

**Jenkins County, Georgia**  
**Multi-Hazard Pre-Disaster Mitigation Plan**  
**Original Plan Approval: 05/20/2009**  
**Update Plan Approval:**  
**Second Update Approval:**



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## CHAPTER I. INTRODUCTION TO THE PLANNING PROCESS

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

**Table 1.1**

Chapter I Section	Updates to Section
I. Purpose and need of the plan, authority & statement of problem	Updated text of this section
II. Local methodology, a brief description of plan update process, Participants in update process	Updated the participants, planning process and how data was collected
III. Description of how each section of the original plan was reviewed and analyzed and whether it was revised	All sections of the original plan were analyzed and revised.
IV. Organization of the plan	The plan is organized by GEMA local planning Local Hazard Mitigation Plan Update Template and includes a timeline.
V. Local Hazard, Risk, and Vulnerability (HRV) summary, local mitigation goals and objectives	Added new information to summary, new purpose for plan.
VI. Multi-jurisdictional special considerations (HRV, goals, special needs)	Reviewed and updated information regarding multijurisdictional concerns
VII. Adoption, implementation, monitoring and evaluation	This was evaluated and remains the same. Additional text was added to clearly delineate the task of implementation and monitoring.
VIII. Community Data (demographics, census, commerce, history, etc.)	Updated demographic and added additional information by jurisdiction.

### SECTION I. PURPOSE AND NEED OF THE PLAN, AUTHORITY AND STATEMENT OF PROBLEM

The Jenkins County 2025 Update is the review and improvement to our Multi-Hazard Pre-Disaster Mitigation Plan approved on May 20, 2009 and reapproved on April 29, 2019. The update is written to comply with Section 409 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act Title 44 CFR as amended by Section 102 of the Disaster Mitigation Act of 2000. The act gives state and local governments the framework to evaluate and mitigate all hazards as a condition of receiving federal disaster funds. The Act is administered by the Georgia Emergency Management Agency (GEMA) and the Federal Emergency Management Agency (FEMA). The act provides federal assistance to state and local emergency management and other disaster response organizations in an effort to reduce damage from disasters.

The update has involved multiple community partners including elected officials, city and county personnel, fire, emergency management, law enforcement, and public works. The update covers Jenkins County to include the city of Millen. The goal of this plan is to identify the natural disasters

that threaten the lives and properties of our community and develop strategies to lessen their impact. The scope of the update includes both short- and long-term mitigation strategies, implementation policies, and possible funding sources. It identifies mitigation strategies implemented since the 2019 update. The plan also contains the following information on:

- The vision of mitigation in our community;
- The profile of Jenkins County, its geography, history, physical features and other community indicators;
- The planning process and the involvement of all municipal, state and federal governments, the public, industry and other community players;
- Jenkins County's past and predicted exposure to natural hazards and the potential risks that include the impacts on critical infrastructure with anticipated losses was documented;
- An overview of Jenkins County's capabilities to implement hazard mitigation goals and objectives, and policies that will effectively mitigate risks to our community;
- Procedures for maintaining an effective, long-range hazard mitigation plan and strategy to implement;
- An assessment of Jenkins County's current policies, goals and regulations that pertain to hazard mitigation;
- Documentation of the planning process;
- Updated hazard events that occurred since 2019;
- Updated critical facilities added since 2019;
- Documented current mitigation strategies implemented since 2019; and
- Examined and updated mitigation strategy goals, objectives and action steps.

The update is the product of the combined efforts of Jenkins County and Millen. Realizing that identifying the community's risks and working collectively toward the prevention of disasters is in the county's best interest, the Jenkins County Emergency Management Agency (EMA) took the lead role in the update. Under the agency's leadership, there has been an endorsement and a commitment by Jenkins County and Millen.

Continued mitigation planning is imperative to lessen the impacts of disasters in Jenkins County and Millen. This plan serves as an excellent method to organize and document current and ongoing mitigation strategies; however, the implementation of the plan and its components is vital to achieving a community that is resistant to the impact of a disaster. The objective is implementation which will result in a reduction of the loss of life and property, while allowing the county to prosper with minimal disruption of services to the community.

## **SECTION II. LOCAL METHODOLOGY, PLAN UPDATE PROCESS AND PARTICIPANTS**

The Jenkins County Board of Commissioners (BOC) contracted with the Central Savannah River Area Regional Commission (RC) to assist in the update. The RC has assisted twelve counties in the completion and update of their Pre-Disaster Mitigation Plans. The RC is currently assisting seven counties with their third update. The RC was tasked to review the current plan and identify new information to incorporate into the update. The RC in conjunction with the EMA Director, supervised the project, organized the data, set meeting dates, documented in-kind services, and worked with GEMA to complete the update.

EMA Director Grady Saxon assembled the Hazard Mitigation Planning Committee. Table 1.2 identifies the 2025 members.

**Table 1.2**

Name	Agency/Title	Jurisdiction
Jeff Brantley	City Manager	City of Millen
Clay Boulineau	Public Works Director	City of Millen
Dwayne Herrington	Director of Public Safety	City of Millen
John Thomas	Public Works Superintendent	City of Millen
Grady Saxon	County Administrator/Interim EMA Director	Jenkins County
Mandy Underwood	JC Development Authority Director	Jenkins County
Richard Lane	GFC Ranger	Jenkins County
Sarai Register	Sheriff's Office Administrative Secretary	Jenkins County
Jason Oglesby	Public Works Director	Jenkins County
Robert Oglesby	Sheriff	Jenkins County
Lee Wilson	Senior Citizens Center Director	Jenkins County
Kane Hadden	Core Civic Safety Manager	Jenkins County
Talamadge Fries	Board of Education Transportation Director	Jenkins County
John P. Hearn	JC School System Superintendent	Jenkins County
Clarissa Young	Health Dept. Nurse Manager	Jenkins County
Antoine Poythress	Medical Center CEO	Jenkins County
Henry Young	EMS Director	Jenkins County
Joanna Greenway	DFCS Director	Jenkins County
Wendell Clark	Recreation Director	Jenkins County
Horace Weathersby III	Commission Chairman	Jenkins County
Jeff Brantley	City Manager	City of Millen

The 2025 committee was responsible for the organization, data collection and completion of the plan. It was the responsibility of the committee to include all pertinent departments within their respective governments and to request information as needed. The following agencies/departments/organizations provided specific information and support for the original plan and provided any new information for the update:

- Jenkins County School District was responsible for providing structural replacement and content values for all schools as well as square footage and occupancy limits.
- Millen Police Department provided staff support and were responsible for providing structural replacement and content values for all critical facilities as well as square footage and occupancy limits.
- Jenkins County Sheriff's Office provided staff support to the planning effort.
- Jenkins County Health Department, Optim Medical Center, and Jenkins County DFCS, identified vulnerable populations. They also provided replacement and content value estimates for their properties.
- Millen Fire Department provided staff support to the planning effort and assisted with identifying occupancy limits for some of the critical structures and replacement and



content value estimates.

- Jenkins County Road Department provided information on past effects on roads during hazard events.
- Millen City officials provided information relative to their jurisdiction and provided replacement and content value estimates for their critical facilities as well as square footage and daily occupancy.
- Georgia Forestry Commission provided data on wildfire events and assisted with the formulation of mitigation measures.
- Jenkins County Chamber of Commerce assisted in identifying major businesses.
- Jenkins County BOC Administrator provided information about county government buildings including respective replacement and content value estimates along with square footages.
- Jenkins County Tax Assessor's Office provided most of the aggregate values for the critical structures as well as all assets located in the county and all jurisdictions. The valuations had to be converted to full values since they are figured at 40 % of actual value. This information, combined with demographic data, is compiled on GEMA Worksheet #3a in Appendix A for all jurisdictions.
- The RC's Geographical Information System (GIS) Department produced several of the maps. Maps are located in Appendix A and C.

