of Life Gospel Ministry	College Park
Truth & Transformation Ministries	College Park
Oliver Grove Laotian Baptist Church	College Park
Mt Calvary Baptist Church	College Park

Oliver Grove Laotian Baptist Church	College Park
Restoration Christian Fellowship Center	College Park
South Fulton Medical Center	East Point
WellStar Atlanta Medical Center - South Campus	East Point
Regency Hospital of South Atlanta	East Point
Global Tech Afterschool @ Hollis Innovation Academy	East Point
Conley Hills Elementary School	East Point
Paul D. West Middle School	East Point
RISE Grammar Elementary School	East Point
RISE Prep Middle School	East Point
Woodland Middle School	East Point
Asa G Hiliard Elementary School	East Point
Future Stars Academy	East Point
Carlisle Montessori School	East Point
Parklane Elementary School	East Point
KIPP South Fulton Academy Middle School	East Point
Tri-Cities High School	East Point
Brookview Elementary School	East Point
Hamilton E. Holmes Elementary School	East Point
The Peach Pit Prado	East Point
The Drake House	East Point
Peachtree Road Lutheran Child Development Center	East Point
The Dojo American Karate Centers	East Point
The Play Pad	East Point
Sustainable Seeds	East Point
The EJ Wright School for Success	East Point
Wieuca Road Baptist Church CDC	East Point
Temple Beth Tikvah Preschool	East Point
The Club After School @ Hope Hill Elementary	East Point
Westminster Schools Inc.	East Point
Smart Start	East Point
Wiz Kidz 24 Hour Childcare	East Point
The Boyce L. Ansley School	East Point
The Little Nook	East Point
The Attention Center c/o E.S.T.H.E.R. Project	East Point
The Consummate Schoolmaster	East Point
Y After School at West Roswell	East Point
Woodson Park YMCA Early Learning Center	East Point
Y Afterschool @ High Point Elementary	East Point
St. Peter Chanel Preschool	East Point
The Ormewood School	East Point
Young Life Academy	East Point
Kids R Kids Crabapple	East Point
The Little Gym of Alpharetta/ Johns Creek	East Point
The Goddard School - Parent's Night Out	East Point
The Marlowe School LLC	East Point
Windward Child Development Center	East Point

STAR House - Mimosa Elementary	East Point
Success4Life After School	East Point
The Children's School	East Point
Westside Kids	East Point
The Howard School	East Point
The Lovett School - ASAP	East Point
Young Leaders Academy of South Atlanta	East Point
The Greater Gift @ Cliftondale Park Community Center	East Point
Y Afterschool @ Dunwoody Springs Elementary	East Point
Joyful Praise Academy	East Point
The Greater Gift @ Sandtown Gym	East Point
YMCA @ Kindezi School at Old 4th Ward	East Point
College Park Library	East Point
East Point City Hall	East Point
East Point -Police Department	East Point
Fire Station 4 East Point	East Point
Fire Station 3 East Point	East Point
Fire Station 2 East Point	East Point
Fire Station 1 East Point	East Point
East Point Ave United Methodist	East Point
East Point Church	East Point
Impact Church	East Point
New Jerusalem Missionary Baptist Church	East Point
Mt Glory 1st Missionary Baptist Church	East Point
Mt Glory 1st Missionary Baptist Church	East Point
East Point First Mallalieu United Methodist Church	East Point
ISREALITE KINGDOM OF GOD	East Point
New Beginning With Christ	East Point
Water To Wine Faith Ministries	East Point
Masjid At-Taqwa	East Point
Trinity Covenant Outreach Ministries Inc	East Point
Christ Lutheran Church	East Point
Mount Olive Baptist Church Inc	East Point
Victory Baptist Church	East Point
Connally Drive Baptist Church	East Point
Greater Victory Christian Center	East Point
East Point Church	East Point
Divine Unity Missionary Baptist	East Point
Restoration Revival Church of God in Christ	East Point
Restoration Revival Church Of God In Christ	East Point
St Mark Lutheran Church	East Point
Sword of the Word Evangelistic	East Point
True Life Ministries, Inc.	East Point
First Baptist Church East Point	East Point
Tri-Cities Church	East Point
True Life Ministries	East Point
Educate-Enrich-Enable @ Humphries Elementary School	Fairburn

Campbell Elementary School	Fairburn
Future Leaders Christian Academy	Fairburn
Chastain Arts Center-Art a la Carte Summer Camp	Fairburn
Georgia Institute of Technology	Fairburn
Future Foundation @ Tri-Cities High - After School	Fairburn
Renaissance Elementary School	Fairburn
Appleton Early Learning Center	Fairburn
Renaissance Middle School	Fairburn
Langston Hughes High School	Fairburn
Evoline West Elementary School	Fairburn
Bear Creek Middle School	Fairburn
Creekside High School	Fairburn
Genesis Early Learning and Child Development Center	Fairburn
F. L. Stanton	Fairburn
The Tutor Shop at Crabapple Crossing Elementary School	Fairburn
Prime Time - Sweet Apple	Fairburn
Welch Traci B	Fairburn
Weimer Noel K	Fairburn
Roswell United Methodist Preschool & Kindergarten	Fairburn
Mount Vernon Presbyterian School	Fairburn
Robotic Explorers	Fairburn
The MJCCA Schiff School	Fairburn
Youth Volunteer Service and Learning Center	Fairburn
Vertical Thinking Team (Kipp Strive Primary School)	Fairburn
Victory Little Scholars	Fairburn
Urban Explorers Preschool	Fairburn
The Goddard School	Fairburn
Fairburn City Hall	Fairburn
Helen S. Mills Senior Multi-Purpose Facility	Fairburn
Justice Center-Lewis R. Slaton Courthouse	Fairburn
Romae T. Powell Juvenile Justice Center	Fairburn
Fairburn -Police Department	Fairburn
Fire Station 22 Fairburn	Fairburn
Fire Station 21 Fairburn	Fairburn
Fire Station 23 Fairburn	Fairburn
Charis Fellowship Center	Fairburn
Miller Grove Baptist Church	Fairburn
Living Word Church Ministries	Fairburn
Harvest Rain Church International	Fairburn
Mt Zion Baptist Church	Fairburn
New Horizons In Faith Church International, Inc	Fairburn
Crossroads Church South Fulton	Fairburn
First Christian Church	Fairburn
Fairburn United Methodist Church	Fairburn
Palmetto Neighborhood Senior Center	Fulton County
Buckhead Library	Fulton County
Martin Luther King Jr. Library	Fulton County

Justice Center-Charles L. Carnes Justice Center Building	Fulton County
Peachtree Street Offices-Housing and Human Services Office	Fulton County
Dogwood Neighborhood Senior Center	Fulton County
Central Training Center	Fulton County
East Point Library	Fulton County
Adamsville-Collier Heights Library	Fulton County
Aviation Community Cultural Center	Fulton County
Camp Fulton/Truitt 4-H Center-Education Center	Fulton County
Camp Truitt Neighborhood Senior Center	Fulton County
Alpharetta Library	Fulton County
South Fulton Service Center (South Annex)	Fulton County
Cleveland Avenue Library	Fulton County
Grace Community Fellowship Church	Fulton County
Grace Community Fellowship Church	Fulton County
Grace Community Fellowship Church	Fulton County
MISSION CENTER INC	Fulton County
Generation Infocus @ Wesley International Academy	Hapeville
Hapeville Charter Middle School	Hapeville
Hapeville Elementary School	Hapeville
The Peach Pit Gymnastics LLC	Hapeville
The Salvation Army Family Life Center	Hapeville
The Salvation Army Boys & Girls Club of Greater Atlanta Bellwood Unit	Hapeville
The Salvation Army Boys and Girls and Clubs of Greater Atlanta - Fuqua Unit	Hapeville
The Retreat @ Marketplace "Make a Difference"	Hapeville
Hapeville City Hall	Hapeville
Fairburn Library/Fairburn Hobgood-Palmer Library	Hapeville
Fulton County Jail	Hapeville
Hapeville -Police Department	Hapeville
Fire Station 1 Hapeville	Hapeville
Fire Station 2 Hapeville	Hapeville
St. John the Evangelist Catholic School	Hapeville
St John the Evangelist Catholic Church	Hapeville
Hapeville First Baptist Church	Hapeville
Faith Is the Victory Christian	Hapeville
Emory Johns Creek Hospital	Johns Creek
Grinberg Bella	Johns Creek
Compu-Kids Learning Center LLC	Johns Creek
Creme de la Creme	Johns Creek
The Goddard School	Johns Creek
Bullard La-Shaunda P	Johns Creek
DBA Cambridge International School	Johns Creek
Cross of Life Montessori School	Johns Creek
A Mark for Success Early Learning Center	Johns Creek
Coggins Dianne	Johns Creek
F.A.S.T ASPire	Johns Creek
Johns Creek High School	Johns Creek
Atlanta United Football Club- Home Depot Backyard	Johns Creek

Bright Horizons at All Saints'	Johns Creek
Heilig Tiffini Nicole	Johns Creek
Children's School The	Johns Creek
Ed Isakson Alpharetta Family YMCA	Johns Creek
Ashley Collegetown The Ascent Project	Johns Creek
Cross Dayana C	Johns Creek
Khan Aysha	Johns Creek
Midtown Lutheran Preschool	Johns Creek
Primrose School of Alpharetta	Johns Creek
North Atlanta Dance Academy	Johns Creek
Right at School at Spalding Drive Elementary School	Johns Creek
Sheltering Arms - East Point Center	Johns Creek
Kids 1st Choice Learning Center	Johns Creek
Semaj Learning Academy	Johns Creek
Rocker Rose	Johns Creek
Prime Time - Alpharetta Elementary School	Johns Creek
Loving Arms Child Development Center	Johns Creek
Second Generation	Johns Creek
Premiere Scholar Early Learning Center	Johns Creek
St. Benedict Weekday Preschool	Johns Creek
Kids in Action Learning Center	Johns Creek
Redeemer Day School Inc.	Johns Creek
Little Acorn Learning Center	Johns Creek
Tony Young Karate Super Summer	Johns Creek
Primrose School of Atlanta Westside	Johns Creek
Youth Sports League @ Jean Childs Young Middle School	Johns Creek
Simmons Tojuana Y	Johns Creek
Primrose School of Mansell	Johns Creek
Love Bug Learning Center	Johns Creek
Preferred School Care at M. Agnes Jones Elementary	Johns Creek
Seeds of Wonder Journey School	Johns Creek
Marais Adrienne J	Johns Creek
Peachtree Presbyterian Church-The Gym	Johns Creek
Lite House Partners Inc. - Shannon Lake	Johns Creek
Solve Tutoring	Johns Creek
Edmondson Mary D.	Johns Creek
The Nest Nursery School	Johns Creek
Johns Creek City Hall	Johns Creek
Central Library	Johns Creek
Animal Services-Main Kennel	Johns Creek
Metropolitan Library	Johns Creek
Johns Creek -Police Department	Johns Creek
Fire Station 62 Johns Creek	Johns Creek
Fire Station 61 Johns Creek	Johns Creek
Fire Station 63 Johns Creek	Johns Creek
Fire Station 64 Johns Creek	Johns Creek
Prince Of Peace Lutheran Church of Roswell	Johns Creek

Johns Creek Christian Church	Johns Creek
Johns Creek Bah? ├¡'?┬í Center	Johns Creek
Congregation Dor Tamid	Johns Creek
St Brigid Catholic Church	Johns Creek
Clear Springs Baptist Church	Johns Creek
Atlanta Chinese Christian Church	Johns Creek
Masjid Jafar and Al-Rahmah Community Center	Johns Creek
Chabad of North Fulton	Johns Creek
Johns Creek Presbyterian Church	Johns Creek
Messiah Church	Johns Creek
Hanbit Korean Presbyterian Church	Johns Creek
Bridgeway Church	Johns Creek
Mt Pisgah United Methodist Church	Johns Creek
Centennial Place Academy	Milton
Carl E. Sanders Family YMCA at Buckhead	Milton
City of College Park Recreation @ Brady	Milton
Birmingham Falls Elementary School	Milton
Dozier's Early Learning Center	Milton
Cambridge High School	Milton
Carrington Academy at Avalon	Milton
Trinity School	Milton
Prime Time-Birmingham Hwy Elementary	Milton
Kiddie Academy of Johns Creek	Milton
Princeton Preparatory Academy	Milton
New Born Learning Center Inc.	Milton
Right At School At Lake Windward Elementary School	Milton
Milton City Hall	Milton
Gladys Dennard Library at South Fulton	Milton
Government Center-Public Safety Building	Milton
South Fulton Mental Health Center	Milton
College Park Regional Health Center	Milton
Milton -Police Department	Milton
Fire Station 42 Milton	Milton
Fire Station 44 Milton	Milton
Fire Station 43 Milton	Milton
Fire Station 41 Milton	Milton
Crabapple Baptist Church	Milton
Birmingham Baptist Church	Milton
Birmingham United Methodist Church	Milton
C3 North Atlanta	Milton
C3 North Atlanta	Milton
Inner Quest Church	Milton
Midway Community Church	Milton
Southeast Islamic Community Center	Milton
Mountain Park City Hall	Mountain Park
Fire Department Mountain Park	Mountain Park
Palmetto Elementary School	Palmetto

Palmetto City Hall	Palmetto
Roswell Library	Palmetto
Mechanicsville Library	Palmetto
Medical Examiner's Center	Palmetto
Palmetto -Police Department	Palmetto
Fire Department Palmetto	Palmetto
Victory Baptist Church	Palmetto
Ramah First Baptist Church	Palmetto
North Fulton Regional Hospital	Roswell
WellStar North Fulton Hospital	Roswell
Carpenter Leslie A	Roswell
Roswell North Elementary School	Roswell
City of Atlanta - Out of School Time Programming at C. A. Scott	Roswell
APEC Learning Center	Roswell
Barack and Michelle Obama Academy	Roswell
Greene Adrienne D	Roswell
Mimosa Elementary School	Roswell
Atlanta Braves Baseball Camps - The Weber School	Roswell
Blue Heron Nature Preserve Summer Camp and Nature Weeks	Roswell
Bright Horizons at Atlantic Station	Roswell
C.H. Gullatt Elementary	Roswell
Farley Michelle	Roswell
Children's Learning Adventure	Roswell
Independence High School	Roswell
Northwood Elementary School	Roswell
Bless You Child Care	Roswell
Creme de la Creme	Roswell
City of Atlanta - Out of School Time Programming at Rosel Fann	Roswell
Camp C.A.R.E Southwest	Roswell
Fowler YMCA Day Camp	Roswell
Future Leaders Learning Academy	Roswell
Esther Jackson Elementary School	Roswell
River Eves Elementary School	Roswell
Grant Park Cooperative Preschool	Roswell
Discovery Point CDC #8	Roswell
Crabapple Montessori School (Elementary Program)	Roswell
City of Roswell Recreation and Parks	Roswell
Sweet Apples Elementary School	Roswell
Favor House Camp	Roswell
G-P for Kids	Roswell
FAST Elementary School	Roswell
FAST Middle School	Roswell
Horizons Kids	Roswell
AlleGro	Roswell
Dean Rusk YMCA Head Start Academy	Roswell
Capitol Hill Child Enrichment Center	Roswell
Elkins Pointe Middle School	Roswell

Mountain Park Elementary School	Roswell
Brown Gail H.	Roswell
Discovery Point #52	Roswell
City of Atlanta - Out of School Time Programming at South Bend	Roswell
Hillside Elementary School	Roswell
City of Atlanta - Out of School Time Programming at Gilbert House	Roswell
Centennial High School	Roswell
Roswell High School	Roswell
City of Atlanta - Out of School Time Programming at Thomasville	Roswell
Georgia Campaign for Adolescent Power and Potential	Roswell
Hembree Springs Elementary School	Roswell
Crabapple Middle School	Roswell
City of Atlanta - Out of School Time Programming at Langford Park	Roswell
Vickery Mill Elementary School	Roswell
City of Atlanta - Out of School Time Programming at Morningside	Roswell
City of Atlanta - Out of School Time Programming at Perkerson	Roswell
Kiddos Garden Hills	Roswell
Prime Time - Shakerag	Roswell
Stepping Stones Academy	Roswell
Lorient Marie C	Roswell
Imaginarium After-school Program	Roswell
Samuel L. Jones Child Care Center	Roswell
LA Fitness Kids Klub @ Atlanta Peachtree Road	Roswell
Little Leaders Academy of the Arts	Roswell
Kick Start Martial Arts	Roswell
Premier Academy - Renaissance CDC	Roswell
Purpose Built Schools of Atlanta @ Thomasville Heights Elementary	Roswell
Success Kids Learning Center	Roswell
Spence Gloria A	Roswell
Mount Olive Early Learning Center	Roswell
Right at School at Mountain Park Elementary School	Roswell
Marr's - Right Side Up Program	Roswell
Mother Hubbard's Day Care & Kindergarten #1	Roswell
Johns Creek Presbyterian Preschool	Roswell
Phase Family Learning Center	Roswell
Sheltering Arms - Welcome All	Roswell
Northminster Day School	Roswell
Montessori In Town	Roswell
Lane Mia M	Roswell
Our House Genesis	Roswell
SMED - Students Making Educated Decisions	Roswell
Lite House Partners Inc - Lakeside Reserve	Roswell
Los Ninos Primero	Roswell
Kiddos Rivers	Roswell
Science Akademeia The Atlanta Preschool of Science	Roswell
St. Andrew Catholic Church Preschool	Roswell
Ivybrook Academy Alpharetta	Roswell

Nicholas House Inc.	Roswell
Preferred School Care at Peyton Forest Elementary	Roswell
Imagination Station	Roswell
School of Rock-Atlanta	Roswell
Prime Time - Abbotts Hill Elementary School	Roswell
O2B Kids - Old Milton	Roswell
KIDazzle Child Care Inc-Atlanta Federal Center	Roswell
St. Jude the Apostle Catholic School	Roswell
Roswell City Hall	Roswell
Fire Station #15	Roswell
South Fulton Arts Center (Cliftondale Arts Center)	Roswell
Harriett G. Darnell Senior Multi-Purpose Facility	Roswell
DFACS Southwest Service Center	Roswell
Bethlehem Senior Center at the J.C. Birdine Neighborhood Service Center	Roswell
North Fulton Regional Health Center, Royal Drive Office Suites	Roswell
South Fulton Training Center	Roswell
Dorothy C. Benson Senior Multi-Purpose Facility	Roswell
Roswell -Police Department	Roswell
Fire Station 3 Roswell	Roswell
Fire Station 2 Roswell	Roswell
Fire Station 1 Roswell	Roswell
Fire Station 5 Roswell	Roswell
Fire Station 6 Roswell	Roswell
Fire Station 4 Roswell	Roswell
Fire Station 7 Roswell	Roswell
Roswell Community Masjid	Roswell
Georgia Christian Assembly	Roswell
The Northview Church	Roswell
Armenian Church of Atlanta	Roswell
New World Ministries Inc.	Roswell
Christ United Methodist Church	Roswell
Temple Beth Tikvah	Roswell
Northbrook United Methodist Church	Roswell
Roswell United Methodist Chapel Roswell	Roswell
FIRST BAPTIST CHURCH OF ROSWELL	Roswell
Atlanta Street Baptist Church	Roswell
Zion Missionary Baptist Church	Roswell
Northside Church	Roswell
Northside Church	Roswell
THE RHEMA CHURCH	Roswell
World Harvest Church	Roswell
Westminster Japanese Church	Roswell
New Community Church of Fulton County	Roswell
One World Spiritual Center	Roswell
New Apostolic Church	Roswell
St Mary's Orthodox Church	Roswell
St Mary’s Orthodox Church	Roswell

Northminster Presbyterian Church	Roswell
Cross Of Life Lutheran Church Inc	Roswell
Congregation Beth Hallel	Roswell
Armenian Church of Atlanta	Roswell
Roswell Alliance Church	Roswell
Sewa Gurdwara Sikh Temple	Roswell
Redeemed Christian Church Of God Inc-Kings Court Chapel	Roswell
Crosspoint Community Church	Roswell
Pleasant Hill Church	Roswell
Praise Harvest Community Church	Roswell
Ebenezer Haitian Church of God	Roswell
Tapestry Community Church	Roswell
St David's Episcopal Church	Roswell
Temple Kehillat Chaim	Roswell
Saint Andrew Catholic Church	Roswell
Restoration Church	Roswell
North River Baptist Church	Roswell
St Mary Coptic Orthodox Church	Roswell
St Peter Chanel Catholic Church	Roswell
Bridge To Grace Church	Roswell
Roswell Assembly	Roswell
Christ Fellowship Church	Roswell
Iglesia Cristiana El Mover de Dios	Roswell
Willeo Baptist Church	Roswell
Saheebozzaman Islamic Center	Roswell
Founding Faith Worship Center	Roswell
Lake Forest Elementary School	Sandy Springs
Ison Springs Elementary School	Sandy Springs
APEC After School Enrichment @ Renaissance	Sandy Springs
Bright Horizons at Glenlake	Sandy Springs
Atlanta Music Project - The Kindezi School	Sandy Springs
All Starz Academy Daycare	Sandy Springs
Ashley-Johnson Zina E	Sandy Springs
City of Hapeville Recreation	Sandy Springs
Da Vinci International School	Sandy Springs
Easter Seals Child Development Center at Premier Academy	Sandy Springs
Ghatti Adilakshne	Sandy Springs
All-Star Learning Center	Sandy Springs
Bright Beginning Early Learning Center	Sandy Springs
Childcare Network #106	Sandy Springs
APEC After School Enrichment @ Randolph	Sandy Springs
Holy Redeemer Catholic School	Sandy Springs
Alpharetta Methodist Preschool	Sandy Springs
Preferred School Care at Benteen Elementary	Sandy Springs
Saint Anne's Enrichment Program	Sandy Springs
Lamar Delores J	Sandy Springs
Preferred School Care at B.E. Usher Elementary	Sandy Springs

Right At School At Roswell North Elementary	Sandy Springs
Kiddos ACA	Sandy Springs
Progressive Steps	Sandy Springs
LifeTime Fitness - Alpharetta	Sandy Springs
Passport 2 Prosperity	Sandy Springs
Spratt Clare J	Sandy Springs
Kids 'R Special Inc.	Sandy Springs
Mount Vernon Presbyterian School	Sandy Springs
Legacy Academy Roswell	Sandy Springs
Lifetime Fitness - Johns Creek	Sandy Springs
Precocious Kids LLC	Sandy Springs
Raising Expectations Inc.	Sandy Springs
LA Fitness Kids Klub @ Camp Creek	Sandy Springs
The Study Hall Inc.	Sandy Springs
Y After School @ Ester Jackson Elementary	Sandy Springs
Sandy Springs United Methodist Church	Sandy Springs
Kids 'R' Kids #43	Sandy Springs
Morningside After School	Sandy Springs
School Bells	Sandy Springs
Sandy Springs City Hall	Sandy Springs
New Beginnings Neighborhood Senior Center	Sandy Springs
Northeast/Spruill Oaks Library	Sandy Springs
New Aldredge Health Center	Sandy Springs
New Horizons Neighborhood Senior Center	Sandy Springs
Dogwood Library	Sandy Springs
H. J. C. Bowden Senior Multipurpose Facility	Sandy Springs
Quality Living Services/QLS Center for Senior Citizens	Sandy Springs
235 Peachtree Office of Tax Assessors	Sandy Springs
Sandy Springs -Police Department	Sandy Springs
Fire Station 53 Sandy Springs	Sandy Springs
Fire Station 51 Sandy Springs	Sandy Springs
Fire Station 54 Sandy Springs	Sandy Springs
Fire Station 52 Sandy Springs	Sandy Springs
Sandy Springs Community Church	Sandy Springs
Christ Church of Atlanta	Sandy Springs
Congregation of Hadash	Sandy Springs
Zainabia Nonprofit Inc	Sandy Springs
Unitarian Universalist Northwest Congregation	Sandy Springs
St James Anglican Episcopal Church	Sandy Springs
Sandy Springs United Methodist Church	Sandy Springs
Sandy Springs Christian Church	Sandy Springs
Rivercliff Lutheran Church	Sandy Springs
Congregation B'nai Torah	Sandy Springs
Shema Yisrael	Sandy Springs
St Jude the Apostle Catholic Church	Sandy Springs
Dunwoody Community Church	Sandy Springs
Temple Emanu-El	Sandy Springs

Church Of The Atonement Inc	Sandy Springs
Mount Vernon Baptist Church	Sandy Springs
Holy Innocents Episcopal Church	Sandy Springs
Church of the Redeemer	Sandy Springs
Chabad Lubavitch of Georgia	Sandy Springs
Church of Scientology Atlanta	Sandy Springs
TEMPLE SINAI	Sandy Springs
Lynwood Park United Church O G I C Inc	Sandy Springs
Lynwood Park United Church Of God In Christ	Sandy Springs
Carver Bible College on Kimberly Road	South Fulton
Ocee Library/Dr. Robert E. Fulton Regional Library at Ocee	South Fulton
Government Center	South Fulton
APEC After School Enrichment @ Wolf Creek	South Fulton
Neighborhood Union Health Center	South Fulton
East Roswell Library	South Fulton
South Fulton Municipal Regional Jail (Former Union City Jail)	South Fulton
South Fulton-PD Headquarters -Police Department	South Fulton
South Fulton-Cedar Grove -Police Department	South Fulton
South Fulton-Cascade -Police Department	South Fulton
South Fulton-Butner -Police Department	South Fulton
Fire Station 15 South Fulton	South Fulton
Fire Station 7 South Fulton	South Fulton
Fire Station 5 South Fulton	South Fulton
Fire Station 2 South Fulton	South Fulton
Fire Station 11 South Fulton	South Fulton
Fire Station 1 South Fulton	South Fulton
Fire Station 3 South Fulton	South Fulton
Fire Station 13 South Fulton	South Fulton
Fire Station 17 South Fulton	South Fulton
Fire Station 19 South Fulton	South Fulton
South Fulton Community Christian Church	South Fulton
Unity In Faith Baptist Church	South Fulton
World Changers Church International	South Fulton
Decision Point Ministries	South Fulton
Living Hope Christian Fellowship	South Fulton
Emmaus Road Missionary Baptist Church	South Fulton
Kingdom of God Evangelistic	South Fulton
Siloam Church International	South Fulton
Red Oak Baptist Church	South Fulton
World Changers Church International	South Fulton
Christians Living For Christ	South Fulton
New City Church - Fairburn Campus	South Fulton
Iglesia Hispania Atlanta City Church	South Fulton
Cornerstone Fellowship Church	South Fulton
Enon Baptist Church	South Fulton
Zion Hill Baptist Church Inc	South Fulton
Elizabeth Baptist Church	South Fulton

Kingdom of Christ Church	South Fulton
Paul Thornton Ministries International	South Fulton
Embassy Church	South Fulton
The Ministry of New Life	South Fulton
Most Blessed Sacrament Catholic Church Atlanta Inc	South Fulton
Bethlehem Baptist Church	South Fulton
Cliftondale United Methodist Church	South Fulton
Friendship Community Church	South Fulton
Word of Love Christian Church	South Fulton
Wood's Memorial Baptist Church	South Fulton
Redemption Outreach Church International	South Fulton
International Center for Christ	South Fulton
Old Landmark Sanctified Church	South Fulton
Bethel United Methodist Church	South Fulton
Apostolic Christian Church-Atlanta	South Fulton
Life Of Redemption Christian Church	South Fulton
Campbellton Baptist Church	South Fulton
College Park Cme Church	South Fulton
First Cliftondale Baptist Church	South Fulton
Camp Creek Church of Christ	South Fulton
Fellowship of Prayer International	South Fulton
Hands of Praise International Ministries Inc	South Fulton
Fun To Learn Childcare & Development Center Inc.	Union City
Artportunity Knocks ASP @Greenbriar	Union City
FCS College and Career Academy High School	Union City
All Gods Children	Union City
Color Us Kids Learning Center - Atlanta	Union City
Liberty Point Elementary School	Union City
Oakley Elementary School	Union City
Hapeville Charter Career Academy High School	Union City
Gullatt Elementary School	Union City
The Goddard School Atlanta Buckhead	Union City
Neighborhood Children's Center	Union City
Webber Anika L	Union City
Westside Atlanta Charter School - Encore	Union City
Youth Sports League @ Salvation Army Fuqua Center	Union City
Versteeg Astride D	Union City
Nash Tammie M	Union City
Young Chefs Academy	Union City
Wings for Kids at William Boyd Elementary	Union City
Zoo Atlanta	Union City
LA Fitness Kids Klub @ Holcomb @ 400	Union City
King Yulonda D	Union City
Phillips Christina L	Union City
YMCA Early Learning at KIPP Woodson Park Academy	Union City
Unique Individual	Union City
Youth Sports League Inc @The Main Street Academy	Union City

Woodward Academy North Campus	Union City
The Goddard School	Union City
Woodward Academy - Main Campus	Union City
Wings for Kids at Heritage Academy	Union City
Twisted Cycle	Union City
Little Lambs Daycare	Union City
Drake Sherry L	Union City
Trees Atlanta	Union City
Wills Park Summer Camp	Union City
WINGS at Hutchinson Elementary School	Union City
XtremeHopp Johns Creek LLC	Union City
Y Afterschool @ M.A. Jones/Arthur Blank Summer Camp	Union City
Union City City Hall	Union City
Southwest Arts Center	Union City
Cascade Library	Union City
Union City -Police Department	Union City
Fire Station 1 Union City	Union City
Fire Station 3 Union City	Union City
Fire Station 2 Union City	Union City
Living Stone Cogic	Union City
Neriah Church	Union City
Rehoboth Worship Church	Union City
Resurrection House For All Nations	Union City
Union Grove Baptist Church	Union City
Shadnor First Baptist Church	Union City
Resurrection House For All Nations	Union City
Power in Christ Ministries	Union City

Appendix D: Mitigation Actions Prioritization

Identified Mitigation Actions (2022-2027), STAPLE+E Score/Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
15.0001	Replace 3' box culvert off of Camp Creek Parkway with a more open design (Comments: Flooding of Camp Creek Parkway causes traffic problems in College Park. Long, low-slope trash rack would be a more cost-effective solution to the problem.)	College Park	Flood, Severe Weather, Tropical Systems	Medium 47
05.0024	Station 21: Harden to improve wind and impact resistance; increase generator capacity (Comments: This is a heavy rescue special operations station; houses rescue boat, collapse rescue equipment, trench rescue equipment, and technical rescue equipment. ALS engine is stationed at this location. GSAR is housed at this station. Station has a large amount of plate glass, including bay doors. Bay doors are older and are not up to current code.)	Atlanta	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 39.5
05.0025	Station 8: Harden to improve wind and impact resistance; increase generator capacity (Comments: This is the Hazardous Materials station and contains HazMat-related personnel and equipment.)	Atlanta	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 39.5
05.0026	Station 1: Harden to improve wind and impact resistance; increase generator capacity (Comments: This station is the Decontamination Station and houses decontamination equipment. It also houses CBRNE equipment and serves as the backup station to the HazMat team in Station 8.)	Atlanta	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 39.5
05.0027	Stations 9, 20, 22 and 25: Harden to improve wind and impact resistance; increase generator capacity	Atlanta	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 39.5
05.0078	Raise levee and other work along Chattahoochee River and Peachtree Creek to prevent flood water from the Chattahoochee River raising into the R.M. Clayton Water Reclamation	Atlanta	Flood	Medium 39.5
05.0079	Acquire flood-prone properties located in the FEMA-mapped floodplains throughout the City of Atlanta (Comments: 1 was remaining to acquire in 2016.)	Atlanta	Flood, Severe Weather, Tropical Systems	Medium 39.5
05.0083	Relocate Parks NE and SE District Maintenance Depots (Comments: Additional space for welding and small equipment; looking for opportunity to aggregate both compounds together with fleet (recreation). Price could be $1.5 million for land and $3 million for construction of new site. DPR is looking for alternative sites that may allow for aggregating maintenance and service sites.)	Atlanta	Flood	Medium 39.5

Identified Mitigation Actions (2022-2027), STAPLE+E Score/Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
05.0092	Generators in support of Schools/Buildings as Shelters	Atlanta	All Hazards	Medium 39.5
05.0099	Purchase and install back-up 250kw gas generator for IT Server Room	Atlanta	Severe Winter Weather (Any hazard that threatens loss of power.)	Medium 39.5
05.0028	Improve wind resistance of roof to the Maddox Park building which houses fleet operations; roof is not wind-rated (Comments: OEAM/DPR assessing the roof at Maddox Park building to determine if the roof will be replaced; numerous repairs were made in FY 12, 13, and 14.)	Atlanta	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 38.5
05.0042	Install generators at Public Works facilities involving 25 sites (Fueling Operations for the City, Operations, and Vehicle Maintenance)	Atlanta	Flood, Severe Weather	Medium 38.5
05.0088	Generators to supply power to fueling stations	Atlanta	All Hazards	Medium 38.5
05.0096	Ben Hill Generator	Atlanta	Extreme Heat, Severe Weather, Severe Winter Weather (Any hazard that threatens loss of power.)	Medium 38.5
05.0097	Emergency generators for Old Adamsville, Rosel Fann, and other recreation centers used as warming stations	Atlanta	Extreme Heat, Severe Weather, Severe Winter Weather (Any hazard that threatens loss of power.)	Medium 38.5
65.0001	Develop Storm Water Plan	Chattahoochee Hills	Severe Weather, Severe Winter Weather, Tropical Systems	Medium 35.5
65.0002	Harden/retrofit City Hall [for EOC and daily operations] (Comments: Generator acquired, and partial cost study done. Surplus/donation of equipment.)	Chattahoochee Hills	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 34.5
65.0004	Harden fire station with impact-resistant glass, garage doors and roof; upgrade station generator (Comments: Generator acquired; surplus/donation of equipment.)	Chattahoochee Hills	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 34.5
5.0033	Acquire generator for emergency power for 40 Fire Stations	Atlanta	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 33.5
5.0034	Retrofit bay doors of [all 40] fire stations	Atlanta	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 33.5
05.0032	Retrofit old window glass at the Fire Department Headquarters Building for increased impact resistance	Atlanta	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 32.5

Identified Mitigation Actions (2022-2027), STAPLE+E Score/Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
05.0038	Relocate SWAT Offices & Storage, Classrooms, Ranger Offices & Storage, Gym, Explosive Bldg., and Equipment Facility at 1500 Key Rd outside of Floodplain	Atlanta	Flood	Medium 32.5
05.0039	Relocate Firing Range Facility at 1500 Key Rd outside of floodplain	Atlanta	Flood	Medium 32.5
05.0023	Improve storm water drainage capacity and design in the area of Piedmont and Auburn Ave to allow better tie into the Claire Creek overflow (Comments: This is an area of identified need as part of the Combined Sewer Overflow (CSO) Remediation Plan, which can be found online at http://www.cleanwateratlanta.org).	Atlanta	Flood	Medium 32
05.0029	R.M. Clayton Wastewater Treatment Plant – Flood-proof the plant through raising the height of the banks. (Comments: This plant flooded from Proctor Creek during the floods of Sept. 2009. It has received some PDM funds for repairs, but further mitigation is needed to improve flood-proofing of this facility. This facility serves East Point, College Park, and Hapeville. The plant cannot treat sewage and is causing environmental problems in West Point Lake. It also affects the communities' ability to draw water.)	Atlanta	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 32
05.0081	Educate the public about the risk of flooding and the importance of obtaining flood insurance (e.g., fliers, newsletters, information on DWM website); continue to update website as needed	Atlanta	Flood, Severe Weather, Tropical Systems	Medium 32
05.0082	Continue program for natural/ vegetative stabilization of stream banks (average 1300 feet per year) to secure infrastructure	Atlanta	Flood, Severe Weather, Tropical Systems	Medium 32
05.0085	Reconstruct roofs and generators on shelter facilities (Comments: Generators located at Ben Hill, Old Adamsville. All need upgrades to produce full-service power restoration; generators needed at additional sites: Central, Rosel Fann, Bessie Branham, Peachtree Hills; $7,500,000+.)	Atlanta	All Hazards	Medium 32
05.0089	Installation of above ground fuel storage tanks	Atlanta	All Hazards	Medium 32
05.0094	Install tornado sirens throughout the Downtown Atlanta campus	Atlanta	Severe Weather, Tornado, Tropical Systems	Medium 32
05.0100	Remove debris, stabilize piers and embankment, repair damage Fair Drive at South River Trib. Bridge ID: 121-0037-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32

Identified Mitigation Actions (2022-2027), STAPLE+E Score/Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
5.0102	Remove debris, stabilize piers and embankment, repair damage Piedmont Ave. at Clear Creek. Bridge ID: 121-0038-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0103	Remove debris, stabilize piers and embankment, repair damage Cheshire Bridge Rd. at CSX Railroad (639814N). Bridge ID: 121-0038-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0104	Remove debris, stabilize piers and embankment, repair damage Dodson Dr. at South Utoy Creek. Bridge ID: 121-0319-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0105	Remove debris, stabilize piers and embankment, repair damage Moores Mill Rd. at Peachtree Creek. Bridge ID: 121-0325-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0106	Remove debris, stabilize piers and embankment, repair damage Paces Ferry Rd. at Nancy Creek. Bridge ID: 121-0329-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0107	Remove debris, stabilize piers and embankment, repair damage Ben E. Mays Rd. at North Utoy Creek. Bridge ID: 121-0338-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0108	Remove debris, stabilize piers and embankment, repair damage Welcome All Rd. at Camp Creek. Bridge ID: 121-0362-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0109	Remove debris, stabilize piers and embankment, repair damage Macon Dr. at South River. Bridge ID: 121-0377-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0110	Remove debris, stabilize piers and embankment, repair damage Forrest Park Rd. at South River. Bridge ID: 121-0379-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0111	Remove debris, stabilize piers and embankment, repair damage Chattahoochee Ave. at Peachtree Creek Trib. Bridge ID: 121-0397-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0112	Remove debris, stabilize piers and embankment, repair damage Bohler Road at Peachtree Creek. Bridge ID: 121-0398-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32

Identified Mitigation Actions (2022-2027), STAPLE+E Score/Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
5.0113	Remove debris, stabilize piers and embankment, repair damage Howell Mill Rd. at Peachtree Creek. Bridge ID: 121-0403-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0114	Remove debris, stabilize piers and embankment, repair damage Collier Rd. at Peachtree Creek Trib. Bridge ID: 121-0435-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0115	Remove debris, stabilize piers and embankment, repair damage DeFoors Ferry Rd. at Peachtree Creek Trib. Bridge ID: 121-0438-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0116	Remove debris, stabilize piers and embankment, repair damage W. Paces Ferry Rd. at Nancy Creek. Bridge ID: 121-0440-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0117	Remove debris, stabilize piers and embankment, repair damage Northside Dr. at Nancy Creek. Bridge ID: 121-0442-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0118	Remove debris, stabilize piers and embankment, repair damage Powers Ferry Rd. at Nancy Creek. Bridge ID: 121-0448-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0119	Remove debris, stabilize piers and embankment, repair damage Hollywood Rd. at Proctor Creek Trib. Bridge ID: 121-0574-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0120	Remove debris, stabilize piers and embankment, repair damage Stone Hogan Conn. At North Fork Camp Creek. Bridge ID: 121-0575-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0121	Remove debris, stabilize piers and embankment, repair damage Pryor Rd. at South River Trib. Bridge ID: 121-0581-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0122	Remove debris, stabilize piers and embankment, repair damage Claire Dr. at South River Trib. Bridge ID: 121-0582-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0123	Remove debris, stabilize piers and embankment, repair damage Bolton Rd. at Whetstone Creek. Bridge ID: 121-0683-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32

Identified Mitigation Actions (2022-2027), STAPLE+E Score/Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
5.0125	Remove debris, stabilize piers and embankment, repair damage Randall Mill Rd. at Nancy Creek. Bridge ID: 121-5178-0	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0126	Marietta Blvd. Bridge – Failed section of deck with through hole, exposed rebar, failed expansion joint	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0127	Alston Bridge – Severe undermining of the culvert walls, roadway cracks, cracks on culvert wall CORRECTIVE ACTION: Repair cracks on culvert wall with high strength grout, repair settlement on culvert foundation, mill and repave roadway	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0128	MLK Drive Bridge – Multiple roadway spalls with exposed rebar, failed expansion joints CORECTIVE ACTION: Repair deck with concrete at all failing spots; repair extension joints in kind.	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
5.0129	Centennial Park Bridge – Multiple roadway spalls with exposed rebar, failed expansion joints. (The corrective action is to repair deck with concrete at all failing spots. Repair extension joints in kind.)	Atlanta	Flood, Severe Weather (Any hazard that threatens bridge infrastructure and further deterioration.)	Medium 32
65.0003	Improve storm water run-off on Cap's Ferry (Comments: Developing plan utilizing outside contractor/advisor during 2016. Due to the proximity to the Chattahoochee River, the creek backs up and floods the road which, in turn, cuts off access to three counties.)	Chattahoochee Hills	Flood, Severe Weather, Tropical Systems	Medium 32
01.0002	Acquire approximately 15 homes in the Mayfield Circle/Maple Lane area near Foe Killer Creek	Alpharetta	Flood, Severe Weather, Tropical Systems	Medium 31.5
05.0037	Acquire generator for emergency power for [15] police facilities (Comments: Plan for immediate smaller rollout of the six (6) main precincts.)	Atlanta	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 31.5
05.009	Potable Clean Water Conveyance/ Storage	Atlanta	All Hazards	Medium 31
05.0091	High Impact Window Glass/treatment	Atlanta	Severe Weather, Tornado, Tropical Systems	Medium 31
05.0098	Watershed Improvement Projects	Atlanta	Flood	Medium 31
05.0036	Place [80] warning sirens in residential areas	Atlanta	Severe Weather	Medium 30

Identified Mitigation Actions (2022-2027), STAPLE+E Score/Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
05.0041	Install traffic warning signs on/at all road crossings at creeks and streams that are submerged during a 100-yr and 500-yr flood (or greater); approximately [80+] locations [at $600 per location)	Atlanta	Flood	Medium 30
15.0002	Storm sewer improvement project on Walker Avenue/Mercer Avenue	College Park	Flood	Medium 27
15.0002 [# duplicated in 2016 Plan)	Storm sewer improvement project Cambridge Avenue (designed), Lyle/Vesta (not designed)	College Park	Flood	Medium 27
01.003	Improve stormwater drainage at North Park Road at Cooper Sandy Creek (Comments: Replace single 4' RCP box culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Medium 26
05.0031	Acquire generator for emergency power for Fire Department Headquarters Building	Atlanta	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 26
05.0035	Retrofit all [40] fire stations with lightning rods	Atlanta	Severe Weather	Medium 26
05.0084	Tree Maintenance Program in Hazard and Urbanized Areas (Comments: Preventative maintenance plan for ROW could require significantly higher funding if implemented citywide. Emergency vehicles for Forestry could be purchased – knuckle boom - $200,000.)	Atlanta	Drought, Extreme Heat, Severe Weather	Low 24.5
05.0093	Install lightning detection equipment/ software for campus buildings and athletic fields	Atlanta	Severe Weather, Tornado, Tropical Systems	Low 24.5
05.0095	Forestry Compound Renovations	Atlanta	Extreme Heat, Severe Weather, Severe Winter Weather (Any hazard that threatens loss of power.)	Low 24.5
05.0087	Upgrade outdoor siren warning system speakers	Atlanta	All Hazards	Low 23.5
01.0008	Foe Killer Creek – Design and implementation of projects to reduce elevated levels of bacteria	Alpharetta	Flood	Low 23
01.0007	Design and install master detention facility for water quality and flood control at Wills Park	Alpharetta	Flood	Low 22
01.001	Perform stream stabilization and repair erosion along stream corridors	Alpharetta	Flood	Low 22
01.0011	Stream bank restoration Big Creek at Webb Bridge	Alpharetta	Flood	Low 22
01.0012	Stream bank restoration Big Creek at Haynes Bridge Road	Alpharetta	Flood	Low 22
01.0013	Stream bank restoration Foe Killer Creek – Squirrel Run to Rucker Road	Alpharetta	Flood	Low 22
01.0014	Reinforce old culverts with skip line	Alpharetta	Flood	Low 22

Identified Mitigation Actions (2022-2027), STAPLE+E Score/Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
01.0015	Improve stormwater drainage at Church Street	Alpharetta	Flood	Low 22
01.0016	Improve stormwater drainage at Highway 9 at Canton Street	Alpharetta	Flood, Severe Weather, Tropical Systems	Low 22
01.0017	Improve stormwater drainage at Southlake Drive culvert (Comments: Replace triple 4' CMP culvert to handle capacity; this area does not handle the 2-year flow) (Note: From 2016 plan but no update provided for 2022 update.)	Alpharetta	Flood	Low 22
01.0018	Improve stormwater drainage at Cape York Trace at Big Creek Trib (Comments: Replace single 4' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22
01.0019	Improve stormwater drainage at Glenn Knoll Court at Long Indian Creek Trib (Comments: Replace triple 2' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22
01.002	Improve stormwater drainage at Mid Broadwell at Foe Killer Creek Trib (Comments: Replace single 4.5' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22
01.0021	Improve stormwater drainage at Newport Bay Passage at Caney Creek Trib (Comments: Replace single 3.5' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22
01.0022	Improve stormwater drainage at Webb Bridge Court at Big Creek Trib (Comments: Replace double 8'x 6' and single 4.35'x 6;5' box culverts to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22
01.0023	Improve stormwater drainage at McGinnis Ferry Road at Big Creek Trib (Comments: Replace single 6' RCP culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22
01.0024	Improve stormwater drainage at Pine Grove Drive at Big Creek Trib (Comments: Replace single 4' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22
01.0025	Improve stormwater drainage at Arrowood Lane at Foe Killer Creek Trib (Comments: Replace single 6' RCP culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22
01.0026	Improve stormwater drainage at Willis Road at Foe Killer Creek Trib (Comments: Replace single 6' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22

Identified Mitigation Actions (2022-2027), STAPLE+E Score/Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
01.0027	Improve stormwater drainage at Northwinds Parkway at Big Creek Trib (Comments: Replace double 5' RCP culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22
01.0028	Improve stormwater drainage at Academy Street at Big Creek Trib (Comments: Replace single 9'x6' box culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22
01.0029	Improve stormwater drainage at Rock Mill Road at Big Creek Trib (Comments: Replace double 5'x5' box culvert to handle capacity; this area does not handle the 2-year flow.)	Alpharetta	Flood	Low 22
01.0031	Improve stormwater drainage at culverts without capacity to handle the 5-year storm (Comments: The City has identified seven locations.)	Alpharetta	Flood	Low 22
01.0032	Improve stormwater drainage at culverts without capacity to handle the 10-year storm (Comments: The City has identified nine locations.)	Alpharetta	Flood	Low 22
01.0034	Improve stormwater drainage at culverts without the capacity to handle the 50-year storm (Comments: The City has identified four locations.)	Alpharetta	Flood	Low 22
01.0037	911 – Phone call warning alert system	Alpharetta	All Hazards	Low 22
01.0042	Install built-in surge protection at public safety buildings	Alpharetta	All Hazards	Low 22
65.0005	Replacement of Garrett's Ferry Bridge (Comments: Engineering study already completed; research federal and state funding and options for replacement.)	Chattahoochee Hills	Severe Weather, Tornado, Tropical Systems	Low 22
01.0004	Complete Hazus-MH study of natural hazard impacts on the city	Alpharetta	All Hazards	Low 21
01.0005	Outreach education (e.g., letters, information packets) to all parcels impacted by SFHA/new RiskMaps (Comments: This project can only be completed after the parcel maps are updated.)	Alpharetta	Flood	Low 21
01.004	Replace early outdoor warning systems	Alpharetta	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Low 21
01.0049	Implement dam inspection on Lake Windward and upgrade dam components and safety measures	Alpharetta	Dam Failure, Flood	Low 21
01.005	Stream gauge with flow meter; rain gauge and stream height for Foe Killer Creek	Alpharetta	Flood	Low 21
1.0051	Maintain City GIS system with accurate parcel data	Alpharetta	All Hazards	Low 19.5

Identified Mitigation Actions (2022-2027), STAPLE+E Score/Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
1.0052	Purchase tactical mobile dispatch unit	Alpharetta	All Hazards	Low 18.5
05.004	Evaluate City of Atlanta Police facility at 1500 Key Road for flood potential [Revised from 2016 Fulton County MJHMP, which read "Site at 1500 Key Road includes SWAT, flooding on the road severely impacts ability to respond; multiple pieces of critical tactical equipment are located there as well as police firing range".]	Atlanta	Flood, Severe Weather, Severe Winter Weather, Tropical Systems	Low 17.5
01.0038	Variable message signage – for use during emergency situations that can be updated from the command center	Alpharetta	All Hazards	Low 14.5
01.0006	Evaluate benefits of joining CRS with impact of new FEMA maps (Comments: This project can only be completed after the parcel maps are updated.)	Alpharetta	Flood	Low 13.5
01.0033	Improve stormwater drainage at culverts without capacity to handle the 25-year storm (Comments: The City has identified ten locations.)	Alpharetta	Flood	Low 13.5
01.0035	Detour roadway map for flood evacuation plans	Alpharetta	Flood	Low 13.5
01.0036	Install traffic warning signs on all road crossings that are submerged during a 25-year flood or greater	Alpharetta	Flood	Low 13.5
01.0045	Purchase cones and brigades for pedestrian traffic on greenways	Alpharetta	Flood	Low 13.5
1.0053	Update early warning software system	Alpharetta	All Hazards	Low 13.5
1.0054	Replace chain saws and blades for removal of trees during an emergency	Alpharetta	All Hazards	Low 13.5
1.0055	Replace rope and technical rescue equipment	Alpharetta	All	Low 13.5
65.0006	Research/publish mitigation "opportunities" for citizen (individual/group) commitment (Comments: Identify/publish information about property insurance savings to property/home/business owners to encourage individual/group participation in mitigation and support for public safety services/needs.)	Chattahoochee Hills	All Hazards	Low 13.5
15.0003	Increase flow-through capacity of box culvert on Park Terrace (Comments: During heavy rains, the flow-through capacity is insufficient causing debris to accumulate and block water flow.)	College Park	Flood, Severe Weather, Tropical Systems	Medium 26

Identified Mitigation Actions (2022-2027), STAPLE+E Score/Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
15.0004	Increase flow-through capacity of box culvert at the intersection of Harris and Rugby Avenue (Comments: During heavy rains, the flow-through capacity is insufficient, causing debris to accumulate and block water flow. Trash rack could be built upstream at Lyle Avenue where nearest house is at a higher elevation.)	College Park	Flood, Severe Weather, Tropical Systems	Medium 28
15.0005	Replace traffic lights with more weather-resistant mast arms	College Park	Severe Weather, Tornado, Tropical Systems	Medium 42
15.0006	Retrofit the roof at the Power Department Building; replace generator (Comments: This building houses the City-owned power utility as well as the water and sewer department and the warehouse. The current generator is small and underpowered for current needs. The computer system that is housed at this location runs all their system data.)	College Park	Severe Weather, Tornado, Severe Winter Storm, Tropical Systems	Medium 43
15.0007	Install Fur Creek structure at Herschel Park Drive to regulate flow	College Park	Flood	Medium 43
15.0008 (refer to 15.0005)	Construct new detention pond to regulate southwest branch of Fur Creek	College Park	Flood	Medium 43
15.0014	Improve Embassy Drive, T. Owen Smith Connector, Best Road, and Sullivan Road stormwater control by installing trash racks	College Park	Flood	Medium 26
15.0015	Replace 48" CMP with 7' by 7' culvert box to improve capacity of Janice Drive storm drainage	College Park	Flood	Low 25
N/A	Increase flow-through capacity of box culvert on Lyle Road	College Park	Flood	Medium 28
N/A	Storm Sewer improvement project Virginia Avenue (undesigned) – non-creek	College Park	Flood, Severe Weather, Tropical Systems	Medium 43
N/A	Storm Sewer improvement project Best Road (undesigned)	College Park	Flood	Medium 28
N/A	Storm Sewer improvement project Sullivan Road. (Comments: Flow study is required.)	College Park	Flood	Low 22
N/A	Storm Sewer improvement project Janice Drive (undesigned)	College Park	Flood	Medium 27
20.0001	Coordinate with DOT regarding improved conveyance capacity and drainage on Camp Creek Pkwy between Washington Rd and Desert Dr (Comments: DOT is preparing to widen Camp Creek and it owns the draining infrastructure; however, there are design impacts that may affect the City that need to be coordinated.)	East Point	Flood, Severe Weather, Tropical Systems	Low 24
20.0002	Improve drainage capacity on Norman Berry Rd	East Point	Flood, Severe Weather, Tropical Systems	Low 16.5

Identified Mitigation Actions (2022-2027), STAPLE+E Score/Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
20.0003	Improve drainage design in the area of Martin St and Norman Berry due to insufficient infrastructure capacity (Comments: This area collects from 3 or 4 different points that drain into one location. Either a larger drain or rerouting of draining points to multiple locations are needed.)	East Point	Flood, Severe Weather, Tropical Systems	Low 15
20.0004	Harden City EOC (2727 East Point St) by adding more impact-resistant glass	East Point	Severe Weather, Tornado, Tropical Systems	Medium 31.5
20.0005	Drainage improvements in the Sun Valley/Camp Creek Watershed area	East Point	Flood	Low 17.5
20.0006	Drainage improvements at Lester St and Spring Avenue in the Utoy Watershed	East Point	Flood	Low 22.5
20.0007	Drainage improvements at Randall St and East Forrest Ave	East Point	Flood	Medium 31
20.0009	Drainage improvements in the Jim's Creek area	East Point	Flood	Low 24
20.001	North Martin St regional storage improvement	East Point	Flood	Low 16.5
20.0011	Calhoun Ave pipe replacement (Comments: There is major road flooding; regional improvements for downstream flooding problems.)	East Point	Flood	Low 24
20.0012	South River unnamed tributary 3 improvements	East Point	Flood	Low 16.5
20.0013	Pipe replacement on Norman Berry Dr near Maria Head Terrace	East Point	Flood	Low 24
20.0014	Georgia Power Pond (Comments: There is secondary road flooding; alternate access to residences; coordinate with Meadow Lark improvements. The detention pond suggested is within the area of a Georgia Power easement in the Meadowlark Drive community. There is no direct association with Georgia Power Company project.)	East Point	Flood	Low 24
20.0015	Meadow Lark Lane Pipe Replacement	East Point	Flood	Low 24
20.0016	Grove Ave Pipe Replacement (Comments: There is secondary road flooding; alternate access to residences.)	East Point	Flood	Low 23
20.0017	Promote public education of water-saving measures (Comments: Rebates/vouchers for low-flow water fixtures, household water savings tips, etc.)	East Point	Drought	Low 23.5
20.0018	Implement water restrictions, prioritizing water use	East Point	Drought	Low 23.5
20.0019	Develop Emergency Notification Outreach program for senior population	East Point	All Hazards	Low 16.5

Identified Mitigation Actions (2022-2027), STAPLE+E Score/Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
20.002	Annual update and review of communication plan (CodeRED)	East Point	All Hazards	Low 16.5
N/A	Improve drainage capacity in the 800 block of Cleveland Avenue; culvert improvement complete w/erosion improvement @ 871 Cleveland parking lot area (local funds); monitor and evaluate stream flow @ location mentioned	East Point	Flood	Medium 32
25.0001	Improve drainage at the bridge at Rivertown Road and Malone by adding drain to tie into the storm water drainage (debris backs up under the bridge at Malone)	Fairburn	Flood	Low 22
25.0002	Acquire the upstream property (currently privately owned) on Rivertown Road to provide City access to clean and prevent debris in stream	Fairburn	Flood	Medium 41.5
25.0003	Acquire privately owned agriculture land to prevent further development that is consistent with current land use policies (Acquisition would be used to promote less dense land usage and expand nature preserve, which is consistent with the natural conservation projects already being implemented in the area.)	Fairburn	All Hazards	Medium 41.5
30.0005	Revise site plan review process to ensure that site plan review is part of the interdepartmental plan review process	Hapeville	All Hazard	Medium 27
30.0006	Replace current fire station that was built in the 1940's	Hapeville	Wildfire	Medium 26
30.0007	Replace current fire station that was built in the 1960's; also, possibly add a training tower	Hapeville	Wildfire	Medium 28
30.0008	Replace current administrative offices (a house that was built in 1924); also, look at putting in a conference/training room that could double as EOC	Hapeville	All Hazards	Medium 28
2.0003	Debris Removal Contract (Comments: Johns Creek is looking to establish a pre-event contract for disaster debris removal to include haulers, reduction, and site monitors)	Johns Creek	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 26
2.0004	Require mandatory water conservation measures during drought emergencies. (Comments: Johns Creek will adopt ordinances specified by Fulton County to prioritize or control water use, particularly for emergency situations like firefighting and develop an ordinance to restrict the use of public water resources for non-essential usage, such as landscaping, washing cars, filling swimming pools, etc.)	Johns Creek	Drought	Low 25

Identified Mitigation Actions (2022-2027), STAPLE+E Score/Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
2.0005	Create a program encouraging to take water-saving measures. (Comments: Johns Creek will encourage citizens to: install low-flow water saving showerheads and toilets, turn water flow off while brushing teeth or during other cleaning activities, adjust sprinklers to water the lawn and not the sidewalk or street, run the dishwasher and washing machine only when they are full, check for leaks in plumping or dripping faucets, install rain-capturing devices for irrigation and encourage the installation of graywater systems in homes to encourage water reuse.)	Johns Creek	Drought	Low 25
2.0006	Create the City flood plan	Johns Creek	Flood	Medium 28
2.0007	Update dam in the City of Johns Creek	Johns Creek	Flood	Medium 31.5
2.0008	Create an evacuation plan for senior living facilities in Johns Creek	Johns Creek	Flood	Low 25
56.0002	Continue development of GIS web mapping project to allow for real-time information of road and other hazard areas to be avoided	Milton	All Hazards	x
56.0003	Develop campaign strategy to increase participation in Nixle notification program	Milton	All Hazards	Low 17.5
56.0004	Replace a malfunctioning 25-year-old generator at Station 43/alternate EOC site	Milton	Severe Weather, Tropical Systems, Flood, Severe Winter Weather	Low 23.5
56.0005	Purchase a generator for Public Works Department Building	Milton	Severe Weather, Tropical Systems, Flood, Severe Winter Weather	Medium 34.5
56.0006	Test/improve LEOP and COOP plans	Milton	All Hazards	Low 17.5
N/A	Replace current administrative offices (a house that was built in 1924); also, look at putting in a conference/training room that could double as EOC	Milton	All Hazards	Low 13.5
N/A	Emergency Action Plans for dam safety to prepare public safety and public works personnel in the event of a dam failure. (This includes 18 dams, including at least 4 Category 1 dams.)	Milton	Dam Failure	Low 24.5

Identified Mitigation Actions (2022-2027), STAPLE+E Score/Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
35.0001	Convert open storm water drainage ditches to underground piping system in areas were the ditching system passes the roadway (Comments: City has open ditch drainage system which causes problems in heavy rain events due to debris in the ditches. When the ditches get clogged, the water overflows onto the road and drivers cannot see where edge of road/ditch is.)	Mountain Park	Flood, Severe Weather, Tropical Systems	Low 20.5
35.0002	Improve storm water drainage ditches in areas that do not cross roadways to increase drainage system capacity	Mountain Park	Flood, Severe Weather, Tropical Systems	Medium 26
35.0004	Install surge protection equipment and measures for the EOC/Fire Station	Mountain Park	Severe Weather	Medium 26
35.0005	Flood-proof Fire Station including raising generators and other mechanicals, installing drainage pumps, waterproofing foundation, and sealing foundation walls	Mountain Park	Flood, Severe Weather, Tropical Systems	Medium 26
[No # assigned in 2016 Plan]	Acquire property to relocate flood-prone Fire Station (Comments: This is a multi-purpose building that also functions as the City's EOC and designated special needs shelter.)	Mountain Park	Flood, Severe Weather, Tropical Systems	Medium 32.5
35.0006	Enhance physical protection of City Hall for increased high-wind resistance	Mountain Park	Severe Weather, Tornado, Tropical Systems	Medium 30.5
35.0007	Acquire property at corner of Cardinal Rd and Mountain Park Rd to relocate the City Works Building	Mountain Park	Flood, Severe Weather, Severe Winter Weather, Wildfire/Wildland Urban Interface Fire	Medium 31.5
35.0008	Improve capacity of Lake Garrett by dredging accumulated sedimentation	Mountain Park	Flood, Severe Weather, Tropical Systems	Medium 26
35.0009	Improve capacity of Lake Cherful by dredging accumulated sedimentation	Mountain Park	Flood, Severe Weather, Severe Winter Weather, Tropical Systems	Medium 26
35.001	Harden spillway structure between Lake Cherful and Lake Garrett	Mountain Park	Flood, Severe Weather, Tropical Systems	Medium 26
99.0011	Rehabilitate the flood plain on Oakhaven Dr. through acquisition of 10 structures in the flood plain; improve drainage in the area (Comments: Area is in a flood plain. There is repeated flooding that affects homes and the roadway; have had numerous rescues due to low-lying area. Too much water comes into area that cannot be dispersed.)	Mountain Park	Flood, Severe Weather, Tropical Systems	Medium 33.5
40.0001	Acquire generator for emergency power for Fire Department Headquarters Building	Palmetto	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 28

Identified Mitigation Actions (2022-2027), STAPLE+E Score/Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
40.0002	Retrofit old window glass at the Fire Department Headquarters building for increased impact resistance	Palmetto	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 35.5
40.0003	Acquire generator for emergency power for Fire Station	Palmetto	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 28
40.0004	Retrofit bay doors of Fire Station (Comments: Bay doors are over 40 years old and of residential grade quality. They are of insufficient wind loading capacity and impact resistance.)	Palmetto	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 35.5
40.0005	Retrofit current flat roof of City Hall for improved wind loading capacity	Palmetto	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 35.5
40.0006	Acquire generator for emergency power for Police Station	Palmetto	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Low 20.5
40.0007	Retrofit Police Station for improved wind loading capacity	Palmetto	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 28
40.0008	Harden Community Center, which functions as a first responder shelter; reinforce roof for wind loading capacity as well replace windows for wind resistance	Palmetto	All Hazards	Medium 35.5
40.0009	Acquire stream in Palmetto Oaks to preserve as green space and improve flood plain management	Palmetto	Flood	Medium 28
40.001	Acquire land on Mixon Ave to prevent further dense development as part of their green space expansion program	Palmetto	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Low 20.5
40.0011	Acquire emergency generator for Water Treatment Plant	Palmetto	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 28
40.0012	Acquire emergency generator for City Hall	Palmetto	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 28
40.0013	Retrofit Water Treatment Plant with lightning protection	Palmetto	Severe Weather, Tornado, Tropical Systems	Medium 28
40.0014	Install two outdoor warning sirens at locations within the City	Palmetto	Severe Weather, Tornado	Medium 36.5
45.0001	Install surge protection at the City fuel island	Roswell	Severe Weather	Medium 30.5

Identified Mitigation Actions (2022-2027), STAPLE+E Score/Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
45.0002	Retrofit roof of the 911 Center which is susceptible to damage from high winds and water leakage (Comments: Retrofit glass with more impact-resistant glass.)	Roswell	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 27
45.0003	Add upstream detention and replace culvert at Warsaw Road near Willow Stream Townhomes (Comments: Area is in shaded zone X floodplain. There is repeated flooding that affects homes and roadway.)	Roswell	Flood, Severe Weather, Tropical Systems	Medium 26
45.004	Perform stream stabilization and repair erosion along Crossville Creek corridors	Roswell	Flood, Severe Weather, Severe Winter Weather, Tropical Systems	Low 24
45.0005	Add tamper-resistant fittings to all fire hydrants in water system boundary	Roswell	Wildfire/Wildland Urban Interface Fire	Medium 28
45.0006	Rehabilitate the floodplain on Oakhaven Dr through acquisition of ten (10) structures in the floodplain; improve drainage in the area (Comments: Area is in a floodplain. There is repeated flooding that affects homes and roadway. Have had to have numerous rescues due to low-lying area. Too much water comes into area that cannot be dispersed. This project score has been dropped because of improvements to the dam overflow structure.)	Roswell	Flood, Severe Weather, Tropical Systems	Medium 32
99.0002	Azalea Drive Roadway Elevation	Roswell	Flood	Medium 27
99.0003	Willeo Road Roadway Elevation	Roswell	Severe Weather, Severe Winter Weather, Tropical Systems	Medium 26
99.0004	Portable Generators for Traffic Signals	Roswell	Severe Weather, Severe Winter Weather, Tropical Systems	Medium 26
99.0005	Roswell Water Plant Emergency Power Generator	Roswell	Severe Weather, Severe Winter Weather, Tropical Systems	Medium 26
99.0006	Generator for Hembree Facility - Fire, Public Works, RDO	Roswell	Severe Weather, Severe Winter Weather, Tropical Systems	Medium 26
99.0007	Storage Shed for Road Salt	Roswell	Severe Winter Weather	Medium 26
99.0008	Tree removal along the river corridor, Pine Grove Road, and other areas	Roswell	Severe Weather, Severe Winter Weather	Low 18.5

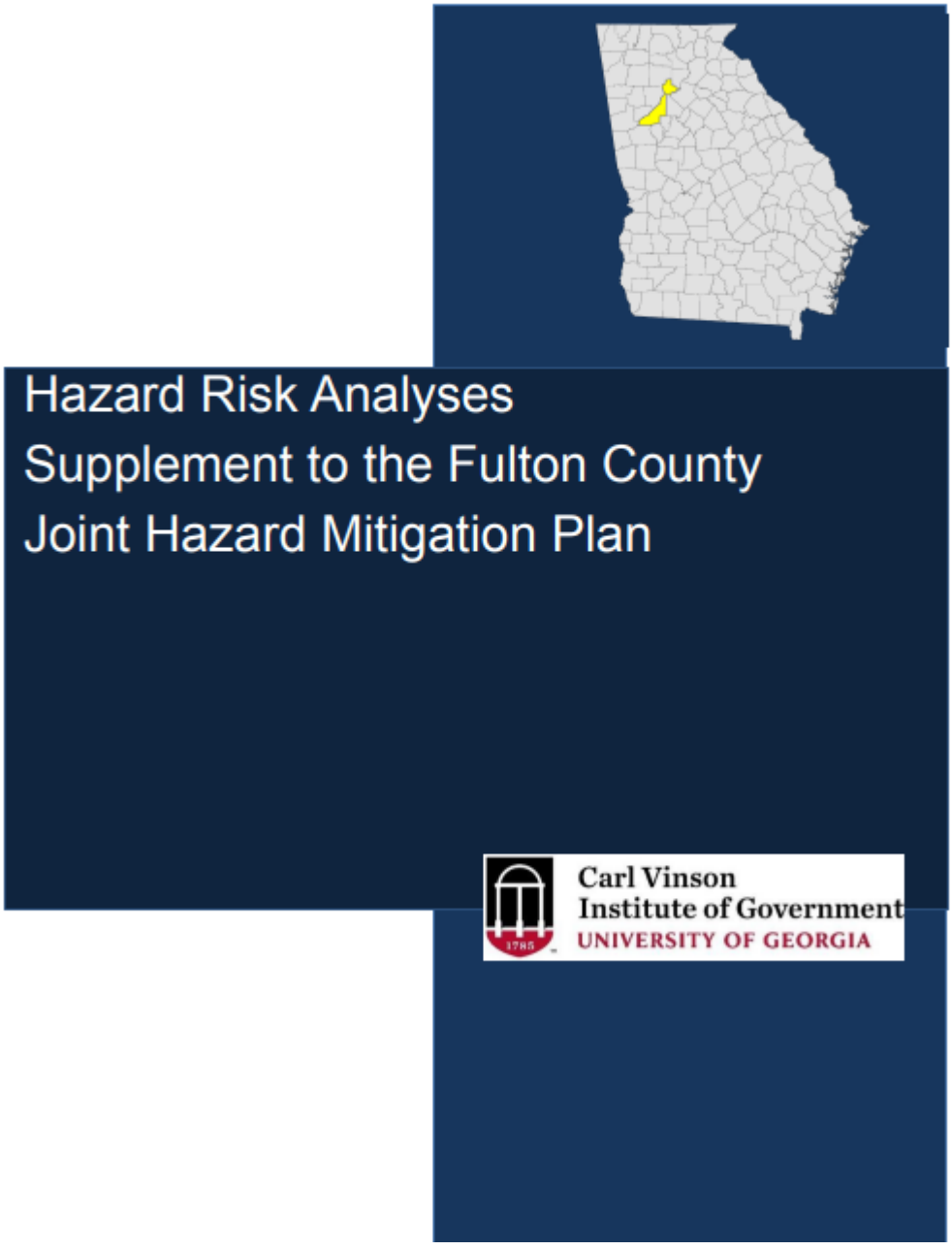
Identified Mitigation Actions (2022-2027), STAPLE+E Score/Rankings, Fulton County				
Project Number	Project	Jurisdiction	Hazard(s) Addressed	STAPLE+E Score
99.0009	Roswell Area Park Flood Mitigation	Roswell	Flood, Severe Weather, Severe Winter Weather	Medium 26
99.0010	Flooding on Oakhaven Drive (Brookfield West	Roswell	Flood, Severe Weather, Severe Winter Weather	Medium 26
99.0011	Stormwater control projects	Roswell	Flood, Severe Weather, Severe Winter Weather	Medium 26
99.0012	Woodstock Street and Woodstock Road Water Main Replacement Project	Roswell	Fire, Winter Weather	Low 18.5
99.0013	Flooding on Oakhaven Drive (Brookfield West	Roswell	Flood, Severe Weather, Severe Winter Weather	Medium 26
99.0014	Emergency Access for Riverwalk Condominium Complex	Roswell	Flood	Low 23
59.0001	Purchase approximately 45 flooded homes in the Colewood Creek Basin (Comments: Homes are located in the floodplain and areas subject to flooding.)	Sandy Springs	Flood, Severe Weather, Tropical Systems	Medium 27
59.0002	Purchase approximately 35 flooded houses in Pine Forest along Nancy Creek Basin (Comments: Development is built in the floodplain. It is a 40-50-year-old development, which was built pre-FIRM.)	Sandy Springs	Flood, Severe Weather, Tropical Systems	Medium 27
59.0003	Acquire approximately ten (10) homes in the North Mill area and convert to open space (Comments: There is a total of about 600 homes in the floodplain. City wishes to purchase the most homes that most at risk.)	Sandy Springs	Flood, Severe Weather, Tropical Systems	Medium 27
59.0004	Reinforce old culverts with slip line (Comments: Current infrastructure is aging and rusting. The leaking pipes are causing secondary erosion to the substrate. This technique would reinforce pipes to keep from collapsing, which could damage homes that are built on or near the top of the system.)	Sandy Springs	Flood, Severe Weather, Tropical Systems, Geological Hazards (Sinkholes)	Medium 30
59.0005	Rehabilitate City-owned detention ponds which have previously breached (Comments: Some of the detention ponds are located by creeks. Should the structure fail, it will release mud and debris into the creeks.)	Sandy Springs	Flood	Medium 26
59.0008	Distributing tornado shelter location information	Sandy Springs	Severe Weather, Tornado, Tropical Systems	Medium 30
59.0009	Supporting Severe Weather Awareness Week	Sandy Springs	Severe Weather, Tornado, Tropical Systems	Medium 34

Identified Mitigation Actions (2022-2027), STAPLE+E Score/Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
59.0010	All-hazards Education and Prevention Community Outreach Program	Sandy Springs	Drought, Flood, Tornado, Wildfire/Wildland Urban Interface Fire	Medium 34
59.0011	Severe Weather Awareness	Sandy Springs	Flood, Tornado, Tropical Systems	Medium 34
59.0012	Community Development Assistance Program (flood mitigation project)	Sandy Springs	Flood, Severe Weather, Severe Winter Weather	Medium 28
59.0013	Reintegrating homes into floodplain	Sandy Springs	Flood	Medium 26
59.0014	Build a City of South Fulton Emergency Operations Center (EOC)	Sandy Springs	All Hazards	Medium 36.5
59.0015	Back-up Power Emergency Shelters	Sandy Springs	Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	Medium 29
59.0016	Install a local Emergency Warning System	Sandy Springs	All Hazards	Medium 36.5
59.0017	Provide NOAA weather radios to low-income, high-risk citizens of the City of South Fulton	Sandy Springs	All Hazards	Medium 36.5
59.0018	Create City of South Fulton Continuity of Operations Plan (COOP)	Sandy Springs	All Hazards	Medium 29
59.0019	Create City of South Fulton Local Emergency Operations Plan (LEOP)	Sandy Springs	All Hazards	Medium 29
59.0020	Annual review of Hazard Mitigation Plan	Sandy Springs	All Hazards	Low 21.5
59.0021	Develop and implement a public awareness campaign encouraging residents to develop family disaster plans	Sandy Springs	All Hazards	Low 21.5
50.0005	Remediation of Upper Dixie Lake Dam (Comments [from 2016 Plan] see Appendix E – Studies, Reports, and Supplementary Documents for detailed options)	Union City	Flood, Severe Weather, Tropical Systems	Medium 27

Identified Mitigation Actions (2022-2027), STAPLE+E Score/Rankings, Fulton County				
Project Number	**Project**	**Jurisdiction**	**Hazard(s) Addressed**	**STAPLE+E Score**
50.0006	Replace early warning system (Comments: City currently employs a siren system, which is older and only reaches a small percent of the population. Need a more targeted system such as Code Red or National Oceanic and Atmospheric Administration (NOAA) weather radios. This will be implemented in collaboration with the recommendations of the evaluation as described in this project.)	Union City	Severe Weather, Tornado	Medium 28
50.0008	Emergency back-up power for facilities with critical operations: City Hall, Public Services, and IT	Union City	Severe Weather, Severe Winter Weather, Tropical Systems, Tornado	Medium 26

Appendix E: Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan

Appendix K – Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan



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Introduction

The Federal Disaster Mitigation Act of 2000 (DMA2K) requires state, local, and tribal governments to develop and maintain a mitigation plan to be eligible for certain federal disaster assistance and hazard mitigation funding programs.

Mitigation seeks to reduce a hazard's impacts, which may include loss of life, property damage, disruption to local and regional economies, and the expenditure of public and private funds for recovery. Sound mitigation must be based on a sound risk assessment that quantifies the potential losses of a disaster by assessing the vulnerability of buildings, infrastructure, and people.

In recognition of the importance of planning in mitigation activities, FEMA Hazus-MH, a powerful disaster risk assessment tool based on geographic information systems (GIS). This tool enables communities of all sizes to predict estimated losses from floods, hurricanes, earthquakes, and other related phenomena and to measure the impact of various mitigation practices that might help reduce those losses.

In 2021, the Georgia Department of Emergency Management partnered with the Carl Vinson Institute of Government at the University of Georgia to develop a detailed risk assessment focused on defining hurricane, riverine flood, and tornado risks in Fulton County, Georgia. This assessment identifies the characteristics and potential consequences of the disaster, how much of the community could be affected by the disaster, and the impact on community assets.

Risk Assessment Process Overview

Hazus-MH Version 2.2 SP1 was used to perform the analyses for Fulton County. The Hazus-MH application includes default data for every county in the US. This Hazus-MH data was derived from a variety of national sources and in some cases the data are also several years old. Whenever possible, using local provided data is preferred. Fulton County provided building inventory information from the county's property tax assessment system. This section describes the changes made to the default Hazus-MH inventory and the modeling parameters used for each scenario.

County Inventory Changes

The default Hazus-MH site-specific point inventory was updated using data compiled from the Georgia Emergency Management Agency (GEMA). The default Hazus-MH aggregate inventory (General Building Stock) was also updated prior to running the scenarios. Reported losses reflect the updated data sets.

General Building Stock Updates

The GBS records for Fulton County were replaced with data derived from parcel and property assessment data obtained from Fulton County. The county provided property assessment data was current as of November 2021 and the parcel data current as of November 2021. Records without improvements were deleted. The parcel boundaries were converted to parcel points located in the centroids of each parcel boundary; then, each parcel point was linked to an assessor record based upon matching parcel numbers. The parcel assessor match-rate for Fulton County is 98.5%. The generated building inventory represents the approximate locations (within a parcel) of structures. The building

inventory was aggregated by census block. Both the tract and block tables were updated. Table 1 shows the results of the changes to the GBS tables by occupancy class.

Table 1: GBS Building Exposure Updates by Occupancy Class*

General Occupancy	Default Hazus-MH Count	Updated Count	Default Hazus-MH Exposure	Updated Exposure
Agricultural	589	30	$170,460,000	$4,954,000
Commercial	21,367	10,524	$26,071,694,000	$7,611,528,000
Education	819	237	$1,485,710,000	$593,274,000
Government	862	542	$928,332,000	$247,290,000
Industrial	4,478	1,843	$3,810,644,000	$3,577,154,000
Religious	2,345	606	$2,275,163,000	$401,776,000
Residential	263,885	306,375	$98,908,429,000	$94,653,572,000
Total	**294,345**	**320,157**	**$133,650,432,000**	**$107,089,548,000**

*The exposure values represent the total number and replacement cost for all Fulton County Buildings

For Fulton County, the updated GBS was used to calculate hurricane wind losses. The flood losses and tornado losses were calculated from building inventory modeled in Hazus-MH as User-Defined Facility (UDF)[1], or site-specific points. Figure 1 shows the distribution of buildings as points based on the county provided data.

[1] The UDF inventory category in Hazus-MH allows the user to enter site-specific data in place of GBS data.

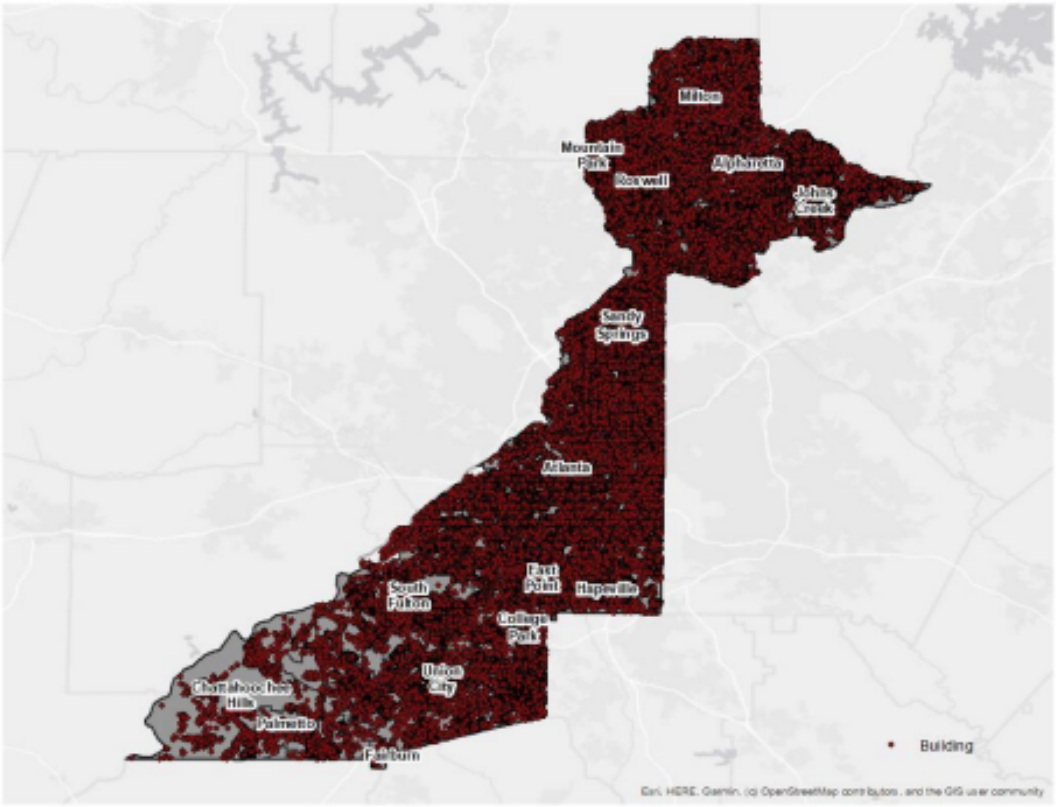


Figure 1: Fulton County Overview

Essential Facility Updates

The default Hazus-MH essential facility data was updated to reflect improved information available in the Georgia Mitigation Information System (GMIS) as of November 2021. For these risk analyses, only GMIS data for buildings that Hazus-MH classified as Essential Facilities was integrated into Hazus-MH because the application provides specialized reports for these five facilities. Essential Facility inventory was updated for the analysis conducted for this report. The following table summarizes the counts and exposures, where available, by Essential Facility classification of the updated data.

Essential facilities include:

- Care facilities
- EOCs
- Fire stations
- Police stations
- Schools

Table 2: Updated Essential Facilities

Classification	Updated Count	Updated Exposure
Alpharetta		
EOC	0	$0
Care	1	$14,634,000
Fire	6	$6,537,000
Police	1	$721,000
School	9	$212,777,000
Total	**17**	**$234,669,000**
Atlanta		
EOC	1	$880,000
Care	13	$729,372,000
Fire	29	$32,409,000
Police	8	$125,796,000
School	88	$852,701,000
Total	**139**	**$1,741,158,000**
Chattahoochee Hills		
EOC	0	$0
Care	0	$0
Fire	1	$111,000
Police	1	$618,000
School	1	$3,537,000
Total	**3**	**$4,266,000**
College Park		
EOC	0	$0
Care	1	$2,149,000
Fire	2	$872,000
Police	1	$1,135,000
School	5	$43,867,000
Total	**9**	**$48,023,000**

Classification	Updated Count	Updated Exposure
East Point		
EOC	0	$0
Care	1	$16,272,000
Fire	4	$5,172,000
Police	1	$4,943,000
School	10	$118,121,000
Total	**16**	**$144,508,000**
Fairburn		
EOC	0	$0
Care	0	$0
Fire	3	$1,928,000
Police	1	$680,000
School	2	$33,842,000
Total	**6**	**$36,450,000**
Hapeville		
EOC	0	$0
Care	0	$0
Fire	3	$77,864,000
Police	1	$1,790,000
School	2	$6,033,000
Total	**6**	**$85,687,000**
Johns Creek		
EOC	0	$0
Care	1	$105,237,000
Fire	4	$3,290,000
Police	1	$11,140,000
School	17	$313,451,000
Total	**23**	**$433,118,000**

Classification	Updated Count	Updated Exposure
	Milton	
EOC	0	$0
Care	0	$0
Fire	4	$13,793,000
Police	1	$7,613,000
School	8	$180,454,000
Total	**13**	**$201,860,000**
	Mountain Park	
EOC	0	$0
Care	0	$0
Fire	1	$216,000
Police	0	$0
School	0	$0
Total	**1**	**$216,000**
	Palmetto	
EOC	0	$0
Care	0	$0
Fire	1	$163,000
Police	1	$763,000
School	1	$14,779,000
Total	**3**	**$15,705,000**
	Roswell	
EOC	0	$0
Care	1	$55,366,000
Fire	7	$8,027,000
Police	1	$6,380,000
School	17	$213,180,000
Total	**26**	**$282,953,000**

Classification	Updated Count	Updated Exposure
Sandy Springs		
EOC	0	$0
Care	3	$89,042,000
Fire	3	$4,482,000
Police	1	$2,561,000
School	12	$162,032,000
Total	**19**	**$258,117,000**
South Fulton		
EOC	0	$0
Care	0	$0
Fire	9	$2,884,000
Police	4	$2,347,000
School	21	$551,905,000
Total	**34**	**$557,136,000**
Union City		
EOC	0	$0
Care	0	$0
Fire	3	$790,000
Police	2	$11,202,000
School	5	$16,222,000
Total	**10**	**$28,214,000**
Unincorporated Areas of Fulton County		
EOC	0	$0
Care	0	$0
Fire	2	$76,747,000
Police	0	$0
School	0	$0
Total	**2**	**$76,747,000**

Assumptions and Exceptions

Hazus-MH loss estimates may be impacted by certain assumptions and process variances made in this risk assessment.

- The Fulton County analysis used Hazus-MH Version 2.2 SP1, which was released by FEMA in May 2015.
- County provided parcel and property assessment data may not fully reflect all buildings in the county. For example, some counties do not report not-for-profit buildings such as government buildings, schools and churches in their property assessment data. This data was used to update the General Building Stock as well as the User Defined Facilities applied in this risk assessment.
- Georgia statute requires that the Assessor's Office assign a code to all of the buildings on a parcel based on the buildings primary use. If there is a residential or a commercial structure on a parcel and there are also agricultural buildings on the same parcel Hazus-MH looks at the residential and commercial "primary" structures first and then combines the value of all secondary structures on that parcel with the value of the primary structure. The values and building counts are still accurate but secondary structures are accounted for under the same classification as the primary structure. Because of this workflow, the only time that a parcel would show a value for an agricultural building is when there are no residential or commercial structures on the parcel thus making the agricultural building the primary structure. This is the reason that agricultural building counts and total values seem low or are nonexistent.
- GBS updates from assessor data will skew loss calculations. The following attributes were defaulted or calculated:

  Foundation Type was set from Occupancy Class for commercial and industrial buildings. The software that was used in the valuation process values these buildings without consideration for different foundation types. The building inventory was developed with the assumption that these buildings all have slab foundations. Foundation types were taken directly from the tax records for residential properties.

  First Floor Height was set from Foundation Type

  Content Cost was calculated from Replacement Cost
- It is assumed that the buildings are located at the centroid of the parcel.
- The essential facilities extracted from the GMIS were only used in the portion of the analysis designated as essential facility damage. They were not used in the update of the General Building Stock or the User Defined Facility inventory.

The hazard models included in this risk assessment included:

- Hurricane assessment which was comprised of a wind only damage assessment.
- Flood assessment based on the 1% annual chance event that includes riverine assessments.
- Tornado assessment based on GIS modeling.

Hurricane Risk Assessment

Hazard Definition

The National Hurricane Center describes a hurricane as a tropical cyclone in which the maximum sustained wind is, at minimum, 74 miles per hour (mph)[2]. The term hurricane is used for Northern Hemisphere tropical cyclones east of the International Dateline to the Greenwich Meridian. The term typhoon is used for Pacific tropical cyclones north of the Equator west of the International Dateline. Hurricanes in the Atlantic Ocean, Gulf of Mexico, and Caribbean form between June and November with the peak of hurricane season occurring in the middle of September. Hurricane intensities are measured using the Saffir-Simpson Hurricane Wind Scale (Table 3). This scale is a 1 to 5 categorization based on the hurricane's intensity at the indicated time.

Hurricanes bring a complex set of impacts. The winds from a hurricane produce a rise in the water level at landfall called storm surge. Storm surges produce coastal flooding effects that can be as damaging as the hurricane's winds. Hurricanes bring very intense inland riverine flooding. Hurricanes can also produce tornadoes that can add to the wind damages inland. In this risk assessment, only hurricane winds, and coastal storm surge are considered.

Table 3: Saffir-Simpson Hurricane Wind Scale

Category	Wind Speed (mph)	Damage
1	74 - 95	Very dangerous winds will produce some damage
2	96 - 110	Extremely dangerous winds will cause extensive damage
3	111 - 130	Devastating damage will occur
4	131 -155	Catastrophic damage will occur
5	> 155	Catastrophic damage will occur

The National Oceanic and Atmospheric Administration's National Hurricane Center created the HURDAT database, which contains all of the tracks of tropical systems since the mid-1800s. This database was used to document the number of tropical systems that have affected Fulton County by creating a 20-mile buffer around the county to include storms that didn't make direct landfall in Fulton County but impacted the county. Note that the storms listed contain the peak sustained winds, maximum pressure and maximum attained storm strength for the entire storm duration. Since 1859, Fulton County has had 18 tropical systems within 20 miles of its county borders (Table 4).

Table 4: Tropical Systems affecting Fulton County[3]

YEAR	DATE RANGE	NAME	MAX WIND(Knots)	MAX PRESSURE	MAX CAT
1859	September 15-18	UNNAMED	81	0	H1

[2] National Hurricane Center (2011). "Glossary of NHC Terms." National Oceanic and Atmospheric Administration. http://www.nhc.noaa.gov/aboutgloss.shtml#h. Retrieved 2012-23-02.
[3] Atlantic Oceanic and Meteorological Laboratory (2012). "Data Center." National Oceanic and Atmospheric Administration. http://www.aoml.noaa.gov/hrd/data_sub/re_anal.html. Retrieved 7-20-2015.

YEAR	DATE RANGE	NAME	MAX WIND(Knots)	MAX PRESSURE	MAX CAT
1887	July 20-28	UNNAMED	98	0	H2
1898	September 25 - October 06	UNNAMED	132	977	H4
1900	September 11-15	UNNAMED	52	0	TS
1902	October 03-13	UNNAMED	104	970	H2
1903	September 09-16	UNNAMED	92	988	H1
1907	September 18-23	UNNAMED	46	0	TS
1911	August 23-31	UNNAMED	98	972	H2
1912	June 07-17	UNNAMED	69	0	TS
1915	August 31 - September 06	UNNAMED	98	1003	H2
1928	August 07-17	UNNAMED	92	0	H1
1940	August 05-14	UNNAMED	98	1008	H2
1959	October 06-09	IRENE	46	1003	TS
1971	September 05-18	EDITH	161	1010	H5
1994	June 30 - July 07	ALBERTO	63	1014	TS
1997	July 16-27	DANNY	81	1013	H1
2004	August 25 - September 10	FRANCES	144	1009	H4
2005	July 03-11	CINDY	75	1011	H1

Category Definitions:
TS – Tropical storm
TD – Tropical depression
H1 – Category 1 (same format for H2, H3, and H4)
E – Extra-tropical cyclone

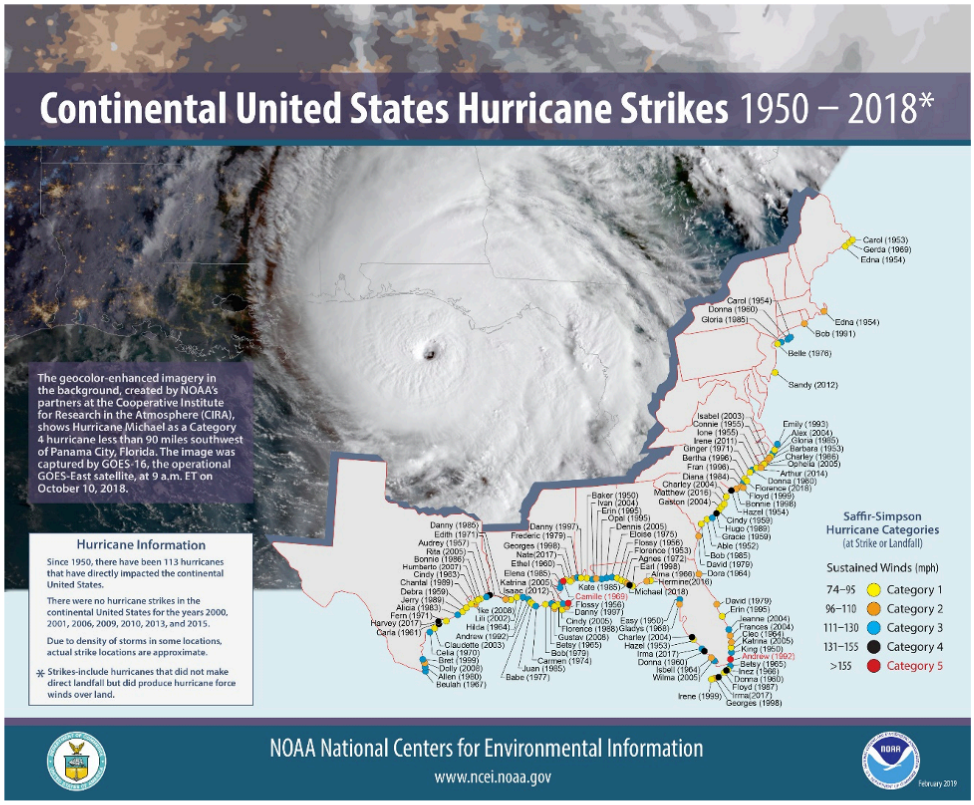


Figure 2: Continental United States Hurricane Strikes: 1950 to 2018[4]

Probabilistic Hurricane Scenario

The following probabilistic wind damage risk assessment modeled a Tropical Storm with maximum winds of 68 mph.

Wind Damage Assessment

Separate analyses were performed to determine wind and hurricane storm surge related flood losses. This section describes the wind-based losses to Fulton County. Wind losses were determined from probabilistic models run for the Tropical Storm which equates to the 1% chance storm event. Figure 3 shows wind speeds for the modeled Tropical Storm.

[4] Source: NOAA National Centers for Environmental Information

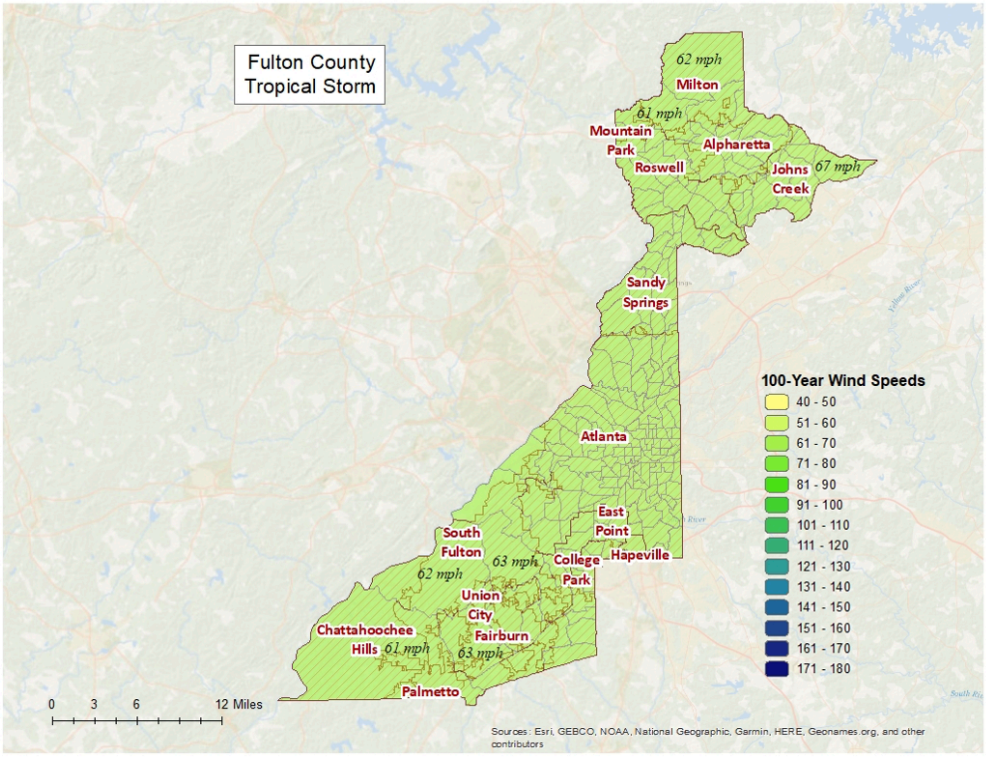


Figure 3: Wind Speeds by Storm Category

Wind-Related Building Damages

Buildings in Fulton 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 Fulton County for the Tropical Storm (100 Year Event). The loss ratio expresses building losses as a percentage of total building replacement cost in the county. Figure 4 illustrates the building loss ratios of the modeled Tropical Storm.

Table 5: Hurricane Wind Building Damage

Classification	Number of Buildings Damaged	Total Building Damage	Total Economic Loss[5]	Loss Ratio
Tropical Storm	179	$47,591,960	$71,145,780	0.04%

[5] Includes property damage (infrastructure, contents, and inventory) as well as business interruption losses.

Note that wind damaged buildings are not reported by jurisdiction. This is due to the fact that census tract boundaries – upon which hurricane building losses are based – do not closely coincide with jurisdiction boundaries.

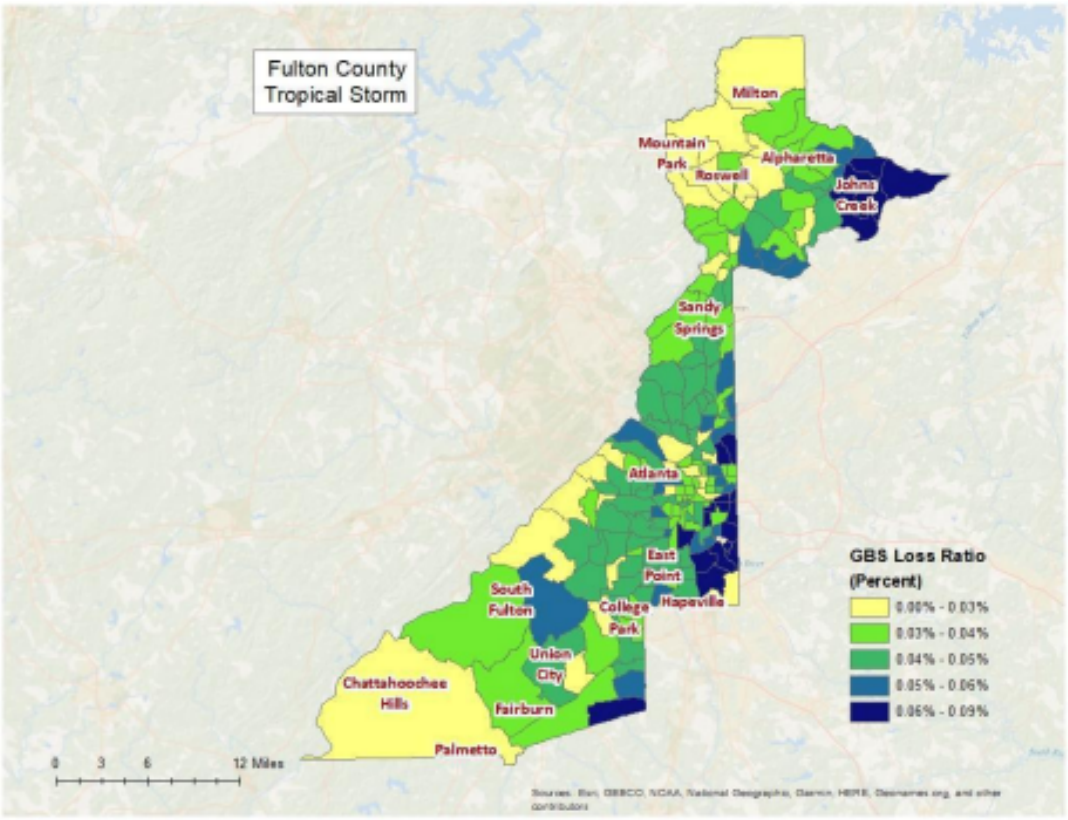


Figure 4: Hurricane Wind Building Loss Ratios

Essential Facility Losses

Essential facilities are also vulnerable to storm events, and the potential loss of functionality may have significant consequences to the community. Hazus-MH identified the essential facilities that may be moderately or severely damaged by winds. The results are compiled in Table 6.