Data was collected from numerous sources, including the National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information (NCEI), Spatial Hazard Events and Losses Database for the United States (SHELDUSTM), National Weather Service, US Geological Survey (USGS), Southeast Regional Climate Center (SERCC), US Census Bureau, Georgia Department of Natural Resources (DNR), Georgia Forestry Commission (GFC), Georgia Tornado History Project Database, Georgia Department of Community Affairs (DCA), US Department of Agriculture (USDA), local and regional newspaper articles, as well as personal interviews. Table 1.3 provides a list of existing planning documents used during the update.

**Table 1.3**

Record of Review		
Existing planning mechanisms	Reviewed (Yes/No)	Method of use in Hazard Mitigation Plan
Jenkins County Joint 2018-2028 Comprehensive Plan	Yes	Development trends, capability assessment, mitigation strategies
Local Emergency Operations Plan	Yes	Identifying hazards; Assessing vulnerabilities; Capability assessment
Georgia Emergency Operations Plan	Yes	Identifying hazards; Assessing vulnerabilities;
Flood Damage Protection Ordinance	Yes	Mitigation strategies, capability assessment
Building and Zoning Codes and Ordinances	Yes	Development trends; Future growth, capability assessment, mitigation strategies
Mutual Aid Agreements	Yes	Assessing vulnerabilities, determine assets added to disaster relief and response.
State Hazard Mitigation Plan	Yes	Risk assessment, review of recommended strategies

Record of Review		
Existing planning mechanisms	Reviewed (Yes/No)	Method of use in Hazard Mitigation Plan
Land Use Maps	Yes	Assessing vulnerabilities; Development trends; Future growth
Critical Facilities Maps	Yes	Locations
Community Wildfire Protection Plan	Yes	Mitigation strategies, risk assessment
Flood Insurance Study	Yes	Review for historical Data and Information
CSRA Regional Plan 2035	Yes	Development trends; Future growth, regional concerns and data

The County does not have a specific Flood Mitigation Assistance Plan nor a Flood Insurance Plan. The above list of plans, codes, ordinances, and studies were reviewed to determine the ability of the County and City to implement a comprehensive mitigation strategy and to identify potential opportunities for establishing or enhancing specific mitigation policies, programs, or projects. This review helped to identify new action steps and shifts in prioritization since the last update as well as determine recent accomplishments, activities, and trends.

The committee held one meeting over a 19 month period to guide the development of the plan. During the writing of this plan, committee members were also involved review the plan, updating the critical facilities, and provided information related to Hurricane Debby and Hurricane Helene. Individual jurisdictions and/or agencies were contacted, as information was needed. The committee was responsible for updating the goals, objectives, and action steps identified in the plan. The committee researched previous hazard information in the areas of flooding, wildfires, tornados, winter storms, hurricanes, high winds, dam failure, lightning, hail, and drought. Other hazards, such as Avalanche, Coastal Erosion, Coastal Storm, Earthquake, Expansive Soils, Extreme Heat, Land Slide, SLOSH (Sea, Lake and Overland Surges from Hurricanes), Tsunami, and Volcano, were examined and determined not to be of sufficient significance in the community to warrant their inclusion in the present Hazard Mitigation Planning effort, based on past history and available data. Committee members collected critical facilities information based on their area of expertise or jurisdiction. The RC was responsible for assessing vulnerability and estimating potential losses from the information collected. Potential losses include people, structures/properties, infrastructure, and other important community assets.

Table 1.4 provides the dates and synopsis of committee meetings. The meeting was open to the public and meeting notices were posted at all governmental offices. Flyers were also posted in areas serving vulnerable populations (ie: Jenkins County Senior Center. The one meeting was advertised in *The Millen News*, the County's legal organ. This is the most efficient means to disseminate information to residents and organizations located in the county. To meet the requirement to allow neighboring communities, local and regional agencies, businesses, academia and other private and non-profit interests to be involved in the planning process, invitations were extended by email. Invitations were extended to the following counties: Burke, Columbia, Glascock, Hancock, Jefferson, Lincoln, McDuffie, Richmond, Taliaferro, Washington, Warren, and Wilkes including all municipalities located within the counties. It is noted that no public comments or feedback was provided by the public. Copies of correspondence, emails and advertisements are in Appendix E.

**Table 1.4**

<b>Date</b>	<b>Purpose of Meeting</b>
July 3, 2024	Advertisement ran in <i>The Millen News</i> for kick-off public meeting on July 10, 2024.
July 10, 2024	Kickoff meeting Michaela Scheisser, from GEMA provided a presentation about the purpose and need of the plan along with changes to the process since the 2019 plan update.
August 12, 2024	Chapter 1 of the Plan was emailed to all committee members to review and recommend any changes.
September 17, 2024	Email sent to Jenkins County and the City of Millen officials to update the critical facilities list.
November 12, 2024	Chapter 2 of the Plan was sent to all committee members to review and recommend any changes.
November 18, 2024	Email sent to all committee members for the final overview of plan to ensure all jurisdictional information was correct and review final mitigation strategies.
	Advertisement ran in <i>The Millen News</i> Advertising for public review and the final meeting <b>date will be added after FEMA approval</b>
	After GEMA approved the plan the public was invited to review the final plan prior to adoption from <b>date will be entered</b> time frame. The meeting was held after the aforementioned review period to ensure that the public was afforded the opportunity provide input.

### SECTION III. ORIGINAL PLAN REVIEW AND REVISION

The Federal Disaster Mitigation Act of 2000 requires an update to the Pre-Disaster Mitigation Plan every five years. The EMA Director was responsible for meeting this requirement. The committee, with the assistance of the RC, was involved in the planning process to ensure thorough data collection. All members of the committee were responsible for the evaluation of 2025 plan. During the review process, the committee noted mitigation accomplishments, updated and prioritized mitigation projects, added additional hazard information, developed new goals and objectives, solicited input from the public and made any needed or required revisions. The evaluation included analyzing any changes in the needs and/or capabilities of Jenkins County and Millen.

### SECTION IV. ORGANIZATION OF THE PLAN

The estimated time to complete the plan update was approximately 19 months. Plan completion is identified by adoption of resolution by all jurisdictions. The update contains a Hazard, Risk, and Vulnerability (HRV) Assessment describing the natural hazards typically occurring within the county, as well as a review of all mitigation goals, objectives, and related courses of action. In addition, plan implementation and maintenance were reviewed, which includes methods to provide opportunities for public involvement. The hazards included in this plan are considered



to have the highest probability of occurrence, vulnerability, potential loss/damages, and highest frequency of occurrence. The plan also identifies and prioritizes hazard mitigation opportunities.

## **SECTION V. LOCAL HAZARD RISK AND VULNERABILITY, SUMMARY LOCAL MITIGATION PLANNING GOALS OBJECTIVES**

The committee established a set of goals and objectives to ensure the effectiveness of this plan. These goals and objectives established the paradigm for the planning process. These goals and objectives are as follows:

- To actively involve and gain support from the City of Millen and Jenkins County for the reduction of disasters in our community.
- Prioritize identified mitigation projects.
- Seek and implement any grant funding for the reduction of disasters in Jenkins County and Millen.
- Monitor, evaluate, and update the progress of the plan as needed.
- To form partnerships among local, state, and federal agencies to make Jenkins County more resistant to the effects of disasters.
- Strengthen our communities against the impacts of disasters through the development of new mitigation strategies and strict enforcement of current regulations that have proven effective.
- Reduce and where possible eliminate repetitive damage, loss of life and property from disasters.
- Bring greater awareness throughout the community about potential hazards and the need for community preparedness.
- To further enhance common mitigation projects and goals between Jenkins County and Millen.

An HRV assessment was accomplished by reviewing historical data on the location of specific hazards, the value of existing structures/properties in hazard locations, and analyzing the risk to life, property, and the environment that could potentially result from future hazard events. The committee accomplished the HRV goals and objectives by completing the following steps:

*Inventory of Critical Facilities:* Critical facilities are crucial for providing essential services necessary for preserving the safety and quality of life of its residents. In addition, these facilities fulfill important public safety, emergency response, and/or disaster recovery functions. All critical facilities were added to the Georgia Mitigation Information System (GMIS). Critical facilities for Jenkins County and Millen were identified, updated, mapped, and illustrated in Appendix A.

*Hazard Identification:* Maps and historical data sources were studied and reviewed to identify the geographic extent, intensity, and probability of occurrence for various hazard events. The committee identified six major hazards that could affect Jenkins County: flooding, dam failure, drought, wildfire, tornados, tropical storms, severe weather (thunderstorms and lightning), and winter storms. The update committee reviewed current hazard data and added hail to the already identified hazard. Appendix A provides an updated comprehensive table for each hazard event.

*Profiling Hazard Events:* The committee analyzed the causes and characteristics of each hazard, and its effect on Jenkins County in the past to determine what segment of the population and

infrastructure has historically been vulnerable to each specific hazard. A discussion of each hazard's updated profile is in Chapter 2.

*Vulnerability Assessment:* This step was accomplished by comparing each previously identified hazard with the inventory of affected critical facilities and population exposed to each hazard. An updated Worksheet #3a is provided in Appendix A.

*Estimating Losses:* Using the best available data, tax digest data, parcel maps and GMIS critical facilities reports and maps allowed the committee to estimate damages and financial losses that might occur in a geographic area. Describing vulnerability in terms of dollar losses provides the county with a common framework in which to measure the effects of hazards on critical facilities. All information in this section has been updated (*Appendix A and Appendix D*).

*Mitigation Goals and Objectives:* After ensuring that all interested persons had been given ample opportunity to contribute to strategy development, mitigation action steps were next given priority status by committee members. The FEMA STAPLEE (Social, Technical, Administrative, Political, Legal, Economic, and Environmental) criteria worksheet was used to evaluate each mitigation action step to identify strategies best for Jenkins County. Steps were ranked as high priority, medium priority, or low priority. Past occurrences of disasters and historical trend data aided committee members in assigning priorities. A copy of the STAPLEE is located in Appendix D.

## SECTION VI. MULTI-JURISDICTIONAL SPECIAL CONSIDERATIONS

Jenkins County and Millen provided active participants in the planning process and have identified mitigation goals, objectives and action items specific to their jurisdiction. The governing bodies for the county and all municipalities have formally adopted the Jenkins County Multi-Hazard Pre-Disaster Mitigation Plan.

The municipalities were notified in September 2017 of the requirement concerning the update. Representatives from the County and Millen have worked collectively over the past months to gather data that included researching old records, newspaper articles, databases, historical data, past and present flood plain data, and technical information for the plan. The collected data was forwarded to the RC for review and plan development. The committee held subsequent meetings in an effort to ensure that all information was correct and that all agencies' and organizations' input was included.

The EMA Director led activities for mitigation planning countywide. The committee's goal is to work in partnership with all jurisdictions toward a common mitigation strategy that significantly reduces the vulnerability of natural disasters. Most natural threats overlap jurisdictions and are all susceptible to their effects. Jenkins County and Millen share the same passion and desire for protecting and reducing risk through mitigation projects. Specific risks and areas were identified through working relationships and data collection.

## SECTION VII. ADOPTION, IMPLEMENTATION AND MONITORING AND EVALUATION

### Adoption Date

Jurisdiction	Adoption Date
Jenkins County	
City of Millen	

The plan was submitted to GEMA for review and then to FEMA for approval. Their respective governing bodies formally adopted the update after GEMA and FEMA approval. The plan is intended to be implemented into policy and to enhance state and federal recommendations for the mitigation of natural hazards in the following ways:

- Substantially reduce the risk of life, injuries, and hardship from the destruction of natural disasters.
- Create awareness to the public about the need for individual preparedness and about building safer, disaster-resistant communities.
- Develop strategies for long-term community sustainability during community disasters.
- Develop governmental and business continuity plans that will continue essential private sector and governmental activities during disasters.

FEMA publishes many guidance documents for local governments for mitigating natural disasters. The plan fully recognizes, adopts, incorporates, and endorses the following principle:

- Develop a strategic mitigation plan for Jenkins County.
- Enforce current building codes.
- Develop incentives to promote mitigation.
- Incorporate mitigation of natural hazards into land use plans.
- Promote awareness of mitigation opportunities throughout the Jenkins County community on a continual basis.
- Identify potential funding sources for mitigation projects.

The private sector is often an overlooked segment of the community during disasters. This sector of a community must be included in mitigation efforts that are consistent with state and federal recommendations as such:

- Develop mitigation incentives with insurance agencies and lending institutions.
- Encourage the creation of a business continuity plan for the continuance of commerce during disasters.
- Partner with businesses in effort to communicate with customers about the community hazards and possible solutions.

Individual citizens must be made aware of the hazards they face. Additionally, they must be educated in how to protect themselves from natural hazards. They must be shown mitigation is an important part of reducing loss of life and property in their community. Their support is critical to the success of any mitigation effort. The Jenkins County Plan supports the following FEMA recommendations regarding individual citizens:



- Become educated on the hazards that your community and you may face.
- Become part of the process by supporting and encouraging mitigation programs that reduce vulnerability to disasters.
- That individual responsibility for safeguarding you and your family prior to a disaster is essential.

Chapter IV. Plan Integration and Maintenance details the formal process that will ensure that the plan remains an active and relevant document. The plan maintenance process includes monitoring and evaluating the plan annually and producing a plan revision every five year. Additionally, Jenkins County will develop steps to ensure public participation throughout the plan maintenance process. Finally, this section describes how Jenkins County will incorporate the mitigation strategies identified in this plan into other relevant planning documents such as the Jenkins County Joint Comprehensive Plan, Short-Term Work program (STWP) and Local Emergency Operations Plan (LEOP).

## SECTION VIII. COMMUNITY DATA

### Political Boundaries - Jenkins County



*Jenkins County*



*GA Department of Community Affairs  
Region 7*



*Georgia*

**History:** Jenkins County was created in 1905. The county was named for Governor Charles J. Jenkins. The Jones House, near Millen, was built in 1762 as a stage coach stop. A century later, General Sherman's troops looted and set it afire on their march to the sea. Learning that the mistress of the house refused to leave her sickbed, the same troops extinguished the flames. The Big Buckhead Church, constructed in 1830, is one of the oldest structures in Georgia. The City of Millen was originally called Seventy-Nine or Old 79 because of its distance from Savannah.

**Government:** Jenkins County operates under a commission-based system of government with five commissioners elected to four-year terms. Other county officials are the County Attorney, Clerk of Superior Court, Probate Judge, Coroner, Magistrate Judge, Sheriff, and Tax Commissioner.

The only municipality is the City of Millen, which operates a Mayor and City Council-based system of government with five elected council members. Other officials charged with presiding over activities are the City Manager, Clerk, Attorney, Finance Officer, and Public Works Director.

**Demographics:** Presently, Jenkins County has a population of 8,693 persons.

**Table 1.6**

Category	Jenkins County	Millen
Population	8,693	2,966
Number of Households	3,290	1,265
Average Household Size	2.59	2.32
Race – White	61.1%	56.1%
Race – Black	31.5%	34.7%
Race - Hispanic	4.0%	9.2%
Race – Other	2.6%	1.3%
Median HH Income	\$29,061	\$22,551

Source: US Census Bureau and 2022 American Community Survey

**Economy:** In the year 2023 the average weekly wage for employment sectors was \$799, compared to the statewide average of \$1,47. The October 2023 unemployment rate was 5.3%. In 2023, the labor force in Jenkins County totaled 2,751. Of the total workforce, 55.8% were employed in the service-providing sector, followed by 17.1% in the goods-producing sector and 26.5% in the government sector.

The North American Industry Classification System (NAICS) is the standard used by Federal statistical agencies in classifying business establishments to collect, analyze, and publish statistical data related to the U.S. business economy. Table 1.7 provides a list of jobs, number of establishments, and jobs along with average weekly wages per job for 2022 in Jenkins County.