There are 327 essential facilities in Fulton County.

Classification	Number
EOCs	1
Fire Stations	82
Care Facilities	21
Police Stations	25
Schools	198

Table 6: Wind-Damaged Essential Facility Losses

Classification	Facilities At Least Moderately Damaged > 50%	Facilities Completely Damaged > 50%	Facilities with Expected Loss of Use (< 1 day)
Tropical Storm	7	0	327

Shelter Requirements

Hazus-MH 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. Since the 1% chance storm event for Fulton County is a Tropical Storm, the resulting damage is not enough to displace Households or require temporary shelters as shown in the results listed in Table 7.

Table 7: Displaced Households and People

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

Debris Generated from Hurricane Wind

Hazus-MH 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 Table 8. 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 8: Wind-Related Debris Weight (Tons)

Classification	Brick, Wood, and Other	Reinforced Concrete and Steel	Eligible Tree Debris	Other Tree Debris	Total
Tropical Storm	325	0	10,392	11,769	22,486

Figure 5 shows the distribution of all wind related debris resulting from a Tropical Storm. Each dot represents 1 ton 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.

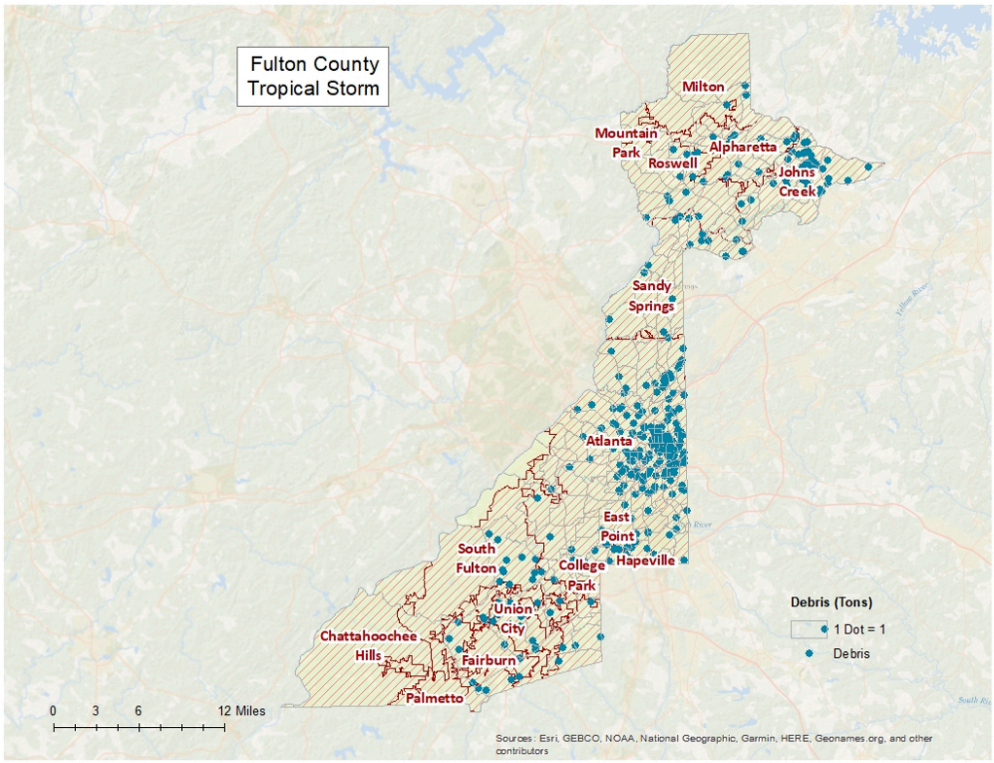


Figure 5: Wind-Related Debris Weight (Tons)

Flood Risk Assessment

Hazard Definition

Flooding is a significant natural hazard throughout the United States. The type, magnitude, and severity of flooding are functions of the amount and distribution of precipitation over a given area, the rate at which precipitation infiltrates the ground, the geometry and hydrology of the catchment, and flow dynamics and conditions in and along the river channel. Floods can be classified as one of three types: upstream floods, downstream floods, or coastal floods.

Upstream floods, also called flash floods, occur in the upper parts of drainage basins and are generally characterized by periods of intense rainfall over a short duration. These floods arise with very little warning and often result in locally intense damage, and sometimes loss of life, due to the high energy of the flowing water. Flood waters can snap trees, topple buildings, and easily move large boulders or other structures. Six inches of rushing water can upend a person; another 18 inches might carry off a car. Generally, upstream floods cause damage over relatively localized areas, but they can be quite severe in the local areas in which they occur. Urban flooding is a type of upstream flood. Urban flooding involves the overflow of storm drain systems and can be the result of inadequate drainage combined with heavy rainfall or rapid snowmelt. Upstream or flash floods can occur at any time of the year in Georgia, but they are most common in the spring and summer months.

Downstream floods, also called riverine floods, refer to floods on large rivers at locations with large upstream catchments. Downstream floods are typically associated with precipitation events that are of relatively long duration and occur over large areas. Flooding on small tributary streams may be limited, but the contribution of increased runoff may result in a large flood downstream. The lag time between precipitation and time of the flood peak is much longer for downstream floods than for upstream floods, generally providing ample warning for people to move to safe locations and, to some extent, secure some property against damage.

Coastal floods occurring on the Atlantic and Gulf coasts may be related to hurricanes or other combined offshore, nearshore, and shoreline processes. The effects of these complex interrelationships vary significantly across coastal settings, leading to challenges in the determination of the base (1-percent-annual-chance) flood for hazard mapping purposes. Land area covered by floodwaters of the base flood is identified as a Special Flood Hazard Area (SFHA). The Fulton County flood risk assessment analyzed at risk structures in the SFHA.

> The SFHA is the area where the National Flood Insurance Program's (NFIP) floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies. The owner of a structure in a high-risk area must carry flood insurance, if the owner carries a mortgage from a federally regulated or insured lender or servicer.

The following probabilistic risk assessment involves an analysis of a 1% annual chance riverine flood event (100-Year Flood) and a 1% annual chance coastal flood.

Riverine 1% Flood Scenario

Riverine losses were determined from the 1% flood boundaries downloaded from the FEMA Flood Map Service Center in December 2021. 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-MH to calculate the riverine flood loss estimates. Figure 6 illustrates the riverine inundation boundary associated with the 1% annual chance.

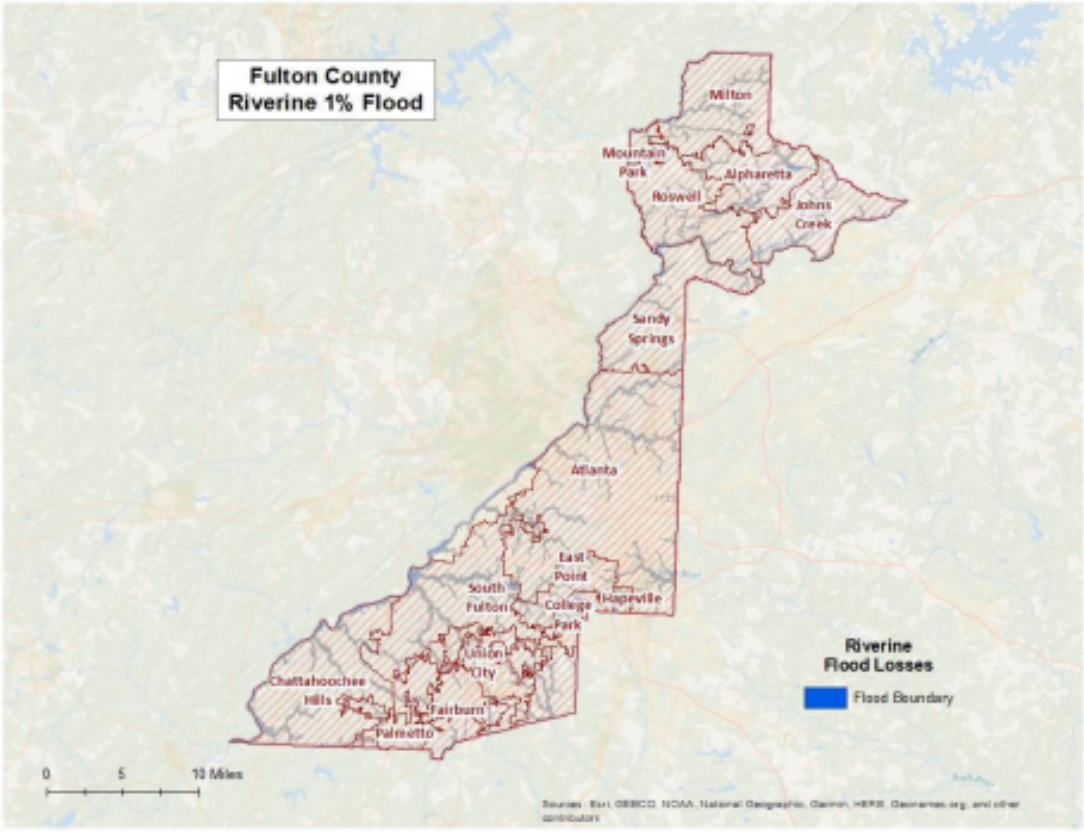


Figure 6: Riverine 1% Flood Inundation

Riverine 1% Flood Building Damages

Buildings in Fulton 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. Table 9 provides a summary of the potential flood-related building damage in Fulton County by jurisdiction that might be experienced from the 1% flood. Figure 7 maps the potential loss ratios of total building exposure to losses sustained to buildings from the 1% flood by 2010 census block and Figure 8 illustrates the relationship of building locations to the 1% flood inundation boundary.

Table 9: Fulton County Riverine 1% Building Losses

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
Alpharetta					
Residential	18,434	172	$6,831,446,280	$16,331,611	0.24%
Government	23	2	$10,685,830	$39,033	0.37%
Industrial	55	1	$103,923,300	$107,314	0.10%
Religious	15	1	$45,835,410	$1,526,016	3.33%
Commercial	1,435	7	$1,366,915,100	$2,633,153	0.19%
Atlanta					
Religious	386	3	$239,606,080	$907,081	0.38%
Commercial	4,587	27	$3,235,577,310	$3,961,574	0.12%
Industrial	797	15	$776,729,910	$2,611,868	0.34%
Government	238	6	$117,531,040	$163,131	0.14%
Education	127	2	$139,132,390	$85,166	0.06%
Residential	128,573	1,683	$41,037,866,010	$183,721,682	0.45%
Chattahoochee Hills					
Residential	1,489	14	$351,720,200	$516,510	0.15%
Government	5	1	$409,200	$1,343	0.33%
Agricultural	10	1	$1,749,360	$2,016	0.12%

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
College Park					
Residential	2,425	71	$509,063,670	$2,839,015	0.56%
Commercial	216	1	$132,008,780	$66,183	0.05%
Government	101	3	$31,351,960	$174,363	0.56%
East Point					
Commercial	368	6	$180,869,760	$135,450	0.07%
Residential	10,814	150	$1,546,355,850	$6,934,885	0.45%
Industrial	143	3	$347,328,370	$176,226	0.05%
Fairburn					
Residential	4,879	14	$1,022,918,930	$336,626	0.03%
Hapeville					
Commercial	157	18	$77,460,630	$662,253	0.85%
Industrial	23	3	$20,890,630	$1,372,232	6.57%
Residential	2,003	101	$288,932,710	$3,364,759	1.16%
Johns Creek					
Agricultural	1	1	$31,660	$5,345	16.88%
Residential	25,126	213	$9,092,659,720	$20,941,509	0.23%
Milton					
Residential	12,019	96	$5,245,532,210	$17,027,748	0.32%
Mountain Park					
Residential	287	1	$66,080,850	$103,724	0.16%

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
Palmetto					
Residential	1,490	4	$273,187,400	$143,945	0.05%
Roswell					
Religious	40	2	$25,310,890	$70,617	0.28%
Government	23	5	$11,613,490	$162,412	1.40%
Residential	27,842	287	$9,515,452,330	$29,834,320	0.31%
Commercial	1,535	6	$690,281,740	$394,133	0.06%
Sandy Springs					
Government	53	1	$24,134,620	$49,562	0.21%
Commercial	806	3	$893,180,740	$202,551	0.02%
Residential	27,094	358	$11,777,000,090	$51,906,492	0.44%
South Fulton					
Agricultural	7	1	$891,970	$27,185	3.05%
Commercial	306	6	$201,922,650	$272,389	0.13%
Residential	37,045	312	$5,851,946,670	$13,113,977	0.22%
Unincorporated					
Industrial	458	14	$1,249,124,720	$15,940,103	1.28%
Commercial	95	3	$57,404,780	$281,292	0.49%
Union City					
Residential	6,723	7	$1,211,792,910	$230,448	0.02%
County Total					
	318,253	**3,625**	**$104,603,858,150**	**$379,377,242**	

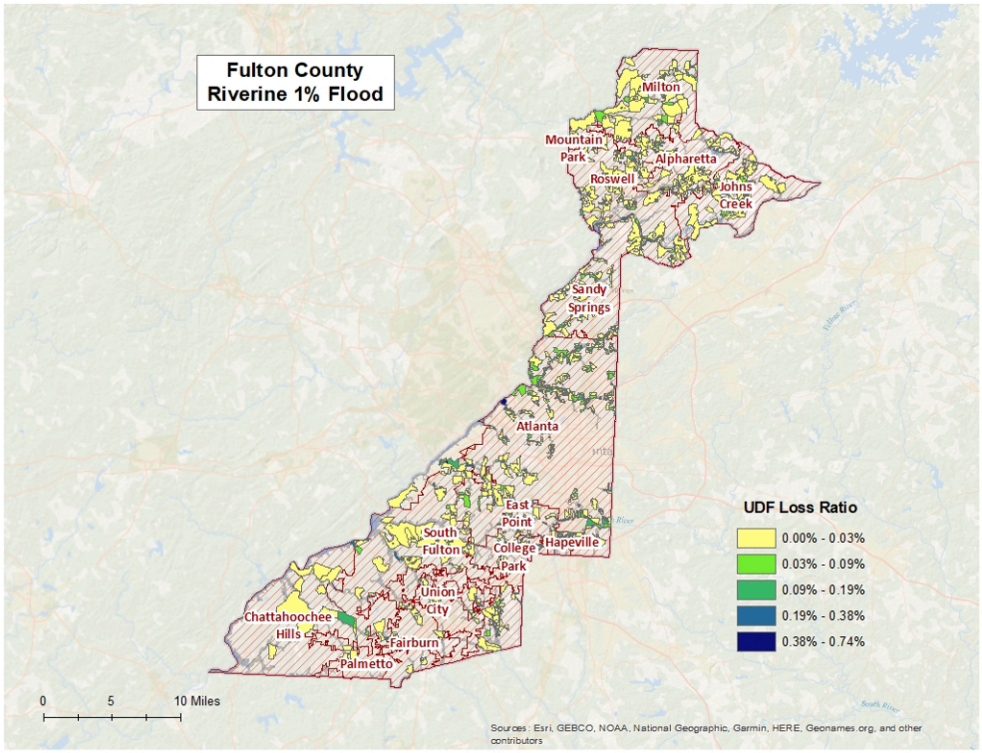


Figure 7: Fulton County Potential Loss Ratios of Total Building Exposure to Losses Sustained to Buildings from the 1% Riverine Flood by 2010 Census Block

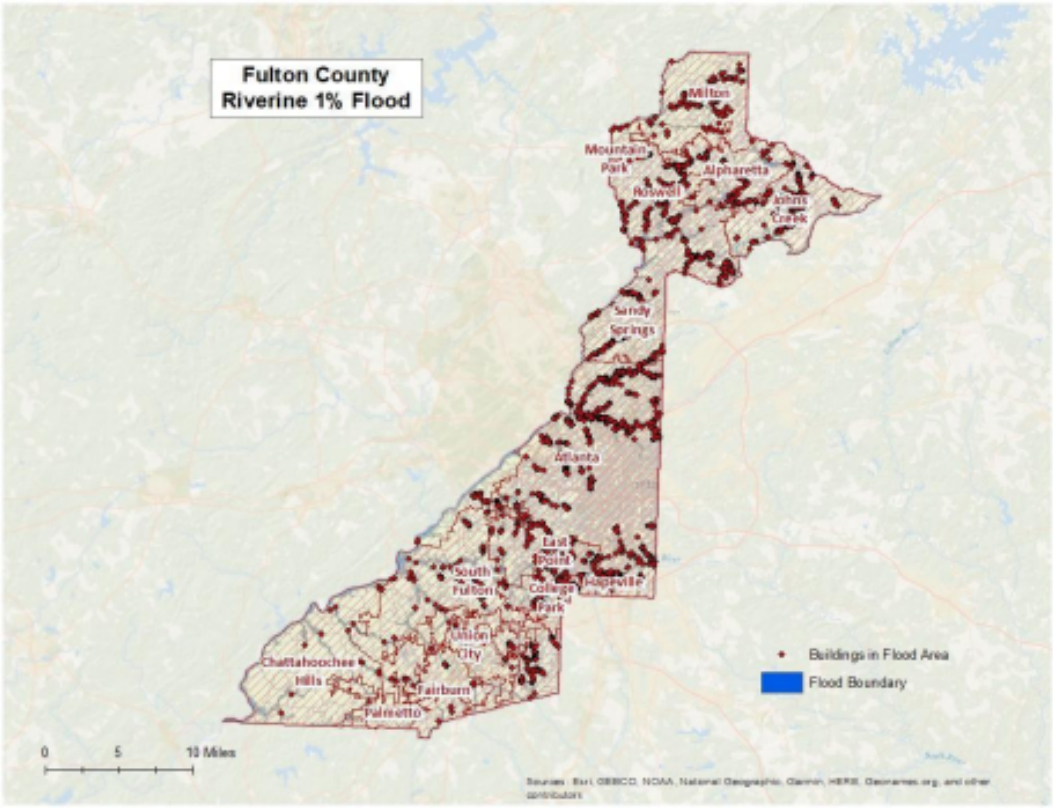


Figure 8: Fulton County Damaged Buildings in Riverine Floodplain (1% Flood)

Riverine 1% Flood Essential Facility Losses

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 analysis identified three essential facilities that were subject to damage in the Fulton County riverine 1% probability floodplain.

Table 10: Riverine 1% Flood Damaged Essential Facilities

Name	Category	City
Fire Station 2 Hapeville	Fire Station	Hapeville
Parklane Elementary School	School	East Point
Continental Colony Elementary School	School	Atlanta

Riverine 1% Flood Shelter Requirements

Hazus-MH estimates that 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 11,945 households might be displaced due to the flood. Displacement includes households evacuated within or very near to the inundated area. Displaced households represent 35,836 individuals, of which 28,880 may require short term publicly provided shelter. The results are mapped in Figure 9.

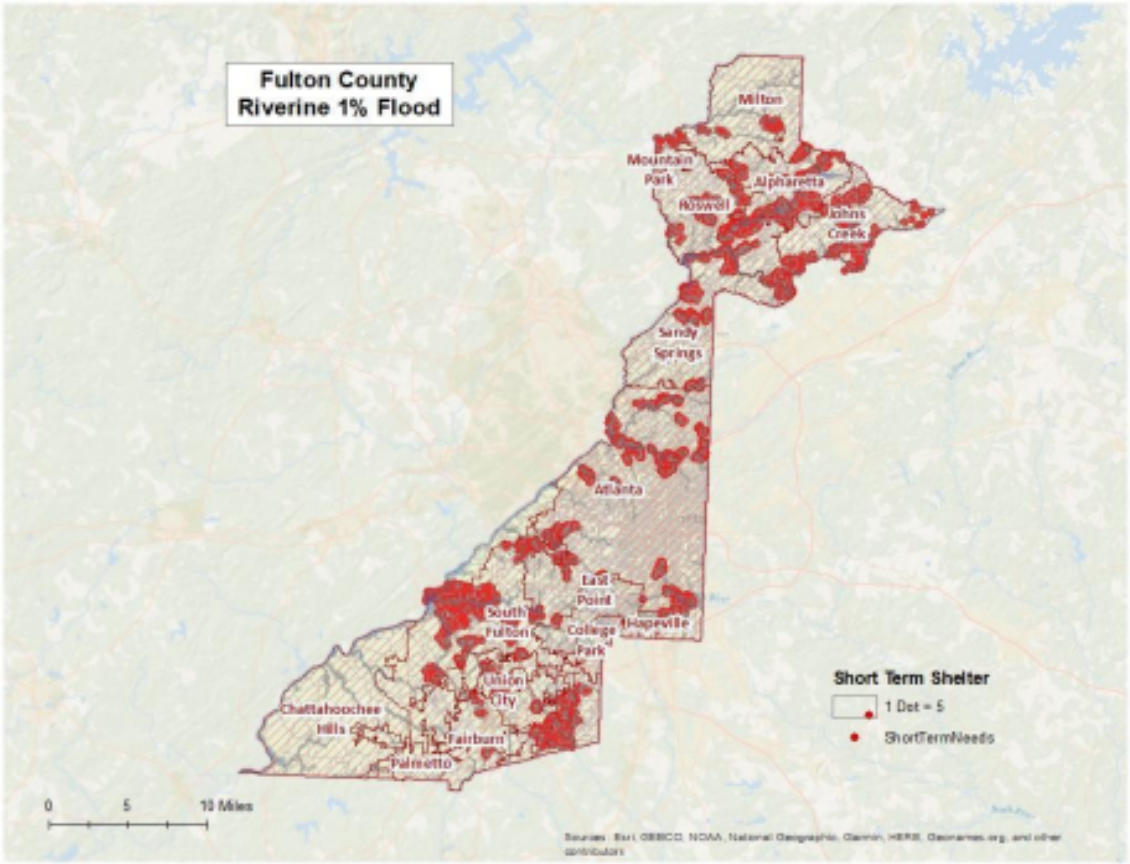


Figure 9: Riverine 1% Estimated Flood Shelter Requirements

Riverine 1% Flood Debris

Hazus-MH estimates the amount of debris that will be generated by the flood. 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-MH are unique to the Hazus-MH 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 169,732 tons of debris might be generated: 1) Finishes- 56,839 tons; 2) Structural – 54,480 tons; and 3) Foundations- 58,413 tons. The results are mapped in Figure 10.

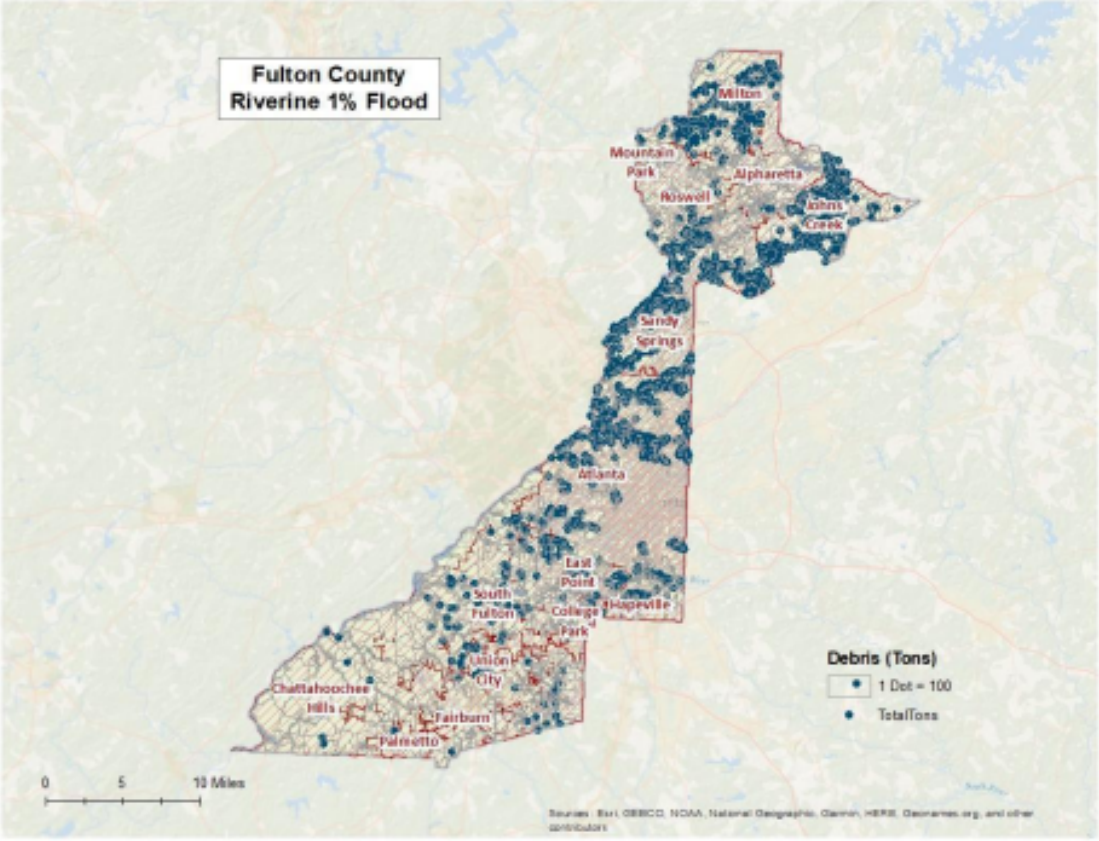


Figure 10: Riverine 1% Flood Debris Weight (Tons)

Tornado Risk Assessment

Hazard Definition

Tornadoes pose a great risk to the state of Georgia and its citizens. Tornadoes can occur at any time during the day or night. They can also happen during any month of the year. The unpredictability of tornadoes makes them one of Georgia's most dangerous hazards. Their extreme winds are violently destructive when they touch down in the region's developed and populated areas. Current estimates place the maximum velocity at about 300 miles per hour, but higher and lower values can occur. A wind velocity of 200 miles per hour will result in a wind pressure of 102.4 pounds per square foot of surface area—a load that exceeds the tolerance limits of most buildings. Considering these factors, it is easy to understand why tornadoes can be so devastating for the communities they hit.

Tornadoes are defined as violently-rotating columns of air extending from thunderstorms and cyclonic events. Funnel clouds are rotating columns of air not in contact with the ground; however, the violently-rotating column of air can reach the ground very quickly and become a tornado. If the funnel cloud picks up and blows debris, it has reached the ground and is a tornado.

Tornadoes are classified according to the Fujita tornado intensity scale. Originally introduced in 1971, the scale was modified in 2006 to better define the damage and estimated wind scale. The Enhanced Fujita Scale ranges from low intensity EF0 with effective wind speeds of 65 to 85 miles per hour, to EF5 tornadoes with effective wind speeds of over 200 miles per hour. The Enhanced Fujita intensity scale is included in Table 11.

Table 11: Enhanced Fujita Tornado Rating

Fujita Number	Estimated Wind Speed	Path Width	Path Length	Description of Destruction
EF0 *Gale*	65-85 mph	6-17 yards	0.3-0.9 miles	Light damage, some damage to chimneys, branches broken, sign boards damaged, shallow-rooted trees blown over.
EF1 Moderate	86-110 mph	18-55 yards	1.0-3.1 miles	Moderate damage, roof surfaces peeled off, mobile homes pushed off foundations, attached garages damaged.
EF2 Significant	111-135 mph	56-175 yards	3.2-9.9 miles	Considerable damage, entire roofs torn from frame houses, mobile homes demolished, boxcars pushed over, large trees snapped or uprooted.
EF3 Severe	136-165 mph	176-56 6 yards	10-31 miles	Severe damage, walls torn from well-constructed houses, trains overturned, most trees in forests uprooted, heavy cars thrown about.
EF4 Devastating	166-200 mph	0.3-0.9 miles	32-99 miles	Complete damage, well-constructed houses leveled, structures with weak foundations blown off for some distance, large missiles generated.

Fujita Number	Estimated Wind Speed	Path Width	Path Length	Description of Destruction
EF5 Incredible	> 200 mph	1.0-3.1 miles	100-315 miles	Foundations swept clean, automobiles become missiles and thrown for 100 yards or more, steel-reinforced concrete structures badly damaged.

Source: http://www.srh.noaa.gov

Hypothetical Tornado Scenario

For this report, an EF3 tornado was modeled to illustrate the potential impacts of tornadoes of this magnitude in the county. The analysis used a hypothetical path based upon an EF3 tornado event running along the predominant direction of historical tornados (southeast to northwest). The tornado path was placed to travel through Atlanta. The selected widths were modeled after a re-creation 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. Table 12 depicts tornado path widths and expected damage.

Table 12: Tornado Path Widths and Damage Curves

Fujita Scale	Path Width (feet)	Maximum Expected Damage
EF-5	2,400	100%
EF-4	1,800	100%
EF-3	1,200	80%
EF-2	600	50%
EF-1	300	10%
EF-0	300	0%

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. Figure 11 describes the zone analysis.

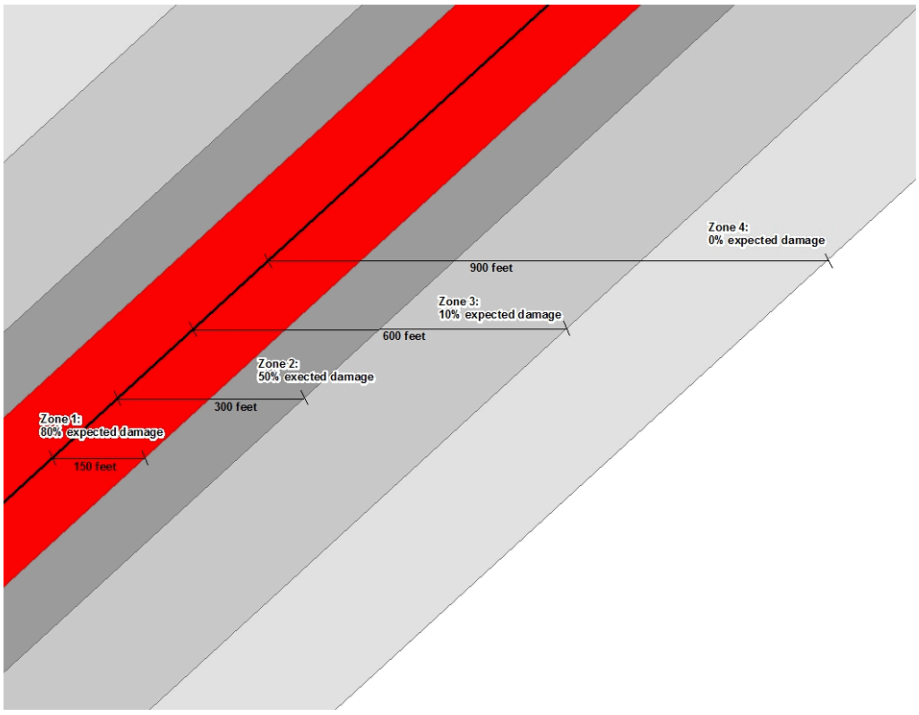


Figure 11: EF Scale Tornado Zones

An EF3 tornado has four damage zones, depicted in Table 13. Major damage is estimated within 150 feet of the tornado path. The outer buffer is 900 feet from the tornado path, within which buildings will not experience any damage. The selected hypothetical tornado path is depicted in Figure 12 and the damage curve buffer zones are shown in Figure 13.

Table 13: EF3 Tornado Zones and Damage Curves

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

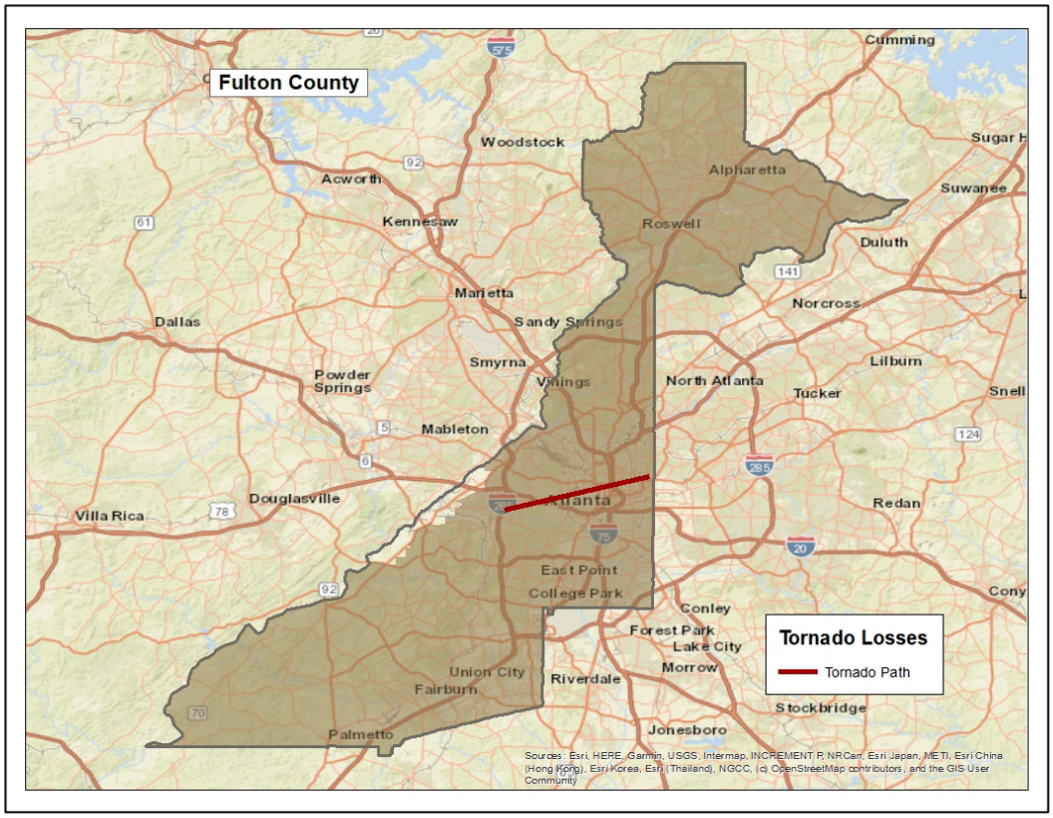


Figure 12: Hypothetical EF3 Tornado Path in Fulton County

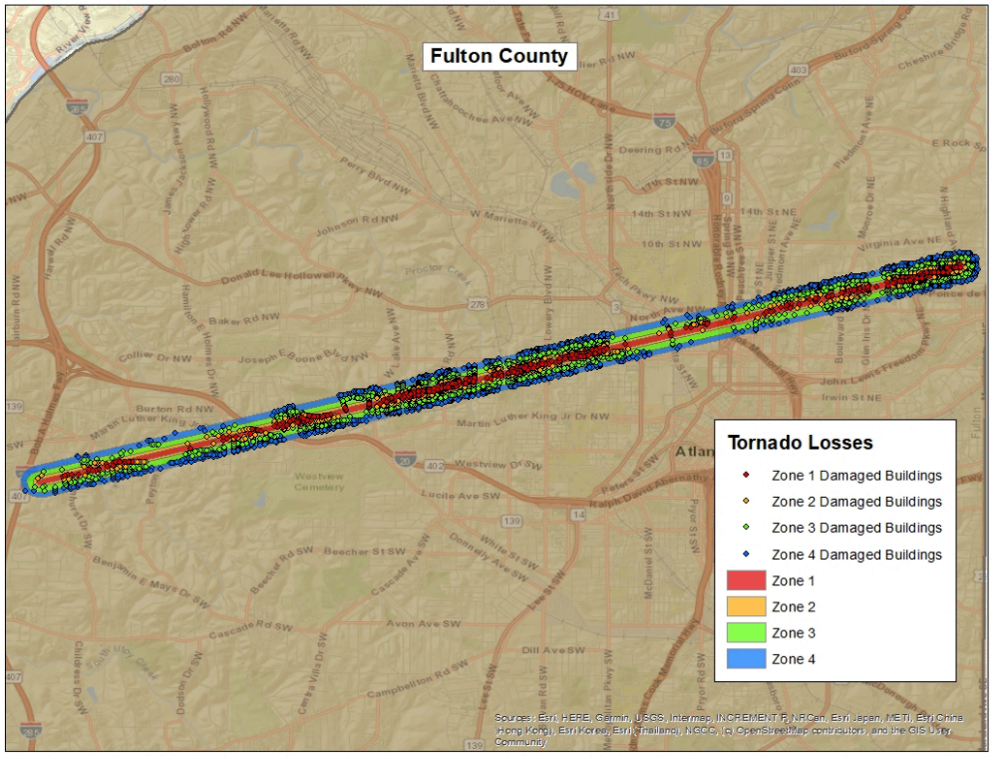


Figure 13: Modeled EF3 Tornado Damage Buffers in Fulton County

EF3 Tornado Building Damages

The analysis estimated that approximately 5,086 buildings could be damaged, with estimated building losses of $278 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 Fulton 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 Table 14.

Table 14: Estimated Building Losses by Occupancy Type

Occupancy	Buildings Damaged	Building Losses
Commercial	197	$36,277,922
Education	6	$140,840
Government	22	$923,321
Industrial	11	$565,602
Religious	23	$1,030,757
Residential	4,827	$239,400,784
Total	**5,086**	**$278,339,226**

EF3 Tornado Essential Facility Damage

There were seven essential facilities located in the tornado path – five schools, one medical care facility and one fire station. Table 15 outlines the specific facility and the amount of damage under the scenario.

Table 15: Estimated Essential Facilities Damaged

Facility	Amount of Damage
Peyton Forest Elementary School	Major Damage
Georgia State University Camps - Atlanta	Major Damage
Centennial Academy	Minor Damage
KIPP WAYS Academy	Minor Damage
KIPP Atlanta Collegiate	Minor Damage
Emory University Hospital Midtown	Minor Damage
Fire Station 16 Atlanta	Minor Damage

According to the Georgia Department of Education, Peyton Forest Elementary School's enrollment was approximately 411 students, Centennial Academy's enrollment was approximately 756 students, KIPP WAYS Academy's enrollment was approximately 382 students, and KIPP Atlanta Collegiate's enrollment was approximately 803 students as of October 2021. Georgia State University Campus has students taking classes throughout the day. 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.

According to the Georgia Department of Public Health OASIS website, Emory University Hospital Midtown has 511 beds. The medical requirements of those patients already in the system, combined with injuries suffered during the storm event, could potentially overtax the medical infrastructure of the county.

The location of the damaged Essential Facility is mapped in Figure 14.

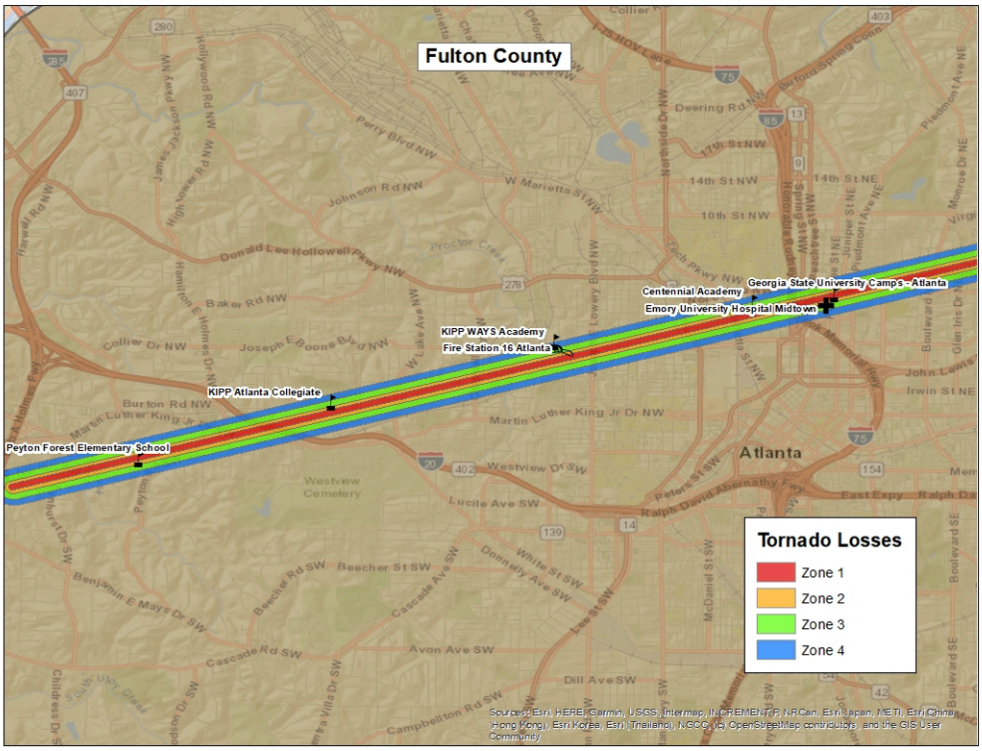


Figure 14: Modeled Essential Facility Damage in Fulton County

Exceptions Report

Hazus Version 2.2 SP1 was used to perform the loss estimates for Fulton County, Georgia. Changes made to the default Hazus-MH inventory and the modeling parameters used to setup the hazard scenarios are described within this document.

Reported losses reflect the updated data sets. Steps, algorithms and assumptions used during the data update process are documented in the project workflow named PDM_GA_Workflow.doc.

Statewide Inventory Changes

The default Hazus-MH Essential Facility inventory was updated for the entire state prior to running the hazard scenarios for Fulton County.

Updates to the Critical Facility data used in GMIS were provided by Fulton County in November 2021. These updates were applied by The Carl Vinson Institute of Government at the University of Georgia. Table 16 summarizes the difference between the original Hazus-MH default data and the updated data for Fulton County.

Table 16: Essential Facility Updates

Site Class	Feature Class	Default Replacement Cost	Default Count	Updated Replacement Cost	Updated Count
EF	Care	$750,734,000	13	$1,012,072,000	21
EF	EOC	$880,000	1	$880,000	1
EF	Fire	$0	13	$235,285,000	82
EF	Police	$59,136,000	48	$177,689,000	25
EF	School	$2,404,873,000	261	$2,722,901,000	198

County Inventory Changes

The GBS records for Fulton County were replaced with data derived from parcel and property assessment data obtained from Fulton County. The county provided property assessment data was current as of November 2021 and the parcel data current as of November 2021.

General Building Stock Updates

The parcel boundaries and assessor records were obtained from Fulton County. Records without improvements were deleted. The parcel boundaries were converted to parcel points located in the

centroids of each parcel boundary. Each parcel point was linked to an assessor record based upon matching parcel numbers. The generated Building Inventory represents the approximate locations (within a parcel) of building exposure. The Building Inventory was aggregated by Census Block and imported into Hazus-MH using the Hazus-MH Comprehensive Data Management System (CDMS). Both the 2010 Census Tract and Census Block tables were updated.

The match between parcel records and assessor records was based upon a common Parcel ID. For this type of project, unless the hit rate is better than 85%, the records are not used to update the default aggregate inventory in Hazus-MH. The Parcel-Assessor hit rate for Fulton County was 98.5%.

Adjustments were made to records when primary fields did not have a value. In these cases, the average values based on records where this information is present were applied to the fields. Table 17 outlines the adjustments made to Fulton County records.

Table 17: Building Inventory Default Adjustment Rates

Type of Adjustment	Building Count	Percentage
Area Unknown	16,843*	5%*
Construction Unknown	-	-%
Condition Unknown	-	-%
Foundation Unknown	-	-%
Year Built Unknown	16,843*	5%*
Total Buildings	**324,719**	**-%**

*Fulton County is a non-WinGAP county, which affects what data can be calculated. Per the data that was provided to us by Fulton County, we were able to calculate the Area Unknown and Year Built Unknown. Construction Unknown, Condition Unknown, and Foundation Unknown were not calculated and left blank.

Approximately 4% of the CAMA values were either missing (<Null> or '0'), did not match CAMA domains or were unusable ('Unknown', 'Other', 'Pending'). These were replaced with 'best available' values. Missing YearBuilt values were populated from average values per Census Block. Missing Condition, Construction and Foundation values were populated with the highest-frequency CAMA values per Occupancy Class. Missing Area values were populated with the average CAMA values per Occupancy Class.

The resulting Building Inventory was used to populate the Hazus-MH General Building Stock and User Defined Facility tables. The updated General Building Stock was used to calculate flood and tornado losses. Changes to the building counts and exposure that were modeled in Fulton County are sorted by General Occupancy in Table 1 at the beginning of this report. If replacements cost or building value were not present for a given record in the Assessor data, replacement costs were calculated from the Building Area (sqft) multiplied by the Hazus-MH RS Means ($/sqft) values for each Occupancy Class.

Differences between the default and updated data are due to various factors. The Assessor records often do not distinguish parcels by occupancy class when the parcels are not taxable; therefore, the total

number of buildings and the building replacement costs for government, religious/non-profit, and education may be underestimated.

User Defined Facilities

Building Inventory was used to create Hazus-MH User Defined Facility (UDF) inventory for flood modeling. Hazus-MH flood loss estimates are based upon the UDF point data. Buildings within the flood boundary were imported into Hazus-MH as User Defined Facilities and modeled as points.

Table 18: User Defined Facility Exposure

Class	Hazus-MH Feature	Counts	Exposure
BI	Building Exposure	320,157	$107,090,637,880
Riverine UDF	Structures Inside 1% Annual Chance	**4,010**	$1,365,804,840

Appendix F: Plan Adoption Resolutions

RESOLUTION AUTHORIZING ADOPTION OF THE 2022 FULTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN PURSUANT TO THE DISASTER MITIGATION ACT OF 2000

WHEREAS, the Federal Disaster Mitigation Act of 2000 ("DMA") provides the legal framwork for the Federal Emergency Management Agency (FEMA) mitigation, planning requirements for state, local, and tribal governments as a condition of mitigation grant assistance; and

WHEREAS, the DMA requires that states as a condition of disaster assistance, with state (support from local government agencies) develop hazard mitigation plans to prepare for and reduce the potential natural hazards; and

WHEREAS, the Atlanta-Fulton County Emergency Management Agency ("AFCEMA") is the Emergency Management Agency for Fulton County, and serves as the lead coordinating agency for mitigation planning and coordinates with the Hazard Mitigation Planning Committee ("HMPC"); and

WHEREAS, AFCEMA has developed a Hazardous Mitigation Plan as a result of a countywide effort to idenfiy and address certain vulnerabilites that exist prior to and during a disaster in Fulton County; and

WHEREAS, Fulton County submitted its Hazardous Mitigation Plan to FEMA and FEMA determined the County's Multi-Jurisdictional Mitigation Plan acceptable in July 2022; and

WHEREAS, DMA requires that local hazard mitigation plans be formally adopted by the governing body of Fulton County aeach participating jurisdiction.

1

NOW, THEREFORE, BE IT RESOLVED, that the Board of Commissioners:

(1) Adopts in its entirely the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan ("FCMHMP")

(2) Will use the adopted plan to guide pre-and post-disaster mitigation of the hazard mitigation of the hazard identified;

(3) Wiil coordinate that strategies identified in 2022 FCMHMP with other planning programs and mechanisms under its jurisdictional authority;

(4) Will continue its support of the Hazard Mitigation Planning Committee ("HMPC") and continue to participate in the HMPC as described in the FCMHMP;

(5) Will help to promote and support the mitigation successes of all FCMHMP partners .

BE IT FURTHER RESOLVED, that the Clerk to the Commission is directed to forward a copy of this Resolution to the Atlanta-Fulton County Emergency Management Agency.

BE IT FURTHER RESOLVED, that this Resolution shall become effective upon its adoption, and that all resolution and parts of resolutions in conflict with this Resolution are hereby repealed to the extent of the conflict.

SO PASSED AND ADOPTED, this ____5th____ day of **October**, 2022.

FULTON COUNTY BOARD OF COMMISSIONERS

BOARD OF COMMISSIONERS FULTON COUNTY Georgia FOUNDED 1853

Robb Pitts, Chairman
Fulton County Board of Commissioners

2

ITEM # 22-0716 RM 10/5/22
REGULAR MEETING

ATTEST:

Tonya R. Grier, Clerk to the Commission

APPROVED AS TO FORM:

Y. Soo Jo, County Attorney

BOARD OF COMMISSIONERS FULTON COUNTY Georgia FOUNDED, 1853

3

ITEM # 22-0716 RM 10 5 22
REGULAR MEETING

RESOLUTION NO. 2148

A RESOLUTION OF THE MAYOR AND CITY COUNCIL OF THE CITY OF ALPHARETTA, GEORGIA ADOPTING THE 2022 FULTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN PURSUANT TO THE DISASTER MITIGATION ACT OF 2000

WHEREAS, the Federal Disaster Mitigation Act of 2000 ("DMA") provides the legal framework for the Federal Emergency Management Agency (FEMA) mitigation, planning requirements for state, local, and tribal governments as a condition of mitigation grant assistance; and

WHEREAS, the DMA requires that states as a condition of disaster assistance, with support from local governmental agencies, develop hazard mitigation plans to prepare for and reduce the potential natural hazards and is intended to facilitate cooperation between state and local authorities; and

WHEREAS, the Atlanta-Fulton County Emergency Management Agency ("AFCEMA") serves as the leading coordinating agency for mitigation planning and coordinates with the Hazard Mitigation Planning Committee ("HMPC"); and

WHEREAS, AFCEMA through County Code, Chapter 130 (Sections 130.1 to 130.30) is designated as the Emergency Management Agency for Fulton County; and

WHEREAS, the purpose of the Fulton County Multi-Jurisdictional Plan is to identify and address certain vulnerabilities that exist prior to and during a disaster in Fulton County; and

WHEREAS, through a comprehensive planning process and risk assessment, the plan creates a unified approach to all Fulton County communities for dealing with identified hazards and associated risk issues and serves as a guide for local governments in their ongoing efforts to reduce community vulnerabilities; and

WHEREAS, Fulton County submitted its Multijurisdictional Hazard Mitigation Plan to FEMA a FEMA determined that the County's Multijurisdictional Mitigation Plan acceptable in August 2022; and

WHEREAS, DMA require local hazard mitigation plans be formally adopted by the governing body of each participating jurisdiction within Fulton County.

WHEREAS, in 2022, AFCEMA made certain revisions to the hazard mitigation plan ("2022 Fulton County Multijurisdictional Hazard Mitigation Plan") based upon the hazard mitigation assistance planning guidelines provided by the Federal Emergency Management Agency ("FEMA"); and

WHEREAS, federal regulations require that the 2022 Fulton County Multijurisdictional Plan be formally adopted by the City of Alpharetta, Ga;

NOW, THEREFORE, BE IT RESOLVED, on this 22nd day of August, 2022 that the City of Alpharetta, Georgia accepts and adopts the 2022 Fulton County Multi-Jurisdictional Hazard Mitigation Plan revised by AFCEMA based on the hazard mitigation assistance planning guidelines provided by FEMA for purposes of ensuring mitigation and preparedness from natural hazards.

BE IT FURTHER RESOLVED, that this Resolution shall be effective upon its adoption, and that all resolutions and parts of resolutions in conflict with this Resolution are hereby repealed to extent of conflict.

[SIGNATURES ON FOLLOWING PAGE]

[SIGNATURE PAGE TO RESOLUTION ADOPTING HAZARD MITIGATION PLAN]

CITY OF ALPHARETTA, GEORGIA

By: _____
Jim Gilvin, Mayor

COUNCILMEMBERS

_____
Donald F. Mitchell

_____
Brian Will

_____
Douglas J. Derito

_____
John Hipes

_____
Jason Binder

_____
Dan Merkel

Attest:

_____
Lauren Shapiro, City Clerk

Approved As To Form:

_____
Molly Esswein, City Attorney

CITY COUNCIL
ATLANTA, GEORGIA

22-R-4590

A RESOLUTION BY COUNCILMEMBER JASON WINSTON TO ACCEPT AND ADOPT THE 2022 FULTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN REVISED BY THE ATLANTA-FULTON COUNTY EMERGENCY MANAGEMENT AGENCY BASED ON THE HAZARD MITIGATION ASSISTANCE PLANNING GUIDELINES PROVIDED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE PURPOSE OF ENSURING MITIGATION AND PREPAREDNESS FROM NATURAL HAZARDS; AND FOR OTHER PURPOSES.

WHEREAS, the Federal Disaster Mitigation Act of 2000 (DMA) provides the legal framework for the Federal Emergency Management Agency (FEMA) mitigation, planning requirements for state, local, and tribal governments as a condition of mitigation grant assistance; and

WHEREAS, the DMA requires that states as a condition of disaster assistance, with support from local governmental agencies, develop hazard mitigation plans to prepare for and reduce the potential natural hazards and is intended to facilitate cooperation between state and local authorities; and

WHEREAS, the Atlanta-Fulton County Emergency Management Agency (AFCEMA) serves as the leading coordinating agency for mitigation planning and coordinates with the Hazard Mitigation Planning Committee ("HMPC"); and

WHEREAS, AFCEMA through County Code, Chapter 130 (Sections 130.1 to 130.30) is designated as the Emergency Management Agency for Fulton County; and

WHEREAS, the purpose of the Fulton County Multi-Jurisdictional Plan is to identify and address certain vulnerabilities that exist prior to and during a disaster in Fulton County; and

WHEREAS, through a comprehensive planning process and risk assessment, the plan creates a unified approach all Fulton County communities for dealing with identified hazards and associated risk issues and serves as a guide for local governments in their ongoing efforts to reduce community vulnerabilities; and

WHEREAS, in 2022, AFCEMA made certain revisions to the hazard mitigation plan (2022 Fulton County Multi-jurisdictional Hazard Mitigation Plan) based upon the hazard mitigation assistance planning guidelines provided by the Federal Emergency Management Agency ("FEMA); and

WHEREAS, Fulton County submitted its Multi-jurisdictional Hazard Mitigation Plan to FEMA and FEMA determined that the County's Multi-jurisdictional Mitigation Plan acceptable in August 2022; and

WHEREAS, a true and correct copy of the final copy of the approved 2022 Fulton County Multi-Jurisdictional Hazard Mitigation Plan is publicly available at:

<https://www.dropbox.com/s/rek2o2ko9gxw20s/2022%20Fulton%20County%20Mulitjurisdictional%20Hazard%20Mitigation%20Plan%20-%20FEMA%20Approved.pdf> ; and

WHEREAS, DMA requires local hazard mitigation plans be formally adopted by the governing body of each participating jurisdiction within Fulton County; and

WHEREAS, accordingly, DMA requires that the 2022 Fulton County Multi-Jurisdictional Plan be formally adopted by the Atlanta City Council; and

WHEREAS, the Atlanta City Council desires to accept and adopt the 2022 Fulton County Multi-Jurisdictional Hazard Mitigation Plan revised by AFCEMA based on the hazard mitigation assistance planning guidelines provided by FEMA for purpose of ensuring mitigation and preparedness from natural hazards.

NOW, THEREFORE BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ATLANTA, GEORGIA, that the Atlanta City Council hereby accepts and adopts the 2022 Fulton County Multi-Jurisdictional Hazard Mitigation Plan revised by the Atlanta-Fulton County Emergency Management Agency based on the hazard mitigation assistance planning guidelines provided by the Federal Emergency Management Agency for purpose of ensuring mitigation and preparedness from natural hazards.

BE IT FINALLY RESOLVED that this Resolution shall be effective immediately upon its approval.

___

A true copy,
A. Vanessa Waldon
Deputy Municipal Clerk

ADOPTED by the Atlanta City Council **NOV 21, 2022**
APPROVED per City Charter Section 2-403 **NOV 30, 2022**

22-R-4590
Page 2 of 7

Last Updated: 11/10/22

CITY COUNCIL
ATLANTA, GEORGIA

22-R-4590

SPONSOR SIGNATURES

Jason H Winston, Councilmember, District 1

STATE OF GEORGIA
COUNTY OF FULTON

RESOLUTION NO. 22-09-333

A RESOLUTION AUTHORIZING THE CITY OF CHATTAHOOCHEE HILLS, GEORGIA ADOPTION OF THE 2022 FULTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN PURSUANT TO THE DISASTER MITIGATION ACT OF 2000

WHEREAS, the Federal Disaster Mitigation Act of 2000 ("DMA") provides the legal framwork for the Federal Emergency Management Agency (FEMA) mitigation, planning requirements for state, local, and tribal governments as a condition of mitigation grant assistance; and

WHEREAS, the DMA requires that states as a condition of disaster assistance, with support from local governmental agencies, develop hazard mitigation plans to prepare for and reduce the potential natural hazards and is intended to faciltate cooperation between state and local authorities; and

WHEREAS, the Atlanta-Fulton County Emergency Management Agency ("AFCEMA") serves as the leading coordinating agency for mitigation planning and coordinates with the Hazard Mitigation Planning Committee ("HMPC"); and

WHEREAS, AFCEMA through County Code, Chapter 130 (Sections 130.1 to 130.30) is designated as the Emergency Management Agency for Fulton County; and

WHEREAS, the purpose of the Fulton County Multi-Jurisdictional Plan is to identify and address certain vulnerabilities that exist prior to and during a disaster in Fulton County; and

WHEREAS, through a comprehensive planning process and risk assessment, the plan creates a unified approach all Fulton County communities for dealing with identified hazards and associated risk issues and serves as a guide for local governments in their ongoing efforts to reduce community vulnerabilities; and

WHEREAS, Fulton County submitted its Multjurisdictional Hazard Mitigation Plan to FEMA and FEMA determined that the County's Multijuridictional Mitigation Plan acceptable in August 2022; and

WHEREAS, DMA requires local hazard mitigation plans be formally adopted by the governing body of each participating jurisdiction within Fulton County.

WHEREAS, in 2022, AFCEMA made certain revisions to the hazard mitigation plan ("2022 Fulton County Multijurisdicitional Hazard Mitigation Plan") based upon the hazard mitigation assistance planning guidelines provided by the Federal Emergency Management Agency ("FEMA); and

WHEREAS, federal regulations require that the 2022 Fulton County Multijurisdictional Plan be formally adopted by the City of Chattahoochee Hills, Georgia; and

WHEREAS, the City of Chattahoochee Hills, Georgia desires to accept the 2022 Hazard Mitigation Plan revised by AFCEMA based on the hazard mitigation assistance planning

STATE OF GEORGIA
COUNTY OF FULTON

RESOLUTION NO. 22-09-333

guidelines provided by FEMA for purpose of ensuring mitigation and preparedness from natural hazards.

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of Chattahoochee Hills, Georgia is directed to forward a copy of this Resolution to the Atlanta-Fulton County Emergency Management Agency.

BE IT FINALLY RESOLVED, that this Resolution shall be effective upon its adoption, and that all resolutions and parts of resolutions in conflict with this Resolution are hereby repealed to extent of conflict.

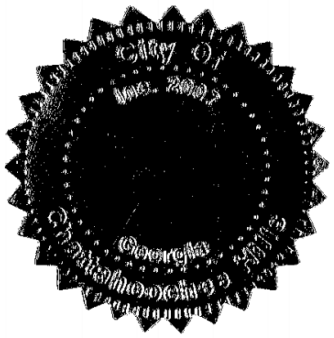
SO PASSED AND ADOPTED, this 6th day of September, 2022

ATTEST:

Dana Wicher, City Clerk

APPROVED AS TO FORM:

Tom Reed, Mayor



RESOLUTION 2022-30

A RESOLUTION AUTHORIZING THE CITY OF COLLEGE PARK ADOPTION OF THE 2022 FULTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN PURSUANT TO THE DISASTER MITIGATION ACT OF 2000

WHEREAS, the Federal Disaster Mitigation Act of 2000 ("DMA") provides the legal framwork for the Federal Emergency Management Agency (FEMA) mitigation, planning requirements for state, local, and tribal governments as a condition of mitigation grant assistance; and

WHEREAS, the DMA requires that states as a condition of disaster assistance, with support from local governmental agencies, develop hazard mitigation plans to prepare for and reduce the potential natural hazards and is intended to faciltate cooperation between state and local authorities; and

WHEREAS, the Atlanta-Fulton County Emergency Management Agency ("AFCEMA") serves as the leading coordinating agency for mitigation planning and coordinates with the Hazard Mitigation Planning Committee ("HMPC"); and

WHEREAS, AFCEMA through County Code, Chapter 130 (Sections 130.1 to 130.30) is designated as the Emergency Management Agency for Fulton County; and

WHEREAS, the purpose of the Fulton County Multi-Jurisdictional Plan is to identify and address certain vulnerabilities that exist prior to and during a disaster in Fulton County; and

WHEREAS, through a comprehensive planning process and risk assessment, the plan creates a unified approach all Fulton County communities for dealing with identified hazards and associated risk issues and serves as a guide for local governments in their ongoing efforts to reduce community vulnerabilities; and

WHEREAS, Fulton County submitted its Multjurisdictional Hazard Mitigation Plan to FEMA and FEMA determined that the County's Multijuridictional Mitigation Plan acceptable in August 2022; and

WHEREAS, DMA requires local hazard mitigation plans be formally adopted by the governing body of each participating jurisdiction within Fulton County.

WHEREAS, in 2022, AFCEMA made certain revisions to the hazard mitigation plan ("2022 Fulton County Multijurisdicitional Hazard Mitigation Plan") based upon the hazard mitigation assistance planning guidelines provided by the Federal Emergency Management Agency ("FEMA); and

WHEREAS, federal regulations require that the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan be formally adopted by the City of College Park; and

WHEREAS, the City of College Park desires to accept the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan revised by AFCEMA based on the hazard mitigation assistance planning guidelines provided by FEMA for purpose of ensuring mitigation and preparedness from natural hazards.

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of College Park hereby adopts the 2022 Fulton County Hazard Mitigation Plan.

1

BE IT FUTHER RESOLVED, that the City Manager or his designee is directed to forward a copy of the resolution to the Atlanta-Fulton County Emergency Management Agency.

BE IT FINALLY RESOLVED, that this resolution shall be effective upon its adption,and that all resolutions and parts of resolutions in conflict with this Resolution are hereby repealed to extent of conflict.

SO PASSED AND ADOPTED, this 20 day of September, 2022

ATTEST:

City Clerk

APPROVED AS TO FORM:

Mayor

2

STATE OF GEORGIA
COUNTY OF FULTON

Resolution No. 188-022

A RESOLUTION OF THE CITY OF EAST POINT GEORGIA AUTHORIZING ADOPTION OF THE 2022 FULTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN PURSUANT TO THE DISASTER MITIGATION ACT OF 2000; AND FOR OTHER PURPOSES.

WHEREAS, the Federal Disaster Mitigation Act of 2000 ("DMA") provides the legal framwork for the Federal Emergency Management Agency (FEMA) mitigation planning requirements for state, local, and tribal governments as a condition of mitigation grant assistance; and

WHEREAS, the DMA requires that states, as a condition of disaster assistance, with support from local governmental agencies, develop hazard mitigation plans to preppare for and reduce the potential natural hazards and is intended to faciltate cooperation between state and local authorities; and

WHEREAS, the Atlanta-Fulton County Emergency Management Agency ("AFCEMA") serves as the leading coordinating agency for mitigation planning and coordinates with the Hazard Mitigation Planning Committee ("HMPC"); and

WHEREAS, AFCEMA through County Code, Chapter 130 (Sections 130.1 to 130.30) is designated as the Emergency Management Agency for Fulton County; and

WHEREAS, the purpose of the Fulton County Multi-Jurisdictional Plan is to identify and address certain vulnerabilities that exist prior to and during a disaster in Fulton County; and

WHEREAS, through a comprehensive planning process and risk assessment, the plan creates a unified approach all Fulton County communities for dealing with identified hazards and

associated risk issues and serves as a guide for local governments in their ongoing efforts to reduce community vulnerabilities; and

WHEREAS, Fulton County submitted its Multijurisdictional Hazard Mitigation Plan to FEMA and FEMA determined that the County's Multijuridictional Mitigation Plan was acceptable in August 2022; and

WHEREAS, the DMA requires local hazard mitigation plans be formally adopted by the governing body of each participating jurisdiction within Fulton County.

WHEREAS, in 2022, AFCEMA made certain revisions to the hazard mitigation plan ("2022 Fulton County Multijurisdicitional Hazard Mitigation Plan") based upon the hazard mitigation assistance planning guidelines provided by the Federal Emergency Management Agency ("FEMA); and

WHEREAS, federal regulations require that 2022 Fulton County Multijurisdictional Hazard Mitigation Plan be formally adopted by the City of East Point; and

WHEREAS, the City of East Point desires to accept the 2022 Hazard Mitigation Plan revised by AFCEMA based on the hazard mitigation assistance planning guidelines provided by FEMA for the purpose of ensuring mitigation and preparedness from natural hazards; and

NOW, THEREFORE, BE IT RESOLVED, by the City of East Point as follows:

Section 1:

The City of East Point hereby accepts and adopts the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan, as revised by AFCEMA.

Resolution Authorizing Adoption of Hazard Mitigation Plan
September 2022

Section 2:

The City Clerk is directed to forward a copy of this Resolution to the Atlanta-Fulton County Emergency Management Agency.

Section 3:

Should any provision of this resolution be rendered invalid by any court of law, the remaining provisions shall continue in force and effect until amended or repealed by action of the governing authority.

Section 4:

The City Clerk, with the concurrence of the City Attorney, is authorized to correct any scrivener's errors found in this resolution as enacted.

Section 5:

This resolution shall become effective upon passage and all resolutions and parts of resolutions in conflict with this Resolution are hereby repealed to extent of the conflict.

BE IT SO RESOLVED, this 17th day of October, 2022.

CITY OF EAST POINT, GEORGIA

BY: Deana Holiday Ingraham
AF32062C45613E707519AE34173445EA contractworks
Deana Holiday Ingraham, Mayor

APPROVED AS TO FORM:

Antavius Weems
B97B8C08456F6864D21957E35A20B54F contractworks
Interim City Attorney

ATTEST:

Keshia McCullough
DBFE209E5ECDFB4B8B9DF0953813E16D contractworks
City Clerk

Resolution Authorizing Adoption of Hazard Mitigation Plan
September 2022

STATE OF GEORGIA
COUNTY OF FULTON

RESOLUTION NO: 2022-08

A RESOLUTION AUTHORIZING THE CITY OF FAIRBURN ADOPTION OF THE 2022 FULTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN PURSUANT TO THE DISASTER MITIGATION ACT OF 2000; AND FOR OTHER RELATED PURPOSES.

WHEREAS, the Federal Disaster Mitigation Act of 2000 ("DMA") provides the legal framework for the Federal Emergency Management Agency (FEMA) mitigation, planning requirements for state, local, and tribal governments as a condition of mitigation grant assistance; and

WHEREAS, the DMA requires that states as a condition of receiving disaster assistance, with support from local governmental agencies, develop hazard mitigation plans to prepare for and reduce potential natural hazards and is intended to facilitate cooperation between state and local authorities; and

WHEREAS, the Atlanta-Fulton County Emergency Management Agency ("AFCEMA") serves as the leading coordinating agency for mitigation planning and coordinates with the Hazard Mitigation Planning Committee ("HMPC"); and

WHEREAS, AFCEMA through County Code, Chapter 130 (Sections 130.1 to 130.30) is designated as the Emergency Management Agency for Fulton County; and

WHEREAS, the purpose of the Fulton County Multi-Jurisdictional Plan is to identify and address certain vulnerabilities that exist prior to and during a disaster in Fulton County; and

WHEREAS, through a comprehensive planning process and risk assessment, the plan creates a unified approach for all Fulton County communities for dealing with identified hazards and associated risk issues and serves as a guide for local governments in their ongoing efforts to reduce community vulnerabilities; and

WHEREAS, in 2022, AFCEMA made certain revisions to the hazard mitigation plan ("2022 Fulton County Multi-Jurisdictional Hazard Mitigation Plan") based upon the hazard mitigation assistance planning guidelines provided by the Federal Emergency Management Agency ("FEMA); and

WHEREAS, Fulton County submitted its Multi-Jurisdictional Hazard Mitigation Plan to FEMA and FEMA determined that the County's Multi-Jurisdictional Mitigation Plan acceptable in August 2022; and

WHEREAS, DMA and federal regulations require the formal adoption of local hazard mitigation plans by the governing body of each participating jurisdiction within Fulton County; and

WHEREAS, the Mayor and City Council have determined it to be in the best interest of the citizens of the City of Fairburn that the City adopt the 2022 Fulton County Multi-Jurisdictional Hazard Mitigation Plan revised by AFCEMA based on the hazard mitigation assistance planning

guidelines provided by FEMA for purpose of ensuring mitigation of and preparedness for natural hazards.

NOW, THEREFORE, BE IT RESOLVED, that the 2022 Fulton County Multi-Jurisdictional Hazard Mitigation Plan is hereby adopted.

BE IT FURTHER RESOLVED, that the City Council of the City of Fairburn is directed to forward a signed copy of this Resolution to the Atlanta-Fulton County Emergency Management Agency.

BE IT FINALLY RESOLVED, that this Resolution shall become effective upon its adoption, and that all resolutions and parts of resolutions in conflict with this Resolution are hereby repealed to extent of conflict only.

This 12 day of September, 2022

Mario B. Avery, Mayor

ATTEST:

Brenda B. James, City Clerk

APPROVED AS TO FORM:

Rory K. Starkey, City Attorney

RESOLUTION NO. 2022-13

A RESOLUTION AUTHORIZING THE CITY OF HAPEVILLE ADOPTION OF THE 2022 FULTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN PURSUANT TO THE DISASTER MITIGATION ACT OF 2000

WHEREAS, the Federal Disaster Mitigation Act of 2000 ("DMA") provides the legal framwork for the Federal Emergency Management Agency (FEMA) mitigation, planning requirements for state, local, and tribal governments as a condition of mitigation grant assistance; and

WHEREAS, the DMA requires that states as a condition of disaster assistance, with support from local governmental agencies, develop hazard mitigation plans to prepare for and reduce the potential natural hazards and is intended to faciltate cooperation between state and local authorities; and

WHEREAS, the Atlanta-Fulton County Emergency Management Agency ("AFCEMA") serves as the leading coordinating agency for mitigation planning and coordinates with the Hazard Mitigation Planning Committee ("HMPC"); and

WHEREAS, AFCEMA through County Code, Chapter 130 (Sections 130.1 to 130.30) is designated as the Emergency Management Agency for Fulton County; and

WHEREAS, the purpose of the Fulton County Multi-Jurisdictional Plan is to identify and address certain vulnerabilities that exist prior to and during a disaster in Fulton County; and

WHEREAS, through a comprehensive planning process and risk assessment, the plan creates a unified approach all Fulton County communities for dealing with identified hazards and associated risk issues and serves as a guide for local governments in their ongoing efforts to reduce community vulnerabilities; and

WHEREAS, Fulton County submitted its Multjurisdictional Hazard Mitigation Plan to FEMA and FEMA determined that the County's Multijuridictional Mitigation Plan acceptable in August 2022; and

WHEREAS, DMA requires local hazard mitigation plans be formally adopted by the governing body of each participating jurisdiction within Fulton County.

WHEREAS, in 2022, AFCEMA made certain revisions to the hazard mitigation plan ("2022 Fulton County Multijurisdicitional Hazard Mitigation Plan") based upon the hazard mitigation assistance planning guidelines provided by the Federal Emergency Management Agency ("FEMA); and

WHEREAS, federal regulations require that the 2022 Fulton County Multijurisdictional Plan be formally adopted by the City of Hapeville; and

WHEREAS, the City of Hapeville desires to accept the 2022 Hazard Mitigation Plan revised by AFCEMA based on the hazard mitigation assistance planning guidelines provided by FEMA for purpose of ensuring mitigation and preparedness from natural hazards.

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of Hapeville is directed to forward a copy of this Resolution to the Atlanta-Fulton County Emergency Management Agency.

BE IT FINALLY RESOLVED, that this Resolution shall be effective upon its adoption, and that all resolutions and parts of resolutions in conflict with this Resolution are hereby repealed to extent of conflict.

SO PASSED AND ADOPTED, this 6 day of September 2022

By:

Alan Hallman, Mayor

Attest:

Sharee Steed, City Clerk

Approved as to form:

City Attorney

STATE OF GEORGIA
COUNTY OF FULTON

RESOLUTION 2022-12-36

A RESOLUTION TO ADOPT THE 2022 FULTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN FOR THE CITY OF JOHNS CREEK, GEORGIA

WHEREAS, the Federal Disaster Mitigation Act of 2000 provides the legal framework for the Federal Emergency Management Agency (FEMA) mitigation, planning requirements for state, local, and tribal governments as a condition of mitigation grant assistance; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 requires the development of hazard mitigation plans to prepare for and reduce the potential natural hazards and is intended to facilitate cooperation between state and local authorities; and

WHEREAS, the Atlanta-Fulton County Emergency Management Agency ("AFCEMA") serves as the leading coordinating agency for mitigation planning in Fulton County and coordinates with the Hazard Mitigation Planning Committee; and

WHEREAS, the City of Johns Creek was a formal member and active participant of the Hazard Mitigation Planning Committee for the 2016 update to the Multi-Jurisdictional Hazard Mitigation Plan; and

WHEREAS, the Mayor and City Council adopted the 2016 Fulton County Multi-Jurisdictional Hazard Mitigation Plan by Resolution 2016-11-20; and

WHEREAS, AFCEMA began holding meetings for the update to the Fulton County Multi-Jurisdictional Hazard Mitigation Plan in 2021 and the City of Johns Creek was a formal member and active participant of the Hazard Mitigation Planning Committee throughout the process; and

WHEREAS, the update to the Multi-Jurisdictional Hazard Mitigation Plan was completed in the summer of 2022 and submitted to FEMA for review; and

WHEREAS, FEMA has approved the 2022 Fulton County Multi-Jurisdictional Plan which is expressly incorporated herein by this reference; and

WHEREAS, the Mayor and City Council desire to adopt the 2022 Fulton County Multi-Jurisdictional Plan and continue to work with the other represented jurisdictions to mitigate the identified hazards to the community.

NOW THEREFORE, BE IT RESOLVED, the Mayor and Council of the City of Johns Creek that the 2022 Fulton County Multi-Jurisdictional Hazard Mitigation Plan is hereby adopted.

PAGE 1 of 2

STATE OF GEORGIA
COUNTY OF FULTON

RESOLUTION 2022-12-36

SO RESOLVED AND EFFECTIVE, this 14th day of December, 2022.

Approved:

John Bradberry, Mayor

ATTEST:

Allison Tarpley, City Clerk

Approved as to Form:

E. Ronald Bennett, Jr., City Attorney

PAGE 2 of 2

STATE OF GEORGIA
COUNTY OF FULTON

RESOLUTION NO. R22-09-620

A RESOLUTION OF THE CITY OF MILTON PURSUANT TO THE DISASTER MITIGATION ACT OF 2000 AUTHORIZING ADOPTION OF THE 2022 FULTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

WHEREAS, Fulton County, the City of Milton, and the other municipal governments in the County are required to complete a Hazard Mitigation Plan pursuant to the Disaster Mitigation Act of 2000; and

WHEREAS, under the provisions of the Disaster Mitigation Act of 2000, local governments that complete Hazard Mitigation Plans will remain eligible for Federal mitigation funding; and

WHEREAS, through a comprehensive planning process and risk assessment, the plan creates a unified approach all Fulton County communities for dealing with identified hazards and associated risk issues and serves as a guide for local governments in their ongoing efforts to reduce community vulnerabilities; and

WHEREAS, the City of Milton participated in this project

WHEREAS, Fulton County and its municipal governments have completed an updated Hazard Mitigation Plan that fulfills the Federal requirements of the Disaster Mitigation Act of 2000.

NOW THEREFORE, BE IT RESOLVED, that the City Council of the City of Milton Approves the 2022 Fulton County Multi-Jurisdictional Hazard Mitigation Plan

RESOLVED this 7th day of September 2022.

Peyton Jamison, Mayor

Attest: Tammy Lowit, City Clerk

CITY OF MILTON GEORGIA EST. 2006

RESOLUTION NO. R 142-22

A RESOLUTION AUTHORIZING THE CITY OF MOUNTAIN PARK ADOPTION OF THE 2022 FULTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN PURSUANT TO THE DISASTER MITIGATION ACT OF 2000

WHEREAS, the Federal Disaster Mitigation Act of 2000 ("DMA") provides the legal framwork for the Federal Emergency Management Agency (FEMA) mitigation, planning requirements for state, local, and tribal governments as a condition of mitigation grant assistance; and

WHEREAS, the DMA requires that states as a condition of disaster assistance, with support from local governmental agencies, develop hazard mitigation plans to prepare for and reduce the potential natural hazards and is intended to faciltate cooperation between state and local authorities; and

WHEREAS, the Atlanta-Fulton County Emergency Management Agency ("AFCEMA") serves as the leading coordinating agency for mitigation planning and coordinates with the Hazard Mitigation Planning Committee ("HMPC"); and

WHEREAS, AFCEMA through County Code, Chapter 130 (Sections 130.1 to 130.30) is designated as the Emergency Management Agency for Fulton County; and

WHEREAS, the purpose of the Fulton County Multi-Jurisdictional Plan is to identify and address certain vulnerabilities that exist prior to and during a disaster in Fulton County; and

WHEREAS, through a comprehensive planning process and risk assessment, the plan creates a unified approach all Fulton County communities for dealing with identified hazards and associated risk issues and serves as a guide for local governments in their ongoing efforts to reduce community vulnerabilities; and

WHEREAS, Fulton County submitted its Multjurisdictional Hazard Mitigation Plan to FEMA and FEMA determined that the County's Multijuridictional Mitigation Plan acceptable in August 2022; and

WHEREAS, DMA requires local hazard mitigation plans be formally adopted by the governing body of each participating jurisdiction within Fulton County.

WHEREAS, in 2022, AFCEMA made certain revisions to the hazard mitigation plan ("2022 Fulton County Multijurisdicitional Hazard Mitigation Plan") based upon the hazard mitigation assistance planning guidelines provided by the Federal Emergency Management Agency ("FEMA); and

WHEREAS, federal regulations require that the 2022 Fulton County Multijurisdictional Plan be formally adopted by the City of Mountain Park; and

WHEREAS, the City of Mountain Park desires to accept the 2022 Hazard Mitigation Plan revised by AFCEMA based on the hazard mitigation assistance planning guidelines provided by FEMA for purpose of ensuring mitigation and preparedness from natural hazards.

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of Mountain Park is directed to forward a copy of this Resolution to the Atlanta-Fulton County Emergency Management Agency.

BE IT FINALLY RESOLVED, that this Resolution shall be effective upon its adoption, and that all resolutions and parts of resolutions in conflict with this Resolution are hereby repealed to extent of conflict.

SO PASSED AND ADOPTED, this 22 day of August, 2022

ATTEST:

Jennifer Zalokar, City Clerk

APPROVED AS TO FORM:

Jim Still, Jr., Mayor

STATE OF GEORGIA
CITY OF PALMETTO

RESOLUTION

NO. 2022-08

A RESOLUTION AUTHORIZING THE CITY OF PALMETTO ADOPTION OF THE 2022 FULTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN PURSUANT TO THE DISASTER MITIGATION ACT OF 2000

WHEREAS, the Federal Disaster Mitigation Act of 2000 ("DMA") provides the legal framwork for the Federal Emergency Management Agency (FEMA) mitigation, planning requirements for state, local, and tribal governments as a condition of mitigation grant assistance; and

WHEREAS, the DMA requires that states as a condition of disaster assistance, with support from local governmental agencies, develop hazard mitigation plans to preppare for and reduce the potential natural hazards and is intended to faciltate cooperation between state and local authorities; and

WHEREAS, the Atlanta-Fulton County Emergency Management Agency ("AFCEMA") serves as the leading coordinating agency for mitigation planning and coordinates with the Hazard Mitigation Planning Committee ("HMPC"); and

WHEREAS, AFCEMA through County Code, Chapter 130 (Sections 130.1 to 130.30) is designated as the Emergency Management Agency for Fulton County; and

WHEREAS, the purpose of the Fulton County Multi-Jurisdictional Plan is to identify and address certain vulnerabilities that exist prior to and during a disaster in Fulton County; and

WHEREAS, through a comprehensive planning process and risk assessment, the plan creates a unified approach all Fulton County communities for dealing with identified hazards and associated risk issues and serves as a guide for local governments in their ongoing efforts to reduce community vulnerabilities; and

WHEREAS, Fulton County submitted its Multjurisdictional Hazard Mitigation Plan to FEMA and FEMA determined that the County's Multijuridictional Mitigation Plan acceptable in August 2022; and

WHEREAS, DMA requires local hazard mitigation plans be formally adopted by the governing body of each participating jurisdictions within Fulton County.

WHEREAS, in 2022, AFCEMA made certain revisions to the hazard mitigatuon plan ("2022 Fulton County Multijurisdicitional Hazard Mitigation Plan") based upon the hazard mitigation assistance planning guidelines provided by the Federal Emergency Management Agency ("FEMA); and

WHEREAS, federal regulations that 2022 Fulton County Multijurisdictional Plan be formally adopted by the City of Palmetto; and

WHEREAS, the City of Palmetto desire to accept the 2022 Hazard Mitigation Plan revised by AFCEMA based on the hazard mitigation assistance planning guidelines provided by FEMA for purpose of ensuring mitigation and preparedness from natural hazards.

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of Palmetto is directed to forward a copy of this Resolution to the Atlanta-Fulton County Emergency Management Agency.

BE IT FINALLY RESOLVED, that this Resolution shall be effective upon its adoption, and that all resolutions and parts of resolutions in conflict with this Resolution are hereby repealed to extent of conflict.

SO PASSED AND ADOPTED, this 3rd day of October, 2022.

MAYOR AND COUNCIL
OF THE
CITY OF PALMETTO

(SEAL)

By: _____
J. Clark Boddie, Mayor

ATTEST:

_____
Cynthia Hanson, City Clerk

APPROVED AS TO FORM:

_____
Dennis Davenport, City Attorney

–2–

Resolution No. 2022-09-58

STATE OF GEORGIA
COUNTY OF FULTON

September 26, 2022

RESOLUTION AUTHORIZING THE CITY OF ROSWELL FOR ADOPTION OF THE 2022 FULTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN PURSUANT TO THE DISASTER MITIGATION ACT OF 2000

WHEREAS, the Federal Disaster Mitigation Act of 2000 ("DMA") provides the legal framework for the Federal Emergency Management Agency (FEMA) mitigation planning requirements for state, local, and tribal governments as a condition of mitigation grant assistance; and

WHEREAS, the DMA requires that states, as a condition of disaster assistance, with support from local governmental agencies, develop hazard mitigation plans to prepare for and reduce potential natural hazards and is intended to facilitate cooperation between state and local authorities; and

WHEREAS, the Atlanta-Fulton County Emergency Management Agency ("AFCEMA") serves as the leading coordinating agency for mitigation planning and coordinates with the Hazard Mitigation Planning Committee ("HMPC"); and

WHEREAS, AFCEMA through County Code, Chapter 130 (Sections 130.1 to 130.30) is designated as the Emergency Management Agency for Fulton County; and

WHEREAS, the purpose of the Fulton County Multi-Jurisdictional Plan is to identify and address certain vulnerabilities that exist prior to and during a disaster in Fulton County; and

WHEREAS, through a comprehensive planning process and risk assessment, the plan creates a unified approach for all Fulton County communities for dealing with identified hazards and associated risk issues and serves as a guide for local governments in their ongoing efforts to reduce community vulnerabilities; and

WHEREAS, Fulton County submitted its Multi-Jurisdictional Hazard Mitigation Plan to FEMA and FEMA determined that the County's Multi-Jurisdictional Mitigation Plan acceptable in August 2022; and

WHEREAS, DMA requires local hazard mitigation plans be formally adopted by the governing body of each participating jurisdiction within Fulton County; and

WHEREAS, in 2022 AFCEMA made certain revisions to the hazard mitigation plan ("2022 Fulton County Multi-Jurisdictional Hazard Mitigation Plan") based upon the hazard mitigation assistance planning guidelines provided by the Federal Emergency Management Agency ("FEMA"); and

Resolution No. 2022-09-58

WHEREAS, federal regulations require that the 2022 Fulton County Multi-Jurisdictional Plan be formally adopted by the City of Roswell; and

WHEREAS, the City of Roswell desires to accept the 2022 Hazard Mitigation Plan revised by AFCEMA based on the hazard mitigation assistance planning guidelineas provided by FEMA for purpose of ensuring mitigation and preparedness from natural hazards.

NOW, THEREFORE, BE IT RESOLVED that the City Clerk of the City of Roswell is directed to forward a copy of this Resolution to the Atlanta-Fulton County Emergency Management Agency.

BE IT FINALLY RESOLVED, that this Resolution shall be effective upon its adoption, and that all resolutions and parts of resolutions in conflict with this Resolution are hereby repealed to extent of conflict.

SO PASSED AND ADOPTED, this 26th day of September, 2022

APPROVED AS TO FORM:

Michael Palermo, Mayor Pro-Tem

Attest:

Marlee Press, City Clerk
(Seal)

RESOLUTION NO. 2022-11-160

STATE OF GEORGIA
COUNTY OF FULTON

A RESOLUTION OF THE CITY OF SANDY SPRINGS AUTHORIZING THE ADOPTION OF THE 2022 FULTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN PURSUANT TO THE DISASTER MITIGATION ACT OF 2000

WHEREAS, the Federal Disaster Mitigation Act of 2000 ("DMA") provides the legal framework for the Federal Emergency Management Agency (FEMA) mitigation, planning requirements for state, local, and tribal governments as a condition of mitigation grant assistance; and

WHEREAS, the DMA requires that states as a condition of disaster assistance, with support from local governmental agencies, develop hazard mitigation plans to prepare for and reduce the potential natural hazards and is intended to facilitate cooperation between state and local authorities; and

WHEREAS, the Atlanta-Fulton County Emergency Management Agency ("AFCEMA") serves as the leading coordinating agency for mitigation planning and coordinates with the Hazard Mitigation Planning Committee ("HMPC"); and

WHEREAS, AFCEMA through County Code, Chapter 130 (Sections 130.1 to 130.30) is designated as the Emergency Management Agency for Fulton County; and

WHEREAS, the purpose of the Fulton County Multi-Jurisdictional Plan is to identify and address certain vulnerabilities that exist prior to and during a disaster in Fulton County; and

WHEREAS, through a comprehensive planning process and risk assessment, the plan creates a unified approach all Fulton County communities for dealing with identified hazards and associated risk issues and serves as a guide for local governments in their ongoing efforts to reduce community vulnerabilities; and

WHEREAS, Fulton County submitted its Multijurisdictional Hazard Mitigation Plan to FEMA and FEMA determined that the County's Multijurisdictional Mitigation Plan acceptable in August 2022; and

WHEREAS, DMA requires local hazard mitigation plans be formally adopted by the governing body of each participating jurisdiction within Fulton County.

WHEREAS, in 2022, AFCEMA made certain revisions to the hazard mitigation plan ("2022 Fulton County Multijurisdictional Hazard Mitigation Plan") based upon the hazard mitigation assistance planning guidelines provided by the Federal Emergency Management Agency ("FEMA); and

WHEREAS Federal regulations require that the 2022 Fulton County Multijurisdictional Plan be formally adopted by the **City of Sandy Springs;** and

WHEREAS the **City of Sandy Springs** desires to accept the 2022 Hazard Mitigation Plan revised by AFCEMA based on the hazard mitigation assistance planning guidelines provided by FEMA for purpose of ensuring mitigation and preparedness from natural hazards.

NOW, THEREFORE, BE IT RESOLVED, that the City Manager or their designee of the **City of Sandy Springs** is directed to forward a copy of this Resolution to the Atlanta-Fulton County Emergency Management Agency.

BE IT FINALLY RESOLVED that this Resolution shall be effective upon its adoption, and that all resolutions and parts of resolutions in conflict with this Resolution are hereby repealed to extent of conflict.

Page **1** of **2**

RESOLUTION NO. 2022-11-160

STATE OF GEORGIA
COUNTY OF FULTON

RESOLVED, this 1st day of November 2022.

Approved:

Russell K. Paul, Mayor

Attest:

Raquel D. González, City Clerk

(Seal)

RES2022-054

A RESOLUTION AUTHORIZING THE CITY OF SOUTH FULTON ADOPTION OF THE 2022 FULTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN PURSUANT TO THE DISASTER MITIGATION ACT OF 2000

WHEREAS, the Federal Disaster Mitigation Act of 2000 ("DMA") provides the legal framwork for the Federal Emergency Management Agency (FEMA) mitigation, planning requirements for state, local, and tribal governments as a condition of mitigation grant assistance; and

WHEREAS, the DMA requires that states as a condition of disaster assistance, with support from local governmental agencies, develop hazard mitigation plans to prepare for and reduce the potential natural hazards and is intended to faciltate cooperation between state and local authorities; and

WHEREAS, the Atlanta-Fulton County Emergency Management Agency ("AFCEMA") serves as the leading coordinating agency for mitigation planning and coordinates with the Hazard Mitigation Planning Committee ("HMPC"); and

WHEREAS, AFCEMA through County Code, Chapter 130 (Sections 130.1 to 130.30) is designated as the Emergency Management Agency for Fulton County; and

WHEREAS, the purpose of the Fulton County Multi-Jurisdictional Plan is to identify and address certain vulnerabilities that exist prior to and during a disaster in Fulton County; and

WHEREAS, through a comprehensive planning process and risk assessment, the plan creates a unified approach all Fulton County communities for dealing with identified hazards and associated risk issues and serves as a guide for local governments in their ongoing efforts to reduce community vulnerabilities; and

WHEREAS, Fulton County submitted its Multjurisdictional Hazard Mitigation Plan to FEMA and FEMA determined that the County's Multijuridictional Mitigation Plan acceptable in August 2022; and

WHEREAS, DMA requires local hazard mitigation plans be formally adopted by the governing body of each participating jurisdiction within Fulton County.

WHEREAS, in 2022, AFCEMA made certain revisions to the hazard mitigation plan ("2022 Fulton County Multijurisdicitional Hazard Mitigation Plan") based upon the hazard mitigation assistance planning guidelines provided by the Federal Emergency Management Agency ("FEMA); and

WHEREAS, federal regulations require that the 2022 Fulton County Multijurisdictional Plan be formally adopted by the City of **South Fulton**; and

WHEREAS, the City of **South Fulton** desires to accept the 2022 Hazard Mitigation Plan revised by AFCEMA based on the hazard mitigation assistance planning guidelines provided by FEMA for purpose of ensuring mitigation and preparedness from natural hazards.

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of **South Fulton** is directed to forward a copy of this Resolution to the Atlanta-Fulton County Emergency Management Agency.

1

BE IT FINALLY RESOLVED, that this Resolution shall be effective upon its adoption, and that all resolutions and parts of resolutions in conflict with this Resolution are hereby repealed to extent of conflict.

The foregoing RESOLUTION No. 2022-054, was adopted on August 23, 2022 was offered by Councilmember Willis, who moved its approval. The motion was seconded by Councilmember Gumbs, and being put to a vote, the result was as follows:

	AYE	NAY
khalid kamau, Mayor		
Carmalitha Gumbs	X	
Catherine Foster Rowell	X	
Helen Zenobia Willis	X	
Jaceey Sebastian	X	
Corey Reeves, Mayor Pro Tem	X	
Natasha Williams	X	
VACANT		

THIS RESOLUTION adopted this 23rd day of August 2022.

CITY OF SOUTH FULTON, GEORGIA

khalid kamau, MAYOR

ATTEST:

9/1/22

COREY E. ADAMS, SR., CITY CLERK

CITY OF SOUTH FULTON OFFICIAL SEAL EST. 2017 GEORGIA

APPROVED AS TO FORM:

9/1/22

VINCENT D. HYMAN, CITY ATTORNEY

A RESOLUTION AUTHORIZING THE CITY OF UNION CITY ADOPTION OF THE 2022 FULTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN PURSUANT TO THE DISASTER MITIGATION ACT OF 2000

WHEREAS, the Federal Disaster Mitigation Act of 2000 ("DMA") provides the legal framwork for the Federal Emergency Management Agency (FEMA) mitigation, planning requirements for state, local, and tribal governments as a condition of mitigation grant assistance; and

WHEREAS, the DMA requires that states as a condition of disaster assistance, with support from local governmental agencies, develop hazard mitigation plans to prepare for and reduce the potential natural hazards and is intended to faciltate cooperation between state and local authorities; and

WHEREAS, the Atlanta-Fulton County Emergency Management Agency ("AFCEMA") serves as the leading coordinating agency for mitigation planning and coordinates with the Hazard Mitigation Planning Committee ("HMPC"); and

WHEREAS, AFCEMA through County Code, Chapter 130 (Sections 130.1 to 130.30) is designated as the Emergency Management Agency for Fulton County; and

WHEREAS, the purpose of the Fulton County Multi-Jurisdictional Plan is to identify and address certain vulnerabilities that exist prior to and during a disaster in Fulton County; and

WHEREAS, through a comprehensive planning process and risk assessment, the plan creates a unified approach all Fulton County communities for dealing with identified hazards and associated risk issues and serves as a guide for local governments in their ongoing efforts to reduce community vulnerabilities; and

WHEREAS, Fulton County submitted its Multjurisdictional Hazard Mitigation Plan to FEMA and FEMA determined that the County's Multijuridictional Mitigation Plan acceptable in August 2022; and

WHEREAS, DMA requires local hazard mitigation plans be formally adopted by the governing body of each participating jurisdiction within Fulton County.

WHEREAS, in 2022, AFCEMA made certain revisions to the hazard mitigation plan ("2022 Fulton County Multijurisdicitional Hazard Mitigation Plan") based upon the hazard mitigation assistance planning guidelines provided by the Federal Emergency Management Agency ("FEMA); and

WHEREAS, federal regulations require that the 2022 Fulton County Multijurisdictional Plan be formally adopted by the City of Union City; and

WHEREAS, the City of **Union City** desires to accept the 2022 Hazard Mitigation Plan revised by AFCEMA based on the hazard mitigation assistance planning guidelines provided by FEMA for purpose of ensuring mitigation and preparedness from natural hazards.

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of **Union City** is directed to forward a copy of this Resolution to the Atlanta-Fulton County Emergency Management Agency.

BE IT FINALLY RESOLVED, that this Resolution shall be effective upon its adoption, and that all resolutions and parts of resolutions in conflict with this Resolution are hereby repealed to extent of conflict.

SO PASSED AND ADOPTED, this **20th** day of **September**, 2022

ATTEST:

Shandrella Jewett, City Clerk

APPROVED AS TO FORM:

Vince WIlliams, Mayor

Appendix G: State of Georgia Plan Approval Letter

GEORGIA EMERGENCY MANAGEMENT AND HOMELAND SECURITY AGENCY

BRIAN P. KEMP
GOVERNOR

JAMES C. STALLINGS
DIRECTOR

July 22, 2022

Honorable Robb Pitts
Chairman
Fulton County Board of Commissioners
141 Pryor Street, SW
Atlanta, Georgia 30303

Dear Commissioner Pitts,

The Federal Emergency Management Agency (FEMA) has completed its review of the Fulton County Hazard Mitigation Plan for compliance with the programmatic requirements of the Federal Hazard Mitigation Planning Standards contained in 44 CFR Section 201.6(b)-(d). FEMA has determined that the Fulton County Hazard Mitigation Plan Update is compliant with Federal standards, subject to formal community adoption.

The county and each municipality must pass individual resolutions adopting the Plan. Please forward the adopted and signed resolutions to Lucy Herring, Hazard Mitigation Planning Specialist, so that we may submit them to FEMA for inclusion in your plan for formal federal review and approval. Upon submittal of a copy of the participating jurisdictions' adoption documentation as well as documentation of the final public meeting, FEMA will issue formal approval of the Fulton County Hazard Mitigation Plan. Should you have any questions or need additional information, please contact Lucy Herring, Hazard Mitigation Planning Specialist, at (404) 635-7245.

Sincerely,

John V. "Jack" Krolikowski
Hazard Mitigation Deputy Manager

lh/as
Enclosure
cc: Matthew Kallmyer, Director
Fulton County Emergency Management Agency
Fulton County Municipalities
Sheri Russo, Area Coordinator
Georgia Emergency Management and Homeland Security Agency

Post Office Box 18055 • Atlanta, Georgia 30316-0055
(404) 635-7200 • Toll Free in Georgia 1-800-TRY-GEMA • gema.ga.gov

Appendix H: FEMA Plan Approval Letter

U.S. Department of Homeland Security
Region 4
3005 Chamblee Tucker Road
Atlanta, GA 30341

FEMA

July 20, 2022

Mr. Steven Clark
Hazard Mitigation Manager
Georgia Emergency Management and Homeland Security Agency
P.O. Box 18055
Atlanta, GA 30316-0055

Reference: Fulton County Hazard Mitigation Plan

Dear Mr. Clark:

The Federal review of the draft Fulton County Hazard Mitigation Plan for compliance with the planning requirements contained in 44 CFR §201.6 is complete. The plan is compliant with Federal requirements, subject to formal community adoption.

For our office to issue formal approval of the plan, the jurisdiction(s) must submit adoption documentation. Upon receipt of the adoption resolution(s) to our office, we will issue formal approval of the Fulton County Hazard Mitigation Plan. Once approved, please submit a final copy of the Plan, without draft notations and track changes.

If you or any plan participant need assistance, please do not hesitate to contact Lillian Huffman, of my staff, at (202) 765-8968.

Sincerely,

Kristen M. Martinenza

Kristen M. Martinenza, P.E., CFM
Branch Chief, Risk Analysis Branch
FEMA Region 4

GEORGIA EMERGENCY MANAGEMENT AND HOMELAND SECURITY AGENCY

BRIAN P. KEMP
GOVERNOR

JAMES C. STALLINGS
DIRECTOR

November 30, 2022

Honorable Rob Pitts
Chairman
Fulton County Board of Commissioners
141 Pryor Street SW
Atlanta, Georgia 30303

Dear Commissioner Pitts,

I am pleased to inform you that the Fulton County Hazard Mitigation Plan has been federally approved for a period of five (5) years, to November 6, 2027. With this approval, Fulton County is an eligible applicant for the Hazard Mitigation Assistance (HMA) grant programs made available through the Georgia Emergency Management and Homeland Security Agency (GEMA/HS).

We commend Fulton County for the development of a solid and workable mitigation plan that will guide hazard mitigation activities over the coming years. The Fulton County Hazard Mitigation Plan established a firm foundation to pursue many valuable and needed mitigation projects that have been identified by Fulton County. Implementation of these projects will ultimately make your community a safer, more sustainable place to live, even through times of disaster.

I strongly encourage the Fulton County Hazard Mitigation planning team to perform an annual review and assessment of the effectiveness of the mitigation plan and provide a report on any updates or changes made to the plan. This report should be coordinated through your Fulton County Emergency Management Agency (EMA) Director who will take care of the updates to be submitted to GEMA/HS.

If you would like more information on the HMA grant application process, please contact Monique McBride, Risk Reduction Specialist, at 470-225-3817.

Sincerely,

Stephen A. Clark
Hazard Mitigation Manager

lh/as
Enclosure
cc: Matthew Kallmyer, Director
Fulton County Emergency Management Agency
Sheri Russo, Area Coordinator
Georgia Emergency Management and Homeland Security Agency

U.S. Department of Homeland Security
Region 4
3005 Chamblee Tucker Road
Atlanta, GA 30341

FEMA

November 7, 2022

Mr. Steven Clark
Hazard Mitigation Manager
Georgia Emergency Management and Homeland Security Agency
P.O. Box 18055
Atlanta, GA 30316-0055

Reference: Fulton County Hazard Mitigation Plan

Dear Mr. Clark:

We are pleased to inform you the Fulton County Hazard Mitigation Plan update complies with the Federal hazard mitigation planning requirements resulting from the Disaster Mitigation Act of 2000, as contained in 44 CFR §201.6. Effective November 7, 2022, the plan is approved for a period of five (5) years to November 6, 2027.

Enclosed is the status of all participating jurisdictions. Approved jurisdictions are eligible applicants through the State for the following mitigation grant programs administered by the Federal Emergency Management Agency (FEMA):

- Hazard Mitigation Grant Program (HMGP)
- Flood Mitigation Assistance (FMA)
- Building Resilient Infrastructure and Communities (BRIC)

Please note that all funding requests will be evaluated individually according to the program's specific eligibility requirements.

The State and all plan participants should be commended for their close coordination and communications with our office in the review and subsequent approval of the plan. If you or any plan participant need assistance, please do not hesitate to contact Lillian Huffman, of my staff, at (202) 765-8968.

Sincerely,

Kristen M. Martinenza

Kristen M. Martinenza, P.E., CFM
Branch Chief, Risk Analysis Branch
FEMA Region 4

Enclosure

Enclosure: Plan Participant Status List

Attached is the list of participating jurisdictions in the referenced hazard mitigation plan.

	Community Name	Jurisdiction Status	Date Approved by FEMA
1)	Alpharetta city	Approved	11/7/22
2)	Atlanta city	APA	
3)	Chattahoochee Hills city	Approved	11/7/22
4)	College Park city	Approved	11/7/22
5)	East Point city	Approved	11/7/22
6)	Fairburn city	Approved	11/7/22
7)	Fulton County	Approved	11/7/22
8)	Hapeville city	Approved	11/7/22
9)	Johns Creek city	APA	
10)	Milton city	Approved	11/7/22
11)	Mountain Park city	Approved	11/7/22
12)	Palmetto city	Approved	11/7/22
13)	Roswell city	Approved	11/7/22
14)	Sandy Springs city	APA	
15)	South Fulton city	Approved	11/7/22
16)	Union City city	Approved	11/7/22

Appendix I: Jurisdictional Annexes

Included in Appendix C is information specific to each of the municipalities participating in the 2022 update of the Atlanta-Fulton County Multijurisdictional Hazard Mitigation Plan. These include:

City of Alpharetta, GA

City of Atlanta, GA

City of Chattahoochee Hills, GA

City of College Park, GA

City of East Point, GA

City of Fairburn, GA

City of Hapeville, GA

City of Johns Creek, GA

City of Milton, GA

City of Mountain Park, GA

City of Palmetto, GA

City of Roswell, GA

City of Sandy Springs, GA

City of South Fulton, GA

Union City, GA

Jurisdiction Profile

- History & Geography
- Population & Demographics
- Critical Facilities & Infrastructure
- Land Use & Development Trends

Hazard Risk Assessment

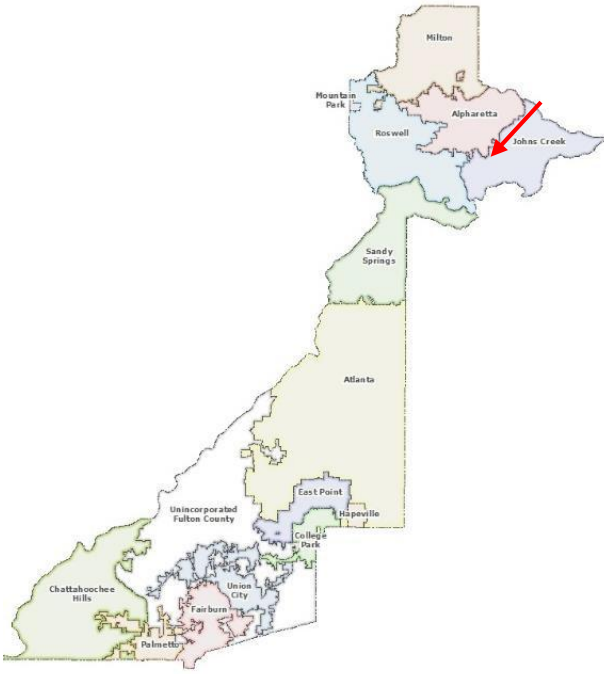
- Hazard Identification & Risk Assessment
- Hazard Event History & Community Impacts

Mitigation Capabilities & Actions

- Capabilities Assessment
- NFIP Participation
- Integration of Hazard Mitigation into Existing & Future Planning Mechanisms
- Mitigation Actions

Jurisdiction Profile: City of Alpharetta, GA

History & Geography



The history of Alpharetta, Georgia, which is in northern Fulton County, dates back to the 1830s. During this period, many settlers and pioneers traveled to the area seeking the promise of community in land ownership, raising families and fertile farmland. On December 11, 1858, the City of Alpharetta was founded.

In 1863, an epidemic of smallpox broke out in the South and a period of economic recession soon followed. Throughout these hardships, Alpharetta remained resilient and retained sustainable growth. In the 1860's, the City of Alpharetta was thriving with numerous hotels, a multi-room school, and an abundance of stores and churches.

General Sherman's March to the Sea, during the Civil War, left a trail of devastation through the South and many of Alpharetta's early records were in ruins. Luckily, a local resident named Dr. O. P. Skeleton was able to salvage several historical documents from the courthouse. These have proved invaluable as many other towns lost all historical documents.

In 1932, with the Great Depression ravaging the country, Milton County and Fulton County merged into one single entity. The first roads began to be paved and Fulton County's population and outreach grew tremendously. Decades later, in 1981, Alpharetta's population was 3,000, and by 2010, it had climbed to 57,551. This number, as explained in Population & Demographics (see next page), has continued to grow.

Today, Alpharetta is one of the fastest growing communities in Fulton County and the South. Its environment is ideal for raising families, supporting a quality lifestyle, and sustaining a thriving business climate.

Significant Characteristics

As the headquarters of many companies, including LexisNexis, Verizon, and ADP, and with the presence of nearly 700 high-tech companies, Alpharetta is dubbed "Technology City of the South."

Alpharetta hosts three parks that highlight nature and walking tours. Running north to south, the seven-mile Greenway is a paved trail following the Big Creek Corridor, the Alpharetta Arboretum at Wills Park (established September 2008), and the Alpharetta Arboretum at Cogburn Park (established December 2008).

The city is home to North Point Mall. Completed in 1993, this retail center has over 1.3 million square feet of retail shopping. Also located in Alpharetta, the Avalon development is a mixed-use luxury community made up of retail, restaurants, entertainment, rental condos and luxury, single family homes. Alpharetta also has the Ameris Bank Amphitheatre at Encore Park, which is an outdoor venue with the seating capacity of 12,000.

Another main attraction in the City of Alpharetta is the Walk of Memories, which is located at American Legion Post 201 and pays tribute to veterans of the U.S. Armed Forces, community and friends, through a brick walk inscribed with the names of all Georgia residents killed in service including and following WWII. A separate section is reserved for those who served in the military and survived.

Population & Demographics

As of the 2020 Decennial Census, there were **65,818** people, **25,391** households, and **11,860** families residing in the City of Alpharetta. This equates to a population density of 2,446.8 people per square mile. The population, as evidenced by the following table, continues to increase year after year, decade after decade.

Table 1: Population Change, City of Alpharetta, GA

Population Change, City of Alpharetta, GA			
Year	2000	2010	2020
Population	46,607	57,551	65,818

Given these numbers, Alpharetta experienced a population increase of 23.5% between 2000 and 2010 and 14.36% between 2010 and 2020 for a total 20-year increase of **41.2**%.

Of the population, 5.6% are under the age of five, 22.5% are under the age of 18, 73.4% are age 18 and over, and 9.8% are age 65 and over. The media age was 41.6 years.

It should also be noted that during the workday, Alpharetta commonly swells to more than 120,000 residents, workers, and visitors, due to the presence of its more than 3,600 businesses.

Of the 25,391 households in Alpharetta, 22.5% had children under the age of 18 living with them, 59.9% were married couples living together, 14% had a male householder (no spouse present), and 22.1% had a female householder (no spouse present). The average family size in Alpharetta was 3.17.

According to the 2020 Decennial Census, there were also 26,089 housing units for an average density of 969.9 per square mile.

The following table provides information specific to Alpharetta's housing stock through the issuance of single-family new house construction building permits over the last 20 years (2001-2021). However, since not all permits become actual housing starts, and starts lag the permit stage of construction, this number does not represent total new construction (2020) but should provide a general indicator on construction activity and the local real estate market.

Table 2: Housing Stock History, Building Permits, Alpharetta, GA

Housing Stock History, Building Permits, Alpharetta, GA	
Year	**# of Permits Issued**
2001 - 2009	2,145
2010	57
2011	94
2012	119
2013	121
2014	55
2015	266
2016	259
2017	357
2018	475
2019	206
2020	210

Data Source:

The Local Economy

As indicated by the 2020 census, the median income for a household in the City of Alpharetta was $136,047, and the median income for a family was $144,894. The per capita income for Alpharetta was unavailable for 2020; however, the per capita income (12 months, 2019) was $58,377. In 2020, approximately 3.5% of the city's population were living below the poverty line, including 7.4% under the age of 18, 5.0% between the ages of 18 and 64, and 3.4% at age 65 and over.

According to the 2019 American Community Survey 1-year Estimates, Alpharetta has an employment rate of 68.1%, which is above the State of Georgia's employment rate of 59.6%. The following table shows the city's leading industries and most recent employment percentages.

Table 3: Leading Industries, Employment Percentages, Alpharetta, GA (2019)

Leading Industries, Employment Percentages, Alpharetta, GA (2019)	
Professional, scientific, and management, and administrative and waste management services	26.0%
Educational services, and health care and social assistance	14.3%
Finance and insurance, and real estate and rental and leasing	11.3%
Manufacturing	9.6%
Retail Trade	8.9%
Arts, entertainment, and recreation, and accommodation and food services	7.1%
Information	6.2%
Other services, except public administration	4.1%
Wholesale Trade	4.1%
Transportation and warehousing, and utilities	3.7%
Construction	3.1%
Public Administration	1.5%

Data Source:

Critical Facilities & Infrastructure

As previously stated, certain facilities have a net positive value on the community, i.e., they contribute to the public good by facilitating the basic functions of society. These facilities maintain order, public health, education, and help the local economy function. Additionally, there are facilities and infrastructure integral to disaster response and recovery operations. Conversely, some of these are of extreme importance due to the negative externalities created when impacted by a disaster. What fits these definitions varies slightly from community to community, but the definitions remain as a guideline for identifying critical infrastructure and facilities.

Unique to Fulton County and under the supervision of the Director of Public Safety, Alpharetta operates a Department of Public Safety where the Fire Division, Police Division, and 911/Communications Division coordinate and collaborate under a unified administration staff. Functions include Patrol, Criminal Investigations, Community Services, Records, Traffic, Fire Suppression, Fire Marshall, Fire Prevention, and Training. Alpharetta also has its own Public Works and Recreation and Parks Departments.

Additionally, the school system within the city limits consists of the enrollment listed in the following table.

Table 4: School Infrastructure within City Limits, Alpharetta, GA

School Infrastructure within City Limits, Alpharetta, GA		
School	Type	Enrollment (2020)
Nursery School, Pre-School	Public	687

School Infrastructure within City Limits, Alpharetta, GA		
School	Type	Enrollment (2020)
Kindergarten to 12th Grade	Public	12,514
College	Public	3,297

Data Source: School Infrastructure within City Limits / https://www.countyoffice.org/alpharetta-ga-colleges/

A complete list of Alpharetta's critical facilities and infrastructure, which may include cell towers, hospitals, water treatment plants, etc., can be found in Appendix C.

Land Use & Development Trends

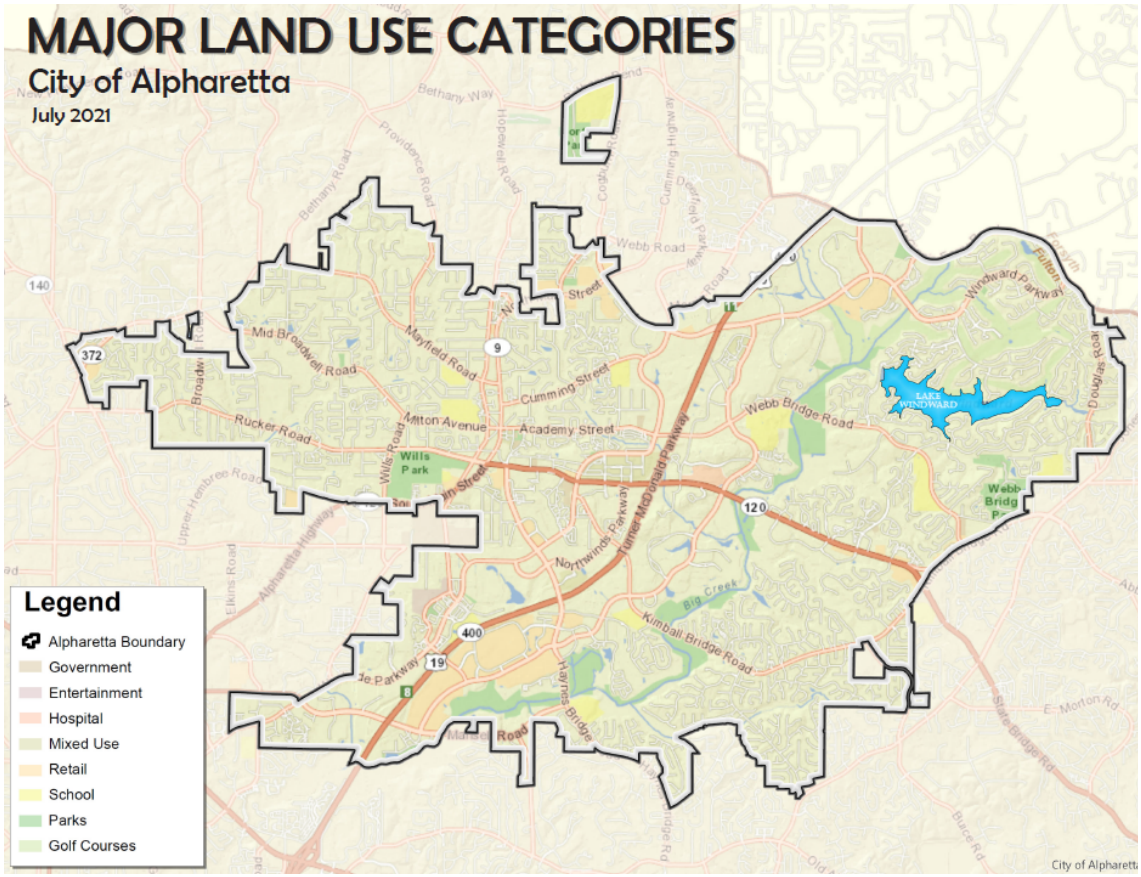
To meet the current and future demands of an increasing population, the City of Alpharetta must continue to implement proactive measures pertaining to land use and development. This is especially true of housing, transportation, education, historic preservation, and the environment, among other things.

According to the U.S. Census Bureau, the City of Alpharetta has a land area of 26.9 square miles. It is generally categorized as residential but there are major areas of commercial activity near State Highway 400. Many people commute into Alpharetta from other nearby cities on a regular basis (Monday-Friday). Accordingly, the city's population can double or almost triple during a typical workday although most commuters stay within the commercial corridor.

Alpharetta does not have many areas designed for industrial use.

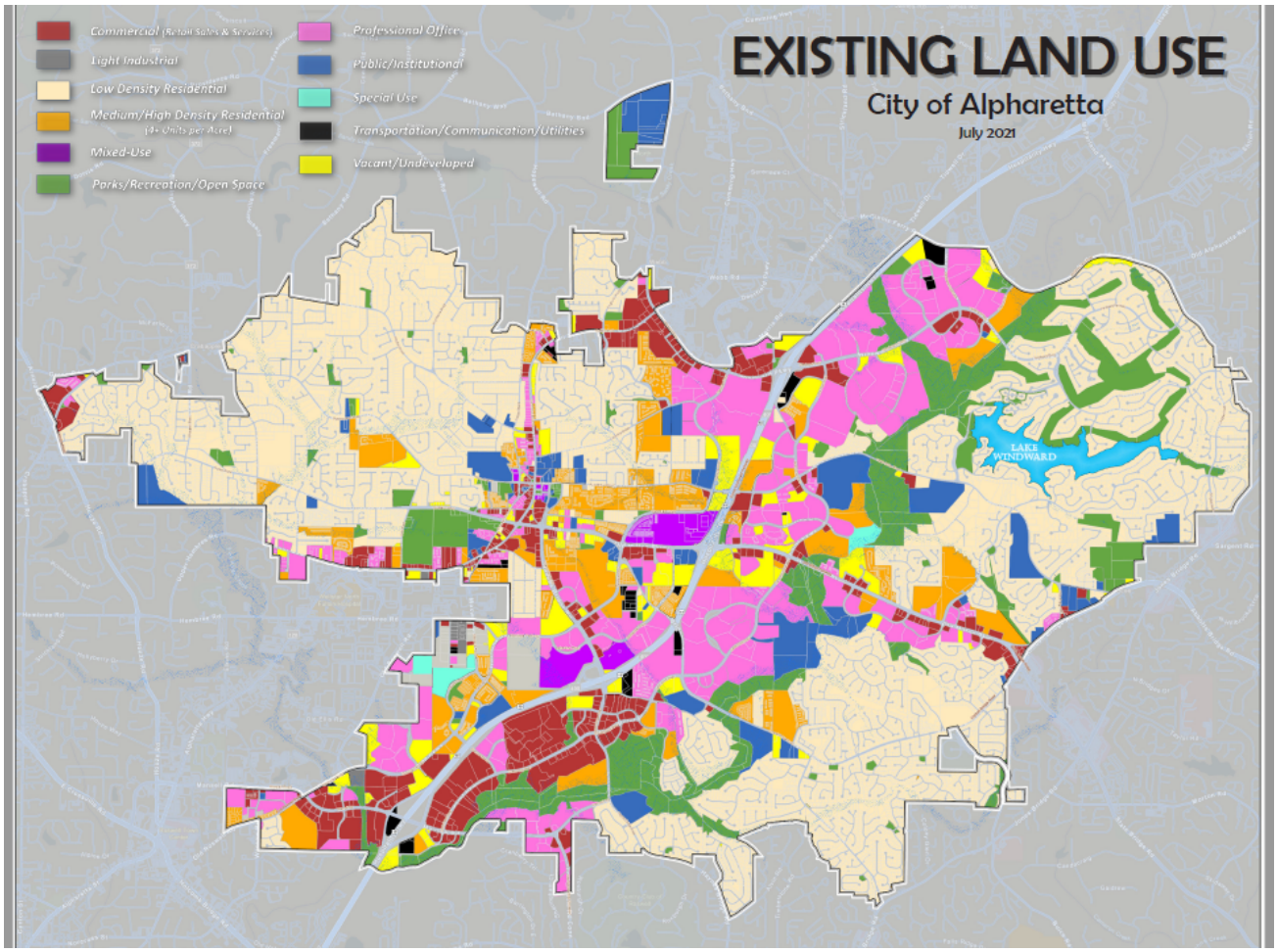
The following map shows the distribution of major land use categories within the city limits.

Map 1: Land Use Categories, Alpharetta, GA



Map Source: Source

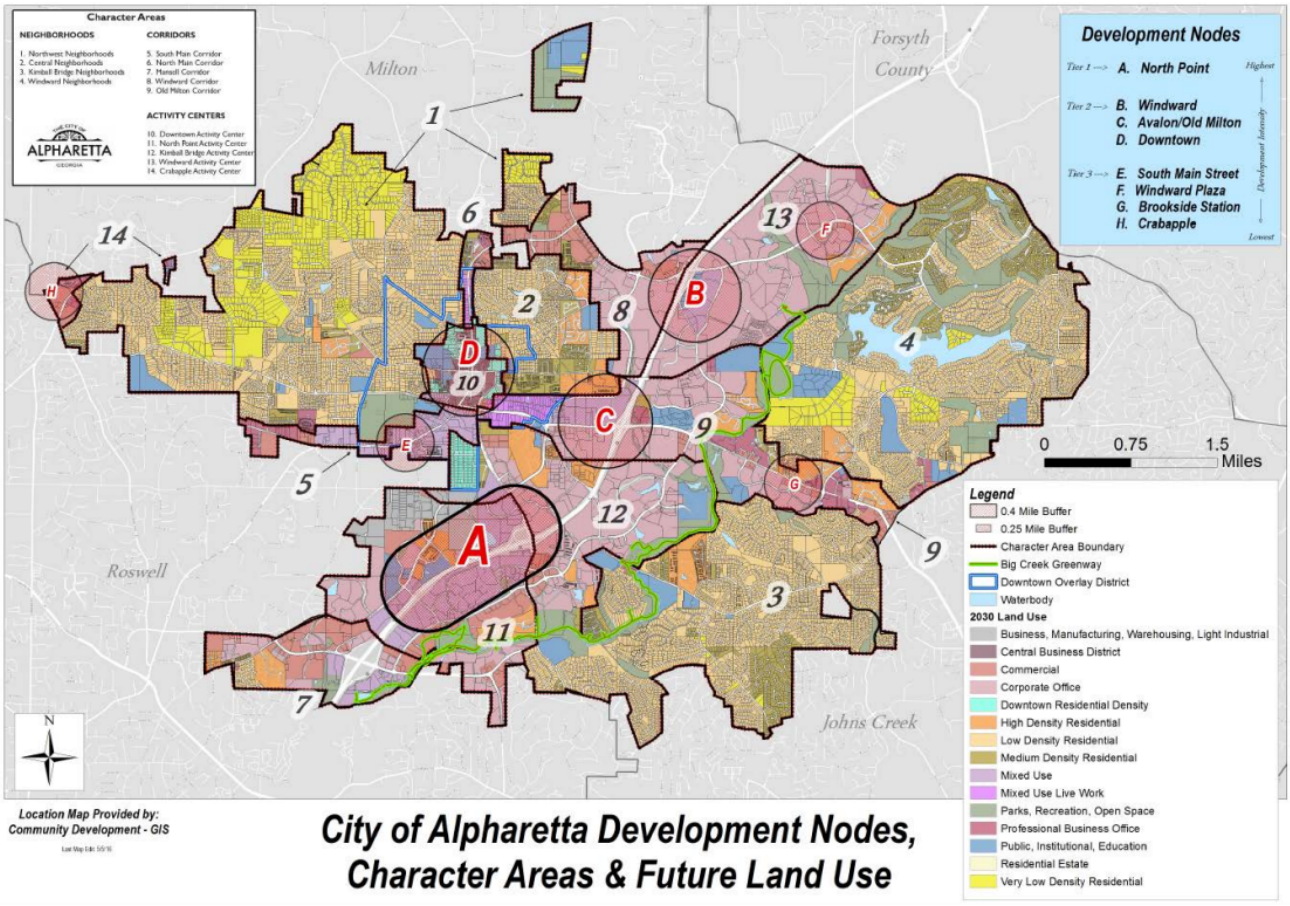
Map 2: Existing Land Use, Alpharetta, GA



Map Source: https://www.alpharetta.ga.us/docs/default-source/publications/comprehensive-plan/existing-land-use-map.pdf?sfvrsn=ba33d9ab_2

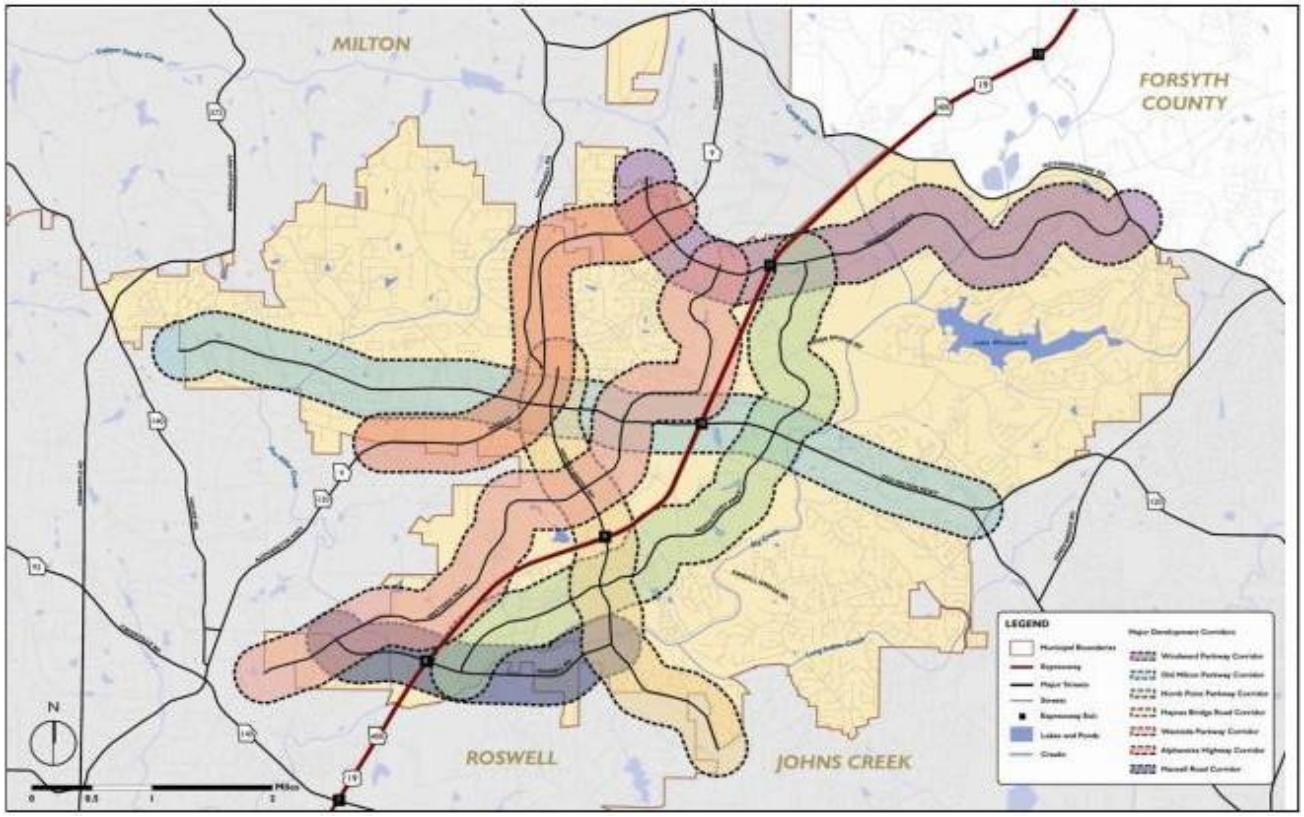
The following map(s) demonstrate the City of Alpharetta's potential growth and development.

Map 3: Development Nodes, Character Areas & Future Land Use, Alpharetta, GA



Map Source: City of Alpharetta 2030 and 2035 Comprehensive Plan(s)

Map 4: Major Development Corridors, Alpharetta, GA



Map Source: City of Alpharetta 2030 and 2035 Comprehensive Plan(s)

Hazard Risk Assessment, City of Alpharetta, GA

Natural Hazard Identification & Risk Assessment

There are 12 of 13 state-identified hazards (natural and human-caused) known to pose risk to Fulton County and one or more of its participating jurisdictions. These include Dam Failure, Drought, Earthquake, Flood, Geological Hazards, Extreme Heat, Severe Weather, Severe Winter Weather, Tornado, Tropical Systems, and Wildfire/Wildland Urban Interface Fires. Wind, which is treated as a separate hazard in the 2019 Georgia Hazard Mitigation Strategy Standard and Enhanced Plan, is addressed in the hazard of Severe Weather in this plan update.

The following table outlines the City of Alpharetta's general risk to the profiled hazards. The rankings are based on a variety of factors, including 1) a composite evaluation of this plan's risk assessment, namely a hazard's probability of occurring in the future, 2) the vulnerability of the jurisdiction to a specific hazard, 3) the intensity of past hazard impacts, and 4) a joint evaluation of local experts and plan stakeholders. The category/range (per year) is based on the following scale: **Unlikely (0%), Occasional (1-10%), Likely (11%-50%), and Highly Likely (51%-100%).**

Table 5: Risk Assessment, Alpharetta, GA

Risk Assessment Matrix, Alpharetta, GA		
Hazard	**Category**	**Range**
Dam Failure	Occasional***	-
Drought	Highly Likely	295%
Earthquake	Occasional**	-
Flood	Occasional	6%
Geological Hazards	Highly Likely	-
Extreme Heat	Highly Likely	-
Severe Weather (including the hazard of Wind)	Highly Likely*	-
Severe Winter Weather	Highly Likely	-
Tornado	Highly Likely	160%
Tropical Systems	Highly Likely	84%
Wildland/Wildland Urban Interface Fires	Occasional*****	

**The hazard of Severe Weather considers the instances of thunderstorms, lightning, hail, and wind, each with a varying degree of occurrence/probability.*

*** The hazard of Earthquake is considered occasional but without a definite calculation of probability. This is due to there being no record/data of earthquake in the planning period since the last plan update (2016).*

**** Calculating future probability is not the only predictor of future occurrences. In the last five years, Fulton County and its participating jurisdictions have documented no cases of Dam Failure. Though the County has experienced occurrences that were listed in its HMP update (2016), the likelihood of a Dam Failure event happening in the planning area is considered* ***occasional.***

*****The NOAA/NCEI Storm Events Database did not have any incidences of storm data records related to Flood (Flash Flood) for the Cities of Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton from January 1, 1970 – July 31, 2021. Since flooding is possible, the Cities Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton's Probability of Future Events is considered* ***occasional.***

******The hazard of Wildfire/Wildland Urban Interface Fire is considered* ***occasional*** *but without a definite calculation of probability. This is due to there being no record/data of wildfire in the planning period since the last plan update (2016).*

This qualitative categorization was performed by Hazard Mitigation Planning Committee members for each natural hazard identified as a potential threat. A meeting was conducted with the participating jurisdiction to complete the assessment exercise. The Planning Process appendix contains the online survey that was used as the assessment instrument and included descriptions for the levels of measurement. After an assessment was completed for the participating jurisdiction, the respective scores were combined to determine an overall County Risk Assessment. This assessment also served to assist the City of Alpharetta in determining which threats posed the highest, or greatest, threat. Once this was determined, this assessment was used to guide the development of hazard mitigation actions that were in the best interest of protecting the community from the most likely and/or the most severe hazards facing the jurisdiction.

Hazard Event History & Community Impacts

Of the 12 hazards identified by Fulton County, five have impacted the City of Alpharetta specifically over the last seven years. Three of these events, a Severe Winter Storm (February 2014), a Winter Storm (February 2105), and a Tornado (October 2014) were documented in the County's previous Multi-Jurisdictional Hazard Mitigation Plan (2016).

The following table provides brief details of all hazard occurrences, as recorded by the National Oceanic and Atmospheric Administration (NOAA) and its National Centers for Environmental Information (NCEI), between January 1, 2016, and October 31, 2021.

Table 6: Hazard Event History, Alpharetta, GA (January 1, 2016 – October 31, 2021)

Hazard Event History, Alpharetta, GA (January 1, 2016 – October 31, 2021)			
Date	**Hazard**	**Disaster Declaration**	**Description**
7/11/19	Flood (Flash Flood)	No	$15.0K Property Damage, No Injuries or Deaths
7/10/20	Severe Weather (Thunderstorm Wind)	No	$4.0K Property Damage, No Injuries or Deaths
7/19/20	Severe Weather (Thunderstorm Wind)	No	$1.0K Property Damage, No Injuries or Deaths
8/7/20	Severe Weather (Thunderstorm Wind)	No	$5.0K Property Damage, No Injuries or Death
8/20/20	Severe Weather	No	$5.0K Property Damage, No Injuries or Deaths
9/8/21	Flood (Flash Flood)	No	$10.0K Property Damage, No Injuries or Deaths

Data Source: NOAA/NCEI Storm Events Database

Mitigation Capabilities & Actions, City of Alpharetta, GA

Capabilities Assessment

The City of Alpharetta has a number of administrative and technical capabilities. City departments include Administrative, Community Development, Court Services, Economic Development, Finance, Human Resources, Information Technology, Public Safety, Public Works and Recreation and Parks. City government includes six council members and a mayor. The City council and mayor all serve a four-year term.

The Legal & Regulatory Capability survey documents authorities available to the jurisdiction and/or enabling legislation at the state level affecting planning and land management tools that support local hazard mitigation planning efforts. The identified planning and land management tools are typically used by states, and local/tribal jurisdictions to implement hazard mitigation activities. The proceeding table summarizes the regulatory tools that are available to the City of Alpharetta.

Planning & Regulatory Capability

Table 7: Planning & Regulatory Capability, Alpharetta, GA (Taken from 2016 plan)

Planning & Regulatory Capability, Alpharetta, GA				
Planning Capability				
Tool/Program	**Do You Have This?**	**Authority**	**Department/Agency Responsible**	**Code Citation & Comments**
Master Plan	Yes	Local	Community Development Department, Recreation and Parks Department	Downtown Master Plan Update, Recreation and Parks Master Plan 2025
Capital Improvement Plan	Yes	Local	Finance	Capital Improvement Plan
Floodplain Management/Basin Plan	Yes	Local	Community Development, Public Works	Unified Development Code Article III, Section 3.4
Stormwater Management Plan	Yes	Local	Public Works	MS4 Phase 1 Permit (2019)
Open Space Plan	Yes	Regional, Local	Atlanta Regional Commission Community Development Department, Recreation and Parks Department	ARC The Region's Plan 2015, City of Alpharetta 2030 Comprehensive Plan/Downtown Master Plan Update, Recreation and Parks Master Plan Update 2025
Stream Corridor Management Plan	Yes	Local	Community Development	
Watershed Management or Protection Plan	Yes	Local	Public Works	WIP Big Creek – (September 2011), WIP Foe Killer Creek (2015), WIP Long Indian Creek (2016)
Economic Development Plan	Yes	Local	Economic Development	
Comprehensive Emergency Management Plan	Yes	Local	Emergency Management	Emergency Operations Plan (EOP) 2015
Emergency Operations Plan	Yes	Local	Emergency Management	Emergency Operations Plan (EOP) 2015
Post-Disaster Recovery Plan	Yes	Local	Emergency Management	Emergency Operations Plan (EOP) 2015
Transportation Plan	Yes	Local	Finance, Community Development, Public Works	Capital Improvement Plan

Planning & Regulatory Capability, Alpharetta, GA				
Planning Capability				
Strategic Recovery Planning Report	No			
Other Plans	N/A			
Regulatory Capability				
Building Code	Yes	State & Local	DCA, AHJ	2015 I-codes, 2015 NEC, 2009 IECC
Zoning Ordinance	Yes	Local	Community Development Department	Unified Development Code, Article 2 – Use of Land and Structures
Subdivision Ordinance	Yes	Local	Community Development Department	Unified Development Code, Article 3 – Land Development Activities and Article 4 - Procedures
National Flood Insurance Program (NFIP) Flood Damage Prevention Ordinance	Yes	Federal, State, Local	Community Development, Public Works	Unified Development Code, Article 3, Section 3.4 (December 2020)
NFIP: Cumulative Substantial Damages	Yes	Local	Community Development	Data in permitting documents
NFIP: Freeboard	Yes	State, Local	Community Development, Public Works	State mandated BFE+2 for single and two-family residential construction, BFE+1 for all other construction types, Local mandated BFE+3 for residential
Growth Management Ordinances	Yes	State, Regional, Local	Georgia DCA, Atlanta Regional Commission, Community Development Department	ARC The Region's Plan 2015, City of Alpharetta 2030 Comprehensive Plan
Site Plan Review Requirements	Yes	Local	Community Development Department	Unified Development Code, Section 4.4.3 Land Disturbance Permit
Stormwater Management Ordinance	Yes	Local	Community Development and Public Works	Unified Development Code, Article 3 (December 2020)
Municipal Separate Storm Sewer System (MS4)	Yes	Local	Community Development and Public Works	MS4 Phase 1 Permit (June 2019)

Planning & Regulatory Capability, Alpharetta, GA				
Regulatory Capability				
Natural Hazard Ordinance	Not at this time			
Post-Disaster Recovery Ordinance	Not at this time			
Real Estate Disclosure Requirement	Yes	State		
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	N/A			

Administrative & Technical Capability

The following table summarizes potential staff and personnel resources available to the City of Alpharetta.

Table 8: Administrative & Technical Capability, Alpharetta, GA

Administrative & Technical Capability, Alpharetta, GA		
Administrative Capability		
Resources	**Is This in Place?**	**Department, Agency, Position**
Planning Board	Yes	Community Development Department
Mitigation Planning Committee	Yes	All Departments
Environmental Board/Commission	Yes	Community Development and Public Works, Natural Resources Commission
Open Space Board/Committee	Yes	Community Development
Economic Development Commission/Committee	Yes	Economic Development
Maintenance Programs to Reduce Risk	No	
Mutual Aid Agreements	Yes	Public Safety
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	Community Development – Zoning Administrator, Development Services Engineer – Stormwater Public Works – Senior Stormwater Engineer
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Community Development – Development Services Engineer – Stormwater Chief Building Official Public Works – Senior Stormwater Engineer
Planner(s) or Engineer(s) with an understanding of natural hazards	Yes	Community Development – Development Services Engineer – Stormwater Chief Building Official Public Works – Senior Stormwater Engineer
National Flood Insurance Protection (NFIP) Floodplain Administrator	Yes	Public Works – Senior Stormwater Engineer

Administrative & Technical Capability, Alpharetta, GA		
Technical/Staffing Capability		
Surveyor(s)	Yes	Contracted by the City of Alpharetta
Personnel skilled or trained in GIS and/or Hazus-MH applications	Yes	Community Development – GIS Specialist/Planner Public Works – Senior Stormwater Engineer Senior Engineer Technician (Stormwater) Information Technology – GIS Manager, Database Administrator
Scientist familiar with natural hazards	Yes	Public Works – Senior Water Resources Analyst Environmental Programs Coordinator
Emergency Manager	Yes	Public Safety
Granter Writer(s)	Yes	Finance
Staff with expertise on training in benefit/cost analysis	Yes	Finance
Professional(s) trained in conducting damage assessments	Yes	Emergency Management

Fiscal Capability

The proceeding table summarizes the financial resources available to the City of Alpharetta.

Table 9: Fiscal Capability, Alpharetta, GA

Fiscal Capability, Alpharetta, GA	
Resources	**Accessible or Eligible to Use?**
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	No
Impact Fees for homebuyers or developers of new development/homes	Yes
Stormwater Utility Fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	Yes
Withhold public expenditures in hazard-prone areas	NA
Other Federal or State Funding Programs	Yes, through grants – Community Development, Public Works, Public Safety
Open Space Acquisition Funding Programs	Yes

Fiscal Capability, Alpharetta, GA	
Resources	**Accessible or Eligible to Use?**
Other	

Community Classifications

The following table summarizes classifications for community programs available to the City of Alpharetta.

Table 10: Community Classifications, Alpharetta, GA

Community Classifications, Alpharetta, GA			
Program	**Do You Have This?**	**Classification**	**Date Classified**
Community Rating System (CRS)	NP*		
Building Code Effectiveness Grading Schedule (BCEGS)	Yes		
Public Protection (ISO Fire Protection Classes 1-10)	Yes	Class 1	June 1, 2015
Storm Ready	No		
Firewise	No		
Disaster/Safety Programs in/for Schools	Yes		
Organization(s) with Mitigation Focus (Advocacy Group, Non-Government)	Yes	Steering Committee	
Public Education Program/Outreach (through website, social media, etc.)	Yes		
Public-Private Partnerships	Yes		

**NP = Not Participating, *N/A = Not Applicable, - =Unavailable, TBD = To Be Determined.*

Hazard Mitigation Capability

The following table summarizes a self-assessment of Alpharetta's current hazard mitigation capability.

Table 11: Hazard Mitigation Capability, Alpharetta, GA

Hazard Mitigation Capability, Alpharetta, GA			
Area	Degree of Hazard Mitigation Capability		
	Limited (If so, please indicate any/all obstacles)	Moderate	High
Planning & Regulatory Capability		X	
Administrative & Technical Capability		X	
Community & Political Capability		X	
Community Resiliency Capability		X	
Capability to Integrate Mitigation into Municipal Processes & Activities			X

National Flood Insurance Program (NFIP) Participation

According to FEMA, the National Flood Insurance Program (NFIP) is a federal insurance program that enables property owners in member communities to purchase flood insurance. This insurance is only made available to municipalities that adopt and enforce a floodplain management ordinance. The fundamental goal of NFIP floodplain management requirements is to reduce the threat to lives and the potential for property damage in flood-prone areas. Each municipality that participates in the NFIP has a Flood Insurance Rate Map (FIRM) that is issued by FEMA. This document maps out flood hazard areas in the municipality.

Like several other jurisdictions in Fulton County, the City of Alpharetta participates in the NFIP (CID #130084, February 1978). The current NFIP Floodplain Administrator is Jill Bazinet, PE, CFM – Senior Stormwater Engineer. Alpharetta is in good standing with the program with no outstanding compliance issues.

Loss History & Mitigation

As of June 2021, there were two Repetitive Loss (RL) or Severe Repetitive Loss (SRL) properties in the City of Alpharetta. Both are residential and neither has officially indicated interest in elevation or acquisition. Likewise, neither are currently in the process of mitigation.

Planning & Regulatory Capabilities

Alpharetta's NFIP Flood Damage Prevention Ordinance was last updated in December 2020 and can be found in the Unified Development Code, Article 3, Section 3.4.

Floodplain management regulations and ordinances meet the minimum requirements set forth by both the Federal Emergency Management Agency (FEMA) and the State of Georgia. Alpharetta also performs site plan review and building plan review, which both include checks of floodplain and local "future floodplain" designations. A preliminary staff review and recommendation occurs prior to Planning Board and Zoning Board considerations.

Administrative & Technical Capabilities

The community identifies the Senior Stormwater Engineer as the local NFIP Floodplain Administrator, currently Jill Bazinet, for which floodplain administration is an auxiliary duty. Two additional staff members are utilized to assist as needed.

Duties and responsibilities of the NFIP Administrator are permit review, damage assessments, record keeping, inspections, GIS, education and outreach, and capital mitigation projects. If Substantial Damage Estimates were necessary, the Floodplain Administrator would be responsible.

The NFIP Administrator feels she is adequately supported and trained to fulfill her responsibilities as the municipal Floodplain Administrator. She also would consider attending continuing education and/or certification training on floodplain management if it were offered in the County for all local floodplain administrators.

Public Education & Outreach

Education and Outreach regarding flood/hazard risk, and flood risk reduction through NFIP insurance is primarily provided to the community through the City website. Additional outreach is provided with adult informational workshops and through classroom teaching with students (using WARD's Scientific Floodplain model).

Actions to Strengthen the Program

During the data collection process staff did not indicate any perceived barriers to running an effective floodplain program in Alpharetta.

Community Rating System (CRS)

Alpharetta does not currently participate in the voluntary Community Rating System (CRS) program, which recognizes and encourages community floodplain management practices that exceed the minimum requirement of the NFIP. The city has considered joining, but the cost for resources to complete the necessary items for the program outweigh the benefits.

Integration of Hazard Mitigation into Existing & Future Planning Mechanisms

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, each municipality was surveyed to obtain a better understanding of their community's progress in plan integration. A summary is provided below. In addition, the community identified specific integration activities that have been/will be incorporated into municipal procedures which may include former mitigation initiatives that have become continuous/ongoing programs and may be considered mitigation "capabilities."

Land Use Planning/Comprehensive Planning

The City of Alpharetta 2035 Comprehensive Plan (January 2017) is currently adopted. This plan considers the following areas of natural hazard risk:

> *"Floodplain – With less undeveloped land remaining for new construction within the city limits, there is potential for increased development pressure within flood prone areas and within areas that could impact flooding on surrounding properties."*
>
> *"Goals, Policies, and Strategies: NHCR Strategy 1.2, 1.6, and 1.7 –*
>
> *Strategy 1.2: Protect the natural environment and areas that contribute to the unique character of the city by ensuring a balance between the natural and the built environment, continued use of buffers and other techniques.*

Strategy 1.6: Continue to enforce standards and enact ordinances for tree protection, signage, landscaping, streetscape design, sidewalks, bicycle paths, greenways, open space preservation, and water quality protection requirements.

Strategy 1.7: Continue to study, update, and enforce best available data for floodplains and future floodplains."

Alpharetta has plans in place to help to manage natural hazard risk. Additionally, the Downtown Master Plan Update includes regulations for open space and tree protection. The Recreation and Parks Master Plan 2025 includes plans for the protection of flood plains and open spaces and Alpharetta has adopted the Comprehensive Emergency Management Plan for Fulton County, which refers to the Multijurisdictional Hazard Mitigation Plan (MJHMP). Alpharetta is an MS4 Regulated Community (Phase 1), and staff indicated they have a formal Stormwater Management Plan that specifies projects/actions/initiatives to reduce the volume of stormwater, or otherwise mitigate stormwater flooding.

Regulatory Compliance

Alpharetta's zoning and subdivision regulations take natural hazard risk into consideration. The City's Unified Development Code (UDC) includes both zoning and subdivision regulations, which regulate impacts on local floodplains and requires developers to take additional actions to mitigate natural hazard risk. The UDC includes a stream buffer protection with a 50-foot undisturbed stream buffer and an additional 25-foot impervious cover setback on both banks of a non-perennial stream and a 100-foot undisturbed stream buffer and an additional 50-foot impervious cover setback on both banks of a perennial stream. In addition, the City's UDC includes regulations for stormwater management and the NFIP Flood Damage ordinance includes provisions which exceed the minimum federal and State NFIP regulatory requirements.

The City's Community Development staff have access to GIS Maps, review and provide recommendations based on natural hazard risk prior to Planning Board and Zoning Board decisions. The City's Planning Commission and Board of Zoning Appeals uses the regulations in the City's UDC and professional staff opinion to guide their decision-making process.

Administrative/Technical Resources & Programs

Alpharetta's Planning Commission is an advisory body, which makes recommendations to the City Council for variances associated with comprehensive plan amendments, rezoning, master plans, and conditional uses. City Council considers all variances of more than 50% of the code requirement. The City's board of Zoning Appeals considers variances between 20% and 50% of the code requirement. City staff considers variances up to 20% of code requirements. Alpharetta also has a land disturbance permit team consisting of planners, engineers, arborists, and fire marshal that review and approve all site plans for new development and redevelopment. Stormwater management functions are performed by the Senior Stormwater Engineer and the Development Services Engineer (Stormwater). NFIP Floodplain management functions are performed by the Senior Stormwater Engineer) and the Chief Building Official.

The City of Alpharetta has staff in place who can perform Substantial Damage Estimates, Benefit-Cost Analysis and prepare applications for mitigation projects. City staff regularly attend training and conferences to promote continuing professional education, including the American Planning Association (APA), Georgia Chapter of APA and Georgia Association of Zoning Administrators. Additionally, a staff member from Public Works receives continuing education to maintain her Certified Floodplain Manager and a Public Safety official receives Emergency Management continuing education and is also a member of the Fulton County All Hazards Council.

The City of Alpharetta also has several staff with job descriptions that specifically include identifying and/or implementing mitigation projects/actions or other efforts to reduce natural hazards. These positions

include the Senior Stormwater Engineer, Urban forestry Program Manager, Senior Water Resources Analyst, Environmental Program coordinator, Development Services Engineer (Stormwater), Zoning Administrator, Senior Transportation Engineer, Stormwater Engineer, City Arborist, Fire Marshal and Emergency Management Coordinator.

Public Education & Outreach

The City uses Alpharetta's website and various adult workshops and student classroom teaching opportunities as platforms to inform citizens of natural hazards. During the assessment staff indicated that they identified the use of social media to enhance further public outreach and education with respect to natural hazard risk management in the community.

Fiscal Resources

The City of Alpharetta includes line items in its operating and capital improvement budgets for mitigation related projects and activities. The City has also received previous grant funds for mitigation-related projects, but none were received during the period reflected in this plan update.

Note: *The City of Alpharetta will receive a copy of the Fulton County Multi-Jurisdictional Hazard Mitigation Plan (2022) to use as a resource when updating other plans and identifying new projects. Additionally, the Mitigation Planning Committee will continue to provide guidance for provide guidance for future development within the jurisdiction.*

Mitigation Actions

Each jurisdiction participating in this plan is responsible for implementing specific mitigation actions as prescribed in the adopted Mitigation Action Plan. In each Mitigation Action Plan, every proposed action is assigned to a specific local department or agency in order to assign responsibility and accountability and increase the likelihood of subsequent implementation. This approach enables individual jurisdictions to update their unique mitigation strategy as needed without altering the broader focus of the countywide plan. The separate adoption of locally specific actions also ensures that each jurisdiction is not held responsible for monitoring and implementing the actions of other jurisdictions involved in the planning process. A complete list of countywide mitigation strategies is provided in Section 5 of this plan update.

Completed Mitigation Actions (2016-2021)

The City of Alpharetta identified 48 mitigation actions in the previous (2016) MJHMP update. Of these, the City completed eight (8) during the five-year planning period (2016-2021). Those projects are referenced in the proceeding table.

Table 12: Completed Mitigation Projects (2016-2021), Alpharetta, GA

Completed Mitigation Projects (2016-2021), Alpharetta, GA		
Project Number*	**2016 Mitigation Action**	**Responsible Party/ies**
01.0001	Complete dam breach analysis on Lake Windward	Public Works
01.0003	Update City GIS system with more accurate parcel data	IT
01.0009	Webb Bridge Park – erosion control and stream bank restoration	Public Works, Engineering
01.0039	Replace early warning software system	Public Safety
01.0044	Purchase a web-based severe weather monitoring service	Public Safety
01.0046	Replace the Fire Dept. Boat for rescue and evacuation on Lake Windward	Public Safety

Completed Mitigation Projects (2016-2021), Alpharetta, GA		
Project Number*	**2016 Mitigation Action**	**Responsible Party/ies**
01.0047	Replace chain saws and blades for removal of trees during an emergency	Public Safety
01.0048	Replace rope and technical rescue equipment	Public Safety

**The project number is intentionally left in the format to allow for incorporation into the Countywide Plan while also uniquely identifying projects for the City of Alpharetta.*

Identified Mitigation Actions (2022-2027)

The following table reflects the remaining 40 mitigation actions from the previous (2016) MJHMP update, all of which are identified mitigation actions for the 2022 MJHMP update. Additionally, the table includes any/all new mitigation actions identified by the City of Alpharetta for the following five-year planning period (2022-2027).

Table 13: Proposed Mitigation Actions (2022-2027), Alpharetta, GA

Identified Mitigation Actions (2022-2027), Alpharetta, GA								
Project Number*	**Mitigation Action/ Description**	**Status as of 2022 HMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
01.0002	Acquire approximately 15 homes in the Mayfield Circle/Maple Lane area near Foe Killer Creek	Carryover from 2016 Plan Update; In Progress	Community Development	Flood, Severe Weather, Tropical Systems	$12,000,000	HMGP, FMA, Local	2022-2027	Medium 31.5
01.0004	Complete Hazus-MH study of natural hazard impact on the city	Carryover from 2016 Plan Update; In Progress	Public Works	All Hazards	$100,000	HMGP, Local	2022-2027	Low 21
01.0005	Outreach education to all parcels impacted by SFHA/new RiskMaps (letters, information packets (Comments: This project can only be completed after the parcel maps are updated.)	Carryover from 2016 Plan Update; In Progress	Engineering	Flood	$20,000	HMGP, Local	2022-2027	Low 21
01.0006	Evaluate benefits of joining CRS with impact of new FEMA maps (Comments: This project can only be completed after the parcel maps are updated.)	Carryover from 2016 Plan Update; Deferred (Awaiting FEMA Flood Maps)	Engineering	Flood	$100,000	HMGP, Local	2022-2027	Low 13.5
01.0007	Design and install master detention facility for water quality and flood control at Wills Park	Included in 2016 HMP Update; Deferred - Funding Not Available	Engineering	Flood	$500,000	HMGP, Local	2022-2027	Low 22

Identified Mitigation Actions (2022-2027), Alpharetta, GA								
Project Number*	Mitigation Action/ Description	Status as of 2022 HMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion	STAPLE+E Score
01.0008	Foe Killer Creek – Design and implementation of projects to reduce elevated levels of bacteria	Included in 2016 HMP Update; In Progress	Public Works Department	Flood	$250,000	HMGP, Local	2022-2027	Low 23
01.0010	Perform stream stabilization and repair erosion along stream corridors	Included in 2016 HMP Update; Deferred - Funding Not Available	Engineering	Flood, Severe Weather, Tropical Systems	$1,500,000	HMGP, Local	2022-2027	Low 22
01.0011	Stream bank restoration Big Creek at Webb Bridge	Included in 2016 HMP Update; Deferred - Funding Not Available	Engineering	Flood	$250,000	HMGP, Local	2022-2027	Low 22
01.0012	Stream bank restoration Big Creek at Haynes Bridge Road	Included in 2016 HMP Update; Deferred - Funding Not Available	Engineering	Flood	$225,000	HMGP, Local	2022-2027	Low 22
01.0013	Stream bank restoration Foe Killer Creek – Squirrel Run to Rucker Road	Included in 2016 HMP Update; Deferred - Funding Not Available	Engineering	Flood	$150,000	HMGP, Local	2022-2027	Low 22
01.0014	Reinforce old culverts with skip line	Included in 2016 HMP Update; In Progress	Engineering	Flood, Severe Weather, Tropical Systems	$$$$$	HMGP, Local	2022-2027	Low 22

Identified Mitigation Actions (2022-2027), Alpharetta, GA								
Project Number*	Mitigation Action/ Description	Status as of 2022 HMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion	STAPLE+E Score
01.0015	Improve stormwater drainage at Church Street	Included in 2016 HMP Update; In Progress (City currently working with contractor for private development to help improve flooding issues)	Engineering	Flood	$200,000	HMGP, Local	2022-2027	Low 22
01.0016	Improve stormwater drainage at Highway 9 at Canton Street	Included in 2016 HMP Update; Deferred – Funding Not Available	Engineering	Flood	$250,000	HMGP, Local	2022-2027	Low 22
01.0017	Improve stormwater drainage at Southlake Drive culvert (Comments: Replace triple 4' CMP culvert to handle capacity; this area does not handle the 2-year flow) (from 2016 plan but no update provided for 2022 update.)	Included in 2016 HMP Update; In Progress (GOT is currently widening state route 9 which will improve the stormwater drainage issues associated with this area)	Engineering	Flood	$600,000	HMGP, Local	2022-2027	Low 22
01.0018	Improve stormwater drainage at Cape York Trace at Big Creek Trib (Comments: Replace single 4' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 HMP Update; Deferred (Funding Not Available)	Public Works	Flood	$250,000	HMGP, Local	2022-2027	Low 22

Identified Mitigation Actions (2022-2027), Alpharetta, GA								
Project Number*	Mitigation Action/ Description	Status as of 2022 HMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion	STAPLE+E Score
01.0019	Improve stormwater drainage at Glenn Knoll Court at Long Indian Creek Trib (Comments: Replace triple 2' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 HMP Update; Deferred (Funding Not Available)	Public Works	Flood	$250,000	HMGP, Local	2022-2027	Low 22
01.0020	Improve stormwater drainage at Mid Broadwell at Foe Killer Creek Trib (Comments: Replace single 4.5' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 HMP Update; Deferred - Funding Not Available	Public Works	Flood	$250,000	HMGP, Local	2022-2027	Low 22
01.0021	Improve stormwater drainage at Newport Bay Passage at Caney Creek Trib (Comments: Replace single 3.5' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 HMP Update; Deferred - Funding Not Available	Public Works	Flood	$250,000	HMGP, Local	2022-2027	Low 22
01.0022	Improve stormwater drainage at Webb Bridge Court at Big Creek Trib (Comments: Replace double 8'x 6' and single 4.35'x 6;5' box culverts to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 HMP Update; Deferred - Funding Not Available	Public Works	Flood	$250,000	HMGP, Local	2022-2027	Low 22
01.0023	Improve stormwater drainage at McGinnis Ferry Road at Big Creek Trib (Comments: Replace single 6' RCP culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 HMP Update; Deferred - Funding Not Available	Public Works	Flood	$500,000	HMGP, Local	2022-2027	Low 22

Identified Mitigation Actions (2022-2027), Alpharetta, GA								
Project Number*	Mitigation Action/ Description	Status as of 2022 HMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion	STAPLE+E Score
01.0024	Improve stormwater drainage at Pine Grove Drive at Big Creek Trib (Comments: Replace single 4' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 HMP Update; Deferred - Funding Not Available	Public Works	Flood	$250,000	HMGP, Local	2022-2027	Low 22
01.0025	Improve stormwater drainage at Arrowood Lane at Foe Killer Creek Trib (Comments: Replace single 6' RCP culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 HMP Update; Deferred - Funding Not Available	Public Works	Flood	$325,000	HMGP, Local	2022-2027	Low 22
01.0026	Improve stormwater drainage at Willis Road at Foe Killer Creek Trib (Comments: Replace single 6' CMP culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 HMP Update; Deferred - Funding Not Available	Public Works	Flood	$350,000	HMGP, Local	2022-2027	Low 22
01.0027	Improve stormwater drainage at Northwinds Parkway at Big Creek Trib (Comments: Replace double 5' RCP culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 HMP Update; Deferred - Funding Not Available	Public Works	Flood	$400,000	HMGP, Local	2022-2027	Low 22
01.0028	Improve stormwater drainage at Academy Street at Big Creek Trib (Comments: Replace single 9'x6' box culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 HMP Update; Deferred - Funding Not Available	Public Works	Flood	$500,000	HMGP, Local	2022-2027	Low 22

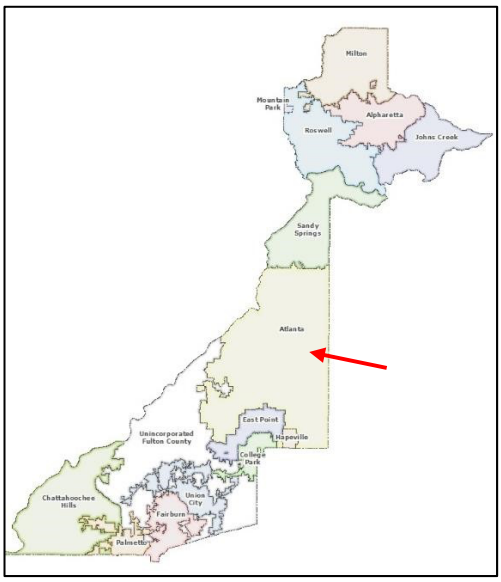
Identified Mitigation Actions (2022-2027), Alpharetta, GA								
Project Number*	Mitigation Action/ Description	Status as of 2022 HMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion	STAPLE+E Score
01.0029	Improve stormwater drainage at Rock Mill Road at Big Creek Trib (Comments: Replace double 5'x5' box culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 HMP Update; Deferred - Funding Not Available	Public Works	Flood	$400,000	HMGP, Local	2022-2027	Low 22
01.0030	Improve stormwater drainage at North Park Road at Cooper Sandy Creek (Comments: Replace single 4' RCP box culvert to handle capacity; this area does not handle the 2-year flow.)	Included in 2016 HMP Update; Deferred - Funding Not Available	Public Works	Flood	$250,000	HMGP, Local	2022-2027	Medium 26
01.0031	Improve stormwater drainage at culverts without capacity to handle the 5-year storm (Comments: The city has identified seven locations.)	Included in 2016 HMP Update; Deferred - Funding Not Available	Engineering	Flood	$2,000,000	HMGP, Local	2022-2027	Low 22
01.0032	Improve stormwater drainage at culverts without capacity to handle the 10-year storm (Comments: The city has identified nine locations.)	Included in 2016 HMP Update; Deferred - Funding Not Available	Engineering	Flood	$3,000,000	HMGP, Local	2022-2027	Low 22
01.0033	Improve stormwater drainage at culverts without capacity to handle the 25-year storm (Comments: The city has identified ten locations.)	Included in 2016 HMP Update; Deferred - Funding Not Available	Engineering	Flood	$4,000,000	HMGP, Local	2022-2027	Low 13.5
01.0034	Improve stormwater drainage at culverts without the capacity to handle the 50-year storm (Comments: The city has identified four locations.)	Included in 2016 HMP Update; Deferred - Funding Not Available	Engineering	Flood	$5,000,000	HMGP, Local	2022-2027	Low 22

Identified Mitigation Actions (2022-2027), Alpharetta, GA								
Project Number*	Mitigation Action/ Description	Status as of 2022 HMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion	STAPLE+E Score
01.0035	Detour roadway map for flood evacuation plans	Included in 2016 HMP Update; Deferred - Funding Not Available	Public Safety	Flood	$100,000	HMGP, Emergency Management	2022-2027	Low 13.5
01.0036	Install traffic warning signs on all road crossings that are submerged during a 25-year flood or greater	Included in 2016 HMP Update; Deferred - Funding Not Available	Public Safety	Flood	$100,000	HMGP, Public Works	2022-2027	Low 13.5
01.0037	911 – Phone call warning alert system	Included in 2016 HMP Update; In Progress (Project Under Review)	Public Safety	All Hazards	$22,000	HMGP, Public Safety	2022-2027	Low 22
01.0038	Variable message signage – for use during emergency situations that can be updated from the command center	Included in 2016 HMP Update; Deferred - Funding Not Available	Public Safety	All Hazards	$15,000	HMGP, Public Works, Public Safety	2022-2027	Low 14.5
01.0040	Replace early outdoor warning systems	Included in 2016 HMP Update; Deferred - Funding Not Available	Public Safety	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$483,000	HMGP, Public Works	2022-2027	Low 21
01.0042	Install built-in surge protection at public safety buildings	Included in 2016 HMP Update; Deferred - Funding Not Available	Public Safety	All Hazards	$150,000	HMGP, Public Works	2022-2027	Low 22

Identified Mitigation Actions (2022-2027), Alpharetta, GA								
Project Number*	Mitigation Action/ Description	Status as of 2022 HMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion	STAPLE+E Score
01.0045	Purchase cones and brigades for pedestrian traffic on greenways	Included in 2016 HMP Update; Deferred - Funding Not Available	Public Works	Flood	$5,000	HMGP, Public Works	2022-2027	Low 13.5
01.0049	Implement dam inspection on Lake Windward and upgrade dam components and safety measures	Included in 2016 HMP Update; In Progress (City is currently obtaining pricing to utilize an on-call contractor in partnership with the Windward HOA for the annual dam inspections and maintenance)	Engineering	Dam Failure, Flood	$25,000 Annually	HMGP, Engineering	2022-2027	Low 21
01.0050	Stream gauge with flow meter; rain gauge and stream height for Foe Killer Creek	Included in 2016 HMP Update; Deferred - Funding Not Available	Engineering	Flood	$14,500 Annually	HMGP, FMA, Local	2022-2027	Low 21
01.0051	Maintain City GIS system with accurate parcel data	Initial Project 01.0003 (2016) Completed; Now a Maintenance Project (City has a company under contract to continuously provide services to update parcel data)	Alpharetta IT Dept.	All Hazards	$90,000	Insert HMGP; FMA; Local Funds	2022-2027	Low 19.5

Identified Mitigation Actions (2022-2027), Alpharetta, GA								
Project Number*	**Mitigation Action/ Description**	**Status as of 2022 HMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
01.0052	Purchase tactical mobile dispatch unit	N/A	Public Safety	All Hazards	$500,000	HMGP, Local	2022-2027	Low 18.5
01.0053	Update early warning software system	Initial Project 01.0039 (2016) Completed; Now a Maintenance Project (Software updates are required every five years)	Public Safety	All Hazards	$5,000	HMGP, Local	2022-2027	Low 13.5
01.0054	Replace chain saws and blades for removal of trees during an emergency	Initial project 01.0047 (2016) Completed; Now a Maintenance Project)	Insert Public Safety	All Hazards	$2,000	HMGP, Local	2022-2027	Low 13.5
01.0055	Replace rope and technical rescue equipment	Initial Project 01.0048 (2016) Completed; Now a Maintenance Project	Insert Public Safety	All Hazards	$10,000	HMGP, Local	2022-2027	Low 13.5

Jurisdiction Profile: City of Atlanta, GA



History & Geography

The City of Atlanta is situated among the foothills of the Appalachian Mountains, and at 1,050 feet above mean sea level, has the highest elevation of any major city east of the Mississippi River. It straddles the Eastern Continental Divide, such that rainwater that falls on the south and east side of the divide flows into the Atlantic Ocean, while rainwater on the north and west side of the divide flows into the Gulf of Mexico. Atlanta sits atop a ridge south of the Chattahoochee River, which is part of the Apalachicola-Chattahoochee-Flint (ACF) River Basin. Located at the far northwestern edge of the city, much of the river's natural habitat is preserved, in part by the Chattahoochee River National Recreation Area.

During the Civil War, multiple railroads in Atlanta made the city a hub for the distribution of military supplies. On November 11, 1864, it was ordered that Atlanta was to be burned to the ground, sparing only the city's churches and hospitals. After the Civil War ended in 1865, Atlanta was gradually rebuilt. Due to the city's superior rail transportation network, the state capital was moved to Atlanta from Milledgeville in 1868. Beginning in the 1880s, The Atlanta Constitution newspaper editor, Henry W. Grady, promoted Atlanta to potential investors based upon a modern economy which was less reliant on agriculture.

Significant Characteristics

The City of Atlanta provides a wide range of cultural activities such as theaters, museums, music, and arts. As such, it attracts many touring Broadway acts, concerts, shows, and exhibitions catering to a variety of interests. As a national center for the arts, Atlanta is home to significant art museums and institutions. The renowned High Museum of Art is arguably the South's leading art museum and among the most visited art museum in the world.

The City of Atlanta is also one of few cities with permanent, professional, resident companies in all major performing arts disciplines.

Atlanta also contains various outdoor attractions. The Atlanta Botanical Gardens has a 40-foot-high skywalk that allows visitors to tour one of the city's last remaining urban forests from above, Zoo Atlanta is a popular attraction, and the city hosts many festivals showcasing arts and crafts, film, and music.

Additionally, Atlanta is home to four professional sports teams: The Atlanta Braves (baseball), the Atlanta Hawks (basketball), the Atlanta Falcons (football), and Atlanta United (soccer).

Atlanta has also been the host city for various international, professional, and collegiate sporting events. Among them, Atlanta hosted the Centennial 1996 Summer Olympics, Super Bowl XXVIII (1994), Super Bowl XXXIV (2000), Super Bowl LIII (2019), the final PGA Tour, PGA Championship, 56th NHL All-Star Game (2008), WrestleMania (2011), NCAA Final Four (2013). The city has also hosted several college football bowl games and events, including the College Football Playoff National Championship (2018) and the Chick-Fil-A Kickoff Game, SEC Championship Game and the Chick-Fil-A Peach Bowl (annually).

Atlanta also has 376 parks, nature preserves, and gardens covering 4,962 acres, including Centennial Olympic Park and Piedmont Park. Atlanta offers resources and opportunities for amateur and participatory sports and recreation.

Population & Demographics

The 2020 U.S. Census reported that Atlanta had a population of 498,715. The racial makeup and population of Atlanta was 51.0% African American, 40.9% White, 4.4% Asian, 4.3% Hispanic**, 0.3% and Native American.**

Table 1: Population Change, City of Atlanta, GA

Population Change, City of Atlanta, GA				
Year	2000	2010	2014	2020
Population	416,474	420,003	456,002 est.	498,715

The Local Economy

The median income for a household in the city was $66,657. The per capita income for the city was $54,414. 20.2% of the population was living below the poverty line with 35% being children under the age of 18 and 16% being seniors over the age of 65. However, compared to the rest of the country Atlanta's cost of living is 6.00% lower than the U.S. average.

The following is a chart of main industries based on data from the United States Bureau of Labor from 2020 for the City of Atlanta:

Table 2: Atlanta Main Industries, April 2020

Atlanta Main Industries, April 2020	
Industry Description	Number of Employees (in thousands)
Finance and Insurance/Real Estate	180.3
Information	98.3
Construction	129.7
Professional, Scientific and Technical Services	528.5
Transportation, Utilities, Trade	583.7
Educational Services/Health Services	377.2
Arts, Entertainment, Recreation	239.9
Manufacturing	175.9
Other Services (except public administration)	93.5

Following is a list of City-issued permits for the construction of single-family homes dating from 2014 to 2021 and the average cost of new construction for that specific year.

Table 3: Single-Family New House Construction Building Permits, 2014-2021

Single-Family New House Construction Building Permits, 2014-2021	
Year	Permits
2014	535
2015	579
2016	694
2017	652
2018	835
2019	740
2020	645
2021	442

Critical Facilities & Infrastructure

The City of Atlanta services its own Police Department with over 2,000 sworn officers and its own Fire Department that includes 36 fire stations and has more than 1,000 employees (sworn and civilian). Atlanta is also located near several major interstates. I-20, I-75, and I-85 crisscross the city and I-285 provides a perimeter around Atlanta. Atlanta is also the home to one of the biggest and busiest airports in the country, Hartsfield-Jackson Atlanta International Airport. The Atlanta school system consists of the following capacity listed in Table 4:

Table 4: City of Atlanta Education, 2019

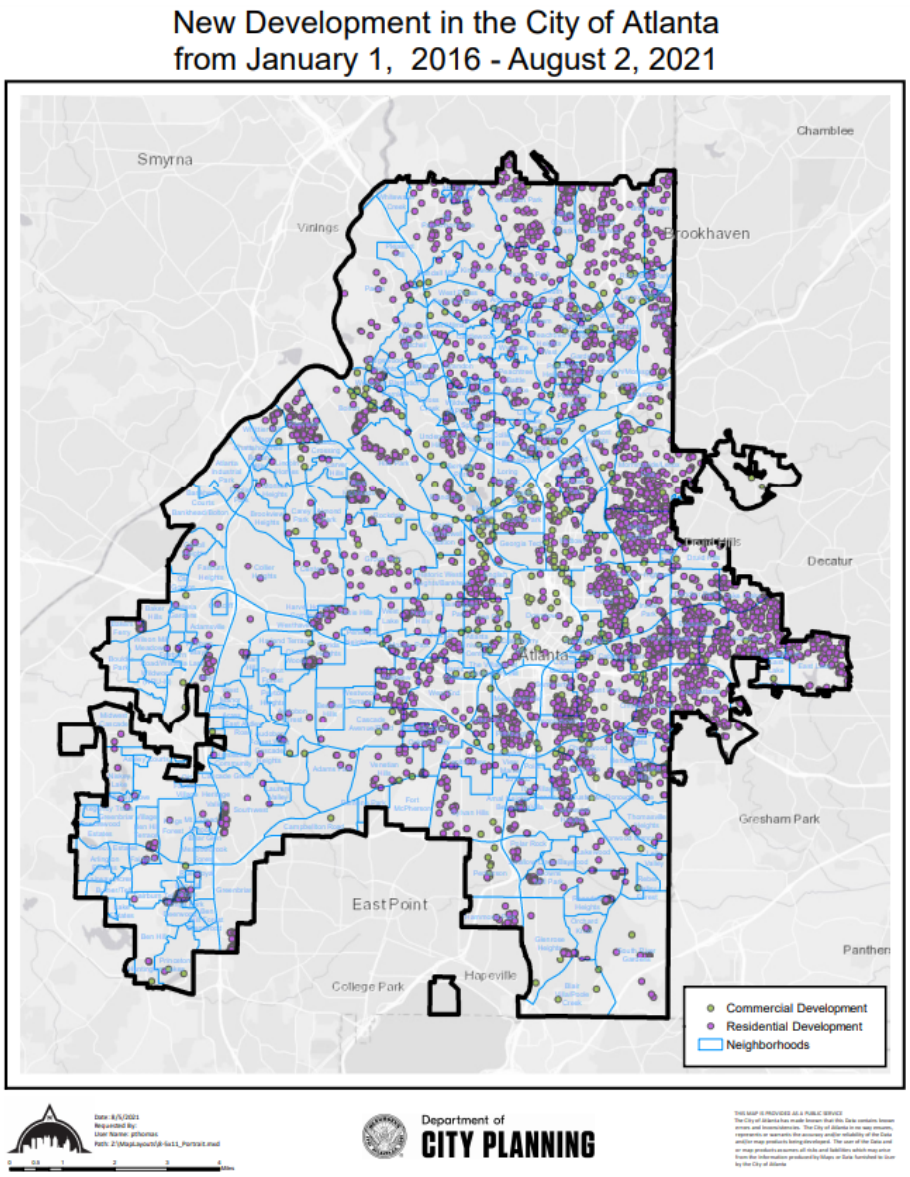
City of Atlanta Education, 2019		
School	Type	Enrollment
Nursery School, preschool	Public	11,265
Kindergarten to 12th grade	Public	56,896
College, undergraduate*	Public	46,326
Graduate, professional school*	Public	17,961

**GA Tech and GA State*

Land Use & Development Trends

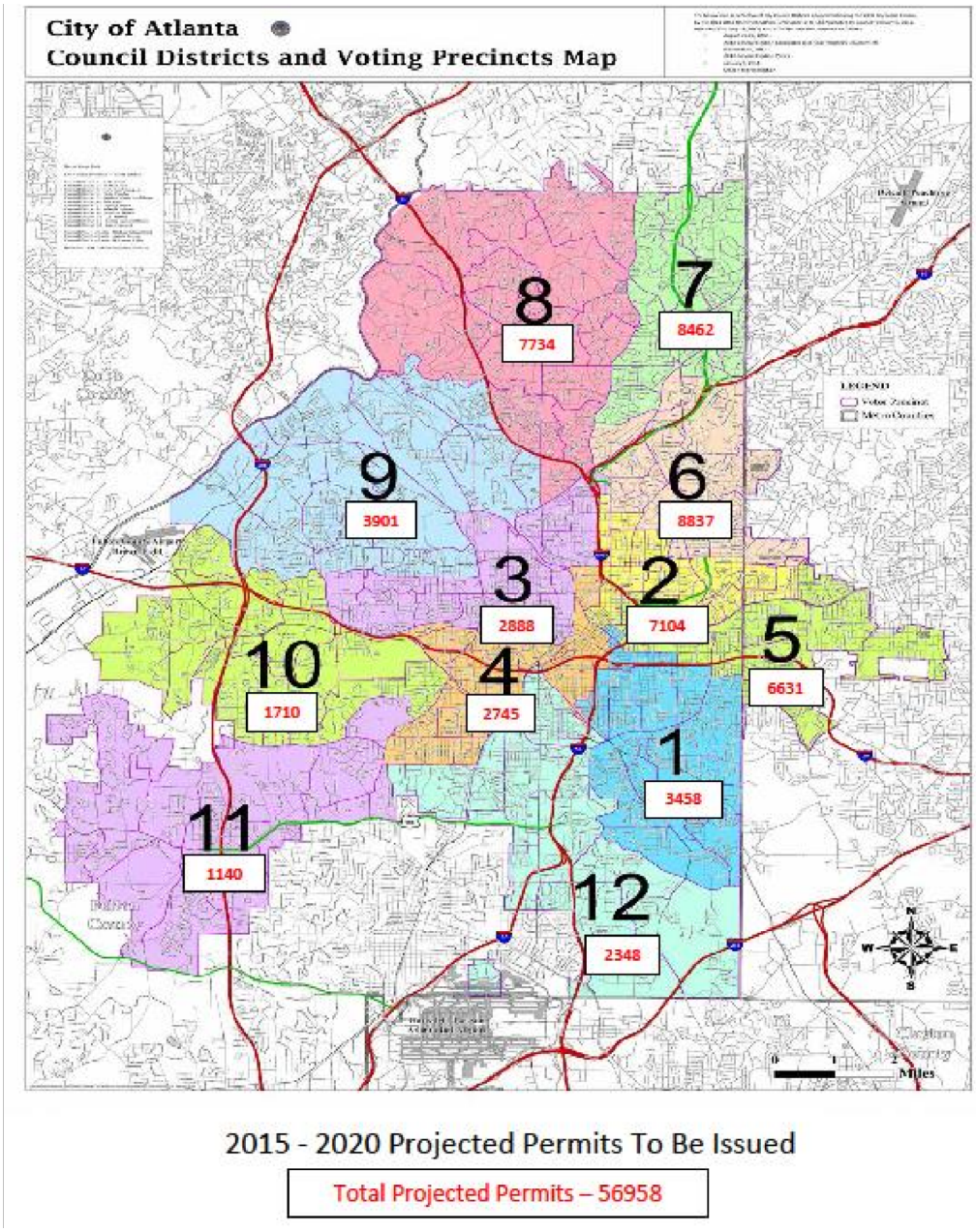
Atlanta is 134.0 square miles with 133.2 square miles of that being land and 0.8 square miles of water. It has a large metropolitan area of 8,376 square miles with a smaller urban area of 1,963 square miles. The following maps illustrate development that occurred in the City of Atlanta over the past five years, as well as known or anticipated future development in the next five (5) years.

Map 1: Atlanta New Development, January 1, 2016 – August 2, 2021



Map Source: Atlanta Department of City Planning

Map 2: Projected Permits 2015-2020



Map Source: Source

Hazard Risk Assessment, City of Atlanta, GA

Hazard Identification & Risk Assessment

There are 12 of 13 State-identified hazards known to pose risk to Fulton County and one or more of its participating jurisdictions. These include Dam Failure, Drought, Earthquake, Flood, Extreme Heat, Geological Hazards, Severe Weather (which includes the hazard of Wind), Tornado, Tropical Systems, Severe Winter Weather, and Wildfire/Wildland Urban Interface Fire.

The following table outlines the City of Atlanta's general risk to the profiled hazards. The rankings are based on a variety of factors, including 1) a composite evaluation of this plan's risk assessment, namely a hazard's probability of occurring in the future, 2) the vulnerability of the jurisdiction to a specific hazard,

3) the intensity of past hazard impacts, and 4) a joint evaluation of local experts and plan stakeholders. The category/range (per year) is based on the following scale: **Unlikely (0%), Occasional (1-10%), Likely (11%-50%), and Highly Likely (51%-100%).**

Table 5: Risk Assessment Matrix, Atlanta, GA

Risk Assessment Matrix, Atlanta, GA		
Hazard	**Category**	**Range**
Dam Failure	Occasional***	-
Drought	Highly Likely	295%
Earthquake	Occasional**	-
Flood	Occasional	64%
Geological Hazards	Highly Likely	-
Extreme Heat	Highly Likely	-
Severe Weather	Highly Likely*	-
Severe Winter Weather	Highly Likely	-
Tornado	Highly Likely	160%
Tropical Systems	Highly Likely	84%
Wildfire/Wildland Urban Interface Fire	Occasional*****	-

**The hazard of Severe Weather considers the instances of thunderstorms, lightning, hail, and wind, each with a varying degree of occurrence/probability.*

*** The hazard of Earthquake is considered occasional but without a definite calculation of probability. This is due to there being no record/data of earthquake in the planning period since the last plan update (2016).*

**** Calculating future probability is not the only predictor of future occurrences. In the last five years, Fulton County and its participating jurisdictions have documented no cases of Dam Failure. Though the County has experienced occurrences that were listed in its MJHMP update (2016), the likelihood of a Dam Failure event happening in the planning area is considered* ***occasional.***

*****The NOAA/NCEI Storm Events Database did not have any incidences of storm data records related to Flood (including flash flooding) for the Cities of Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton from January 1, 1970 – July 31, 2021. However, since flooding is possible, the Cities Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton's Probability of Future Events is considered* ***occasional.***

******The hazard of Wildfire/Wildland Urban Interface Fire is considered* ***occasional*** *but without a definite calculation of probability. This is due to there being no record/data of wildfire in the planning period since the last plan update (2016).*

Hazard Event History & Community Impacts

Fulton County has a history of natural hazard events as detailed in Chapter 5 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. The table below presents a summary of natural events that have occurred to indicate the range and impact of natural hazard events in the community. Information regarding specific damages is included if available based on reference material or local sources.

Table 6: Hazard Event History, Atlanta, GA (2015-2021)

Local Hazard Event History (2015-2021)			
Date	**Hazard**	**Disaster Declaration**	**Description**
01/06/2017	Severe Winter Weather (Winter Storm)	No	No Property Damage, No Injuries or Deaths
04/05/2017	Flood (Flash Flood)	No	No Property Damage, No Injuries or Deaths
04/28/2017	Severe Weather (Thunderstorm)	No	$25K Property Damage, No Injuries or Deaths

Local Hazard Event History (2015-2021)			
Date	Hazard	Disaster Declaration	Description
05/04/2017	Tornado	No	$50K Property Damage, No Injuries or Deaths
06/20/2017	Flood (Flash Flood)	No	No Property Damage, No Injuries or Deaths
06/11/2018	Severe Weather (Thunderstorm)	No	$30K Property Damage, No Injuries or Deaths
06/23/2019	Severe Weather (Thunderstorm)	No	$50K Property Damage, No Injuries or Deaths
07/11-12/2019	Flood (Flash Flood)	No	$15K Property Damage, No Injuries or Deaths
08/05/2019	Flood (Flash Flood)	No	No Property Damage, No Injuries or Deaths
09/17/2020	Flood (Flash Flood)	No	No Property Damage, No Injuries or Deaths
09/16/2020	Severe Weather (High Wind)	No	$200K Property Damage, 1 Injuries and/or Deaths
10/10/2020	Flood (Flash Flood)	No	No Property Damage, No Injuries or Deaths
10/24/2020	Flood (Flash Flood)	No	$15K Property Damage, No Injuries or Deaths

Mitigation Capabilities & Assessment, City of Atlanta, GA

Capabilities Assessment

The Legal and Regulatory Capability survey documents authorities available to the jurisdiction and/or enabling legislation at the state level affecting planning and land management tools that support local hazard mitigation planning efforts. The identified planning and land management tools are typically used by states and local and tribal jurisdictions to implement hazard mitigation activities. The table below summarizes the regulatory tools that are available to the municipality.

Legal and Regulatory Capability

Table 7: Legal and Regulatory Capability

Legal and Regulatory Capability				
Tool/Program	Do You Have This?	Authority	Dept./Agency Responsible	Code Citation and Comments
Planning Capability				
Master Plan	Yes	County	Fulton	
Capital Improvements Plan	Yes	Local	DCP	COA CIP
Floodplain Management / Basin Plan	Yes	Local	DWM	Section 75 201-209 Floodplain Ordinance
Stormwater Management Plan	Yes	Local	DWM	Section 75 501-524 / Clean Water Act / Clean Water Atlanta

Legal and Regulatory Capability				
Tool/Program	**Do You Have This?**	**Authority**	**Dept./Agency Responsible**	**Code Citation and Comments**
Open Space Plan	Yes	Local	DWM	Section 15-28.008.001 Open Space / Atlanta Greenspace Plan
Planning Capability				
Stream Corridor Management Plan	Yes	Local	DWM	Metropolitan River Protection Act (2)
Watershed Management or Protection Plan	Yes	Local	DWM	Section 74 401-406 / Clean Water Act / Safe Drinking Water Act / Clean Water Atlanta
Economic Development Plan	Yes	Local	COA	Georgia Planning Act 1989 / Charter of COA Section 3-601
Comprehensive Emergency Management Plan	Yes	Executive Directive / County/ Local Legislation	AFCEMA / AFRD	Section 50 26-34 Emergency Management Ordinance / Stafford Act / GA Emergency Management Act AFRD 2014 Risk Assessment and Standards of Cover, June 2014 Commission of Fire Accreditation International
Emergency Operation Plan	Yes	County / Local	AFCEMA / AFRD	Section 50 26-34 Emergency Management Ordinance / Stafford Act / GA Emergency Management Act
Post-Disaster Recovery Plan	Yes	Local	AFCEMA	Section 50 26-34 Emergency Management Ordinance / Stafford Act / GA Emergency Management Act
Transportation Plan	Yes	Local	DPW / ADOT	
Strategic Recovery Planning Report	Yes	County	AFCEMA	Section 50 26-34 Emergency Management Ordinance / Stafford Act / GA Emergency Management Act
Other Plans: Climate Action Plan	Yes	Local	Sustainability	
Other Plans: Urban Redevelopment Plan	Yes	Local	DCP	
Other Plans: Connect Atlanta Plan	Yes	Local	DCP	
Regulatory Capability				

Legal and Regulatory Capability				
Tool/Program	**Do You Have This?**	**Authority**	**Dept./Agency Responsible**	**Code Citation and Comments**
Building Code	Yes	Local	DCP	NFPA Section 101, 2012 1BC/1RC
Zoning Ordinance	Yes	Local	DCP	Section 16-01.004 1982
Regulatory Capability				
Subdivision Ordinance	Yes	Local	DCP	Section 15
National Flood Insurance Program (NFIP) Flood Damage Prevention Ordinance	Yes	Federal, State, Local	DWM	Section 74 201-209 Floodplain Ordinance
NFIP: Cumulative Substantial Damages	Yes	Local	DWM	Section 74 Floodplain Ordinance
NFIP: Freeboard	Yes	State, Local	DWM	State mandated BFE+2 for single and two-family residential construction, BFE+1 for all other types of construction
Growth Management Ordinances	Yes	Local	DWM	Land Use Plan
Site Plan Review Requirements	Yes	Local	DCP / DWM	Section 16-19.005 Site Development Plan
Stormwater Management Ordinance	Yes	Local	DWM	Section 74 501-524 / Clean Water Act / Clean Water Atlanta
Municipal Separate Storm Sewer System (MS4)	Yes	Local	DWM	Section 74 501-524 / Clean Water Act / Clean Water Atlanta
Natural Hazard Ordinance	Yes	Local	DWM	City Floodplain Ordinance
Post-Disaster Recovery Ordinance	No			
Real Estate Disclosure Requirement	Yes	State		
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	Not at this time			

Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the City of Atlanta.

Table 8: Administrative and Technical Capabilities

Administrative and Technical Capability		
Resources	**Is this in Place?**	**Department/Agency/Position**
Administrative Capability		
Planning Board	Yes	DCP
Mitigation Planning Committee	Yes	MOEP / COA
Environmental Board/Commission	Yes	DWM
Open Space Board/Committee	Yes	DCP
Economic Development Commission/Committee	Yes	COA
Maintenance Programs to Reduce Risk	Yes	DEAM / AFRD
Mutual Aid Agreements	Yes	AFRD / APD / COA / AFCEMA
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	ATLDOT / DWM
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	ATLDOT / DWM
Planners or engineers with an understanding of natural hazards	Yes	AFRD / DWM / DCP / ATLDOT
NFIP Floodplain Administrator	Yes*	DWM
Surveyor(s)	Yes	DWM / ATLDOT
Personnel skilled or trained in GIS and/or Hazus-MH applications	Yes	DPW / DWM / ATLDOT
Scientist familiar with natural hazards	Yes	DWM / DPW / ATLDOT
Emergency Manager	Yes	AFCEMA / DWM / DPW / ADOT / MOEP
Grant Writer(s)	Yes	COA
Staff with expertise or training in benefit/cost analysis	Yes	COA
Professionals trained in conducting damage assessments	Yes	AFCEMA / DWM / DCP

**If you participate in the NFIP, then you have a Floodplain Administrator.*

Fiscal Capability

The following table below summarizes the financial resources available to the City of Atlanta.

Table 9: Fiscal Capabilities

Fiscal Capability	
Financial Resources	**Accessible or Eligible to Use**
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	No
User fees for water, sewer, gas, or electric service	Yes
Impact Fees for homebuyers or developers of new development/homes	Yes
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	Yes
Withhold public expenditures in hazard-prone areas	No
Other federal or state funding programs	Yes
Open space acquisition funding programs	Yes
Other	

Community Classifications

The following table summarizes classifications for community programs available to the City of Atlanta.

Table 10: Community Classifications

Community Classifications			
Program	**Do You Have This?**	**Classification**	**Date Classified**
Community Rating System (CRS)	Yes	6	August 2021
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	4 – for 1&2 family residential, commercial, and industrial property	July 2015
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	Public Protection Classification Rating – 1	2014 (Ref. Page 6, para. 2, Commission of Fire Accreditation International, Re-Accreditation Report, dated July 12, 2014
Storm Ready	Yes		

Community Classifications			
Program	Do You Have This?	Classification	Date Classified
Firewise	No		
Disaster/Safety Programs in/for Schools	Yes		
Organizations with Mitigation Focus (advocacy group, non-government)	Yes		
Public Education Program/Outreach (through website, social media)	Yes		
Public-Private Partnerships	Yes		

Hazard Mitigation Capability

The following table summarizes a self-assessment of Atlanta's current hazard mitigation capability.

Table 11: Hazard Mitigation Capability

Hazard Mitigation Capability			
Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, please indicate your obstacles.)*	Moderate	High
Planning and Regulatory Capability			X
Administrative and Technical Capability		X	
Fiscal Capability		X	
Community Political Capability		X	
Community Resiliency Capability		X	
Capability to Integrate Mitigation into Municipal Processes and Activities		X	

National Flood Insurance Program (NFIP) Participation

The City of Atlanta is currently an active member of the NFIP, and in good standing with no outstanding compliance issues. Atlanta completed its latest compliance audit and verification under the Community Rating System (CRS) in August 2021.

NFIP Floodplain Administrator: Craig Rethwilm, PE, CFM – Civil Engineering Manager, DWM

Loss History and Mitigation

As of July 2021, mitigation activities have been completed for 14 residential Repetitive Loss and/or Severe Repetitive Loss properties. Thirteen (13) properties were acquired and demolished under HMGP 1858-0010, and one (1) property was acquired and demolished under HMGP 4284-0045, resulting in 6.6 acres of land acquisition by the City (See table 10 below). Currently, one Severe Repetitive Loss property has

indicated interest in acquisition, and an application for FY20 FMA funding for mitigation of the property is under review by FEMA.

Planning and Regulatory Capabilities

Atlanta's NFIP Flood Damage Prevention Ordinance was last updated in July 2017 and can be found on the Municode web service.

Floodplain management regulations and ordinances meet the minimum requirements set forth by both FEMA and the State of Georgia. Atlanta also performs site plan review and building plan review which include checks of floodplain designations.

Administrative and Technical Capabilities

The community does have a local NFIP Floodplain Administrator who is supported by six (6) additional CFMs on staff and a GIS staff. Information collected during the update process suggests the NFIP Administrator feels they are adequately supported and trained to fulfill his responsibilities as the municipal floodplain administrator. The Administrator would also consider attending continuing education and/or certification training on floodplain management.

Substantial damage estimates are typically completed by Site Development when necessary.

Public Education and Outreach

Education and Outreach regarding flood/hazard risk, and flood risk reduction through NFIP insurance is provided annually. This effort is designed to assist citizens with information concerning their FEMA floodplain status, yearly repetitive loss notification and new map notification. Information on floodplain management is provided to the public on DWM's website: Floodplain Management (atlantawatershed.org).

Actions to Strengthen the Program

During the data collection process staff did not indicate any perceived barriers to running an effective floodplain program in Atlanta.

Community Rating System

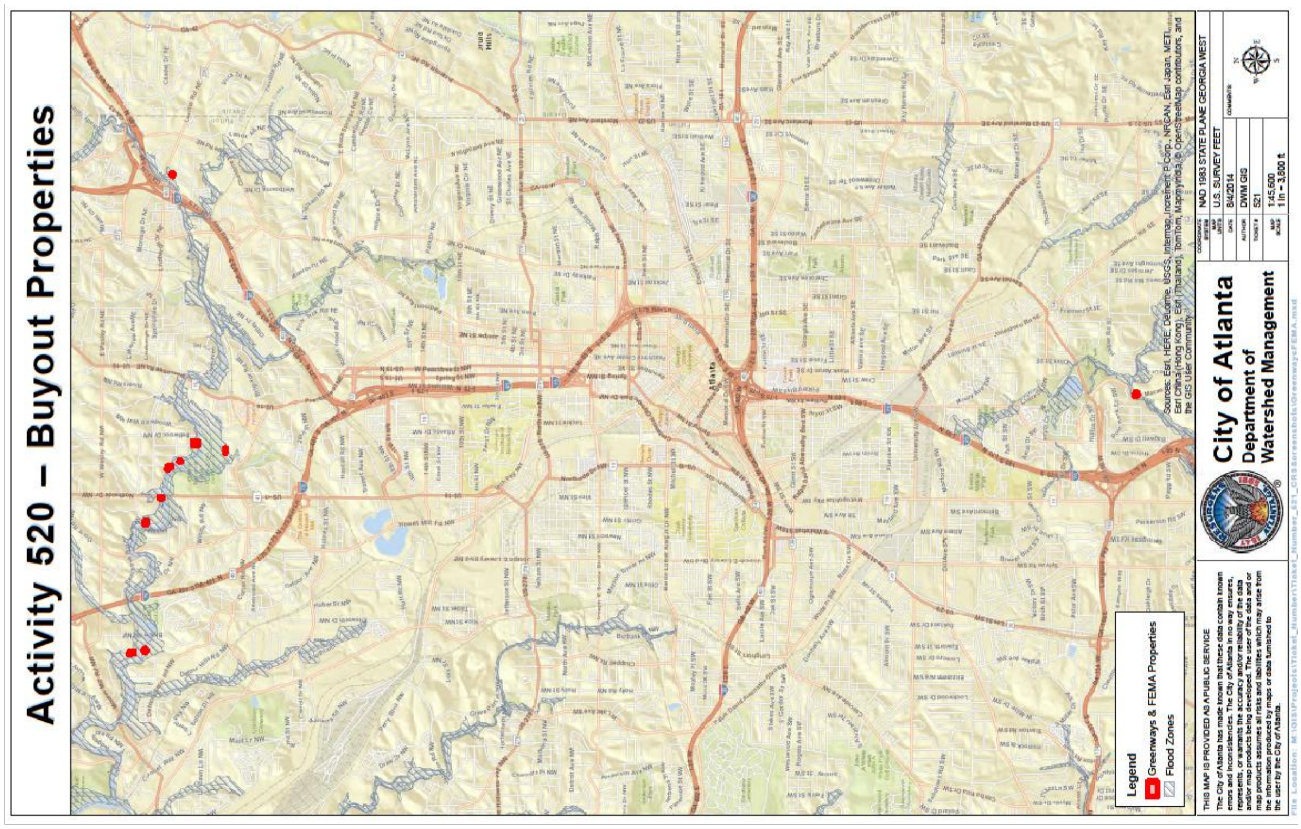
Atlanta does currently participate in the Community Rating System (CRS) program. The city entered in of October 2015 as a Class 7, and its rating improved to a Class 6 in August 2021 per the latest CRS Verification Report, resulting in a 20% discount for all flood insurance premiums within SFHA in the city.

Table 12: FEMA Property Acquisition, Acreage

FEMA Property Acquisition, Acreage		
Phase I		
	Property Address	**Acreage**
	2381 Armand Road, Atlanta, Ga. 30324	0.412
	757 Woodward Way, Atlanta, Ga. 30305	0.451
	391 Golfview Road, Atlanta, Ga. 30305	0.285
	1342 Hanover West Drive, Atlanta, Ga. 30327	0.566
	2235 Havenridge Drive, Atlanta, Ga. 30305	0.550
	2243 Havenridge Drive, Atlanta, Ga. 30305	0.380
	2249 Havenridge Drive, Atlanta, Ga. 30305	0.365
	473 Woodward Way, Atlanta, Ga. 30305	0.846

FEMA Property Acquisition, Acreage		
Phase I		
Total		**3.855**
Phase II		
	Property Address	Acreage
	1355 Battleview Drive, Atlanta, Ga. 30327	0.844
	2251 Macon Drive, Atlanta, Ga. 30315	0.434
	429 Woodward Way, Atlanta, Ga. 30305	0.227
	609 Woodward Way, Atlanta, Ga. 30327	0.373
	115 Biscayne Drive, Atlanta, Ga 30309	0.112
Total		**1.99**
HMFP 4284-0045		
	2372 Armand Road NE, Atlanta, Ga 30324	0.7
Total Acreage		**6.55**

Map 3: Activity 520 Buyout Properties



Map Source: City of Atlanta Department of Watershed Management

Integration of Hazard Mitigation into Existing & Future Planning Mechanisms

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, each municipality was surveyed to obtain a better understanding of its progress in plan integration. Each municipality identified specific integration activities that have been/will be incorporated into municipal procedures. These may include former mitigation initiatives that have become continuous/ongoing programs and as such, may be considered mitigation "capabilities."

Mitigation Actions

Each jurisdiction participating in this plan is responsible for implementing specific mitigation actions. In each Mitigation Action Plan, every proposed action is assigned to a specific local department or agency to assign responsibility and accountability and increase the likelihood of subsequent implementation. This approach enables individual jurisdictions to update their unique mitigation strategy as needed without altering the broader focus of the countywide plan. The separate adoption of locally specific actions also ensures that each jurisdiction is not held responsible for monitoring and implementing the actions of other jurisdictions involved in the planning process. A complete list of countywide mitigation strategies is provided in Chapter 5 of the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan.

Completed Mitigation Actions (2016-2021)

The City of Atlanta identified mitigation actions in the previous MJHMP update (2016). Of the mitigation actions, the City of Atlanta completed zero (0) during the five-year planning period (2016-2021).

Proposed Mitigation Actions (2022-2027) –

The following table reflects mitigation actions from the previous 2016 MJHMP update, all of which are proposed mitigation actions for the 2022 MJHMP update. Additionally, the table includes any/all new mitigation actions identified by the City of Atlanta for the current five-year planning period (2022-2027).