**Table 1.7**

Annual Industry Distribution of Jobs and Average Wage in 2022 (NAICS)	Establishments	Jobs	Annual Average Wage Per Job
<b>Total Covered Employment and Wages</b>	<b>126</b>	<b>2,751</b>	<b>\$799</b>
<b>Total Private Sector</b>	<b>111</b>	<b>2,046</b>	<b>\$829</b>
<b>Total Government</b>	<b>15</b>	<b>425</b>	<b>\$829</b>
Agriculture, forestry, fishing, hunting	9	18	1,090
Mining, Quarrying, and Oil and Gas Extraction	0	0	\$0
Construction	11	308	*
Manufacturing	5	99	\$924
Wholesale trade	3	21	\$1,052
Retail trade	21	204	\$505
Transportation, warehousing	5	129	\$445
Utilities	1	*	*
Information	0	0	\$0
Finance and Insurance	7	23	\$800
Real Estate, rental, leasing	1	*	*
Professional, Scientific, Technical services	4	7	\$1,026

Annual Industry Distribution of Jobs and Average Wage in 2022 (NAICS)	Establishments	Jobs	Annual Average Wage Per Job
Mgmt. of companies, enterprises	0	0	\$0
Administrative and support and waste management and remediation services	9	*	*
Educational services	0	12	\$0
Health care, social assistance	9	275	\$895
Arts, entertainment, recreation	0	11	\$0
Accommodation and food services	13	169	\$301
Other services, except public administration	5	210	\$583
Unclassified-Industry not assigned	5	4	\$684

Source: Georgia Department of Labor, Area Labor Profile Oct. 2023 \* Industry group does not meet criteria for disclosure

**Climate:** According to the National Weather Service, Jenkins County experiences all four seasons. Summers typically consist of long spells of warm and humid weather with afternoon high temperatures in the lower 90's and readings of 90 degrees or higher can be expected on 70 to 80 days. Overnight lows usually range from the upper 60's to lower 70's. Weather during winter months is more variable with stretches of mild weather alternating with cold spells. Winter high temperatures average in the mid 50's to lower 60's with lows averaging in the mid 30's. Temperatures of 32 degrees or lower can be expected on 40 to 50 days. Spring and autumn are characterized by much variability from day to day and from year to year. The average date of first freeze is in mid-November and the average date of the last freeze is in mid-to-late March.

Jenkins County averages 45 inches of rain per year. The number of days with any measurable precipitation is 91. On average, there are 218 sunny days per year in the county. The average July high is around 93 degrees and the average January low is around 37 degrees.

**Physical Features:** Jenkins County encompasses an area of roughly 352.7 square miles or 225,782 acres. Millen is the county seat and is located about 50 miles south of Augusta. Jenkins County is located between the mountains of north Georgia and seashores of coastal Georgia. Jenkins County is mostly in the Southern Coastal Plain Major Land Resource Area. A small area in the northwestern part of the county is in the Carolina and Georgia Sand Hills Major Land Resource Area.

The County is located in the Vidalia Upland Physiographic District, a moderately dissected area with a well-developed dendritic stream pattern on gravelly and clayey sands. Floodplains are narrow except along the principal rivers which have a wide expanse of swamp bordering both sides of the channel. Relief varies from 100 to 150 feet. Elevations in the district range from 500 feet in the northwest to 100 feet in the southeast indicating the regional dip.

Jenkins County is within the Southern Coastal Plain major land resource area, characterized by gently sloping, well-drained sandy loam to sandy soils over friable sandy clay loam to clay subsoils that are sticky when wet. When fertilized and limed, soils produce high yields of corn, peanuts,



tobacco, small grains, and soybeans. This province provides a fair to good suitability for residential and industrial foundations. A soil map is in Appendix A.

## Transportation

*Vehicle Traffic* *Vehicle Traffic*: U.S. 25 passes through Jenkins County from north to south. The Savannah River Parkway, a new four-lane connector between Augusta and Interstate 16 in Statesboro and Savannah follows U.S. 25 in its north-south route.

**Table 1.8**

Mileage by Route and Road System Report 445 for 2019			
	Total Road Mileage	Lane Mileage	Vehicle Miles Traveled (VMT)
State Route	84.364	229	252,684
County Road	417.220	834	122,693
City Street	29.027	58	10,472
<b>Total</b>	<b>530.611</b>	<b>1,122</b>	<b>385,849</b>

Source: Georgia Department of Transportation, Office of Transportation Data, "445 Series Reports 2019."

*Public Transportation*: Public transportation is made available to County residents through the Section 18 Program and is not a widespread system found in urban areas. This federally funded program apportions transit assistance funds to rural areas and places having fewer than 50,000 residents. It is administered by the County and the Georgia Department of Transportation (GDOT). Public buses are also used to assist the elderly, providing transportation to senior citizens centers for congregate meals and to deliver meals.

*Rail Traffic*: Norfolk Southern, a Class I railroad, operates major freight corridors in and through Georgia. A major corridor is a north-south link along the eastern border of the state from Augusta through Savannah to Jacksonville, Florida (I-26/I-95). Approximately 25 miles of the rail line runs through Jenkins County. No state improvement projects are planned.

*Air Service*: The Millen-Jenkins County airport, located on 70 acres just five miles from Millen and is owned and operated by the county. The airport accommodates general aviation related activities, including recreational flying and agricultural spraying. The airport has one runway, runway 17/35, that is 5,000 feet-long and 75-feet wide and equipped with medium-intensity runway lighting (MIRL), precision path approach path indicators (PAPI), rotating beacon, wind cone, and segment circle. Current landside facilities include a 300 square-foot administration building/terminal and 9 apron parking spaces. Commercial air travel is available at Augusta Regional Airport at Bush Field.

## Utilities

*Electricity*: Residential electrical service is provided by two companies: Georgia Power and Planters EMC. As part of Georgia's modern integrated electrical transmission system, Jenkins County has excellent ability to supply industrial demands. Compared to 47 % for the U.S., coal accounts for 84 % of fuel used by the state's power generating plants. This assures long-term continuity. If demand exceeds 900kw, any supplier can step in and offer service.

*Natural gas:* Natural Gas Services is provided by the City of Millen.

*Water:* Jenkins County residents in the unincorporated areas are served by private wells with the exception of eight residents that fall within the Millen public water boundary. The Millen systems provides water to its residents by four deep wells with a maximum pumping capacity of 4.608 million gallons per day (GPD). The current daily demand on the water system is 544,000 GPD. There are currently 1,896 services, 1,562 active meters, and 290 fire hydrants in the city. The City maintains three storage tanks capable of storing 900,000 gallons. Water is treated at the well with chlorine, fluoride, and a preventative corrosion agent.

*Sewer:* There is no public sewer system serving the unincorporated county. County residential sewer treatment is by private septic tank systems. Millen provides public sewerage and wastewater treatment to customers within the city limits. The daily demand is 300,000 GPD with a capacity of 950,000 GPD. There are 136 customers in the city who live in low lying areas and have septic tanks. There is one oxidation pond with three cells located on 15-acres along U. S. Hwy. 25.

*Solid Waste:* Jenkins County provides green box drop-off locations for residential solid waste. There are 75 green box locations throughout the county. The county hauls its municipal solid waste to a solid waste facility located in Ridgeland, South Carolina. Utilizing city employees, Millen provides curbside pickup of municipal solid waste for its residents and green box dumpster locations for commercial businesses. Millen offers 65 green boxes at 35 sites in the city. Solid waste from Jenkins County and the city is taken to the county transfer station and then it is transported to the Hickory Hill Landfill in Ridgeland, South Carolina. The County owns and operates an MSW landfill, which is currently in closure, and a COD landfill as well as an inert landfill.