Table 13: Identified Mitigation Actions (2022-2027), Atlanta, GA

Identified Mitigation Actions (2022-2027), Atlanta, GA								
Project Number*	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
05.0095	Forestry Compound Renovations	Proposed project for the 2022 Plan Update	City of Atlanta Parks and Recreation Department	Severe Weather, Severe Winter Weather, Extreme Heat [Temperatures], Any hazard that threatens loss of power	$125,000	Local/Federal Funding	2022-2027	Low 24.5
05.0096	Ben Hill Generator	Proposed project for the 2022 Plan Update	City of Atlanta Parks and Recreation Department	Severe Weather, Severe Winter Weather, Extreme Heat [Temperatures], Any hazard that threatens loss of power	$125,000	Local/Federal Funding	2022-2027	Medium 38.5
05.0097	Emergency Generators for Old Adamsville, Rosel Fann, and other recreation centers used as warming stations	Proposed project for the 2022 Plan Update	City of Atlanta Parks and Recreation Department	Severe Weather, Severe Winter Weather, Extreme Heat [Temperatures], Any hazard that threatens loss of power	$2,500,000	Local/Federal Funding	2022-2027	Medium 38.5
05.0098	Watershed Improvement Projects	Proposed project for the 2022 Plan Update	City of Atlanta Department of Water Management	Flood	$596,000,000	Local/Federal Funding	2022-2027	Medium 31

Identified Mitigation Actions (2022-2027), Atlanta, GA								
Project Number*	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
05.0096	Purchase and install back-up 250kw Gas Generator for IT server room	Proposed project for the 2022 Plan Update	City of Atlanta Department of Water Management	Severe Winter Weather, Any hazard that threatens loss of power	$287,500	Local/Federal Funding	2022-2027	Medium 39.5
05.0097	Remove Debris, stabilize piers and embankment, repair damage Fair Drive at South River Trib. Bridge ID: 121-0037-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	Est. Cost: $50,000.	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32
05.0098	Remove Debris, stabilize piers and embankment, repair damage Piedmont Ave. at Clear Creek. Bridge ID: 121-0038-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	Est. Cost: $50,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32
05.0099	Remove Debris, stabilize piers and embankment, repair damage Cheshire Bridge Rd. at CSX Railroad (639814N). Bridge ID: 121-0038-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	Est. Cost: $50,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32
05.0100	Remove Debris, stabilize piers and embankment, repair damage Dodson Dr. at South Utoy Creek. Bridge ID: 121-0319-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	Est. Cost: $75,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32

Identified Mitigation Actions (2022-2027), Atlanta, GA								
Project Number*	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
05.0101	Remove Debris, stabilize piers and embankment, repair damage Moores Mill Rd. at Peachtree Creek. Bridge ID: 121-0325-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$75,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32
05.0102	Remove Debris, stabilize piers and embankment, repair damage Paces Ferry Rd. at Nancy Creek. Bridge ID: 121-0329-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$75,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32
05.0103	Remove Debris, stabilize piers and embankment, repair damage Ben E. Mays Rd. at North Utoy Creek. Bridge ID: 121-0338-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$75,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32
05.0104	Remove Debris, stabilize piers and embankment, repair damage Lynhurst Dr. at North Utoy Creek. Bridge ID: 121-0351-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$50,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32
05.0105	Remove Debris, stabilize piers and embankment, repair damage Welcome All Rd. at Camp Creek. Bridge ID: 121-0362-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$50,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32

Identified Mitigation Actions (2022-2027), Atlanta, GA								
Project Number*	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion	STAPLE+E Score
05.0106	Remove Debris, stabilize piers and embankment, repair damage Macon Dr. at South River. Bridge ID: 121-0377-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$50,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32
05.0107	Remove Debris, stabilize piers and embankment, repair damage Forrest Park Rd. at South River. Bridge ID: 121-0379-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$50,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32
05.0108	Remove Debris, stabilize piers and embankment, repair damage Chattahoochee Ave. at Peachtree Creek Trib. Bridge ID: 121-0397-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$50,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32
05.0109	Remove Debris, stabilize piers and embankment, repair damage Bohler Road at Peachtree Creek. Bridge ID: 121-0398-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$50,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32
05.0110	Remove Debris, stabilize piers and embankment, repair damage Howell Mill Rd. at Peachtree Creek. Bridge ID: 121-0403-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$75,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32

Identified Mitigation Actions (2022-2027), Atlanta, GA								
Project Number*	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion	STAPLE+E Score
05.0111	Remove Debris, stabilize piers and embankment, repair damage Collier Rd. at Peachtree Creek Trib. Bridge ID: 121-0435-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$50,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32
05.0112	Remove Debris, stabilize piers and embankment, repair damage DeFoors Ferry Rd. at Peachtree Creek Trib. Bridge ID: 121-0438-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$75,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32
05.0113	Remove Debris, stabilize piers and embankment, repair damage W. Paces Ferry Rd. at Nancy Creek. Bridge ID: 121-0440-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$75,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32
05.0114	Remove Debris, stabilize piers and embankment, repair damage Northside Dr. at Nancy Creek. Bridge ID: 121-0442-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$75,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32
05.0115	Remove Debris, stabilize piers and embankment, repair damage Powers Ferry Rd. at Nancy Creek. Bridge ID: 121-0448-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$75,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32

Identified Mitigation Actions (2022-2027), Atlanta, GA								
Project Number*	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion	STAPLE+E Score
05.0116	Remove Debris, stabilize piers and embankment, repair damage Hollywood Rd. at Proctor Creek Trib. Bridge ID: 121-0574-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$75,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32
05.0117	Remove Debris, stabilize piers and embankment, repair damage Stone Hogan Conn. At North Fork Camp Creek. Bridge ID: 121-0575-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$50,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32
05.0118	Remove Debris, stabilize piers and embankment, repair damage Pryor Rd. at South River Trib. Bridge ID: 121-0581-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$50,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32
05.0119	Remove Debris, stabilize piers and embankment, repair damage Claire Dr. at South River Trib. Bridge ID: 121-0582-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$50,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32
05.0120	Remove Debris, stabilize piers and embankment, repair damage Bolton Rd. at Whetstone Creek. Bridge ID: 121-0683-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$75,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32

Identified Mitigation Actions (2022-2027), Atlanta, GA								
Project Number*	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
05.0122	Remove Debris, stabilize piers and embankment, repair damage Randall Mill Rd. at Nancy Creek. Bridge ID: 121-5178-0	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$50,000	Local/Federal Funding	Proposed timeline: 2022-2026	Medium 32
05.0123	Marietta Blvd. Bridge – Failed section of deck with through hole, exposed rebars, failed expansion join	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$250,000	Local/Federal Funding	Proposed timeline: 2021-2022	Medium 32
05.0124	Alston Bridge – Severe undermining of the culvert walls, roadway cracks, cracks on culvert wall. CORRECTIVE ACTION: repair cracks on culvert wall with high strength grout, repair settlement on culvert foundation, mill and repave roadway	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$76,000	Local/Federal Funding	Proposed timeline: 2022-2023	Medium 32
05.0125	MLK Drive Bridge – Multiple Roadway spalls with exposed rebars, failed expansion joints. The corrective action is to repair deck with concrete at all failing spots. Repair extension joints in kind.	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$2,000,000	Local/Federal Funding	Proposed timeline: 2022-2023	Medium 32

Identified Mitigation Actions (2022-2027), Atlanta, GA								
Project Number*	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
05.0126	Centennial Park Bridge - Multiple Roadway spalls with exposed rebars, failed expansion joints. The corrective action is to repair deck with concrete at all failing spots. Repair extension joints in kind.	Proposed project for the 2022 Plan Update	City of Atlanta Department of Transportation (ATLDOT)	Severe Weather, Flood (erosion), Any hazard that threatens bridge infrastructure and further deterioration	$2,000,000	Local/Federal Funding	Proposed timeline: 2022-2023	Medium 32
05.0024 05.0025 05.0026 05.0027	Harden to improve wind and impact resistance; increase generator capacity. (Comments: Focus on Station 1, 8, 9, 20, 21, 22, and 25. Station 21 is a heavy rescue special operations station. Houses rescue boat, collapse rescue equipment, trench rescue equipment, and technical rescue equipment. ALS engine is station at this location. GSAR is housed at this station. Station has large amount of plate glass, including bay doors. Bay doors are older and are not up to current code.)	In-progress/ Carried over from the 2016 MJHMP	City of Atlanta Fire and Rescue	Flood, Severe Weather; Severe Winter Weather, Tornado, Tropical Systems	$500,000 per station	HMGP; SCG; Local Funds	2022-2027	Medium 39.5

Identified Mitigation Actions (2022-2027), Atlanta, GA								
Project Number*	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
05.0029	R.M. Clayton Wastewater Treatment Plan: Flood-proof the plant through raising the height of the banks (Comments: This plant flooded from Proctor Creek during the floods of Sept. 2009. It has received some PDM funds for repairs, but further mitigation is needed to improve flood-proofing of this facility. This facility serves East Point, College Park, and Hapeville. The plant cannot treat sewage and is causing environmental problems in West Point Lake. It also affects the communities' ability to draw water.)	In-progress/ Carried over from the 2016 MJHMP	Department of Water Management; Army Corp of Engineers	Flood, Severe Weather, Tropical Systems	$2,500,000	HMGP; FMA; Local Funds	2022-2027	Medium 32
05.0082	Continue program for natural/ vegetative stabilization of stream banks (average 1300 feet per year) to secure infrastructure	In-progress/ Carried over from the 2016 MJHMP	City of Atlanta Department of Water Management	Flood, Severe Weather, Tropical Systems	$200,500 yearly	Local Funds	2022-2027	Medium 32
05.0084	Tree Maintenance Program in Hazard and Urbanized Areas (Comments: Preventative maintenance plan for ROW could require significantly higher funding if implemented citywide. Emergency vehicles for Forestry could be purchased – knuckle boom - $200,000)	In-progress/ Carried over from the 2016 MJHMP	City of Atlanta Parks and Recreation Department	Extreme Heat, Drought, Severe Weather	$300,000 Equipment; $400,000 annually	Local Funds	2022-2027	Low 24.5

Identified Mitigation Actions (2022-2027), Atlanta, GA								
Project Number*	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
05.0034	Retrofit bay doors of Fire Stations	In-progress/ Carried over from the 2016 HMJMP	City of Atlanta Fire and Rescue; DEAM	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$5,000,000	HMGP; SCG; Local Funds	2022-2027	Medium 33.5
05.0035	Retrofit All Fire Stations with Lightning Rods	In-progress/ Carried over from the 2016 MJHMP	City of Atlanta Fire and Rescue; DEAM	All Hazards	$800,000	HMGP; SCG; Local Funds	2022-2027	Medium 26
05.0036	Place Warning Sirens in Residential Areas	In-progress/ Carried over from the 2016 MJHMP	City of Atlanta Fire and Rescue	Severe Weather	$4,000,000	HMGP; SCG; Local Funds	2022-2027	Medium 30
05.0037	Acquire generator for emergency power for Police Facilities (Comments: Plan for immediate smaller rollout of the main precincts (6) in FY17.)	In-progress/ Carried over from the 2016 MJHMP	City of Atlanta Police Department	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$2,500,000	HMGP; DHS; Local Funds	2022-2027	Medium 31.5
05.0038	Relocate SWAT Offices & Storage, Classrooms, Ranger Offices & Storage, Gym, Explosive Bldg., and Equipment Facility at 1500 Key Rd outside of Floodplain	In-progress/ Carried over from the 2016 MJHMP	City of Atlanta Police Department	Flood	$3,750,000	DHS; Local Funds	2022-2027	Medium 32.5
05.0039	Relocate Firing Range Facility at 1500 Key Rd outside of floodplain	In-progress/ Carried over from the 2016 MJHMP	City of Atlanta Police Department	Flood	$2,215,000	Local Funds	2022-2027	Medium 32.5

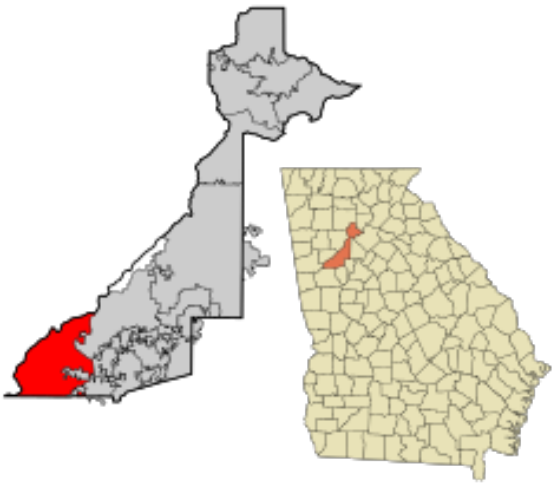
Identified Mitigation Actions (2022-2027), Atlanta, GA								
Project Number*	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
05.0040	Site at 1500 Key Road includes SWAT, flooding on the road severely impacts ability to respond. (Comments: Multiple pieces of critical tactical equipment are located there as well as police firing range.)	In-progress/ Carried over from the 2016 MJHMP	City of Atlanta Public Works Department; City of Atlanta Police Department	Flood, Severe Weather, Severe Winter Weather, Tropical Storms	$1,500,000	Federal/State Grant; Local Funds	2022-2027	Medium 32.5
05.0042	Install generators at Public Work Facilities involving 25 sites involving Fueling Operations for the City, Operations, and Vehicle Maintenance	In-progress/ Carried over from the 2016 MJHMP	City of Atlanta Public Works Department	Flood, Severe Weather	$2,500,000	HMGP; Local Funds	2022-2027	Medium 36.5
05.0081	Educate the public about the risk of flooding and the importance of obtaining flood insurance (Comments: Flyers and newsletters, Information on DWM website. Continue to update website as needed.)	In-progress/ Carried over from the 2016 MJHMP	City of Atlanta Department of Water Management	Flood, Severe Weather, Tropical Systems	$50,000 yearly	Local Funds	2022-2027	Medium 32

Identified Mitigation Actions (2022-2027), Atlanta, GA								
Project Number*	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
05.0083	Relocate Parks NE and SE District Maintenance Depots (Comments: Additional space for welding and small equipment. Looking for opportunity to aggregate both compounds together with fleet (recreation). Price could be $1.5 million for land and $3 million for construction of new site. DPR is looking for alternative sites that may allow for aggregating maintenance and service sites.)	In-progress/ Carried over from the 2016 MJHMP	City of Atlanta Parks and Recreation Department	Flood	$800,000 for Land and $1,500,000 for Design & Construction	Local Funds	2022-2027	Medium 39.5
05.0023	Improve storm water drainage capacity and design in the area of Piedmont and Auburn Ave to allow better tie into the Claire Creek overflow (Comments: This is an area of identified need as part of the Combined Sewer Overflow (CSO) Remediation Plan, which can be found at http://www.cleanwateratlanta.org.)	Deferred in 2016 Plan due to lack of funding; Carry over to 2022 MJHMP update	City of Atlanta Department of Water Management	Flood	$5,000,000	Federal/State Grant; Local Funds	2022-2027	Medium 32
05.0087	Upgrade outdoor siren warning system speakers	Deferred in 2016 Plan due to lack of funding; Carry over to 2022 MJHMP update	Georgia Institute of Technology Office of Emergency Management	All Hazards	$186,000 for 6 speakers	Local Funds; Other Funding Opportunities	2022-2027	Medium 32.5

Identified Mitigation Actions (2022-2027), Atlanta, GA								
Project Number*	Mitigation Action/ Description	Status as of 2022 MJHMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion	STAPLE+E Score
05.0088	Generators to supply power to fueling stations	Deferred in 2016 Plan due to lack of resources/staff time; Carry over to 2022 MJHMP update	Atlanta Public Schools Office of Safety and Security	All Hazards	$100,000	Local Funds; Other Funding Opportunities	2022-2027	Low 23.5
05.0089	Installation of above ground fuel storage tanks	Deferred in 2016 Plan due to lack of resources/staff time; Carry over to 2022 MJHMP update	Atlanta Public Schools Office of Safety and Security	All Hazards	$100,000	Local Funds; Other Funding Opportunities	2022-2027	Medium 32
05.0090	Potable Clean Water Conveyance/ Storage	Deferred in 2016 Plan due to lack of resources/staff time; Carry over to 2022 MJHMP update	Atlanta Public Schools Office of Safety and Security	All Hazards	$300,000	Local Funds; Other Funding Opportunities	2022-2027	Medium 31
05.0091	High Impact Window Glass/treatment	Deferred in 2016 Plan due to lack of resources/staff time; Carry over to 2022 MJHMP update	Atlanta Public Schools Office of Safety and Security	Severe Weather, Tornado, Tropical Systems	$1,000,000	Local Funds; Other Funding Opportunities	2022-2027	Medium 31
05.0092	Generators in support of Schools/Buildings as shelters	Deferred in 2016 Plan due to lack of resources/staff time; Carry over to 2022 MJHMP update	Atlanta Public Schools Office of Safety and Security	All Hazards	$2,550,000	Local Funds; Other Funding Opportunities	2022-2027	Medium 39.5

Identified Mitigation Actions (2022-2027), Atlanta, GA								
Project Number*	**Mitigation Action/ Description**	**Status as of 2022 MJHMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
05.0093	Install lightning detection equipment/ software for campus buildings and athletic fields	Deferred in 2016 Plan due to lack of resources/staff time; Carry over to 2022 MJHMP update	Georgia State University Emergency Management	Severe Weather, Tropical Systems, Tornado	$30,000	Local Funds; Other Funding Opportunities	2022-2027	Low 24.5
05.0094	Install tornado sirens throughout the Downtown Atlanta campus	Deferred in 2016 Plan due to lack of resources/staff time; Carry over to 2022 MJHMP update	Georgia State University Emergency Management	Severe Weather, Tropical Systems; Tornado	$300,000	Local Funds; Other Funding Opportunities	2022-2027	Medium 32

Jurisdiction Profile: City of Chattahoochee Hills, GA



History & Geography

Chattahoochee Hills is one of Metro Atlanta's newer cities and was specifically designated to keep the area rural and prevent urban sprawl. On June 19, 2007, residents voted by an 83% to 17% margin to incorporate the 33,000-acre portion within Fulton County as the City of "Chattahoochee Hill Country" in a local referendum. Months later, on December 1, 2007, Chattahoochee Hill Country became a city with the first elected officials taking office a few days later.

On September 23, 2008, the city was renamed by an ordinance from Chattahoochee Hill Country to "Chattahoochee Hills."

Today, the City of Chattahoochee Hills is made up of over 60,000 acres and has a population of 2,950 (U.S. Census 2020). Most of the city sits in South Fulton County, but parts of Douglas, Carroll, and Coweta counties are also annexed into the community.

Significant Characteristics

As intended, the City of Chattahoochee Hills is a quiet and rural area with natural hills and lakes. It sits along the Chattahoochee River and is home to Cochran Mill Park. The park, popular among residents and visitors alike, features 800 acres of woods, fields, streams, stunning waterfalls, wildflowers, native azaleas, mountain laurel, and the runs of three historic mills. In 2010, donations from almost 400 local families in the City of Chattahoochee Hills allowed the city to purchase the park from Fulton County.

Chattahoochee Hills is the location of TomorrowWorld, a three-day festival (and five-day camping experience) held annually. In September of 2014, TomorrowWorld welcomed 160,000 visitors from over 75 countries the city. This marked the second international edition of Tomorrowland, the world's most popular electronic music festival, held in Belgium each year.

Population & Demographics

As indicated in Fulton County's previous Hazard Mitigation Plan (2016), historical information fixing the City of Chattahoochee Hills' population prior to 2007 is not available with absolute certainty. The City was newly incorporated in 2007 so no records exist for the exact geographical area that is now Chattahoochee Hills. Fulton County did keep some records for a larger area that included Chattahoochee Hills and nearby unincorporated areas, referenced in the 2025 Fulton County Comprehensive Plan as "Southwest Fulton County". However, "Southwest Fulton County," as referenced in the Fulton County Comprehensive Plan (Focus Fulton 2025), was significantly bigger and more populous than the City of Chattahoochee Hills.

Per the 2020 Decennial Census, there were **2,950** people, **1,106** households, and **475** families (married couples) residing in the City of Chattahoochee Hills. This city spans 58.0 square miles. This equates to a population density of 50.86 people per square mile. The population of Chattahoochee Hills, as evidenced by the following table, has grown at a very slow pace since the city's incorporation in 2007.

Table 1: Population Change, City of Chattahoochee Hills, GA

Population Change, City of Chattahoochee Hills, GA		
Year	2010 U.S. Census	2020 U.S. Census
Population	2,378	2,950

The population of Chattahoochee Hills in 2007 is not known with absolute certainty. However, given the census data from 2010 and 2020, it is known that the city's population increased by 572 people, or 24.05%, over a ten-year period.

Of the population, 5.1% are under the age of five, 17.3% are under the age of 18, 82.7% are age 18 and over, and 21.3% are age 65 and over. The median age was 37.2 years as of the U.S. Census 2020.

Of Chattahoochee Hills' households, 50.2% were married couples living together, 25.8% had a male householder (no spouse present), and 21.3% had a female householder (no spouse present). The percentage of children under the age of 18 living at home was 17.3%. The average family size in Chattahoochee Hills was 3.12.

According to the 2020 Decennial Census, there were also 1,439 housing units for an average density of 24.8 per square mile.

The following table provides information specific to Chattahoochee Hills' housing stock through the issuance of single-family new house construction building permits over the last ten years (2010-2020). However, since not all permits become actual housing starts, and starts lag the permit stage of construction, this number does not represent total new construction (2021) but should provide a general indicator on construction activity and the local real estate market.

Table 2: Housing Stock History, Building Permits, Chattahoochee Hills, GA

Housing Stock History, Building Permits, Chattahoochee Hills, GA	
Year	# of Permits Issued
2014	8
2015	NA
2016	NA
2017	NA
2018	19
2019	18

Data Source: City of Chattahoochee Hills

The Local Economy

A history of specific economy- and industry-related data is not available due to the Chattahoochee Hills' formation in 2007. However, as indicated by the 2020 census, the median income for a household in the City of Chattahoochee Hills was $60,867, slightly below the State of Georgia's average of $61,980. The median income for a family was $65,156. In 2020, approximately 12.8% of the city's population were living below the poverty line, including 20.1% under the age of 18, 12.9% between the ages of 18 and 64, and 6.7% at age 65 and over.

According to the 2019 American Community Survey, Chattahoochee Hills employment grew 3%, to a total of 1.2K employees.

Table 3: Leading Industries, Employment Percentages, Chattahoochee Hills, GA (2019)

Leading Industries, Employment Percentages, Chattahoochee Hills, GA (2019)	
Educational services, and health care and social assistance	16.0%
Retail Trade	13.1%
Arts, entertainment, and recreation, and accommodation and food services	12.6%
Professional, scientific, and management, and administrative and waste management services	11.8%
Transportation and warehousing, and utilities	11.3%
Finance and insurance, and real estate and rental and leasing	4.6%
Manufacturing	9.6%
Construction	8.7%
Public Administration	5.5%
Wholesale Trade	3.0%
Other services, except public administration	2.9%
Information	0.7%
Agriculture, Forestry, Fishing and Hunting, and Mining	0.4%

Critical Facilities & Infrastructure

As stated within the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan (MJHMP), certain facilities have a net positive value on the community, i.e., they contribute to the public good by facilitating the basic functions of society. These facilities maintain order, public health, education, and help the local economy function. Additionally, there are facilities and infrastructure integral to disaster response and recovery operations. Conversely, some of these are of extreme importance due to the negative externalities created when impacted by a disaster. What fits these definitions varies slightly from community to community, but the definitions remain as a guideline for identifying critical infrastructure and facilities.

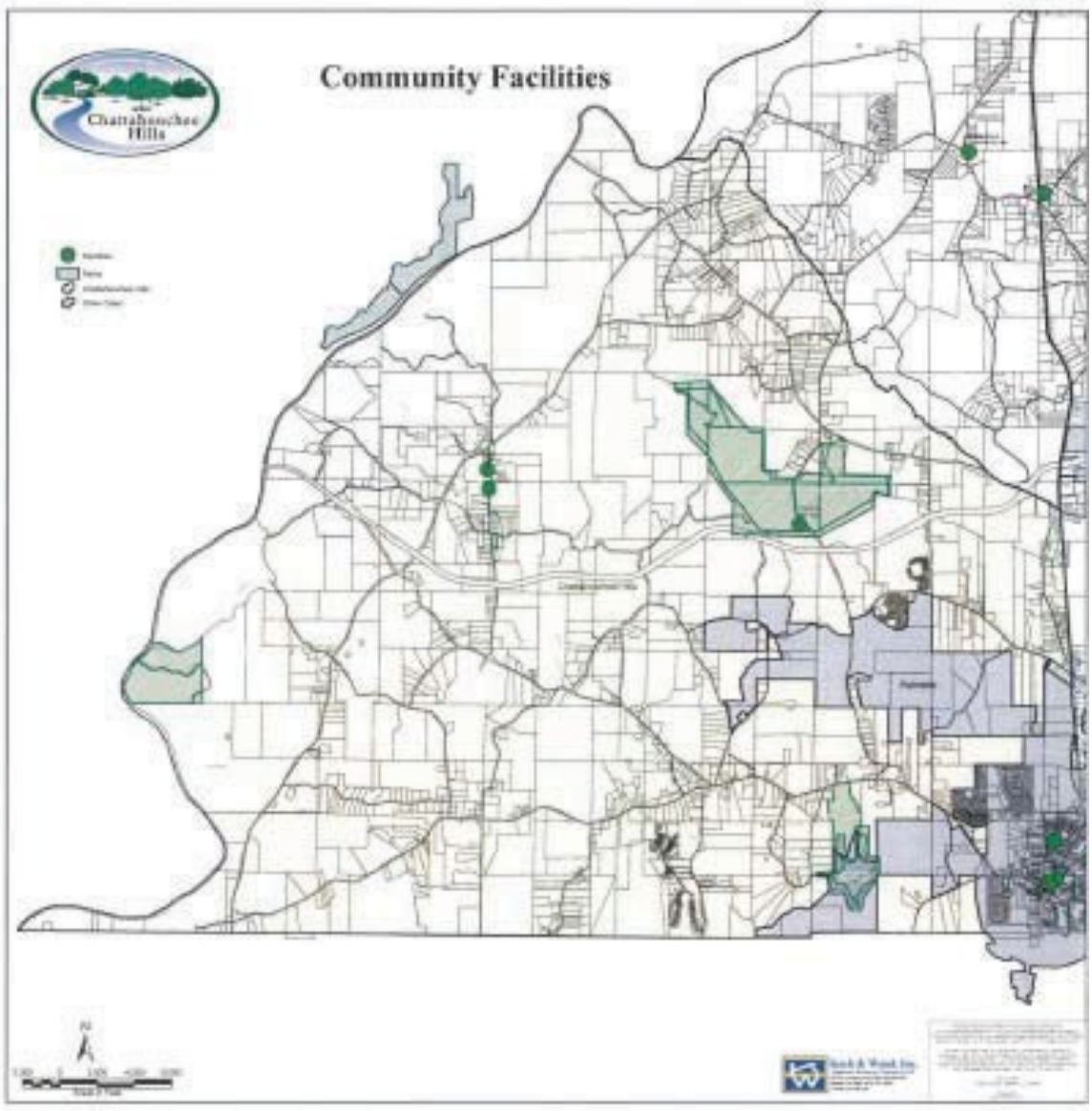
As indicated in Section 4 – Hazard Risk Assessment of the 2022 Fulton County MJHMP, the following essential facilities are unique to the City of Chattahoochee Hills.

Table 4: Essential Facilities, City of Chattahoochee Hills, GA

Essential Facilities, City of Chattahoochee Hills, GA		
Classification	**Updated Count**	**Updated Exposure**
EOC	0	$0
Care	0	$0
Fire	1	$111,000
Police	1	$618,000
School	1	$3,537,000
Total	3	$4,266,000

The following map depicts community facilities within Chattahoochee Hills. A complete list of the City's critical facilities and infrastructure can be found in Appendix C.

Map 1: Community Facilities, Chattahoochee Hills, GA

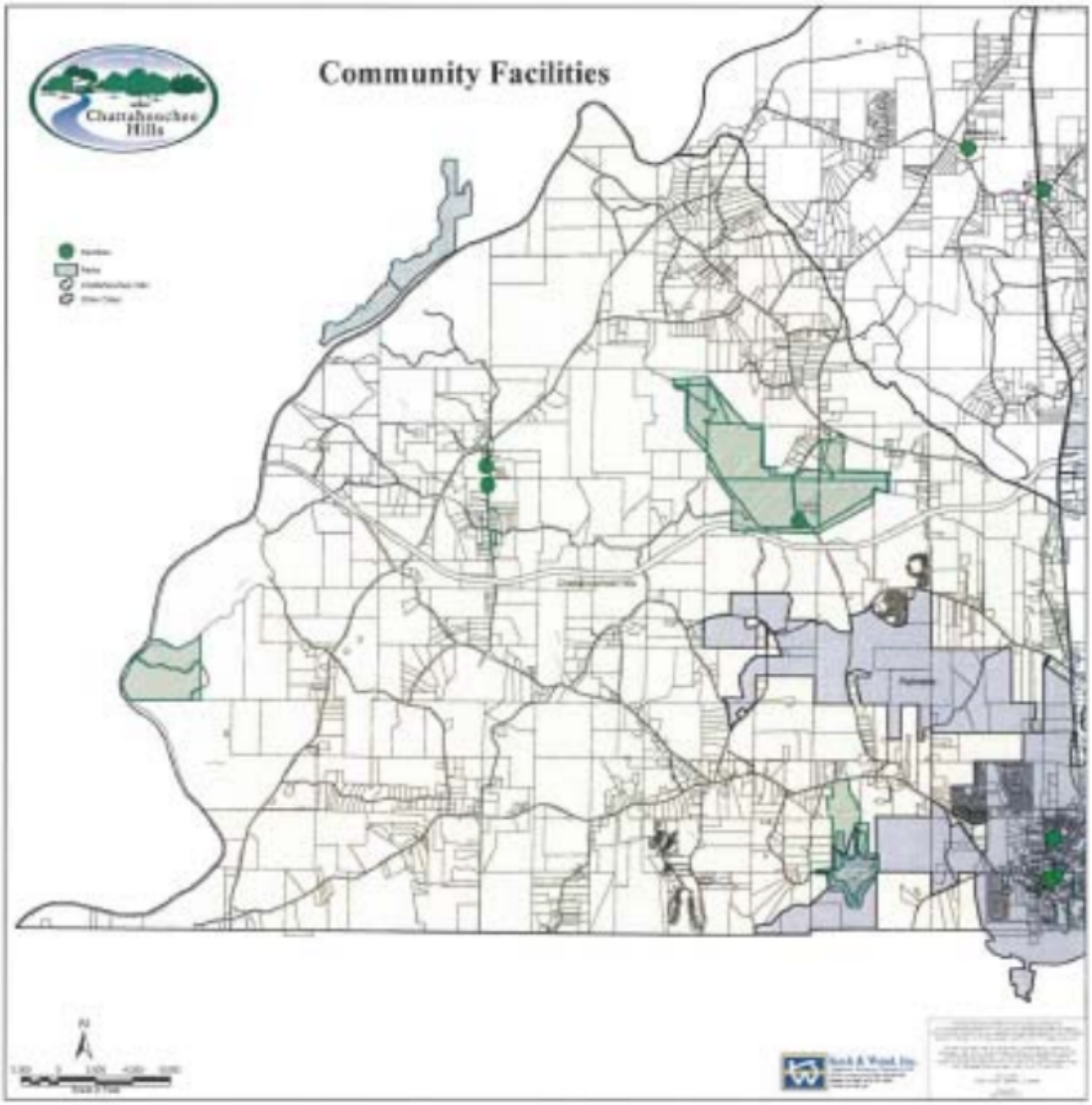


Map Source: Source

Land Use & Development Trends

To meet the current and future demands of an increasing population, the City of Chattahoochee Hills must continue to implement proactive measures pertaining to land use and development. This is especially true of housing, transportation, education, historic preservation, and the environment, among other things.

According to the U.S. Census Bureau, Chattahoochee Hills has a land area of 58.0 square miles. It is generally rural and residential. Few areas are designed for industrial use.



Map Source: Source

Hazard Risk Assessment, City of Chattahoochee Hills, GA

Hazard Identification & Risk Assessment

There are 12 of 13 Georgia-identified hazards known to pose risk to Fulton County and one or more of its participating jurisdictions. These include Dam Failure, Drought, Earthquake, Flood, Geological Hazards, Extreme Heat, Severe Weather, Tornado, Tropical Systems, Severe Winter Weather, and Wildfire/Wildland Urban Interface Fires. Wind, which is addressed separately in the 2019 Georgia Hazard Mitigation Strategy Standard and Enhanced Plan, is included in the Severe Weather hazard in this plan update.

The following Risk Assessment Matrix is specific to the City of Chattahoochee Hills. The table outlines Chattahoochee Hills' general risk to the profiled hazards. The rankings are based on a variety of factors, including 1) a composite evaluation of this plan's risk assessment, namely a hazard's probability of occurring in the future, 2) the vulnerability of the jurisdiction to a specific hazard, 3) the intensity of past hazard impacts, and 4) a joint evaluation of local experts and plan stakeholders. The category/range (per

year) is based on the following scale: **Unlikely (0%), Occasional (1-10%), Likely (11-50%), and Highly Likely (51-100%).**

Table 5: Risk Assessment Matrix, City of Chattahoochee Hills, GA

Risk Assessment Matrix, Chattahoochee Hills, GA		
Hazard	**Category**	**Range**
Dam Failure	Occasional***	-
Drought	Highly Likely	295%
Earthquake	Occasional**	-
Flood	Occasional****	-
Geological Hazards	Highly Likely	-
Extreme Heat	Highly Likely	-
Severe Weather	Highly Likely*	-
Severe Winter Weather	Highly Likely	-
Tornado	Highly Likely	160%
Tropical Systems	Highly Likely	84%
Wildfire/Wildland Urban Interface Fire	Occasional*****	-

**The hazard of Severe Weather considers the instances of thunderstorms, lightning, hail, and wind, each with a varying degree of occurrence/probability.*

*** The hazard of Earthquake is considered occasional but without a definite calculation of probability. This is due to there being no record/data of earthquake in the planning period since the last plan update (2016).*

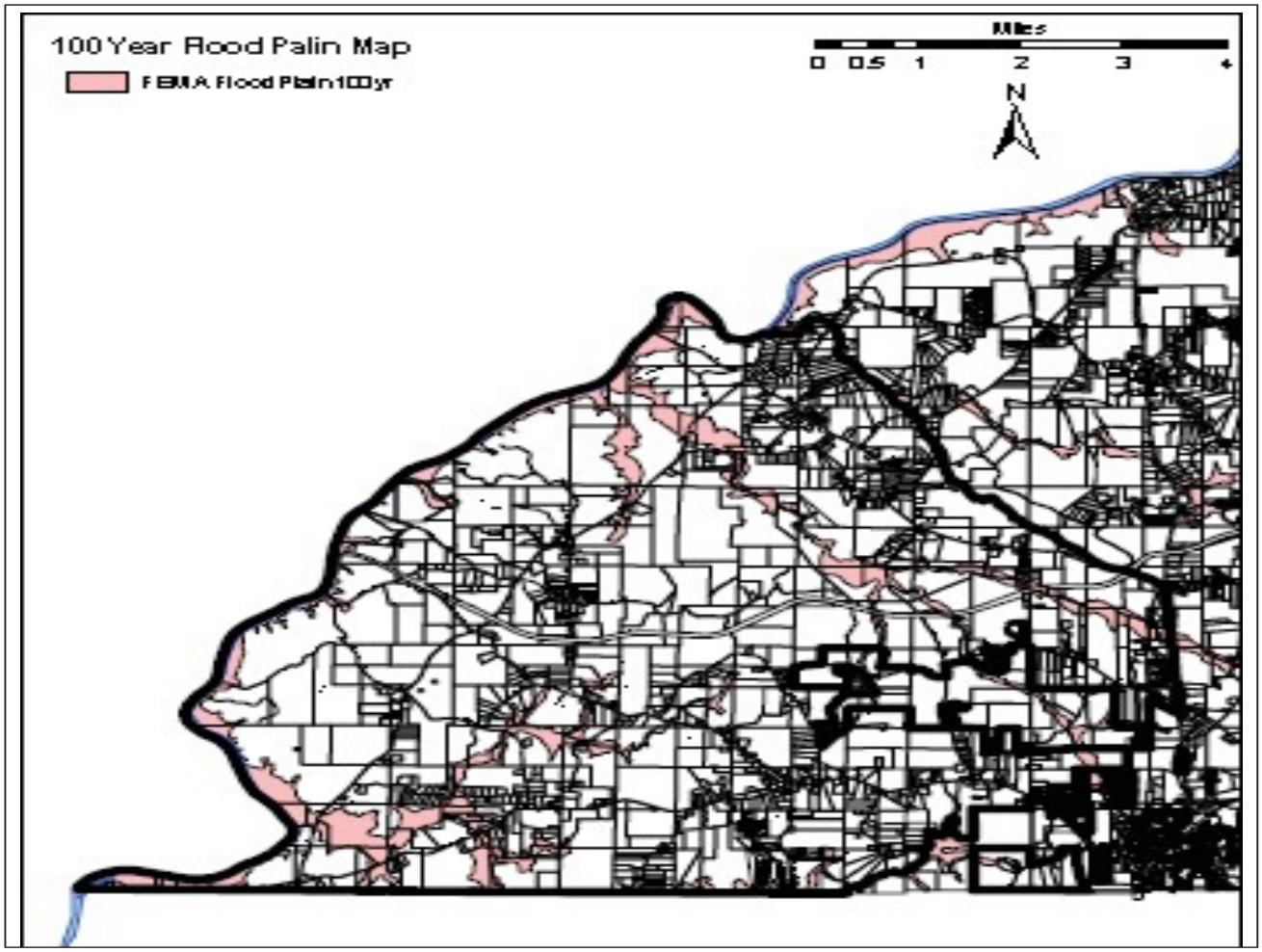
**** Calculating future probability is not the only predictor of future occurrences. In the last five years, Fulton County and its participating jurisdictions have documented no cases of Dam Failure. Though the County has experienced occurrences that were listed in its MJHMP update (2016), the likelihood of a dam failure event happening in the planning area is considered **occasional.***

*****The NOAA/NCEI Storm events database did not have any incidences of storm data records related to Flood (including flash flood) for the Cities of Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton from January 1, 1970 – July 31, 2021. Since flooding is possible, the Cities Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton's Probability of Future Events is considered **occasional.***

******The hazard of Wildfire/Wildland Urban Interface Fire is considered **occasional** but without a definite calculation of probability. This is due to there being no record/data of wildfire in the planning period since the last plan update (2016).*

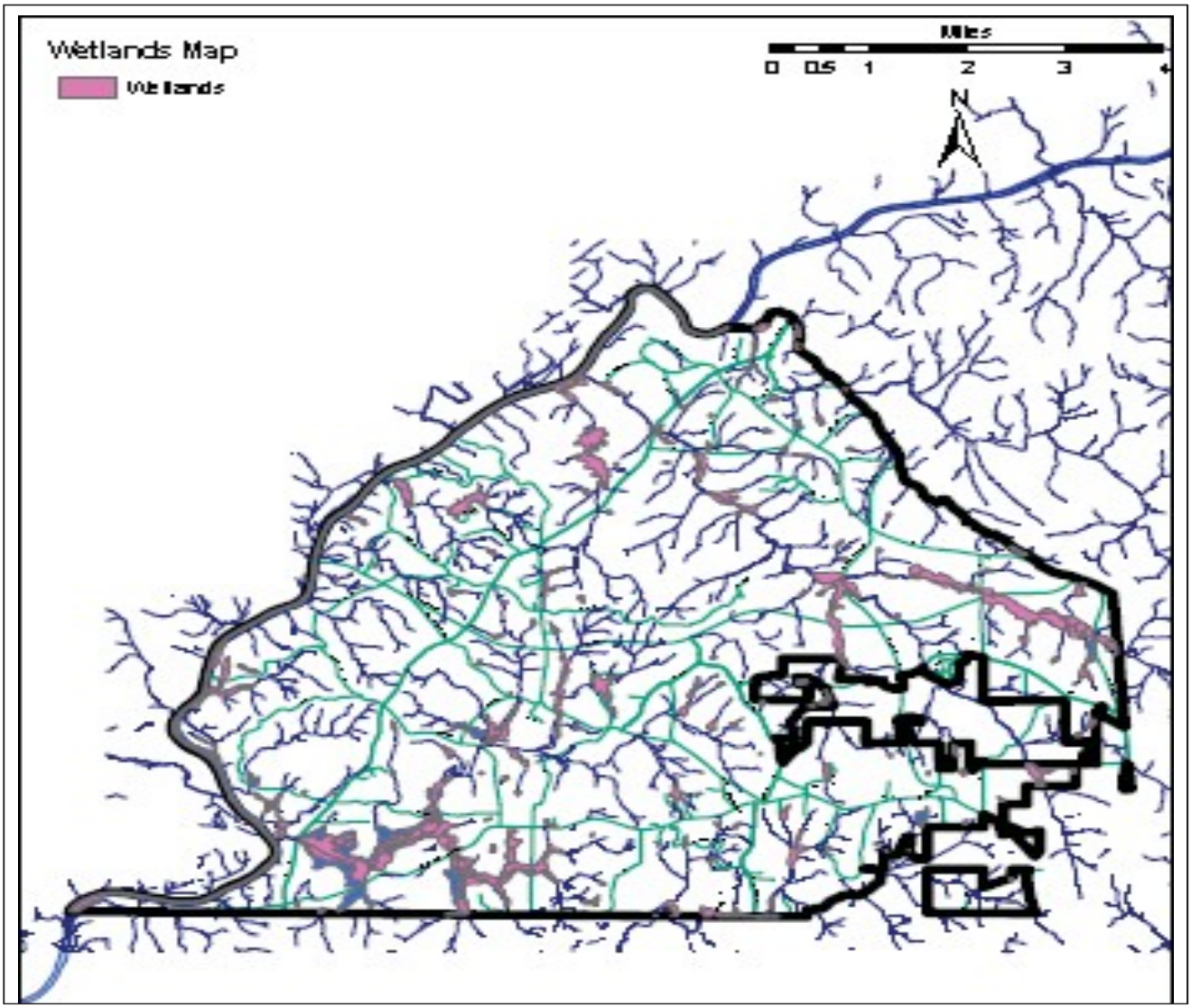
The following maps provide a visual representation of Chattahoochee Hills' 100-year Floodplain, its wetlands, and steep slopes, all of which have a bearing on one or more of the identified hazards.

Map 3: 100-year Flood Plain, Chattahoochee Hills, GA



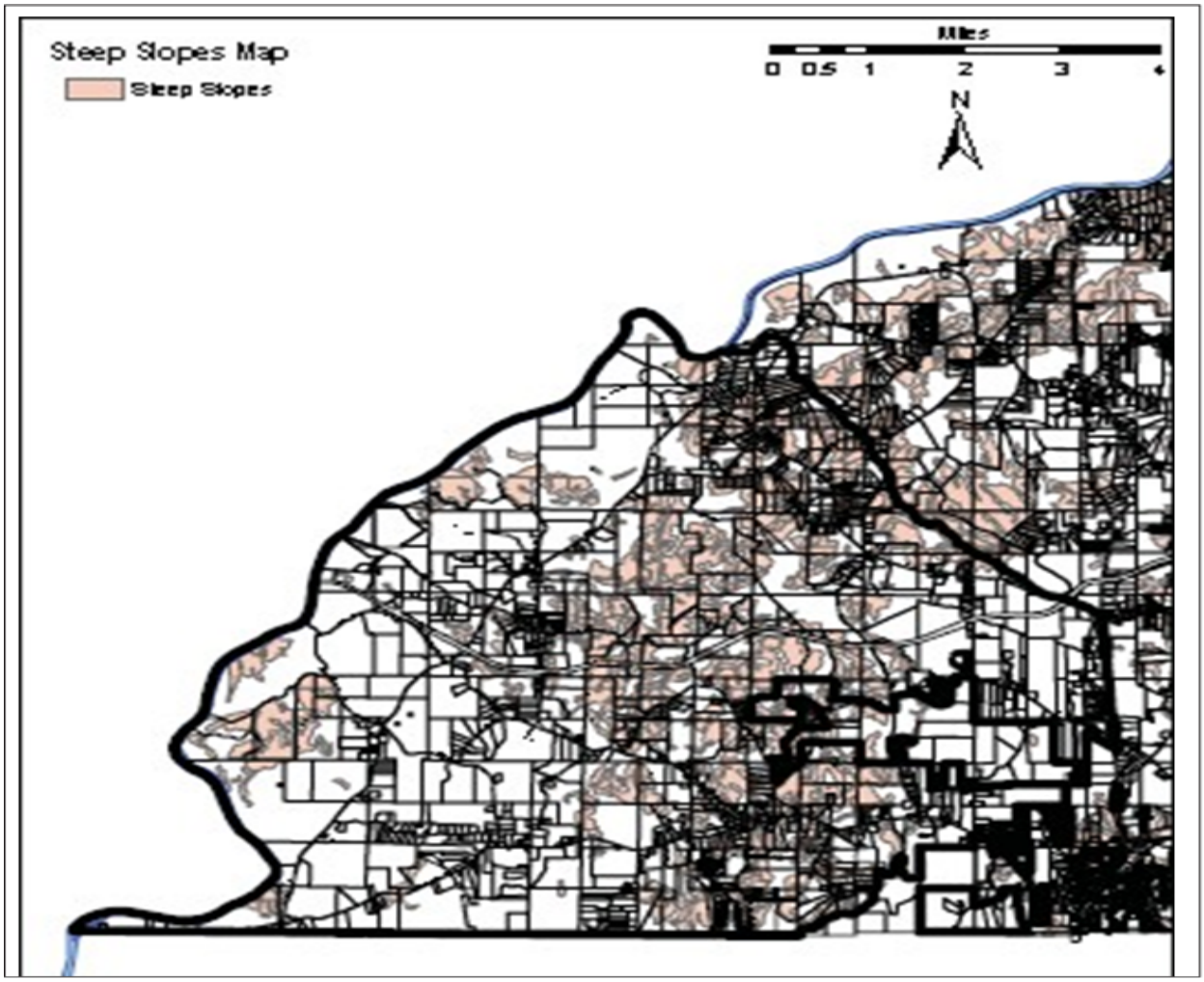
Map Source: Source

Map 4: Wetlands, Chattahoochee Hills, GA



Map Source: Source

Map 5: Steep Slopes, Chattahoochee Hills, GA



Map Source: Source

Hazard Event History & Community Impacts

Of the hazards identified by Fulton County, two have impacted the City of Chattahoochee Hills specifically over the last seven years. Both were documented in the County's previous hazard mitigation plan (2016). The first relates to flooding and occurred in September 2009; the second relates to severe winter weather and occurred in February 2014.

According to NOAA's National Centers for Environmental Information (NCEI), there were no occurrences of the identified hazards within the City of Chattahoochee Hills, specifically, between January 1, 2016 and October 31, 2021. However, the NOAA/NCEI database does include several hazard occurrences in this timeframe for the South Fulton Zone (of which Chattahoochee Hills is a part of). These include 11 drought events, and two (2) tropical system-related events, namely tropical storms. During the September 11, 2017 event, a tropical storm, the South Fulton Zone reported $250K in property damage. It is unclear how much, if any, of this damage occurred in the City of Chattahoochee Hills.

Mitigation Capabilities & Actions, City of Chattahoochee Hills, GA

Capabilities Assessment

Like other jurisdictions within Fulton County, the City of Chattahoochee Hills has a number of administrative and technical capabilities. City departments include Administrative, Community Development, Court Services, Economic Development, Finance, Human Resources, Information Technology, Public Safety, Public Works and Recreation and Parks. City government includes six council members and a mayor. The City council and mayor all serve a four-year term.

The Legal & Regulatory Capability survey documents authorities available to the jurisdiction and/or enabling legislation at the state level affecting planning and land management tools that support local hazard mitigation planning efforts. The identified planning and land management tools are typically used by states, and local/tribal jurisdictions to implement hazard mitigation activities. The proceeding table summarizes the regulatory tools that are available to the City of Chattahoochee Hills.

Planning & Regulatory Capability

Table 6: Planning & Regulatory Capability, Chattahoochee Hills, GA (From 2016 HMP)

Planning & Regulatory Capability, Chattahoochee Hills, GA				
Planning Capability				
Tool/Program	**Do You Have This?**	**Authority**	**Department/Agency Responsible**	**Code Citation & Comments**
Master Plan	Yes	Local	Community Development	Comprehensive Plan
Capital Improvements Plan	Not at this time			
Floodplain Management/Basin Plan	Not at this time			
Stormwater Management Plan	Not at this time			
Open Space Plan	Yes	Local	Community Development	Comprehensive Plan
Stream Corridor Management Plan	Not at this time			
Watershed Management or Protection Plan	Not at this time			
Economic Development Plan	Not at this time			
Comprehensive Emergency Management Plan	Yes	Local	Emergency Management, Fire	
Emergency Operations Plan	Not at this time			

Planning & Regulatory Capability, Chattahoochee Hills, GA				
Planning Capability				
Tool/Program	**Do You Have This?**	**Authority**	**Department/Agency Responsible**	**Code Citation & Comments**
Post-Disaster Recovery Plan	Not at this time			
Transportation Plan	Not at this time			
Strategic Recovery Planning Report	Not at this time			
Other Plans	N/A			
Regulatory Capability				
Building Code	Yes	State & Local		City Code Chapt. 9
Zoning Ordinance	Yes	Local	Community Development	Chapt. 20, 05/15/2015
Subdivision Ordinance	Yes	Local	Community Development	Chapt. 20, 05/15/2015
National Flood Insurance Program (NFIP) Flood Damage Prevention Ordinance	Yes	Federal, State, Local		
NFIP: Cumulative Substantial Damages	Not at this time			
NFIP: Freeboard	Yes	State, Local		State mandated BFE+2 for single and two-family residential construction, BFE+1 for all other construction types
Growth Management Ordinances	Growth Management Ordinances			
Site Plan Review Requirements	Site Plan Review Requirements			
Storm Water Management Ordinance	Storm Water Management Ordinance	Yes	State/Local	Community Development
Municipal Separate Storm Sewer System (MS4)	Municipal Separate Storm Sewer System (MS4)	No		
Natural Hazard Ordinance	Natural Hazard Ordinance			
Post-Disaster Recovery Ordinance	Post-Disaster Recovery Ordinance			

Planning & Regulatory Capability, Chattahoochee Hills, GA				
Regulatory Capability				
Tool/Program	**Do You Have This?**	**Authority**	**Department/Agency Responsible**	**Code Citation & Comments**
Real Estate Disclosure Requirement	Real Estate Disclosure Requirement	Yes	State	
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	N/A			

Administrative & Technical Capability

The following table summarizes potential staff and personnel resources available to the City of Chattahoochee Hills.

Table 7: Administrative & Technical Capability, Chattahoochee Hills, GA (From 2016 HMP)

Administrative & Technical Capability, Chattahoochee Hills, GA		
Administrative Capability		
Resources	**Is This in Place?**	**Department, Agency, Position**
Planning Board	Yes	
Mitigation Planning Committee	No	
Environmental Board/Commission	No	
Open Space Board/Committee	No	
Economic Development Commission/Committee	No	
Maintenance Programs to Reduce Risk	Yes	Public Works
Mutual Aid Agreements		Fire, Police
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	Community Development
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	By Contract, Building Official
Planner(s) or Engineer(s) with an understanding of natural hazards	Yes	
National Flood Insurance Protection (NFIP) Floodplain Administrator	Yes*	
Surveyor(s)	No	
Personnel skilled or trained in GIS and/or HAZUS-MH applications	Yes	

Administrative & Technical Capability, Chattahoochee Hills, GA		
Technical/Staffing Capability		
Resources	**Is This in Place?**	**Department, Agency, Position**
Scientist familiar with natural hazards	No	
Emergency Manager	Yes	
Granter Writer(s)	Yes	City Manager, Fire Chief, Parks Commission
Staff with expertise on training in benefit/cost analysis	Yes	
Professional(s) trained in conducting damage assessments	No	

**Participation in the NFIP requires the city to have a Floodplain Administrator.*

Fiscal Capability

The proceeding table summarizes the financial resources available to the City of Chattahoochee Hills.

Table 8: Fiscal Capability, Chattahoochee Hills, GA

Fiscal Capability, Chattahoochee Hills, GA	
Resources	**Accessible or Eligible to Use?**
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital Improvements Project Funding	No
Authority to Levy Taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	No
Impact Fees for homebuyers or developers of new development/homes	No
Stormwater Utility Fee	No
Incur debt through general obligation bonds	No
Incur debt through special tax bonds	No
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	Yes
Other Federal or State Funding Programs	LMIG, RTP
Open Space Acquisition Funding Programs	
Other	Yes

Community Classifications

The following table summarizes classifications for community programs available to the City of Chattahoochee Hills.

Table 9: Community Classifications, Chattahoochee Hills, GA (From 2016 HMP)

Community Classifications, Chattahoochee Hills, GA			
Program	**Do You Have This?**	**Classification**	**Date Classified**
Community Rating System (CRS)	No		
Building Code Effectiveness Grading Schedule (BCEGS)	No		
Public Protection (ISO Fire Protection Classes 1-10)	TBD	PCR 10	12/2007
Storm Ready	No		
Firewise	No		
Disaster/Safety Programs in/for Schools	TBD		
Organization(s) with Mitigation Focus (Advocacy Group, Non-Government)	No		
Public Education Program/Outreach (through website, social media, etc.)	TBD		
Public-Private Partnerships	Yes		

**NP = Not Participating, *N/A = Not Applicable, - =Unavailable, TBD = To Be Determined.*

Hazard Mitigation Capability

The table below summarizes a self-assessment of Chattahoochee Hills' current hazard mitigation capability.

Table 10: Hazard Mitigation Capability, Chattahoochee Hills, GA

Hazard Mitigation Capability, Chattahoochee Hills, GA			
Area	**Degree of Hazard Mitigation Capability**		
	Limited (If so, please indicate any/all obstacles)	**Moderate**	**High**
Planning & Regulatory Capability		X	
Administrative & Technical Capability		X	
Fiscal Capability	X		
Community & Political Capability	X		
Community Resiliency Capability		X	
Capability to Integrate Mitigation into Municipal Processes & Activities		X	

National Flood Insurance Program (NFIP) Participation

According to FEMA, the National Flood Insurance Program (NFIP) is a federal insurance program that enables property owners in member communities to purchase flood insurance. This insurance is only made available to municipalities that adopt and enforce a floodplain management ordinance. The fundamental goal of NFIP floodplain management requirements is to reduce the threat to lives and the potential for property damage in flood-prone areas. Each municipality that participates in the NFIP has a Flood Insurance Rate Map (FIRM) that is issued by FEMA. This document maps out flood hazard areas in the municipality.

Like other jurisdictions in Fulton County, the City of Chattahoochee Hills participates in the NFIP (CID #135714, May 7, 2001). The current NFIP Floodplain Administrator is Mike Morton, Community Development Director. The city is believed to be in good standing with the program, with no outstanding compliance issues.

Loss History & Mitigation

Chattahoochee Hills does not maintain a list of properties that have been flood damaged. However, given NOAA/NCEI's Storm Events Database includes no flood-related events in the city (or even the South Fulton Zone) since January 1, 2016, it is likely there are no such properties at the time of this plan update.

Planning & Regulatory Capabilities

As documented in the previous hazard mitigation plan (2016), Chattahoochee Hills does use local ordinance, plans and programs to support floodplain management. The City's floodplain management regulations and ordinances meet the minimum requirements set forth by both FEMA and the State of Georgia. Chattahoochee Hills performs permit reviews, inspections of properties under development, record keeping, and correlation with GIS.

Administrative & Technical Capabilities

The community identifies the Senior Stormwater Engineer as the local NFIP Floodplain Administrator, currently Mike Morton, for which floodplain administration is an auxiliary duty. Two additional staff members are utilized to assist as needed.

Duties and responsibilities of the NFIP Administrator are permit review, damage assessments, record keeping, inspections, GIS, education and outreach, and capital mitigation projects. If Substantial Damage Estimates were necessary, the Floodplain Administrator would be responsible.

The NFIP Administrator feels they are adequately supported and trained to fulfill her responsibilities as the municipal Floodplain Administrator. They also would consider attending continuing education and/or certification training on floodplain management if it were offered in the County for all local floodplain administrators.

Public Education & Outreach

Education and Outreach regarding flood/hazard risk, and flood risk reduction through NFIP insurance is primarily provided to the community through the City website.

Actions to Strengthen the Program

During the data collection process (2016), staff indicated there was a need to finalize development of a comprehensive floodplain management program with funding for implementation/administration. Personnel also expressed the desire for additional training and support of the program.

Community Rating System

Chattahoochee Hills does not currently participate in the voluntary Community Rating System (CRS) program, which recognizes and encourages community floodplain management practices that exceed the minimum requirement of the NFIP.

Integration of Hazard Mitigation into Existing & Future Planning Mechanisms

Fulton County intends to incorporate this 2022 update of its Multi-jurisdictional Hazard Mitigation Plan into other planning documents the County and City of Chattahoochee Hills utilizes. Where applicable, portions of the previous plan were considered for incorporation into other local plans and programs. This includes some form of incorporation into the city's comprehensive plan. Comprehensive plans, which focus on land use and community development, are required of all local governments by the Georgia Department of Community Affairs (DCA).

Portions of this plan update may also be integrated into the Atlanta-Fulton County Emergency Management Agency (AFCEMA) Local Emergency Operations Plan (LEOP), emergency plans for the city of Chattahoochee Hills, GA, and other existing or future public safety-related plans. This plan is not only useful for implementing mitigation activities and projects but also critical in creating development plans and capital improvement projects. The risk assessment in this plan can prevent unmanaged and dangerous development in identified hazard areas or other portions of the planning area that decrease a community's overall resiliency.

Note: *The City of Chattahoochee Hills will receive a copy of the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan to use as a resource when updating other plans, identifying new projects, etc. Additionally, the Mitigation Planning Committee will continue to provide guidance for provide guidance for future development within the jurisdiction.*

Mitigation Actions

Each jurisdiction participating in this plan is responsible for implementing specific mitigation actions as prescribed in the adopted Mitigation Action Plan. In each Mitigation Action Plan, every proposed action is assigned to a specific local department or agency in order to assign responsibility and accountability and increase the likelihood of subsequent implementation. This approach enables individual jurisdictions to update their unique mitigation strategy as needed without altering the broader focus of the countywide plan. The separate adoption of locally specific actions also ensures that each jurisdiction is not held responsible for monitoring and implementing the actions of other jurisdictions involved in the planning process. A complete list of countywide mitigation strategies is provided in Section 5 of this plan update.

Completed Mitigation Actions (2016-2021)

The City of Chattahoochee Hills identified six (6) mitigation actions in the previous plan update (2016). And while progress was made on two projects, 65.004 and 65.006, all will carry forward to the 2022 plan update.

Identified Mitigation Actions (2022-2027)

The following table reflects mitigation actions from the previous 2016 MJHMP update, all of which are proposed mitigation actions for the 2022 MJHMP update. No new mitigation actions have been identified for the City of Chattahoochee Hills for the current five-year planning period (2022-2027).

Table 11: Identified Mitigation Actions (2022-2027), Chattahoochee Hills, GA

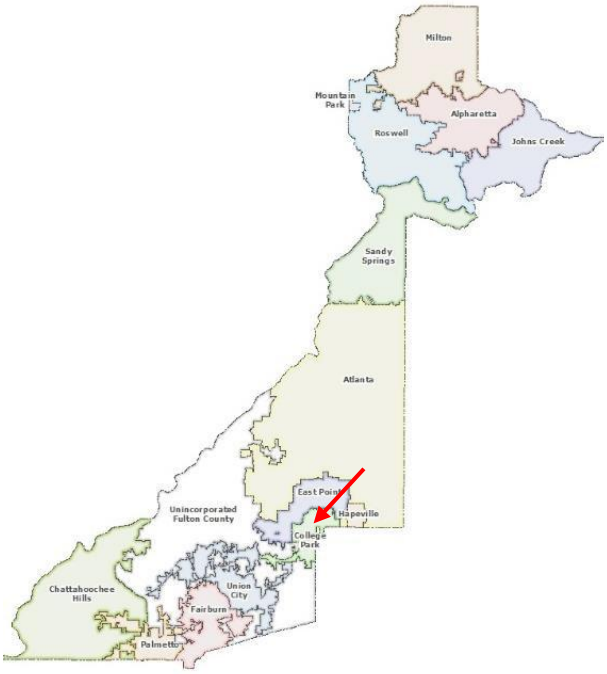
Identified Mitigation Actions (2022-2027), Chattahoochee Hills, GA								
Project Number*	**Mitigation Action/ Description**	**Status as of 2022 HMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
65.001	Develop Storm Water Plan	Carryover from 2016 Plan Update; Deferred (Lack of Funding and Trained Staff)	Planning & Development	Severe Weather, Severe Winter Weather, Tropical Systems	$10,000	HMGP, Local	2023	Medium 35.5
65.002	Harden/retrofit City Hall [for EOC and daily operations] (Comments: Generator acquired, and partial cost study done; surplus/donation of equipment.)	Carryover from 2016 Plan Update; In Progress	Public Works	Severe Weather, Severe Winter Weather, Tropical Systems	$75,000	HMGP, EOC, Local	2024	Medium 34.5
65.003	Improve storm water run-off on Cap's Ferry (Comments: Developing plan utilizing outside contractor/advisor during 2016. Due to the proximity to the Chattahoochee River, the creek backs up and floods the road with, in turn, cuts off access to three counties.)	Carryover from 2016 Plan Update; In Progress	Public Works	Flood, Severe Weather, Severe Winter Weather, Tropical Systems	$1.2 million	HMGP, EOC, Local	2024	Medium 32
65.004	Harden fire station with impact-resistant glass, garage doors and roof; upgrade station generator (Comments: Generator acquired; surplus/donation of equipment.)	Carryover from 2016 Plan Update; In Progress	Fire & Rescue	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$200,000	HMGP, SCG, Local	2023	Medium 34.5
65.005	Replacement of Garrett's Ferry Bridge (Comments: Engineering study already completed; research federal and state funding and options for replacement.)	Carryover from 2016 Plan Update; Deferred	Public Works	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$200,000	Local, Other Local Funding Sources	2024	Low 22

Identified Mitigation Actions (2022-2027), Chattahoochee Hills, GA								
Project Number*	**Mitigation Action/ Description**	**Status as of 2022 HMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
65.006	Research/publish mitigation "opportunities" for citizen (individual/group) commitment. (Comments: Identify/publish information about property insurance savings to property/home/business owners to encourage individual/group participation in mitigation and support for public safety services.)	Carryover from 2016 Plan Update; In Progress	Public Works	All Hazards	$2,500	Local, Other Local Funding Sources	2023	Low 13.5

Jurisdiction Profile: City of College Park, GA

History & Geography

College Park is located on the border of Fulton and Clayton counties. The City has a total area of 10.1 square miles, of which 0.019 square miles is water. The community that would become College Park was founded as Atlantic City in 1890 as a depot on the Atlanta and West Point Railroad. The town was renamed Manchester when it was incorporated as a City in 1891. It was renamed again as the City of College Park in 1896.



The City has 853 properties listed on the National Register of Historic Places by the United States Department of the Interior. The City's name came from being the home of Cox College and Georgia Military Academy.

Significant Characteristics

The College Park Woman's Club, one of the oldest in Georgia, is located in Camellia Hall on Main Street.

College Park has three City recreation centers (the Wayman & Bessie Brady Recreation Center, the Hugh C. Conley Recreation Center, and the Tracey Wyatt Recreation Complex). The City also has four parks: Barrett Park; Charles E. Phillips Sr. Esq. Park; Richard D. Zupp Park, and Subrenia Miller Willis Park.

College Park is home to the College Park Municipal Golf Course, which was established in 1929. The course is nine holes and is built on hilly terrain.

Population & Demographics

As of the 2020 Decennial Census, there were **13,930** people, **25,391** households, and **11,860** families residing in the City of College Park. This equates to a population density of 2,098.8 people per square mile. The population, as evidenced by the following table, continues to fluctuate.

Table 1: Population Change, City of College Park

Population Change, City of College Park, GA			
Year	2000	2010	2020
Population	20,288	11,505	13,390

Given these numbers, College Park experienced a population decrease of 56.7% between 2000 and 2010 and 21% between 2010 and 2020 for a total 20-year decrease of **44**%.

Of the population, 8.4% are under the age of five, 30.5% are under the age of 18, 61.1% are age 18 and over, and 9.4% are age 65 and over. The media age was 33.7 years.

Of the 5,861 households in College Park, 31% were married couples living together, 8% had a male householder (no spouse present), and 38% had a female householder (no spouse present). The average family size in College Park was 2.47.

The following table provides information specific to College Point's housing stock through the issuance of single-family new house construction building permits over the last 20 years (2001-2021). However, since not all permits become actual housing starts, and starts lag the permit stage of construction, this number does not represent total new construction (2020) but should provide a general indicator on construction activity and the local real estate market.

Table 2: Housing Stock History, Building Permits, College Park, GA

Housing Stock History, Building Permits, College Park, GA	
Year	**# of Permits Issued**
2001 - 2009	352
2010	0
2011	7
2012	4
2013	1
2014	N/A
2015	2
2016	27
2017	58
2018	12
2019	41
2020	73
2021	32 est.

Data Source: College Park Buildings and Inspections Department

The Local Economy

As indicated by the 2020 census, the median income for a household in the City of College Park was $34.436. The per capita income for College Park was unavailable for 2020; however, the per capita income (12 months, 2019) was $24,809. In 2020, approximately 29.5% of the city's population were living below the poverty line, including 51% under the age of 18, 5.0% between the ages of 18 and 64, and 12% at age 65 and over.

A more current and complete inventory of employment by sector, establishments, and sales in College Park as of 2005 is listed in Table 4.2. The 2005 employment data was obtained from Caritas Data Services as a supplement to the Economic Census data. However, because Claritas data is classified by SIC code (Standard Industrial Classification) as opposed to the newer NAICS code (North American Industry Classification System) used by the Economic Census, direct comparison of these data sources is difficult. As of 2005, the City of College Park maintains a high proportion of its total employment in the Service Sectors (25.3%). Among the sub-categories included in this sector, Educational Services, Health Services, and Business Services are the top employers within College Park. Retail Trade forms the second largest sector, with 19.4% of the total employment in College Park. The vast majority of the Retail Trade employment in College Park comes from eating and drinking establishments, with over 2,500 jobs. The third largest employment sector in College Park is Finance, Insurance, and Real Estate (FIRE) (15.1%). The majority of this employment within the FIRE sector is in hotels and lodging places. The fourth largest employment sector in College Park is government (13.3%). This concentration of T complex on. Next, the Transportation, Communications, and Utilities (TCU) sector (12.2%) also forms a robust part of employment within College Park. Hence, most of the dominant industries within College Park have some association with the Hartsfield-Jackson Airport.

Table 3: Leading Industries, Employment Percentages, College Park, GA (2005-2025)

Leading Industries, College Park (2005-2025)				
Sector	**Employment**	**%**	**Establishments**	**Sales (Millions)**
Agriculture, Forestry, and Mining	15	0.1%	4	0.7
Construction	706	4.2%	36	144.0
Manufacturing	387	2.3%	25	38.0
Transportation, Communications, Utilities	2,054	12.2%	71	206.0
Wholesale Trade	1,231	7.3%	21	222.0
Retail Trade	3,267	19.4%	205	244.0
Finance, Insurance, and Real Estate	2,533	15.1%	130	271.0
Services	4,255	25.3%	413	440.1
Government	2,239	13.3%	40	0.0
Other	139	0.8%	6	0.0
TOTAL	**16,826**	**100.0%**	**951**	**1,565.8**

Data Source: College Park Comprehensive Plan Update, 2005-2025

Critical Facilities & Infrastructure

As previously stated, certain facilities have a net positive value on the community, i.e., they contribute to the public good by facilitating the basic functions of society. These facilities maintain order, public health, education, and help the local economy function. Additionally, there are facilities and infrastructure integral to disaster response and recovery operations. Conversely, some of these are of extreme importance due to the negative externalities created when impacted by a disaster. What fits these definitions varies slightly from community to community, but the definitions remain as a guideline for identifying critical infrastructure and facilities.

Additionally, the school system within the city limits consists of the capacity listed below.

Table 4: School Infrastructure within City Limits, College Park, GA

School Infrastructure within City Limits, College Park, GA		
School	**Type**	**Enrollment (2020)**
Nursery School, Pre-School	Public	315
Kindergarten to 12th Grade	Public	1,064
College, Undergraduate	Public	NA
Graduate, Professional School	Public	NA

Land Use & Development Trends

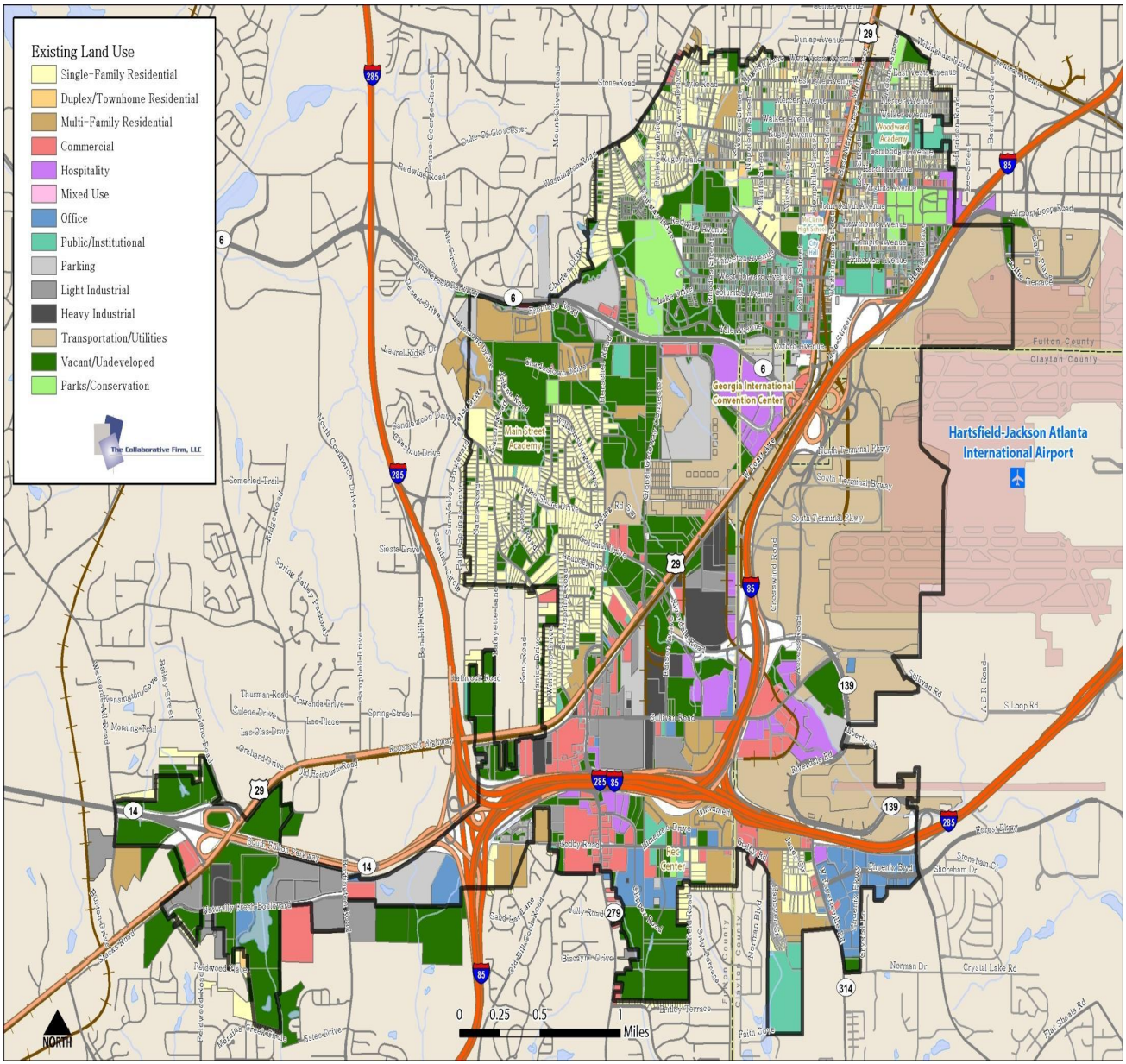
To meet the current and future demands of an increasing population, the City of College Park must continue to implement proactive measures pertaining to land use and development. This is especially true of housing, transportation, education, historic preservation, and the environment, among other things.

According to the U.S. Census Bureau, the City of College Park has a land area of 10.7 square miles with a population density of 1,384.8 per square mile.

College Park does not have many areas designed for industrial use.

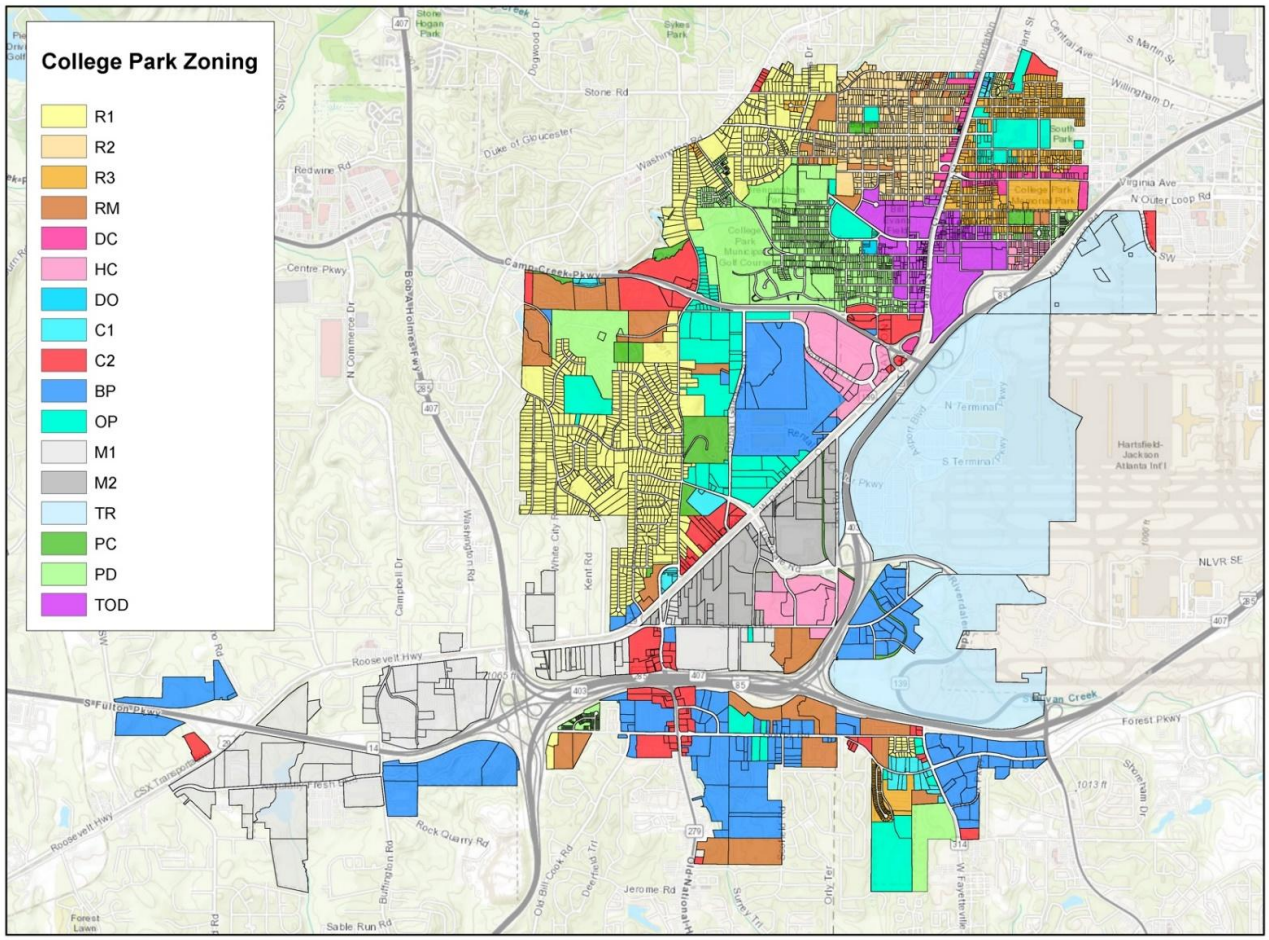
The map below shows the distribution of major land use categories within the city limits.

Map 1: Land Use Categories, College Park, GA



Map Source: Source

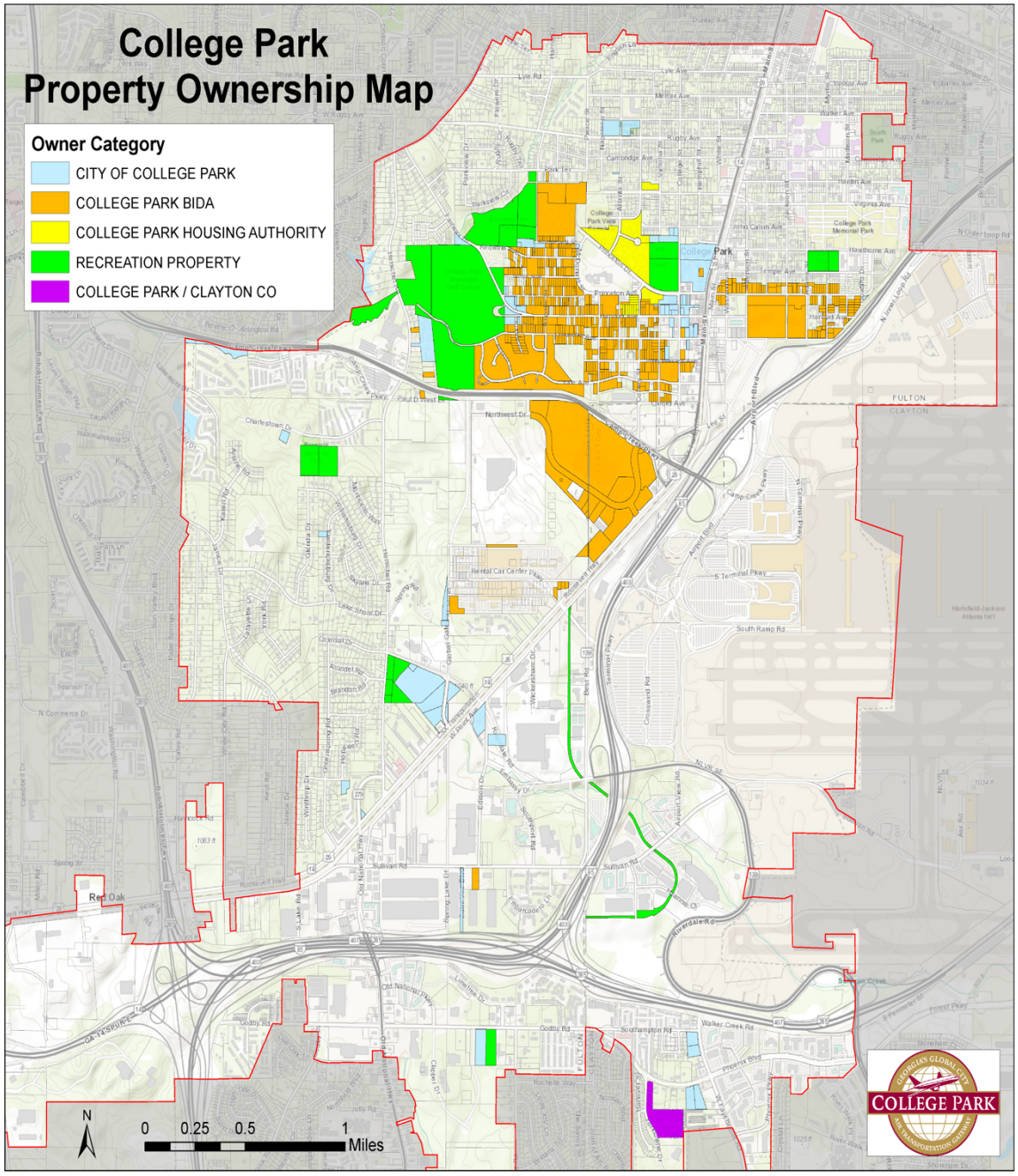
Map 2: Existing Land Use, College Park, GA



Map Source: Source

The following map(s) demonstrate the City of College Park's potential growth and development.

Map 3: Development Nodes, Character Areas & Future Land Use, College Park, GA



Map Source: City of College Park 2030 and 2035 Comprehensive Plan(s)

Hazard Risk Assessment, City of College Park, GA

Hazard Identification & Risk Assessment

There are 12 of 13 Georgia-identified hazards known to pose risk to Fulton County and one or more of its participating jurisdictions. These include Dam Failure, Drought, Earthquake, Flood, Geological Hazards, Extreme Heat, Severe Weather, Tornado, Tropical Systems, Severe Winter Weather, and Wildfire/Wildland Urban Interface Fires. Wind, though identified as a separate hazard in the 2019 Georgia Hazard Mitigation Strategy Standard and Enhanced Plan, is included in the Severe Weather hazard in this plan update.

The following table outlines the City of College Park general risk to the profiled hazards. The rankings are based on a variety of factors, including 1) a composite evaluation of this plan's risk assessment, namely a hazard's probability of occurring in the future, 2) the vulnerability of the jurisdiction to a specific hazard, 3) the intensity of past hazard impacts, and 4) a joint evaluation of local experts and plan stakeholders. The category/range (per year) is based on the following scale: **Unlikely (0%), Occasional (1-10%), Likely (11%-50%), and Highly Likely (51%-100%).**

Table 5: Risk Assessment, College Park, GA

Risk Assessment Matrix, College Park, GA		
Hazard	**Category**	**Range**
Dam Failure	Occasional***	-
Drought	Highly Likely	295%
Earthquake	Occasional**	-
Flood	Occasional	-
Geological Hazards	Highly Likely	-
Extreme Heat	Highly Likely	-
Severe Weather (including Thunderstorm Wind)	Highly Likely*	-
Severe Winter Weather	Highly Likely	-
Tornado	Highly Likely	160%
Tropical Systems	Highly Likely	84%
Wildfire/Wildland Urban Interface Fires	Occasional*****	-

**The hazard of Severe Weather considers the instances of thunderstorms, lightning, hail, and wind, each with a varying degree of occurrence/probability.*

*** The hazard of Earthquake is considered occasional but without a definite calculation of probability. This is due to there being no record/data of earthquake in the planning period since the last plan update (2016).*

**** Calculating future probability is not the only predictor of future occurrences. In the last five years, Fulton County and its participating jurisdictions have documented no cases of Dam Failure. Though the County has experienced occurrences that were listed in its HMP update (2016), the likelihood of a dam failure event happening in the planning area is considered* ***occasional.***

*****The NOAA/NCEI Storm Events Database did not have any incidences of storm data records related to Flood (including flash flood) for the Cities of Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton from January 1, 1970 – July 31, 2021. Since flooding is possible, the Cities Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton's Probability of Future Events is considered* ***occasional.***

******The hazard of Wildfire/Wildland Urban Interface Fire is considered* ***occasional*** *but without a definite calculation of probability. This is due to there being no record/data of wildfire in the planning period since the last plan update (2016).*

Hazard Event History & Community Impacts

Of the 12 hazards identified by Fulton County, five have impacted the City of College Park specifically over the last seven years. Three of these events, a Severe Winter Storm (February 2014), a Winter Storm (February 2105), and a Tornado (October 2014) were documented in the County's previous Multijurisdictional Hazard Mitigation Plan (2016).

The following table provides brief details of all hazard occurrences, as recorded by the National Oceanic and Atmospheric Administration (NOAA) and its National Centers for Environmental Information (NCEI), between January 1, 2016, and October 31, 2021.

Table 6: Natural Hazards, Previous Occurrences, College Park, GA

Natural Hazards, Previous Occurrences, College Park, GA			
Date	**Hazard**	**Disaster Declaration**	**Description**
None	None	None	None

Data Source: NOAA/NCEI Storm Events Database

Mitigation Capabilities & Actions, City of College Park, GA

Capabilities Assessment

The City of College Park has a number of administrative and technical capabilities. City departments include Administrative, Community Development, Court Services, Economic Development, Finance, Human Resources, Information Technology, Public Safety, Public Works and Recreation and Parks. City government includes four council members and a mayor. The City council and mayor all serve a four-year term.

The Legal & Regulatory Capability survey documents authorities available to the jurisdiction and/or enabling legislation at the state level affecting planning and land management tools that support local hazard mitigation planning efforts. The identified planning and land management tools are typically used by states, and local/tribal jurisdictions to implement hazard mitigation activities. The proceeding table summarizes the regulatory tools that are available to the City of College Park.

Planning & Regulatory Capability

Table 7: Planning & Regulatory Capability, College Park, GA

Planning & Regulatory Capability, College Park, GA				
Planning Capability				
Tool/Program	**Do You Have This?**	**Authority**	**Department/Agency Responsible**	**Code Citation & Comments**
Master Plan	Yes, 11/1/21	Local	The Collaborative Firm	Comprehensive Plan
Capital Improvement Plan	Yes, 7/12/21	Local	Finance	5 Year CIP
Floodplain Management/Basin Plan	Yes, 9/18/13	Federal Emergency Management Agency (FEMA)	Engineering	City Code, Chapter 5

Planning & Regulatory Capability, College Park, GA				
Planning Capability				
Tool/Program	**Do You Have This?**	**Authority**	**Department/Agency Responsible**	**Code Citation & Comments**
Stormwater Management Plan	Yes, 6/21/14	GEPD	Public Works	City Code, Chapter 5
Open Space Plan	Yes, 7/1/ 08	Local	Public works	Greenspace
Stream Corridor Management Plan	No			
Watershed Management or Protection Plan	Yes, 10/31/11	Local	Public works	Groundwater recharge
Economic Development Plan	Yes	Local	Economic Development	College Park Business and Industrial Development Authority (BIDA)
Comprehensive Emergency Management Plan	Yes, 7/1/12	Local	Police	COOP
Emergency Operations Plan	Yes	Local	Police	COOP
Post-Disaster Recovery Plan	No			
Transportation Plan	No			
Strategic Recovery Planning Report	No			
Other Plans				
Regulatory Capability				
Building Code	Yes	State & Local	Building Inspection	City Code, Chapter 5
Zoning Ordinance	Yes	Local	The Collaborative Firm	City Code, Appendix A
Subdivision Ordinance	Yes	Local	Engineering	City Code, Chapter 17
National Flood Insurance Program (NFIP) Flood Damage Prevention Ordinance	Yes	Federal, State, Local	Engineering	City Code, Chapter 5
NFIP: Cumulative Substantial Damages	Yes	Local	Engineering	City Code, Chapter 5
NFIP: Freeboard	Yes	State, Local	Engineering	State mandated BFE+2 for single and two-family residential construction, BFE+1 for all other construction types

Planning & Regulatory Capability, College Park, GA				
Planning Capability				
Tool/Program	**Do You Have This?**	**Authority**	**Department/Agency Responsible**	**Code Citation & Comments**
Growth Management Ordinances	N/A			

Planning & Regulatory Capability, College Park, GA				
Regulatory Capability				
Tool/Program	**Do You Have This?**	**Authority**	**Department/Agency Responsible**	**Code Citation & Comments**
Site Plan Review Requirements	Yes	Local	Building Inspection	City Code, Chapter 5
Stormwater Management Ordinance	Yes	Local	Engineering	City Code, Chapter 5
Municipal Separate Storm Sewer System (MS4)	Yes	Local, State	Public Works	City Code, Chapter 5
Natural Hazard Ordinance	N/A			
Post-Disaster Recovery Ordinance	N/A			
Real Estate Disclosure Requirement	N/A			
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]				

Administrative & Technical Capability

The following table summarizes potential staff and personnel resources available to the City of College Park.

Table 8: Administrative & Technical Capability, College Park, GA

Administrative & Technical Capability, College Park, GA		
Administrative Capability		
Resources	**Is This in Place?**	**Department, Agency, Position**
Planning Board	Yes	Business Zoning Authority
Mitigation Planning Committee	Yes	Fire, Community Development,
Environmental Board/Commission	Not at this time	
Open Space Board/Committee	Not at this time	

Administrative & Technical Capability, College Park, GA		
Administrative Capability		
Resources	**Is This in Place?**	**Department, Agency, Position**
Economic Development Commission/Committee	Yes	College Park Business and Industrial Development Authority (BIDA)
Maintenance Programs to Reduce Risk	Yes	Public Works Department/ Storm Water Utility Division
Mutual Aid Agreements	Yes	Fire and GICC
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	Director of Infrastructure and Development and The Collaborative Firm

Administrative & Technical Capability, College Park, GA		
Technical/Staffing Capability		
Resources	**Is This in Place?**	**Department, Agency, Position**
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Director of Infrastructure and Development
Planner(s) or Engineer(s) with an understanding of natural hazards	Yes	Director of Infrastructure and Development
National Flood Insurance Protection (NFIP) Floodplain Administrator	Yes	Director of Infrastructure and Development
Surveyor(s)	N/A	
Personnel skilled or trained in GIS and/or Hazus-MH applications	No	
Scientist familiar with natural hazards	N/A	
Emergency Manager	Yes	Public Safety – Emergency Management Coordinator
Granter Writer(s)	Yes	Director of Infrastructure and Development
Staff with expertise on training in benefit/cost analysis	Yes	Director of Infrastructure and Development
Professional(s) trained in conducting damage assessments	Yes	Director of Infrastructure and Development

Fiscal Capability

The proceeding table summarizes the financial resources available to the City of College Park.

Table 9: Fiscal Capability, College Park, GA

Fiscal Capability, College Park, GA	
Resources	**Accessible or Eligible to Use?**
Community Development Block Grants (CDBG, CDBG-DR)	Accessible
Capital Improvements Project Funding	Accessible

Authority to Levy Taxes for specific purposes	Accessible
User fees for water, sewer, gas or electric service	Accessible
Impact Fees for homebuyers or developers of new development/homes	Accessible
Stormwater Utility Fee	Accessible
Incur debt through general obligation bonds	Accessible
Incur debt through special tax bonds	Accessible
Incur debt through private activity bonds	
Withhold public expenditures in hazard-prone areas	
Other Federal or State Funding Programs	Accessible
Open Space Acquisition Funding Programs	
Other	

Community Classifications

The following table summarizes classifications for community programs available to the City of College Park.

Table 10: Community Classifications, College Park, GA

Community Classifications, College Park, GA			
Program	**Do You Have This?**	**Classification**	**Date Classified**
Community Rating System (CRS)	Yes	Class VI	October 1, 2002
Building Code Effectiveness Grading Schedule (BCEGS)	N/A		
Public Protection (ISO Fire Protection Classes 1-10)	Yes	Class II	July 1, 2014
Storm Ready	N/A		
Firewise	N/A		
Disaster/Safety Programs in/for Schools	Yes	Fulton County Board of Education	
Organization(s) with Mitigation Focus (Advocacy Group, Non-Government)	Yes	Safety Committee	January 2020
Public Education Program/Outreach (through website, social media, etc.)	Yes	Fire Safety Mobile Display	January 2009
Public-Private Partnerships	Yes	American Red Cross	April 2015

**NP = Not Participating, *N/A = Not Applicable, - =Unavailable, TBD = To Be Determined.*

Hazard Mitigation Capability

The table below summarizes a self-assessment of College Park's current hazard mitigation capability.

Table 11: Hazard Mitigation Capability, College Park, GA

Hazard Mitigation Capability, College Park, GA			
Area	Degree of Hazard Mitigation Capability		
	Limited (If so, please indicate any/all obstacles)	Moderate	High
Planning & Regulatory Capability		X	
Administrative & Technical Capability			X
Community & Political Capability		X	
Community Resiliency Capability		X	
Capability to Integrate Mitigation into Municipal Processes & Activities		X	

National Flood Insurance Program (NFIP) Participation

According to FEMA, the National Flood Insurance Program (NFIP) is a federal insurance program that enables property owners in member communities to purchase flood insurance. This insurance is only made available to municipalities that adopt and enforce a floodplain management ordinance. The fundamental goal of NFIP floodplain management requirements is to reduce the threat to lives and the potential for property damage in flood-prone areas. Each municipality that participates in the NFIP has a Flood Insurance Rate Map (FIRM) that is issued by FEMA. This document maps out flood hazard areas in the municipality.

The City of College Park is currently an active member of the NFIP, in good standing with no outstanding compliance issues.

Loss History & Mitigation

College Park does have a system in place to maintain a list of properties that have been flood damaged.

Planning & Regulatory Capabilities

College Park does use local ordinance, plans and programs to support floodplain management. The City's floodplain management regulations and ordinances meet the minimum requirements set forth by both FEMA and the State of Georgia. The City performs permit review, inspections, damage assessment, record keeping, GIS, education, and outreach. Some of the outreach activities include the distribution of NFIP literature in the local library and sending annual letters to floodplain property owners about the availability of flood insurance.

Administrative & Technical Capabilities

Raymond Cotton, Superintendent, is the NFIP Floodplain Administrator

Public Education & Outreach

Education and Outreach regarding flood/hazard risk, and flood risk reduction through NFIP insurance is primarily provided to the community through the City website.

Actions to Strengthen the Program

During the data collection process staff indicated that additional support is needed to continue running an effective floodplain program in College Park.

Community Rating System

College Park does currently participate in the CRS program.

Integration of Hazard Mitigation into Existing & Future Planning Mechanisms

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, each municipality was surveyed to obtain a better understanding of their community's progress in plan integration. A summary is provided below. In addition, the community identified specific integration activities that have been/will be incorporated into municipal procedures which may include former mitigation initiatives that have become continuous/ongoing programs and may be considered mitigation "capabilities."

Land Use Planning/Comprehensive Planning

The City of College Park 2035 Comprehensive Plan (January 2017) is currently adopted.

College Park, a small city of the southern border of the metropolis of Atlanta, by two of the significant environment challenges facing old and new projects are water conservation and the handling of stormwater runoff to remove pollutants. Enabling the city to make better use of stormwater runoff we became the first city to come up with a neighborhood redevelopment, was to collect runoff from the street and various corridor and pipe it to two large new sedimentation, ponds comprising the Camp Creek Drainage Basin. Keeping our city within compliance of our MS4 Regulated Community (Phase 1), by pollutant removal efficiencies for such biofilter cells (high-rate vegetated media filters) of tree box filters whit these characteristics exceed those of most of EPA's other structural best management practices.

College Park has plans in place to help to manage natural hazard risk. Additionally, the Downtown Master Plan Update includes regulations for open space and tree protection. The Recreation and Parks Master Plan 2025 includes plans for the protection of flood plains and open spaces and College Park has adopted the Comprehensive Emergency Management Plan for Fulton County, which refers to the Multijurisdictional Hazard Mitigation Plan (MJHMP). College Park is an MS4 Regulated Community (Phase 1), and staff indicated they have a formal Stormwater Management Plan that specifies projects/actions/initiatives to reduce the volume of stormwater, or otherwise mitigate stormwater flooding.

Regulatory Compliance

College Park's zoning and subdivision regulations take natural hazard risk into consideration. The City's Unified Development Code (UDC) includes both zoning and subdivision regulations, which regulate impacts on local floodplains and requires developers to take additional actions to mitigate natural hazard risk. The UDC includes a stream buffer protection with a 50-foot undisturbed stream buffer and an additional 25-foot impervious cover setback on both banks of a non-perennial stream and a 100-foot undisturbed stream buffer and an additional 50-foot impervious cover setback on both banks of a perennial stream. In addition, the City's UDC includes regulations for stormwater management and the NFIP Flood Damage ordinance includes provisions which exceed the minimum federal and State NFIP regulatory requirements.

The City's Community Development staff have access to GIS Maps, review and provide recommendations based on natural hazard risk prior to Planning Board and Zoning Board decisions. The City's Planning

Commission and Board of Zoning Appeals uses the regulations in the City's UDC and professional staff opinion to guide their decision-making process.

Administrative/Technical Resources & Programs

College Park's Planning Commission is an advisory body, which makes recommendations to the City Council for variances associated with comprehensive plan amendments, rezoning, master plans, and conditional uses. City Council considers all variances of more than 50% of the code requirement. The City's board of Zoning Appeals considers variances between 20% and 50% of the code requirement. City staff considers variances up to 20% of code requirements. College Park also has a land disturbance permit team consisting of planners, engineers, arborists, and fire marshal that review and approve all site plans for new development and redevelopment. Stormwater management functions are performed by the Senior Stormwater Engineer and the Development Services Engineer (Stormwater). NFIP Floodplain management functions are performed by the Senior Stormwater Engineer) and the Chief Building Official.

The City of College Park has staff in place who can perform Substantial Damage Estimates, Benefit-Cost Analysis and prepare applications for mitigation projects. City staff regularly attend training and conferences to promote continuing professional education, including the American Planning Association (APA), Georgia Chapter of APA and Georgia Association of Zoning Administrators. Additionally, a staff member from Public Works receives continuing education to maintain his Certified Floodplain Manager and a Public Safety official receives Emergency Management continuing education and is also a member of the Fulton County All Hazards Council.

The City of College Park also has several staff with job descriptions that specifically include identifying and/or implementing mitigation projects/actions or other efforts to reduce natural hazards. These positions include the Senior Stormwater Engineer, Urban forestry Program Manager, Senior Water Resources Analyst, Environmental Program coordinator, Development Services Engineer (Stormwater), Zoning Administrator, Senior Transportation Engineer, Stormwater Engineer, City Arborist, Fire Marshal and Emergency Management Coordinator.

Public Education & Outreach

The City uses College Park's website and various adult workshops and student classroom teaching opportunities as platforms to inform citizens of natural hazards. During the assessment staff indicated that they identified the use of social media to enhance further public outreach and education with respect to natural hazard risk management in the community.

Fiscal Resources

The City of College Park includes line items in its operating and capital improvement budgets for mitigation related projects and activities. The City has also received previous grant funds for mitigation-related projects, but none were received during the period reflected in this plan update.

Note: *The City of College Park will receive a copy of the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan to use as a resource when updating other plans and identifying new projects. Additionally, the Mitigation Planning Committee will continue to provide guidance for provide guidance for future development within the jurisdiction.*

Mitigation Actions

Each jurisdiction participating in this plan is responsible for implementing specific mitigation actions as prescribed in the adopted Mitigation Action Plan. In each Mitigation Action Plan, every proposed action is assigned to a specific local department or agency in order to assign responsibility and accountability and increase the likelihood of subsequent implementation. This approach enables individual jurisdictions to update their unique mitigation strategy as needed without altering the broader focus of the countywide

plan. The separate adoption of locally specific actions also ensures that each jurisdiction is not held responsible for monitoring and implementing the actions of other jurisdictions involved in the planning process. A complete list of countywide mitigation strategies is provided in Section 5 of this plan update.

Completed Mitigation Actions (2016-2021)

The City of College Park identified five (5) mitigation actions in the previous (2016) hazard mitigation plan update. Of those mitigation actions, the City of College Park completed zero during the five-year planning period (2016-2021).

Proposed Mitigation Actions (2022-2027)

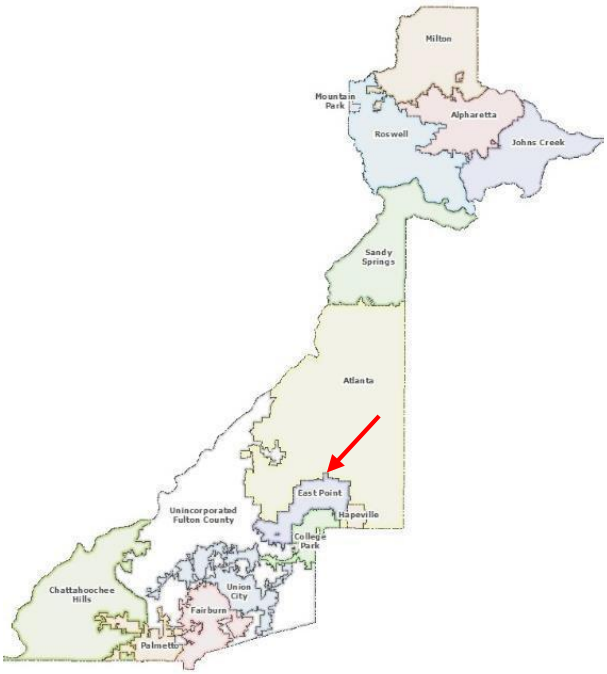
The following table reflects the proposed mitigation actions/projects for the 2022 MJHMP update. (2016) HMP update, all of which are proposed mitigation actions for the 2021 HMP update. Additionally, the table includes any/all new mitigation actions identified by the City of College Park for the following five-year planning period (2021-2026).

Table 12: Identified Mitigation Actions (2022-2027), College Park, GA

Identified Mitigation Actions (2022-2027), College Park, GA								
Project Number*	**Mitigation Action/ Description**	**Status as of 2022 HMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
15.0006	Retrofit the roof at the Power Department Building; replace generator. (Comments: This building houses the operations for the City-owned power utility as well as the water and sewer department and the warehouse. The current generator is small and underpowered for current needs. The computer system that is housed at this location runs all of their system data.)	Deferred from 2016 MJHMP/ Carryover to 2022 plan update	Power Department	Severe Weather, Tornado, Severe Winter Weather, Tropical Systems	$50,000	HMGP; Local Funds	2022-2027	Medium 43
15.0005	Replace traffic lights with more weather resistant mast arms	Deferred from 2016 MJHMP/ Carryover to 2022 plan update	Power Department	Severe Weather, Tornado, Tropical Systems	$150,000 each one replaced at Godby Road, two candidates on Roosevelt Highway	HMGP; DOT; Local Funds	2022-2027	Medium 42
15.0001	Replace of the three (3) box culvert off of Camp Creek. (Comments: During heavy rains, the flow-through capacity is insufficient causing debris to accumulate and block water flow.)	Deferred from 2016 MJHMP/ Carryover to 2022 plan update	Public Works Department; Army Corp of Engineers	Flood, Severe Weather, Tropical Systems	$300,000-$400,000	HMGP; Storm Water Utility Fund; FMA	1-3 years	Medium 47
N/A	Increase flow- through capacity of box culvert on Lyle Road	Deferred from 2016 MJHMP/ Carryover to 2022 plan update	City of College Park Public Works Department; Army Corp of Engineers	Flood	$150,000-$250,000	HMGP; Storm Water Utility Fund; FMA	2022-2027	Medium 28

Identified Mitigation Actions (2022-2027), College Park, GA								
Project Number*	**Mitigation Action/ Description**	**Status as of 2022 HMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
N/A	Storm Sewer improvement project Virginia Avenue (undesigned) - non creek	Deferred from 2016 MJHMP/ Carryover to 2022 plan update	City of College Park Public Works Department	Flood, Severe Weather, Tropical Systems	$250,000	HMGP; BRIC; Storm Water Utility Fund; FMA	2022-2027	Medium 43
N/A	Storm Sewer improvement project Best Road (undesigned)	Deferred from 2016 MJHMP/ Carryover to 2022 plan update	City of College Park Public Works Department	Flood	$150,000 - $200,000	HMGP; Storm Water Utility Fund; FMA	2022-2027	Medium 28
N/A	Storm Sewer improvement project Sullivan Road. Flow study is required	Deferred from 2016 MJHMP due to lack of funding and resources/ carry over to 2022 plan update	City of College Park Public Works Department	Flood	$100,000- $200,000	HMGP; FMA; Storm Water Utility Fund	2022-2027	Low 22
N/A	Storm Sewer improvement project Janice Drive (undesigned)	Deferred from 2016 MJHMP due to flooding/ Carry over to 2022 plan update	City of College Park Public Works Department; City of South Fulton Public Works Department; GA EPD; Army Corp of Engineers	Flood	500,000 - $1M	HMGP: Storm Water Utility Fund	2022-2027	Medium 27

Jurisdiction Profile: City of East Point, GA



History & Geography

The City of East Point started with only 16 original families in 1870 but grew quickly after it became an inviting place for industry to develop. Soon it boasted the railway, two gristmills, and a government distillery. One of the earliest buildings was the factory of the White Hickory Manufacturing Company, built by B.M. Blount and L.M. Hill.

By 1880 the town had two churches, a common school, steam-gin, sawmill, post office, telegraph office, and its own weekly newspaper. East Point ranked as a grain and cotton-growing center, and with its pleasant climate and proximity to the railway, had also become a popular summer resort.

In 1890, East Point had its first housing boom, when a major portion of property along East Point Avenue was subdivided and developed, opening the way for more homes, more churches, more people and more places of employment. By 1892 Main Street was completed, despite protests from a few early settlers who maintained that one major thoroughfare, Newnan Road, was more than sufficient.

Significant Characteristics

East Point has seven recreation parks; Sumner Park, Sykes Park, Brookdale Park, Grayson Field, Jefferson Park, and John Milner Park.

In 1974, the Dick Lane Velodrome (named after a longtime City Council member) was built. It was inspired by a group of residents and City officials that visited the Munich Olympics. It is located eight miles south of downtown Atlanta. The Dick Lane Velodrome is a banked concrete track for bicycle racing, set in Sumner Park. Dick Lane is the only velodrome in the world with a green space that contains a large oak tree and a creek running through the in-field. The City of East Point owns the velodrome and has a long-term partnership with The East Point Velodrome Association, Inc. (EPVA) to manage the Dick Lane Velodrome. The EPVA conducts Youth Service Activities for children at no cost to the city or state. These activities include the highly acclaimed Bicycle Little League, summer camps, and bicycle safety clinics.

Population & Demographics

As of the 2020 Decennial Census, there were **33,712** people, **13,333** households, and **7,735** families residing in the City of East Point. This equates to a population density of 2,446.8 people per square mile. The population, as evidenced by the following table, continues to increase after the drop since 2010.

Table 1: Population Change, City of East Point

Population Change, City of East Point, GA			
Year	2000	2010	2020
Population	39,595	33,712	35,448

Given these numbers, East Point experienced a population decrease of 15% between 2000 and 2010 and a population increase of 1.05% between 2010 and 2020 for a total 20-year decrease of 10%.

Of the population 29.3% are under the age of 18, 62.8% are age 18 and over, and 7.9% are age 65 and over. The media age was 34.7 years.

Of the 25,391 households in East Point, 33.3% had children under the age of 18 living with them, 25.2% were married couples living together, and 26.1% had a female householder (no spouse present). The average family size in East Point was 3.25.

The following table provides information specific to East Point's housing stock through the issuance of single-family new house construction building permits over the last 20 years (2001-2020). However, since not all permits become actual housing starts, and starts lag the permit stage of construction, this number does not represent total new construction (2020) but should provide a general indicator on construction activity and the local real estate market.

Table 2: Housing Stock History, Building Permits, East Point, GA

Housing Stock History, Building Permits, East Point, GA	
Year	**# of Permits Issued**
2001 - 2009	1,240
2010	23
2011	19
2012	29
2013	24
2014	40
2015	57
2016	59
2017	68
2018	106
2019	93
2020	112

The Local Economy

As indicated by the 2020 census, the median income for a household in the City of East Point was $35,002, and the median income for a family was $38,895. The per capita income for East Point was $15,175. In 2020, approximately 20.7% of the city's population were living below the poverty line, including 30% under the age of 18, 5.0% between the ages of 18 and 64, and 13.6% at age 65 and over.

According to the 2019 American Community Survey 1-year Estimates, East Point has an employment rate of 69%, which is above the State of Georgia's employment rate of 59.6%. The following table shows the city's leading industries and most recent employment percentages.

Table 3: Leading Industries, Employment Percentages, East Point, GA (2019)

Leading Industries, Employment Percentages, East Point, GA (2019)	
Professional, scientific, and management, and administrative and waste management services	26.0% (4,472)
Educational services, and health care and social assistance	14.3% (2,460)
Finance and insurance, and real estate and rental and leasing	11.3% (1,943)
Manufacturing	9.6% (1,651)
Retail Trade	8.9% (1,530)
Arts, entertainment, and recreation, and accommodation and food services	7.1% (1,221)
Information	6.2% (1,066)
Other services, except public administration	4.1% (705)
Wholesale Trade	4.1% (705)
Transportation and warehousing, and utilities	3.7% (636)
Construction	3.1% (533)
Public Administration	1.5% (258)

Critical Facilities & Infrastructure

East Point is served by its own Fire Department, which includes an Operations division that handles fire calls and emergency medical calls. In addition to responding to these, the East Point Fire Department has taken an approach to reducing the number of fire fatalities and injuries within the community by developing a variety of community risk reduction and public education programs. The City also is served by its own Police Department, which is a full-service police department that consists of patrol units, investigators, and various other support services and personnel to facilitate the needs of the department and community. The East Point Police Department is an accredited member of the Georgia Police Accreditation Coalition (GPAC).

Additionally, the school system within the city limits consists of the capacity listed below.

Table 4: School Infrastructure within City Limits, East Point, GA

School Infrastructure within City Limits, East Point, GA		
School	**Type**	**Enrollment (2020)**
Nursery School, Pre-School	Public	323
Kindergarten to 12th Grade	Public	6,312
College, Undergraduate	None	None
Graduate, Professional School	None	None

Data Source: countyoffice.org and Fulton County Schools

A complete list of East Point's critical facilities and infrastructure, which may include cell towers, hospitals, water treatment plants, etc., can be found in Appendix C.

Land Use & Development Trends

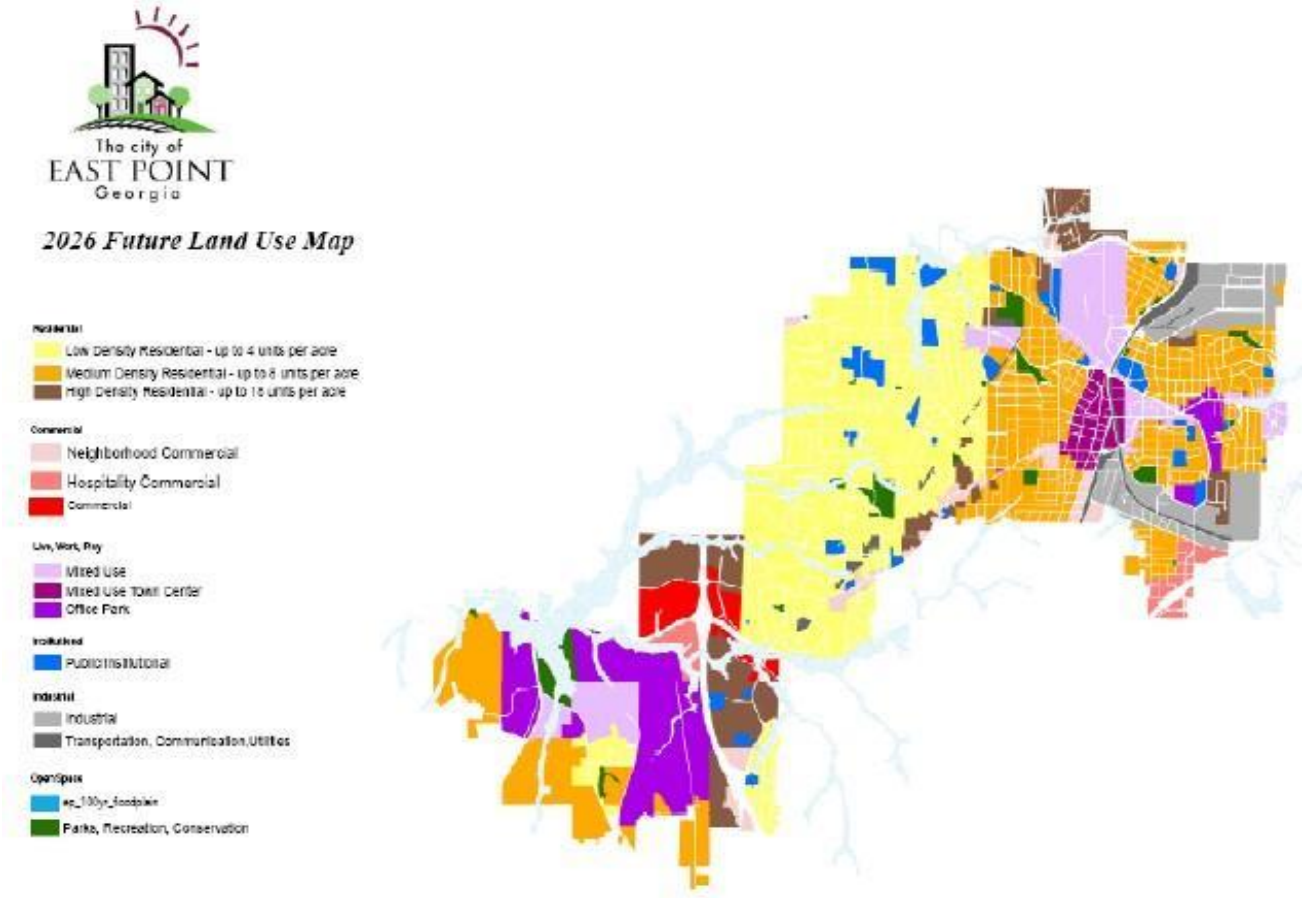
To meet the current and future demands of an increasing population, the City of East Point must continue to implement proactive measures pertaining to land use and development. This is especially true of housing, transportation, education, historic preservation, and the environment, among other things.

According to the U.S. Census Bureau, the City of East Point has a land area of 13.8 square miles. The City of East Point is mostly residential with a smaller portion for commercial. Several new developments in both residential and commercial areas are planned. Below are two future land use and development maps projected for 2036.

East Point does not have many areas designed for industrial use.

The following map(s) demonstrate the City of East Point's potential growth and development.

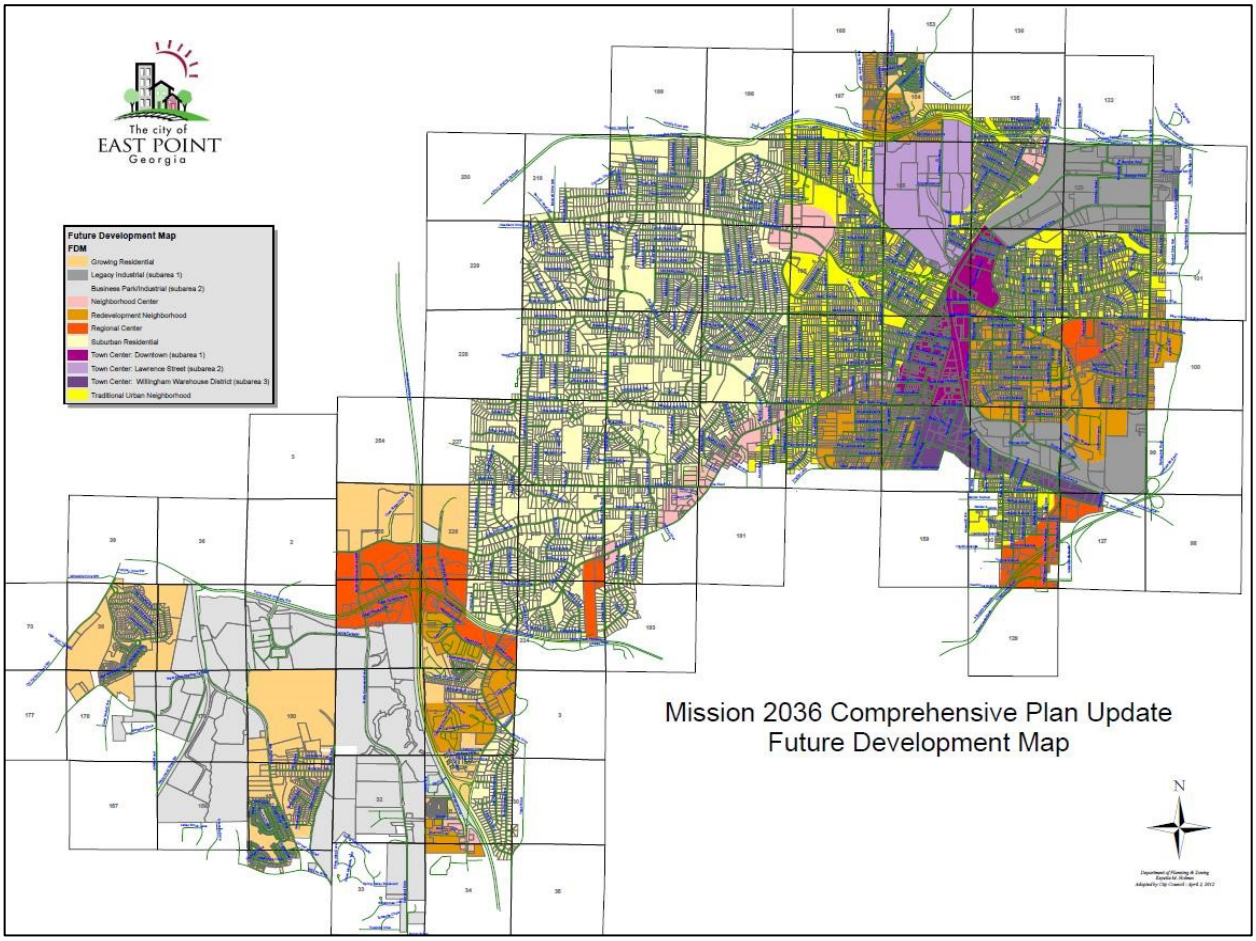
Map 1: Development Nodes, Character Areas & Future Land Use, East Point, GA



Map Source: The City of East Point, GA

Map 2: Major Development Corridors, East Point, GA

Future Development



Map Source: City of East Point 2030 and 2035 Comprehensive Plan(s)

Hazard Risk Assessment, City of East Point, GA

Natural Hazard Identification & Risk Assessment

There 12 of 13 Georgia-identified hazards known to pose risk to Fulton County and one or more of its participating jurisdictions. These include Dam Failure, Drought, Earthquake, Flood, Geological Hazards, Extreme Heat, Severe Weather, Tornado, Tropical Systems, Severe Winter Weather, and Wildfire/Wildland Urban Interface Fires. Wind, though identified as a separate hazard in the 2019 Georgia Hazard Mitigation Strategy Standard and Enhanced Plan, is included in the Severe Weather hazard in this plan update.

The following table outlines the City of East Point's general risk to the profiled hazards. The rankings are based on a variety of factors, including 1) a composite evaluation of this plan's risk assessment, namely a hazard's probability of occurring in the future, 2) the vulnerability of the jurisdiction to a specific hazard, 3) the intensity of past hazard impacts, and 4) a joint evaluation of local experts and plan stakeholders. The category/range (per year) is based on the following scale: **Unlikely (0%), Occasional (1-10%), Likely (11%-50%), and Highly Likely (51%-100%).**

Table 5: Risk Assessment, East Point, GA

Risk Assessment Matrix, East Point, GA		
Hazard	**Category**	**Range**
Dam Failure	Occasional***	-
Drought	Highly Likely	295%
Earthquake	Occasional**	-
Flood	Occasional	4%
Geological Hazards	Highly Likely	-
Extreme Heat	Highly Likely	-
Severe Weather	Highly Likely*	-
Severe Winter Weather	Highly Likely	-
Tornado	Highly Likely	160%
Tropical Systems	Highly Likely	84%
Wildfire/Wildland Urban Interface Fires	Occasional*****	-

**The hazard of Severe Weather considers the instances of thunderstorms, lightning, hail, and wind, each with a varying degree of occurrence/probability.*

*** The hazard of Earthquake is considered occasional but without a definite calculation of probability. This is due to there being no record/data of earthquake in the planning period since the last plan update (2016).*

**** Calculating future probability is not the only predictor of future occurrences. In the last five years, Fulton County and its participating jurisdictions have documented no cases of Dam Failure. Though the County has experienced occurrences that were listed in its HMP update (2016), the likelihood of a dam failure event happening in the planning area is considered* ***occasional.***

*****The NOAA/NCEI Storm events database did not have any incidences of storm data records related to Flood (including flash flood) for the Cities of Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton from January 1, 1970 – July 31, 2021. Since flooding is possible, the Cities Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton's Probability of Future Events is considered* ***occasional.***

******The hazard of Wildfire/Wildland Urban Interface Fires is considered* ***occasional*** *but without a definite calculation of probability. This is due to there being no record/data of wildfire in the planning period since the last plan update (2016).*

This qualitative categorization was performed by Hazard Mitigation Planning Committee members for each natural hazard identified as a potential threat. A meeting was conducted with the participating jurisdiction to complete the assessment exercise. The Planning Process appendix contains the online survey that was used as the assessment instrument and included descriptions for the levels of measurement. After an assessment was completed for the participating jurisdiction, the respective scores were combined to determine an overall County Risk Assessment. This assessment also served to assist the City of East Point in determining which threats posed the highest, or greatest, threat. Once this was determined, this assessment was used to guide the development of hazard mitigation actions that were in the best interest of protecting the community from the most likely and/or the most severe hazards facing the jurisdiction.

Hazard Event History & Community Impacts

Of the 12 hazards identified by Fulton County, one has impacted the City of East Point specifically since 2016. The following table provides brief details of all hazard occurrences, as recorded by the National Oceanic and Atmospheric Administration (NOAA) and its National Centers for Environmental Information (NCEI), between January 1, 2016, and October 31, 2021.

Table 6: Natural Hazards, Previous Occurrences, East Point, GA

Natural Hazards, Previous Occurrences, East Point, GA			
Date	**Hazard**	**Disaster Declaration**	**Description**
7/21/2018	Hail	No	No damage and no injuries or deaths

Data Source: NOAA/NCEI Storm Events Database

Mitigation Capabilities & Actions, City of East Point, GA

Capabilities Assessment

The City of East Point has a number of administrative and technical capabilities. City departments include Administrative, Community Development, Court Services, Economic Development, Finance, Human Resources, Information Technology, Public Safety, Public Works and Recreation and Parks. City government includes six council members and a mayor. The City council and mayor all serve a four-year term.

The Legal & Regulatory Capability survey documents authorities available to the jurisdiction and/or enabling legislation at the state level affecting planning and land management tools that support local hazard mitigation planning efforts. The identified planning and land management tools are typically used by states, and local/tribal jurisdictions to implement hazard mitigation activities. The proceeding table summarizes the regulatory tools that are available to the City of East Point.

Planning & Regulatory Capability

Table 7: Planning & Regulatory Capability, East Point, GA

Planning & Regulatory Capability, East Point, GA				
Planning Capability				
Tool/Program	**Do You Have This?**	**Authority**	**Department/Agency Responsible**	**Code Citation & Comments**
Master Plan	Not at this time			
Capital Improvement Plan	Not at this time			
Floodplain Management/Basin Plan	Yes	Local	Public Works	Part 10, Chapter 5 East Point Code of Ordinances
Stormwater Management Plan	Yes	Local	Public Works	Part 10, Chapter 11 East Point Code of Ordinances
Open Space Plan	Yes	Regional, Local		Part 10, Chapter 10 East Point Code of Ordinances
Stream Corridor Management Plan	Yes	Local	Public Works	Part 10, Chapter 12 East Point Code of Ordinances
Watershed Management or Protection Plan	Yes	Local	Public Works	Part 10, Chapter 10,11,12 East Point Code of Ordinances
Economic Development Plan	Not at this time			

Planning & Regulatory Capability, East Point, GA				
Planning Capability				
Tool/Program	**Do You Have This?**	**Authority**	**Department/Agency Responsible**	**Code Citation & Comments**
Comprehensive Emergency Management Plan	Yes	Local	Fire	Comprehensive Emergency Management Plan
Emergency Operations Plan	Yes	Local	Fire	Comprehensive Emergency Management Plan
Post-Disaster Recovery Plan	Yes	Local	Fire	Comprehensive Emergency Management Plan
Transportation Plan	Not at this time			
Strategic Recovery Planning Report	Not at this time			
Other Plans	Not at this time			
Regulatory Capability				
Building Code	Yes	State & Local	Planning & Community Development	DCA Minimum Standards (ICC) Part 10, Chapter 3 East Point Code of Ordinances
Zoning Ordinance	Yes	Local	Planning & Community Development	Part 10, Chapter 2 East Point Code of Ordinances
Subdivision Ordinance	Yes	Local	Planning & Community Development	Part 10, Chapter 4 East Point Code of Ordinances
National Flood Insurance Program (NFIP) Flood Damage Prevention Ordinance	Yes	Federal, State, Local		
NFIP: Cumulative Substantial Damages	Not at this time			
NFIP: Freeboard	Yes	State, Local		
Growth Management Ordinances	Yes	Local	Planning & Community Development	Mission 2036 Comprehensive Plan & Future Development Map
Site Plan Review Requirements	Yes	Local		https://www.eastpointcity.org/icma/
Stormwater Management Ordinance	Not at this time			
Municipal Separate Storm Sewer System (MS4)	Not at this time			

Planning & Regulatory Capability, City of East Point, GA
Regulatory Capability

Tool/Program	Do You Have This?	Authority	Department/Agency Responsible	Code Citation & Comments
Natural Hazard Ordinance	Not at this time			
Post-Disaster Recovery Ordinance	Not at this time			
Real Estate Disclosure Requirement	Yes	State		
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	Not at this time			

Administrative & Technical Capability

The following table summarizes potential staff and personnel resources available to the City of East Point.

Table 8: Administrative & Technical Capability, East Point, GA

Administrative & Technical Capability, East Point, GA		
Administrative Capability		
Resources	**Is This in Place?**	**Department, Agency, Position**
Planning Board	Yes	Planning & Community Development
Mitigation Planning Committee	Yes	
Environmental Board/Commission	Not at this time	
Open Space Board/Committee	Not at this time	
Economic Development Commission/Committee	Not at this time	
Maintenance Programs to Reduce Risk	No	
Mutual Aid Agreements	Yes	Atlanta, College Park, Hapeville, Fulton County
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	Planning & Community Development, Public Works, Water & Sewer, East Point Power
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Planning & Community Development, Public Works, Water & Sewer, East Point Power
Planner(s) or Engineer(s) with an understanding of natural hazards	Yes	Planning & Community Development, Public Works, Water & Sewer, East Point Power
National Flood Insurance Protection (NFIP) Floodplain Administrator	Yes	Public Works/East Point/Floodplain Administrator
Administrative & Technical Capability, East Point, GA		
Technical/Staffing Capability		

Resources	Is This in Place?	Department, Agency, Position
Surveyor(s)	Not at this time	
Personnel skilled or trained in GIS and/or Hazus-MH applications	Not at this time	
Scientist familiar with natural hazards	Not at this time	
Emergency Manager	Yes	Fire Department/East Point/Fire Chief
Granter Writer(s)	Yes	Finance/East Point/Grant Writer
Staff with expertise on training in benefit/cost analysis	Not at this time	
Professional(s) trained in conducting damage assessments	Not at this time	

Fiscal Capability

The proceeding table summarizes the financial resources available to the City of East Point.

Table 9: Fiscal Capability, East Point, GA

Fiscal Capability, East Point, GA	
Resources	**Accessible or Eligible to Use?**
Community Development Block Grants (CDBG, CDBG-DR)	Not at this time
Capital Improvements Project Funding	Not at this time
Authority to Levy Taxes for specific purposes	Not at this time
User fees for water, sewer, gas or electric service	Not at this time
Impact Fees for homebuyers or developers of new development/homes	Not at this time
Stormwater Utility Fee	Not at this time
Incur debt through general obligation bonds	Not at this time
Incur debt through special tax bonds	Not at this time
Incur debt through private activity bonds	Not at this time
Withhold public expenditures in hazard-prone areas	Not at this time
Other Federal or State Funding Programs	Not at this time
Open Space Acquisition Funding Programs	Not at this time
Other	

Community Classifications

The following table summarizes classifications for community programs available to the City of East Point.

Table 9: Community Classifications, East Point, GA

Community Classifications, East Point, GA			
Program	**Do You Have This?**	**Classification**	**Date Classified**
Community Rating System (CRS)	Yes		
Building Code Effectiveness Grading Schedule (BCEGS)	Not at this time		
Public Protection (ISO Fire Protection Classes 1-10)	Yes	4	
Storm Ready	Not at this time		
Firewise	Not at this time		
Disaster/Safety Programs in/for Schools	Not at this time		
Organization(s) with Mitigation Focus (Advocacy Group, Non-Government)	Not at this time		
Public Education Program/Outreach (through website, social media, etc.)	Yes		
Public-Private Partnerships	Not at this time		

**NP = Not Participating, *N/A = Not Applicable, - =Unavailable, TBD = To Be Determined.*

Hazard Mitigation Capability

The table below summarizes a self-assessment of East Point's current hazard mitigation capability.

Table 10: Hazard Mitigation Capability, East Point, GA

Hazard Mitigation Capability, East Point, GA			
Area	**Degree of Hazard Mitigation Capability**		
	Limited (If so, please indicate any/all obstacles)	**Moderate**	**High**
Planning & Regulatory Capability		Not Indicated	
Administrative & Technical Capability		Not Indicated	
Community & Political Capability		Not Indicated	
Community Resiliency Capability		Not Indicated	
Capability to Integrate Mitigation into Municipal Processes & Activities			

National Flood Insurance Program (NFIP) Participation

According to FEMA, the National Flood Insurance Program (NFIP) is a federal insurance program that enables property owners in member communities to purchase flood insurance. This insurance is only made available to municipalities that adopt and enforce a floodplain management ordinance. The fundamental goal of NFIP floodplain management requirements is to reduce the threat to lives and the potential for property damage in flood-prone areas. Each municipality that participates in the NFIP has a Flood Insurance Rate Map (FIRM) that is issued by FEMA. This document maps out flood hazard areas in the municipality.

Like several other jurisdictions in Atlanta-Fulton County, the City of East Point participates in the NFIP.

The current NFIP Floodplain Administrator is Reza Aral, Flood Plain Manager-Stormwater. East Point is in good standing with the program with no outstanding compliance issues. The city completed Community Assistance Visits (CAVs), with the most recent taking place in 2013.

Loss History & Mitigation

As of June 2021, there were eleven Repetitive Loss (RL) or Severe Repetitive Loss (SRL) properties in the City of East Point. They are residential. Two properties have officially indicated interest in elevation or acquisition in the areas of Woodhill Lane and Hayden Dr.

Planning & Regulatory Capabilities

East Point's NFIP Flood Damage Prevention Ordinance was last updated in December 2020 and can be found in the Unified Development Code, Article 3, Section 3.4.

Floodplain management regulations and ordinances meet the minimum requirements set forth by both the Federal Emergency Management Agency (FEMA) and the State of Georgia. East Point also performs site plan review and building plan review, which both include checks of floodplain and local "future floodplain" designations. A preliminary staff review, and recommendation occurs prior to Planning Board and Zoning Board considerations.

Administrative & Technical Capabilities

Duties and responsibilities of the NFIP Administrator are permit review, damage assessments, record keeping, inspections, GIS, education and outreach, and capital mitigation projects. If Substantial Damage Estimates were necessary, the Floodplain Administrator would be responsible.

Public Education & Outreach

Education and Outreach regarding flood/hazard risk, and flood risk reduction through NFIP insurance is primarily provided to the community through the City website. Additional outreach is provided with adult informational workshops and through classroom teaching with students (using WARD's Scientific Floodplain model).

Actions to Strengthen the Program

During the data collection process staff did not indicate any perceived barriers to running an effective floodplain program in East Point.

Community Rating System

In 2013 the City of East Point Joined the CRS with the Rating of 7 and is always trying hard to lower the rate to make the community floodplain safe.

Integration of Hazard Mitigation into Existing & Future Planning Mechanisms

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, each municipality was surveyed to obtain a better understanding of their community's progress in plan integration. A summary is provided below. In addition, the community identified specific integration activities that have been/will be incorporated into municipal procedures which may include former mitigation initiatives that have become continuous/ongoing programs and may be considered mitigation "capabilities."

Land Use Planning/Comprehensive Planning

The City of East Point's 2035 Comprehensive Plan (November 2021) is currently adopted. This plan considers the following areas of natural hazard risk:

East Point has plans in place to help to manage natural hazard risk. Additionally, the Downtown Master Plan Update includes regulations for open space and tree protection. The Recreation and Parks Master Plan 2025 includes plans for the protection of flood plains and open spaces and East Point has adopted the Comprehensive Emergency Management Plan for Fulton County, which refers to the Hazard Mitigation Plan (HMP). East Point is an MS4 Regulated Community (Phase 1), and staff indicated they have a formal Stormwater Management Plan that specifies projects/actions/initiatives to reduce the volume of stormwater, or otherwise mitigate stormwater flooding.

Regulatory Compliance

East Point's zoning and subdivision regulations take natural hazard risk into consideration. The City's Unified Development Code (UDC) includes both zoning and subdivision regulations, which regulate impacts on local floodplains and requires developers to take additional actions to mitigate natural hazard risk. The UDC includes a stream buffer protection with a 50-foot undisturbed stream buffer and an additional 25-foot impervious cover setback on both banks of a non-perennial stream and a 100-foot undisturbed stream buffer and an additional 50-foot impervious cover setback on both banks of a perennial stream. In addition, the City's UDC includes regulations for stormwater management and the NFIP Flood Damage ordinance includes provisions which exceed the minimum federal and State NFIP regulatory requirements.

The City's Community Development staff have access to GIS Maps, review and provide recommendations based on natural hazard risk prior to Planning Board and Zoning Board decisions. The City's Planning Commission and Board of Zoning Appeals uses the regulations in the City's UDC and professional staff opinion to guide their decision-making process.

Administrative/Technical Resources & Programs

East Point's Planning Commission is an advisory body, which makes recommendations to the City Council for variances associated with comprehensive plan amendments, rezoning, master plans, and conditional uses. City Council considers all variances of more than 50% of the code requirement. The City's board of Zoning Appeals considers variances between 20% and 50% of the code requirement. City staff considers variances up to 20% of code requirements. East Point also has a land disturbance permit team consisting of planners, engineers, arborists, and fire marshal that review and approve all site plans for new development and redevelopment. Stormwater management functions are performed by the Senior Stormwater Engineer and the Development Services Engineer (Stormwater). NFIP Floodplain management functions are performed by the Senior Stormwater Engineer) and the Chief Building Official.

The City of East Point has staff in place who can perform Substantial Damage Estimates, Benefit-Cost Analysis and prepare applications for mitigation projects. City staff regularly attend training and conferences to promote continuing professional education, including the American Planning Association (APA), Georgia Chapter of APA and Georgia Association of Zoning Administrators. Additionally, a staff

member from Public Works receives continuing education to maintain her Certified Floodplain Manager and a Public Safety official receives Emergency Management continuing education and is also a member of the Fulton County All Hazards Council.

The City of East Point also has several staff with job descriptions that specifically include ***identifying and/or implementing mitigation projects/actions or* other efforts to reduce natural hazards.** These positions include the Senior Stormwater Engineer, Urban forestry Program Manager, Senior Water Resources Analyst, Environmental Program coordinator, Development Services Engineer (Stormwater), Zoning Administrator, Senior Transportation Engineer, Stormwater Engineer, City Arborist, Fire Marshal and Emergency Management Coordinator/Homeland Security Manager.

Public Education & Outreach

East Point utilizes their website and various adult workshops and student classroom teaching opportunities as platforms to inform citizens of natural hazards. During the assessment staff indicated that they identified the use of social media to enhance further public outreach and education with respect to natural hazard risk management in the community.

Fiscal Resources

The City of East Point includes line items in its operating and capital improvement budgets for mitigation related projects and activities. The City has also received previous grant funds for mitigation-related projects, but none were received during the period reflected in this plan update.

Note: *The City of East Point will receive a copy of the Fulton County Multi-Jurisdictional Hazard Mitigation Plan (2021) to use as a resource when updating other plans and identifying new projects. Additionally, the Mitigation Planning Committee will continue to provide guidance for provide guidance for future development within the jurisdiction.*

Mitigation Actions

Each jurisdiction participating in this plan is responsible for implementing specific mitigation actions as prescribed in the adopted Mitigation Action Plan. In each Mitigation Action Plan, every proposed action is assigned to a specific local department or agency in order to assign responsibility and accountability and increase the likelihood of subsequent implementation. This approach enables individual jurisdictions to update their unique mitigation strategy as needed without altering the broader focus of the countywide plan. The separate adoption of locally specific actions also ensures that each jurisdiction is not held responsible for monitoring and implementing the actions of other jurisdictions involved in the planning process. A complete list of countywide mitigation strategies is provided in Section 5 of this plan update.

Completed Mitigation Actions (2016-2021)

The City of East Point identified 23 mitigation actions in the previous (2016) HMP update. Of the 23 mitigation actions, the City of East Point completed one during the five-year planning period (2016-2021).

Table 11: Completed Mitigation Projects (2016-2021), East Point, GA

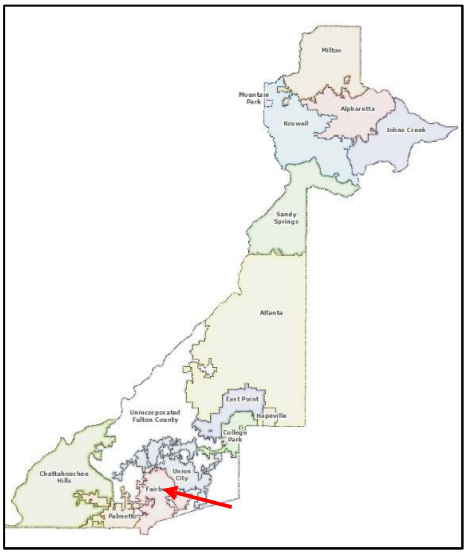
Completed Mitigation Projects (2016-2021), East Point, GA		
Project #	**2016 Mitigation Action**	**Responsible Party/ies**
20.0008	Culvert improvements at 3030 & 3042 Dodson Dr.. Status: Site plan approved by State Local funding. RFP will be issued for construction	City of East Point Public Works Department

Identified Mitigation Actions (2022-2027)

Table 12: Identified Mitigation Actions, East Point, GA

Identified Mitigation Actions (2022-2027), East Point, GA								
Project Number	**Mitigation Action/Description**	**Status as of 2022 HMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
20.0019	Develop Emergency Notification Outreach program for city senior population	Proposed	East Point Fire Department	All Hazards	Staff time and resources	Local Funds; Potential Federal/State Grants	2022-2024	Low 16.5
20.002	Annual update and review of communication plan (CodeRED)	Proposed	Public Works	All Hazards	Staff time and resources	Local Funds; Potential Federal/State Grants	2022-2024	Low 16.5
N/A	Improve drainage capacity in the 800 block of Cleveland Ave. Culvert improvement complete w/erosion Improvement @ 871 Cleveland parking lot Area – Local funds. Monitor and evaluate stream flow @ location mentioned	In Progress / Carry over from 2016 MJHMP	City of East Point Public Works Department	Flood	$300,000	Local Funds	1 – 2 years from funds availability	Medium 32

Jurisdiction Profile: City of Fairburn, GA



History & Geography

The City of Fairburn is located just 25 minutes south of Atlanta along a railroad line and was the County seat of Campbell County starting in 1870. The City has experienced phenomenal growth in business, industry, and residential neighborhoods in recent years. The government of Campbell County went bankrupt in 1931 during the Great Depression was absorbed into Fulton County when 1932 began.

Significant Characteristics

The downtown Commercial District, listed in the National Register of Historic Places, includes 20 different commercial buildings and two train depots dating from the late 19th and early 20th centuries. Fairburn maintains a traditional small-town atmosphere with the advantages of a nearby metropolitan area.

Population and Demographics

In 2017, the census recorded there were 15,520 people, 4,691 households, and 3,219 families residing in the city. There were 5,430 housing units at an average density of 275.5 per square mile. The racial makeup of the city was 72.87% African American, 20.1% White, 0.4% Native American, 1.7% Asian, 6.5% from other races, and 2% from two or more races. Hispanic or Latino of any race was 11.9% of the population.

There were 1,745 households out of which 37.2% had children under the age of 18 living with them, 39.4% were married couples living together, 23.1% had a female householder with no husband present, and 31.4% were non-families. 26.5% of all households were made up of individuals and 13.5% had someone living alone who was 65 years of age or older. The average household size was 2.74 and the average family size was 3.33.

In the City the population was spread out with 69.7% over the age of 18, 6% from 20 to 24, 31.7% from 25 to 44, 22.6% from 45 to 64, and 6.9% who were 65 years of age or older. The median age was 32 years. The male population is 43.62% and the female population is 56.38%.

Table 1: Population Change, City of Fairburn, GA

Population Change, City of Fairburn, GA				
Year	2010	2015	2020	2025
Population	12,950	14,039 est.	17,664	22,470 est.

Economy

The median income for a household in the City was $49,421, and the median income for a family was $49,744. Males had a median income of $32,708 versus $28,940 for females. The per capita income for the city was $20,215. About 6.1% of families and 7.7% of the population were below the poverty line, including 11.9% of those under age 18 and 2.8% of those age 65 or over.

Following is a chart of main industries based on data from the United States Census Bureau 2012:

Table 2: Main Industries (Based on Data from 2012)

Industry Description	Number of Establishments	Number of Employees
Wholesale Trade	17	930
Retail Trade	43	325
Manufacturing	11	1061
Information	1	0
Real Estate, Rental, Leasing	13	Not available
Professional, Scientific and Technical Services	12	36
Administrative and Support and Waste Management and Remediation	16	149
Educational Services	3	9
Health Care and Social Assistance	16	291
Accommodation and Food Services	24	321
Other Services	19	229

Below is a list of City issued permits for the construction of single-family homes dating from 2015 to 2020 and the average cost of new construction for that specific year.

Table 3: New Construction Permits

Year	Permits
2015	96
2016	229
2017	170
2018	117
2019	137
2020	97

Critical Facilities & Infrastructure

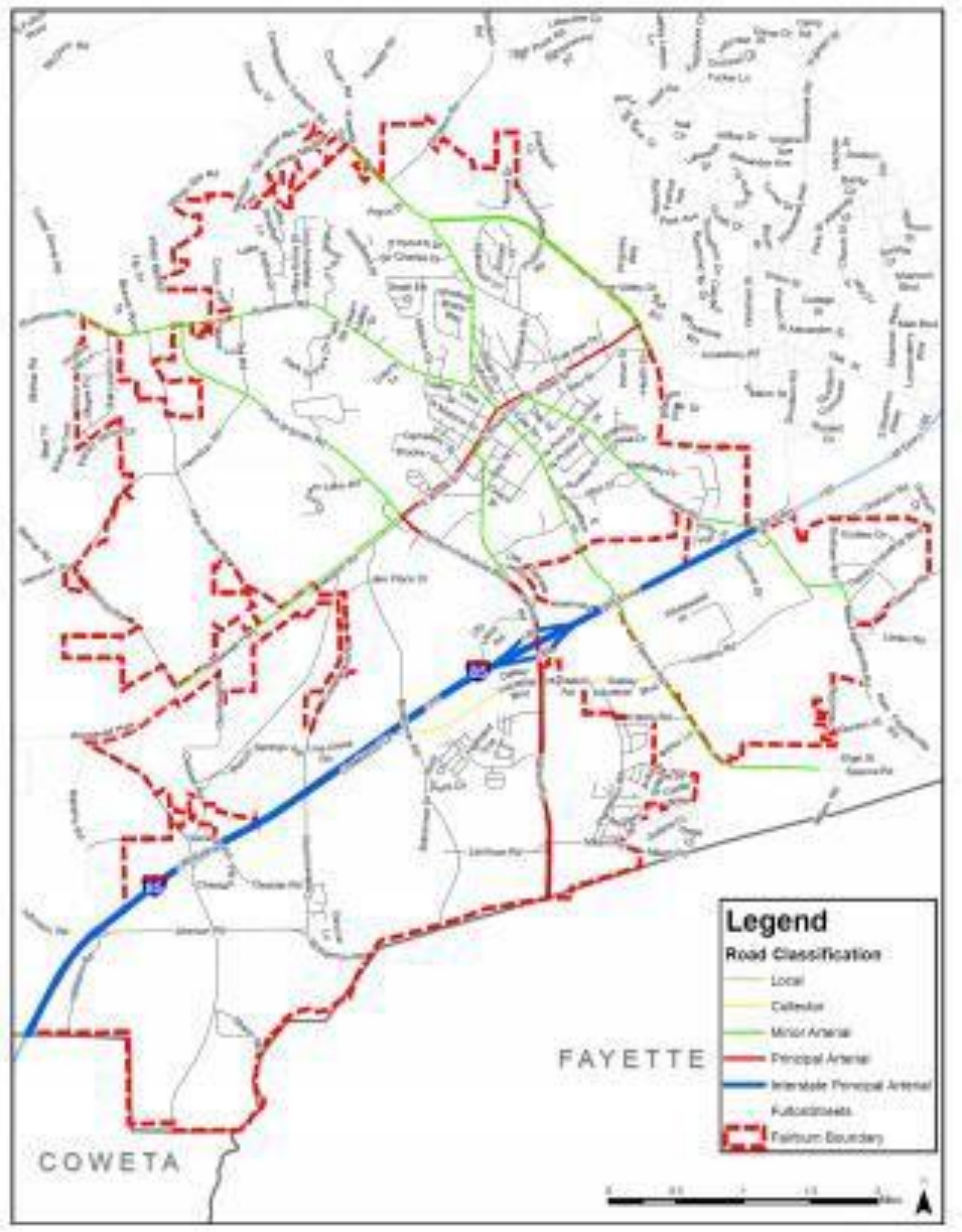
The City of Fairburn's Police Department has three division: the Office of the Chief, the Uniform Patrol Division, and the Criminal Investigative Division. Fairburn also has a Fire Department that serves the city. The Fairburn Fire Department consists of an Administrative Division, a Fire Marshal's Office, a Training Division, and an operations Division.

The school system within the City limits consists of the following capacity.

Table 4: School Infrastructure within City Limits

School	Type	Enrollment
Nursery School, pre-school	Public	90
Kindergarten to 12th grade	Public	8,168
College, undergraduate	(1) Military and (1) Public	Not Reported
Graduate, professional school	Not Reported	Not Reported

Map 1: Road Classifications – 2035 Comprehensive Plan

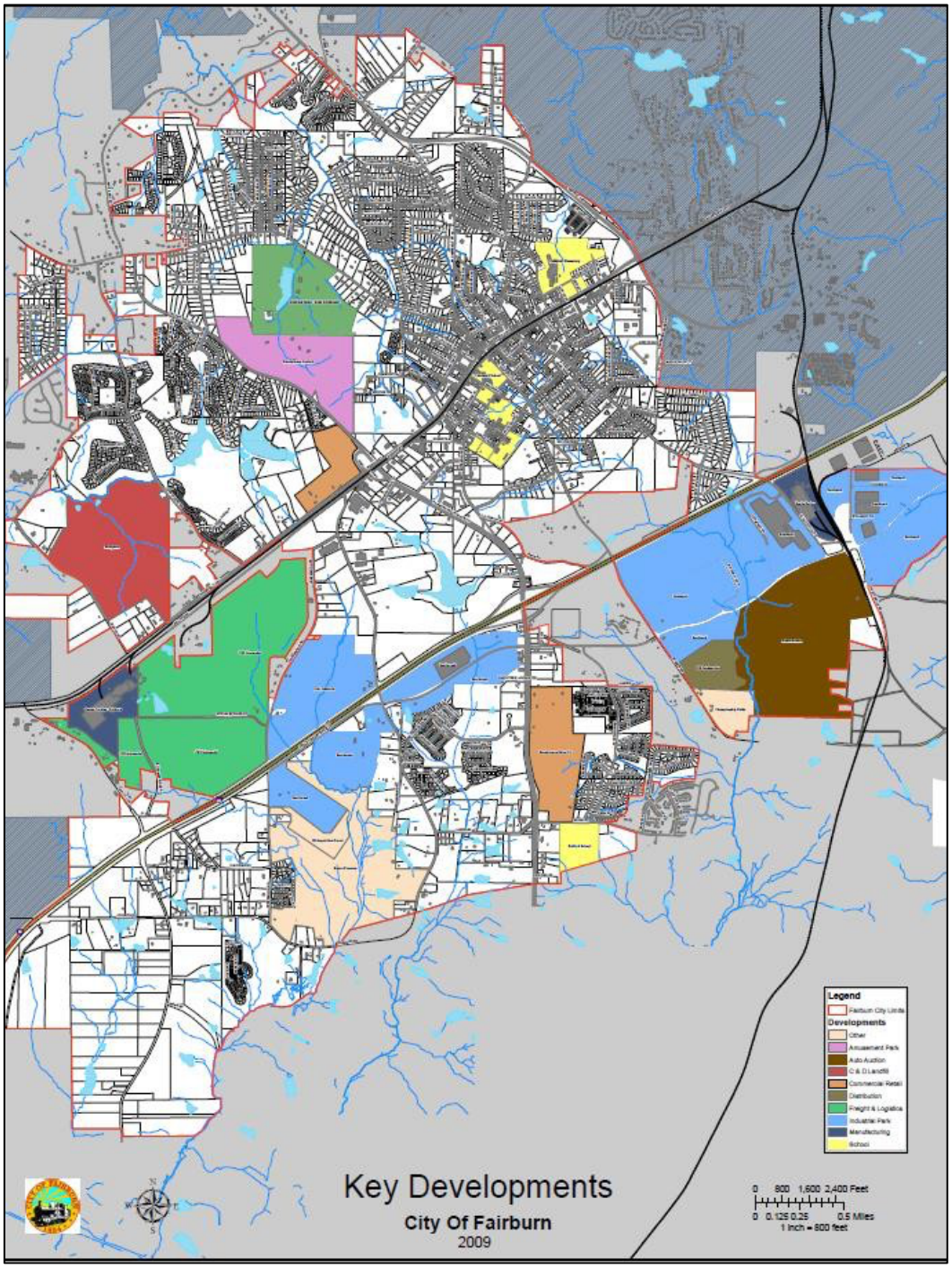


Map Source: Source

Land Use & Development Trends

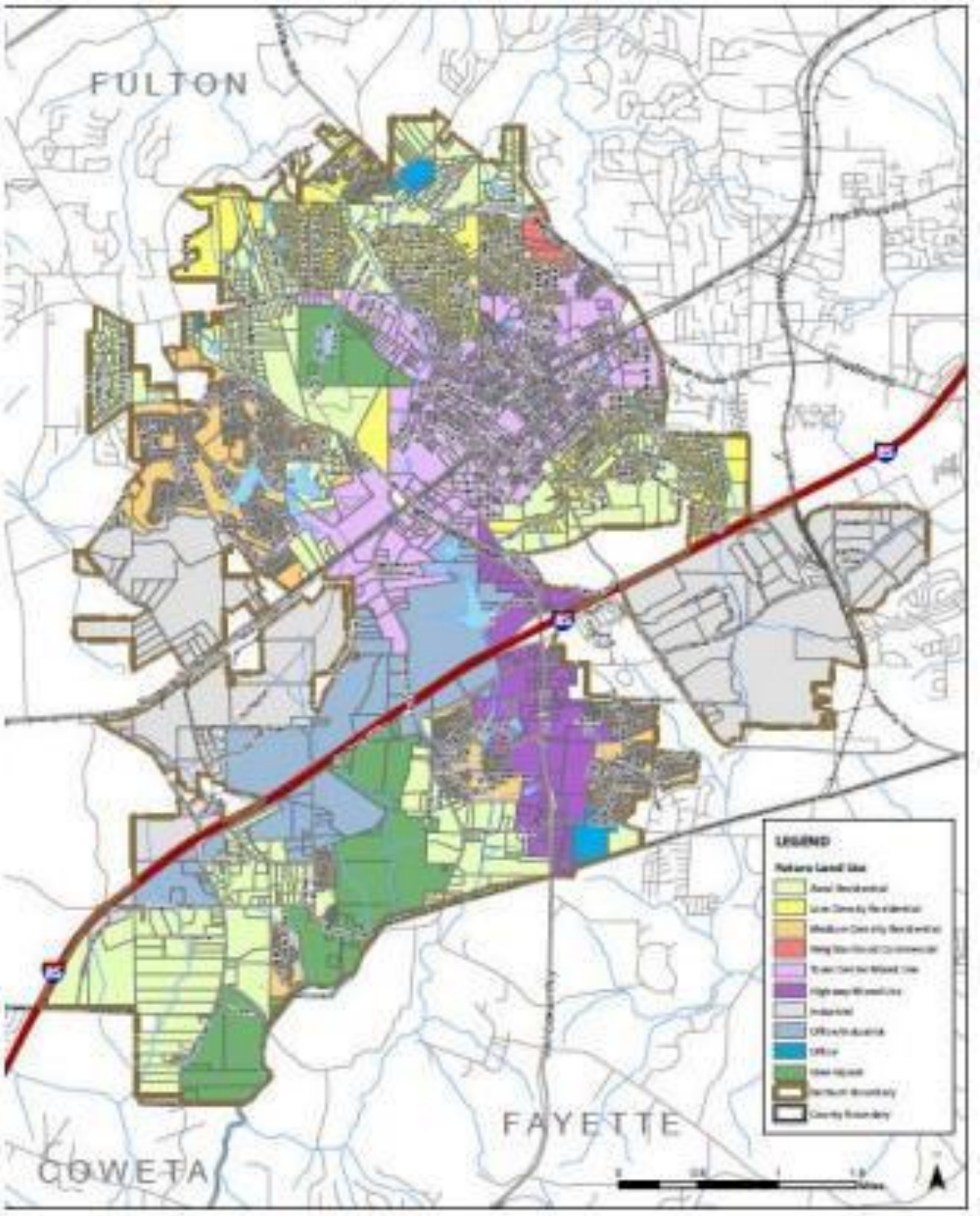
The City of Fairburn has a total of 17.1 square miles with 16.9 square miles being land and 0.2 square miles being water. It offers industrial, commercial, and retail zoning in close distance to family-oriented residential areas. The map below details the zoning areas for the city:

Map 2: Zoning Areas



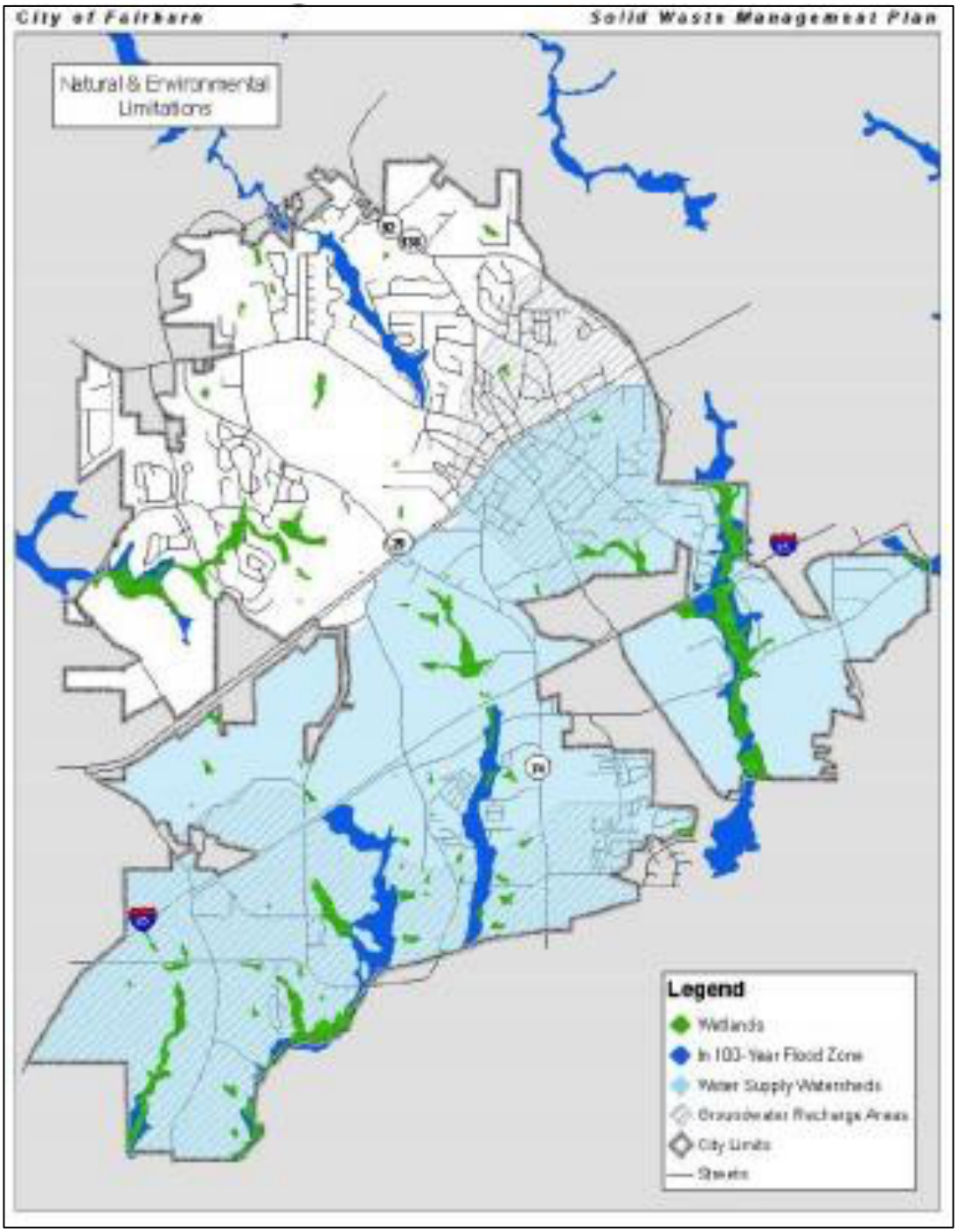
Map Source: City of Fairburn, GA

Map 3: Future Development Map - 2035 Comprehensive Plan



Map Source: 2035 Comprehensive Plan, City of Fairburn

Map 4: Natural & Environmental Limitations - 2035 Comprehensive Plan



Map Source: 2035 Comprehensive Plan, City of Fairburn

Hazard Risk Assessment, City of Fairburn, GA

Hazard Identification & Risk Assessment

There are 12 of 13 natural hazards known to pose risk to Fulton County and one or more of its participating jurisdictions. These include Dam Failure, Drought, Earthquake, Flood, Geological Hazards, Extreme Heat, Severe Weather, Tornado, Tropical Systems, Severe Winter Weather, and Wildfire/Wildland Urban Interface Fires. Wind, though identified as a separate hazard in the 2019 Georgia Hazard Mitigation Strategy Standard and Enhanced Plan, is included in the Severe Weather hazard in this plan update.

The following table outlines the City of Fairburn general risk to the profiled hazards. The rankings are based on a variety of factors, including 1) a composite evaluation of this plan's risk assessment, namely a hazard's probability of occurring in the future, 2) the vulnerability of the jurisdiction to a specific hazard, 3) the intensity of past hazard impacts, and 4) a joint evaluation of local experts and plan stakeholders. The category/range (per year) is based on the following scale: **Unlikely (0%), Occasional (1-10%), Likely (11%-50%), and Highly Likely (51%-100%).**

Table 5: Risk Assessment, Fairburn, GA

Risk Assessment Matrix, Fairburn, GA		
Hazard	**Category**	**Range**
Dam Failure	Occasional***	-
Drought	Highly Likely	295%
Earthquake	Occasional**	-
Flood	Occasional	6%
Geological Hazards	Highly Likely	-
Extreme Heat	Highly Likely	-
Severe Weather (including Wind)	Highly Likely*	-
Severe Winter Weather	Highly Likely	-
Tornado	Highly Likely	160%
Tropical Systems	Highly Likely	84%
Wildfire/Wildland Urban Interface Fires	Occasional*****	-

**The hazard of Severe Weather considers the instances of thunderstorms, lightning, hail, and wind, each with a varying degree of occurrence/probability.*

***The hazard of Earthquake is considered occasional but without a definite calculation of probability. This is due to there being no record/data of earthquake in the planning period since the last plan update (2016).*

****Calculating future probability is not the only predictor of future occurrences. In the last five years, Fulton County and its participating jurisdictions have documented no cases of Dam Failure. Though the County has experienced occurrences that were listed in its HMP update (2016), the likelihood of a dam failure event happening in the planning area is considered* ***occasional.***

*****The NOAA/NCEI Storm Events Database did not have any incidences of storm data records related to Flood (including flash flood) for the Cities of Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton from January 1, 1970 – July 31, 2021. Since flooding is possible, the Cities Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton's Probability of Future Events is considered* ***occasional.***

******The hazard of Wildfire/Wildland Urban Interface Fires is considered* ***occasional*** *but without a definite calculation of probability. This is due to there being no record/data of wildfire in the planning period since the last plan update (2016).*

Hazard Event History & Community Impacts

Fulton County has a history of natural hazard events as detailed in Section 5 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. The table below presents a summary of natural events that have occurred to indicate the range and impact of natural hazard events in the community. Information regarding specific damages is included if available based on reference material or local sources.

Table 6: Local Hazard Event History 2015-2021

Hazard Event History (2015-2021), City of Fairburn, GA			
Date(s) of Event	Event Type (Disaster Declaration if applicable)	Atlanta-Fulton County Designated?	Event Type (Disaster Declaration if applicable)
11/15/2015	EF-1 Tornado	Yes	Severe Windstorm Damage
9/11/2017	Cat 4 – Hurricane	Yes	Wind & Rain Damage (DR – 4338 – DA)
3/19/2018	EF-2 Tornado	Yes	Severe Windstorm Damage
5/3/2021	EF-1 Tornado	Yes	Severe Windstorm Damage

Mitigation Capabilities & Actions, City of Fairburn, GA

Capabilities Assessment

The following describes the various capabilities identified by the City of Fairburn, GA.

Legal and Regulatory Capabilities

The Legal and Regulatory Capability survey documents authorities available to the jurisdiction and/or enabling legislation at the state level affecting planning and land management tools that support local hazard mitigation planning efforts. The identified planning and land management tools are typically used by states and local and tribal jurisdictions to implement hazard mitigation activities. The table below summarizes the regulatory tools that are available to the municipality.

Table 7: Legal and Regulatory Capability

Tool / Program	Do You Have This?	Authority	Dept./Agency Responsible	Code Citation and Comments
Planning Capability				
Master Plan	Yes	Local	Administration	
Capital Improvements Plan	Not at this time	Local	Administration	
Floodplain Management / Basin Plan	Yes	Local	Engineering	

Tool / Program	Do You Have This?	Authority	Dept./Agency Responsible	Code Citation and Comments
Planning Capability				
Stormwater Management Plan	Yes	Local	Water	
Open Space Plan	Not at this time			
Stream Corridor Management Plan	Not at this time			
Watershed Management or Protection Plan	Yes	Local	Engineering	
Economic Development Plan	Not at this time			
Comprehensive Emergency Management Plan	Yes	County	AFCEMA	
Emergency Operation Plan	Yes	Local	Fire	EOP
Post-Disaster Recovery Plan	Not at this time			
Transportation Plan	Not at this time			
Strategic Recovery Planning Report	Not at this time			
Other Plans:				
Regulatory Capability				
Building Code	Yes	State & Local	Building Fire	IBC,NFPA, PCA
Zoning Ordinance	Yes	Local	Zoning	
Subdivision Ordinance	Yes	Local	Administration	
National Flood Insurance Program (NFIP) Flood Damage Prevention Ordinance	Yes	Federal, State, Local		
NFIP: Cumulative Substantial Damages				
NFIP: Freeboard	Yes	State, Local		State mandated BFE+2 for single and two-family residential construction, BFE+1 for all other types of construction
Growth Management Ordinances	No			
Site Plan Review Requirements	Yes	Local	Fire Engineering	
Storm water Management Ordinance				
Municipal Separate Storm Sewer System (MS4)	Yes	Local	Water	
Natural Hazard Ordinance	Not at this time			
Post-Disaster Recovery Ordinance	No			

Tool / Program	Do You Have This?	Authority	Dept./Agency Responsible	Code Citation and Comments
Regulatory Capability				
Real Estate Disclosure Requirement	Yes	State		
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	Not at this time			

Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to Fairburn.

Table 8: Administrative and Technical Capabilities

Resources	Is this in Place?	Department/Agency/Position
Administrative Capability		
Planning Board	Yes	
Mitigation Planning Committee	Not at this time	
Environmental Board/Commission	Not at this time	
Open Space Board/Committee	Not at this time	
Economic Development Commission/Committee	Not at this time	
Maintenance Programs to Reduce Risk	Not at this time	
Mutual Aid Agreements	Yes	Fire
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	Water / ELEC
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	2 – PE 2 – Engineer	Engineering, Water, ELEC
Planners or engineers with an understanding of natural hazards	Yes	Water / ELEC
NFIP Floodplain Administrator	Yes*	
Surveyor(s)	Not at this time	Contract
Personnel skilled or trained in GIS and/or Hazus-MH applications	Not at this time	
Scientist familiar with natural hazards	Not at this time	
Emergency Manager	Yes	Fire
Grant Writer(s)	Yes	Contract
Staff with expertise or training in benefit/cost analysis	Yes	Finance
Professionals trained in conducting damage assessments	Yes	Building

Fiscal Capability

The table below summarizes financial resources available to Fairburn.

Table 9: Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use
Community Development Block Grants (CDBG, CDBG-DR)	Not at this time
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes
Impact Fees for homebuyers or developers of new development/homes	Not at this time
Stormwater utility fee	Not at this time
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Not at this time
Incur debt through private activity bonds	Not at this time
Withhold public expenditures in hazard-prone areas	Not at this time
Other federal or state funding programs	Not Sure
Open space acquisition funding programs	Not at this time
Other	

Community Classifications

The table below summarizes classifications for community program available to Fairburn.

Table 10: Community Classifications

Program	Do You Have This?	Classification	Date Classified
Community Rating System (CRS)	Not at this time		
Building Code Effectiveness Grading Schedule (BCEGS)	Not at this time		
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	ISO Class 1	1-26-2015
Storm Ready	Not at this time		
Firewise	Not at this time		
Disaster/Safety Programs in/for Schools	Yes		
Organizations with Mitigation Focus (advocacy group, non-government)	Not at this time		

Program	Do You Have This?	Classification	Date Classified
Public Education Program/Outreach (through website, social media)	Yes		
Public-Private Partnerships	Yes		

Hazard Mitigation Capability

The table below summarizes a self-assessment of Fairburn's current hazard mitigation capability.

Table 11: Hazard Mitigation Capability

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, please indicate your obstacles.)*	Moderate	High
Planning and Regulatory Capability		X	
Administrative and Technical Capability			X
Fiscal Capability			X
Community Political Capability			X
Community Resiliency Capability			X
Capability to Integrate Mitigation into Municipal Processes and Activities			X

National Flood Insurance Program (NFIP) Participation

NFIP Floodplain Administrator: City Engineer

The City of Fairburn is currently an active member of the NFIP, in good standing with no outstanding compliance issues. It is currently undetermined when their last Community Assistance Visits (CAV) were completed.

Loss History and Mitigation

Fairburn does have a system in place to maintain a list of properties that have been flood damaged; however, there are none to date. The floodplain administrator can make substantial damage estimates if needed. To date no property owners have expressed an interest in the mitigation process. If mitigation actions were sought in Fairburn, it is believed the funding source would primarily be the property owner and insurance.

Planning and Regulatory Capabilities

Fairburn does use local ordinance, plans, and programs to support floodplain management. The City's floodplain management regulations and ordinances meet the minimum requirements set forth by both the Federal Emergency Management Agency (FEMA) and the State of Georgia. Fairburn reviews all site plans and building plans for flood compliance, provide all inspections in house, maintain records of all developments and buildings, outreach information about flooding is on web site, assistance is provided to residents and professionals about FEMA requirements, and provide additional mapping information.

Actions to Strengthen the Program

During the data collection process staff did not indicate any perceived barriers to running an effective floodplain program in Fairburn; however, they did state an interest in receiving more training and/or attending conferences if the future.

Community Rating System

Fairburn does not currently participate in the CRS program.

Mitigation Actions

Each jurisdiction participating in this Plan is responsible for implementing specific mitigation actions as prescribed in the adopted Mitigation Action Plan. In each Mitigation Action Plan, every proposed action is assigned to a specific local department or agency to assign responsibility and accountability and increase the likelihood of subsequent implementation. This approach enables individual jurisdictions to update their unique mitigation strategy as needed without altering the broader focus of the countywide plan. The separate adoption of locally specific actions also ensures that each jurisdiction is not held responsible for monitoring and implementing the actions of other jurisdictions involved in the planning process. A complete list of countywide mitigation strategies is provided in Section 5 of the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan.

Completed Mitigation Actions (2016-2021)

The City of Fairburn identified three (3) mitigation actions in the previous (2016) MJHMP update. Of the three (3) mitigation actions, the City of Fairburn completed zero during the five-year planning period (2016-2021).

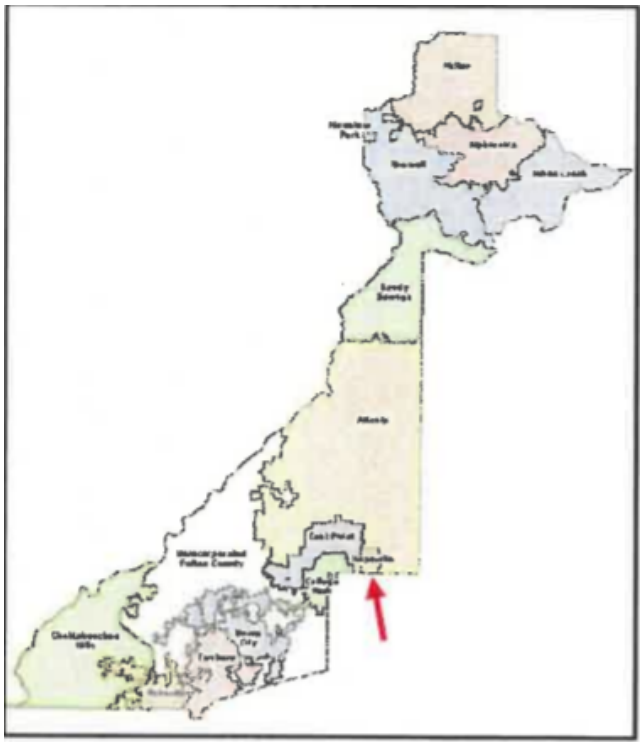
Identified Mitigation Actions (2022-2027)

The following table reflects the Identified projects for the 2022 HMP update. (2016) HMP update, all of which are proposed mitigation actions for the 2021 HMP update. Additionally, the table includes any/all new mitigation actions identified by the City of Fairburn for the following five-year planning period (2022-2027).

Table 12: Proposed Mitigation Actions (2022-2027), Fairburn, GA

Identified Mitigation Actions (2022-2027), Fairburn, GA								
Project Number	**Mitigation Action/ Description**	**Status as of 2021 HMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+ E Score**
25.0001	Improve drainage at the bridge at Rivertown Road and Malone by adding drain to tie into the storm water drainage. Debris backs up under the bridge at Malone. Need to add a drain to tie into the system	Since the plan update, the project is still in the planning phase which is why it is being carried over to the 2021 plan update. The goal is to continue in long term planning	City of Fairburn Engineering Department; City of Fairburn Public Works Department	Flood	$150,000	HMGP; FMA; Local Funds	2-5 years	Low 22
25.0002	Acquire the upstream property (currently privately owned) on Rivertown Road to provide City access to clean and prevent debris in stream.	Since the last plan update, there has been no progress on this mitigation project. This project is being carried over to the 2021 plan update cycle due to still working in the planning phase of the project.	City of Fairburn Engineering Department	Flood	$100,000	HMGP; FMA; Local Funds	2-5 years	Medium 41.5
25.0003	Acquire privately owned agriculture land to prevent further development that is consistent with current land use policies. Acquisition would be used to promote less dense land usage and expand nature preserve, which is consistent with the natural conservation projects already being implemented in the area.	Since the last plan update, there has been no progress on this mitigation project. This project is being carried over to the 2021 plan update cycle due to still working in the planning phase of the project.	City of Fairburn Engineering Department	All Hazards	$100,000	HMGP; Local Funds	2-5 years	Medium 41.5

Jurisdiction Profile: City of Hapeville, GA



History & Geography

During the 1950s and 1960s, Hapeville was a thriving part of the Tri-City (Hapeville, East Point, College Park) area and its post-WWII population supported three elementary schools, Josephine Wells, North Avenue, and College Street, as well as one high school. During the next 40 years, it became regarded as a somewhat depressed industrial area. Hapeville has since been discovered by young professionals looking for historic neighborhoods close to downtown Atlanta, and there has been a great deal of new residential and commercial construction. This new development has led to a revived historic downtown. The Hapeville Historic District is listed on the National Register of Historic Places.

Hapeville has also been discovered by metro Atlanta's arts community and is now an artist colony that is taking shape with the assistance of the Hapeville Arts Alliance.

Significant Characteristics

Since 1947, Hapeville was home to the Ford Atlanta Assembly Plant. Due to Ford closing in 2006, the property was demolished and turned into a mixed-use development. Currently, Porsche North America has built its North America Headquarters on the site along with the Kempton Hotel.

Another main attraction in the City of Hapeville is the Walk of Memories, which is located at American Legion Post 201 and pays tribute to veterans of the U.S. Armed Forces, community, and friends, through a brick walk inscribed with the names of all Georgia residents killed in service including and following WWII. A separate section is reserved for those who served in the military and survived.

Population and Demographics

As of 2019, the City of Hapeville had a population of 6,534. The racial and ethnic composition of the population was 22.7% white, 40.4% black or African American, 2.8% Asian, 6.3% from some other race (0.2% non-Hispanic from some other race) and 4.6% from two or more races. 23.2% of the population was Hispanic or Latino.

At the 2010 census there were 2,750 households, out of which 26.9% had children under the age of 18 living with them. 8.1% of the residents aged 65 or older and females made up 53.4% of the population. The median resident age was 32.9 years old.

The following table describes the population change in the City of Hapeville from 1990 to 2020.

Table 1: Population Change, City of Hapeville, GA

Population Change, City of Hapeville, GA				
Year	1990	2000	2010	2020
Population	5,483	6,180	6,373	6,553

Economy

The median income for a household in the city was $44,881 and 26% of the population living in poverty. The chart below lists a sample of establishments in Hapeville, it is also worth noting the estimated daytime population of Hapeville is greater than 50,000 and a nighttime population of more than 20,000.

Table 2: Main Industries Based on Data from 2021

Industry Description	Number of Establishments
Mercantile	62
Government Services	21
Multi-Family	14
General Business / Services	80
Automotive Services	17
Aviation & Transportation Services	25
Health Care & Social Assistance	31
Hotels / Motels	11
Financial Institutions	8
Food Services	67
Educational / Places of Worship	19
Industrial	5

Below is a list of City issued permits for the construction of new single-family homes and new commercial structures, dating from 2015 to present.

Table 3: New Construction Permits

Year	Single Family Permits	Commercial Permits
2015	5	0
2016	13	3
2017	13	2
2018	18	2
2019	17	2
2020	28	2
2021	18	2
Pending	109	20

Critical Facilities & Infrastructure

Hapeville's Police Department is composed of Administration, Uniform Patrol Division, Detective Division, Code Enforcement, Animal Control, Communications, and Crime Prevention. The Hapeville Fire Department has 30 Firefighter/EMTs. The Administration has three personnel: the Fire Chief, Fire Marshal, and an Administrative Assistant.

The school system within the city limits consists of the following capacities:

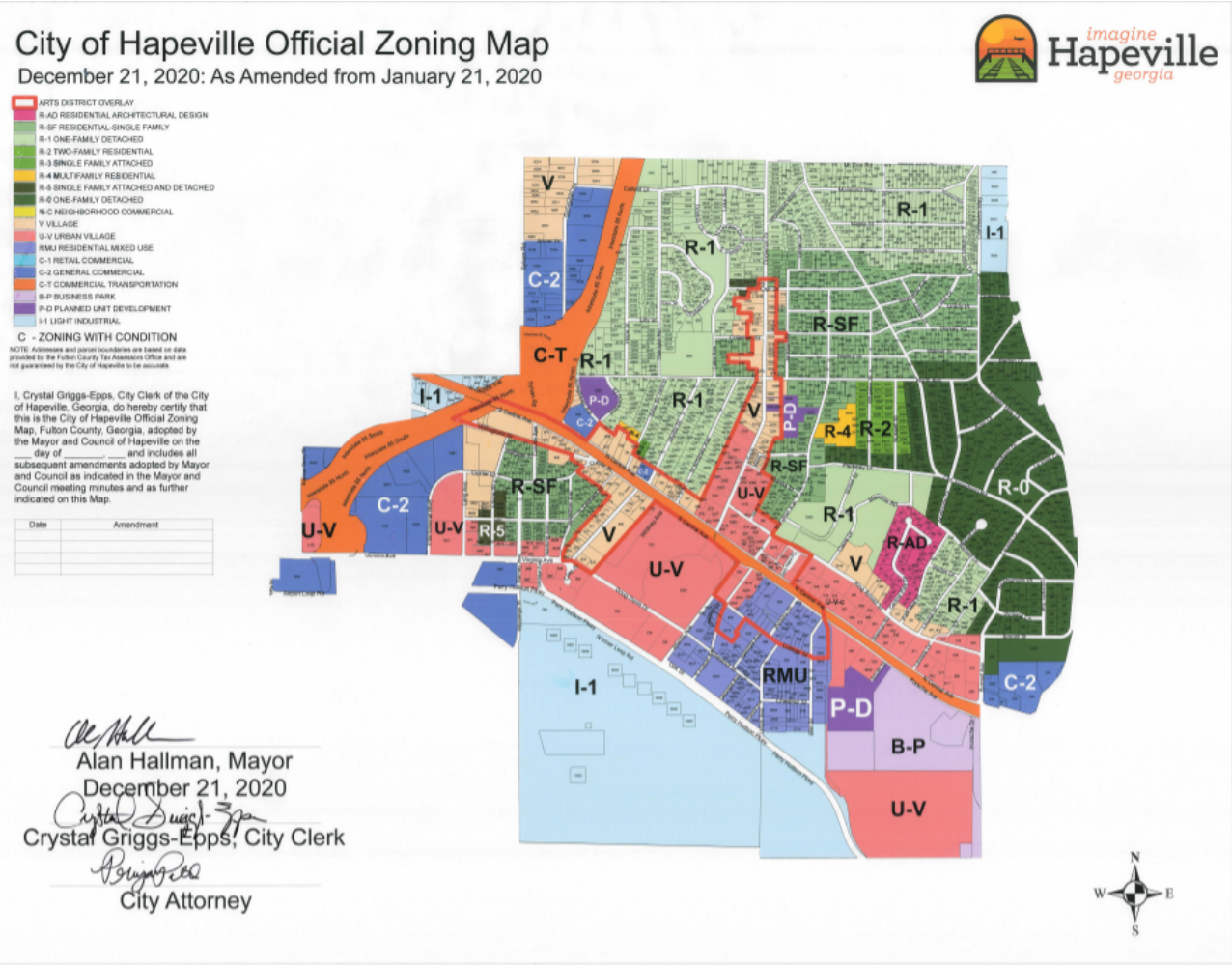
Table 4: School Infrastructure within City Limits

School	Type	Enrollment
Nursery School, pre-school	Public	68
Kindergarten to 12th grade	Public	1,347
College, undergraduate	NA	NA
Graduate, professional school	NA	NA

Land Use & Development Trends

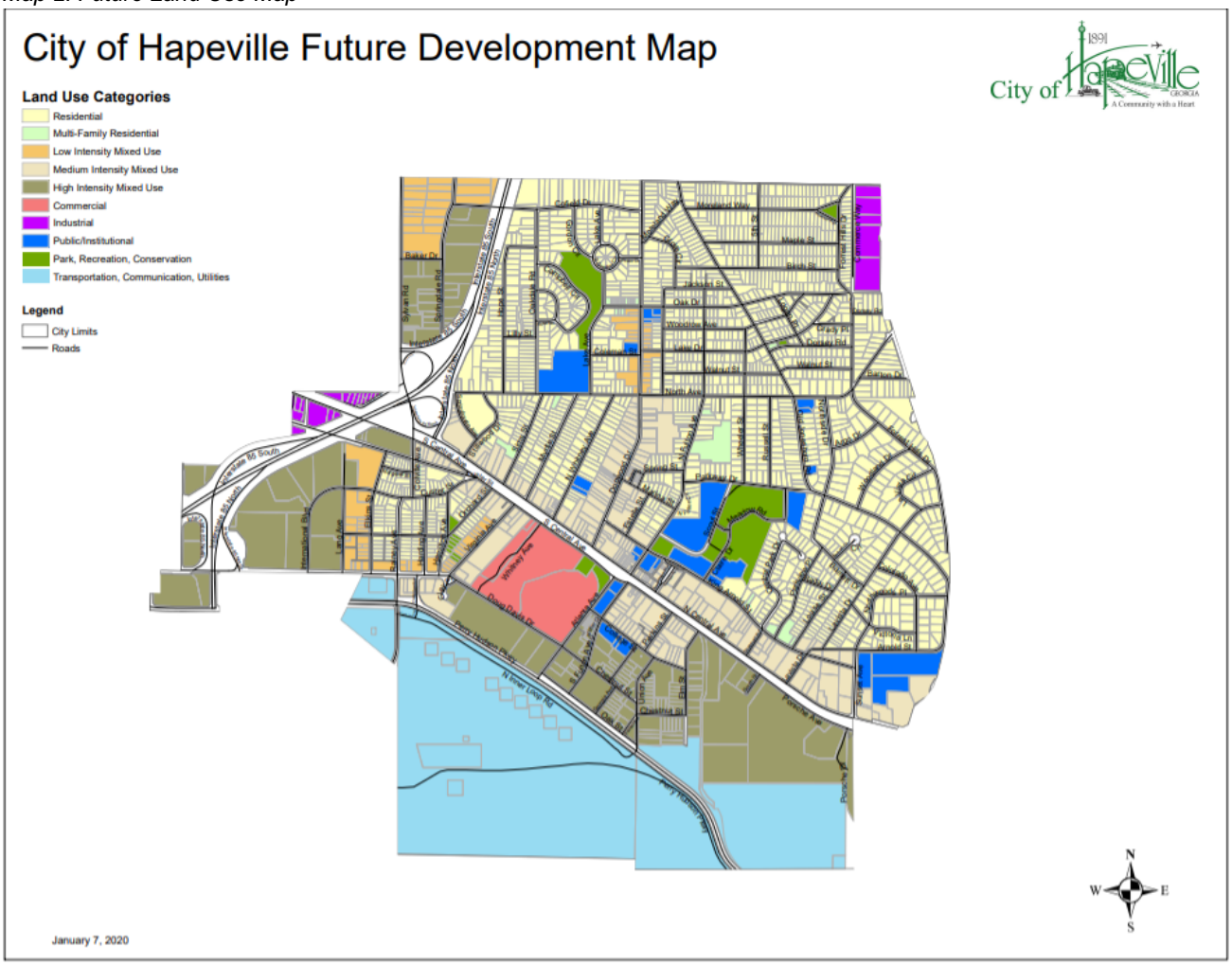
Hapeville is 2.4 square miles with all of that being land. Below is a series of existing and proposed future development maps from the 2025 Comprehensive Plan showing the use of land within theHapeville City limits. A map of the Hapeville Flood Zones is also included.

Map 1: Existing Land Use Map



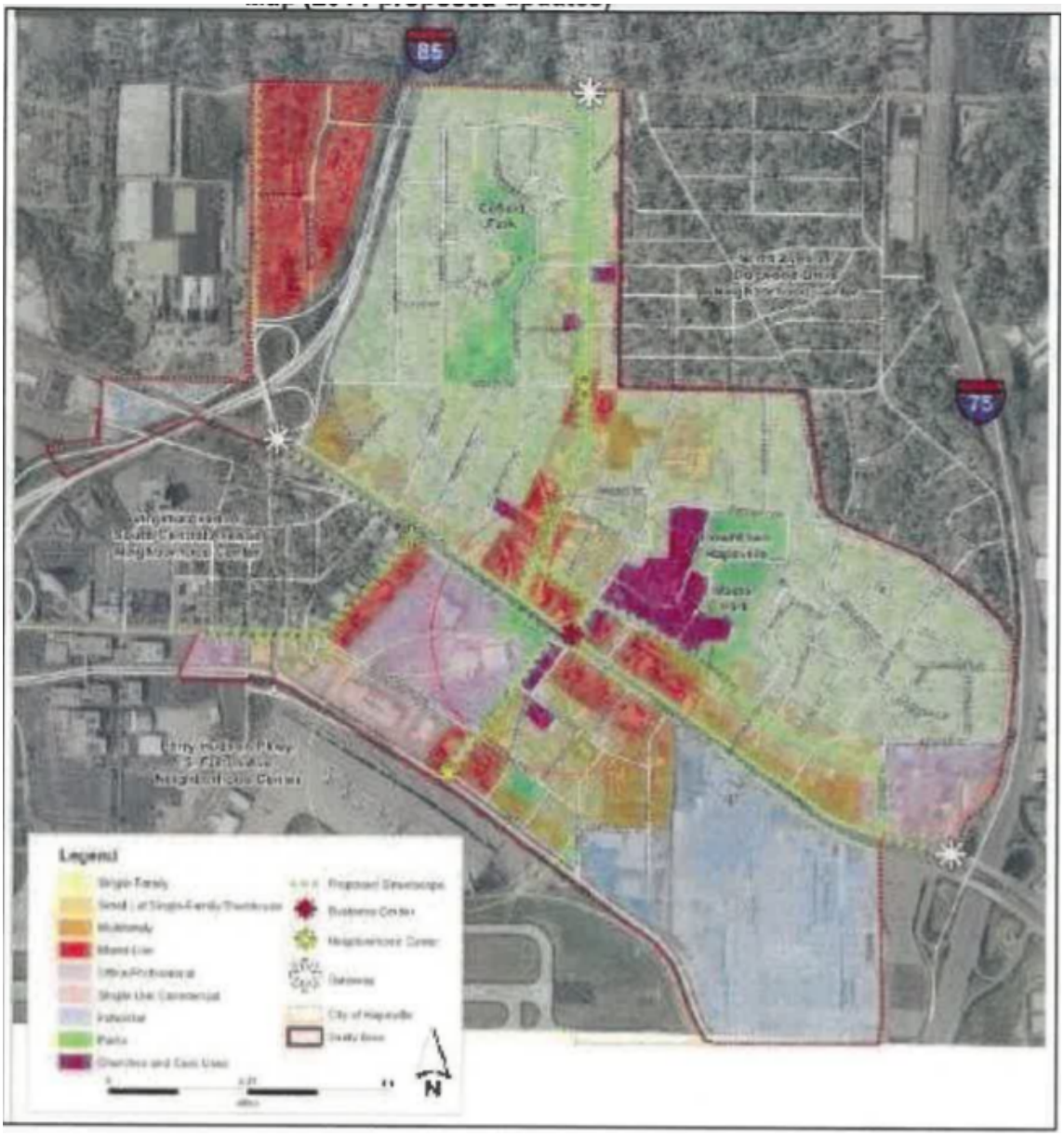
Map Source: City of Hapeville, 2025 Comprehensive Plan

Map 2: Future Land Use Map



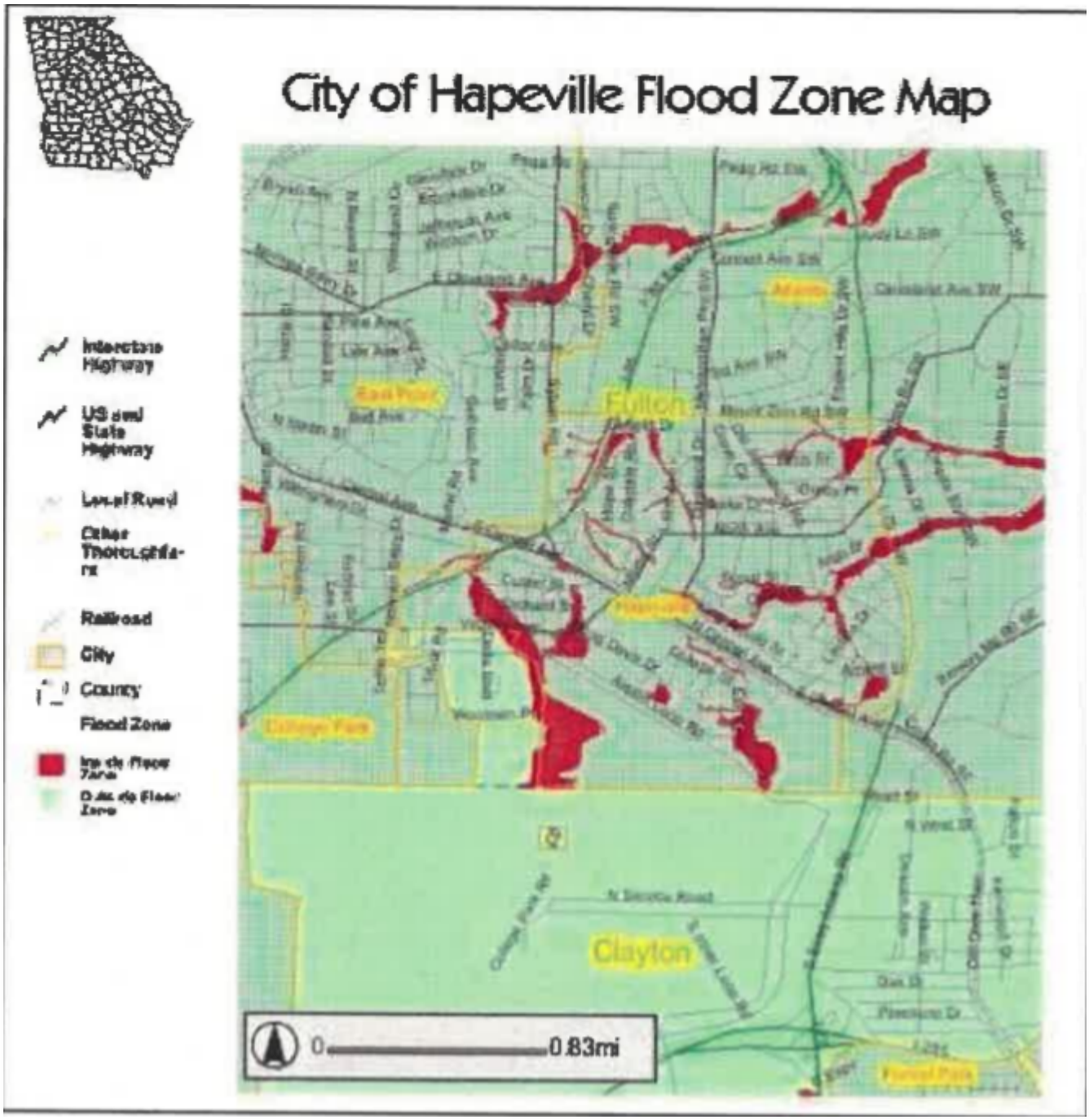
Map Source: City of Hapeville

Map 3: Future Land Use Maps (2014 proposed updates)



Map Source: Source

Map 4: Hapeville Flood Zone Map



The following table summarizes future major developments within the City of Hapeville.

Table 5: Future Development

Property or Development Name	Type (e.g. Res., Comm.)	# of Units/Structures	Address and Block/Lot	Known Hazard Zones	Description/Status of Development
750,000+ sq. ft. commercial development	Commercial	7	City Wide	None	Planning Phase
Townhomes	Residential	300+	City Wide	None	Planning Phase
Apartments	Residential	575 units	City Wide	None	Planning Phase

Hazard Risk Assessment, City of Hapeville, GA

Hazard Identification & Risk Assessment

There are 12 of 13 natural hazards known to pose risk to Fulton County and one or more of its participating jurisdictions. These include Dam Failure, Drought, Earthquake, Flood, Geological Hazards, Extreme Heat, Severe Weather, Tornado, Tropical Systems, Severe Winter Weather, and Wildfire/Wildland Urban Interface Fire. Wind, though identified as a separate hazard in the 2019 Georgia Hazard Mitigation Strategy Standard and Enhanced Plan, is included in the Severe Weather hazard in this plan update.

The following table outlines the City of Hapeville general risk to the profiled hazards. The rankings are based on a variety of factors, including 1) a composite evaluation of this plan's risk assessment, namely a hazard's probability of occurring in the future, 2) the vulnerability of the jurisdiction to a specific hazard, 3) the intensity of past hazard impacts, and 4) a joint evaluation of local experts and plan stakeholders. The category/range (per year) is based on the following scale: **Unlikely (0%), Occasional (1-10%), Likely (11%-50%), and Highly Likely (51%-100%).**

Table 6: Risk Assessment Matrix, Hapeville, GA

Risk Assessment Matrix, Hapeville, GA		
Hazard	**Category**	**Range**
Dam Failure	Occasional***	-
Drought	Highly Likely	295%
Earthquake	Occasional**	-
Flood	Occasional	2%
Geological Hazards	Highly Likely	-
Extreme Heat	Highly Likely	-
Severe Weather*	Highly Likely*	-
Severe Winter Weather	Highly Likely	-
Tornado	Highly Likely	160%
Tropical Systems	Highly Likely	84%
Wildfire/Wildland Urban Interface Fires	Occasional*****	-

**The hazard of Severe Weather considers the instances of thunderstorms, lightning, hail, and wind, each with a varying degree of occurrence/probability.*

*** The hazard of Earthquake is considered occasional but without a definite calculation of probability. This is due to there being no record/data of earthquake in the planning period since the last plan update (2016).*

**** Calculating future probability is not the only predictor of future occurrences. In the last five years, Fulton County and its participating jurisdictions have documented no cases of Dam Failure. Though the County has experienced occurrences that were listed in its HMP update (2016), the likelihood of a dam failure event happening in the planning area is considered **occasional.***

*****The NOAA/NCEI Storm events database did not have any incidences of storm data records related to Flood (including flash flood) for the Cities of Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton from January 1, 1970 – July 31, 2021. Since flooding is possible, the Cities Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton's Probability of Future Events is considered **occasional.***

******The hazard of Wildfire/Wildland Urban Interface Fire is considered **occasional** but without a definite calculation of probability. This is due to there being no record/data of wildfire in the planning period since the last plan update (2016).*

Hazard Event History & Community Impacts

There have been no natural hazard events specific to the City of Hapeville, as recorded by the National Oceanic and Atmospheric Administration (NOAA) and its National Centers for Environmental Information (NCEI), between January 1, 2016, and October 31, 2021.

Mitigation Capabilities & Actions, City of Hapeville, GA

Capabilities Assessment

Legal and Regulatory Capabilities

The Legal and Regulatory Capability survey documents authorities available to the jurisdiction and/or enabling legislation at the state level affecting planning and land management tools that support local hazard mitigation planning efforts. The identified planning and land management tools are typically used by states and local and tribal jurisdictions to implement hazard mitigationactivities. The table below summarizes the regulatory tools that are available to the municipality.

Table 7: Legal and Regulatory Capability

Tool / Program	Do You Have This?	Authority	Dept./Agency Responsible	Code Citation and Comments
Planning Capability				
Master Plan	Yes	Local		
Capital Improvements Plan	Yes	Local	Community Services	
Floodplain Management / Basin Plan	Yes	Local	Community Services	
Stormwater Management Plan	Yes	Local	Community Service	
Open Space Plan	Not at this time			
Stream Corridor	Not at this time			
Watershed Management or Protection Plan	Not at this time			
Economic Development Plan	Not at this time		Economic Development Department	In Process
Comprehensive Emergency Management Plan	Not at this time		Fire Department	In Process

Tool / Program	Do You Have This?	Authority	Dept./Agency Responsible	Code Citation and Comments
Planning Capability				
Emergency Operation Plan	Yes		Fire Department	In Process
Post-Disaster Recovery	Not at this time		Fire Department	In Process
Transportation Plan	Not at this time			
Strategic Recovery Planning	Not at this time			
Other Plans				
Regulatory Capability				
Building Code	Yes	State & Local	Community Services	International Building Code
Zoning Ordinance	Yes 6-3-14			
Subdivision Ordinance	Yes 8-19-14			
National Flood Insurance Program (NFIP) Flood Damage Prevention	Yes	Federal, State, Local	Community Services	
NFIP: Cumulative Substantial Damages	Not at this time			
NFIP: Freeboard	Yes	State, Local		State mandated BFE+2 for single and two-family residential construction, BFE+1 for all other types of construction
Growth Management	Not at this time			
Site Plan Review Requirements	Yes 1-1-2012	Local	Community Services	
Storm water Management Ordinance	Yes 9-6-1994			
Municipal Separate Storm Sewer System (MS4)	Yes 4-3-2010			
Natural Hazard Ordinance	Not at this time			
Post-Disaster Recovery Ordinance	Not at this time			
Real Estate Disclosure Requirement	Yes	State		
Other [Special Purpose Ordinances (i.e., sensitive	Not at this time			

Tool / Program	Do You Have This?	Authority	Dept./Agency Responsible	Code Citation and Comments
Regulatory Authority				
Growth Management Ordinances	Not at this time			
Site Plan Review Requirements	Yes 1-01-2012	Local	Community Services	
Storm Water Management Ordinances	Yes 9-06-1994			
Municipal Separate Storm Sewer System (MS4)	Yes 4-03-2010			
Natural Hazard Ordinance	Not at this time			
Post-Disaster Recovery Plan	Not at this time			
Real Estate Disclosure Requirement	Yes	State		
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	Not at this time			

Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to Hapeville.