*Communications:* Jenkins County's cable services is provided by three companies provider is Comcast Communication, DirecTV, and Dish Network. AT&T and Comcast provide internet services in Jenkins County. Local print media consists of *The Millen News* (which serves as the legal organ of the county) and *The Augusta Chronicle*. Jenkins County is served by 13 AM radio stations and 16 FM radio stations. Seven television stations in metro Augusta broadcast in Jenkins County. They are WJBF, WAGT, WRDW, WAAU, WBPI, WCES, and WFXG.

## **Fire and Emergency Services**

*Response:* Enhanced 911 Service (E-911) is available 24 hours a day throughout the county and is operated and coordinated by the Jenkins County Sheriff's Office.

*Fire and Rescue:* Jenkins County is protected by the Millen-Jenkins County Fire Department with a full time station in Millen along with six volunteer departments located throughout the county. The Georgia Forestry Commission maintains a county protection unit located three miles south of Millen on Hwy 17 to respond to wildfires throughout the county. The city of Millen is serviced by a pressurized water system with 290 hydrants available.

The Millen Fire Department has two 1,000 gallon pumper trucks and 1 ladder truck with nine paid personnel and 26 volunteer personnel. The City houses the County fire trucks and city personnel

respond to the County Fires. The County trucks consist of one 1,200 gallon pumper, one 1,000 gallon pumper and one 3,000 gallon tanker. The department has one rescue truck.

The South Jenkins Volunteer Fire Department's Station 5 has 1 pumper truck and one brush truck and operates with approximately 18 volunteers. The South Jenkins County Volunteer Fire Department District Six, has two pumpers, one tanker, and one brush truck. There are 17 volunteer firefighters.

The North Jenkins County Fire Department covers the unincorporated area of Jenkins County located north of the Ogeechee River. The department is made up of four stations. Combined, these stations operate four brush trucks, 3 tankers and four pumpers. There are currently 36 volunteers.

Jenkins County personnel are trained to perform the operations of the fire department under the most severe conditions. As a result, residents can rely on their fire departments in any situation because the volunteers recognize the importance of delivering high caliber emergency service to the public. Each firefighter is required to complete intense training each year. The training is a combination of classroom, hands on practical exercises and live fire training. All firefighters are required to pass and maintain minimum firefighter standards set forth by the State of Georgia.

The area within the city limits of Millen has an Insurance Services Office (ISO) Public Protection Classification Class 5 rating, while most of Jenkins County currently possesses a rating of 9. The Rural Fire Defense Program, in conjunction with the USDA has developed a system of Dry Hydrants and Drafting Sites throughout the county. Property owners are encouraged to install an approved dry hydrant in their ponds and lakes.

*Law Enforcement:* Jenkins County is served by the Jenkins County Sheriff's Office. The Sheriff's Office consists of eight full-time staff with arrest powers (including the Sheriff), two full time admins, eleven full time jailers/dispatchers and one part time dispatcher. The jailers/dispatchers work in E-911 as well. The Office operates a fleet of thirteen vehicles and averages 6307 calls per year.

The Millen Police Department has 12 full time employees and no part time employees and operate 11 cruisers and 1 investigator vehicle.

The Jenkins County Sheriff's Office and Jail currently houses inmates for the County and City. The jail was built in 2016 and is roughly 14,555 square feet which contains the office space, records area, and jail cells and service areas, as well as E-911.

## CHAPTER II. NATURAL HAZARD, RISK AND VULNERABILITY (HRV)

Utilizing FEMA Worksheet #1 (Appendix D), the committee identified all natural hazards that affect Jenkins County to include the City of Millen. As a result of the planning process, the committee determined that eight natural hazards pose a direct, measurable threat: flooding, dam failure, drought, wildfire, tornados, tropical storms, severe weather (to include thunderstorm winds, lightning and hail), and winter storms. The committee profiled each of these hazards using FEMA worksheet #2 and #3a, which included obtaining a base map and then recording hazard event profile information. Of the eight hazards mentioned, the entire County is exposed to six: tornados, tropical storms, severe weather, winter storms, wildfire and drought. Flooding is isolated to select areas within the floodplain, while dam failure is isolated to areas downstream of the event. Each of these potential hazards is addressed with relevant supporting data.

**Table 2.1**

Chapter II. Section	Updates to Section
I. Flood	Updated events, critical facilities to GMIS, tax information. Recalculated hazard frequency data. Added information from Hazus-MH analyses.
II. Dam Failure	Updated events, critical facilities to GMIS, tax information. Recalculated hazard frequency data.
III. Drought	Updated events, critical facilities to GMIS, tax information. Recalculated hazard frequency data.
IV. Wildfire	Updated events, critical facilities to GMIS, tax information. Recalculated hazard frequency data.
V. Tornados	Updated events, added critical facilities to GMIS, updated tax information. Recalculated hazard frequency data.
VI. Tropical Storms	Updated events, added critical facilities to GMIS, updated tax information. Recalculated hazard frequency data.
VII. Severe Weather	Updated events, critical facilities to GMIS, tax information. Recalculated hazard frequency data.
VIII. Winter Storms	Updated events, critical facilities to GMIS, tax information. Recalculated hazard frequency data.

### SECTION I. FLOODING

**A. Hazard Identification:** Flood plains are relatively flat lands that border streams and rivers that are normally dry but are covered with water during floods. The susceptibility of a stream to flooding is dependent upon several different variables. Among these are topography, ground saturation, rainfall intensity and duration, soil types, drainage, drainage patterns of streams, and vegetative cover. A large amount of rainfall over a short period can result in flash flood conditions. A small amount of rain can also result in floods where the soil is saturated from a previous wet period or if rain is concentrated in an area of impermeable surfaces such as large parking lots, paved roadways, etc. Topography and ground cover are contributing factors for floods where water runoff is greater in areas with steep slopes and little or no vegetation. The severity of a flood is usually measured in terms of depth of flooding.

Flooding occurs when the volume of water exceeds the ability of a water body (stream, river, or lake) to contain it within its normal banks. Floodplains serve three major purposes: Natural water storage and conveyance, water quality maintenance, and groundwater recharge. These three purposes are greatly inhibited when floodplains are misused or abused through improper and unsuitable land development. For example, if floodplains are filled to construct a building, valuable water storage and recharge areas are lost. This causes unnecessary flooding in previously dry areas and can damage buildings and other structures.

Jenkins County and Millen will continue to comply with NFIP requirements and intend to remain in compliance by enforcing flood plain ordinances that prohibit or severely limit development in floodplains. These ordinances are enforced by the Jenkins County code enforcement Office and the Millen Building and Permitting Department. Table 2.2 provides information about each jurisdiction's participation level.

**Table 2.2**

Community Name	Init FHBM Identified	Init. FIRM Identified	Curr. Eff. Map Date	Reg-Emer Date	Sanction Date
Jenkins County	02/0378	09/29/89	08/05/10	09/29/89	N/A
Millen	04/12/74	05/01/87	08/05/10	05/01/87	N/A

*Source: FEMA Community Status Book*

- B. Hazard Profile:** Severe flooding within Jenkins County is a relatively infrequent event. The county has over 35,292 acres of wetlands, 14 lakes, 33 rivers/streams and 14 reservoirs. Slopes in Jenkins County ranges from nearly level in the low-lying floodplain areas to around 17-20 percent along the side slopes of some ridgelines and bluffs. Floodplains are narrow except along the principal rivers which have a wide expanse of swamp bordering both sides of the channel. Relief varies from 100 to 150 feet. Elevations in the district range from 500 feet in the northwest to 100 feet in the southeast indicating the regional dip. The committee examined historical data from the NCEI, USGS, SHELDUS<sup>TM</sup>, past newspaper articles and conducted interviews on the effects of past flooding events.

Over the last 95 years, there have been 14 documented flooding events, resulting in nearly \$700,000 in damages. Throughout this period, a total of three fatalities and one injury have been attributed to flooding event. One particularly tragic incident occurred during the flood in October 1992, when a 2-week-old infant was swept from the arms of their mother as the family was evacuated. Hurricane Debby produced heavy rainfall totals across the county, no widespread flooding was reported. Table 2.3 contains data compiled from interviews, newspaper articles, and records from the NCEI and SHELDUSTM databases.