Table 8: Administrative and Technical Capabilities

Resources	Is This in Place?	Department/Agency/Position
Administrative Capability		
Planning Board	Yes	
Mitigation Planning Committee	Not at this	
Environmental Board/Commission	Not at this time	
Open Space Board/Committee	Not at this time	
Economic Development Commission/Committee	Not at this time	
Maintenance Programs to Reduce Risk	Not at this time	
Mutual Aid Agreements	Yes	Fire and Police
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	Community Services
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Community Services
Planners or engineers with an understanding of natural hazards	Yes	Community Services
NFIP Floodplain Administrator	Yes*	
Surveyor(s)	Not at this time	

Resources	Is This in Place?	Department/Agency/Position
Technical/Staffing Capability		
Personnel skilled or trained in GIS and/or HAZUS- MH applications	Not at this time	
Scientist familiar with natural hazards	Not at this time	
Emergency Manager	Yes	Fire Department / David Bloodworth
Grant Writer(s)	Yes	City Hall / Fire Department
Staff with expertise or training in benefit/cost analysis	Yes	Finance
Professionals trained in conducting damage assessments	Yes	Community Services / Fire Department

Fiscal Capability

The table below summarizes financial resources available to Hapeville.

Table 9: Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes
Impact Fees for homebuyers or developers of new development/homes	Not at this time
Stormwater utility fee	Yes
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	Yes
Withhold public expenditures in hazard-prone areas	Not at this time
Other federal or state funding programs	Yes
Open space acquisition funding programs	Not at this time
Other	Special District Fire Tax

Community Classifications

The following table below summarizes classifications for community program available to Hapeville.

Table 10: Community Classifications

Program	Do You Have This?	Classification	Date Classified
Community Rating System (CRS)	Not at this time		
Building Code Effectiveness Grading Schedule (BCEGS)	Not at this time		
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	ISO rating of 2	
Storm Ready	Not at this time		
Firewise	Not at this time		
Disaster/Safety Programs in/for Schools	Yes		
Organizations with Mitigation Focus (advocacy group, non-government)	Yes		
Public Education Program/Outreach (through website, social media)	Yes		
Public-Private Partnerships	Yes		

Hazard Mitigation Capability

The table below summarizes a self-assessment of Hapeville's current hazard mitigation capability.

Table 11: Hazard Mitigation Capability

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, please indicate your obstacles.)*	Moderate	High
Planning and Regulatory Capability		X	
Administrative and Technical Capability		X	
Fiscal Capability		X	
Community Political Capability		X	
Community Resiliency Capability	Very limited staff		
Capability to Integrate Mitigation into Municipal Processes and Activities	Very limited staff		

National Flood Insurance Program (NFIP) Participation

NFIP Floodplain Administrator: Lemuel Eubanks, Water/Sewer Coordinator

The City of Hapeville is currently an active member of the NFIP, in good standing with no outstanding compliance issues. At the time of data collection, it was undetermined when their last Community Assistance Visits (CAV) were completed.

Loss History and Mitigation

Hapeville does not currently maintain a list of properties that have been flood damaged; however, there have been five business properties and three structures damaged on South Central Ave. Fire Station 2 houses first responder fire apparatus and crew 24-365 and is also flooded routinely during inclement weather. To date no property owners have expressed an interest in the mitigation process.

Planning and Regulatory Capabilities

Hapeville does use local ordinance, plans and programs to support floodplain management. TheCity's floodplain management regulations and ordinances meet the minimum requirements set forth by both the Federal Emergency Management Agency (FEMA) and the State of Georgia. The City of Hapeville Engineer reviews site plans, map revision and removal requests. We will sign aletter of concurrence for removal from flood plan if resident certifies it with engineer.

Actions to Strengthen the Program

During the data collection process staff did not indicate any perceived barriers to running an effective floodplain program in Hapeville; however, they did state an interest in receiving more training and/or attending conferences if the future.

Community Rating System

Hapeville does not currently participate in the CRS program.

Mitigation Actions

Each jurisdiction participating in this plan is responsible for implementing specific mitigation actions as prescribed in the adopted Mitigation Action Plan. In each Mitigation Action Plan, every proposed action is assigned to a specific local department or agency in order to assign responsibility and accountability and increase the likelihood of subsequent implementation. This approach enables individual jurisdictions to update their unique mitigation strategy as needed without altering the broader focus of the countywide plan. The separate adoption of locally specific actions also ensures that each jurisdiction is not held responsible for monitoring and implementing the actions of other jurisdictions involved in the planning process. A complete list of countywide mitigation strategies is provided in Section 5 of this plan update.

Completed Mitigation Actions (2016-2021)

The City of Hapeville identified seven (7) mitigation actions in the previous (2016) MJHMP update. Of the 7 mitigation actions, the City of Hapeville completed 6 during the five-year planning period (2016-2021).

Table 12: Completed Mitigation Projects Since 2016, Hapeville, GA

Completed Since 2016, Hapeville, GA		
Project Number	**2016 Mitigation Action**	**Responsible Party/ies**
30.0001	Install surge protection for City Hall which houses server databases	City of Hapeville Community Services
30.0002	Install surge protection at the Police Station which houses its own database servers	City of Hapeville Community Services
30.0003	Install surge protection at Fire Station #2. Lightning surges can damage older repeaters, which serve as their backup communications system	City of Hapeville Community Services
30.0004	Install surge protection at the Community Services building. This building which IT Administration; Planning & Zoning; Public Works Administration; Plan Review Data and other data records. All GIS data is located at this building as well which is on a server with no external backup.	City of Hapeville Community Services
30.0006	Improve drainage in South-Central Avenue by increasing the size of the underground storm drain. Flooding impacts the business district and floods on both sides of the railroad tracks. Businesses are moving out of the area causing economic harm to the city. It also results in flooding at the fire station located at 870 S. Central Ave in which flood waters have flowed through the front garage door and out the back. The city would like to reroute the piping under the railroad, Refer to Hapeville flooding map for location of these choke points.	City of Hapeville Community Development
30.0007	Perform curb modification on Oakdale Road, which currently has header rocks. Installation of curb and gutters will improve storm water drainage	City of Hapeville Community Services

Identified Mitigation Actions (2021-2026)

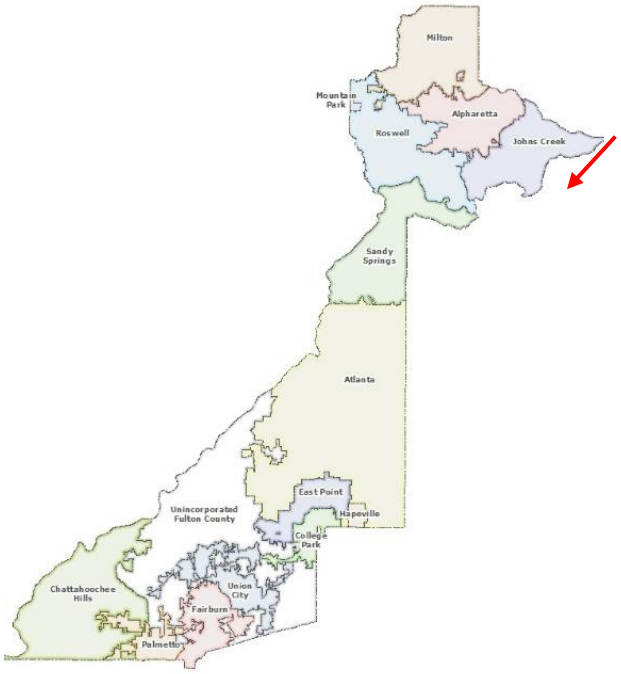
The following table reflects the Identified projects for the 2022 MJHMP update. (2016) HMP update, all of which are proposed mitigation actions for the 2021 HMP update. Additionally, the table includes any/all new mitigation actions identified by the City of Hapeville for the following five-year planning period (2022-2027).

Table 13: Identified Mitigation Actions (2022-2027), Hapeville, GA

Identified Mitigation Actions, Hapeville, GA								
Project Number	**Mitigation Action/ Description**	**Status as of 2021 HMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
30.0006	Replace Current fire station that was built in the 1940's	Proposed project for the 2021 Plan Update	City of Hapeville Fire Department	Wildfire/Wildland Urban Interface Fire	$1,800,000	Grant funding and/or general funds	2022-2027	Medium 26
30.0007	Replace current fire station that was built in the 1960's. Also, possibly add a training tower	Proposed project for the 2021 Plan Update	City of Hapeville Fire Department	Wildfire/Wildland Urban Interface Fire	$2,500,000	Grant funding and/or general funds	2022-2027	Medium 28
30.0008	Replace current administrative offices, a house that was built in 1924. We would also look at putting in a conference/training room that could double as EOC	Proposed project for the 2021 Plan Update	City of Hapeville Fire Department	All Hazards	$1,800,000	Grant funding and/or general funds	2022-2027	Medium 28

Jurisdiction Profile: City of Johns Creek, GA

History & Geography



The City of Johns Creek began as a small, picturesque outpost nestled along the Chattahoochee River and the gentle foothills of North Georgia in the early 19th century. Fast-track development began in 1981 with the development of Technology Park/Johns Creek, a thriving economic driver that today has attracted numerous Fortune 100 firms and professionals from all over the globe. The city was incorporated in 2006. Today, spanning 30.8 square miles and with a population of 82,453 (U.S. Census 2020), the city is the 10th largest in Georgia. Johns Creek is also recognized as one of the safest cities in Georgia (#2 Safest City in Georgia, SafeWise, 2020) and one of the best places to live in the state (#2 Best Place to Raise a Family in Georgia, Niche.com, 2020, and #3 Best Places to Live in Georgia, Niche.com, 2020).

The City is a northeastern suburb of Atlanta. Johns Creek is bounded by Roswell to the west and south, Alpharetta to the northwest, Forsyth County and the City of Suwanee to the north, and Gwinnett County to the south and east.

In the early 19th century, the Johns Creek area had several trading posts along the Chattahoochee River. Some trading posts gradually became crossroads communities where pioneer families gathered to visit and sell their crops. By 1820, the community of Sheltonville was a ferry-crossing site, with the McGinnis Ferry and Rogers Ferry carrying people and livestock across the river for a small fee. Further south, the Nesbit Ferry did the same near another crossroads community known as Newtown. In 1831, much of the land in the former Cherokee Nation north of the Chattahoochee was combined into the massive Cherokee County. When Johns Creek County was formed in 1858, the Johns Creek area was folded into it. In the 1930s, during the Great Depression, Johns Creek County was dissolved and all of its land was then absorbed into Fulton County.

By 2000, a grassroots movement to incorporate the Johns Creek area into a City was slowly developing. Residents wanted more control over issues such as traffic, growth, development and their quality of life. In 2005, a legislative campaign was started to incorporate the Johns Creek community. House Bill 1321 was passed by the state legislature, signed by Gov. Sonny Perdue in March 2006, and approved by the residents of northeast Fulton County in a July 18, 2006, voter referendum. In November 2006, the City's first elected officials were voted into office, with the City of Johns Creek becoming official December 1, 2006.

According to Money Magazine, Johns Creek is the 13th highest-earning City in the United States.

In 1981, a group of Georgia Institute of Technology graduates bought 1,700 acres of farmland and woods near McGinnis Ferry and Medlock Bridge Roads for a high-tech office park. The new office park was to mirror one built in 1970 in nearby Peachtree Center, known as Technology Park/Atlanta. This is the first reference to Johns Creek as a place. The area grew over the years to become the home of 200 companies with nearly 11,000 people spread over 6,000,000 square feet of office, retail, and industrial space. With the jobs came houses and shopping centers, and the population increased to about 60,000.

Significant Characteristics

Today, Johns Creek has metro Atlanta's only part-time, fully professional symphony orchestra, the Johns Creek Symphony Orchestra under the leadership of Music Director, J. Wayne Baughman, the orchestra performs several times each year. Johns Creek also is the home to the Johns Creek Arts Center, which offers classes and camps for aspiring artists in multiple media throughout the year.

There also are several festivals year-round, such as Founders Week in December in which the community celebrates the City's incorporation with activities and a parade. The "Fall Family Festival" in September is a community get-together at Newtown Park. Arts on the Creek is a juried art show, and also has musical and stage performers. "The Taste of Johns Creek" is an annual food festival in the fall that features more than 40 local restaurants with proceeds supporting public school extracurricular activities.

Johns Creek also has the Autrey Mill Nature Preserve and Heritage Center, which offers a replica of a Creek Indian hut, a 1800s historic village, and wildlife in 46 acres of woodlands. Biking the four-mile Greenway along Georgia 141 is also a popular pastime. The City has plans to develop and connect other pathways to the Greenway, which will tie in with other cities, adding several miles of trails.

Population & Demographics

As of the 2020 Decennial Census, there were **82,453** people, **25,391** households, and **11,860** families residing in the City of Johns Creek. This equates to a population density of 2,446.8 people per square mile. The population, as evidenced by the following table, continues to increase year after year, decade after decade.

Table 1: Population Change, City of Johns Creek

Population Change, City of Johns Creek, GA			
Year	2000	2010	2020
Population	N/A	76,728	82,453

Given these numbers, Johns Creek experienced a population increase of 1.078% between 2010 and 2020. Of the population, 4.7% are under the age of five, 26.6% are under the age of 18, 58% are age 18 and over, and 10.7% are age 65 and over. The media age was 41.1 years.

Of the 27,941 households in Johns Creek 74% were married couples living together, 3.2% had a male householder (no spouse present), and 9% had a female householder (no spouse present). The average family size in Johns Creek was 3.

According to the 2020 Decennial Census, there were also 29,139 housing units for an average density of 30.73 per square mile.

The following table provides information specific to Johns Creek's housing stock through the issuance of single-family new house construction building permits over the last 20 years (2001-2021). However, since not all permits become actual housing starts, and starts lag the permit stage of construction, this number does not represent total new construction (2020) but should provide a general indicator on construction activity and the local real estate market.

Table 2: Housing Stock History, Building Permits, Johns Creek, GA

Housing Stock History, Building Permits, Johns Creek, GA	
Year	**# of Permits Issued**
2001 - 2009	418
2010	139

2011	133
2012	177
2013	203
2014	115
2015	293

The Local Economy

As indicated by the 2020 census, the median income for a household in the City of Johns Creek was $136,047, and the median income for a family was $144,894. The per capita income for Johns Creek was unavailable for 2020; however, the per capita income (12 months, 2019) was $58,377. In 2020, approximately 3.5% of the city's population were living below the poverty line, including 7.4% under the age of 18, 5.0% between the ages of 18 and 64, and 3.4% at age 65 and over.

According to the 2019 American Community Survey 1-year Estimates, Johns Creek has an employment rate of 68.1%, which is above the State of Georgia's employment rate of 59.6%. The following table shows the city's leading industries and most recent employment percentages.

Table 3: Leading Industries, Employment Percentages, Johns Creek, GA (from 2016 MJHMP)

Leading Industries, Employment Percentages, Johns Creek, GA		
Industry Description	**Number Establishments**	**Number of Employees**
Wholesale Trade	67	231
Retail Trade	149	1,831
Information	35	250-499
Real Estate, Rental, Leasing	99	250-499
Professional, Scientific and Technical Services	581	1,819
Administrative and Support and Waste Management and Remediation Service	111	3,411
Educational Services	61	935
Health Care and Social Assistance	160	2,402
Accommodation and Food Services	87	250-499
Other Services	137	2,100

Critical Facilities & Infrastructure

As previously stated, certain facilities have a net positive value on the community, i.e., they contribute to the public good by facilitating the basic functions of society. These facilities maintain order, public health, education, and help the local economy function. Additionally, there are facilities and infrastructure integral to disaster response and recovery operations. Conversely, some of these are of extreme importance due to the negative externalities created when impacted by a disaster. What fits these definitions varies slightly from community to community, but the definitions remain as a guideline for identifying critical infrastructure and facilities.

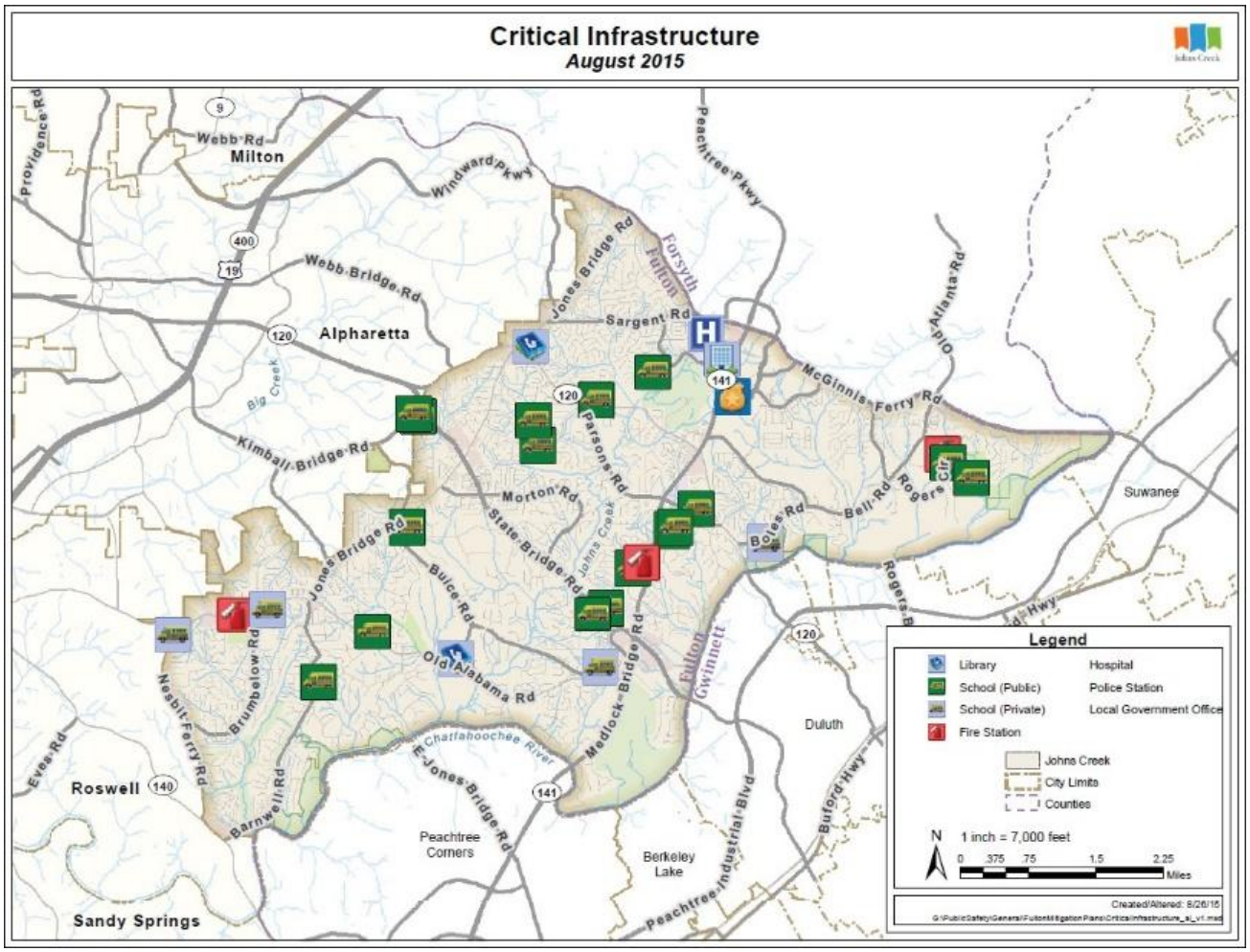
Additionally, the school system within the city limits consists of the following capacity:

Table 4: School Infrastructure within City Limits, Johns Creek, GA (from 2016 MJHMP)

School Infrastructure within City Limits, Johns Creek, GA		
School	**Type**	**Enrollment (2016)**
Nursery School, Pre-School	Public	43
Kindergarten to 12th Grade	Public	23,697
College, Undergraduate	Public	NA
Graduate, Professional School	Public	NA

The following map depicts the locations of critical facilities within the City of Johns Creek.

Map 1: Critical Facilities & Infrastructure, City of Johns Creek, GA



Map Source: AFCEMA

Land Use & Development Trends

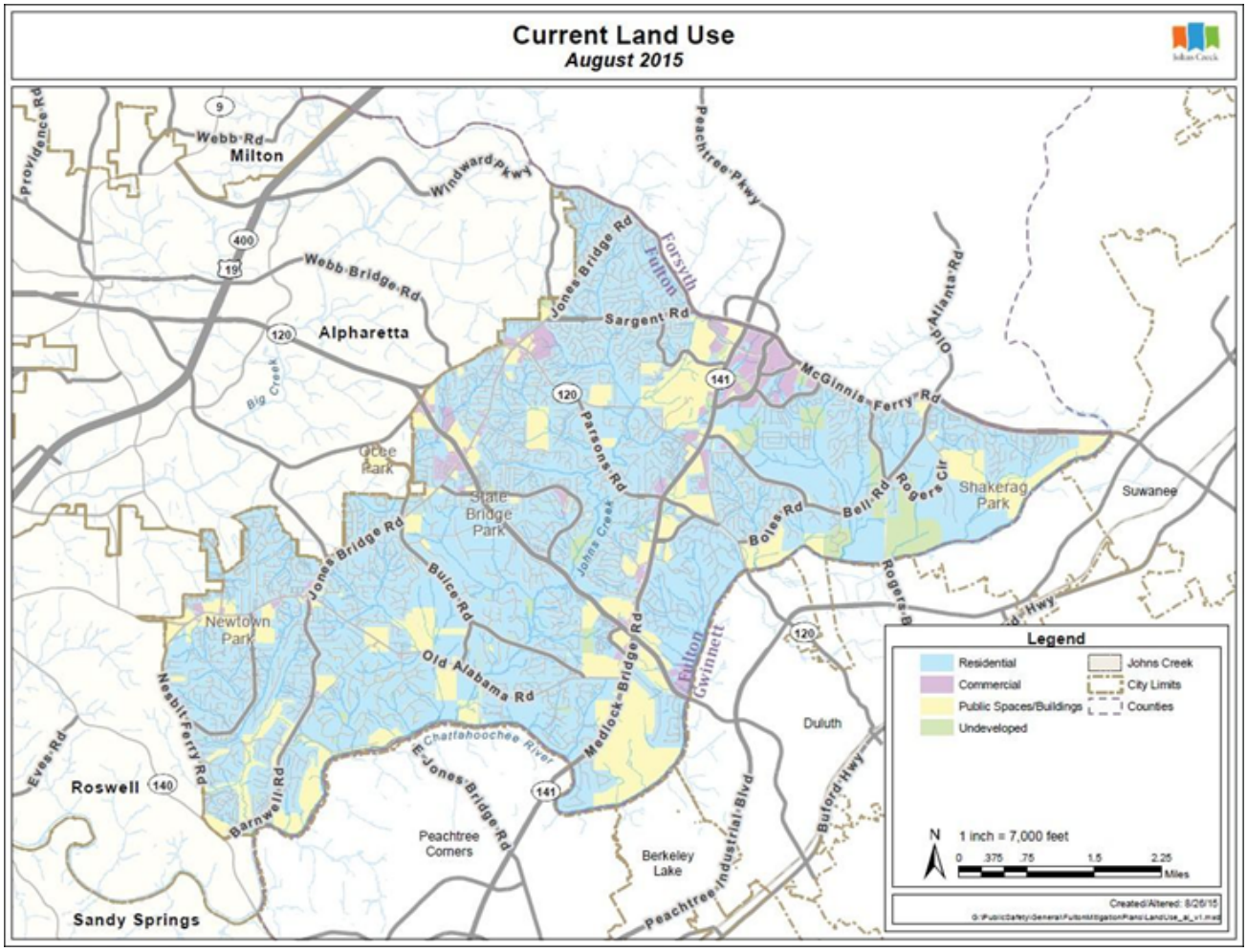
To meet the current and future demands of an increasing population, the City of Johns Creek must continue to implement proactive measures pertaining to land use and development. This is especially true of housing, transportation, education, historic preservation, and the environment, among other things.

According to the U.S. Census Bureau, the City of Johns Creek has a land area of 30.73 square miles. It is generally categorized as residential but there are major areas of commercial activity.

Johns Creek does not have many areas designed for industrial use.

The map below shows the distribution of major land use categories within the city limits.

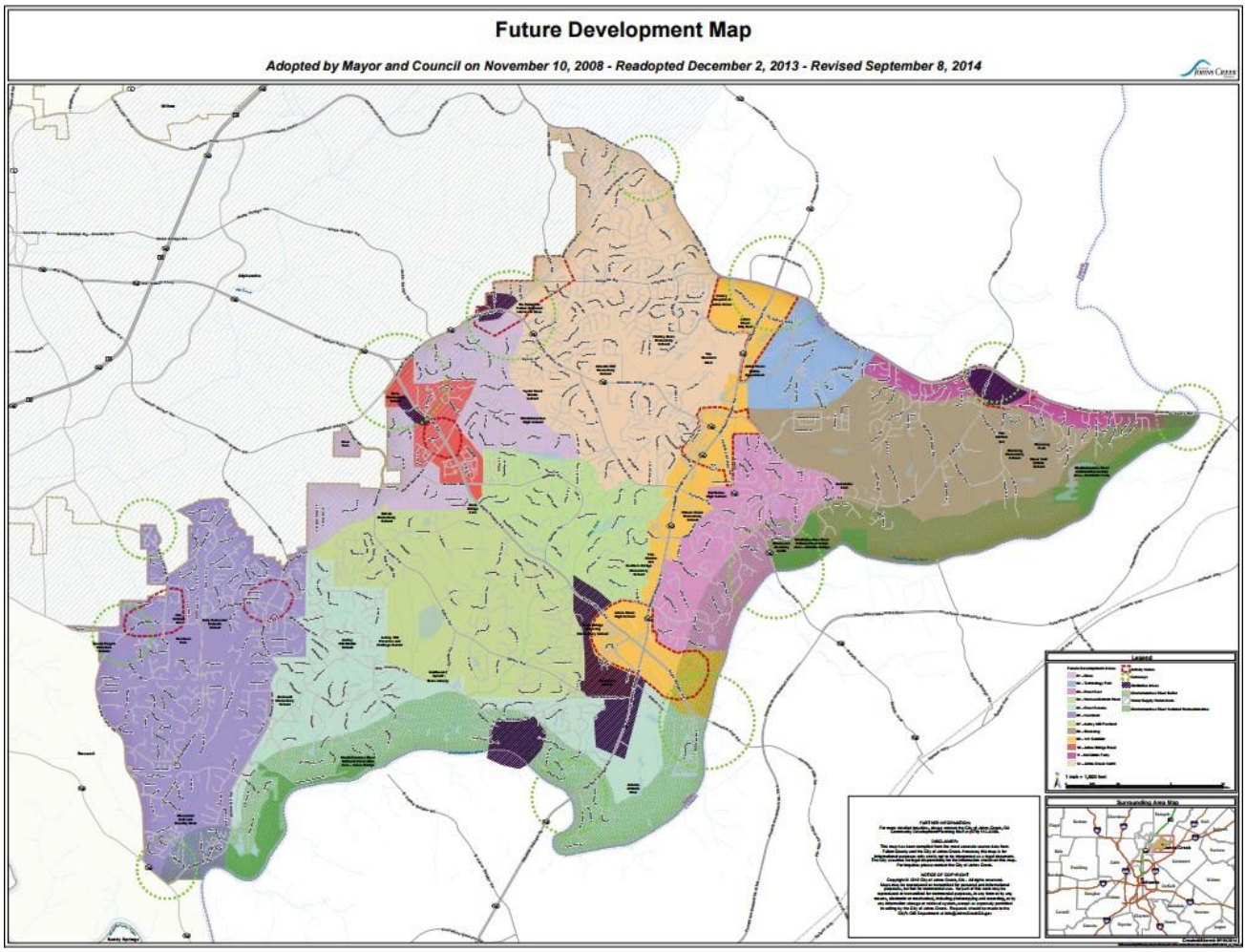
Map 2: Existing Land Use, Johns Creek, GA



Map Source: Source

The following map demonstrates the City of Johns Creek's potential growth and development.

Map 3: Development Nodes, Character Areas & Future Land Use, Johns Creek



Map Source: Source

Hazard Risk Assessment, City of Johns Creek, GA

Hazard Identification & Risk Assessment

There are 12 of 13 natural hazards known to pose risk to Fulton County and one or more of its participating jurisdictions. These include Dam Failure, Drought, Earthquake, Flood, Geological Hazards, Extreme Heat, Severe Weather, Tornado, Tropical Systems, Severe Winter Weather, and Wildland/Urban Interface Fires. Wind, though identified as a separate hazard in the 2019 Georgia Hazard Mitigation Strategy Standard and Enhanced Plan, is included in the Severe Weather hazard in this plan update.

The following table outlines the City of Johns Creek general risk to the profiled hazards. The rankings are based on a variety of factors, including 1) a composite evaluation of this plan's risk assessment, namely a hazard's probability of occurring in the future, 2) the vulnerability of the jurisdiction to a specific hazard, 3) the intensity of past hazard impacts, and 4) a joint evaluation of local experts and plan stakeholders. The category/range (per year) is based on the following scale: **Unlikely (0%), Occasional (1-10%), Likely (11%-50%), and Highly Likely (51%-100%).**

Table 4: Hazard Risk Assessment, Johns Creek, GA

Risk Assessment Matrix, Johns Creek, GA		
Hazard	**Category**	**Range**
Dam Failure	Occasional***	-
Drought	Highly Likely	295%
Earthquake	Occasional**	-
Flood	Occasional	-
Geological Hazards	Highly Likely	-
Extreme Heat	Highly Likely	-
Severe Weather (including Wind)	Highly Likely*	-
Severe Winter Weather	Highly Likely	-
Tornado	Highly Likely	160%
Tropical Systems	Highly Likely	84%
Wildfire/Wildland Urban Interface Fires	Occasional*****	-

**The hazard of Severe Weather considers the instances of thunderstorms, lightning, hail, and wind, each with a varying degree of occurrence/probability.*

***The hazard of Earthquake is considered occasional but without a definite calculation of probability. This is due to there being no record/data of earthquake in the planning period since the last plan update (2016).*

****Calculating future probability is not the only predictor of future occurrences. In the last five years, Fulton County and its participating jurisdiction do not have any documented cases of Dam Failure. Though the County has experienced occurrences that were listed in its HMP update (2016), the likelihood of a dam failure event happening in the planning area is considered* ***occasional.***

******* Note:*** *The NOAA/NCEI Storm events database did not have any incidences of storm data records related to Flood (including flash flood) for the Cities of Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton from January 1, 1970 – July 31, 2021. Since flooding is possible, the Cities Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton's Probability of Future Events is considered* ***occasional.***

******The hazard of Wildfire/Wildland Urban Interface Fire is considered* ***occasional*** *but without a definite calculation of probability. This is due to there being no record/data of wildfire in the planning period since the last plan update (2016).*

Hazard Event History & Community Impacts

Fulton County has a history of natural hazard events as detailed in this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. The table below presents a summary of natural events that have occurred to indicate the range and impact of natural hazard events in the community. Information regarding specific damages is included if available based on reference material or local sources.

Table 5: Natural Hazards, Previous Occurrences, Johns Creek, GA

Natural Hazards, Previous Occurrences, Johns Creek, GA			
Date	**Hazard**	**Disaster Declaration**	**Description**
July 21, 2018	Thunderstorm	No	$35,000 in damage; no injuries or deaths.
April 19, 2019	Tornado – EF0	No	Some damage to power lines, and infrastructure. No injuries or deaths.

Data Source: NOAA/NCEI Storm Events Database

Mitigation Capabilities & Actions, City of Johns Creek, GA

Capabilities Assessment

The City of Johns Creek has a number of administrative and technical capabilities. City departments include Administrative, Community Development, Court Services, Economic Development, Finance, Human Resources, Information Technology, Public Safety, Public Works and Recreation and Parks. City government includes six council members and a mayor. The City council and mayor all serve a four-year term.

The Legal & Regulatory Capability survey documents authorities available to the jurisdiction and/or enabling legislation at the state level affecting planning and land management tools that support local hazard mitigation planning efforts. The identified planning and land management tools are typically used by states, and local/tribal jurisdictions to implement hazard mitigation activities. The proceeding table summarizes the regulatory tools that are available to the City of Johns Creek.

Planning & Regulatory Capability

Table 6: Planning & Regulatory Capability, Johns Creek, GA

Planning & Regulatory Capability, Johns Creek, GA				
Planning Capability				
Tool/Program	**Do You Have This?**	**Authority**	**Department/Agency Responsible**	**Code Citation & Comments**
Master Plan	Yes	Local		
Capital Improvement Plan	Yes	Local		
Floodplain Management/Basin Plan	Yes	Local		

Planning & Regulatory Capability, Johns Creek, GA				
Planning Capability				
Tool/Program	**Do You Have This?**	**Authority**	**Department/Agency Responsible**	**Code Citation & Comments**
Stormwater Management Plan	Yes	Local		
Open Space Plan	No			
Stream Corridor Management Plan	Yes	County		
Watershed Management or Protection Plan	Yes	County		
Economic Development Plan	Yes	Local		
Comprehensive Emergency Management Plan	Yes	Local		
Emergency Operations Plan	Yes	Local	EM	
Post-Disaster Recovery Plan	Yes	Local	EM	
Transportation Plan	Yes	Local		
Strategic Recovery Planning Report	Yes			
Other Plans				
Regulatory Capability				
Building Code	Yes	State & Local		
Zoning Ordinance	Yes	Local		
Subdivision Ordinance	Yes	Federal, State, Local		
National Flood Insurance Program (NFIP) Flood Damage Prevention Ordinance	Yes	Federal, State, Local		
NFIP: Cumulative Substantial Damages	Not at this time			
NFIP: Freeboard	Yes	State, Local		State mandated BFE+2 for single and two-family residential construction, BFE+1 for all other construction types
Growth Management Ordinances	Not at this time			

Planning & Regulatory Capability, Johns Creek, GA				
Planning Capability				
Tool/Program	**Do You Have This?**	**Authority**	**Department/Agency Responsible**	**Code Citation & Comments**
Site Plan Review Requirements	Yes			
Stormwater Management Ordinance	Yes			
Municipal Separate Storm Sewer System (MS4)	Yes			
Natural Hazard Ordinance	Not at this time			
Post-Disaster Recovery Ordinance	Not at this time			Johns Creek does have a COOP for municipal services
Real Estate Disclosure Requirement	Not at this time			
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	Not at this time			

Administrative & Technical Capability

The following table summarizes potential staff and personnel resources available to the City of Johns Creek.

Table 7: Administrative & Technical Capability, Johns Creek, GA

Administrative & Technical Capability, Johns Creek, GA		
Administrative Capability		
Resources	**Is This in Place?**	**Department, Agency, Position**
Planning Board	Yes	
Mitigation Planning Committee	Yes	
Environmental Board/Commission	Not at this time	
Open Space Board/Committee	Not at this time	
Economic Development Commission/Committee	Yes	
Maintenance Programs to Reduce Risk	Yes	
Mutual Aid Agreements	Yes	

Administrative & Technical Capability, Johns Creek, GA		
Technical/Staffing Capability		
Resources	**Is This in Place?**	**Department, Agency, Position**
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	
Planner(s) or Engineer(s) with an understanding of natural hazards	Yes	
National Flood Insurance Protection (NFIP) Floodplain Administrator	Yes*	
Surveyor(s)	Yes	
Personnel skilled or trained in GIS and/or Hazus-MH applications	Yes	
Scientist familiar with natural hazards	Not at this time	
Emergency Manager	Yes	
Granter Writer(s)	Yes	
Staff with expertise on training in benefit/cost analysis	Yes	
Professional(s) trained in conducting damage assessments	Yes	JCOEM Director

Fiscal Capability

The proceeding table summarizes the financial resources available to the City of Johns Creek.

Table 8: Fiscal Capability, Johns Creek, GA

Fiscal Capability, Johns Creek, GA	
Resources	**Accessible or Eligible to Use?**
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes
Impact Fees for homebuyers or developers of new development/homes	Yes
Stormwater Utility Fee	Yes

Fiscal Capability, Johns Creek, GA	
Resources	**Accessible or Eligible to Use?**
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	Yes
Withhold public expenditures in hazard-prone areas	Yes
Other Federal or State Funding Programs	Yes
Open Space Acquisition Funding Programs	Yes
Other	Yes

Community Classifications

The following table summarizes classifications for community programs available to the City of Johns Creek.

Table 9: Community Classifications, Johns Creek, GA

Community Classifications, Johns Creek, GA			
Program	**Do You Have This?**	**Classification**	**Date Classified**
Community Rating System (CRS)	Yes		
Building Code Effectiveness Grading Schedule (BCEGS)	Yes		
Public Protection (ISO Fire Protection Classes 1-10)	Yes	Class 2	2015
Storm Ready	Yes		
Firewise	Not at this time		
Disaster/Safety Programs in/for Schools	Yes		
Organization(s) with Mitigation Focus (Advocacy Group, Non-Government)	Yes		
Public Education Program/Outreach (through website, social media, etc.)	Yes		
Public-Private Partnerships	Yes		

**NP = Not Participating, *N/A = Not Applicable, - =Unavailable, TBD = To Be Determined.*

Hazard Mitigation Capability

The table below summarizes a self-assessment of Johns Creek's current hazard mitigation capability.

Table 10: Hazard Mitigation Capability, Johns Creek, GA

Hazard Mitigation Capability, Johns Creek, GA			
Area	Degree of Hazard Mitigation Capability		
	Limited (If so, please indicate any/all obstacles)	Moderate	High
Planning & Regulatory Capability			X
Administrative & Technical Capability			X
Fiscal Capability		X	
Community Political Capability			X
Community Resiliency Capability			X
Capability to Integrate Mitigation into Municipal Processes & Activities			X

National Flood Insurance Program (NFIP) Participation

NFIP Floodplain Administrator: Gilbert Quinones

Johns Creek is currently an active member of the NFIP, in good standing with no outstanding compliance issues. Their last Community Assistance Visits (CAV) was completed in 2015.

Loss History & Mitigation

Johns Creek does not currently maintain a list of properties that have been flood damaged; however, records do show that four homes have had water in their basements and the City has identified 34 properties in floodplain. The floodplain administrator has the ability to make substantial damage estimates if needed. To date no property owners have expressed an interest in the mitigation process.

Planning & Regulatory Capabilities

Johns Creek does use local ordinance, plans, and programs to support floodplain management. The City's floodplain management regulations and ordinances meet the minimum requirements set forth by both the Federal Emergency Management Agency (FEMA) and the State of Georgia. Johns Creek also performs permit review, inspections, damage assessments, and record keeping, GIS as well as education and outreach through open house, senior lunches, and learning.

Administrative & Technical Capabilities

During the data collection process staff did not indicate any perceived barriers to running an effective floodplain program in Johns Creek; however, they did state an interest in receiving more training and/or attending conferences if the future.

Public Education & Outreach

Education and Outreach regarding flood/hazard risk, and flood risk reduction through NFIP insurance is primarily provided to the community through the City website. Additional outreach is provided with adult informational workshops and through classroom teaching with students (using WARD's Scientific Floodplain model).

Actions to Strengthen the Program

During the data collection process staff did not indicate any perceived barriers to running an effective floodplain program in Johns Creek.

Community Rating System

Johns Creek does currently participate in the CRS program and has a class 8 rating as of May 2015.

Mitigation Actions

Each jurisdiction participating in this plan is responsible for implementing specific mitigation actions as prescribed in the adopted Mitigation Action Plan. In each Mitigation Action Plan, every proposed action is assigned to a specific local department or agency in order to assign responsibility and accountability and increase the likelihood of subsequent implementation. This approach enables individual jurisdictions to update their unique mitigation strategy as needed without altering the broader focus of the countywide plan. The separate adoption of locally specific actions also ensures that each jurisdiction is not held responsible for monitoring and implementing the actions of other jurisdictions involved in the planning process. A complete list of countywide mitigation strategies is provided in Section 5 of this plan update.

Completed Mitigation Actions (2016-2021)

The City of John's Creek has identified mitigation actions from the previous 2016 HMP update. The City of Johns Creek has completed two during the five-year planning period (2016-2021).

Table 11: Completed Mitigation Projects Since 2016, Johns Creek, GA

Completed Since 2016, Johns Creek, GA		
Project Number	**2016 Mitigation Action**	**Responsible Party/ies**
02.0001	Signage for severe weather at parks and open spaces	City of Jones Creek Parks and Recreation Department
02.0002	Develop a Debris Management Plan (Comments: Johns Creek is currently drafting a debris management plan.)	City of Jones Creek Emergency Management

Proposed Mitigation Actions (2022-2027), City of Johns Creek, GA

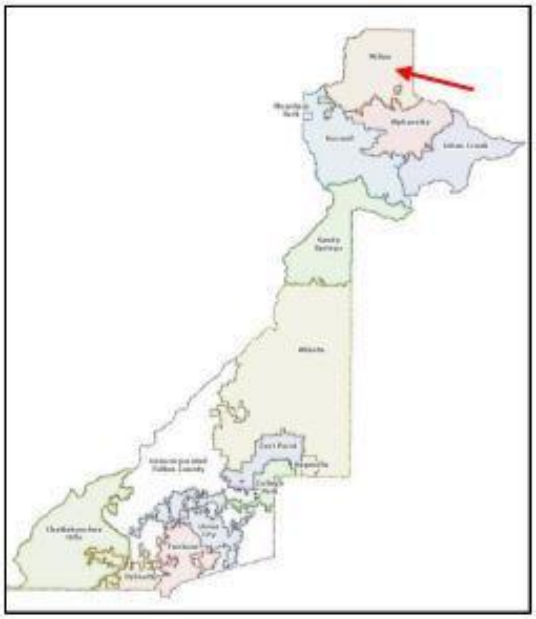
The City of Johns Creek proposes the following mitigation actions for the 2022 MJHMP Update.

Table 12: Proposed Mitigation Actions, Johns Creek, GA

Proposed Mitigation Actions (2022-2027), City of Johns Creek, GA								
Project Number	Mitigation Action/ Description	Status as of 2021 HMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion	STAPLE+E Score
02.0003	Debris Removal Contract. Johns Creek is looking to establish a pre-event contract for disaster debris removal to include haulers, reduction, and site monitors.	Ongoing	City of Jones Creek Emergency Management	Flood, Severe Weather, Severe Winter Weather, Tropical Systems, Tornado	$3,600	Local Funds; Other Local Funding Sources	2016-2021	Low 8
02.0004	Require mandatory water conservation measures during drought emergencies. Johns Creek will adopt ordinances specified by Fulton County to prioritize or control water use, particularly for emergency situations like firefighting and develop an ordinance to restrict the use of public water resources for non-essential usage, such as landscaping, washing cars, filling swimming pools, etc.	In-Progress	City of Jones Creek Emergency Management	Drought	Staff Time	HMGP; FMA; Local Funds	2016-2021	Low 25
02.0005	Create a program encouraging to take water-saving measures. Johns Creek will encourage citizens to: install low-flow water saving showerheads and toilets, turn water flow off while brushing teeth or during other cleaning activities, adjust sprinklers to water the lawn and not the sidewalk or street, run the dishwasher and washing machine only when they are full, check for leaks in plumping or dripping faucets, install rain-capturing devices for irrigation and encourage the installation of graywater systems in homes to encourage water reuse.	Ongoing	City of Jones Creek Emergency Management	Drought	Staff Time	HMGP; FMA; Local Funds	2016-2021	Low 25

Proposed Mitigation Actions (2022-2027), City of Johns Creek, GA								
Project Number	Mitigation Action/ Description	Status as of 2021 HMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion	STAPLE+E Score
02.0006	Create the City flood plan	Proposed	Johns Creek Public Works/Storm Water Authority	Flood	$3,500	Federal/State Grants; Local Funds	12 Months	Medium 28
02.0007	Update dam in the City of Johns Creek	Proposed	Johns Creek Public Works/Storm Water Authority	Flood	$3,500	Federal/State Grants; Local Funds	12 Months	Medium 31.5
02.0008	Create an evacuation plan for senior living facilities in Johns Creek	Proposed	Johns Creek EM; Local Senior Living Facilities; AFCMEA; Red Cross	All Hazards	$3,500	Federal/State Grants; Local Funds	12 Months	Low 25

Jurisdiction Profile: City of Milton, GA



History & Geography

Milton, which is located in Fulton County, was incorporated on December 1, 2006. It was created out of the entire unincorporated northwestern part of northern Fulton County. Milton is named in honor of the former Milton County, which was named after Revolutionary War Hero John Milton. After debate, the Georgia State House and Senate approved a bill creating the City of Milton on March 9, 2006. On March 28, Governor Sonny Perdue signed the bill into law. In July 2006, voters approved a ballot referendum on July 18. On August 4, 2006, Governor Sonny Perdue appointed a five-person commission to serve as the interim government of Milton. Milton adopted the existing County ordinances on December 1, 2006.

Milton, which today covers 38.5 square miles and has a population of 41,296 (U.S. Census 2020), was incorporated in December 2006. Milton is boarded by the cities of Roswell and Alpharetta on the south, and the counties of Forsyth on the east and Cherokee on the north and west.

Significant Characteristics

Milton is a community that is known for small-town life and heritage with its scenic landscapes and peacefulness. The city is consistently ranked as offering residents among the highest quality of life in Georgia. Five years after its incorporation, Milton was rated as having the highest quality of life in the state of Georgia, and ninth-highest quality of life in the southern U.S. Additionally, the website, 24/7 Wall Street, also ranked Milton as the best place to live in Georgia in 2019. The city also regularly ranks as one of Georgia's safest cities, according to numerous reports.

Population & Demographics

According to the Census Bureau's 2020, the population of Milton is 41,296. The City is 73.3% white, 12.9% Asian, 11.3% African American, 5.9% Hispanic or Latino of any race, and 0.1% Native American.

Table 1: Population Change, City of Milton

Population Change, City of Milton, GA			
Year	2000	2010	2020
Population	-	32,661	41,296

Given these numbers, Milton experienced a population growth of 12.25% between 2010 and 2020.

As of 2020, of the population, 6.1% are under the age of five, 28.5% are under the age of 18, 65.4% are age 18 and over, and 8.3% are age 65 and over. The media age was 38.9 years.

Of the 13,540 households in Milton, with an average family size in of 2.86

The following table provides information specific to Milton's housing stock through the issuance of single-family new house construction building permits over the last 6 years (2015-2021). However, since not all permits become actual housing starts, and starts lag the permit stage of construction, this number does

not represent total new construction (2020) but should provide a general indicator on construction activity and the local real estate market.

Table 2: Housing Stock History, Building Permits, Milton, GA

Year	Permits
2015	340
2016	196
2017	172
2018	181
2019	122
2020	111

Data Source: City of Milton Community Development

The Local Economy

As indicated by the 2020 census, the median income for a household in the City of Milton was $128,559. The per capita income for Milton was unavailable for 2020; however, the per capita income (12 months, 2019) was $69,952. In 2020, approximately 3.5% of the city's population were living below the poverty line.

According to the 2019 American Community Survey 1-year Estimates, Milton has an employment rate of 68.8%, which is above the State of Georgia's employment rate of 59.6%. The following table shows the city's leading industries and most recent employment percentages.

Table 3: Leading Industries, Employment Percentages, Milton, GA (2019)

Leading Industries, Employment Percentages, Milton, GA (2019)	
Professional, scientific, and management, and administrative and waste management services	23.82%
Educational services, and health care and social assistance	14.65%
Finance and insurance, and real estate and rental and leasing	12.94%
Manufacturing	8.59%
Retail Trade	8.32%
Arts, entertainment, and recreation, and accommodation and food services	8.10%
Information	4.80%
Other services, except public administration	4.57%
Wholesale Trade	4.45%
Transportation and warehousing, and utilities	4.02%
Construction	3.13%
Public Administration	2.42%

Source: U.S. American Community Survey

Critical Facilities & Infrastructure

As previously stated, certain facilities have a net positive value on the community, i.e., they contribute to the public good by facilitating the basic functions of society. These facilities maintain order, public health, education, and help the local economy function. Additionally, there are facilities and infrastructure integral to disaster response and recovery operations. Conversely, some of these are of extreme importance due to the negative externalities created when impacted by a disaster. What fits these definitions varies slightly from community to community, but the definitions remain as a guideline for identifying critical infrastructure

The Milton Police Department is a career-based department with a total of 39 officers. The police department was established in 2007. Milton also has its own fire department, which has three fire stations and houses a ladder truck at an Alpharetta station through an automatic aid agreement.

Additionally, the school system within the city limits consists of the enrollment listed below.

Table 4: School Infrastructure/Enrollment within City Limits, Milton, GA

School Infrastructure/Enrollment within City Limits, Milton, GA		
School	**Type**	**Enrollment (2020)**
Nursery School, Pre-School	Public	645
Kindergarten to 12th Grade	Public	8840
College, Undergraduate	Public	1562
Graduate, Professional School	Public	353

Data Source: US Census

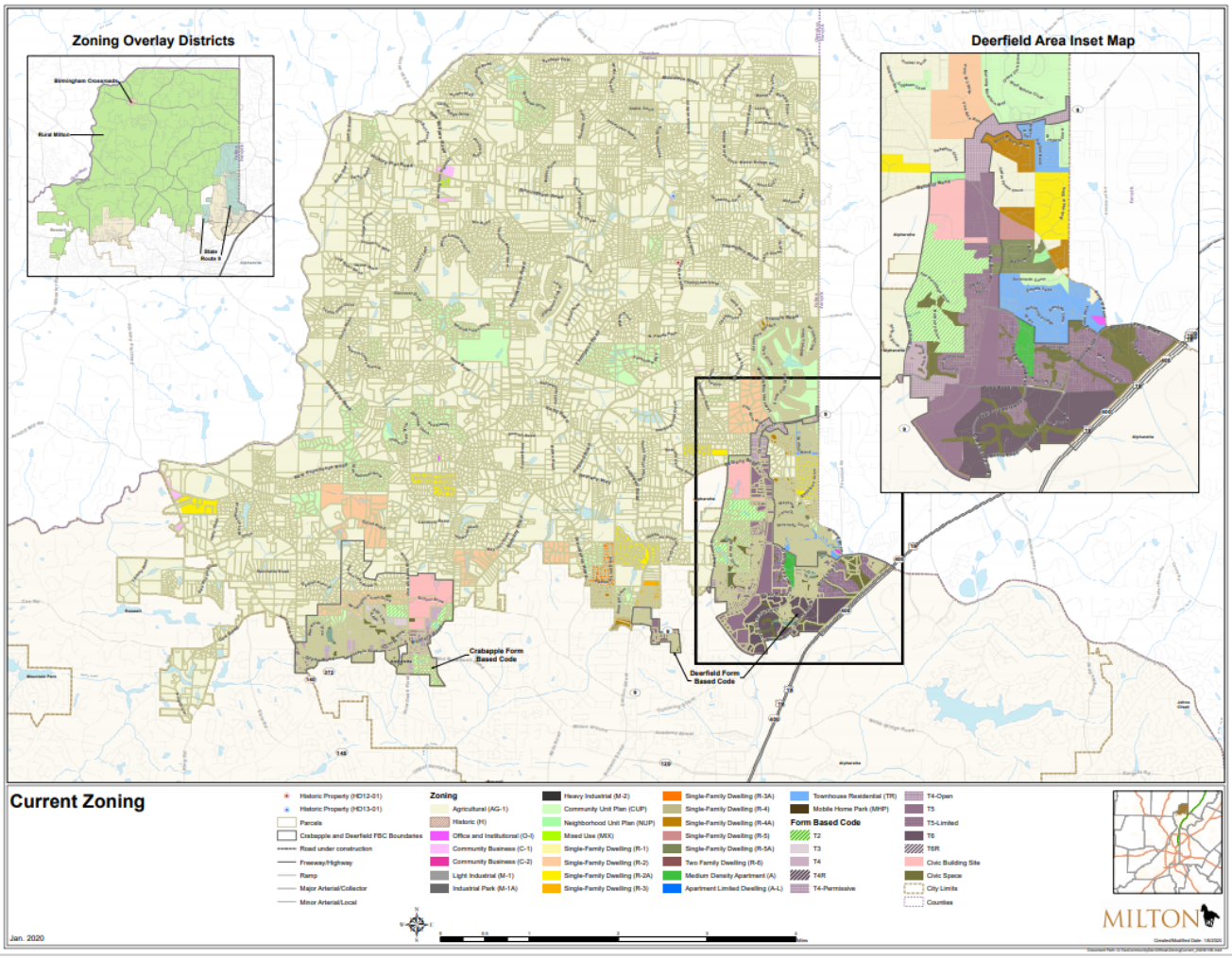
Land Use & Development Trends

To meet the current and future demands of an increasing population, the City of Milton must continue to implement proactive measures pertaining to land use and development. This is especially true of housing, transportation, education, historic preservation, and the environment, among other things.

According to the U.S. Census Bureau, the city Milton is a total of 38.7 square miles, with 38.5 square miles of that being land. There is 1.3% of the City that is a waterway. Milton is primarily agricultural with spurts of residential and commercial areas.

The following map shows the distribution of major land use categories within the city limits.

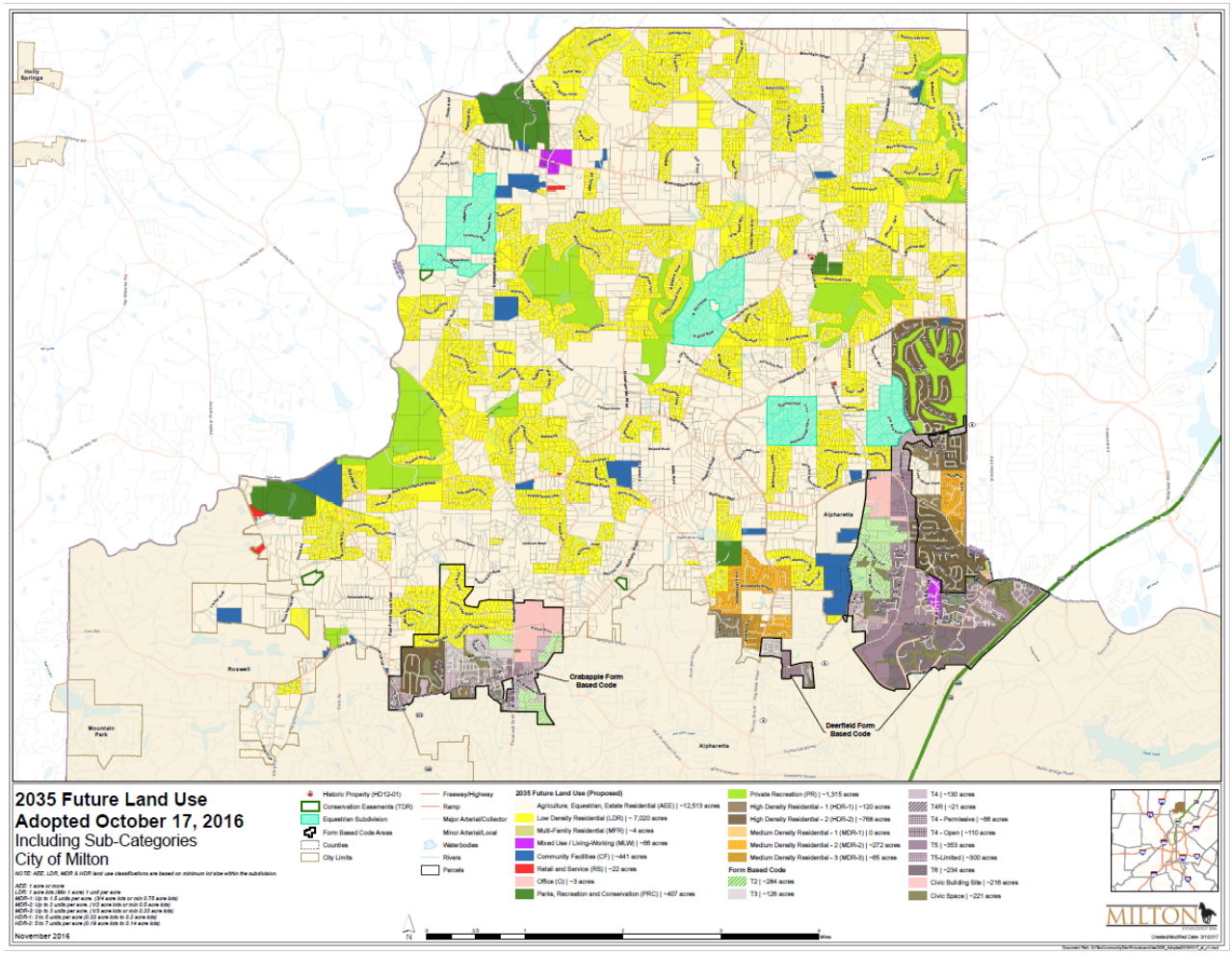
Map 1: Existing Land Use, Milton, GA



Map Source: City of Milton

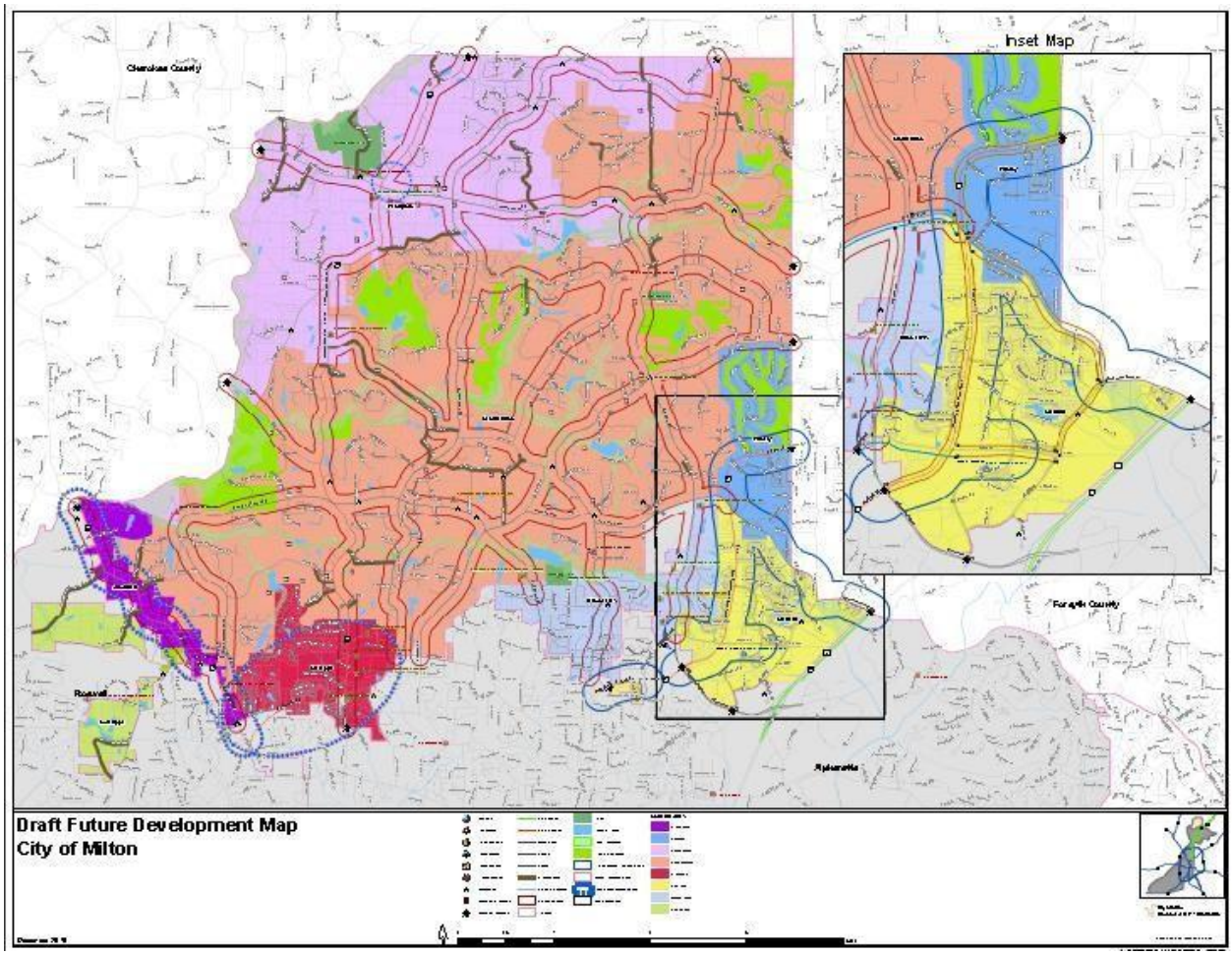
The following map(s) demonstrate the City of Milton's potential growth and development.

Map 2: Development Nodes, Character Areas & Future Land Use, Milton, GA



Map Source: City of Milton 2030 and 2035 Comprehensive Plan(s)

Map 3: Major Development Corridors, Milton, GA



Map Source: City of Milton 2030 and 2035 Comprehensive Plan(s)

The following table summarizes major development that occurred in the municipality over the past five years, as well as known or anticipated future development in the next five (5) years.

Table 5: Major Development (Past & Anticipated), City of Milton, GA

Major Development (Past & Anticipated), City of Milton, GA					
Property or Development Name	**# of Units / Structures**	**Type (e.g. Res., Comm.)**	**Address and Block/Lot**	**Known Hazard Zone(s)**	**Description/Status of Development**
Recent Development from 2016 to Present					
Blue Valley Phase 2	31	Residential	199, 197, 235	Increase Population	Built Out
Blue Valley Phase 3	38	Residential	199, 197, 235	Increase Population / Fire Hazard	Built Out
Muirfield Place	14	Residential	606, 607, 614	Increase Population / Fire Hazard	Built Out

Major Development (Past & Anticipated), City of Milton, GA					
Property or Development Name	**# of Units / Structures**	**Type (e.g. Res., Comm.)**	**Address and Block/Lot**	**Known Hazard Zone(s)**	**Description/Status of Development**
Recent Development from 2016 to Present					
High Grove	15	Residential	736;777	Increase Population / Fire Hazard	Built Out
Reserve at Providence	36	Residential	842;843;886;887;914	Increase Population / Fire Hazard	Built Out
Blue Valley	29	Residential	194;195;196;197;235;237;238	Increase Population / Fire Hazard	Built Out
Lake Haven	60	Residential	915;958	Increase Population /Fire Hazard	Built Out
Hawthorne Manor	12	Residential	847	Increase Population /Fire Hazard	Built Out
Laura Villa Estates	3	Residential	1028	Increase Population / Fire Hazard	Built Out
Triple Crown V	9	Residential	812;813	Increase Population /Fire Hazard	Built Out
Manorview	72	Residential	181; 182;183; 250; 251	Increase Population /Fire Hazard	Built Out
The Manor 2 E 2	11	Residential	323;324	Increase Population /Fire Hazard	Homes Under Construction
The Manor 5 B	5	Residential	396;397	Increase Population / Fire Hazard	Built Out

Major Development (Past & Anticipated), City of Milton, GA					
Property or Development Name	**# of Units / Structures**	**Type (e.g. Res., Comm.)**	**Address and Block/Lot**	**Known Hazard Zone(s)**	**Description/Status of Development**
Recent Development from 2016 to Present					
Hayfield Extension	21	Residential	812;845	Increase Population / Fire Hazard	Built Out
Taylor Estates	12	Residential	633;	Increase Population / Fire Hazard	Built Out
Grove at Birmingham	39	Residential	450;451	Increase Population / Fire Hazard	Built Out
Kingsley Estates	30	Residential	239;	Increase Population / Fire Hazard	Built Out
Hampshires II	11	Residential	241;	Increase Population / Fire Hazard	Built Out
Highland @ N Valley	3	Residential	887;	Increase Population / Fire Hazard	Built Out
The Manor 2 E	62	Residential	1252;1251;	Increase Population / Fire Hazard	Homes Under Construction
The Manor 2 A	6	Residential	398;	Increase Population / Fire Hazard	Built Out
Valmont	8	Residential	706;663	Increase Population / Fire Hazard	Built Out

Major Development (Past & Anticipated), City of Milton, GA					
Property or Development Name	**# of Units / Structures**	**Type (e.g. Res., Comm.)**	**Address and Block/Lot**	**Known Hazard Zone(s)**	**Description/Status of Development**
Recent Development from 2016 to Present					
The Mayfair	51	Residential	268;269;270	Increase Population	Homes Under Construction
Killian Manor	14	Residential	381, 412	Increase Population / Fire Hazard	Built Out
North Point Forest	36	Residential	190, 243	Increase Population / Fire Hazard	Built Out
Heritage at Crabapple	63	Residential	1096;1137	Increase Population / Fire Hazard	Built Out
Parkview	14	Residential	1169	Increase Population / Fire Hazard	Built Out
Hidden Forrest	25	Residential	972	Increase Population / Fire Hazard	Built Out
Gray Stone Lake	7	Residential	622;	Increase Population / Fire Hazard	Platted
Bakers Farm	5	Residential	190;191	Increase Population / Fire Hazard	Built Out
Minor plat	2	Residential	820;863	Increase Population / Fire Hazard	Built Out

Major Development (Past & Anticipated), City of Milton, GA					
Property or Development Name	**# of Units / Structures**	**Type (e.g. Res., Comm.)**	**Address and Block/Lot**	**Known Hazard Zone(s)**	**Description/Status of Development**
Recent Development from 2016 to Present					
Minor plat	3	Residential	462;463	Increase Population / Fire Hazard	Built Out
Freemanville Crossing	12	Residential	242;	Increase Population / Fire Hazard	Built Out
Bentwater	10	Residential	1028;	Increase Population	Homes Under Construction
St. Francis Practice Gym	3	Institutional	978, 977	School / Target Hazard	Built Out
Northwestern MS	1	Institutional	1039, 1040	School / Target Hazard	Built Out
Crabapple Mercantile	1	Commercial	1136	Commercia l	Built Out
Mill Spring Academy	1	Institutional	803, 854-858	School / Target Hazard	Built Out
Kensley	73	Residential	1049	Increase Population / Fire Hazard	Built Out
Manor Enclave	49	Residential	326; 393; 394; 395	Increase Population / Fire Hazard	Built Out
North Point Forest	34	Residential	190; 243	Increase Population / Fire Hazard	Built Out

Major Development (Past & Anticipated), City of Milton, GA					
Property or Development Name	**# of Units / Structures**	**Type (e.g. Res., Comm.)**	**Address and Block/Lot**	**Known Hazard Zone(s)**	**Description/Status of Development**
Recent Development from 2016 to Present					
Rivers Edge	15	Residential	519-521	Increase Population / Fire Hazard	Homes Under Construction
Rivers Edge	23	Residential	519-521, 560562	Increase Population / Fire Hazard	Homes Under Construction
Woodwinds East	23	Residential	878, 879	Increase Population / Fire Hazard	Built Out
Woodwinds West	18	Residential	877	Increase Population / Fire Hazard	Built Out
Water's Edge	19	Residential	322, 327	Increase Population / Fire Hazard	Homes Under Construction
Ebenezer Pond	18	Residential	1071, 1090	Increase Population / Fire Hazard	Homes Under Construction
Milton Crossing	29	Residential	314. 263	Increase Population / Fire Hazard	Homes Under Construction
Brickmont Assisted Living	1	Institutional	1048	Increase Population / Fire Hazard / Life Safety	Built Out

Major Development (Past & Anticipated), City of Milton, GA					
Property or Development Name	**# of Units / Structures**	**Type (e.g. Res., Comm.)**	**Address and Block/Lot**	**Known Hazard Zone(s)**	**Description/Status of Development**
Recent Development from 2016 to Present					
Phoenix Senior Living	1	Institutional	831	Increase Population / Fire Hazard / Life Safety	Built Out
Crabapple Green	11	Residential	1166; 1167	Increase Population / Fire Hazard	Built Out
Oakmont	33	Residential	1168	Increase Population / Fire Hazard	Built Out
Thompson Road	27	Residential	472, 466, 465, 399	Increase Population / Fire Hazard	Built Out
Meadowood	3	Residential	1139;	Increase Population / Fire Hazard	Homes Under Construction
Wood Acres	3	Residential	699, 742	Increase Population / Fire Hazard	Built Out
Annandale	25	Residential	383	Increase Population / Fire Hazard	Homes Under Construction
Bethany Bend	27	Residential	832	Increase	Homes Under Construction
Crescent Ridge	12	Residential	1037	Increase Population / Fire Hazard	Under Review
JW Commercial	1	Commercial	1135	Fire Hazard	Built Out

Major Development (Past & Anticipated), City of Milton, GA					
Property or Development Name	**# of Units / Structures**	**Type (e.g. Res., Comm.)**	**Address and Block/Lot**	**Known Hazard Zone(s)**	**Description/Status of Development**
Recent Development from 2016 to Present					
Del Taco	1	Commercial	1042, `1047	Fire Hazard	Built Out
Crossroads at Birmingham	25	Residential	409, 410, 456	Increase Population / Fire Hazard	Homes Under Construction
Public Safety Complex	2	Government	903	Fire Hazard	Built Out
Milton City Hall	2	Government	1135	Fire Hazard	Built Out
Town Center East	1	Commercial	1134	Fire Hazard	Built Out
Crabapple Market	14	Commercial	1135, 1136	Fire Hazard	Built Out
Willhite Animal Hospital	1	Commercial	833	Fire Hazard	Built Out
Family Tree Animal Clinic	1	Commercial	847	Fire Hazard	Built Out
Self Storage Webb Road	1	Commercial	1048	Fire Hazard	Built Out
Self Storage N. Main St.	1	Commercial	1124	Fire Hazard	Built Out
Parkview	13	Residential	1169	Increase Population / Fire Hazard	Built Out
Chamblis Brown	3	Residential	630,595	Increase Population / Fire Hazard	Built Out

Major Development (Past & Anticipated), City of Milton, GA					
Property or Development Name	# of Units / Structures	Type (e.g. Res., Comm.)	Address and Block/Lot	Known Hazard Zone(s)	Description/Status of Development
Recent Development from 2016 to Present					
Edgemont	9	Residential	1124	Increase Population / Fire Hazard	Built Out
Tanglewood Preserve	42	Residential	465,466	Increase Population / Fire Hazard	Built Out

Hazard Risk Assessment, City of Milton, GA

Hazard Identification & Risk Assessment

There are 12 of 13 natural hazards known to pose risk to Fulton County and one or more of its participating jurisdictions. These include Dam Failure, Drought, Earthquake, Flood, Geological Hazards, Extreme Heat, Severe Weather, Tornado, Tropical Systems, Severe Winter Weather, and Wildfire/Wildland Urban Interface Fires. Wind, though identified as a separate hazard in the 2019 Georgia Hazard Mitigation Strategy Standard and Enhanced Plan, is included in the Severe Weather hazard in this plan update.

The following table outlines the City of Milton's general risk to the profiled hazards. The rankings are based on a variety of factors, including 1) a composite evaluation of this plan's risk assessment, namely a hazard's probability of occurring in the future, 2) the vulnerability of the jurisdiction to a specific hazard, 3) the intensity of past hazard impacts, and 4) a joint evaluation of local experts and plan stakeholders. The category/range (per year) is based on the following scale: **Unlikely (0%), Occasional (1-10%), Likely (11%-50%), and Highly Likely (51%-100%).**

Table 6: Risk Assessment Matrix, Milton, GA

Risk Assessment Matrix, Milton, GA		
Hazard	Category	Range
Dam Failure	Occasional***	-
Drought	Highly Likely	295%
Earthquake	Occasional**	-
Flood	Occasional	-
Geological Hazards	Highly Likely	-
Extreme Heat	Highly Likely	-
Severe Weather (including Wind)	Highly Likely*	-
Severe Winter Weather	Highly Likely	-
Tornado	Highly Likely	160%
Tropical Systems	Highly Likely	84%

Risk Assessment Matrix, Milton, GA		
Hazard	**Category**	**Range**
Wildfire/Wildland Urban Interface Fires	Occasional*****	-

**The hazard of Severe Weather considers the instances of thunderstorms, lightning, hail, and wind, each with a varying degree of occurrence/probability.*

***The hazard of Earthquake is considered occasional but without a definite calculation of probability. This is due to there being no record/data of earthquake in the planning period since the last plan update (2016).*

****Calculating future probability is not the only predictor of future occurrences. In the last five years, Fulton County and its participating jurisdiction do not have any documented cases of Dam Failure. Though the County has experienced occurrences that were listed in its HMP update (2016), the likelihood of a dam failure event happening in the planning area is considered* ***occasional***

********Note:** The NOAA/NCEI Storm Events Database did not have any incidences of storm data records related to Flood (including flash flood) for the Cities of Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton from January 1, 1970 – July 31, 2021. Since flooding is possible, the Cities Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton's Probability of Future Events is considered* ***occasional.***

******The hazard of Wildfire/Wildland Urban Interface Fires is considered* ***occasional*** *but without a definite calculation of probability. This is due to there being no record/data of wildfire in the planning period since the last plan update (2016).*

Hazard Risk Assessment, City of Milton, GA

Hazard Event History & Community Impacts

Of the hazards identified by Fulton County, three have impacted the City of Milton specifically over the last seven years. Three of these events, a Severe Winter Storm (February 2014), a Winter Storm (February 2105), and a Tornado (October 2014) were documented in the County's previous Multi-Jurisdictional Hazard Mitigation Plan (2016).

The following table provides brief details of all hazard occurrences, as recorded by the National Oceanic and Atmospheric Administration (NOAA) and its National Centers for Environmental Information (NCEI), between January 1, 2016, and October 31, 2021.

Table 7: Natural Hazards, Previous Occurrences, Milton, GA

Natural Hazards, Previous Occurrences, Milton, GA			
Date	**Hazard**	**Disaster Declaration**	**Description**
January 2016	Winter Storm	No	Winter Storm Response - Milton EOC was opened, plowing and salt operations were conducted for 2 days and additional crews were staffed in police and fire to aid in the response
January 2017	Winter Storm	No	Winter Storm Response - Milton EOC was opened, plowing and salt operations were conducted for 2 days and additional crews were staffed in police and fire to aid in the response.
September 2017	Hurricane/ Tropical Storm Irma	Yes	Hurricane Irma remained at tropical storm strength when it reached metro Atlanta. Milton suffered extensive wind and power infrastructure damage, operated out of its EOC for several operational periods, and approx. $20,000 in aid (Safford Act).
December 2017	Winter Storm	No	Winter Storm Response - Milton EOC was opened, plowing and salt operations were conducted for 2 days and

Natural Hazards, Previous Occurrences, Milton, GA			
Date	**Hazard**	**Disaster Declaration**	**Description**
			additional crews were staffed in police and fire to aid in the response.
February 2020	Rain/Flooding Event	No	Local impacts from a significant rain event including washed out roads. Staffing was increased to manage the response to the event.
October 2020	Hurricane/Tropical Storm Zeta	No	Hurricane Zeta remained at tropical storm strength when it reached metro Atlanta. Milton suffered extensive wind and power infrastructure damage, operated out of its EOC for several operational periods, but did not have a federal declaration.
March 2020 to Present	COVID-19 Pandemic		Ongoing pandemic response. This has resulted in more than $150,000 in overtime, lost wages, supplies purchased, vaccine program support, testing program support, etc. and is still ongoing as of this plan.
Jan 2016 through Dec 2020	Fire	Yes	Fire Loss $10,106,719 Significant Life Safety. Several Injuries from smoke inhalation. Significant life disruption for the victim (the large-loss fires during this time have ALL been residential fires that have displaced families.

Data Source: NOAA/NCEI Storm Events Database

Mitigation Capabilities & Actions, City of Milton, GA

Capabilities Assessment

The City of Milton has a number of administrative and technical capabilities. City departments include Administrative, Community Development, Court Services, Economic Development, Finance, Human Resources, Information Technology, Public Safety, Public Works and Recreation and Parks. City government includes six council members and a mayor. The City council and mayor all serve a four-year term.

The Legal & Regulatory Capability survey documents authorities available to the jurisdiction and/or enabling legislation at the state level affecting planning and land management tools that support local hazard mitigation planning efforts. The identified planning and land management tools are typically used by states, and local/tribal jurisdictions to implement hazard mitigation activities. The proceeding table summarizes the regulatory tools that are available to the City of Milton.

Planning & Regulatory Capability

Table 8: Planning & Regulatory Capability, Milton, GA

Planning & Regulatory Capability, Milton, GA				
Planning Capability				
Tool/Program	**Do You Have This?**	**Authority**	**Department/Agency Responsible**	**Code Citation & Comments**
Master Plan	Yes	Local	Community Development Department, Recreation and Parks Department	
Capital Improvement Plan	Yes	Local	Finance	The city has a CIP and departments have their own CIP.
Floodplain Management/Basin Plan	Yes	Local	Community Development	Chapter 20, Environment
Stormwater Management Plan	Yes	Local	Public Works & Community Development	Chapter 20, Environment & NPDES Phase II MS4 State Permit
Open Space Plan	Yes	Local	Community Development	
Stream Corridor Management Plan	Yes	Local	Public Works	Chapter 20, Environment
Watershed Management or Protection Plan	Yes	Local	Public Works & Community Development	Chapter 20, Environment & NPDES Phase II MS4 State Permit
Economic Development Plan	No			
Comprehensive Emergency Management Plan	Yes	Local	Fire/EMA	
Emergency Operations Plan	Yes	Local	Fire/EMA/Public Works	Milton LEOP
Post-Disaster Recovery Plan	Yes	Local/Fed	Fire/EMA/Public Works	Milton LEOP
Transportation Plan	Yes	Local	Public Works	
Strategic Recovery Planning Report	Not at this time	N/A	N/A	N/A
Other Plans	N/A			

Planning and Regulatory Capability, Milton, GA				
Regulatory Capability				
Tool/Program	**Do You Have This?**	**Authority**	**Department/Agency Responsible**	**Code Citation & Comments**
Building Code	Yes	State & Local	Building Department	2012 I-codes, with GA amendment
Zoning Ordinance	Yes	Local	Community Development Department	Chapter 64, Zoning
Subdivision Ordinance	Yes	Local	Community Development Department	Chapter 50, Subdivision
National Flood Insurance Program (NFIP) Flood Damage Prevention Ordinance	Yes	Local	Community Development, Public Works	City mandated BFE+3 for 1% annual events with new construction, BFE+1 for future conditions 1% annual events with new construction.
NFIP: Cumulative Substantial Damages	Yes	Local	Community Development	Chapter 20, Flood Prevention
NFIP: Freeboard	Yes	Local	Community Development	City mandated BFE+3 for 1% annual events with new construction, BFE+1 for future conditions 1% annual events with new construction.
Growth Management Ordinances	Yes	Local	Community Development	Various City Ordinances and Zoning
Site Plan Review Requirements	Yes	Local,	Fire Marshall, Community Development	State Codes (2012 IBC, IFC, LSC, etc.) Chapter 20, Environment, Chapter 50, Subdivision
Stormwater Management Ordinance	Yes	Local	Community Development and Public Works	Chapter 20, Stormwater Ordinance
Municipal Separate Storm Sewer System (MS4)	Yes	State	Public Works	NPDES Phase II MS4 State Permit
Natural Hazard Ordinance	Yes	Local	Community Development, Fire, EMA	Limited IFC, City Ordinance

Planning & Regulatory Capability, Milton, GA				
Regulatory Capability				
Tool/Program	**Do You Have This?**	**Authority**	**Department/Agency Responsible**	**Code Citation & Comments**
Post-Disaster Recovery Ordinance	Yes	N/A	Fire/EMA	N/A
Real Estate Disclosure Requirement	Yes	State		
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	N/A			

Administrative & Technical Capability

The following table summarizes potential staff and personnel resources available to the City of Milton.

Table 9: Administrative & Technical Capability, Milton, GA

Administrative & Technical Capability, Milton, GA		
Administrative Capability		
Resources	**Is This in Place?**	**Department, Agency, Position**
Planning Board	Yes	Community Development
Mitigation Planning Committee	Yes	Handled ad hoc between EM and ACM/PW
Environmental Board/Commission	No	
Open Space Board/Committee	No	
Economic Development Commission/Committee	Not at this time	
Maintenance Programs to Reduce Risk	Yes	Public Works
Mutual Aid Agreements	Yes	Mutual Aid and PP Partnerships
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	Community Development/Public Works
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	City Architect and Building Department
Planner(s) or Engineer(s) with an understanding of natural hazards	Yes	Public Works
National Flood Insurance Protection (NFIP) Floodplain Administrator	Yes	Public Works, Community Development
Surveyor(s)	Yes	Via contract

Administrative & Technical Capability, Milton, GA		
Technical/Staffing Capability		
Resources	**Is This in Place?**	**Department, Agency, Position**
Personnel skilled or trained in GIS and/or Hazus-MH applications	Yes	GIS Department/ City Engineer
Scientist familiar with natural hazards	Yes	Fire Marshall, Public Works
Emergency Manager	Yes	Fire Marshall
Granter Writer(s)	Yes	Fire Marshall
Staff with expertise on training in benefit/cost analysis	Yes	Community Development, Public Works, Local Architect
Professional(s) trained in conducting damage assessments	Yes	Fire Marshall and Building Official

Fiscal Capability

The proceeding table summarizes the financial resources available to the City of Milton.

Table 10: Fiscal Capability, Milton, GA

Fiscal Capability, Milton, GA	
Resources	**Accessible or Eligible to Use?**
Community Development Block Grants (CDBG, CDBG-DR)	Yes, Community Development
Capital Improvements Project Funding	Yes, Public Works/Fire Department/Police Department
Authority to Levy Taxes for specific purposes	No
User fees for water, sewer, gas or electric service	No
Impact Fees for homebuyers or developers of new development/homes	Yes, Community Development
Stormwater Utility Fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	No
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other Federal or State Funding Programs	Yes
Open Space Acquisition Funding Programs	Yes
Other	N/A

Community Classifications

The following table summarizes classifications for community programs available to the City of Milton.

Table 11: Community Classifications, Milton, GA

Community Classifications, Milton, GA			
Program	**Do You Have This?**	**Classification**	**Date Classified**
Community Rating System (CRS)	Not at this time		
Building Code Effectiveness Grading Schedule (BCEGS)	Not at this time		
Public Protection (ISO Fire Protection Classes 1-10)	Yes	2/2x	Spring 2015
Storm Ready	Not at this time		
Firewise	Not at this time		
Disaster/Safety Programs in/for Schools	Yes	N/A	Monthly
Organization(s) with Mitigation Focus (Advocacy Group, Non-Government)	Yes, MFRF	N/A	
Public Education Program/Outreach (through website, social media, etc.)	Yes	N/A	N/A
Public-Private Partnerships	Yes	N/A	Fall 2006

**NP = Not Participating, *N/A = Not Applicable, - =Unavailable, TBD = To Be Determined.*

Hazard Mitigation Capability

The table below summarizes a self-assessment of Milton's current hazard mitigation capability.

Table 12: Hazard Mitigation Capability, Milton, GA

Hazard Mitigation Capability, Milton, GA			
Area	**Degree of Hazard Mitigation Capability**		
	Limited (If so, please indicate any/all obstacles)	**Moderate**	**High**
Planning & Regulatory Capability		X	
Administrative & Technical Capability		X	
Community & Political Capability			X
Community Resiliency Capability			X
Capability to Integrate Mitigation into Municipal Processes & Activities		X	

National Flood Insurance Program (NFIP) Participation

According to FEMA, the National Flood Insurance Program (NFIP) is a federal insurance program that enables property owners in member communities to purchase flood insurance. This insurance is only made available to municipalities that adopt and enforce a floodplain management ordinance. The fundamental goal of NFIP floodplain management requirements is to reduce the threat to lives and the potential for property damage in flood-prone areas. Each municipality that participates in the NFIP has a

Flood Insurance Rate Map (FIRM) that is issued by FEMA. This document maps out flood hazard areas in the municipality.

Like several other jurisdictions in Fulton County, the City of Milton participates in the NFIP. The current NFIP Floodplain Administrator is Ken Kagy, CFM– City Engineer. Milton is in good standing with the program with no outstanding compliance issues. The city completed Community Assistance Visits (CAVs), with the most recent taking place in 2009.

Loss History & Mitigation

Milton does have a system in place to maintain a list of properties that have been flood damaged; however, there are none to date. The floodplain administrator has the ability to make substantial damage estimates if needed. To date no property owners have expressed an interest in the mitigation process. If mitigation actions were sought in Milton, it is believed the funding source would primarily be the property owner and insurance.

Planning & Regulatory Capabilities

Milton's NFIP Flood Damage Prevention Ordinance was last updated in December 2020 and can be found in the Unified Development Code, Article 3, Section 3.4.

Floodplain management regulations and ordinances meet the minimum requirements set forth by both the Federal Emergency Management Agency (FEMA) and the State of Georgia. Milton also performs site plan review and building plan review, which both include checks of floodplain and local "future floodplain" designations. A preliminary staff review, and recommendation occurs prior to Planning Board and Zoning Board considerations.

Administrative & Technical Capabilities

The community identifies the Community Development Director as the local NFIP Floodplain Administrator for which floodplain administration is an assigned duty. This would be supported by the City Stormwater Engineer.

Duties and responsibilities of the NFIP Administrator are permit review, damage assessments, record keeping, inspections, GIS, education and outreach, and capital mitigation projects. If Substantial Damage Estimates were necessary, the Floodplain Administrator would be responsible.

Public Education & Outreach

Education and Outreach regarding flood/hazard risk, and flood risk reduction through NFIP insurance is primarily provided to the community through the City website. Additional outreach is provided with adult informational workshops and through classroom teaching with students (using WARD's Scientific Floodplain model).

Actions to Strengthen the Program

During the data collection process staff did not indicate any perceived barriers to running an effective floodplain program in Milton.

Community Rating System

Milton does not currently participate in the voluntary Community Rating System (CRS) program, which recognizes and encourages community floodplain management practices that exceed the minimum requirement of the NFIP. The city has considered joining, but the cost for resources to complete the necessary items for the program outweigh the benefits.

Integration of Hazard Mitigation into Existing & Future Planning Mechanisms

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, each municipality was surveyed to obtain a better understanding of their community's progress in plan integration. A summary is provided below. In addition, the community identified specific integration activities that have been/will be incorporated into municipal procedures which may include former mitigation initiatives that have become continuous/ongoing programs and may be considered mitigation "capabilities."

Land Use Planning/Comprehensive Planning

The City of Milton's 2035 Comprehensive Plan (January 2017) is currently adopted. This plan considers the following areas of natural hazard risk:

> *"Floodplain – With less undeveloped land remaining for new construction within the city limits, there is potential for increased development pressure within flood prone areas and within areas that could impact flooding on surrounding properties."*
>
> *"Goals, Policies, and Strategies: NHCR Strategy 1.2, 1.6, and 1.7 –*
>
> *Strategy 1.2: Protect the natural environment and areas that contribute to the unique character of the city by ensuring a balance between the natural and the built environment, continued use of buffers and other techniques.*
>
> *Strategy 1.6: Continue to enforce standards and enact ordinances for tree protection, signage, landscaping, streetscape design, sidewalks, bicycle paths, greenways, open space preservation, and water quality protection requirements.*
>
> *Strategy 1.7: Continue to study, update, and enforce best available data for floodplains and future floodplains."*

Milton has plans in place to help to manage natural hazard risk. Additionally, the Downtown Master Plan Update includes regulations for open space and tree protection. The Recreation and Parks Master Plan 2025 includes plans for the protection of flood plains and open spaces and Milton has adopted the Comprehensive Emergency Management Plan for Fulton County, which refers to the Hazard Mitigation Plan (HMP). Milton is an MS4 Regulated Community (Phase 1), and staff indicated they have a formal Stormwater Management Plan that specifies projects/actions/initiatives to reduce the volume of stormwater, or otherwise mitigate stormwater flooding.

Regulatory Compliance

Milton's zoning and subdivision regulations take natural hazard risk into consideration. The City's Unified Development Code (UDC) includes both zoning and subdivision regulations, which regulate impacts on local floodplains and requires developers to take additional actions to mitigate natural hazard risk. The UDC includes a stream buffer protection with a 50-foot undisturbed stream buffer and an additional 25-foot impervious cover setback on both banks of a non-perennial stream and a 100-foot undisturbed stream buffer and an additional 50-foot impervious cover setback on both banks of a perennial stream. In addition, the City's UDC includes regulations for stormwater management and the NFIP Flood Damage ordinance includes provisions which exceed the minimum federal and State NFIP regulatory requirements.

The City's Community Development staff have access to GIS Maps, review and provide recommendations based on natural hazard risk prior to Planning Board and Zoning Board decisions. The City's Planning Commission and Board of Zoning Appeals uses the regulations in the City's UDC and professional staff opinion to guide their decision-making process.

Administrative/Technical Resources & Programs

Milton's Planning Commission is an advisory body, which makes recommendations to the City Council for variances associated with comprehensive plan amendments, rezoning, master plans, and conditional uses. City Council considers all variances of more than 50% of the code requirement. The City's board of Zoning Appeals considers variances between 20% and 50% of the code requirement. City staff considers variances up to 20% of code requirements. Milton also has a land disturbance permit team consisting of planners, engineers, arborists, and fire marshal that review and approve all site plans for new development and redevelopment. Stormwater management functions are performed by the Senior Stormwater Engineer and the Development Services Engineer (Stormwater). NFIP Floodplain management functions are performed by the Senior Stormwater Engineer) and the Chief Building Official.

The City of Milton has staff in place who can perform Substantial Damage Estimates, Benefit-Cost Analysis and prepare applications for mitigation projects. City staff regularly attend training and conferences to promote continuing professional education, including the American Planning Association (APA), Georgia Chapter of APA and Georgia Association of Zoning Administrators. Additionally, a staff member from Public Works receives continuing education to maintain her Certified Floodplain Manager and a Public Safety official receives Emergency Management continuing education and is also a member of the Fulton County All Hazards Council.

The City of Milton also has several staff with job descriptions that specifically include identifying and/or implementing mitigation projects/actions or other efforts to reduce natural hazards. These positions include the Senior Stormwater Engineer, Urban forestry Program Manager, Senior Water Resources Analyst, Environmental Program coordinator, Development Services Engineer (Stormwater), Zoning Administrator, Senior Transportation Engineer, Stormwater Engineer, City Arborist, Fire Marshal and Emergency Management Coordinator.

Public Education & Outreach

Milton utilizes Milton's website and various adult workshops and student classroom teaching opportunities as platforms to inform citizens of natural hazards. During the assessment staff indicated that they identified the use of social media to enhance further public outreach and education with respect to natural hazard risk management in the community.

Fiscal Resources

The City of Milton includes line items in its operating and capital improvement budgets for mitigation related projects and activities. The City has also received previous grant funds for mitigation-related projects, but none were received during the period reflected in this plan update.

Note: *The City of Milton will receive a copy of the 2022 Fulton County Multijurisdictional Hazard Mitigation Plan to use as a resource when updating other plans and identifying new projects. Additionally, the Mitigation Planning Committee will continue to provide guidance for provide guidance for future development within the jurisdiction.*

Mitigation Actions

Each jurisdiction participating in this plan is responsible for implementing specific mitigation actions as prescribed in the adopted Mitigation Action Plan. In each Mitigation Action Plan, every proposed action is assigned to a specific local department or agency in order to assign responsibility and accountability and increase the likelihood of subsequent implementation. This approach enables individual jurisdictions to update their unique mitigation strategy as needed without altering the broader focus of the countywide plan. The separate adoption of locally specific actions also ensures that each jurisdiction is not held responsible for monitoring and implementing the actions of other jurisdictions involved in the planning process. A complete list of countywide mitigation strategies is provided in Section 5 of this plan update.

Completed Mitigation Actions (2016-2021)

The City of Milton identified 11 mitigation actions in the previous (2016) HMP update. Of the 11 mitigation actions, the City of Milton completed 4 during the five-year planning period (2016-2021).

Table 13: Completed Mitigation Projects Since 2016, Milton, GA

Completed Since 2016, Milton, GA		
Project Number	**2016 Mitigation Action**	**Responsible Party/ies**
56.0001	Replace wooden wing walls on bridges with concrete wing walls; perform bank restoration and stabilization. (Comments: When the creek swells the water seeps in through wooden wing wall cracks which then flows behind the wall and erodes the embankment. Four bridges were significantly damaged in Sept. 2009 and received PDM funds to replace, but can only replace with wooden wing walls, so the problem will re-occur.)	City of Milton Public Works Department
X	Detailed stormwater inventory (add more description for this project)	City of Milton Public Works Department
X	Bridge Inspection and Capital Improvement Recommendations	City of Milton Public Works Department
X	Hardening of the ECO at Fire Headquarters	City of Milton Fire/Emergency Management

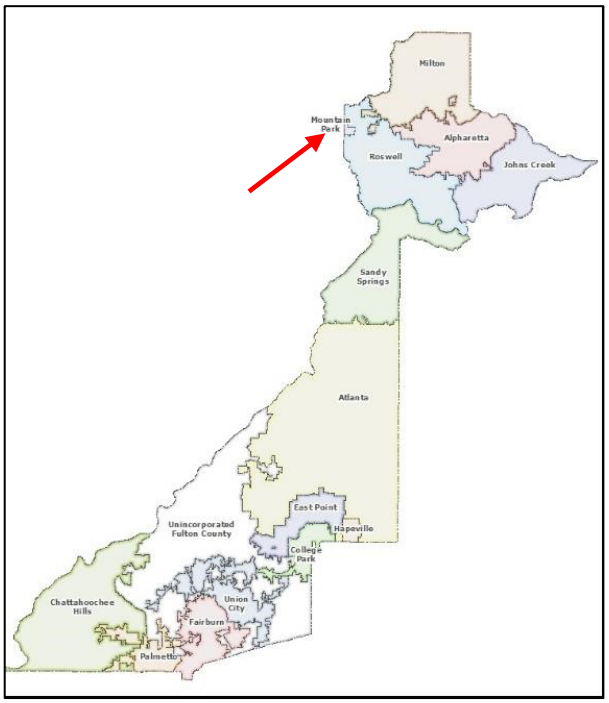
Identified Mitigation Actions (2022-2027)

The following table reflects the identified projects for the 2021 HMP update. Additionally, the table includes any/all new mitigation actions identified by the City of Milton for the following five-year planning period (2022-2027).

Table 14: Identified Mitigation Actions, Milton, GA

Identified Mitigation Actions, Milton, GA								
Project Number	**Mitigation Action/ Description**	**Status as of 2021 HMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
56.0004	Replace a malfunctioning 25-year-old generator at Station 43 / alternate EOC site.	Proposed project for the 2021 Plan Update	City of Milton Fire Department	Severe Weather, Tropical Systems, Flood, Severe Winter Weather	$70,000	Federal/State Grants; Local Funds	Winter 2022/2023	Low 23.5
56.0005	Purchase a Generator at Public Works Department Building	Proposed project for the 2021 Plan Update	City of Milton Public Works Department	Severe Weather, Tropical Systems, Flood, Severe Winter Weather	$15,000	Federal/State Grants; Local Funds	Winter 2022/2023	Medium 34.5
56.0006	Test/improve LEOP and COOP plans	Proposed project for the 2021 Plan Update	Milton Emergency Management / Fire-Rescue	All Hazards	$10,000	Federal/State Grants; Local Funds	Winter 2022/2023	Low 19.5
56.0002	Continue development of GIS web mapping project to allow for real time information of road and other hazard areas to be avoided	In-Progress / carry over to 2022 MJHMP	City of Milton Planning and Development Department	All Hazards	$20,000	HMGP; DHS; Local Funds	2022-2027	Low 20.5
56.0003	Emergency Action Plans for dam safety to prepare public safety and public works personnel in the event of a dam failure. This includes 18 dams, including at least 4 category 1 dams.	Deferred from 2016 HMP due to lack of funding / carry over to 2022 MJHMP	City of Milton Public Works Department; GEPD, Dam Safety Program	Dam Failure	$20,000	Federal/State Grants; Local Funds	2022-2027	Low 19.5

Jurisdiction Profile: City of Mountain Park, GA



History & Geography

Mountain Park is a city primarily in the western part of northern Fulton County, with a small portion extending less than 1,000 feet into southeastern Cherokee County. Mountain Park is surrounded on three sides by the City of Roswell.

Mountain Park was incorporated in 1927 and it is essentially an eclectic community and is designated a wildlife refuge. There is no zoning for commercial or business uses, only residential.

Mountain Park Volunteer Fire and Rescue was formed in 1978 and is an all-volunteer fire and emergency medical services (EMS) department providing emergency management services to the City. It also provides Automatic Aid to Roswell and mutual aid to the Fulton/Cherokee/Cobb County fire departments. It is state-certified and has roughly 20 members who are state or nationally certified for emergency services.

Significant Characteristics

Mountain Park is an officially designated wildlife refuge, which protects all wildlife including birds, animals, and reptiles.

Population & Demographics

The U.S. Census report in 2019 that there were 583 people, 273 households, and 143 families residing in the City. There were 292 housing units at an average density of 530.4 per square mile. The racial makeup of the City was 82.3% White, 1.9% African American, 0.3% Native American, 2.4% Asian, 2.2% from other races, and 10.8% from two or more races. Hispanic and Latino of any race were 5.7% of the population.

There were 273 households out of which 18.5% had children under the age of 18 living with them, 49.1% were married couples living together, 30.8% had a female householder with no husband present, and 13.2% had a male householder with no wife present. The average family size was 2.89.

In the City the population was spread out with 18.5% under the age of 18, 11.4% from 18 to 24, 20.25% from 25 to 44, 33.4% from 45 to 64 and 20.1% who were 65 years of age or older. The median age was 48.3 years.

Table 1: City of Mountain Park Population Since 1990

Year	1990	2000	2010	2015	2019
Population	554	506	547	579	583

The Local Economy

The median income for a household in the City was $89,375, and the median income for a family was $108,472. The per capita income for the City was $41,467. About 8.6% of the population were below thepoverty line, including 13.5% of those under age 18 and 1.5% of those age 65 or over.