**Table 2.3**

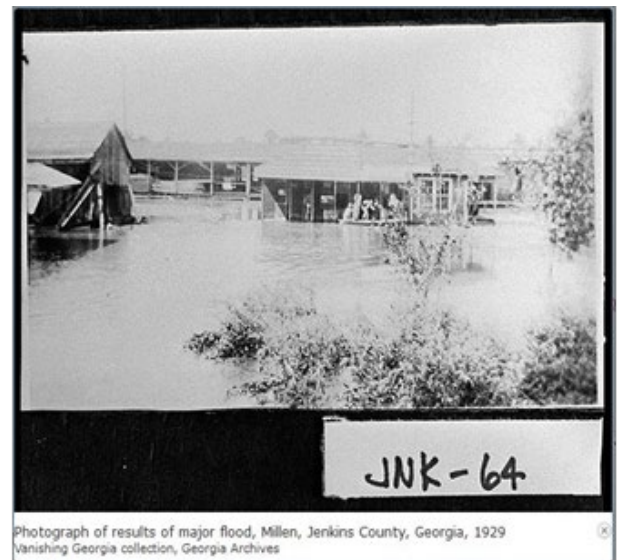
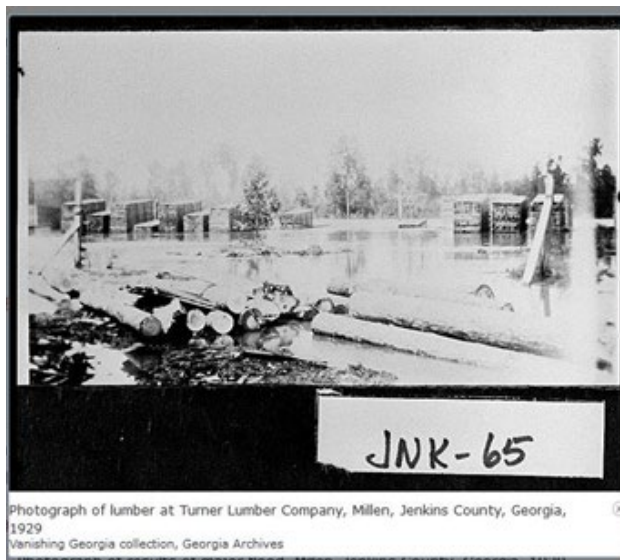
Date	Dth	Inj	PrD	CrD
9/25/1929	2	0	.00	.00
3/20/1980	0	0	.00	.00
10/11/1990	0	0	\$500,000	.00
10/14/1990	0	0	\$50,000	.00



Date	Dth	Inj	PrD	CrD
2/14/1991	0	0	.00	\$500
8/26/1991	0	0	\$50,000	.00
10/2/1992	0	0	\$100,000	.00
10/8/1992	1	1	.00	.00
3/11/1998	0	0	.00	.00
4/10/2003	0	0	.00	.00
7/26/2003	0	0	.00	.00
6/29/2010	0	0	.00	.00
6/29/2010	0	0	.00	.00
5/29/2012	0	0	.00	.00

Source: NCEI and SHELATUS

The worst recorded flood in Jenkins County occurred between September 25 and October 3, 1929, as a result of two heavy thunderstorms that passed through the area within a period of ten days. The first storm, which occurred September 25-27, 1929, was prolonged and intense. The second storm was the result of a tropical hurricane that passed around the Florida peninsula, turned northwest and moved inland near Pensacola on September 30. It moved northeast across northern Florida and southeastern Georgia and then up the Atlantic coast. Pictures were found of the flood from the Vanishing Georgia site ([http://dlg.galileo.usg.edu/vanga/? Welcome](http://dlg.galileo.usg.edu/vanga/?Welcome))



The second major flooding event occurred from October 10-12, 1990 where torrential rain occurred in east-central Georgia. Rainfall totaled as much as 19.89 inches for the 3-day period, although most areas received from 7.0 to 10.0 inches of rain. Flood depths were reported to be approximately 20 feet. Severe flooding caused by the intense rain on already saturated ground occurred in several tributaries to the Ogeechee, Ochoopee, and Savannah Rivers. The rains were the result of the convergence of a slow-moving cold front from the northwest, Tropical Storm Klaus from the east, and Tropical Storm Marco from the south. The resulting excessive rains approached or exceeded several long-standing rainfall records in Georgia. The flood of October 11-20 was the

third severe flood to occur in Georgia in 1990, and nine counties, which includes Jenkins, were named in Presidential Disaster Declaration 880.

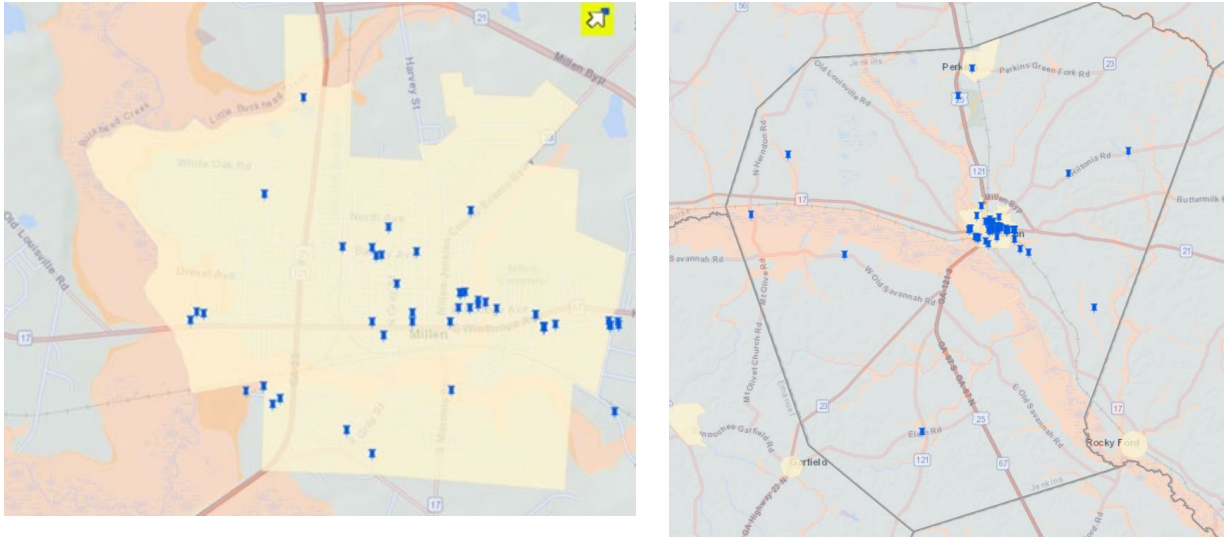
All sites where discharge equaled or exceeded the 100-year discharge within a 50-mile radius had drainage areas of less than 100 square miles, except sites on the Ogeechee River. The Ogeechee River experienced maximum discharges having recurrence intervals ranging from 10 to more than 100 years. The maximum discharge of 27,000 cubic feet per second for the Ogeechee River near Louisville (41 miles from Millen) was the largest since 1929 at that site. The maximum stage for Ogeechee River at Scarboro (eight miles from Millen) was 13.42 feet where flood stage is 8 feet. The maximum discharge for Ogeechee River at Scarboro 37,000 cubic feet per second. The flood of 1929 maximum discharge was 75,000 cubic feet per second. USGS report and tables are in Appendix C.

Most flood events resulted in flash flooding which caused downed trees and power lines, apartments, and schools to flood and washed out several roads. Limited data is available for the incorporated jurisdiction. While severe flooding within the county is a relatively infrequent event, there is a potential for flooding. Flash flooding is the most prominent flooding event as riverbanks overflow due to rainfall. There are no NFIP mitigated properties and no properties have encountered repetitive flooding. The GMIS flood hazard map assigns a flood zone rating of zero for the unincorporated parts of the County and Millen where there are no identified flood hazards and a zone rating of three for Jenkins County and Millen where floodplains are known.