There are not any registered businesses within the city limits of Mountain Park. However, the City has approximately ten home occupation licenses issued annually.

Below is a list of City issued permits for the construction of single-family homes dating from 2001 to 2014 and the average cost of new construction for that specific year.

Table 2: Single-Family New House Construction Building Permits

Year	Permits
2001-2014	0
2015-2022	6

Critical Facilities & Infrastructure

Law enforcement is provided by the Fulton County Sheriff's Department. Mountain Park's Fire Services are operated by City volunteers, which provides first response for all medical and fire emergencies in Mountain Park and mutual aid for the City of Roswell, as well as the counties of Cobb, Cherokee, and Fulton. Members are trained in residential and commercial firefighting, emergency medical response, hazardous materials incidents and more. Mountain Park also contracts with Roswell for Fire and E911 services. There are no public schools or colleges located within the City limits of Mountain Park.

Land Use & Development Trends

According to the U.S. Census Bureau, the City has a total area of 0.5 square miles, of which 0.1 square miles, or 12.96%, is water. Mountain Park is a residential and wildlife refuge community.

Hazard Risk Assessment, City of Mountain Park, GA

Hazard Identification & Risk Assessment

There are 12 of 13 natural hazards known to pose risk to Fulton County and one or more of its participating jurisdictions. These include Dam Failure, Drought, Earthquake, Flood, Geological Hazards, Extreme Heat, Severe Weather, Tornado, Tropical Systems, Severe Winter Weather, and Wildfire/Wildland Urban Interface Fire. Wind, though identified as a separate hazard in the 2019 Georgia Hazard Mitigation Strategy Standard and Enhanced Plan, is included in the Severe Weather hazard in this plan update.

The following table outlines the City of Mountain Park's general risk to the profiled hazards. The rankings are based on a variety of factors, including 1) a composite evaluation of this plan's risk assessment, namely a hazard's probability of occurring in the future, 2) the vulnerability of the jurisdiction to a specific hazard, 3) the intensity of past hazard impacts, and 4) a joint evaluation of local experts and plan stakeholders. The category/range (per year) is based on the following scale: **Unlikely (0%), Occasional (1-10%), Likely (11%-50%), and Highly Likely (51%-100%).**

Table 3: Risk Assessment, Mountain Park, GA

Risk Assessment Matrix, Mountain Park, GA		
Hazard	**Category**	**Range**
Dam Failure	Occasional***	-
Drought	Highly Likely	295%
Earthquake	Occasional**	-

Risk Assessment Matrix, Mountain Park, GA		
Hazard	**Category**	**Range**
Flood	Occasional	8%
Geological Hazards	Highly Likely	-
Extreme Heat	Highly Likely	-
Severe Weather (including Wind)	Highly Likely*	-
Severe Winter Weather	Highly Likely	-
Tornado	Highly Likely	160%
Tropical Systems	Highly Likely	84%
Wildfire/Wildland Urban Interface Fires	Occasional*****	-

**The hazard of Severe Weather considers the instances of thunderstorms, lightning, hail, and wind, each with a varying degree of occurrence/probability.*

***The hazard of Earthquake is considered occasional but without a definite calculation of probability. This is due to there being no record/data of earthquake in the planning period since the last plan update (2016).*

****Calculating future probability is not the only predictor of future occurrences. In the last five years, Fulton County and its participating jurisdictions have documented no cases of Dam Failure. Though the County has experienced occurrences that were listed in its HMP update (2016), the likelihood of a dam failure event happening in the planning area is considered* ***occasional.***

*****The NOAA/NCEI Storm Events Database did not have any incidences of storm data records related to Flood (including flash flood) for the Cities of Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton from January 1, 1970 – July 31, 2021. Since flooding is possible, the Cities Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton's Probability of Future Events is considered* ***occasional.***

******The hazard of Wildfire/Wildland Urban Interface Fires is considered* ***occasional*** *but without a definite calculation of probability. This is due to there being no record/data of wildfire in the planning period since the last plan update (2016).*

Hazard Event History & Community Impacts

Fulton County has a history of natural hazard events as detailed in this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. The table below presents a summary of natural events that have occurred to indicate the range and impact of natural hazard events in the community. Information regarding specific damages is included if available based on reference material or local sources.

Table 4: Local Hazard Event History

Dates of Event	Event Type (Disaster Declaration, if declared)	Atlanta-Fulton County Designated?	Notes on Damages with County
February 10-15, 2014	DL-4165 Severe Winter Storm	Yes	Severe Winter Storm damages
Jan 28-30, 2014	Winter Storm	No	Citywide Road Closures. Road Cleanup. Approximately $10,000 cost.

Mitigation Capabilities & Actions, City of Mountain Park, GA

Capabilities Assessment

The Legal and Regulatory Capability survey documents authorities available to the jurisdiction and/or enabling legislation at the state level affecting planning and land management tools that support local hazard mitigation planning efforts. The identified planning and land management tools are typically used by states and local and tribal jurisdictions to implement hazard mitigation activities. The table below summarizes the regulatory tools that are available to the municipality.

Table 5: Legal and Regulatory Capability

Tool / Program	Do You Have This?	Authority	Dept./Agency Responsible	Code Citation and Comments
Planning Capability				
Master Plan	Not at this time			
Capital Improvements Plan	Not at this time			
Floodplain Management / Basin Plan	Yes	State	Code Compliance	
Stormwater Management Plan	Yes	County		
Open Space Plan	Yes	Local	Admin	
Stream Corridor Management Plan	Yes	County		
Watershed Management or Protection Plan	Not at this time			
Economic Development Plan	Not at this time			
Comprehensive Emergency Management Plan	Yes	County		
Emergency Operation Plan	Yes	Local	PS	
Post-Disaster Recovery Plan	Yes	Local	PS	
Transportation Plan	Not at this time			
Strategic Recovery Planning Report	Not at this time			
Other Plans	Not at this time			
Regulatory Capability				
Building Code	Yes	State & Local		
Zoning Ordinance	Yes	Local	Amin	
Subdivision Ordinance	Not at this time			
National Flood Insurance Program (NFIP) Flood Damage Prevention Ordinance	Yes	Federal, State, Local		
NFIP: Cumulative Substantial Damages	Not at this time			
NFIP: Freeboard	Yes	State		
Growth Management Ordinances	Not at this time			
Site Plan Review Requirements	Yes	Local	Safebuilt	
Storm water Management Ordinance	Not at this time			

Tool / Program	Do You Have This?	Authority	Dept./Agency Responsible	Code Citation and Comments
Regulatory Authority				
Municipal Separate Storm Sewer System (MS4)	Yes	State	Code Compliance	
Natural Hazard Ordinance	Not at this time			
Post-Disaster Recovery Ordinance	Not at this time			
Real Estate Disclosure Requirement	Yes	State		Property Condition Disclosure Act
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	Not at this time			

Administrative and Technical Capabilities

The table below summarizes potential staff and personnel resources available to Mountain Park.

Table 6: Administrative and Technical Capabilities

Resources	Is this in Place?	Department/Agency/Position
Administrative Capability		
Planning Board	Not at this time	
Mitigation Planning Committee	Not at this time	
Environmental Board/Commission	Not at this time	
Open Space Board/Committee	Not at this time	
Economic Development Commission/Committee	Not at this time	
Maintenance Programs to Reduce Risk	Not at this time	
Mutual Aid Agreements	Yes	Fire Safety
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Not at this time	
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Safebuilt
Planners or engineers with an understanding of natural hazards	Not at this time	
NFIP Floodplain Administrator	Yes	
Surveyor(s)	Not at this time	
Personnel skilled or trained in GIS and/or HAZUS- MH applications	Yes	Fire
Scientist familiar with natural hazards	Not at this time	
Emergency Manager	Yes	

Resources	Is this in Place?	Department/Agency/Position
Technical/Staffing Capability		
Grant Writer(s)	Yes	Robin Auerbach
Staff with expertise or training in benefit/cost analysis	Not at this time	
Professionals trained in conducting damage assessments	Not at this time	

Fiscal Capability

The table below summarizes financial resources available to Mountain Park.

Table 7: Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use
Community Development Block Grants (CDBG, CDBG-DR)	N/A
Capital improvements project funding	N/A
Authority to levy taxes for specific purposes	Council
User fees for water, sewer, gas or electric service	Administrator
Impact Fees for homebuyers or developers of new development/homes	N/A
Stormwater utility fee	N/A
Incur debt through general obligation bonds	Council
Incur debt through special tax bonds	Council/Referendum
Incur debt through private activity bonds	Council/Referendum
Withhold public expenditures in hazard-prone areas	N/A
Other federal or state funding programs	Undetermined
Open space acquisition funding programs	Undetermined
Other	

Community Classifications

The following table summarizes classifications for community programs available to Mountain Park.

Table 8: Community Classifications

Program	Do You Have This?	Classification	Date Classified
Community Rating System (CRS)	Not at this time		
Building Code Effectiveness Grading Schedule (BCEGS)	TBD		

Program	Do You Have This?	Classification	Date Classified
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	Class 2 & 3	2020 & May 2020
Storm Ready	Not at this time		
Firewise	TBD		
Disaster/Safety Programs in/for Schools	N/A		
Organizations with Mitigation Focus (advocacy group, non-government)	Not at this time		
Public Education Program/Outreach (through website, social media)	Not at this time		
Public-Private Partnerships	Not at this time		

**NP = Not Participating, *N/A = Not Applicable, - =Unavailable, TBD = To Be Determined.*

Hazard Mitigation Capability

The table below summarizes a self-assessment of Mountain Park's current hazard mitigation capability.

Table 9: Hazard Mitigation Capability

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, please indicate your obstacles.)*	Moderate	High
Planning and Regulatory Capability		X	
Administrative and Technical Capability			X
Fiscal Capability			X
Community Political Capability		X	
Community Resiliency Capability	X		
Capability to Integrate Mitigation into Municipal Processes and Activities		X	

National Flood Insurance Program (NFIP) Participation

According to FEMA, the National Flood Insurance Program (NFIP) is a federal insurance program that enables property owners in member communities to purchase flood insurance. This insurance is only made available to municipalities that adopt and enforce a floodplain management ordinance. The fundamental goal of NFIP floodplain management requirements is to reduce the threat to lives and the potential for property damage in flood-prone areas. Each municipality that participates in the NFIP has a Flood Insurance Rate Map (FIRM) that is issued by FEMA. This document maps out flood hazard areas in the municipality.

NFIP Floodplain Administrator: Craig Carpenter, Code Enforcement

The City of Mountain Park is currently an active member of the NFIP, in good standing with no outstanding compliance issues. Mountain Park completed their last Community Assistance Visits (CAV) in November 1994 and CAC in October 2009.

Loss History & Mitigation

Mountain Park does have a system in place to maintain a list of properties that have been flood damaged since 2009 and there are currently three residential properties that have experienced flood damage in this community. There is also interest in performing mitigation actions for the fire station, but it is undetermined if the residential property owners are interested in the mitigation process. The floodplain administrator has the ability to make substantial damage estimates based upon inspection and permit records.

Planning & Regulatory Capabilities

Mountain Park uses local plans and programs to support floodplain management such as permit review, inspections, damage assessments, flood protection advice and record keeping. Education and outreach materials are periodically dispersed to 100% of the residence in the city limits through the community newsletter. The City's floodplain management regulations and ordinances meet the minimum requirements set forth by both the Federal Emergency Management Agency (FEMA) and the State of Georgia.

Actions to Strengthen the Program

During the data collection process, it was indicated that additional staff, additional funding and in house GIS capabilities are potential barriers to running an effective floodplain program in Mountain Park. The current floodplain manager did also state an interest in receiving more training and/or attending conferences if the future to assist with maintaining certification and staying well-informed of industry trends.

Community Rating System

Mountain Park does not currently participate in the CRS program.

Integration of Hazard Mitigation into Existing & Future Planning Mechanisms

Mitigation Actions

Each jurisdiction participating in this plan is responsible for implementing specific mitigation actions as prescribed in the adopted Mitigation Action Plan. In each Mitigation Action Plan, every proposed action is assigned to a specific local department or agency to assign responsibility and accountability and increase the likelihood of subsequent implementation. This approach enables individual jurisdictions to update their unique mitigation strategy as needed without altering the broader focus of the countywide plan. The separate adoption of locally specific actions also ensures that each jurisdiction is not held responsible for monitoring and implementing the actions of other jurisdictions involved in the planning process.

Completed Mitigation Actions (2016-2021)

The City of Mountain Park identified several mitigation actions in the previous (2016) MJHMP update. Of the mitigation actions, the City of Mountain Park completed one during the five-year planning period (2016-2021).

Table 10: Completed Mitigation Projects Since 2016, Mountain Park, GA

Completed Since 2016, Mountain Park, GA		
Project Number	**2016 Mitigation Action**	**Responsible Party/ies**
35.0003	Acquire generator for EOC/Fire Station building	City of Mountain Park Fire and Rescue

Proposed Mitigation Actions

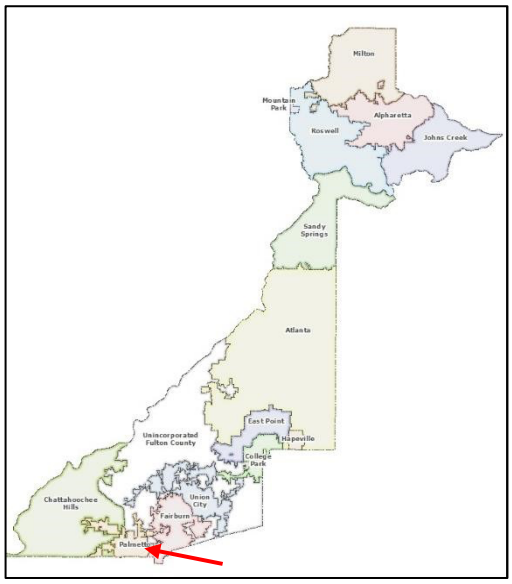
The following table reflects the proposed projects for the 2022 MJHMP update. Additionally, the table includes any/all new mitigation actions identified by the City of Mountain Park for the following five-year planning period (2022-2027).

Table 11: Identified Mitigation Projects (2022-2027), City of Mountain Park

Identified Mitigation Actions (2022-2027), Mountain Park, GA								
Project Number	**Mitigation Action/ Description**	**Status as of 2021 HMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
35.0001	Convert open storm water drainage ditches to underground piping system in areas were the ditching system passes the roadway	In-Progress	City of Mountain Park Public Works Department	Flood, Severe Weather, Tropical Systems	$500,000	Federal/State Grants; Local Funds	2022-2027	Medium 26
35.0002	Improve storm water drainage ditches in areas that do not cross roadways to increase drainage system capacity	In-Progress	City of Mountain Park Public Works Department	Flood, Severe Weather, Tropical Systems	$300,000	Federal/State Grants; Local Funds	2022-2027	Medium 26
35.0004	Install surge protection equipment and measures for the EOC/Fire Station	In-Progress	City of Mountain Park Fire and Rescue	Severe Weather	$5000	Federal/State Grants; Local Funds	2022-2027	Medium 26
35.0005	Flood proof Fire Station including, raising generators and other mechanicals, installing drainage pumps, waterproof foundation and seal foundation walls	In-Progress	City of Mountain Park Fire and Rescue	Flood, Severe Weather, Tropical Systems	25,000	Federal/State Grants; EOC; SCG; FMA: Local Funds	2022-2027	Medium 26
35.0008	Improve capacity of Lake Garrett by dredging accumulated sedimentation	Deferred From 2016 Plan / Carry over to 2022 MJHMP	City of Mountain Park Public Works Department	Flood, Severe Weather, Severe Winter Weather, Tropical Systems	$2.865 Million	Federal/State Grants; Local Funds	2022-2027	Medium 26
35.0009	Improve capacity of Lake Cherful by dredging accumulated sedimentation	Deferred From 2016 HMP / Carry over to 2022 MJHMP	City of Mountain Park Public Works Department	Flood, Severe Weather; Severe Winter Weather, Tropical Systems	$2.865 Million	Federal/State; Local Funds	2022-2027	Medium 26

Identified Mitigation Actions (2022-2027), Mountain Park, GA								
Project Number	Mitigation Action/ Description	Status as of 2021 HMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion	STAPLE+E Score
35.0010	Harden spillway structure between Lake Cherful and Lake Garrett (Comments: Received PDM grant to repair damage from recent flood event. Improvements would lessen risk for future damage.)	In-Progress	City of Mountain Park Public Works Department	Flooding; Severe Weather; Winter Storm; Tropical Systems	200,000	Federal/Grants; Local Funds	2022-2027	Medium 26
99.0011	Rehabilitate the flood plain on Oakhaven Dr. through acquisition of 10 structures in the flood plain; improve drainage in the area (Comments: Area is in floodplain. There is repeated flooding that affects homes and roadway. There have been numerous rescues due to low-lying area. Too much water comes into area that cannot be dispersed.)	In-Progress	City of Mountain Park; City of Roswell	Flooding; Severe Weather; Winter Storm; Tropical Systems	$3,000,000	Federal/State Grants; Local Funds	2016-2021	Medium 33.5

Jurisdiction Profile: City of Palmetto, GA



History & Geography

Palmetto was established in 1853 and is a city located mostly in Fulton County and partly in Coweta County. Palmetto is located 25 miles south of Atlanta on U.S. Highway 29 and on the Atlanta and West Point railroad. The railroad was completed from Atlanta to Palmetto in 1851. Palmetto is located on the highest point above sea level between Atlanta and New Orleans. The railroad is built on a water shed divide, so all the water falling east of the railroad flows into the Flint River and all water falling west of the railroad flows into the Chattahoochee River.

Palmetto was first established as Johnson's Store in Coweta County on May 8, 1833, at which time Mr. John H. Johnson was appointed the first postmaster. The name was changed from Johnson's Store to Palmetto on December 8, 1847. The community was located in Campbell County sometime between the years of 1850 and 1851. The town of Palmetto was chartered by a State Legislative Act approved on February 18, 1854. The town was an unincorporated community for several years prior to the charter. When Campbell County dissolved, Palmetto became a part of Fulton County (January 1, 1932).

Significant Characteristics

Palmetto has two very beautiful parks within the City: Wayside Park on Main Street and Veterans Park on Park Street.

Palmetto also has an historic Train Depot, located at 549 Main Street at the corner of Main Street and Church Street. Beside the Train Depot is a Banquet Hall, which is in the old warehouse and still has the charm of the original floors, exposed brick walls and rafters, wooden freight doors and large windows.

Palmetto is also the Corporate Headquarters of YourTown Healthcare System. Their three-story Headquarters Building, located on Main Street in Palmetto also provides medical care services to the surrounding community.

Population & Demographics

The 2020 U.S. Census reported there were 5,095 people, 1,950 households, and 881 families residing in the City. There were 2,267 housing units at an average density of 394.4 per square mile. The racial make-up of the City was 33.00% White, 54.20% African American, 1.2% Native American, 5.7% Asian, 0.00% Pacific Islander, 6.61% from other races, and 1.5% from two or more races. Hispanic or Latino of any race were 12.1% of the population.

There were 1,950 households out of which 17.33 had children under the age of 18 living with them, 37.5% were married couples living together, 52.3% had a female householder with no husband present and 9.3% of all households were made up of individuals and 2.6% had someone living alone who was 65 years of age or older. The average household size was 2.57 and the average family size was 3.53.

In the City the population was spread out with 31.0% under the age of 18, 5.2% from 20 to 24, 21.9% from 25 to 44, 38.4% from 45 to 64, and 15.3% who were 65 years of age or older. The median age was 38.4 years. For every 100 females, there were 69.7 males. For every 100 females age 18 and over, there were 72.9 males.

Table 1: City of Palmetto Population Change Since 1990

Year	1990	2000	2010	2020
Population	2,612	3,400	4,488	5,095

The Local Economy

The median income for a household in the City was $47,019, and the median income for a family was $53,870. Males had a median income of $41,967 versus $47,034 for females. The per capita income for the City was $22,800. About 19.2% of the population was below the poverty line.

Below is a chart of main industries based on data from the United States Census Bureau 2019:

Table 2: Palmetto Industry Main Industries from 2019

Industry Description	Number of Establishments	Number of Employees
Wholesale Trade	Not Available	76
Retail Trade	Not Available	290
Finance and Insurance/Real Estate	Not Available	33
Information	Not Available	46
Construction	Not Available	123
Professional, Scientific and Technical Services	Not Available	129
Transportation and Warehouse and Support	Not Available	283
Educational Services/Healthcare	Not Available	287
Arts, Entertainment, Recreation	Not Available	310
Manufacturing	Not Available	287
Other Services	Not Available	93

Below is a list of City issued permits for the construction of single-family homes dating from 2015 to 2020.

Table 3: Single-Family New House Construction Building Permits 2015-2020

Year	Permits
2015	5
2016	12
2017	45
2018	87
2019	78
2020	53

Critical Facilities & Infrastructure

The Palmetto Police Department consists of 16 sworn officers including the Police Chief, Lieutenant, detectives, and patrol officers. The Palmetto Fire Department provides fire inspections and public education services along with the day-to-day life safety of its city's residents. The fire department has 14 full time fire-rescue personnel who operate two Paramedic Engines and one Ladder Truck.

The school infrastructure within City limits consists of the following capacity:

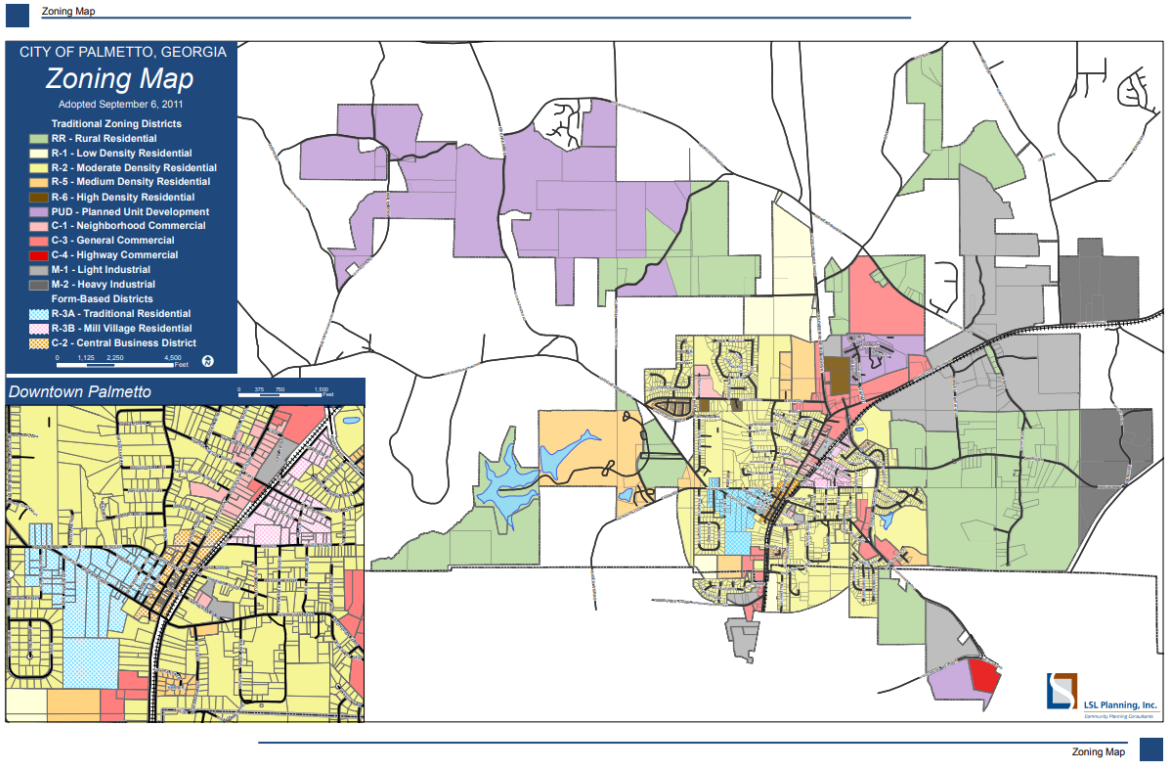
Table 4: Infrastructure within City Limits

School	Type	Enrollment
Nursery School, preschool	Public	97
Kindergarten to 12th grade	Public	360
College, undergraduate	NA	NA
Graduate, professional school	NA	NA

Land Use & Development Trends

Palmetto is a total of 11.6 square miles with only 0.2 square miles of that being water. The City is primarily residential with pockets of commercial. On the out skirts, there are zones dedicated for industrial. Below is a zoning map that was adopted in 2011.

Map 1: Zoning Map of City of Palmetto, GA



Map Source: City of Palmetto, GA

The following table summarizes major development that occurred in the municipality over the past five years, as well as known or anticipated future development in the next five (5) years.

Table 5: Recent and Known Future Development

Property or Development Name	Type (e.g. Res., Comm.)	# of Units/ Structures	Address and Block/Lot	Known Hazard Zones	Description/Status of Development
Recent Development from 2015 to Present					
Palmetto Oaks	Single Family Homes		Hutchenson Ferry	No Known	Phase 1 Complete
PVH Co.	LM Warehouse	940,000 sq feet	Tatum Rd	No Known	Complete
Drive Medical	LM Warehouse	1.3 m sq ft	Palmetto Logistics Parkway	No Known	Complete
Yamaha	LM Warehouse	1.1 sq ft	1015 Collinsworth Rd	No Known	Complete
DHL Co	LM Warehouse	1.3 m sq ft	706 Palmetto Logistics Parkway	No Known	Complete
Conlon Co	LM Warehouse	1.0 m sq ft	700	No Known	Under Construction
Becknell Ind	LM Warehouse	686,000 sq ft	Bowen Rd	No Known	Under Construction
Fortline Co	LM Warehouse	12,982 sq ft	Lot 4 Sabal Dr	No Known	Under Construction
Davita Dialysis	Dialysis Clinic		501 Walnut Way	No Known	Complete
Known or Anticipated Development in the Next Five (5) Years					
Carolina Townhomes	Townhomes	245	Cascade Palmetto Hwy	No Known	Approved
Pizza Farm	Planned Unit Development	275 Acres	Cascade Palmetto Hwy	No Known	Planning
Palmetto Downs	Planned Unit Development	840	Wilkerson Mill Rd	No Known	Planning
Merrill	Mixed Use		Cochran Mill Rd	No Known	Planning
NDA	LM Warehouse	1 Structure	Bowen Rd	No Known	Planning
NDA	LM Warehouse	1 Structure	Tatum Rd	No Known	Planning
NDA	LM Warehouse	1 Structure	Tatum Rd	No Known	Planning
Microsoft	Data Center	250,000 sq feet	Johnson Rd.	No Known	Planning
NDA	LM Warehouse	1 Structure	HW 29 @ Wilkerson Mill	No Known	Planning

Hazard Risk Assessment, City of Palmetto, GA

Hazard Identification & Risk Assessment

There are 12 of 13 natural hazards known to pose risk to Fulton County and one or more of its participating jurisdictions. These include Dam Failure, Drought, Earthquake, Flood, Geological Hazards, Extreme Heat, Severe Weather, Tornado, Tropical Systems, Severe Winter Weather, and Wildfire/Wildland Urban Interface Fire. Wind, though identified as a separate hazard in the 2019 Georgia Hazard Mitigation Strategy Standard and Enhanced Plan, is included in the Severe Weather hazard in this plan update.

The following table outlines the City of Palmetto general risk to the profiled hazards. The rankings are based on a variety of factors, including 1) a composite evaluation of this plan's risk assessment, namely a hazard's probability of occurring in the future, 2) the vulnerability of the jurisdiction to a specific hazard,

3) the intensity of past hazard impacts, and 4) a joint evaluation of local experts and plan stakeholders. The category/range (per year) is based on the following scale: **Unlikely (0%), Occasional (1-10%), Likely (11%-50%), and Highly Likely (51%-100%).**

Table 6: Risk Assessment Matrix, Palmetto, GA

Risk Assessment Matrix, Palmetto, GA		
Hazard	**Category**	**Range**
Dam Failure	Occasional***	-
Drought	Highly Likely	295%
Earthquake	Occasional**	-
Flood	Occasional	-
Geological Hazards	Highly Likely	-
Extreme Heat	Highly Likely	-
Severe Weather (including Wind)	Highly Likely*	-
Severe Winter Weather	Highly Likely	-
Tornado	Highly Likely	160%
Tropical Systems	Highly Likely	84%
Wildfire/Wildland Urban Interface Fires	Occasional*****	-

**The hazard of Severe Weather considers the instances of thunderstorms, lightning, hail, and wind, each with a varying degree of occurrence/probability.*

***The hazard of Earthquake is considered occasional but without a definite calculation of probability. This is due to there being no record/data of earthquake in the planning period since the last plan update (2016).*

****Calculating future probability is not the only predictor of future occurrences. In the last five years, Fulton County and its participating jurisdictions have documented no cases of Dam Failure. Though the County has experienced occurrences that were listed in its HMP update (2016), the likelihood of a dam failure event happening in the planning area is considered **occasional.***

*****The NOAA/NCEI Storm Events Database did not have any incidences of storm data records related to Flood (flash flood included) for the Cities of Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton from January 1, 1970 – July 31, 2021. Since flooding is possible, the Cities Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton's Probability of Future Events is considered **occasional.***

******The hazard of Wildfire/Wildland Urban Interface Fire is considered **occasional** but without a definite calculation of probability. This is due to there being no record/data of wildfire in the planning period since the last plan update (2016).*

Hazard Event History & Community Impacts

Fulton County has a history of natural hazard events as detailed in this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. The table below presents a summary of natural events that have occurred to indicate the range and impact of natural hazard events in the community. Information regarding specific damages is included if available based on reference material or local sources.

Table 7: Local Hazard Event History

Dates of Event	Event Type (disaster declaration if applicable)	Atlanta-Fulton County Designated?	Notes on Damages within County
September 11 – 13, 2017	Hurricane Irma	Yes FEMA04338-DR-GA PA ID # 121-58884-00	Wind Damage to Power Lines and Power Poles. Cleanup and Removal of Downed Trees and Limbs. Administrative Costs. No Sheltering Required. Temporary Road Closures.
August 4, 2015	Severe Thunderstorm	No	Power Lines Downed – Electrical Surge Damaged City Water Treatment Plant
July 30, 2015 Unknown	Severe Thunderstorm Excessive Rainfall	No No	Multiple Incidences of Power Lines Downed/Structure Damaged by Falling Tree Honeysuckle Lane / Washout of Culvert/Partial Street Collapse
Unknown	Excessive Rainfall	No	Fayetteville Rd./Collapse of Culvert/Street Collapse

Mitigation Capabilities & Actions, City of Palmetto, GA

Capabilities Assessment

The Legal and Regulatory Capability survey documents authorities available to the jurisdiction and/or enabling legislation at the state level affecting planning and land management tools that support local hazard mitigation planning efforts. The identified planning and land management tools are typically used by states and local and tribal jurisdictions to implement hazard mitigation activities. The table below summarizes the regulatory tools that are available to the municipality.

Table 8: Legal and Regulatory Capability

Tool / Program	Do You Have This?	Authority	Dept./Agency Responsible	Code Citation and Comments
Planning Capability				
Master Plan	Yes	Local	Administration	
Capital Improvements Plan	Not at this time			
Floodplain Management / Basin Plan	Not at this time			
Stormwater Management Plan	Yes	Local	Code Enforcement	
Open Space Plan	Not at this time			
Stream Corridor Management Plan	Not at this time			
Watershed Management or Protection Plan	Yes	Local	Code Enforcement	

Tool / Program	Do You Have This?	Authority	Dept./Agency Responsible	Code Citation and Comments
Planning Capability				
Economic Development Plan	Not at this time			
Comprehensive Emergency Management Plan	Yes	County	AFCEMA	
Emergency Operation Plan	Yes	County	AFCEMA	
Post-Disaster Recovery Plan	Not at this time			
Transportation Plan	Not at this time			
Strategic Recovery Planning Report	Not at this time			
Other Plans:	Not at this time			
Regulatory Capability				
Building Code	Yes	State & Local	Administration	
Zoning Ordinance	Yes	Local	Administration	
Subdivision Ordinance	Yes	Local	Administration	
National Flood Insurance Program (NFIP) Flood Damage Prevention Ordinance	Yes	Federal, State, Local	Code Enforcement	
NFIP: Cumulative Substantial Damages	Not at this time			
NFIP: Freeboard	Yes	State, Local	Administration	State mandated BFE+2 for single and two-family residential construction, BFE+1 for all other types of construction
Growth Management Ordinances	Not at this time			
Site Plan Review Requirements	Yes	Local	Zoning	
Storm water Management Ordinance	Yes	Local	Code Enforcement	
Municipal Separate Storm Sewer System (MS4)	Yes	Local	Code Enforcement	
Natural Hazard Ordinance	Not at this time			
Post-Disaster Recovery Ordinance	Not at this time			
Real Estate Disclosure Requirement	Yes	State		
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	Not at this time			

Administrative and Technical Capabilities

The table below summarizes potential staff and personnel resources available to Palmetto.

Table 9: Administrative and Technical Capabilities

Resources	Is this in Place?	Department/Agency/Position
Administrative Capability		
Planning Board	Yes	Palmetto Planning and Zoning Board
Mitigation Planning Committee	Yes	
Environmental Board/Commission	Not at this time	
Open Space Board/Committee	Not at this time	
Economic Development Commission/Committee	Yes	Palmetto Development Authority
Maintenance Programs to Reduce Risk	Not at this time	
Mutual Aid Agreements	Yes	Palmetto Fire Department
Resources	**Is this in Place?**	**Department/Agency/Position**
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	Contracted
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Contracted
Planners or engineers with an understanding of natural hazards	Yes	Contracted
NFIP Floodplain Administrator	Yes*	Code Enforcement/Zoning Administrator
Surveyor(s)	Yes	Contracted
Personnel skilled or trained in GIS and/or HAZUS- MH applications	Not at this time	
Scientist familiar with natural hazards	Not at this time	
Emergency Manager	Yes	Fire Chief/Palmetto Fire Department
Grant Writer(s)	Not at this time	
Staff with expertise or training in benefit/cost analysis	Not at this time	
Professionals trained in conducting damage assessments	Not at this time	

**If you participate in the NFIP, then you have a Floodplain Administrator.*

Fiscal Capability

The table below summarizes financial resources available to Palmetto.

Table 10: Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvements project funding	Yes

Financial Resources	Accessible or Eligible to Use
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes
Impact Fees for homebuyers or developers of new development/homes	Not at this time
Stormwater utility fee	Not at this time
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	
Incur debt through private activity bonds	
Withhold public expenditures in hazard-prone areas	
Other federal or state funding programs	Yes
Open space acquisition funding programs	Yes
Other	

Community Classifications

The following table summarizes classifications for community programs available to Palmetto.

Table 11: Community Classifications

Program	Do You Have This?	Classification	Date Classified
Community Rating System (CRS)	Not at this time		
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	3	07/07/2015
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	1/1X	08/01/2017
Storm Ready	Yes		
Firewise	Not at this time		
Disaster/Safety Programs in/for Schools	Yes		
Organizations with Mitigation Focus (advocacy group, non-government)	Not at this time		
Public Education Program/Outreach (through website, social media)	Yes		
Public-Private Partnerships	Not at this time		

**NP = Not Participating, *N/A = Not Applicable, - =Unavailable, TBD = To Be Determined.*

Hazard Mitigation Capability

The table below summarizes a self-assessment of Palmetto's current hazard mitigation capability.

Table 12: Hazard Mitigation Capability

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, please indicate your obstacles.)*	Moderate	High
Planning and Regulatory Capability			X
Administrative and Technical Capability		X	
Fiscal Capability		X	
Community Political Capability		X	
Community Resiliency Capability		X	
Capability to Integrate Mitigation into Municipal Processes and Activities		X	

National Flood Insurance Program (NFIP) Participation

According to FEMA, the National Flood Insurance Program (NFIP) is a federal insurance program that enables property owners in member communities to purchase flood insurance. This insurance is only made available to municipalities that adopt and enforce a floodplain management ordinance. The fundamental goal of NFIP floodplain management requirements is to reduce the threat to lives and the potential for property damage in flood-prone areas. Each municipality that participates in the NFIP has a Flood Insurance Rate Map (FIRM) that is issued by FEMA. This document maps out flood hazard areas in the municipality.

NFIP Floodplain Administrator: Frank West, Code Enforcement/Flood Plain Manager

The City of Palmetto is currently an active member of the NFIP, in good standing with no outstanding compliance issues. It is currently undetermined when Palmetto completed their last Community Assistance Visits (CAV).

Loss History & Mitigation

Palmetto does have a system in place to maintain a list of properties that have been flood damaged; however, there are none to date. The floodplain administrator does not make substantial damage estimates and no property owners have expressed an interest in the mitigation process. If mitigation actions were sought in Palmetto it is believed the funding source would primarily be the property owner and insurance.

Planning & Regulatory Capabilities

Palmetto does use local ordinance, plans, and programs to support floodplain management. The City's floodplain management regulations and ordinances meet the minimum requirements set forth by both FEMA and the State of Georgia.

Actions to Strengthen the Program

During the data collection process staff did not indicate any perceived barriers to running an effective floodplain program in Palmetto; however, they did state an interest in receiving more training and/or attending conferences if the future.

Community Rating System

Palmetto does not currently participate in the CRS program.

Integration of Hazard Mitigation into Existing & Future Planning Mechanisms

Mitigation Actions

Each jurisdiction participating in this plan is responsible for implementing specific mitigation actions as prescribed in the adopted Mitigation Action Plan. In each Mitigation Action Plan, every proposed action is assigned to a specific local department or agency in order to assign responsibility and accountability and increase the likelihood of subsequent implementation. This approach enables individual jurisdictions to update their unique mitigation strategy as needed without altering the broader focus of the countywide plan. The separate adoption of locally specific actions also ensures that each jurisdiction is not held responsible for monitoring and implementing the actions of other jurisdictions involved in the planning process. A complete list of countywide mitigation strategies is provided in Section 5 of this plan update.

Completed Mitigation Actions (2016-2021)

The City of Palmetto identified 13 mitigation actions in the previous (2016) MJHMP update. Of the 13 mitigation actions, the City of Palmetto completed zero during the five-year planning period (2016-2021).

Identified Mitigation Actions (2021-2026)

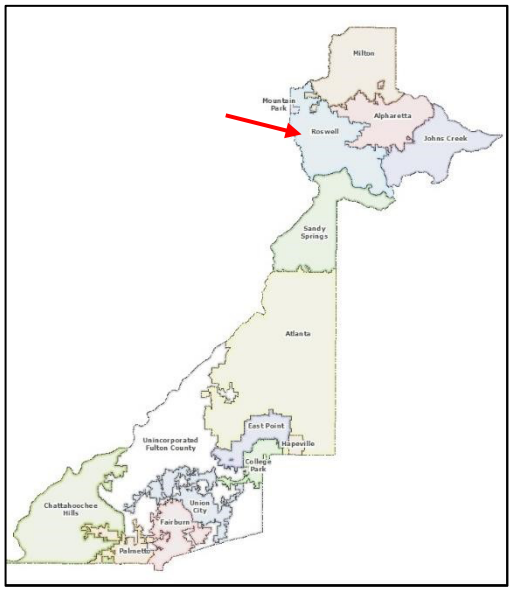
The following table reflects the proposed projects for the 2022 MJHMP update. Additionally, the table includes any/all new mitigation actions identified by the City of Palmetto for the following five-year planning period (2022-2027).

Identified Mitigation Actions, Palmetto, GA								
Project Number	Mitigation Action/ Description	Status as of 2021 HMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion	STAPLE+E Score
40.0014	Install Two Outdoor Warning Sirens at Locations within the City.	Proposed during 2016 Plan lifecycle In-Progress	City of Palmetto Administration	Severe Weather, Tornado	$75,000	HMGP, DHS, Local Funds	2022-2027	Medium 36.5
40.0001	Acquire generator for emergency power for Fire Department Headquarters Building	Deferred in 2016 Plan - lack of funding. Carry over to 2022 MJHMP	City of Palmetto Fire and Rescue	Severe Weather, Severe Winter Weather, Tropical Systems; Tornado	$25,000	HMGP; EOC; SCG; Local Funds	2022-2027	Medium 28
40.0002	Retrofit old window glass at the Fire Department Headquarters building for increased impact resistance	Deferred in 2016 Plan - lack of funding. Carry over to 2022 MJHMP	City of Palmetto Fire and Rescue	Severe Weather, Severe Winter Weather, Tropical Systems, Tornado	$10,000	HMGP; EOC; SCG; Local Funds	2022-2027	Medium 35.5
40.0003	Acquire generator for emergency power for Fire Station	Deferred in 2016 Plan - lack of funding. Carry over to 2022 HMJMP	City of Palmetto Fire and Rescue	Severe Weather, Severe Winter Weather, Tropical Systems, Tornado	$25,000	HMGP; SCG; Local Funds	2022-2027	Medium 28
40.0004	Retrofit bay doors of Fire Station. (Comments: Bay doors are over 40 years old and of residential grade quality. They are of insufficient wind loading capacity and impact resistance.)	Deferred in 2016 Plan - lack of funding. Carry over to 2022 MJHMP	City of Palmetto Fire and Rescue	Severe Weather, Severe Winter Weather, Tropical Systems, Tornado	$15,000	HMGP; SCG; Local Funds	2022-2027	Medium 35.5
40.0005	Retrofit current flat roof of City Hall for improved wind loading capacity	Deferred in 2016 Plan - lack of	City of Palmetto Administration	Severe Weather, Severe Winter	$55,000	HMGP; Local Funds	2022-2027	Medium 35.5

Identified Mitigation Actions, Palmetto, GA								
Project Number	Mitigation Action/ Description	Status as of 2021 HMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion	STAPLE+E Score
		funding. Carry over to 2022 MJHMP		Weather, Tropical Systems, Tornado				
40.0006	Acquire generator for emergency power for Police Station	Deferred in 2016 Plan - lack of funding. Carry over to 2022 MJHMP	City of Palmetto Police Department	Severe Weather, Severe Winter Weather, Tropical Systems, Tornado	$15,000	HMGP, DHS, Local Funds	2022-2027	Low 20.5
40.0007	Retrofit Police Station for improved wind loading capacity	Deferred in 2016 Plan - lack of funding. Carry over to 2022 MJHMP	City of Palmetto Police Department	Severe Weather; Severe Winter Weather, Tropical Systems, Tornado	$15,000	HMGP, DHS, Local Funds	2022-2027	Medium 28
40.0008	Harden Community Center, which functions as a first responder shelter. Reinforce roof for wind loading capacity as well replace windows for wind resistance	Deferred in 2016 Plan - lack of funding. Carry over to 2022 MJHMP	City of Palmetto Administration	All Hazards	$110,000	HMGP; Local Funds	2022-2027	Medium 35.5
40.0009	Acquire stream in Palmetto Oaks to preserved as green space and improve flood plain management	Deferred in 2016 Plan - lack of funding. Carry over to 2022 MJHMP	City of Palmetto Administration	Flood	$300,000	HMGP; FMA; Local Funds	2022-2027	Medium 28
40.0010	Acquire land on Mixon Ave to prevent further dense development as part of their green space expansion program	Deferred in 2016 Plan - lack of funding. Carry over to 2022 MJHMP	City of Palmetto Administration	Wildfire/Wildland Urban Interface, Tornado, Severe Weather	$150,000	HMGP; Local Funds	2022-2027	Medium 20.5
40.0011	Acquire Emergency Generator for Water Treatment Plant	In progress – Carried over from 2016 MJHMP	City of Palmetto Public Works Department	Severe Weather, Tornado, Severe Winter Weather, Tropical Systems	$25,000	HMGP, DHS, Local Funds	2022-2027	Medium 28

Identified Mitigation Actions, Palmetto, GA								
Project Number	Mitigation Action/ Description	Status as of 2021 HMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion	STAPLE+E Score
40.0012	Acquire Emergency Generator for City Hall	In progress – Carried over from 2016 MJHMP	City of Palmetto Administration	Severe Weather, Tornado, Severe Winter Weather, Tropical Systems	$25,000	HMGP, DHS, Local Funds	2022-2027	Medium 28
40.0013	Retrofit Water Treatment Plant with Lightning Protection	In progress – Carried over from 2016 MJHMP	City of Palmetto Public Works Department	Severe Weather, Tornado, Severe Winter Weather, Tropical Systems	$25,000	HMGP, DHS, Local Funds	2022-2027	Medium 28

Jurisdiction Profile: City of Roswell, GA



History & Geography

Roswell is a city in north Fulton County and is Georgia's eighth largest City. In 1830, Roswell King passed through the area of what is now Roswell and observed the great potential for building a cotton mill along Victory Creek. Since the land nearby was also good for plantations, his idea was to put cotton processing near cotton production. Toward the middle of the 1830s, King returned to build a mill that would soon become the largest in North Georgia (Roswell Mill). He brought with him 36 African slaves from his own plantation, plus another 42 skilled carpenter slaves bought in Savannah to build the mills. The slaves built the mills, infrastructure, houses, mill worker apartments, and supporting buildings for the new town. The Africans brought their unique culture, language, and religious traditions from the coast to North Georgia. Roswell King invited investors from the coast to join him at the new location. He was also joined by Barrington King, one of his sons, who succeeded his father in the manufacturing company. Archibald Smith was one of the planters who migrated there to establish a new plantation, also bringing enslaved African Americans from the coastal areas.

The Roswell area was part of Cobb County when first settled, and the County seat of Marietta was a four-hour (one-way) horseback ride to the west. Since Roswell residents desired a local government, they submitted a City charter to be incorporated to the Georgia General Assembly. The charter was approved on February 16, 1854.

Significant Characteristics

Some of the notable places to visit are the Archibald Smith Planation Home, Bullock Hall, Barrington Hall, Chattahoochee River National Recreation Area, Chattahoochee Nature Center, Faces of War Memorial, Promise Cottage, Teaching Museum North, Atlanta Rowing Club and Historic Roswell District. Barrington Hall (the home of Barrington King), Smith Plantation (the home of Archibald Smith) and Bulloch Hall (the childhood home of President Theodore Roosevelt's mother, Mittie Bulloch) have been preserved and restored. They are now open to the public.

The Roswell Recreation and Parks department has 18 parks with 800 acres of active and passive parkland and facilities. The goals of the department are to promote a sense of community spirit and athleticism in the youth of Roswell partnering with many local middle and high schools to achieve its goals by lending practice fields and athletic coaches throughout the year. A branch of the Chattahoochee River National Recreation Area, a component of the National Park System is in Roswell at Vickery Creek.

Roswell also has several festivals and parades throughout the year, such as; Roswell Memorial Day Ceremony (the largest Memorial Day Ceremony in Georgia), Roswell Roots: A Festival of Black History & Culture, Roswell Criterium Bicycle Race and Historic Roswell Kiwanis Kids Bike Safety Rodeo, Roswell Magnolia Storytelling Festival, Riverside Sounds Concert Series, Roswell Youth Day Parade and Festival, Keep Roswell Beautiful Duck Race, Roswell Annual Fireworks Extravaganza, the Roswell Wine Festival, Dia de Los Muertos Celebration, and Alive in Roswell (the third Thursday of each month).

Population & Demographics

The U.S. Census reports in 2020, there were 92,833 people, 34,380 households, and 20,933 families residing in the City. There were 389,287 housing units at an average density of 2.73 per square mile (7.07/km²). The racial makeup of the City was 75.05% White, 14.30% African American, 0.32% Native American, 4.33% Asian, 0.02% Pacific Islander, 3.03% from other races, and 2.95% from two or more races. Hispanic or Latino of any race was 16.00% of the population.

In the City, the population was spread out with 7.1% under the age of 5 years, 25.1% under the age of 18, and 12.5% 65 years and older.

Table 1: City of Roswell Population Since 1990

Year	1990	2000	2010	2014	2020
Population	47,923	79,334	88,346	94,089	92,833

The Local Economy

The median income for a household in the City was $109,805, and the median income for a family was $96,760. Males had a median income of $72,754 versus $45,979 for females. The per capita income for the City was $50,715. About 3.2% of families and 7.6% of the population were below the poverty line, including 5.6% of those under age 18 and 0.7% of those age 65 or over.

Below is a chart of local industries based on data from the United States Census Bureau December 12-2021:

Table 2: Main Industries Based on Data from 2021

Industry Description	Number of Establishments	Number of Employees
Wholesale Trade	136	1,389
Retail Trade	490	5,168
Information	46	1,128
Real Estate, Rental, Leasing	154	708
Professional, Scientific and Technical Services	401	4,059
Administrative and Support and Waste Management and Remediation Service	140	2,470
Educational Services	109	1,415
Health Care and Social Assistance	603	5,546
Accommodation and Food Services	269	3,609
Other Services	597	2,038

Following is a list of City-issued permits for the construction of single-family homes dating from 2015 to 2019.

Table 3: Single-Family New House Construction Building Permits

Year	Permits
2015	258
2016	287
2017	244
2018	209
2019	245

Critical Facilities & Infrastructure

The Roswell Police Department is located 20 miles north of Atlanta. The employee department consists of 157 sworn employees, 47 civilian employees and serves a population of almost 100,000 and 41.95 square miles of property. The Roswell Fire Department has a staff of 197 part-time certified firefighter employees, 15 full-time certified firefighter employees (6 of 15 are also certified Arson Investigators and certified Fire Inspectors), and 4 civilian employees.

The Fulton County school system within Roswell City limits consists of the following capacities.

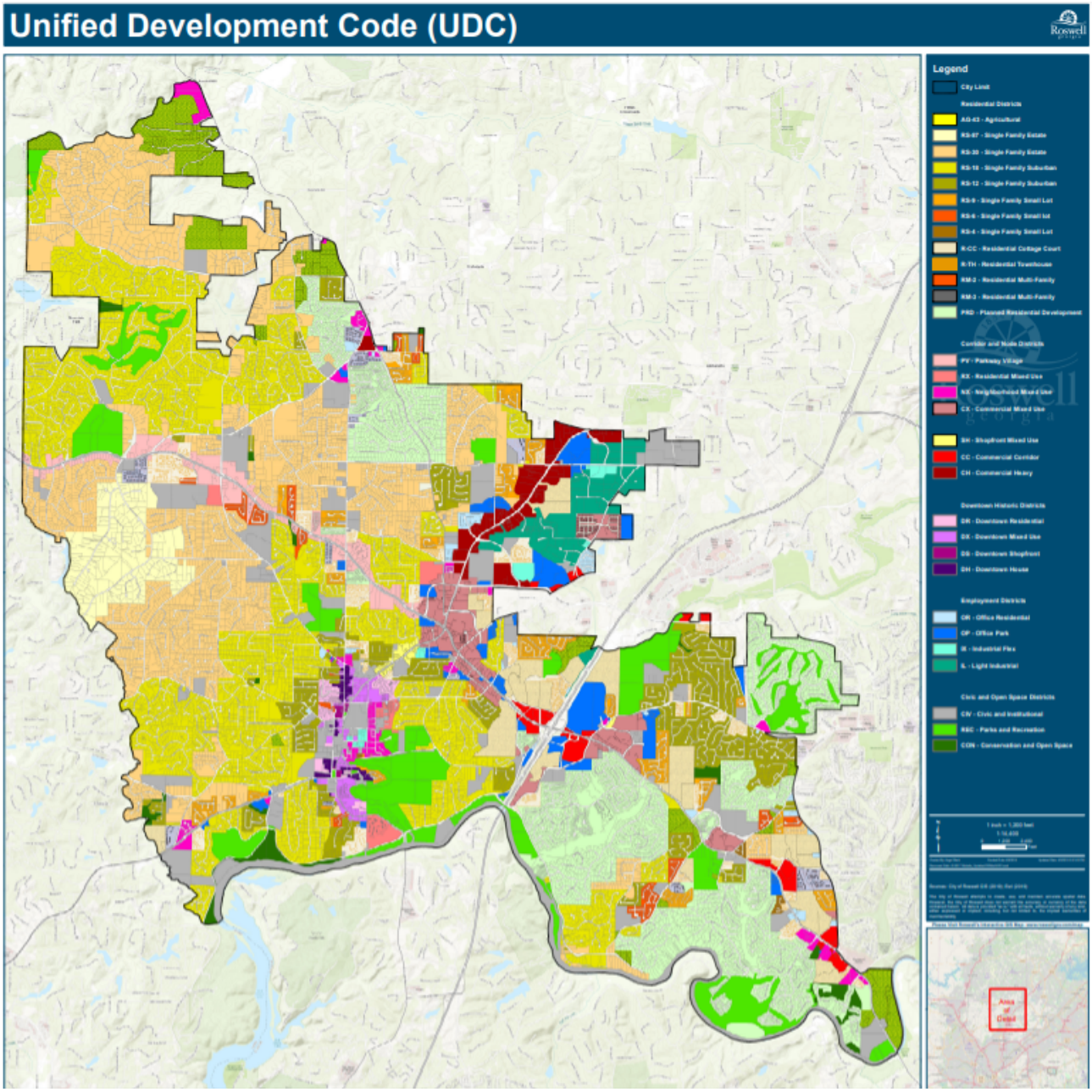
Table 4: Infrastructure within City Limits

School	Type	Enrollment
Nursery School, preschool	Public	403
Kindergarten to 12th grade	Public	16,114
College, undergraduate	Not Reported	Not Reported
Graduate, professional school	Not Reported	Not Reported

Land Use & Development Trends

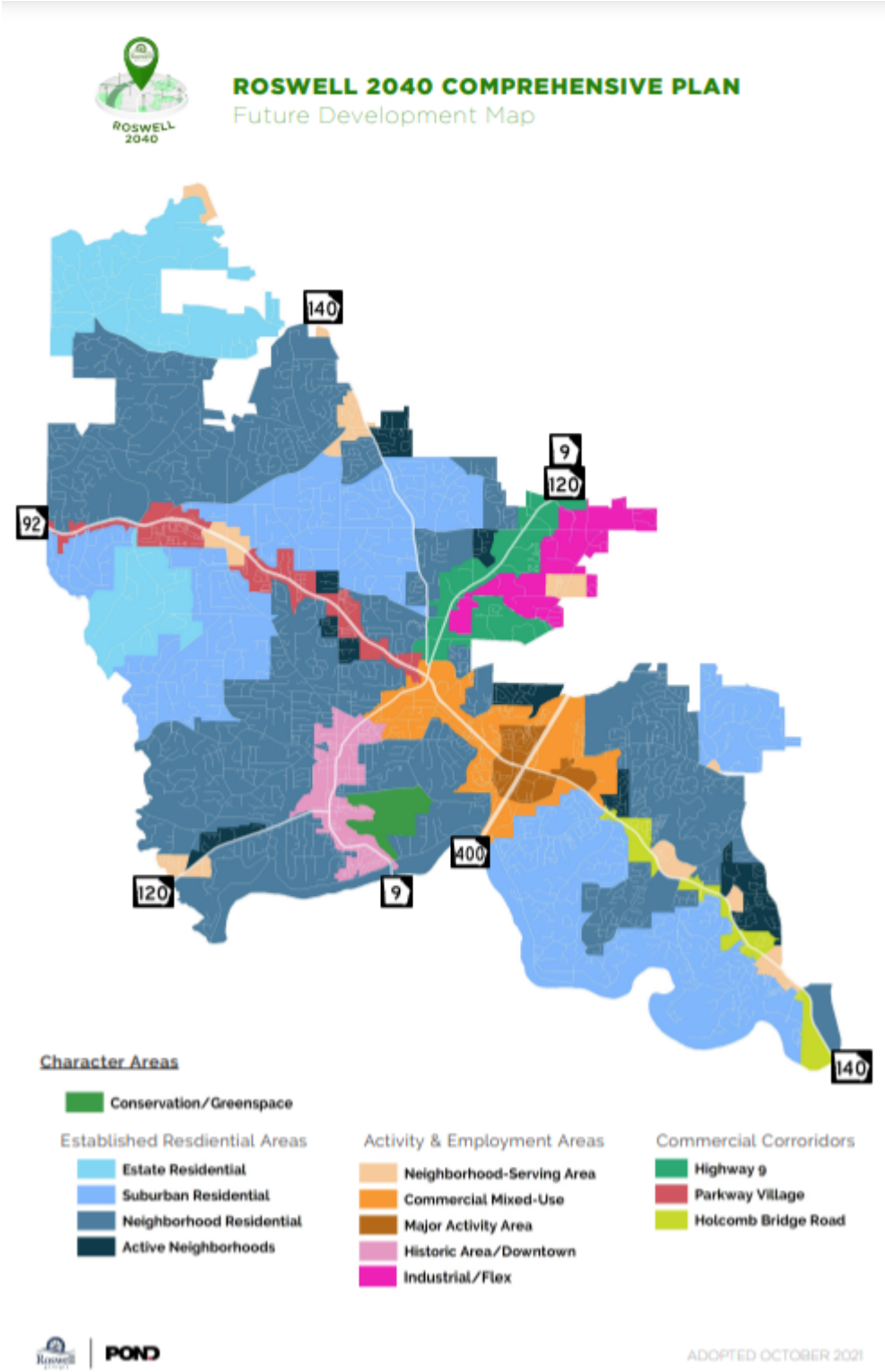
Roswell is a total of 41.95 square miles with only 0.6 square miles being water. Roswell has a good mix of residential and commercial; as well as districts for employment and civic/open spaces including: 0.6% water, 65% residential, 27% commercial, 1% agriculture, 6% undeveloped. Following is the City's zoning map from 2019.

Map 1: City of Roswell, Zoning Map (2019)



Map Source: City of Roswell, GA

Map 2: City of Roswell, Development Map



Map Source: Roswell 2040 Comprehensive Plan

The following table summarizes major development that occurred in the municipality over the past five years, as well as known or anticipated future development in the next five (5) years.

Table 5: Recent Major Development, City of Roswell, GA

Property or Development Name	Type (e.g. Res., Comm.)	# of Units/Structures	Address and Block/Lot	Known Hazard Zone(s)	Description/Status of Development
Recent Development from 2015 to Present					
Harlow West	Townhomes	283	Old Roswell Rd	No	In process
Harlow East	Townhomes	84	Old Roswell Rd	No	In process
Goulding Village	Residential	41	Goulding Place	No	Complete
Roswell Township	Townhomes	92	Highway 92	No	Complete
Oak Lane	Single-Family	8	Woodstock Road	No	Complete
Canton St. Walk	Residential	13	Canton Street	No	Complete
Etris Rd. Subdivision	Single-Family	3	Etris Road	No	Future
Grand Reserve phases 1-2	Single-Family	74	Bishops Court/ Grand Litchfield Drivee	No	In process
110 Woodstock	Townhomes	21	Woodstock Street	No	Complete
835 Mimosa	Townhomes	7	Ramsey Street	No	Complete
Emerson Woods	Single-Family	20	Upper Hembree Road	No	Complete
Hillendale	Single-Family	36	Coleman	No	In process
Alstead	Residential	108	Holcomb Bridge Road	No	Complete
Briarstone	Single-Family	68	Briarstone Ridge Way	No	In process
Roswell Court		17 +1 retail		No	
Oxbo Bluffs	Single-Family	7	Oxbo Road	No	Complete

Property or Development Name	Type (e.g. Res., Comm.)	# of Units/Structures	Address and Block/Lot	Known Hazard Zone(s)	Description/Status of Development
Recent Development from 2015 to Present					
Oxbo Townhomes	Townhomes	4	Oxbo Road	No	Complete
Enclave at East Roswell	Single -Family	31	Old Scott Road	No	In process
Woodland Pointe	Townhomes	18	Mansell Road	No	In process
Old Blacksmith Row	Townhomes	6	Canton Street	No	Complete
Riverwalk	Townhomes	56	Old Alabama Road	No	In process
Reed Farm	Single-Family	6	Houze Road	No	In process
Towns @ Old Mill	Townhomes	40	Houze Road	No	In process
Windfaire phase 3	Single-Family	17	Gray Hawk Lane	No	In process
Park @ Old Roswell	Townhomes	50	Old Roswell Road	No	In process
Cottages at Horseshoe Bend	Residential	15	Belmont Place	No	Future
Canopy	Townhomes	54	Atlanta Street	No	In process
Aurora Park	Townhomes	45	Mansell Road	No	In process
Regents Court	Single-Family	11	Hightower Road	No	Future
Saddle Crossing	Single-Family	6	Ebenezer Road	No	In process
Parkside Estates	Residential	14	Strickland Road	No	In process
Berkdale Phase 3	Single-Family	12	Applegate Drive	No	In process
Vickers	Mixed use	71 apartments; 7,673 SF commercial	Woodstock Road	No	Complete
The Catherine	Residential	300 apartments	Alpharetta Highway and Sun Valley	No	Complete

Property or Development Name	Type (e.g. Res., Comm.)	# of Units/Structures	Address and Block/Lot	Known Hazard Zone(s)	Description/Status of Development
Recent Development from 2015 to Present					
Racetrac	Commercial	5.411 SF	Alpharetta Highway	No	Completed 3/1/2022
Home 2 Suites	Commercial	106 hotel rooms	Mansell Road	No	Complete
Springhill Suites	Commercial	90 hotel rooms	Westside Parkway	No	Complete
The Residence Inn	Commercial	102 hotel rooms	Westside Parkway	No	In process
Hill Street Development	Mixed use	96 apartments; 10,092 SF commercial	Atlanta St and Hill St	No	Future
West Alley	Commercial	125 hotel rooms; 72,400 SF commercial	Magnolia, Mimosa and Webb	No	Future
Southern Post Development	Mixed use	128 apartments; 9 townhomes; and 150,169 SF	Alpharetta St	No	Future
Southern Post Hotel	Commercial	125 hotel rooms	Alpharetta St	No	Future
Parkside on Canton	Mixed Use	14 residential units; 2,328 SF office space	Canton St	No	Complete
East Village	Residential	320 apartments; 74 townhomes	Holcomb Bridge Road	No	Future
The Preserve @ Historic Roswell	Single -Family	16	Roswell Farms Drive	No	In process
155 Mansell	Industrial	21,000 SF	Mansell Road	No	In process
Green St. Townhomes	Townhomes	5	Green Street	No	In process
Swallow Townhomes	Townhomes	8	Green Street	No	In process
Chase Bank	Commercial	3,375 SF	Alpharetta St	No	Complete
Lidl	Commercial	28,579 SF	Holcomb Bridge	No	Complete
Chick-fil-A	Commercial	4.990 SF	Alpharetta Highway	No	Complete

Property or Development Name	Type (e.g. Res., Comm.)	# of Units/Structures	Address and Block/Lot	Known Hazard Zone(s)	Description/Status of Development
Recent Development from 2015 to Present					
Vickery Rose	Residential	130 units/ 180,336 SF	Crossville Road	No	Complete
Wash Factory Car Wash	Commercial	4,122 SF	Alpharetta Highway	No	Complete
Champions Place	Residential	10,220 SF	Nesbit Ferry Road	No	Complete
Serenity @ Chattahoochee	Mixed Use	50 townhomes, 64 condos and 8,000 SF commercial	Old Alabama Road	No	Future
Oak Crossing	Townhomes	24	Myrtle Street	No	Future
Statum at Roswell (office)	Commercial	24,000 SF	Woodstock Road/Highway 92	No	Future
Office development	Commercial	5,572 SF	Atlanta St	No	Complete
Roswell Corners (new building)	Commercial	9,000 SF	Woodstock Road/Highway 92	No	Complete
Long Circle	Single-Family	3	Ling Circle	No	In process
Maple St extension	Single-Family	3	Maple St	No	In process
Maple St Cottages	Single-Family	8	Maple St	No	Future
Cox Road Development	Single-Family	24	Cox Road	No	Future
Self-Storage	Commercial	46,600 SF	Old Ellis Rd	No	Complete
Retail building	Commercial	9.900 SF	Holcomb Bridge Road	No	Complete
Tidal Wave Car Wash	Commercial	3,500 SF	Holcomb Bridge Road	No	Complete

Hazard Risk Assessment, City of Roswell, GA

Hazard Identification & Risk Assessment

There are 12 of 13 natural hazards known to pose risk to Fulton County and one or more of its participating jurisdictions. These include: Dam Failure, Drought, Earthquake, Flood, Geological Hazards, Extreme Heat, Severe Weather, Tornado, Tropical Systems, Severe Winter Weather, and Wildfire/Wildland Urban Interface Fire. Wind, though identified as a separate hazard in the 2019 Georgia Hazard Mitigation Strategy Standard and Enhanced Plan, is included in the Severe Weather hazard in this plan update.

The following table outlines the City of Roswell's general risk to the profiled hazards. The rankings are based on a variety of factors, including 1) a composite evaluation of this plan's risk assessment, namely a hazard's probability of occurring in the future, 2) the vulnerability of the jurisdiction to a specific hazard, 3) the intensity of past hazard impacts, and 4) a joint evaluation of local experts and plan stakeholders. The category/range (per year) is based on the following scale: **Unlikely (0%), Occasional (1-10%), Likely (11%-50%), and Highly Likely (51%-100%).**

Table 6: Risk Assessment Matrix, Roswell, GA

Risk Assessment Matrix, Roswell, GA		
Hazard	**Category**	**Range**
Dam Failure	Occasional***	-
Drought	Highly Likely	295%
Earthquake	Occasional**	-
Flood	Occasional	8%
Geological Hazards	Highly Likely	-
Extreme Heat	Highly Likely	-
Severe Weather (including Wind)	Highly Likely*	-
Severe Winter Weather	Highly Likely	-
Tornado	Highly Likely	160%
Tropical Systems	Highly Likely	84%
Wildfire/Wildland Urban Interface Fires	Occasional*****	-

**The hazard of Severe Weather considers the instances of thunderstorms, lightning, hail, and wind, each with a varying degree of occurrence/probability.*

***The hazard of Earthquake is considered occasional but without a definite calculation of probability. This is due to there being no record/data of earthquake in the planning period since the last plan update (2016).*

****Calculating future probability is not the only predictor of future occurrences. In the last five years, Fulton County and its participating jurisdictions have documented no cases of Dam Failure. Though the County has experienced occurrences that were listed in its HMP update (2016), the likelihood of a dam failure event happening in the planning area is considered* ***occasional.***

*****The NOAA/NCEI Storm Events Database did not have any incidences of storm data records related to Flood (including Flash Flood) for the Cities of Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton from January 1, 1970 – July 31, 2021. Since flooding is possible, the Cities Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton's Probability of Future Events is considered* ***occasional.***

******The hazard of Wildfire/Wildland Urban Interface Fire is considered* ***occasional*** *but without a definite calculation of probability. This is due to there being no record/data of wildfire in the planning period since the last plan update (2016).*

Hazard Event History & Community Impacts

Fulton County has a history of natural hazard events as detailed in this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. The table below presents a summary of natural events that have occurred to indicate the range and impact of natural hazard events in the community. Information regarding specific damages is included if available based on reference material or local sources.

Table 7: Local Hazard Event History (2014 – 2021)

Date(s) of Event	Event Type (Disaster Declaration if applicable)	Atlanta-Fulton County Designated?	Notes on Damages within County
02/10/2014-15/2014	Severe Winter Storm	Yes	Severe Winter Storm damages
07/13/2018	Flash Flood	No	No damage or injuries/deaths
02/06/2020	Flash Flood	Yes	No damage or injuries/deaths

Mitigation Capabilities & Actions, City of Roswell, GA

Capabilities Assessment

The Legal and Regulatory Capability Survey documents authorities available to the jurisdiction and/or enabling legislation at the state level affecting planning and land management tools that support local hazard mitigation planning efforts. The identified planning and land management tools are typically used by states and local and tribal jurisdictions to implement hazard mitigation activities. The table below summarizes the regulatory tools that are available to the municipality.

Table 8: Legal and Regulatory Capability

Tool / Program	Do You Have This?	Authority	Dept. /Agency Responsible	Code Citation and Comments
Planning Capability				
City's Strategic Plan	Yes	Local	Administration	New 2022
Capital Improvements Plan	Yes	Local	Finance	Annual Budget
Floodplain Management / Basin Plan	Yes - 06/02/2008AND (UDC) 02/24/14	State & Local	Environmental/PW	Code of Ordinances – Art. 7.4 – Flood Damage Ordinance and then UDC – Article 12 – Environmental Protection – Sec. 12.

Tool / Program	Do You Have This?	Authority	Dept. /Agency Responsible	Code Citation and Comments
Stormwater Management Plan	Yes –12/16/2002 AND (UDC) 02/24/14	State & Local	Environmental/PW	Code of Ordinances – Article 7.1 – Ordinance 2002-12-04 and then UDC – Article 12 – Environmental Protection – Sec. 12.5
Open Space Plan	No			
Stream Corridor Management Plan	Yes	State & Local	Environmental/PW	UDC – Article 12 – Environmental Protection – Sec. 12.2
Watershed Management or Protection Plan	Yes - 06/02/2008	State & Local	Environmental/PW	Code of Ordinances – Article 7.1 – Ordinance 2002-12-04 and then UDC – Article 12 – Environmental Protection – Sec. 12.5
Economic Development Plan	Yes – 08/13/2012	Local	Community Development	Strategic Economic Development Plan – Resolution #2012-08-36
Comprehensive Emergency Management Plan	Yes	Local	Fire	December 2014 Update
Emergency Operation Plan	Yes	Local	Fire	December 2014 Update
Post-Disaster Recovery Plan	Yes	Local	Fire	Part of EOP
Transportation Plan	Yes – 12/11/2006	Local	Transportation	Transportation Master Plan
Strategic Recovery Planning Report	Yes	Local	All	COOP/COG
Other Plans				
Regulatory Capability				
Building Code	Yes	State & Local	Community Development	Code of Ordinances – revised 8/23/12 – Ordinance # 2012-08-13

Tool / Program	Do You Have This?	Authority	Dept. /Agency Responsible	Code Citation and Comments
Zoning Ordinance	Yes – 02/24/2014	Local	Community Development	Unified Development Code – Resolution 2014-02-02 (became effective 6/1/14)
Subdivision Ordinance	Yes- 12/08/03	Local	Community Development	Code of Ordinance – Article 19 – Subdivision; Also in UDC – Art. 11.2 – Streets & Public Improvements (Subdivision)
National Flood Insurance Program (NFIP) Flood Damage Prevention Ordinance	Yes	Federal, State, Local	Community Development	UDC – Article 12 – Environmental Protection – Sec. 12.7
NFIP: Cumulative Substantial Damages	Yes	Federal, State, Local	Community Development	UDC – Article 12 – Environmental Protection – Sec. 12.7
NFIP: Freeboard	Yes	State, Local	Community Development	State mandated BFE+2 for single two-family residential construction, BFE+1 for all other construction types
Growth Management Ordinances	Yes	Local	Community Development	Various
Site Plan Review Requirements	Yes – UDC – 02/24/15	Local	Community Development	UDC – Article 13 – Administration – Sec. 13.1. – 13.7
Storm water Management Ordinance	Yes – 12/16/2002 AND 2/24/14 (UDC)	State and Local	Environmental/PW	Code of Ordinances – Article 7.1 – Ordinance 2002-12-04 then adoption of UDC – Article 12 – Environmental Protection – Sec. 12.5
Municipal Separate Storm Sewer System (MS4)	Yes	Local	Environmental/PW	Storm sewer system is owned and operated by the City of Roswell and is separate from sanitary sewer system, owned and operated by Fulton County.
Natural Hazard Ordinance	No			

Tool / Program	Do You Have This?	Authority	Dept. /Agency Responsible	Code Citation and Comments
Post-Disaster Recovery Ordinance	No			
Real Estate Disclosure Requirement	Yes	State		
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	Yes- UDC 2/24/2015	State & Local	Community Development	UDC – Article 12 – Environmental Protection

Administrative and Technical Capabilities

The table below summarizes potential staff and personnel resources available to Roswell.

Table 9: Administrative and Technical Capabilities

Resources	Is this in Place?	Department/Agency/Position
Administrative Capability		
Planning Board	Yes	Community Development / Planning Commission
Mitigation Planning Committee	Yes	Fire is the lead – All departments participate
Environmental Board/Commission	Yes	Environmental/Public Works – Also Erosion and Sediment Control Fund Committee – Ordinance No. 2010-06-12 – approved 6/21/10
Open Space Board/Committee	No	N/A
Economic Development Commission/Committee	Yes	Community Development/SEDP Steering Committee – 5/23/11 – Resolution 2011- 05-22
Maintenance Programs to Reduce Risk	Yes	Administration/Facilities Conditions Assessment
Mutual Aid Agreements	Yes	Fire Department – Roswell, Johns Creek, Alpharetta, City of Milton, Sandy Springs, Mountain Park
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	Community Development/Planning and Zoning

Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Administration/Building Operations Manager/Certified Professional Facilities Manager
Planners or engineers with an understanding of natural hazards	Yes	Environmental/Public Works, Community Development, Transportation
NFIP Floodplain Administrator	Yes*	Community Development/Engineering
Surveyor(s)	Yes	Transportation
Personnel skilled or trained in GIS and/or HAZUS- MH applications	Yes	Community Development/GIS Division, Environmental/Public Works, Transportation
Scientist familiar with natural hazards	No	n/a
Emergency Manager	Yes	Fire Chief
Grant Writer(s)	Yes	Administration/Grants Manager/Grants Coordinator
Staff with expertise or training in benefit/cost analysis	Yes	Finance
Professionals trained in conducting damage assessments	Yes	Administration/Risk Management/Director

Fiscal Capability

The proceeding table summarizes the financial resources available to Roswell, GA.

Table 10: Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes
Impact Fees for homebuyers or developers of new development/homes	Yes
Stormwater utility fee	Yes
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	Yes
Withhold public expenditures in hazard-prone areas	No
Other federal or state funding programs	Yes

Financial Resources	Accessible or Eligible to Use
Open space acquisition funding programs	No
Other	

Community Classifications

The following table summarizes classifications for community programs available to Roswell, GA.

Table 11: Community Classifications

Program	Do You Have This?	Classification	Date Classified
Community Rating System (CRS)	Yes	Rating = 7	
Building Code Effectiveness Grading Schedule (BCEGS)	Not at this time		
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	Class 3	October 2021
Storm Ready	Not at this time		
Firewise	Not at this time		
Disaster/Safety Programs in/for Schools	Yes		
Organizations with Mitigation Focus (advocacy group, non-government)	Yes	C.E.R.T	October 2015
Public Education Program/Outreach (through website, social media)	Yes		
Public-Private Partnerships	Yes		

**NP = Not Participating, *N/A = Not Applicable, - =Unavailable, TBD = To Be Determined*

Hazard Mitigation Capability

The following table summarizes a self-assessment of Roswell's current hazard mitigation capability.

Table 12: Hazard Mitigation Capability

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, please indicate your obstacles.)*	Moderate	High
Planning and Regulatory Capability		X	
Administrative and Technical Capability		X	
Fiscal Capability		X	
Community Political Capability		X	
Community Resiliency Capability		X	

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, please indicate your obstacles.)*	Moderate	High
Capability to Integrate Mitigation into Municipal Processes and Activities		X	

National Flood Insurance Program (NFIP) Participation

According to FEMA, the National Flood Insurance Program (NFIP) is a federal insurance program that enables property owners in member communities to purchase flood insurance. This insurance is only made available to municipalities that adopt and enforce a floodplain management ordinance. The fundamental goal of NFIP floodplain management requirements is to reduce the threat to lives and the potential for property damage in flood-prone areas. Each municipality that participates in the NFIP has a Flood Insurance Rate Map (FIRM) that is issued by FEMA. This document maps out flood hazard areas in the municipality.

NFIP Floodplain Administrator: Lenor M. Bromberg, PE, F.ASCE

The City of Roswell is currently an active member of the NFIP, in good standing with no outstanding compliance issues. Roswell completed their last Community Assistance Visits (CAV) in December 2011.

Loss History & Mitigation

Roswell does have a system in place to maintain a list of properties that have been flood damaged and those who become interested in mitigation. The floodplain administrator does make substantial damage estimates and one property was considered to be Substantially Damaged in the last 10 years and that home has been demolished. There are 3 Repetitive Loss properties and no Severe Repetitive Loss properties in Roswell. No property owners are currently in the process of mitigation or have expressed an interest in the mitigation process.

Planning & Regulatory Capabilities

Roswell does use local ordinance, plans and programs to support floodplain management and maintains GIS floodplain mapping, resident assistance, participates in the CRS program, performs record keeping, permitting assistance and damage inspections as needed. The City also provides a community outreach brochure that is sent to all properties within the SFHA. Roswell's floodplain management regulations and ordinances meet the minimum requirements set forth by both the Federal Emergency Management Agency (FEMA) and the State of Georgia. The City also conscientiously regulates stream buffers including City stream buffers that exceed state buffers for waterways exceeding a 20-acres drainage basin.

Administrative & Technical Capabilities

The community identifies the Senior Stormwater Engineer as the local NFIP Floodplain Administrator, currently Lenor Bromberg (PE, F.ASCE), for which floodplain administration is an auxiliary duty. Two additional staff members are utilized to assist as needed.

Duties and responsibilities of the NFIP Administrator are permit review, damage assessments, record keeping, inspections, GIS, education and outreach, and capital mitigation projects. If Substantial Damage Estimates were necessary, the Floodplain Administrator would be responsible.

The NFIP Administrator feels she is adequately supported and trained to fulfill her responsibilities as the municipal Floodplain Administrator. She also would consider attending continuing education and/or certification training on floodplain management if it were offered in the County for all local floodplain

administrators.

Actions to Strengthen the Program

During the data collection process staff did not indicate any perceived barriers to running an effective floodplain program in Roswell; however, they did state an interest in receiving more training and/or attending conferences if the future.

Community Rating System

Roswell does currently participate in the CRS program and has a rating of 7 which results in a reduction in flood insurance premiums of 15% for homes located in the Special Flood Hazard Area and 5% outside the Special Flood Hazard Area.

Integration of Hazard Mitigation into Existing & Future Planning Mechanisms

Mitigation Actions

Each jurisdiction participating in this plan is responsible for implementing specific mitigation actions as prescribed in the adopted Mitigation Action Plan. In each Mitigation Action Plan, every proposed action is assigned to a specific local department or agency in order to assign responsibility and accountability and increase the likelihood of subsequent implementation. This approach enables individual jurisdictions to update their unique mitigation strategy as needed without altering the broader focus of the countywide plan. The separate adoption of locally specific actions also ensures that each jurisdiction is not held responsible for monitoring and implementing the actions of other jurisdictions involved in the planning process. A complete list of countywide mitigation strategies is provided in Section 5 of this plan update.

Completed Mitigation Actions (2016-2021)

The City of Roswell identified five (5) mitigation actions in the previous (2016) MJHMP update. Of the five (5) mitigation actions, the City of Roswell completed zero during the five-year planning period (2016-2021).

Identified Mitigation Actions

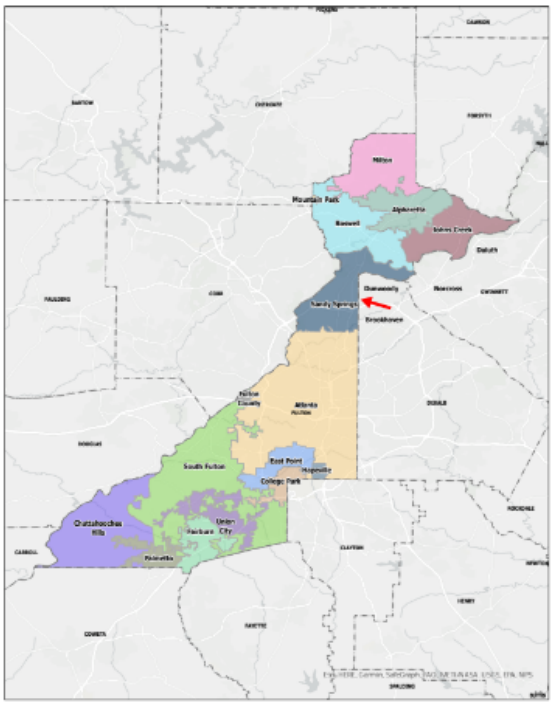
The following table reflects the identified projects for the 2022 MJHMP update. Additionally, the table includes any/all new mitigation actions identified by the City of Roswell for the following five-year planning period (2022-2027).

Table 13: Proposed Mitigation Actions (2022-2027), Roswell, GA

Identified Mitigation Actions (2022-2027), Roswell, GA								
Project Number	**Mitigation Action/ Description**	**Status as of 2021 HMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
99.0002	Azalea Drive Roadway Elevation	Proposed	RDOT	Flood	$6,500,000	Local, State, and Federal Funding	2022 to 2024	Medium 27
99.0003	Willeo Road Roadway Elevation	Proposed	RDOT	Flood	$4,800,000	Local, State, and Federal Funding	2022 to 2024	Medium 27
99.0004	Portable Generators for Traffic Signals	Proposed	RDOT	Severe Weather (including Wind), Severe Winter Weather, Tropical Systems	$30,000	State & Local Funding	2022 to 2023	Low 25
99.0005	Roswell Water Plant Emergency Power Generator	Proposed	PW	Severe Weather (including Wind), Severe Winter Weather, Tropical Systems	$1,000,000	State & Local Funding	2022 to 2024	Medium 26
99.0006	Generator for Hembree Facility - Fire, Public Works, RDOT	Proposed	PW	Severe Weather (including Wind), Severe Winter Weather, Tropical Systems	$110,000	State & Local Funding	2022 to 2023	Medium 26
99.0007	Storage Shed for Road Salt	Proposed	PW	Severe Winter Weather	$18,000	State & Local Funding	2022 to 2023	Medium 26

Identified Mitigation Actions (2022-2027), Roswell, GA								
Project Number	Mitigation Action/ Description	Status as of 2021 HMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion	STAPLE+E Score
99.0008	Tree removal along the river corridor, Pine Grove Road, and other areas of the City	Proposed	PW	Severe Weather, Severe Winter Weather	$85,000	State & Local Funding	2022 to 2024	Low 18.5
99.0009	Roswell Area Park Flood Mitigation	Proposed	Parks & Rec	Severe Weather, Severe Winter Weather, Flood	$85,000	State & Local Funding	2023 to 2024	Medium 26
99.0010	Flooding on Oakhaven Drive (Brookfield West)	Proposed	PW	Severe Weather, Severe Winter Weather, Flood	$1,100,000	Federal/ State Grant; Private Funding	2024 to 2026	Medium 26
99.0011	Stormwater control projects	Proposed	PW	Severe Weather, Severe Winter Weather, Flood	$1,000,000	State & Local Funding	2023 to 2024	Medium 26
99.0012	Woodstock Street and Woodstock Road Water Main Replacement Project	Proposed	PW	Wildfire/Wildland Urban Interface Severe Winter Weather	$1,750,000	State & Local Funding	2024 to 2026	Low 18.5
99.0013	Emergency Access for Riverwalk Condominium Complex	Proposed	Department of Transportation	Flood	$90,000	Federal/ State Grant; Private Funding	2022 to 2023	Low 23

Jurisdiction Profile: City of Sandy Springs, GA



History & Geography

Sandy Springs is located in northern Fulton County. The boundaries of Sandy Springs are Atlanta to the south, Cobb County (at the Chattahoochee River) to the west and north, Roswell to the north, and Dunwoody and Brookhaven, at the DeKalb County line, to the east. A small panhandle in the northeast extends between the Chattahoochee River to the north and Dunwoody to the south, ending in a very small border with Peachtree Corners in Gwinnett County.

In 1950, the state legislature blocked Atlanta from annexing the community, which remained rural until the Interstate Highway System was authorized by the Federal-Aid Highway Act of 1956. In 1959, Atlanta Mayor William Hartsfield urged residents to support annexation so that the area would have better firefighting protection. Community opposition killed the proposal. In the early 1960s, Georgia 400 and Interstate 285 were constructed, connecting Sandy Springs to metro Atlanta and initiating a housing boom that brought new residents and major land development. In 1966, annexation by Atlanta was defeated in a referendum, with two-thirds voting against.

Debate over incorporation began in the 1970s when the City of Atlanta attempted to use a state law to force annexation of Sandy Springs. The attempt failed when the Supreme Court of Georgia ruled that the law was unconstitutional. In response, the Committee for Sandy Springs was formed in 1975. In every legislative session, state legislators representing the area introduced a bill in the Georgia General Assembly to authorize a referendum on incorporation. Legislators representing Atlanta and southwestern Fulton County, who feared tax revenue that would be lost from incorporation, blocked the bills using the procedural requirement that all local legislation be approved first by a delegation of representatives from the affected area. In 1989, a push was made for Sandy Springs to join neighboring Chattahoochee Plantation in Cobb County. This move was blocked by the Speaker of the House.

When the Republican Party gained a majority in both houses of the General Assembly in 2005, the procedural rules previously used to prevent a vote by the full chamber were changed so that the bill was handled as a state bill and not as a local bill. The Assembly also repealed the requirement that new cities must be at least three miles from existing cities, because the new City limits border both Roswell and Atlanta. The bill allowing for a referendum on incorporation was introduced and passed as HB 37. The referendum initiative was approved by the Assembly and signed by Governor Sonny Perdue.

The referendum was held on June 21, 2005, and residents voted 94% to 6% in favor of incorporation. Many residents expressed displeasure with County services, claiming, based upon financial information provided by the County that the County was redistributing revenues to fund services in less financially stable areas of the County, ignoring local opposition to rezoning, and allowing excessive development. Many residents of unincorporated and less developed south Fulton County strongly opposed incorporation, fearing the loss of tax revenues that fund County services. County residents outside Sandy Springs were not allowed to vote on the matter.

A mayor and six City council members were elected in early November 2005. Formal incorporation occurred on December 1, making Sandy Springs the third-largest City ever to incorporate in the U.S. The City's police force and fire department began service in 2006. In 2010, the City became the first jurisdiction

in Georgia to successfully "bail out" from the preclearance requirements of Section 5 of the Voting Rights Act.

Significant Characteristics

The City of Sandy Springs has several events that are held annually including two summer concert series: City Green Live on select Friday nights on the Green at City Springs and Concerts by the Springs on select Sunday nights at the Heritage Amphitheater. Other events include The Farmers Market, The Lantern Parade, Stars and Stripes fireworks celebration, Spooky Springs, and the city's annual Veterans Day celebration and salute to Dr. Martin Luther King. The Sparkle holiday tree lighting, menorah lighting, and parade continue to grow each year and are a community favorite.

Throughout the City, there are several points of interest that bring in visitors every year such as the Heritage Sandy Springs Museum that opened on March 20, 2010. It is dedicated to the history of the Sandy Springs community and is located in the repurposed Williams-Payne house at Heritage Green. Two notable exhibits are "Sandy Springs: Land and People" which tells the changing story of Sandy Springs as the home of Native Americans, rural farmers, and modern suburbanites and "A Land Nearby" which features a collection of 20 photographs of Georgia's Barrier Island taken by Dr. Curt Hames Jr. Sandy Springs also has a museum devoted to Anne Frank.

Sandy Springs is the home to sixteen parks and green spaces which offer more than 950 acres of parkland. Some of the more popular parks are the Heritage Green, Hammond Park, Morgan Falls Overlook, Sandy Springs Tennis Center, Abernathy Park, Allen Park, John Ripley Forbes Big Trees Forest Nature Park, Ridgeview Park and Abernathy Greenway.

Population & Demographics

The U.S. Census 2019 and 2020 American Community Survey reported that there were 109,466 people, 52,820 households, and 25,861 families residing in the City. The racial makeup (alone or in combination with one or more other races) was 65.4% White, 23.4% African American, 0.6% Native American, 8.7% Asian, and 4.4% from other races. Hispanic or Latino of any race were 10.3% of the population.

There were 52,820 households, out of which 22.1% had children under the age of 18 living with them, 38.5% were married couples living together, 6.9% had a female householder with no spouse present, and 51.0% were non-families. 42.3% of all households were made up of individuals and 10.1% had someone living alone who was 65 years of age or older. The average household size was 2.06 and the average family size was 2.88.

The age distribution of the population shows 18.6% under the age of 18, 7.6% from 18 to 24, 36.9% from 25 to 44, 24.2% from 45 to 64, and 12.8% who were 65 years of age or older. The median age was 37.3 years. For every 100 females there were 89.4 males.

Table 1: City of Sandy Springs Population Since 1990

Year	1990	2000	2010	2019	2020
Population	67,842	85,781	93,908	109,466	108,080

The Local Economy

The median income for a household in the City was $83,111, and the median income for a family was $119,949. Males had a median income of $65,189 versus $47,414 for females. The per capita income for the City was $64,554. About 2.1% of families and 3.9% of the total population were below the poverty line, including 3.8% of those under age 18 and 3.8% of those age 65 or over.

Below is a chart of industries with data from the United States Census Bureau 2019 Economic Census.

Table 2: Sandy Springs Industry Main Industries from 2019

Industry Description	Number of Establishments	Number of Employees
Utilities	5	106
Wholesale trade	153	3,193
Retail trade	271	4,407
Transportation and warehousing	30	350
Information	154	7,341
Finance and insurance	493	12,501
Real estate and rental and leasing	393	2,815
Professional, scientific, and technical services	1016	15,440
Administrative & support & waste management & remediation services	262	20,013
Educational services	61	401
Health care and social assistance	689	22,581
Arts, entertainment, and recreation	60	1,153
Accommodation and food services	297	5,436
Other services (except public administration)	251	1,914

Following is a list of City issued permits for the construction of single-family homes dating from 2006 to 2020 and the average cost of new construction for that specific year.

Table 3: Single-Family New House Construction Building Permits (2006-2020)

Year	Permits
2006	0
2007	149
2008	136
2009	27
2010	50
2011	64
2012	213
2013	352
2014	77

Year	Permits
2015	142
2016	119
2017	143
2018	104
2019	90
2020	67

Critical Facilities & Infrastructure

Sandy Springs has a career-based Police Department that was established in 2006. The department 140 sworn officers. The City also has a fire rescue department with five fire stations around the City. The fire rescue department is composed of firefighters, emergency medical service staff and a citizen-based program called Community Emergency Response Team (CERT).

The school system within the City limits consists of the following capacity.

Table 4: Infrastructure within City Limits

School	Number of Schools	Total Enrollment
Elementary (K-5)	7	4,446
Middle (6-8)	2	1,992
High (9-12)	2	3,173
College, undergraduate	NA	NA
Graduate, professional school	NA	NA

Land Use & Development Trends

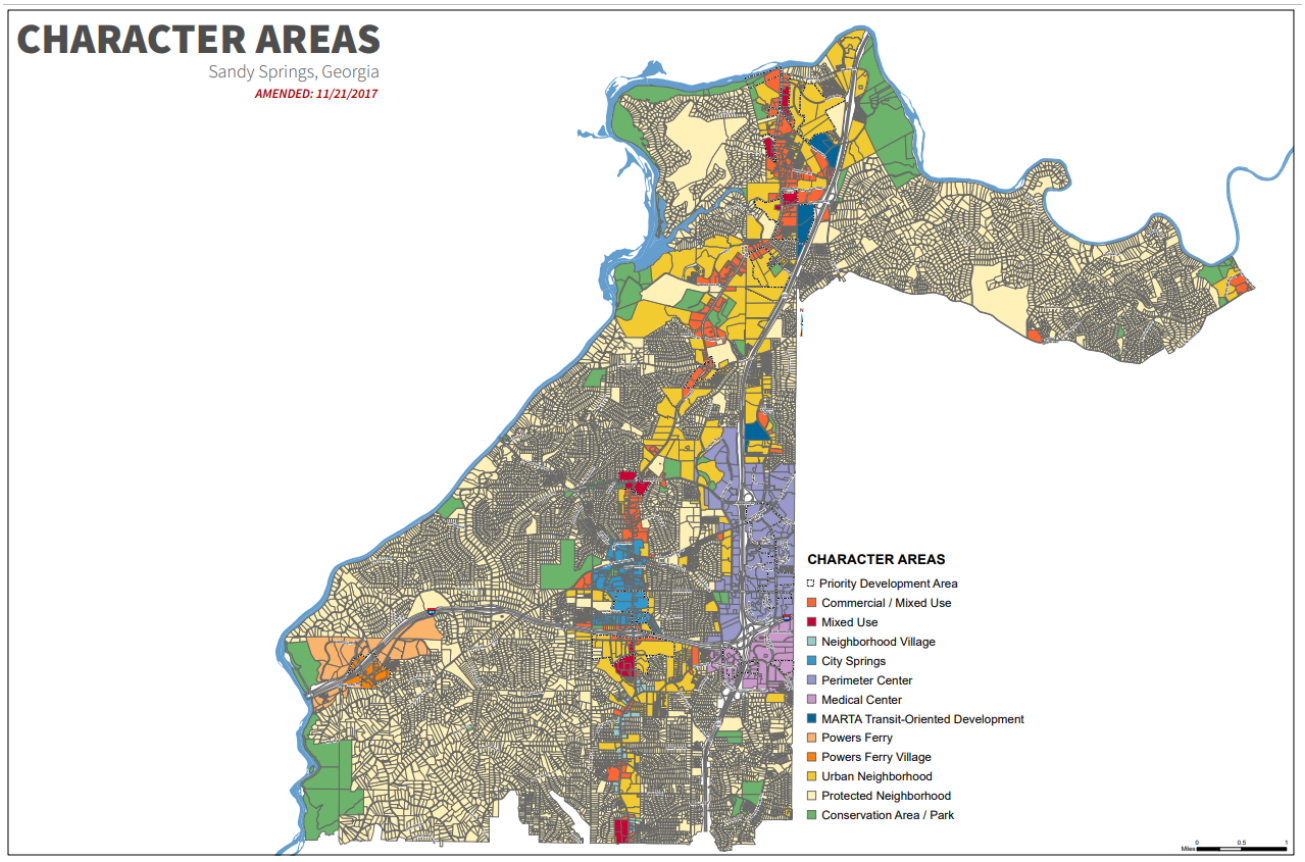
Sandy Springs is a total of 39 square miles. The Chattahoochee River serves as the border between Cobb County on the west and Roswell on the north. Sandy Springs also shares a boundary with Gwinnett County, Dunwoody, Brookhaven, and Atlanta. There are approximately with 1.3 square miles of hydrography in Sandy Springs, with the majority being the Chattahoochee River. In 2017, Sandy Springs adopted a new zoning map, which is detailed in the table below. The majority of the City is zoned residential. Sandy Springs uses its Character Areas map to define future land uses.

Table 5: Existing Land Uses, City of Sandy Springs, 2020

Zoning Description	Sq Ft	Acres	Percent
Chattahoochee River	20,661,778.92	474.44	1.91%
City Springs	10,544,113.82	242.06	0.97%
Commercial and Mixed Use	12,085,105.57	277.44	1.12%
Commercial Corridor	3,350,382.82	76.91	0.31%
Conservation and Open Space	54,870,205.67	1,259.65	5.07%
Industrial Mixed Use	1,203,768.24	27.63	0.11%
Office Neighborhood	2,734,041.95	62.97	0.25%

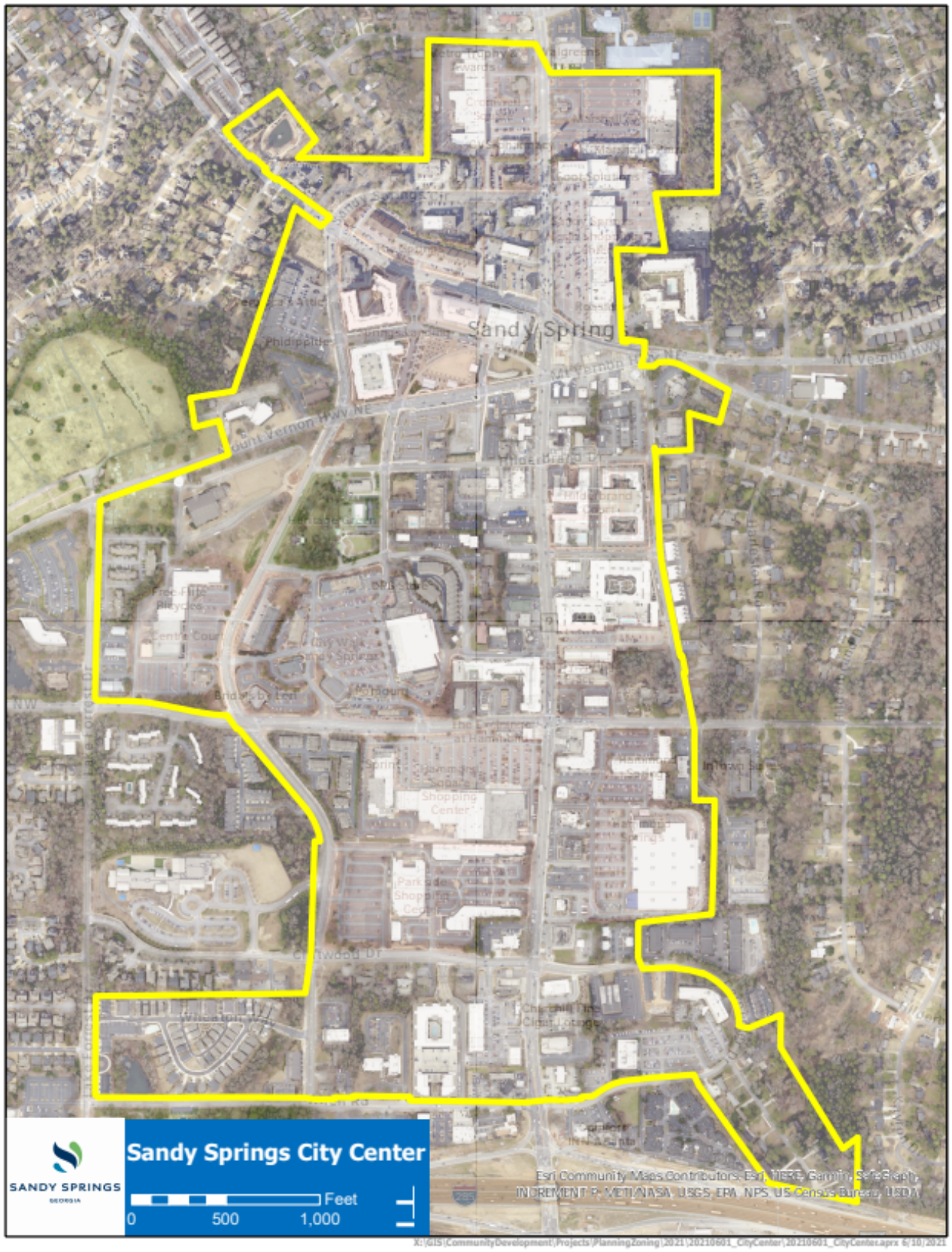
Zoning Description	Sq Ft	Acres	Percent
Office Mixed Use	23,553,268.71	540.72	2.18%
Parks and Recreation	10,807,351.88	248.1	1.00%
Perimeter Medical	11,058,341.09	253.86	1.02%
Perimeter Mixed Use	28,670,256.21	658.18	2.65%
Perimeter Residential	7,171,866.97	164.64	0.66%
Residential Detached	342,122,976.00	7,854.06	31.59%
Residential Estate	301,711,048.63	6,926.33	27.86%
Residential Mixed Use	834,547.97	19.16	0.08%
Residential Multi-use	231,784,076.90	5,321.03	21.41%
Residential Townhouse	28,755,296.23	660.14	2.66%
Residential Urban	3,607,582.31	82.82	0.33%
Roads	128,734,116.97	2,955.33	11.89%
Shopfront Mixed Use	7,318,499.27	168.01	0.68%
Transit-Oriented Development	5,264,385.79	120.85	0.49%

Map 1: Future Land Use Map – 2027 Comprehensive Plan



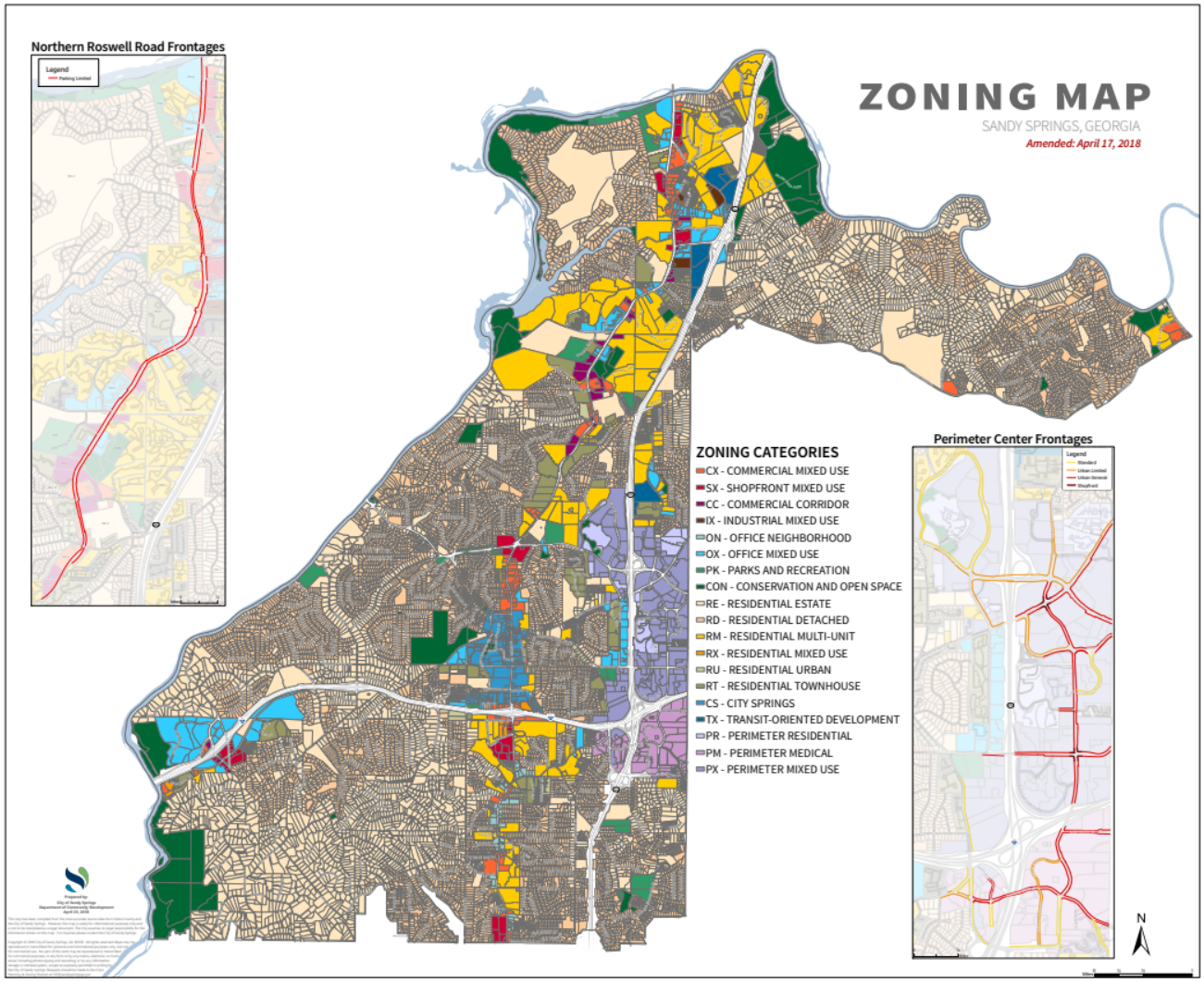
Map Source: Source

Map 2: Future Land Use – Town Center 2027 Comprehensive Plan, Sandy Springs, GA



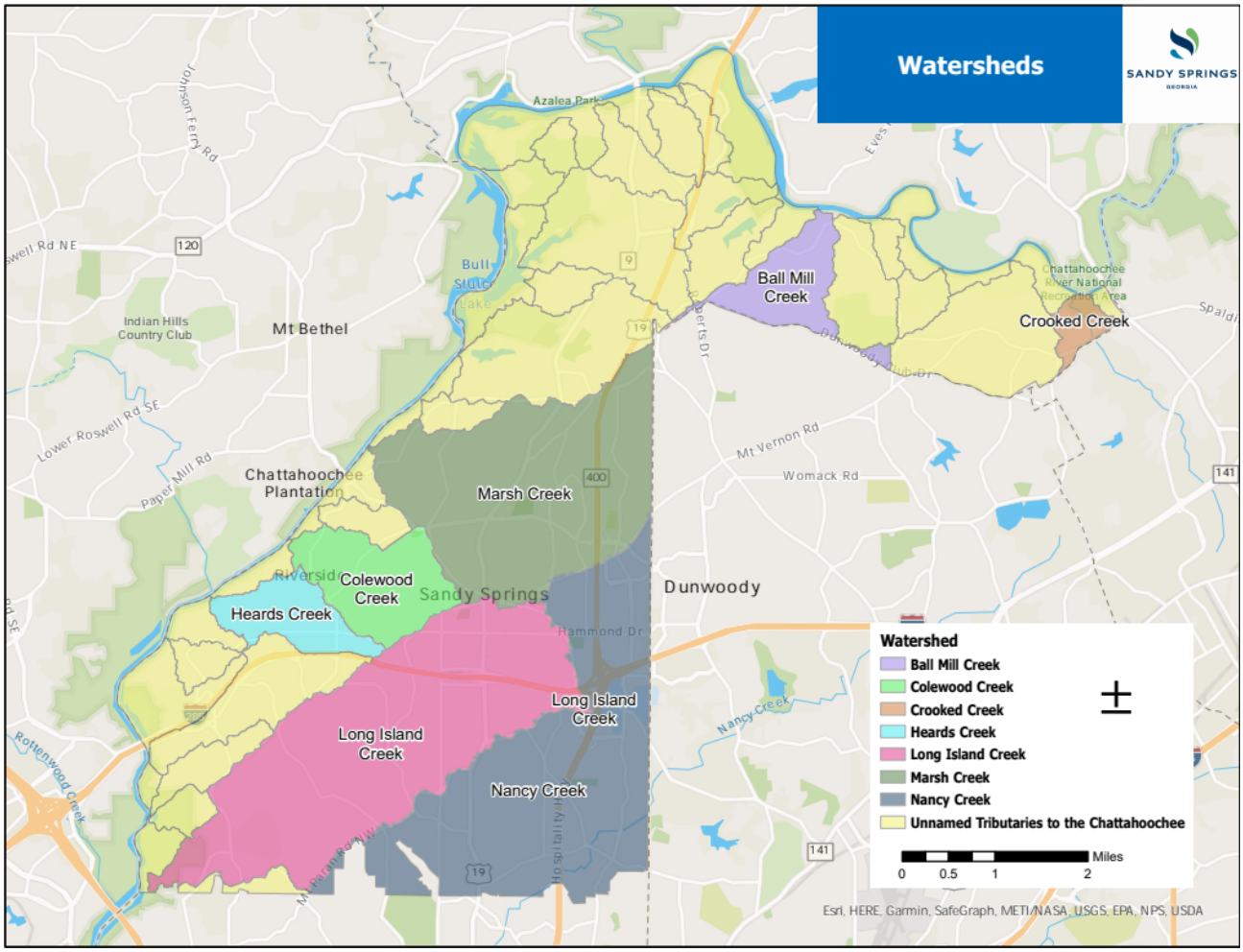
Map Source: City of Sandy Springs, GA

Map 3: 2018 Zoning Map, City of Sandy Springs, GA



Map Source: City of Sandy Springs, GA

Map 4: Watershed 2027 Comprehensive Plan, City of Sandy Springs, GA



Map Source: 2027 Comprehensive Plan, Sandy Springs, GA

Growth/Development Trends

The following table summarizes major development that occurred in the municipality over the past five years, as well as known or anticipated future development in the next five (5) years.

Table 6: Recent and Known Future Development

Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Address and Block/Lot	Known Hazard Zone(s)	Description/Status of Development
Recent Development from 2016 to Present					
The Hill	Commercial	1	1160 Johnson Ferry	NA	Midrise Multifamily/Retail
The Bishop	Commercial	2	1115 & 1165 Springwood Conn	NA	2 Midrise Multifamily/Retail
Modera	Commercial	1	6125 Roswell RD	NA	Midrise Multifamily/Retail
Adley	Commercial	1	6075 Roswell RD	NA	Midrise Multifamily/Retail

Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Address and Block/Lot	Known Hazard Zone(s)	Description/Status of Development
Recent Development from 2016 to Present					
Northridge Vista	Commercial	4	550 Northridge Pkwy	NA	3 Midrise Multifamily + Leasing/Clubhouse
Alexan North Station	Commercial	1	6919 PDR	NA	Midrise Multifamily
Hannover Perimeter	Commercial	1	1110 Hammond Dr	NA	Midrise Multifamily/Retail
Chastain Heights	Commercial	1	225 Franklin Rd	NA	Midrise Multifamily
Plaza at Sandy Springs	Commercial	3	5840 Roswell RD	NA	Retail shopping center
Alastair Development	Commercial	3	6500 Aria Blvd (Glenridge / Abernathy)	NA	Midrise Multifamily + 2 retail buildings
Mansions Memory Care	Commercial	1	7300 Spalding Dr	NA	Nursing home, memory care unit
Sommerby	Commercial	1	25 Glenlake Pkwy	NA	Assisted living / senior living
Riverwood HS	Commercial	1	5900 Raider Dr	NA	High School. Phase replacement and expansion of existing building
Hyatt House	Commercial	1	5785 PDR	NA	High Rise Hotel
Northside Hospital	Commercial	1	1000 Johnson Ferry	NA	Addition of new high rise tower at existing hospital
Northside Hospital Gold Deck	Commercial	1	5780 PDR	NA	New high rise parking deck for hospital
Aloft Hotel	Commercial	1	6403 Barfield Rd	NA	New Midrise hotel under construction
Crescent Perimeter Apartments	Commercial	1	5755 Glenridge Dr	NA	Midrise multifamily building.
Gateway II	Commercial	1	4600 Roswell Rd Bldg. I	NA	Midrise multifamily added to existing complex
Square One Apartments	Commercial	1	6050 Roswell Rd	NA	Midrise Multifamily / Retail
Mount Vernon Presb	Commercial	1	510 Mount Vernon Hwy	NA	Addition of 1 low rise education building to existing complex
Holy Innocents Episcopal School	Commercial	1	810 Mount Vernon Hwy	NA	New low-rise education building on existing campus
Sandy Springs Station 2	Commercial	1	135 Johnson Ferry	NA	Fire Station under construction
Sandy Springs Station 5	Commercial	1	Spalding at Mount Vernon	NA	Fire station currently in plan development
Atwater Sandy Springs	Residential		Sandy Springs Circle/Allen Rd	NA	Residential subdivision single family/townhomes

Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Address and Block/Lot	Known Hazard Zone(s)	Description/Status of Development
Recent Development from 2016 to Present					
ARIA North	Residential		Approx. 740 Abernathy	NA	Residential subdivision townhome development
ARIA West	Residential		Approx. 6565 Glenridge Dr	NA	Residential subdivision single family/townhome
ARIA South	Residential		Corner Glenridge / Abernathy	NA	Residential subdivision townhome development
Townes at Chastain	Residential		Approx. 4735 Roswell Rd	NA	Residential townhome development
Townhome Development	Residential	5	6555 Roswell Rd	NA	Townhomes
Townhome Development	Residential		200 Hannover Park	NA	Townhomes
Townhome Development	Residential		120 W Weiuca	NA	Townhomes
Known or Anticipated Development in the Next Five (5) Years					
Multifamily Project	Commercial	5	7300 Roswell Rd	NA	Multifamily / Retail development
High Rise Office	Commercial	1	1250 Abernathy	NA	Highrise Office/Parking deck
New Sandy Springs Public Safety Headquarters	Commercial	3	Morgan Falls Rd	NA	Renovation of existing, addition of fire training center and eventually planned new fire station
Pavilion Project	Commercial	6	5575 PDR	NA	Addition to existing site. 4 single story mercantile, 1 high rise office tower, 1 midrise office or multifamily planned.
Holy Innocents	Commercial	4	810 Mount Vernon Hwy	NA	Planned replacement of 4 buildings on site over next 5 years.

Hazard Risk Assessment, City of Sandy Springs, GA

Hazard Identification & Risk Assessment

There are 12 of 13 natural hazards known to pose risk to Fulton County and one or more of its participating jurisdictions. These include Dam Failure, Drought, Earthquake, Flood, Geological Hazards, Extreme Heat, Severe Weather, Tornado, Tropical Systems, Severe Winter Weather, and Wildfire/Wildland Urban Interface Fires. Wind, though identified as a separate hazard in the 2019 Georgia Hazard Mitigation Strategy Standard and Enhanced Plan, is included in the Severe Weather hazard in this plan update.

The following table outlines the City of Sandy Spring's general risk to the profiled hazards. The rankings are based on a variety of factors, including 1) a composite evaluation of this plan's risk assessment,

namely a hazard's probability of occurring in the future, 2) the vulnerability of the jurisdiction to a specific hazard, 3) the intensity of past hazard impacts, and 4) a joint evaluation of local experts and plan stakeholders. The category/range (per year) is based on the following scale: **Unlikely (0%), Occasional (1-10%), Likely (11%-50%), and Highly Likely (51%-100%).**

Table 7: Risk Assessment Matrix, Sandy Springs, GA

Risk Assessment Matrix, Sandy Springs, GA		
Hazard	**Category**	**Range**
Dam Failure	Occasional***	-
Drought	Highly Likely	295%
Earthquake	Occasional**	-
Flood	Occasional	12%
Geological Hazards	Highly Likely	-
Extreme Heat	Highly Likely	-
Severe Weather (including Wind)	Highly Likely*	-
Severe Winter Weather	Highly Likely	-
Tornado	Highly Likely	160%
Tropical Systems	Highly Likely	84%
Wildfire/Wildland Urban Interface Fires	Occasional*****	-

**The hazard of Severe Weather considers the instances of thunderstorms, lightning, hail, and wind, each with a varying degree of occurrence/probability.*

***The hazard of Earthquake is considered occasional but without a definite calculation of probability. This is due to there being no record/data of earthquake in the planning period since the last plan update (2016).*

****Calculating future probability is not the only predictor of future occurrences. In the last five years, Fulton County and its participating jurisdictions have documented no cases of Dam Failure. Though the County has experienced occurrences that were listed in its HMP update (2016), the likelihood of a dam failure event happening in the planning area is considered* ***occasional.***

*****The NOAA/NCEI Storm Events Database did not have any incidences of storm data records related to flood/flash flood for the Cities of Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton from January 1, 1970 – July 31, 2021. Since flooding is possible, the Cities Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton's Probability of Future Events is considered* ***occasional.***

******The hazard of Wildfire/Wildland Urban Interface Fire is considered* ***occasional*** *but without a definite calculation of probability. This is due to there being no record/data of wildfire in the planning period since the last plan update (2016).*

Hazard Event History & Community Impacts

Fulton County has a history of natural hazard events as detailed in this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities.

The following table provides brief details of all hazard occurrences, as recorded by the National Oceanic and Atmospheric Administration (NOAA) and its National Centers for Environmental Information (NCEI), between January 1, 2016, and October 31, 2021.

Table 8: Natural Hazards, Previous Occurrences, Sandy Springs, GA

Natural Hazards, Previous Occurrences, Sandy Springs, GA			
Date(s)	**Hazard**	**Disaster Declaration**	**Description**
08/09/2017	Flood (Flash Flood)	No	$0.0 Property Damage, No Injuries or Deaths
02/06/2020	Flood (Flash Flood)	No	$0.0 Property Damage, No Injuries or Deaths
07/21/2020	Severe Weather	No	$20.0K Property Damage, No Injuries or Deaths
08/03/2020	Flood (Flash Flood)	No	$10.0K Property Damage, No Injuries or Deaths
08/03/2020	Severe Weather	No	$2.0K Property Damage, No Injuries or Deaths
09/17/2020	Flood (Flash Flood)	No	$0.0 Property Damage, No Injuries or Deaths
10/29/2020	Tropical Storm	No	$64.0K Property Damage, No Injuries or Deaths

Mitigation Capabilities & Actions, City of Sandy Springs, GA

Capabilities Assessment

The Legal and Regulatory Capability survey documents authorities available to the jurisdiction and/or enabling legislation at the state level affecting planning and land management tools that support local hazard mitigation planning efforts. The identified planning and land management tools are typically used by states and local and tribal jurisdictions to implement hazard mitigation activities. The table below summarizes the regulatory tools that are available to the municipality.

Table 9: Legal and Regulatory Capability

Tool / Program	Do You Have This?	Authority	Dept./Agency Responsible	Code Citation and Comments
Planning Capability				
Master Plan	Yes	Local	Community Development	
Capital Improvements Plan	Yes	Local	Finance	
Floodplain Management / Basin Plan	Yes	Local	Community Development	
Stormwater Management Plan	Yes	Local	Stormwater	
Open Space Plan	N/A	Local	Public Works	
Stream Corridor Management Plan	Yes	Local	Public Works	

Tool / Program	Do You Have This?	Authority	Dept./Agency Responsible	Code Citation and Comments
Planning Capability				
Watershed Management or Protection Plan	Yes	Local	Community Development	
Economic Development Plan	Yes	Local	Community Development	
Comprehensive Emergency Management Plan	Yes	Local/State	Fire/AFCEMA	
Emergency Operation Plan	Yes	Local/State	Fire/AFCEMA	
Post-Disaster Recovery Plan	Yes	Local/State	Fire Department	
Transportation Master Plan	Yes	Local/State	Public Works	
Strategic Recovery Planning Report				
Other Plans				
Regulatory Capability				
Building Code	Yes	Local/State	Community Development	
Zoning Ordinance	Yes	Local	Community Development	
Subdivision Ordinance	Yes	Local	Community Development	
National Flood Insurance Program (NFIP) Flood Damage Prevention Ordinance	Yes	Federal, State, Local	Community Development	
NFIP: Cumulative Substantial Damages	Undetermined			
NFIP: Freeboard	Yes	Local/State		State mandated BFE+2 for single and two-family residential construction, BFE+1 for all other types of construction
Growth Management Ordinances	Yes	Local	Community Development	
Site Plan Review Requirements	Yes	Local	Community Development	
Stormwater Management Ordinance	Yes	Local	Community Development	
Municipal Separate Storm Sewer System (MS4)	Yes	Local	Public Works	
Natural Hazard Ordinance	N/A			
Post-Disaster Recovery Ordinance	N/A			

Tool / Program	Do You Have This?	Authority	Dept./Agency Responsible	Code Citation and Comments
Regulatory Capability				
Real Estate Disclosure Requirement	Yes			
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]				

Administrative and Technical Capabilities

The table below summarizes potential staff and personnel resources available to Sandy Springs.

Table 10: Administrative and Technical Capabilities

Resources	Is this in Place?	Department/Agency/Position
Administrative Capability		
Planning Board	Yes	Planning Board/Community Development
Mitigation Planning Committee	Yes	Planning Board/Community Development
Environmental Board/Commission	Yes	Community Development
Open Space Board/Committee	N/A	
Economic Development Commission/Committee	Yes	Community Development
Maintenance Programs to Reduce Risk	Yes	Public Works
Mutual Aid Agreements	Yes	Various agencies around the City
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	Planning Board/Community Development
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Planning Board/Community Development
Planners or engineers with an understanding of natural hazards	Yes	Planning Board/Community Development
NFIP Floodplain Administrator	Yes	Planning Board/Community Development
Surveyor(s)	Yes	Public Works
Personnel skilled or trained in GIS and/or Hazus-MH applications	Yes	GIS

Resources	Is this in Place?	Department/Agency/Position
Technical/Staffing Capability		
Scientist familiar with natural hazards	No	N/A
Emergency Manager	Yes	Fire
Grant Writer(s)	Yes	City Management
Staff with expertise or training in benefit/cost analysis	Yes	City Management
Professionals trained in conducting damage assessments	Yes	Fire Department

Fiscal Capability

The table below summarizes financial resources available to Sandy Springs.

Table 11: Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use
Community Development Block Grants (CDBG, CDBG-DR)	Yes (Community Development CDBG-DR)
Capital improvements project funding	Yes, PW and Parks & Rec, Facilities
Authority to levy taxes for specific purposes	Not at this time
User fees for water, sewer, gas or electric service	Not at this time
Impact Fees for homebuyers or developers of new development/homes	Yes, Community Development
Stormwater utility fee	Not at this time
Incur debt through general obligation bonds	Yes, City Council
Incur debt through special tax bonds	Not at this time
Incur debt through private activity bonds	Not at this time
Withhold public expenditures in hazard-prone areas	Yes, City Manager
Other federal or state funding programs	Yes, CM, Mayor, and Council
Open space acquisition funding programs	Yes, CM, Mayor, and Council
Other	

Community Classifications

The following table summarizes classifications for community programs available to Sandy Springs.

Table 12: Community Classifications

Program	Do You Have This?	Classification	Date Classified
Community Rating System (CRS)			
Building Code Effectiveness Grading Schedule (BCEGS)	Unknown		
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	ISO/3	2009
Storm Ready	Not at this time	Fulton County	
Firewise	Not at this time		
Disaster/Safety Programs in/for Schools	Yes	Fulton County	
Organizations with Mitigation Focus (advocacy group, non-government)	Yes	CERT/Fire Corp	2008
Public Education Program/Outreach (through website, social media)	Yes	Sandy Springs Comm-Dept	2005
Public-Private Partnerships	Yes		2005

**NP = Not Participating, *N/A = Not Applicable, - =Unavailable, TBD = To Be Determined*

Hazard Mitigation Capability

The table below summarizes a self-assessment of Sandy Springs' current hazard mitigation capability.

Table 13: Hazard Mitigation Capability

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, please indicate your obstacles.)*	Moderate	High
Planning and Regulatory Capability		X	
Administrative and Technical Capability		X	
Fiscal Capability		X	
Community Political Capability		X	
Community Resiliency Capability		X	
Capability to Integrate Mitigation into Municipal Processes and Activities		X	

National Flood Insurance Program (NFIP) Participation

NFIP Floodplain Administrator: Jesus Davila, DFM, MSF-CECI, Land Development Manager

The City of Sandy Springs is currently an active member of the NFIP, in good standing with no outstanding compliance issues.

The last Community Assistance Visit (CAV) occurred in Fall 2019. The most recent flood map update was conducted in 2013, with Future Condition Floodplain Maps developed in 2016.

Loss History & Mitigation

The Floodplain Administrator does not make substantial damage estimates and no property owners are currently in the process of mitigation or have expressed an interest in the mitigation process.

Planning & Regulatory Capabilities

Sandy Springs does use local ordinance, plans and programs to support floodplain management and the floodplain manager does provide permit reviews. The City's floodplain management regulations and ordinances meet the minimum requirements set forth by both the Federal Emergency Management Agency (FEMA) and the State of Georgia.

Actions to Strengthen the Program

During the data collection process staff did not indicate any perceived barriers to running an effective floodplain program in Sandy Springs. The Floodplain Administrator and other staff members are Certified Floodplain Managers and maintain certification by attending training and education sessions.

Community Rating System

Sandy Springs does not currently participate in the CRS program.

Properties with Documented Flood Damage

- Three (1) in area of E. Powderhorn Rd
- One (1) in area of Hitching Post Trail
- Two (2) in area of Pine Forest Road
- Two (2) in area of River Shore Pkwy
- Four (40 in area of Granite Ridge Place
- One (1) in area of Tanacrest Court

Integration of Hazard Mitigation into Existing & Future Planning Mechanisms

Mitigation Actions

Each jurisdiction participating in this plan is responsible for implementing specific mitigation actions as prescribed in the adopted Mitigation Action Plan. In each Mitigation Action Plan, every proposed action is assigned to a specific local department or agency in order to assign responsibility and accountability and increase the likelihood of subsequent implementation. This approach enables individual jurisdictions to update their unique mitigation strategy as needed without altering the broader focus of the countywide plan. The separate adoption of locally specific actions also ensures that each jurisdiction is not held responsible for monitoring implementing the actions of other jurisdictions involved in the planning process. A complete list of countywide mitigation strategies is provided in Section 5 of this plan update.

Completed Mitigation Actions (2016-2021)

Table 14: Completed Mitigation Projects Since 2016, Sandy Springs, GA

Completed Since 2016, Sandy Springs, GA		
Project Number	**2016 Mitigation Action**	**Responsible Party/ies**
59.0006	Build retaining wall on Morgan Falls Rd where erosion is occurring where slope crosses the roadway and has lake below	Public Works
59.0007	Build retaining wall on Lake Forest Rd to reduce debris sliding onto the roadway (Comments: This is an old settlement road that became a major road. Trees, boulders, and mud block can block the road following severe weather events blocking any access, including first responders, into the area.	Public Works

Identified Mitigation Actions

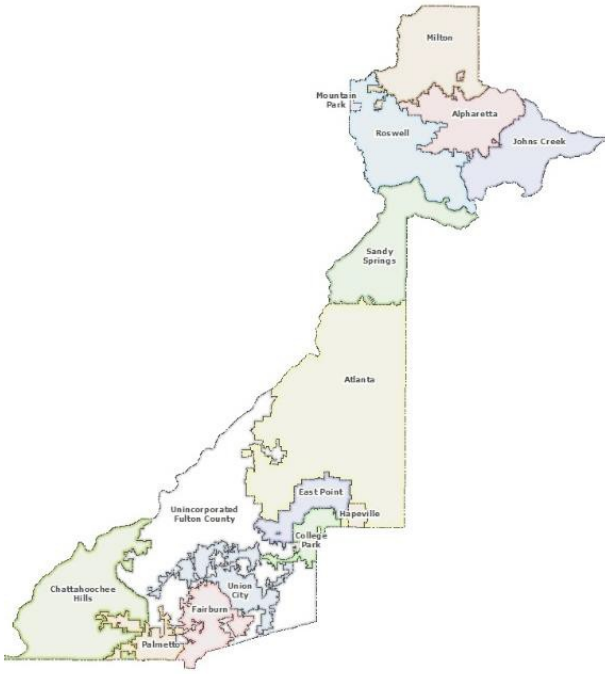
The following table reflects the previous (2016) MJHMP update, all of which are proposed mitigation actions for the 2021 HMP update. Additionally, the table includes any/all new mitigation actions identified by the City of Sandy Springs for the following five-year planning period (2022-2027).

Table 15: Identified Mitigation Actions (2022-2027), Sandy Springs, GA

Identified Mitigation Actions, Sandy Springs, GA								
Project Number	**Mitigation Action/ Description**	**Status as of 2021 HMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
59.0010	All Hazards Education and Prevention Community Outreach program	Proposed	City of Sandy Springs Fire Department and Emergency Management Department	Tornado, Flood, Wildfire/Wildland Urban Interface Fire, Drought	$10,000	Federal, State, and Local Funds	Minimum of twice annually	Low 18.5
59.0011	Severe Weather Awareness	Proposed	City of Sandy Springs Fire Department and Emergency Management Department	Flood (flash), Tornado, Tropical Systems (hurricane)	$10,000	Federal, State, and Local Funds	Minimum of twice annually	Low 18.5
59.0012	Community Development Assistance Program - Flood Mitigation Project	Proposed	City of Sandy Springs Sustainability Department/Community Development	Flood, Severe Weather, Severe Winter Weather	$7,000	Local Capital Improve-ment Funds	Analysis 1-2 years; Planning year 3; Implementation years 4-5	Low 20.5
59.0013	Reintegrating homes into floodplain	Proposed	City of Sandy Springs Sustainability Department/Community Development	Flood	$100,000	Local Capital Improve-ment Funds	Analysis 1-2 years; Planning year 3; Implementation years 4-6	Medium 28

Jurisdiction Profile: City of South Fulton, GA

History & Geography



The City of South Fulton is the latest area within Fulton County to incorporate (May 2017) and is the newest participant in Fulton County's Multi-Jurisdictional Hazard Mitigation Plan. The city is situated within a 15–20-minute drive to Atlanta and the Hartsfield-Jackson International Airport (ATL). South Fulton is considered by many to represent the best of all worlds, from the bustling business districts on Roosevelt and Old National Highways to sprawling, rural scenes along the city's picturesque southeast border. And communities such as Red Oak, Campbellton, and Sandtown enjoy rich histories that have unfolded for hundreds of years. South Fulton comprises 84.8 square miles and is the home of 107,436 people (U.S. Census 2020), making it Georgia's fifth largest city in population. Interestingly, nearly 92 percent of its residents hold at least a high school diploma, and the median household income is $80,051, making the city one of the best-educated and most affluent in the south metro Atlanta area (https://www.cityofsouthfultonga.gov/3009/About-Us).

Going from north to south, the northernmost portion of Fulton County, encompassing Milton and northern Alpharetta, is located in the Etowah River sub-basin of the ACT (Coosa-Tallapoosa) River Basin. The rest of north and central Fulton is located in the Upper Chattahoochee River sub-basin of the ACR (Apalachicola-Chattahoochee-Flint) River Basin. The bulk of south Fulton County is located in the Middle Chattahoochee River-Lake Harding sub-basin of the larger ACF River Basin, with just the eastern edges of south Fulton in the Upper Flint River sub-basin of the same larger ACF River Basin. Fulton County was created in 1853 from the western half of DeKalb County. It was named in honor of a surveyor from the Western and Atlanta Railroad named Hamilton Fulton. Settlement increased in the Piedmont section of upland Georgia, Fulton County grew rapidly after the American Civil War as Atlanta was rebuilt, becoming a center of railroad shipping, industry and business.

Significant Characteristics

In the later 20th century, Atlanta and Fulton County became the location of numerous national and international headquarters for leading companies, attracting workers from around the country. As a result, the City and County became more cosmopolitan and diverse. Fulton County is the home to several big name company headquarters such as AFC Enterprises (Popeyes and Cinnabon), AT&T Mobility, Chick-Fil-A, Children's Healthcare of Atlanta, Church's Chicken, The Coca-Cola Company, Cox Enterprises, Delta Air Lines, Earthlink, Equifax, First Data, Georgia-Pacific, Global Payments, Inc., The Home Depot, InterContinental Hotels Group, IBM Internet Security Systems, Mirant Corp., Newell Rubbermaid, Northside Hospital, Porsche Cars North America, Saint Joseph's Hospital, Southern Company, Spectrum Brands, SunTrust Banks, United Parcel Service, and Wendy's/Arby's Group. Mellow Mushroom is headquartered in an unincorporated area in Fulton County.

Population & Demographics

As of the 2020 Decennial Census, there were **107,436** people, **33,091** households, and **11,860** families residing in the City of South Fulton. This equates to a population density of 1,169.4 people per square mile. The population, as evidenced by the following table, continues to increase year after year, decade after decade.

Table 1: Population Change, City of South Fulton

Population Change, City of South Fulton, GA			
Year	2000	2010	2020
Population	N/A	N/A	107,436

Of the population, 7.1% are under the age of five, 24.8% are under the age of 18, 56.8% are age 18 and over, and 11.3% are age 65 and over. The media age was 34.9 years.

Of the 25,391 households in South Fulton, 54% were married couples living together, 15% had a male householder (no spouse present), and 30% had a female householder (no spouse present). The average family size in South Fulton was 3.1.

According to the 2020 Decennial Census, there were also 34,672 housing units.

The following table provides information specific to South Fulton's housing stock through the issuance of single-family new house construction building permits over the last 20 years (2001-2021). However, since not all permits become actual housing starts, and starts lag the permit stage of construction, this number does not represent total new construction (2020) but should provide a general indicator on construction activity and the local real estate market.

Table 2: Housing Stock History, Building Permits, South Fulton, GA

Housing Stock History, Building Permits, South Fulton, GA	
Year	**# of Permits Issued**
2001 - 2009	N/A
2010	N/A
2011	N/A
2012	N/A
2013	N/A
2014	N/A
2015	N/A
2016	N/A
2017	
2018	
2019	
2020	

Data Source: Edmunds/SAGES.GOV

The Local Economy

As indicated by the 2020 census, the median income for a household in the City of South Fulton was $65,919, and the median income for a family was $80,051. The per capita income for South Fulton was unavailable for 2020; however, the per capita income (12 months, 2019) was $30,162. In 2020, approximately 9.1% of the city's population were living below the poverty line, including 13% under the age of 18 and 11% at age 65 and over.

According to the 2019 American Community Survey 1-year Estimates, South Fulton has an employment rate of 68.8%, which is above the State of Georgia's employment rate of 59.6%. The following table shows the city's leading industries and most recent employment percentages.

Table 3: Leading Industries, Employment Percentages, South Fulton, GA (2019)

Leading Industries, Employment Percentages, South Fulton, GA (2019)	
Professional, scientific, and management, and administrative and waste management services	26.0%
Educational services, and health care and social assistance	14.3%
Finance and insurance, and real estate and rental and leasing	11.3%
Manufacturing	9.6%
Retail Trade	8.9%
Arts, entertainment, and recreation, and accommodation and food services	7.1%
Information	6.2%
Other services, except public administration	4.1%
Wholesale Trade	4.1%
Transportation and warehousing, and utilities	3.7%
Construction	3.1%
Public Administration	1.5%

Critical Facilities & Infrastructure

As previously stated, certain facilities have a net positive value on the community, i.e., they contribute to the public good by facilitating the basic functions of society. These facilities maintain order, public health, education, and help the local economy function. Additionally, there are facilities and infrastructure integral to disaster response and recovery operations. Conversely, some of these are of extreme importance due to the negative externalities created when impacted by a disaster. What fits these definitions varies slightly from community to community, but the definitions remain as a guideline for identifying critical infrastructure and facilities.

Additionally, the school system within the city limits consists of the capacities listed below.

Table 4: School Infrastructure within City Limits, South Fulton, GA

School Infrastructure within City Limits, South Fulton, GA		
School	**Type**	**Enrollment (2020)**
Nursery School, Pre-School	Public	10.2%
Kindergarten to 12th Grade	Public	64.2%
College, Undergraduate	Public	18.3%
Graduate, Professional School	Public	7.4%

Data Source: US Census Bureau, Chart Survey/Program: 2019 ACS 5-Year Estimates Subject Tables

Land Use & Development Trends

To meet the current and future demands of an increasing population, the City of South Fulton must continue to implement proactive measures pertaining to land use and development. This is especially true of housing, transportation, education, historic preservation, and the environment, among other things.

According to the U.S. Census Bureau, the City of South Fulton has a land area of 86.25 square miles. It is generally categorized as residential but there are major areas of commercial activity near State Highway 400. Many people commute into South Fulton from other nearby cities on a regular basis (Monday-Friday).

South Fulton does not have many areas designed for industrial use.

Hazard Risk Assessment, City of South Fulton, GA

Hazard Identification & Risk Assessment

There are 12 of 13 natural hazards known to pose risk to Fulton County and one or more of its participating jurisdictions. These include Dam Failure, Drought, Earthquake, Flood, Geological Hazards, Extreme Heat, Severe Weather, Tornado, Tropical Systems, Severe Winter Weather, Wind and Wildfire/Wildland Urban Interface Fire. Wind, though identified as a separate hazard in the 2019 Georgia Hazard Mitigation Strategy Standard and Enhanced Plan, is included in the Severe Weather hazard in this plan update.

The following table outlines the City of South Fulton's general risk to the profiled hazards. The rankings are based on a variety of factors, including 1) a composite evaluation of this plan's risk assessment, namely a hazard's probability of occurring in the future, 2) the vulnerability of the jurisdiction to a specific hazard, 3) the intensity of past hazard impacts, and 4) a joint evaluation of local experts and plan stakeholders. The category/range (per year) is based on the following scale: **Unlikely (0%), Occasional (1-10%), Likely (11%-50%), and Highly Likely (51%-100%).**

Table 5: Risk Assessment Matrix, South Fulton, GA

Risk Assessment Matrix, South Fulton, GA		
Hazard	**Category**	**Range**
Dam Failure	Occasional***	-
Drought	Highly Likely	295%
Earthquake	Occasional**	-
Flood	Occasional	-
Geological Hazards	Highly Likely	-
Extreme Heat	Highly Likely	-
Severe Weather	Highly Likely*	-
Severe Winter Weather	Highly Likely	-
Tornado	Highly Likely	160%
Tropical Systems	Highly Likely	84%
Wildfire/Wildland Urban Interface Fires	Occasional*****	-

**The hazard of Severe Weather considers the instances of thunderstorms, lightning, hail, and wind, each with a varying degree of occurrence/probability.*

***The hazard of Earthquake is considered occasional but without a definite calculation of probability. This is due to there being no record/data of earthquake in the planning period since the last plan update (2016).*

****Calculating future probability is not the only predictor of future occurrences. In the last five years, Fulton County and its participating jurisdictions have documented no cases of Dam Failure. Though the County has experienced*

occurrences that were listed in its HMP update (2016), the likelihood of a dam failure event happening in the planning area is considered ***occasional.***

*****The NOAA/NCEI Storm events database did not have any incidences of storm data records related to Flood (also flash flood) for the Cities of Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton from January 1, 1970 – July 31, 2021. Since flooding is possible, the Cities Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton's Probability of Future Events is considered* ***occasional.***

******The hazard of Wildfire/Wildland Urban Interface Fires s considered* ***occasional*** *but without a definite calculation of probability. This is due to there being no record/data of wildfire in the planning period since the last plan update (2016).*

Hazard Event History & Community Impacts

Fulton County has a history of natural hazard events as detailed in this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. The table below presents a summary of natural events that have occurred to indicate the range and impact of natural hazard events in the community. Information regarding specific damages is included if available based on reference material or local sources.

Table 6: Natural Hazards, Previous Occurrences, South Fulton, GA (2016–2021)

Dates of Event	Event Type (Disaster Declaration if applicable)	Atlanta-Fulton County Designated?	Notes on Damages within County
June 1, 2016 – January 1, 2017	Drought	No	No damages, injuries or deaths
March 19, 2018	Tornado – EF2	No	Damage to infrastructure, and homes. No injuries

Data Source: NOAA/NCEI Storm Events Database

Mitigation Capabilities & Actions, City of South Fulton, GA

Capabilities Assessment

The City of South Fulton has a number of administrative and technical capabilities. City departments include Administrative, Community Development, Court Services, Economic Development, Finance, Human Resources, Information Technology, Public Safety, Public Works and Recreation and Parks. City government includes six council members and a mayor. The City council and mayor all serve a four-year term.

The Legal & Regulatory Capability survey documents authorities available to the jurisdiction and/or enabling legislation at the state level affecting planning and land management tools that support local hazard mitigation planning efforts. The identified planning and land management tools are typically used by states, and local/tribal jurisdictions to implement hazard mitigation activities. The proceeding table summarizes the regulatory tools that are available to the City of South Fulton.

Planning & Regulatory Capability

Information specific to the Planning & Regulatory Capability of the City of South Fulton is available in the following table.

Table 7: Planning & Regulatory Capability, South Fulton, GA

Tool / Program (Code, Ordinance, Plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (Local, County, State, Federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Planning Capability				
Master Plan	Yes – Nov 2021	Local	Community Development	https://www.cityofsouthfultonga.gov/DocumentCenter/View/5798/South-Fulton-Comp-Plan-1119
Capital Improvements Plan	Yes	Local	Public Works	https://www.cityofsouthfultonga.gov/2847/Capital-Improvement-Program-Projects
Floodplain Management / Basin Plan	Yes	Local	CDRA - Eric Glover & James Gordon	
Stormwater Management Plan	Yes	Local	CDRA - Eric Glover & James Gordon	
Open Space Plan	Yes	Local	Parks & Rec – Travis Landrum	
Stream Corridor Management Plan	N/A			
Watershed Management or Protection Plan	Yes	Local	Public Works & City of Atlanta	
Economic Development Plan	Yes – Jan 2020	Local	Economic Development	https://www.cityofsouthfultonga.gov/DocumentCenter/View/4362/S-Fulton-Economic-Development-Strategic-Plan-FINAL_081720-003---CP?bidId=
Comprehensive Emergency Management Plan	No		Emergency Management	New division. Plans under development
Emergency Operation Plan	No		Emergency Management	New division. Plans under development
Post-Disaster Recovery Plan	No		Emergency Management	New division. Plans under development
Transportation Plan	Yes	Local, State & Federal	City of Atlanta	
Strategic Recovery Planning Report	No		Emergency Management	New division. Plans under development
Other Plans	N/A			
Regulatory Capability				
Building Code	Yes	State & Local	Community Development	https://library.municode.com/ga/south_fulton/codes/code_of_ordinances
Zoning Ordinance	Yes	Local	Community Development	https://library.municode.com/ga/south_fulton/codes/code_of_ordinances
Subdivision Ordinance	Yes	Local	Community Development	https://library.municode.com/ga/south_fulton/codes/code_of_ordinances
NFIP Flood Damage Prevention Ordinance	Yes	Federal, State, Local	Community Development	

Tool / Program (Code, Ordinance, Plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (Local, County, State, Federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Regulatory Capability				
NFIP: Cumulative Substantial Damages			Community Development	
NFIP: Freeboard	Yes	State, Local	Community Development	State mandated BFE+2 for single and two-family residential construction, BFE+1 for all other construction types
Growth Management Ordinances	Yes	Local	Community Development	https://library.municode.com/ga/south_fulton/codes/code_of_ordinances
Site Plan Review Requirements	Yes	Local	Community Development	https://library.municode.com/ga/south_fulton/codes/code_of_ordinances
Stormwater Management Ordinance	Yes	State, Local	Community Development	https://library.municode.com/ga/south_fulton/codes/code_of_ordinances
Municipal Separate Storm Sewer System (MS4)	Yes	State, Local	Community Development	
Natural Hazard Ordinance				
Post-Disaster Recovery Ordinance				
Real Estate Disclosure Requirement	Yes	State		NYS mandate, Property Condition Disclosure Act, NY Code - Article 14 §460-467
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]				

Administrative & Technical Capability

The following table summarizes potential staff and personnel resources available to the City of South Fulton.

Table 8: Administrative & Technical Capability, South Fulton, GA

Administrative & Technical Capability, South Fulton, GA		
Administrative Capability		
Resources	**Is This in Place?**	**Department, Agency, Position**
Planning Board	Yes	Community Development
Mitigation Planning Committee		
Environmental Board/Commission		
Open Space Board/Committee		
Economic Development Commission/Committee	Yes	Economic Development

Administrative & Technical Capability, South Fulton, GA		
Maintenance Programs to Reduce Risk		
Mutual Aid Agreements		
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	Community Development, Public Works
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Community Development, Public Works
Planner(s) or Engineer(s) with an understanding of natural hazards	Yes	Community Development, Public Works
National Flood Insurance Protection (NFIP) Floodplain Administrator	Yes*	Community Development,
Surveyor(s)	Yes	Community Development
Personnel skilled or trained in GIS and/or Hazus-MH applications	Yes	Information Technology
Scientist familiar with natural hazards		
Emergency Manager	Yes	Fire
Granter Writer(s)	Yes	CoSF
Staff with expertise on training in benefit/cost analysis	Yes	Finance
Professional(s) trained in conducting damage assessments	Yes	EM, Citywide training being coordinated with GEMA

Fiscal Capability

The proceeding table summarizes the financial resources available to the City of South Fulton.

Table 9: Fiscal Capability, South Fulton, GA

Fiscal Capability, South Fulton, GA	
Resources	**Accessible or Eligible to Use?**
Community Development Block Grants (CDBG, CDBG-DR)	Community Development
Capital Improvements Project Funding	Public Works
Authority to Levy Taxes for specific purposes	N/A
User fees for water, sewer, gas or electric service	No
Impact Fees for homebuyers or developers of new development/homes	No
Stormwater Utility Fee	N/A
Incur debt through general obligation bonds	N/A

Fiscal Capability, South Fulton, GA	
Resources	**Accessible or Eligible to Use?**
Incur debt through special tax bonds	N/A
Incur debt through private activity bonds	N/A
Withhold public expenditures in hazard-prone areas	N/A
Other Federal or State Funding Programs	N/A
Open Space Acquisition Funding Programs	N/A
Other	

Community Classifications

The following table summarizes classifications for community programs available to the City of South Fulton.

Table 10: Community Classifications, South Fulton, GA

Community Classifications, South Fulton, GA			
Program	**Do You Have This?**	**Classification**	**Date Classified**
Community Rating System (CRS)	TBD		
Building Code Effectiveness Grading Schedule (BCEGS)	TBD		
Public Protection (ISO Fire Protection Classes 1-10)	Yes	3/3X	September 1, 2020
Storm Ready	No		
Firewise	No		
Disaster/Safety Programs in/for Schools	Yes		
Organization(s) with Mitigation Focus (Advocacy Group, Non-Government)	No		
Public Education Program/Outreach (through website, social media, etc.)	Yes		
Public-Private Partnerships	No		

**NP = Not Participating, *N/A = Not Applicable, - =Unavailable, TBD = To Be Determined*

Hazard Mitigation Capability

The following table summarizes a self-assessment of South Fulton's current hazard mitigation capability.

Table 11: Hazard Mitigation Capability, South Fulton, GA

Hazard Mitigation Capability, South Fulton, GA			
Area	Degree of Hazard Mitigation Capability		
	Limited (If so, please indicate any/all obstacles)	Moderate	High
Planning & Regulatory Capability		New City. Current capabilities being assessed. Tier II reporting being reviewed. Pre-planning scheduled.	
Administrative & Technical Capability		New City. Technical capability being assessed. Hazmat technician training conducted. Equipment updating needed to meet mission.	
Community & Political Capability	New City. Interface with primary stakeholders necessary. Contact will be scheduled this CY.		
Community Resiliency Capability	New City. Evaluation needed to determine capability. Training and exercise will bridge gap.		
Capability to Integrate Mitigation into Municipal Processes & Activities	New City. Will have to understand the shortfalls and conduct gap analysis. Training for all stakeholders necessary for successful implementation.		

National Flood Insurance Program (NFIP) Participation

NFIP Floodplain Administrator: Eric Glover, City Engineer

South Fulton is currently an active member of the NFIP, in good standing with no outstanding compliance issues. Fulton has completed Community Assistance Visits (CAV), with the most recent visit completed on October 1, 2015.

Loss History & Mitigation

As of August 2015, there were four (4) repetitive loss properties and three (3) repetitive loss areas in Unincorporated Fulton County (from which The City of South Fulton was incorporated in 2017). The three Repetitive Loss Areas are: 1. Village Drive SW; 2. Erin Rd/Dublin Drive SW; 3. Tahoe Drive SW. Each of these repetitive loss areas are residential and are within the SHFA (low laying area/100 ye-r floodplain). No properties have officially indicated interest in elevation or acquisition and no properties are currently in the process of mitigation.

Planning & Regulatory Capabilities

Fulton County's NFIP Flood Damage Prevention Ordinance can be found in the Unified Development Code. Floodplain management regulations and ordinances meet and exceed the minimum requirements set forth by both FEMA and the State of Georgia. Fulton also performs site plan review and building plan review, which both include checks of floodplain designations. A preliminary staff review and recommendation occurs prior to planning board and zoning board considerations.

Administrative & Technical Capabilities

Duties and responsibilities of the NFIP Administrator include permit review, damage assessments, record keeping, inspections, GIS, education and outreach, and capital mitigation projects. The NFIP Administrator feels he is adequately supported and trained to fulfill his responsibilities as the municipal floodplain administrator. He also would consider attending continuing education and/or certification training on floodplain management.

Public Education & Outreach

In 2015 Fulton County Education and Outreach regarding flood/hazard risk, and flood risk reduction through NFIP insurance is primarily provided to the community through the County website. Additional outreach is provided to banks and insurance companies, annual letters to those in the Special Flood Hazard Area (SFHA) and providing flood information brochures in several public buildings.

Actions to Strengthen the Program

During the data collection process staff identified limited funding to acquire property in the SFHA as a potential barrier to running an effective floodplain program in Fulton.

Community Rating System

South Fulton does currently participate in the CRS program with a Class 8 rating, and personnel regularly attend a local CRS Seminar.

Mitigation Actions

Each jurisdiction participating in this plan is responsible for implementing specific mitigation actions as prescribed in the adopted Mitigation Action Plan. In each Mitigation Action Plan, every proposed action is assigned to a specific local department or agency in order to assign responsibility and accountability and increase the likelihood of subsequent implementation. This approach enables individual jurisdictions to update their unique mitigation strategy as needed without altering the broader focus of the countywide plan. The separate adoption of locally specific actions also ensures that each jurisdiction is not held responsible for monitoring and implementing the actions of other jurisdictions involved in the planning process. A complete list of countywide mitigation strategies is provided in Section X of this plan update.

Completed Mitigation Actions (2016-2021)

As a new city (incorporated in 2017), the City of South Fulton did not identify any completed mitigation projects from the 2016 MJHMP.

Identified Mitigation Actions (2022-2027)

The following table reflects the City of South Fulton's identified projects for the 2022 MJHMP update. All are newly proposed as there are no carryover/deferred projects from the previous MJHMP (2016). The City of South Fulton was incorporated in 2017. The following actions share the same timeframe for completion, which is the current five-year planning period (2022-2027).

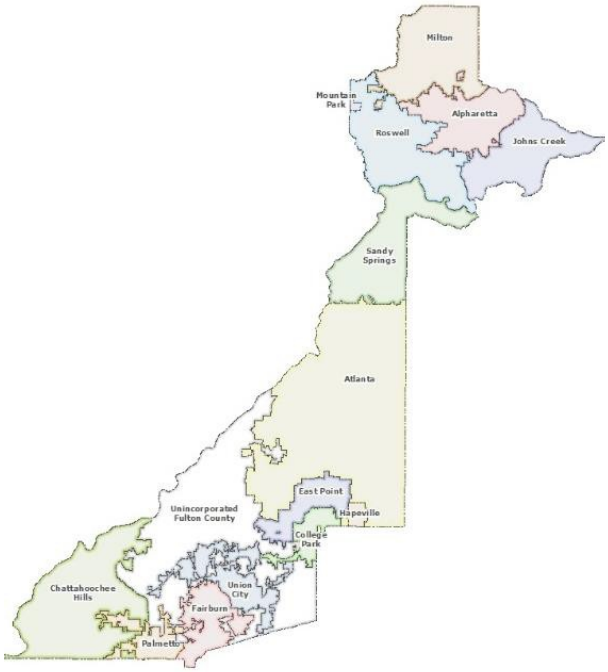
Table 12: Proposed Mitigation Actions (2022-2027), South Fulton, GA

Identified Mitigation Actions, South Fulton, GA								
Project Number	Mitigation Action/ Description	Status as of 2021 HMP Update	Responsible Party/ies	Hazard(s) Addressed	Estimated Project Cost	Possible Funding Source(s)	Timeframe for Completion	STAPLE+E Score
70.0001	Build a City of South Fulton Emergency Operations Center	Proposed	City of South Fulton Emergency Management	All Hazards	$500,000	Federal/State Grants; Local Funds	2022-2027	Medium 36.5
70.0002	Back-Up Power Emergency Shelters	Proposed	City of South Fulton Emergency Management/City of South Fulton Public Works	Severe Weather, Severe Winter Weather; Tornado, Tropical Systems, Flood	Using a 2000 KW generator I would estimate $40K per unit, including accessories - 1 for Sandtown - $50K; 4 Welcome All - $200K	Federal/State Grants; Local Funds	2022-2027	Medium 29
70.0003	Install a local Emergency Warning System.	Proposed	City of South Fulton Emergency Management	All Hazards	$1,200,000	Federal/State Grants; Local Funds	2022-2027	Medium 36.5
70.0004	Provide NOAA Weather Radios to low-income high-risk citizens of the City of South Fulton	Proposed	City of South Fulton Emergency Management	All Hazards	$6,500-$10,000	Federal/State Grants; Local Funds	2022-2027	Medium 36.5
70.0005	Create City of South Fulton Continuity of Operations Plan (COOP)	Proposed	City of South Fulton Emergency Management; City of South Fulton Administration and	All Hazards	$40,000 - $60,000	Federal/State Grants; Local Funds	2022-2027	Medium 29

Identified Mitigation Actions, South Fulton, GA								
Project Number	**Mitigation Action/ Description**	**Status as of 2021 HMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
			Departments (Public Works, Police, Fire, etc.)					
70.0006	Create City of South Fulton Local Emergency Operations Plan (LEOP)	Proposed	City of South Fulton Emergency Management; City of South Fulton Administration and Departments (Public Works, Police, Fire, etc.)	All Hazards	$40,000 - $60,001	Federal/State Grants; Local Funds	2022-2027	Medium 29
70.0007	Annual Review of Hazard Mitigation Plan	Proposed	City of South Fulton Emergency Management; City of South Fulton Administration and Departments (Public Works, Police, Fire, etc.)	All Hazards	Staff Time & Resources	Federal/State Grants; Local Funds	2022-2027	Low 21.5
70.0008	Develop and implement a Public Awareness Campaign Encouraging Residents to Develop Family Disaster Plans	Proposed	City of South Fulton Emergency Management; City of South Fulton Administration and Departments (Public Works, Police, Fire, etc.)	All Hazards	Staff Time & Resources	Federal/State Grants; Local Funds	2022-2027	Low 21.5

Jurisdiction Profile: Union City, GA

History & Geography



Union City, Georgia was established as a result of two individuals, Drewry Arthur Carmical and Charles Simon Barrett. Barrett was the newly elected president of the National Farmers Union at a time when the Union was looking for an appropriate location for its headquarters. The City was officially named as the result of the location of the headquarters.

A charter was drawn up for the new town and signed on August 17, 1908. Drewry Carmical became the first mayor of Union City. He was chairman of the town's school board and manager of the implement company.

The South Fulton Municipal Regional Jail, constructed in the late 1990s, is the first regional correctional facility in Georgia to be based on cooperation between cities (Union City and Palmetto) rather than between counties. The Regional Jail and the Union City Justice Center were built at the same time, and the jail was uniquely constructed in a way that connects the facility by tunnel to the Justice Center's police headquarters, court system, 911 Center, and related City services.

Significant Characteristics

Union City offers two great parks: Ronald Bridge's Park and Mayor's Park. Both are conveniently located in the heart of our residential community and present a wide variety of activities including, picnic areas, pavilions, playgrounds, walking tracks and basketball courts.

Population & Demographics

The 2020 U.S. Census reported that there were 26,830 people residing in the City. The racial makeup of Union City was 86.4% African American, 8% White, 7.0% Hispanic or Latino, and 4% from two or more races. In the City, the population age was spread out with 32.8% under the age of 18, and 11.5% 65 years of age or older.

Table 1: Population Change, Union City, GA

Population Change, Union City, GA				
Year	1990	2000	2010	2020
Population	8,375	11,621	19,456	26,830

The Local Economy

Following is a list of City-issued permits for the construction of single-family homes dating from 2017 to 2021.

Table 2: Union City Building Permits

Single-Family New House Construction Building Permits	
2017	X
2018	242
2019	367
2020	232
2021	257

Critical Facilities & Infrastructure

The Police Department currently consists of 57 sworn officers and 5 civilian employees. The department is composed of two sections, the Field Operations Section, and the Technical Services Section. Each respective section is composed of multiple divisions that are commanded by officers holding the rank of Captain. The Union City Fire Department is composed of three rotating 24-hour shifts providing its citizens with 24/7 fire and medical services. Union City's workforce consists of 60 full-time dedicated and professional individuals including a chief, assistant chief, fire marshal, two fire safety inspectors, executive administrative assistant, training officer, and 54 members in suppressions. The total workforce for Union City totals 262 this includes full-time, and part-time.

The school system infrastructure within the City limits consists of the following capacity.

Table 3: Union City's School Enrollments

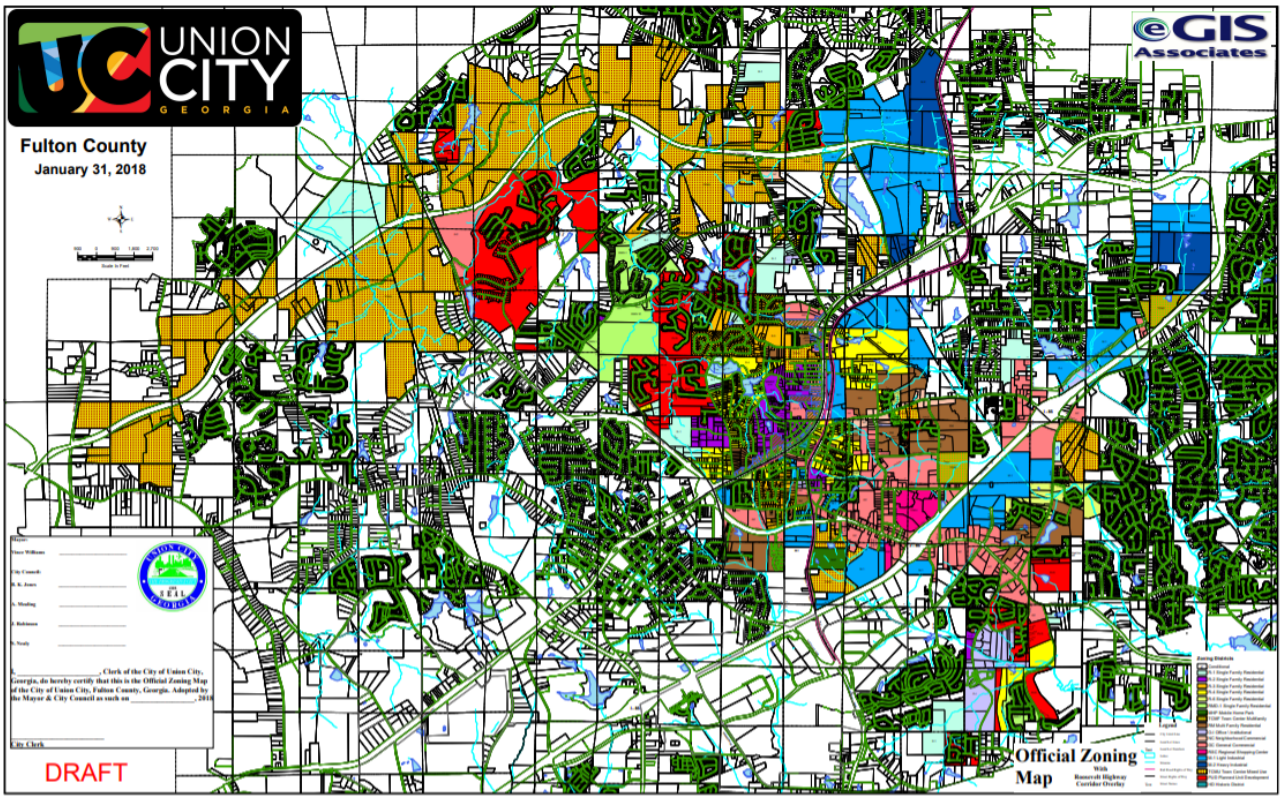
School	Type	Enrollment
Nursery School, pre-school	Private	794
Kindergarten to 12th grade	Public	2,785
College, undergraduate	N/A	N/A
Graduate, professional school	N/A	N/A

Land Use & Development Trends

Union City is a total of 19.3 square miles with only 0.2 square miles of that being water. The City is made up of primarily residential areas with smaller zones for commercial and industrial. Below is a zoning map that was adopted in 2018.

The following map shows the distribution of major land use categories within the city limits.

Map 1: Land Use, Union City, GA



Map Source: Union City, Fulton County

The following table summarizes major development that occurred in the municipality over the past five years, as well as known or anticipated future development in the next five (5) years:

Table 4: Recent and Known Future Development, Union City

Property or Development Name	Type (e.g. Res., Comm.)	# of Units/Structures	Address and Block/Lot	Known Hazard Zones	Description/Status of Development
Recent Development from 2015 to Present					
Union Station Subdivision	Single Family Homes	105 Lots	Highway 92	No Known	Final Plat Phase 1
Chatteron Springs Subdivision	Single Family Homes	102 Lots	Koweta Road	No Known	Final Plat Phase 1
Enclave at Parkway Villages	Single Family Homes	101 Lots	Thompson Road	No Known	Final Plat Phase 1
Southwood Subdivision	Townhome Community	268 Units	Southwood Road	No Known	Preliminary Plat
Parks at Pine Valley	Single Family, Townhomes & Multi-family	95 Single Family 216 Townhomes 250 Multi-family	Hall Road & Jones Road	No Known	Final Plat – Phase 1 of Multifamily
Langston Hughes Apartments	Multi-family Residential	320 Units	Hall Road and Highway 92	No Known	Building Permit Issued

Property or Development Name	Type (e.g. Res., Comm.)	# of Units/Structures	Address and Block/Lot	Known Hazard Zones	Description/Status of Development
Stonewall Station West	Single Family Homes	90	Stonewall Tell Road	No Known	Under Construction
Stonewall Station East	Single Family	35	Stonewall Tell Road	No Known	Under Construction
Buffington Road Apartments Phase 2	Multi-family Residential	156 Units	Buffington Road	No Known	Under Construction
Known or Anticipated Development in the Next Five (5) Years					
Apartments at Stonewall Tell Road	Multi-family Residential	350 Units	Stonewall Tell Road & Scarobough Road	No Known	Planning
Checker's	Restaurant	1,008 sq feet	Highway 138	No Known	Permitting
Little Caesars' Pizza	Restaurant	1,900 sq feet	Shannon Parkway	No Known	Permitting
CHI Stonewall Tell	Industrial Facility	170,500 sq feet	Stonewall Tell Rd	No Known	Permitting
Saxum Freezer Project	Industrial Facility	305,841 sq feet 188,121 sq feet	Derrick Road	No Known	Permitting
Union City Commerce Center	Industrial Park	1,775,000 sq feet	Evans Drive	No Known	Planning
Stream Flat Shoals	Industrial Facility	360,180 sq feet	Flat Shoals Road	No Known	Permitting
7430 Oakley Road Site	Industrial Facility	267,766 sq feet	Oakley Road.	No Known	Permitting
Highway 92 Self Storage	Self-Storage	137,916 sq feet	Highway 92	No Known	Planning

Hazard Risk Assessment, Union City, GA

Hazard Identification & Risk Assessment

There are 12 of 13 natural hazards known to pose risk to Fulton County and one or more of its participating jurisdictions. These include Dam Failure, Drought, Earthquake, Flood, Geological Hazards, Extreme Heat, Severe Weather, Tornado, Tropical Systems, Severe Winter Weather, and Wildfire/Wildland Urban Interface Fire. Wind, though identified as a separate hazard in the 2019 Georgia Hazard Mitigation Strategy Standard and Enhanced Plan, is included in the Severe Weather hazard in this plan update.

The following table outlines the Union City's general risk to the profiled hazards. The rankings are based on a variety of factors, including 1) a composite evaluation of this plan's risk assessment, namely a hazard's probability of occurring in the future, 2) the vulnerability of the jurisdiction to a specific hazard, 3) the intensity of past hazard impacts, and 4) a joint evaluation of local experts and plan stakeholders. The category/range (per year) is based on the following scale: **Unlikely (0%), Occasional (1-10%), Likely (11%-50%), and Highly Likely (51%-100%).**

Table 5: Risk Assessment Matrix, Union City, GA

Risk Assessment Matrix, Union City, GA		
Hazard	**Category**	**Range**
Dam Failure	Occasional***	-
Drought	Highly Likely	295%
Earthquake	Occasional**	-
Flood	Occasional	2%
Geological Hazards	Highly Likely	-
Extreme Heat	Highly Likely	-
Severe Weather (including Wind)	Highly Likely*	-
Severe Winter Weather	Highly Likely	-
Tornado	Highly Likely	160%
Tropical Systems	Highly Likely	84%
Wildfire/Wildland Urban Interface Fires	Occasional*****	-

**The hazard of Severe Weather considers the instances of thunderstorms, lightning, hail, and wind, each with a varying degree of occurrence/probability.*

***The hazard of Earthquake is considered occasional but without a definite calculation of probability. This is due to there being no record/data of earthquake in the planning period since the last plan update (2016).*

****Calculating future probability is not the only predictor of future occurrences. In the last five years, Fulton County and its participating jurisdictions have documented no cases of Dam Failure. Though the County has experienced occurrences that were listed in its HMP update (2016), the likelihood of a dam failure event happening in the planning area is considered* ***occasional.***

*****The NOAA/NCEI Storm Events Database did not have any incidences of storm data records related to Flood (including Flash Flood) for the Cities of Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton from January 1, 1970 – July 31, 2021. Since flooding is possible, the Cities Chattahoochee Hills, Fairburn, Johns Creek, Milton, Mountain Park, Palmetto, and South Fulton's Probability of Future Events is considered* ***occasional.***

******The hazard of Wildfire/Wildland Urban Interface Fires considered* ***occasional*** *but without a definite calculation of probability. This is due to there being no record/data of wildfire in the planning period since the last plan update (2016).*

Hazard Risk Assessment, Union City, GA

Hazard Event History & Community Impacts

There have been no recordings by the National Oceanic and Atmospheric Administration (NOAA) and its National Centers for Environmental Information (NCEI), between January 1, 2016, and October 31, 2021 for Union City.

Capabilities Assessment

The Legal & Regulatory Capability survey documents authorities available to the jurisdiction and/or enabling legislation at the state level affecting planning and land management tools that support local hazard mitigation planning efforts. The identified planning and land management tools are typically used by states, and local/tribal jurisdictions to implement hazard mitigation activities. The proceeding table summarizes the regulatory tools that are available to Union City.

Planning & Regulatory Capability

Table 6: Planning & Regulatory Capability, Union City, GA (Taken from 2016 plan)

Planning & Regulatory Capability, Union City, GA				
Planning Capability				
Tool/Program	**Do You Have This?**	**Authority**	**Department/Agency Responsible**	**Code Citation & Comments**
Master Plan				
Capital Improvement Plan	Yes	Local	Finance	
Floodplain Management/Basin Plan	Yes	Local	Planning Department	
Stormwater Management Plan	Yes	Local	Public Services	
Open Space Plan	Yes	Local	Public Services	
Stream Corridor Management Plan	Yes	Local	Public Services	
Watershed Management or Protection Plan	Yes	Local/County	Atlanta Watershed	
Economic Development Plan	Yes	Local	Committee Developed	
Comprehensive Emergency Management Plan	Yes	County	AFCEMA	
Emergency Operations Plan	Yes	Local	Fire Department	
Post-Disaster Recovery Plan	Yes	Local	All Departments	
Transportation Plan	Yes	Local	Public Works	
Strategic Recovery Planning Report	Yes	Local	All Departments	
Other Plans	Not at this time			
Regulatory Capability				
Building Code	Yes	State & Local		
Zoning Ordinance	Yes	Local	Community Development	
Subdivision Ordinance	Yes	Local	Community Development	
National Flood Insurance Program (NFIP) Flood Damage Prevention Ordinance	Yes	Federal, State, Local	Community Development	
NFIP: Cumulative Substantial Damages	Yes	Local	Community Development	

Planning & Regulatory Capability, Union City, GA				
Regulatory Capability				
Tool/Program	**Do You Have This?**	**Authority**	**Department/Agency Responsible**	**Code Citation & Comments**
NFIP: Freeboard	Yes	State, Local	Community Development	
Growth Management Ordinances	Yes	Local	Community Development	
Site Plan Review Requirements	Yes	Local	Community Development	
Stormwater Management Ordinance	Yes	Local	Public Services	
Municipal Separate Storm Sewer System (MS4)	Yes	Local	Public Services	
Natural Hazard Ordinance	Not at this time	Local	Fire	
Post-Disaster Recovery Ordinance	Not at this time	Local	Fire	
Real Estate Disclosure Requirement	Yes	State	Community Development	
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]				

Administrative & Technical Capability

The following table summarizes potential staff and personnel resources available to Union City:

Table 7: Administrative & Technical Capability, Union City, GA

Administrative & Technical Capability, Union City, GA		
Administrative Capability		
Resources	**Is This in Place?**	**Department, Agency, Position**
Planning Board	Yes	Community Development
Mitigation Planning Committee	Yes	All Departments
Environmental Board/Commission	Not at this time	
Open Space Board/Committee	Not at this time	
Economic Development Commission/Committee	Yes	Community Development
Maintenance Programs to Reduce Risk	Yes	Public Services
Mutual Aid Agreements	Yes	Neighboring Fire Departments

Administrative & Technical Capability, Union City, GA		
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	Community Development/Moreland Altobelli Assc.
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Community Development/Safebuilt
Planner(s) or Engineer(s) with an understanding of natural hazards	Yes	Community Development/Keck and Wood
National Flood Insurance Protection (NFIP) Floodplain Administrator	Yes	Community Development
Surveyor(s)	Yes	Moreland Altobelli Assc.
Personnel skilled or trained in GIS and/or Hazus-MH applications	Yes	Public Services
Scientist familiar with natural hazards	Not at this time	
Emergency Manager	Yes	Fire Chief
Granter Writer(s)	Yes	Operations
Staff with expertise on training in benefit/cost analysis	Yes	All Department Heads
Professional(s) trained in conducting damage assessments	Yes	Moreland Altobelli Assc.

Fiscal Capability

The proceeding table summarizes the financial resources available to Union City.

Table 8: Fiscal Capability, Union City, GA

Fiscal Capability, Union City, GA	
Resources	**Accessible or Eligible to Use?**
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Not at this time
Impact Fees for homebuyers or developers of new development/homes	Not at this time
Stormwater Utility Fee	Yes
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes

Fiscal Capability, Union City, GA	
Resources	**Accessible or Eligible to Use?**
Incur debt through private activity bonds	Yes
Withhold public expenditures in hazard-prone areas	Yes
Other Federal or State Funding Programs	Yes
Open Space Acquisition Funding Programs	Yes
Other	

Community Classifications

The following table summarizes classifications for community programs available to Union City.

Table 9: Community Classifications, Union City, GA

Community Classifications, Union City, GA			
Program	**Do You Have This?**	**Classification**	**Date Classified**
Community Rating System (CRS)	Not at this time		
Building Code Effectiveness Grading Schedule (BCEGS)	Not at this time		
Public Protection (ISO Fire Protection Classes 1-10)	Yes	02/2Y	March 21 2016
Storm Ready	Not at this time		
Firewise	Not at this time		
Disaster/Safety Programs in/for Schools	Yes		
Organization(s) with Mitigation Focus (Advocacy Group, Non-Government)	Not at this time		
Public Education Program/Outreach (through website, social media, etc.)	Yes		
Public-Private Partnerships	Yes		

**NP = Not Participating, *N/A = Not Applicable, - =Unavailable, TBD = To Be Determined*

Hazard Mitigation Capability

The following table summarizes a self-assessment of Union City's current hazard mitigation capability.

Table 10: Hazard Mitigation Capability, Union City, GA

Hazard Mitigation Capability, Union City, GA			
Area	Degree of Hazard Mitigation Capability		
	Limited (If so, please indicate any/all obstacles)	Moderate	High
Planning & Regulatory Capability		X	
Administrative & Technical Capability			X
Fiscal Capability	(x) Due to recent trends in economic development tax collections are down affecting the Fiscal budget.		
Community & Political Capability			X
Community Resiliency Capability		X	
Capability to Integrate Mitigation into Municipal Processes & Activities			X

National Flood Insurance Program (NFIP) Participation

NFIP Floodplain Administrator: Ellis Still, Director of Community Development

Union City is currently an active member of the NFIP, in good standing with no outstanding compliance issues. It is currently undetermined when Union City completed their last Community Assistance Visits (CAV).

Loss History & Mitigation

Union City does not currently have a system in place to maintain a list of properties that have been flood damaged; however, there are none to date. The floodplain administrator does not make substantial damage estimates and no property owners have expressed an interest in the mitigation process.

Planning & Regulatory Capabilities

The City's floodplain management regulations and ordinances meet the minimum requirements set forth by both FEMA and the State of Georgia.

Actions to Strengthen the Program

During the data collection process staff did not indicate any perceived barriers to running an effective floodplain program in Union City; however, they did state an interest in receiving more training and/or attending conferences in the future.

Community Rating System (CRS)

Union City does not currently participate in the CRS program.

Mitigation Actions

Each jurisdiction participating in this plan is responsible for implementing specific mitigation actions as prescribed in the adopted Mitigation Action Plan. In each Mitigation Action Plan, every proposed action is assigned to a specific local department or agency in order to assign responsibility and accountability and increase the likelihood of subsequent implementation. This approach enables individual jurisdictions to update their unique mitigation strategy as needed without altering the broader focus of the countywide plan. The separate adoption of locally specific actions also ensures that each jurisdiction is not held responsible for monitoring and implementing the actions of other jurisdictions involved in the planning process. A complete list of countywide mitigation strategies is provided in Section 5 of this plan update.

Completed Mitigation Actions (2016-2021)

Union City identified mitigation actions in the previous (2016) MJHMP update. Union City completed eight of them during the five-year planning period (2016-2021). Those projects are referenced in the proceeding table.

Table 11: Completed Mitigation Actions (2016-2021), Union City, GA

Completed Mitigation Projects (2016-2021), Union City, GA		
Project Number	**2016 Mitigation Action**	**Responsible Party/ies**
X	Elevate areas of Lester Rd where creeks cross the roadway. (Comments: This project was placed in Mitigation Plan by previous DPW Directors with no specifics. There has been no recent flooding of Lester Rd. Will conduct a feasibility study to verify if this is a warranted concern. There are no projects or plans to elevate Lester Road at this time. Lester Rd is not currently experiencing flooding. Determine if proposal is a feasible solution.)	Union City Public Works Department
X	Improve aging storm water infrastructure on Lester Rd which is circa 1950 and of insufficient capacity for storm water runoff (Comments: This project was placed in Mitigation Plan by previous DPW Directors with no specifics. There has been no recent flooding of Lester Rd. Will continue to monitor and make recommendations based on outcome. Previous flooding had been caused by blockages in creek bed restricting water flow. these obstructions have been removed.)	Union City Public Works Department
X	Oakley Industrial Boulevard catch basins repair (Comments: Project to address flooding and storm water runoff by construction of pipe and drainage structures.)	Union City Public Works Department
X	Royal South Parkway tire cleanup around lake. (Comments: Project to address flooding and storm water runoff as well as assist in controlling mosquito population by construction of pipe and drainage structures.)	Union City Public Works Department
x	Mall Boulevard and Londonderry Way sinkhole repair (Comments: project to address flooding and storm water runoff by construction of pipe and drainage structures.	Union City Public Works Department
50.0004	Improvements to drainage along roadways (Comments: Projects to address flooding and storm water runoff by construction of pipe and drainage structures: Locations already identified include but are not limited to locations along the following: Alexander Street and Roosevelt Highway, Lester Road, Westbrook and McKinley Street, Shannon Boulevard, and Dodson Road.)	Union City Public Works Department

Completed Mitigation Projects (2016-2021), Union City, GA		
Project Number	**2016 Mitigation Action**	**Responsible Party/ies**
50.0005	Dredge Windham Creek that runs through the City to be wider and deeper to increase volume (Comments: Current creek capacity is insufficient. There is an increase volume directed towards it as a result of urbanization. The speed and volume of the flow causes erosion and exposes drainage pipes. NOTE: There are no populations downstream that would be affected by increased volume.)	Union City Public Works Department
50.0007	Improve emergency responder communication interoperability by implementing an 800 MHz radio system. Union City is the only jurisdiction in Fulton County, which does not have an 800 MHz radio system. This results in severe interoperability issues with other jurisdictions and leaves the City with no backup system should the current system become damaged or otherwise inoperable.	Union City Administration

Identified Mitigation Actions (2022-2027), Union City, GA

The following table reflects the identified projects for the 2022 MJHMP update. Additionally, the table includes any/all new mitigation actions identified by Union City for the present five-year planning period (2022-2027).

Table 12: Identified Mitigation Actions, Union City, GA

Identified Mitigation Actions, Union City, GA								
Project Number	**Mitigation Action/ Description**	**Status as of 2021 HMP Update**	**Responsible Party/ies**	**Hazard(s) Addressed**	**Estimated Project Cost**	**Possible Funding Source(s)**	**Timeframe for Completion**	**STAPLE+E Score**
50.0005	Remediation of Upper Dixie Lake Dam (Comments [from 2016 MJHMP] see Appendix E – Studies, Reports, and Supplementary Documents for detailed options)	Ongoing / Carry over from 2016 Plan	Union City Public Works Department	Flood, Severe Weather, Tropical Systems	$250,000 - $1,300,000	Local, State, and Federal Funding	N/A	Medium 27
50.0006	Replace early warning system. (Comments: It currently employs a siren system, which is older and only reaches a small percent of the population. Need a more targeted system such as Code Red or National Oceanic and Atmospheric Administration (NOAA) weather radios. This will be implemented in collaboration with the recommendations of the evaluation as described in this project.)	Deferred from 2016 Plan / Carry over to 2022r	Union City Fire and Rescue	Severe Weather, Tornado	$75,000	HMGP: Local Funds	N/A	Medium 28
50.0008	Emergency backup power for facilities with critical operations: City Hall, Public Services, and IT	On-going/ Carry over from 2016 Plan	Union City Administration	Severe Weather, Severe Winter Weather, Tornado, Tropical Systems	$62,000	Local Funds	N/A	Medium 26

Appendix J – All Hazards (Except Flood) Worksheet #3a – Inventory of Assets

Note: *These worksheets are a requirement for Georgia Emergency Management Agency/Homeland Security (GEMA/HS). This information is used to determine the equivalent process for Fulton County and its participating jurisdictions' building inventory within the affected hazard area for the spatially (flooding) and non-spatially (all-hazards) that could impact the planning area.*

GEMHSA Worksheet #3a — Inventory of Assets

Jurisdiction: Fulton County
Hazard: All hazards (except Flood)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	306,375	306,375	100.000%	$94,653,572,000.00	$94,653,572,000.00	100.000%	1,066,710	1,066,710	100%
Commercial	10,524	10,524	100.000%	$7,611,528,000.00	$7,611,528,000.00	100.000%	0	0	0%
Industrial	4,478	4,478	100.000%	$3,577,154,000.00	$3,577,154,000.00	100.000%	0	0	0%
Agricultural	30	30	100.000%	$4,954,000.00	$4,954,000.00	100.000%	0	0	0%
Religious/ Non-profit	606	606	100.000%	$401,776,000.00	$401,776,000.00	100.000%	0	0	0%
Government	542	542	100.000%	$247,290,000.00	$247,290,000.00	100.000%	0	0	0%
Education	237	237	100.000%	$593,274,000.00	$593,274,000.00	100.000%	0	0	0%
Utilities	0	0	#DIV/0!	0	0	0.000%	0	0	0%
Total	322,792	322,792	100.000%	$107,089,548,000.00	$107,089,548,000.00	100.000%	1,066,710	1,066,710	100%

***Note:** This table represents all hazards that could affect Fulton County. The data was taken from GBS Building Exposure Updates by Occupancy Class from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	Y	
2. Do you know whether your critical facilities will be operational after a hazard event?		N
3. Is there enough data to determine which assets are subject to the greatest potential damages?	Y	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	Y	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	Y	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	Y	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		N

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Alpharetta
Hazard: All hazards (except Flood)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	0	0	0.000%	0	0	0.000%	65,818	0	0%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	0	0	0.000%	0	0	0.000%	0	0	0%
Education	0	0	0.000%	0	0	0.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	0	0	0.000%	0	0	0.000%	65,818	0	0%

***Note:** *This table represents all hazards that could affect the City of Alpharetta. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Atlanta
Hazard: All hazards (except Flood)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	0	0	0.000%	0	0	0.000%	498,715	498,715	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	96	96	100.000%	$159,205,000.00	$159,205,000.00	0.000%	0	0	0%
Education	88	88	100.000%	$852,701,000.00	$852,701,000.00	100.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	184	184	100.000%	$1,011,906,000.00	$ 1,011,906,000.00	100.000%	498,715	498,715	100%

***Note:** *This table represents all hazards that could affect the City of Atlanta. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Chattahoochee Hills
Hazard: All hazards (except Flood)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	1,106	1,106	100.000%	0	0	0.000%	2,950	2,950	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	2	2	100.000%	$729,000.00	$729,000.00	100.000%	0	0	0%
Education	1	1	100.000%	$3,537,000.00	$3,537,000.00	100.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	1,109	1,109	100.000%	$4,266,000.00	$4,266,000.00	100.000%	2,950	2,950	100%

***Note:** *This table represents all hazards that could affect the City of Chattahoochee Hills. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of College Park
Hazard: All hazards (except Flood)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	25,391	25,391	100.000%	0	0	0.000%	13,930	13,930	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	4	4	100.000%	$700,000.00	$700,000.00	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	40	40	100.000%	$2,007,000.00	$2,007,000.00	100.000%	0	0	0%
Education	5	5	100.000%	$43,867,000.00	$43,867,000.00	100.000%	0	0	0%
Utilities	71	71	100.000%	0	0	0.000%	0	0	0%
Total	25,511	25,511	100.000%	$46,574,000.00	$46,574,000.00	100.000%	13,930	13,930	100%

***Note:** *This table represents all hazards that could affect the City of College Park. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	**N**
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of East Point
Hazard: All hazards (except Flood)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	13,333	13,333	100.000%	0	0	0.000%	35,448	35,448	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	5	5	100.000%	$10,115,000.00	$10,115,000.00	100.000%	0	0	0%
Education	10	10	100.000%	$118,121,000.00	$118,121,000.00	100.000%	6,635	6,635	100%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	13,348	13,348	100.000%	128,236,000	128,236,000	100.000%	42,083	42,083	100%

***Note:** *This table represents all hazards that could affect the City of East Point. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Fairburn
Hazard: All hazards (except Flood)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	4,691	4,691	100.000%	0	0	0.000%	16,483	16,483	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	4	4	100.000%	$1,928,780.00	$1,928,780.00	100.000%	0	0	0%
Education	2	2	100.000%	$33,842,000.00	$33,842,000.00	100.000%	8,259	8,259	100%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	4,697	4,697	100.000%	35,770,780	35,770,780	100.000%	24,742	24,742	100%

***Note:** *This table represents all hazards that could affect the City of Fairburn. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Hapeville
Hazard: All hazards (except Flood)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	2,750	2,750	100.000%	0	0	0.000%	6,553	6,553	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	5	5	100.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	21	21	100.000%	$79,654,000.00	$79,654,000.00	100.000%	0	0	0%
Education	2	2	100.000%	$6,033,000.00	$6,033,000.00	100.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	2,778	2,778	100.000%	$85,687,000.00	$85,687,000.00	100.000%	6,553	6,553	100%

***Note:** *This table represents all hazards that could affect the City of Hapeville. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Johns Creek
Hazard: All hazards (except Flood)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	29,139	29,139	100.000%	0	0	0.000%	82,453	82,453	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	5	5	100.000%	$14,430,000.00	$14,430,000.00	100.000%	0	0	0%
Education	17	17	100.000%	$313,451,000.00	$313,451,000.00	100.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	29,161	29,161	100.000%	327,881,000	327,881,000	100.000%	82,453	82,453	100%

***Note:** *This table represents all hazards that could affect the City of Johns Creek. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Milton
Hazard: All hazards (except Flood)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	13,540	13,540	100.000%	0	0	0.000%	41,296	41,296	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	5	5	100.000%	$21,406,000.00	$21,406,000.00	100.000%	0	0	0%
Education	8	8	100.000%	$180,454,000.00	$180,454,000.00	100.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	13,553	13,553	100.000%	$201,860,000.00	$201,860,000.00	100.000%	41,296	41,296	100%

***Note:** *This table represents all hazards that could affect the City of Milton. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Mountain Park
Hazard: All hazards (except Flood)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	0	0	0.000%	0	0	0.000%	583	583	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	1	1	100.000%	$216,000.00	$216,000.00	100.000%	0	0	0%
Education	0	0	0.000%	0	0	0.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	1	1	100.000%	$216,000.00	$216,000.00	100.000%	583	583	100%

***Note:** This table represents all hazards that could affect the City of Mountain Park. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	Y	
2. Do you know whether your critical facilities will be operational after a hazard event?		N
3. Is there enough data to determine which assets are subject to the greatest potential damages?	Y	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	Y	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	Y	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	Y	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		N

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Palmetto
Hazard: All hazards (except Flood)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	1,950	1,950	100.000%	0	0	0.000%	5,071	5,071	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	2	2	100.000%	$926,000.00	$926,000.00	100.000%	0	0	0%
Education	1	1	100.000%	$14,779,000.00	$14,779,000.00	100.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	1,953	1,953	100.000%	$15,705,000.00	$15,705,000.00	100.000%	5,071	5,071	100%

***Note:** *This table represents all hazards that could affect the City of Palmetto. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Roswell
Hazard: All hazards (except Flood)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	34,380	34,380	100.000%	0	0	0.000%	92,833	92,833	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	8	8	100.000%	$14,407,000.00	$14,407,000.00	100.000%	0	0	0%
Education	17	17	100.000%	$213,180,000.00	$213,180,000.00	100.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	34,405	34,405	100.000%	$227,587,000.00	$227,587,000.00	100.000%	92,833	92,833	100%

***Note:** *This table represents all hazards that could affect the City of Sandy Springs. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Sandy Springs
Hazard: All hazards (except Flood)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	52,820	52,820	100.000%	0	0	0.000%	108,080	108,080	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	4	4	100.000%	$7,043,000.00	$7,043,000.00	100.000%	0	0	0%
Education	12	12	100.000%	$162,032,000.00	$162,032,000.00	100.000%	0	0	0%
Utilities	5	5	100.000%	0	0	0.000%	0	0	0%
Total	52,841	52,841	100.000%	$169,075,000.00	$169,075,000.00	100.000%	108,080	108,080	100%

***Note:** *This table represents all hazards that could affect the City of Sandy Springs. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of South Fulton
Hazard: All hazards (except Flood)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	34,672	34,672	100.000%	0	0	0.000%	107,436	107,436	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	13	13	100.000%	5,231,000	5,231,000	100.000%	0	0	0%
Education	21	21	100.000%	$551,905,000	551,905,000	100.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	34,706	34,706	100.000%	557,136,000	557,136,000	100.000%	107,436	107,436	100%

***Note:** *This table represents all hazards that could affect the City of South Fulton. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Union City
Hazard: All hazards (except Flood)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	0	0	0.000%	0	0	0.000%	26,830	26,830	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	5	5	0.000%	$11,992,000.00	$0.00	0.000%	0	0	0%
Education	5	5	0.000%	$16,222,000.00	$0.00	0.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	10	10	100.000%	$28,214,000.00	$0.00	0.000%	26,830	26,830	100%

***Note:** This table represents all hazards that could affect the City of Union City. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

Appendix J(2) – Flood Hazard Worksheet #3a – Inventory of Assets

Note: *These worksheets are a requirement for Georgia Emergency Management Agency/Homeland Security (GEMA/HS). This information is used to determine the equivalent process for Fulton County and its participating jurisdictions' building inventory within the affected hazard area for the spatially (flooding) and non-spatially (all-hazards) that could impact the planning area.*

GEMHSA Worksheet #3a — Inventory of Assets

Jurisdiction: Fulton County
Hazard: Flood

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	0	0	0.000%	0	0	0.000%	1,066,710	1,066,710	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	0	0	0.000%	0	0	0.000%	0	0	0%
Education	0	0	0.000%	0	0	0.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	318,253	318,253	100.000%	$104,603,858,150.00	$104,603,858,150.00	100.000%	1,066,710	1,066,710	100%

***Note:** *This table represents all hazards that could affect Fulton County. The data was taken from GBS Building Exposure Updates by Occupancy Class from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Alpharetta
Hazard: Flood

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	18,434	18,434	100.000%	$16,331,611.00	$16,331,611.00	100.000%	65,818	65,818	100%
Commercial	1,435	1,435	100.000%	$2,633,153.00	$2,633,153.00	100.000%	0	0	0%
Industrial	55	55	100.000%	$103,923,300.00	$103,923,300.00	100.000%	0	0	0%
Agricultural	0	0	0.000%	$0.00	$0.00	0.000%	0	0	0%
Religious/ Non-profit	15	15	100.000%	$45,835,410.00	$45,835,410.00	100.000%	0	0	0%
Government	23	23	100.000%	$10,685,830.00	$10,685,830.00	100.000%	0	0	0%
Education	0	0	0.000%	$0.00	$0.00	0.000%	0	0	0%
Utilities	0	0	0.000%	$0.00	$0.00	0.000%	0	0	0%
Total	19,962	19,962	100.000%	$179,409,304.00	$179,409,304.00	100.000%	65,818	65,818	100%

***Note:** *This table represents all hazards that could affect the City of Alpharetta. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Atlanta
Hazard: Flood

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	128,573	128,573	100.000%	$41,037,866,010	41,037,866,010	100.000%	498,715	498,715	100%
Commercial	4,587	4,587	100.000%	$3,235,577,310	3,235,577,310	100.000%	0	0	0%
Industrial	797	797	100.000%	$776,729,910	776,729,910	100.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	386	0	0.000%	$239,606,080	$239,606,080	100.000%	0	0	0%
Government	238	238	100.000%	$117,531,040	117,531,040	100.000%	0	0	0%
Education	127	127	100.000%	$139,132,390	139,132,390	100.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	134,708	134,322	99.713%	45,546,442,740	45,546,442,740	100.000%	498,715	498,715	100%

***Note:** *This table represents all hazards that could affect the City of Atlanta. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Chattahoochee Hills
Hazard: Flood

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	1,489	1,489	100.000%	$351,720,200	351,720,200	100.000%	2,950	2,950	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	10	10	100.000%	$1,749,360	1,749,360	100.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	5	5	100.000%	$409,200	409,200	100.000%	0	0	0%
Education	0	0	0.000%	0	0	0.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	1,504	1,504	100.000%	353,878,760	353,878,760	100.000%	2,950	2,950	100%

***Note:** *This table represents all hazards that could affect the City of Chattahoochee Hills. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of College Park
Hazard: Flood

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	2,425	2,425	100.000%	$509,063,670	509,063,670	100.000%	13,930	13,930	100%
Commercial	216	216	100.000%	$132,008,780	132,008,780	100.000%	0	0	0.000%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0.000%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0.000%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0.000%
Government	101	101	100.000%	$31,351,960	31,351,960	100.000%	0	0	0.000%
Education	0	0	0.000%	0	0	0.000%	0	0	0.000%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0.000%
Total	2,742	2,742	100.000%	672,424,410	672,424,410	100.000%	13,930	13,930	100%

***Note:** *This table represents all hazards that could affect the City of College Park. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of East Point
Hazard: Flood

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	10,814	10,814	100.000%	$1,546,355,850	1,546,355,850	100.000%	38,358	38,358	100%
Commercial	368	368	100.000%	$180,869,760	180,869,760	100.000%	0	0	0.000%
Industrial	143	143	100.000%	$347,328,370	347,328,370	100.000%	0	0	0.000%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0.000%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0.000%
Government	0	0	0.000%	0	0	0.000%	0	0	0.000%
Education	0	0	0.000%	0	0	0.000%	0	0	0.000%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0.000%
Total	11,325	11,325	100.000%	2,074,553,980	2,074,553,980	100.000%	38,358	38,358	100%

***Note:** *This table represents all hazards that could affect the City of East Point. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Fairburn
Hazard: Flood

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	4,879	4,879	100.000%	$1,022,918,930	1,022,918,930	100.000%	16,483	16,483	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	0	0	0.000%	0	0	0.000%	0	0	0%
Education	0	0	0.000%	0	0	0.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	4,879	4,879	100.000%	1,022,918,930	1,022,918,930	100.000%	16,483	16,483	100%

***Note:** This table represents all hazards that could affect the City of Fairburn. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	Y	
2. Do you know whether your critical facilities will be operational after a hazard event?		N
3. Is there enough data to determine which assets are subject to the greatest potential damages?	Y	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	Y	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	Y	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	Y	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		N

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Hapeville
Hazard: Flood

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	2,003	2,003	100.000%	$288,932,710	288,932,710	100.000%	6,553	6,553	100%
Commercial	157	157	100.000%	$77,460,630	77,460,630	100.000%	0	0	0.000%
Industrial	23	23	100.000%	$20,890,630	20,890,630	100.000%	0	0	0.000%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0.000%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0.000%
Government	0	0	0.000%	0	0	0.000%	0	0	0.000%
Education	0	0	0.000%	0	0	0.000%	0	0	0.000%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0.000%
Total	2,183	2,183	100.000%	387,283,970	387,283,970	100.000%	6,553	6,553	100%

***Note:** *This table represents all hazards that could affect the City of Hapeville. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	Y	
2. Do you know whether your critical facilities will be operational after a hazard event?		N
3. Is there enough data to determine which assets are subject to the greatest potential damages?	Y	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	Y	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	Y	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	Y	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		N

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Johns Creek
Hazard: Flood

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	25,126	25,126	100.000%	$9,092,659,720	9,092,659,720	100.000%	82,453	82,453	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	1	1	100.000%	$31,660	31,660	100.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	0	0	0.000%	0	0	0.000%	0	0	0%
Education	0	0	0.000%	0	0	0.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	25,127	25,127	100.000%	$9,092,691,380.00	$9,092,691,380.00	100.000%	82,453	82,453	100%

***Note:** *This table represents all hazards that could affect the City of Johns Creek. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Milton
Hazard: Flood

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	12,019	12,019	100.000%	$5,245,532,210.00	$5,245,532,210.00	100.000%	41,296	41,296	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0.000%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0.000%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0.000%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0.000%
Government	0	0	0.000%	0	0	0.000%	0	0	0.000%
Education	0	0	0.000%	0	0	0.000%	0	0	0.000%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0.000%
Total	12,019	12,019	100.000%	$5,245,532,210.00	$5,245,532,210.00	100.000%	41,296	41,296	100%

***Note:** *This table represents all hazards that could affect the City of Milton. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Mountain Park
Hazard: Flood

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	287	287	100.000%	$66,080,850.00	$66,080,850.00	100.000%	583	583	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0.000%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0.000%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0.000%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0.000%
Government	0	0	0.000%	0	0	0.000%	0	0	0.000%
Education	0	0	0.000%	0	0	0.000%	0	0	0.000%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0.000%
Total	287	287	100.000%	$66,080,850.00	$66,080,850.00	100.000%	583	583	100%

***Note:** *This table represents all hazards that could affect the City of Mountain Park. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Palmetto
Hazard: All hazards (except Flood)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	1,490	1,490	100.000%	$273,187,400.00	$273,187,400.00	100.000%	5,071	5,071	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0.000%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0.000%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0.000%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0.000%
Government	0	0	0.000%	0	0	0.000%	0	0	0.000%
Education	0	0	0.000%	0	0	0.000%	0	0	0.000%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0.000%
Total	1,490	1,490	100.000%	$273,187,400.00	$273,187,400.00	100.000%	5,071	5,071	100%

***Note:** *This table represents all hazards that could affect the City of Palmetto. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Roswell
Hazard: Flood

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	27,842	27,842	100.000%	$9,515,452,330.00	$9,515,452,330.00	100.000%	92,833	92,833	100%
Commercial	0	0	0.000%	$690,281,740.00	$690,281,740.00	100.000%	0	0	0%
Industrial	1,535	1,535	100.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	40	40	100.000%	$25,310,890.00	$25,310,890.00	100.000%	0	0	0%
Government	23	23	100.000%	$11,613,490.00	$25,310,890.00	100.000%	0	0	0%
Education	0	0	0.000%	0	0	0.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	29,440	29,440	100.000%	$10,242,658,450.00	$10,256,355,850.00	100.134%	92,833	92,833	100%

***Note:** *This table represents all hazards that could affect the City of Sandy Springs. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Sandy Springs
Hazard: Flood

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	27,094	27,094	100.000%	$11,777,000,090.00	$11,777,000,090.00	100.000%	108,080	108,080	100%
Commercial	806	806	100.000%	$893,180,740.00	$893,180,740.00	100.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	53	53	100.000%	$24,134,620.00	$24,134,620.00	100.000%	0	0	0%
Education	0	0	0.000%	0	0	0.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	27,953	27,953	100.000%	$12,694,315,450.00	$12,694,315,450.00	100.000%	108,080	108,080	100%

***Note:** This table represents all hazards that could affect the City of Sandy Springs. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of South Fulton
Hazard: Flood

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	37,045	37,045	100.000%	$5,851,946,670.00	$5,851,946,670.00	100.000%	107,436	107,436	100%
Commercial	306	306	100.000%	$201,922,650.00	$201,922,650.00	100.000%	0	0	0%
Industrial	0	0	0.000%	$891,970.00	$891,970.00	100.000%	0	0	0%
Agricultural	7	7	100.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	0	0	0.000%	0	0	0.000%	0	0	0%
Education	0	0	0.000%	0	0	0.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	37,358	37,358	100.000%	$6,054,761,290.00	$6,054,761,290.00	100.000%	107,436	107,436	100%

***Note:** *This table represents all hazards that could affect the City of South Fulton. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Union City
Hazard: Flood

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	6,723	6,723	100.000%	$1,211,792,910.00	$1,211,792,910.00	100.000%	26,830	26,830	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	0	0	0.000%	0	0	0.000%	0	0	0%
Education	0	0	0.000%	0	0	0.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	6,723	6,723	100.000%	$1,211,792,910.00	$1,211,792,910.00	100.000%	26,830	26,830	100%

***Note:** *This table represents all hazards that could affect the City of Union City. The data was taken from Fulton County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the Fulton County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 Fulton County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

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