Table 2.4 describes the characteristics of the flood zones based on data from the GMIS.

**Table 2.4**

Score	Original Value	Description
4	Floodway	Floodway (within zone AE)
	V	1% with Velocity no Base Flood Elevation (BFE)
	VE	1% with Velocity BFE
3	A	1% Annual Chance no BFE
	A99	1% Federal flood protection system
	AE	1% has BFE
	AH	1% Ponding has BFE
	AO	1% Sheet Flow has depths
	AR	1% Federal flood protection system
2	X500	0.2% Annual Chance
1	ANI	Area not included in survey
	D	Undetermined but possible
0	UNDES	Undesignated
	X	Outside Flood Zones



Source: GMIS Flood Map for Millen and Jenkins County

The magnitude of a major flood event could have approximately 75 percent of the county experiencing some damage from flooding. Based on a 20-year hazard cycle the chance of an annual flooding event occurring is:

- 15 percent for all of Jenkins County;
- 15 percent for unincorporated areas of Jenkins County; and
- 15 percent for Millen (See *Appendix A* and *Appendix D*).

**C. Assets Exposed to Hazard and Estimates of Potential Loss:** For determination of assets exposed to risk this plan used maps created from FEMA data and available parcel data. Based on FIRM, tax digests, parcel maps and FEMA Worksheet #3a for inventory of assets, the following assets are at risk during a flood event:

- Millen has 87 structures/properties valued at approximately \$13 million with a population of 250;
- Unincorporated Jenkins County has 194 structures/properties valued at approximately \$22 million with an estimated population of 135.

All 281 structures/properties have been identified by federal flood plain maps and/or parcel maps. Not all structures that have been identified will experience damage from floods. Further studies, including professional surveys, would have to be conducted to determine exactly which structures are at consistent risk from flooding.

The extent of each flood varies according to the amount of rainfall in a given area. If a complete loss of the 281 structures/properties located within flood zones would result in approximately \$35 million in damages assuming 100 percent loss, a 75 percent loss would represent approximately \$26 million, a 50 percent loss would represent approximately \$15.5 million, and a 25 percent loss would represent approximately \$8.8 million.

The GMIS has eleven critical facilities with a hazard score of three: one in the county and 10 in the city with a value over \$14 million. The 45 remaining critical facilities have a hazard score of zero with a value of nearly \$61 million. Table 2.5 shows the breakdown of critical facilities by jurisdiction, flood hazard score, replacement value, content value, and occupancy.

**Table 2.5**

Jurisdiction	Hazard Score	# of Critical Facilities	Replacement Value \$	Content Value \$	Occupancy	
					Day	Night
Jenkins County	3	1	6,000,000	0	0	0
Jenkins County	0	26	44,761,750	10,645,000	1,776	4
Millen	3	10	8,470,000	83,000	10	0
Millen	0	19	16,232,000	1,830,000	10	0
<b>TOTAL</b>		<b>56</b>	<b>\$75,463,750</b>	<b>12,558,000</b>	<b>1,796</b>	<b>4</b>

The GMIS has no repetitive flooding NFIP property and no NFIP mitigated properties where there was loss. There is no estimate for future structures since future development will be limited and regulated in areas where floodplains exist. (*See Appendix A and Appendix D*).

FEMA Hazus-MH Version 2.2 SP1 was used to analyze a probabilistic risk assessment of a 1% annual chance riverine flood event (100-Year Flood) for Jenkins County. A copy of the complete report can be found in Appendix C. Land area covered by floodwaters of the base flood is identified as a Special Flood Hazard Area (SFHA). The County's flood risk assessment analyzed at risk structures in the SFHA. The results of the Riverine 1% Flood Scenario revealed that buildings 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 Hazus analysis generated information to building loss, essential facility loss, food and shelter requirements and debris because of the Riverine 1% Flood Scenario. Table 2.6 shows results of this scenario are as follows:

**Table 2.6**

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
<b>Millen</b>					
Residential	1,261	68	\$132,238,098	\$1,159,982	0.88%
Industrial	29	3	\$5,333,088	\$9,011	0.17%
Commercial	153	5	\$17,756,387	\$29,979	0.14%
<b>Unincorporated</b>					
Religious	22	1	\$2,879,104	\$10,131	0.35%
Residential	2,932	191	\$238,708,553	\$2,992,557	1.25%
<b>County Total</b>					
	<b>4,397</b>	<b>268</b>	<b>\$396,915,224</b>	<b>\$4,195,660</b>	

- **Essential Facility Losses:** The analysis identified no essential facilities being subject to damage.
- **Flood Shelter Requirements:** The scenario estimates 244 households are subject to displacement. Displaced households represent 731 individuals, of which 349 may require short-term publicly provided shelter.
- **Flood Debris:** Hazus-MH estimates that an approximate total of 3,002 tons of debris might be generated by the flood. The model breaks debris into three general categories:
  - Finishes (dry wall, insulation, etc.) – 1,394 tons generated;
  - Structural (wood, brick, etc.) – 545 tons generated; and
  - Foundations (concrete slab, concrete block, rebar, etc.) – 1,064 tons generated.

It is noted that the difference between the FEMA Hazus-MH results and the FEMA worksheet #3a is because Hazus-MH is only looking at buildings. The FEMA flood maps and parcel maps include all parcels whether a building exist or not. The community is rural, and agriculture is an important industry. All parcels are included in our analysis just not structures.

**D. Land Use and Development Trends:** The Jenkins County Comprehensive Plan 2023-2028 presents future development scenarios for Jenkins County and Millen in the form of “character areas”. Character areas not only identify existing and future land uses appropriate for a particular area, they can highlight a variety of other factors such as: the form, function and style of new development; existing features that should be incorporated into future development scenarios; and, relationships to adjacent development. The character areas recommended for Jenkins County and Millen are ones that:

- Presently have unique or special characteristics that need to be preserved;
- Have potential to evolve into unique areas; and
- Require special attention because of unique development issues.

The conservation or reserve character area describes primarily undeveloped natural lands and environmentally sensitive areas that are not suitable for urban or suburban development. These areas include flood plains, wildlife management areas, public parks and other environmentally sensitive areas. The development pattern should seek to:

- Minimize impervious surfaces;
- Protect water quality;
- Preserve natural resources, habitats, views, and rural/agricultural character;
- Protect open space in a linear pattern, typically following the flood plain of river and stream corridors and accommodate greenways; and
- Provide opportunities for low-impact recreation (e.g. canoeing, fishing, hunting, hiking, etc.) and environmental education.

Primary land use should seek to:

- Assure undeveloped areas are left in their natural state;
- Promote passive parks; and
- Promote agriculture.

The County has experienced very little growth over the past decade and future forecasts project relatively slow growth patterns. Despite the slow growth forecasts the county intends to work closely



with the city to encourage and manage future growth. Additionally, as the Savannah River Parkway corridor widening project is completed, the county expects growth to occur.

The joint comprehensive plan discourages new development within known flood prone areas with the exception of very low impact usages, such as recreational facilities (i.e. trails, open fields, etc.). With this type of land use, the floodplains are utilized without disturbing their cycles.

Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard. The vulnerability in terms of future buildings, infrastructure and critical facilities located in the identified hazard areas is not known at this time since no planned or approved future development exist. Thus, it is impossible to determine vulnerability in terms of future buildings, infrastructure and critical facilities within the county or Millen. (*Current and Future Land Maps and Tables for each jurisdiction can be found in Appendix B*)

- E. Multi-Jurisdictional Concerns:** Jenkins County and Millen will continue to comply with NFIP requirements and intend to remain in compliance by enforcing flood plain ordinances that prohibit or severely limit development in floodplains. During a large-scale flood event, many portions of Jenkins County would potentially be impacted by flooding. However, the area's most prone to flooding have historically been those areas located within the 100-year floodplain. Since flooding has the potential to affect all of Jenkins County, any mitigation steps taken related to flooding should be undertaken on a countywide basis and Millen.
- F. Hazard Summary:** Severe flooding within Jenkins County is a relatively infrequent event. The county has over 35,292 acres of wetlands, 14 lakes, 33 rivers/streams and 14 reservoirs. There have been 14 flooding events recorded in the last 95 years. These events resulted in school closings, roads washing out, and three fatalities and one injury. The hazard frequency table calculates a 15 percent chance of an annual flooding event in Jenkins County. Hazard frequency tables can be found in Appendix D.

Based on tax data, parcel and flood maps all or a portion of 281 known structures/properties valued at approximately \$35 million and a population of 135 located in known floodplains. The committee identified specific mitigation goals, objectives and action items related to flooding, which can be found in Chapter III, Section III.

- G. Climate Change:** Per the Fourth National Climate Assessment, the frequency and intensity of heavy precipitation events is expected to increase across the country. More specifically, it is "very likely" (90-100% probability) that most areas of the United States will exhibit an increase of at least 5% in the maximum 5-day precipitation by late 21st century. Additionally, increases in precipitation totals are expected in the Southeast and Jenkins County. The mean change in the annual number of days with rainfall over 1 inch for the Southeastern United States is 0.5 to 1.5 days. Therefore, with more rainfall falling in more intense incidents, the region may experience more frequent flash flooding. Increased flooding may also result from more intense tropical cyclone. Researchers have noted the occurrence of more intense storms bringing greater rainfall totals, a trend that is expected to continue as ocean and air temperatures rise.

## SECTION II. DAM FAILURE

- A. Hazard Identification:** Dam failures and incidents involve unintended release or surges of impounded water. They can destroy property and cause injury and death downstream. While they may involve the total collapse of a dam, that is not always the case. Damaged spillways, overtopping of a dam or other problems may result in a hazardous situation. Dam failures may be caused by structural deficiencies in the dam itself. Dam failures may also come from other factors including but not limited to debris blocking spillways, flooding, improper operation and vandalism. Dam failures are potentially the worst flood events. When a dam fails, a large quantity of water is suddenly released downstream, destroying anything in its path and posing a threat to life and property.

Dams are classified into three categories:

- High Hazard – Dams where failure or disoperation will probably cause loss of human life.
- Significant Hazard – Dams where failure or disoperation will probably not result in loss of life, but can cause economic loss, environmental damage, and disruption of lifeline facilities or other concerns.
- Low Hazard – Dams where failure or disoperation will probably not result in loss of life and cause only low economic and/or environmental loss.
- Undetermined Hazard - Hazard level has not been determined.

- B. Hazard Profile:** Based on the 2023 National Inventory of Dams there are 18 dams in Jenkins County where 16 are low hazard and two are classified as undetermined. The average dam age is 59 years and zero percent of the dams are regulated by state or federal agencies. All are located in the unincorporated areas of the county. A map and complete table of the dams can be found in Appendix A by classification and jurisdiction.

Based on interviews and best available data there have been two dam failure events within the last 95 years: one in 1929 and one in 1990. The dam failures were a result of the flooding events that occurred in the aforementioned section. There were three deaths and one injury as a result of the flood event. Based on a 20-year hazard cycle the chance of an annual dam failure occurring is less than one percent for all of Jenkins County. Further study needs to be conducted to determine the precise probability of an annual dam failure event (*See Appendix A and Appendix D*).

- C. Assets Exposed to Hazard and Estimate of Potential Losses:** The number of dams posing potential loss of life hazards to Jenkins County residents and the number of residents living downstream from these potentially hazardous dams is unknown at this time. Based on best available data, the residents of Millen do not appear to be at risk due to dam failure. Data is not available at this time for the committee to determine what assets are exposed to risk due to dam failure in the unincorporated areas of Jenkins County. The GMIS report has critical facilities replacement value at more than \$75 million with a population of 1,800. The County has a population of 8,693 and 24,770 structures/properties valued at more than \$978 million at risk of potential loss. (*See Appendix A and Appendix D*).

- D. Land Use and Development Trends:** The County has experienced very little growth over the past decade and future forecasts project relatively slow growth patterns. Despite the slow growth forecasts the county intends to work closely with the city to encourage and manage future growth.

Vulnerability in terms of future buildings, infrastructure and critical facilities is not known at this time. It can be surmised that this future development will bring an increase in population and efforts must be made to ensure that new homes are not built downstream where a dam break may occur. Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard. Current and future land use tables are in Appendix B. A dam break analysis study is recommended in Chapter III, Section III to determine the exact assets exposed to risk as a result of a dam failure.

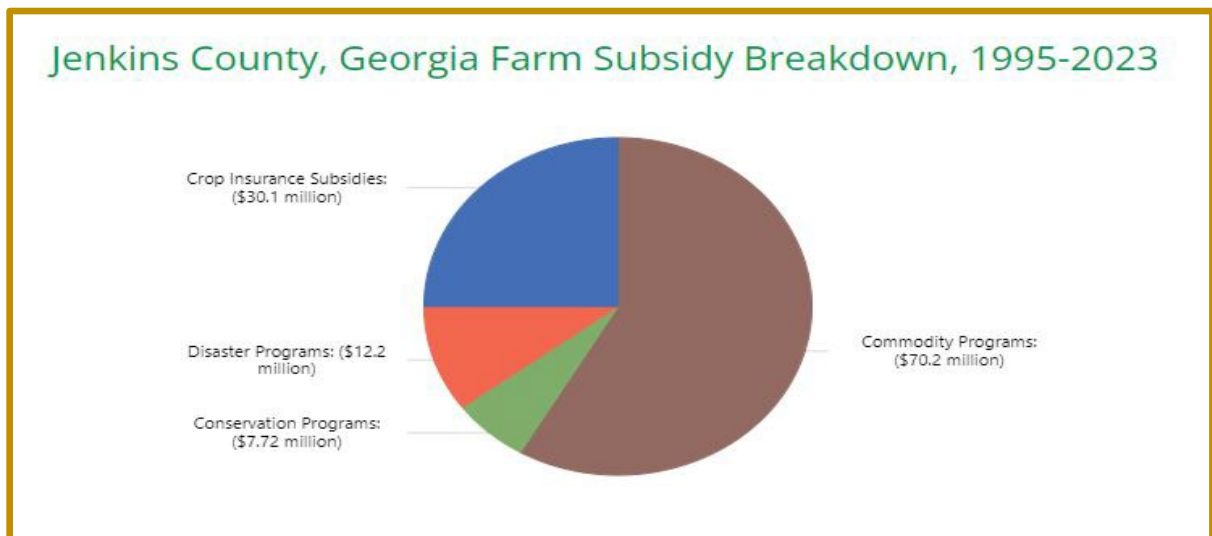
- E. Multi-Jurisdictional Concerns:** There is no way to determine with any statistical significance whether dams in one area of Jenkins County are in danger of failure more than others (as most are similar in construction and age).
- F. Hazard Summary:** Dam failures and incidents involve unintended release or surges of impounded water. They can destroy property and cause injury and death downstream. While they may involve total collapse of a dam, that is not always the case. There have been two known dam failures events in the last 90 years. The committee deemed it important to address since there are 17 dams in Jenkins County where 15 are low hazard and two are classified as undetermined. The committee recognized the potential for losses caused by dam failure and identified it as a hazard requiring mitigation measures. To summarize, there are approximately 24,770 structures/properties in the county totaling more than \$978 million with a population of 8,693. The committee identified specific mitigation goals, objectives and action items related to dam failure, which can be found in Chapter III, Section III.
- G. Climate Change:** Studies have been conducted to investigate the impact of climate change scenarios on dam safety. Climate change impacts on dam failure in Jenkins County will most likely be those related to changes in precipitation and flood likelihood. Climate change projections suggest that precipitation may increase and occur in more extreme events, which may increase risk of flooding, putting stress on dams and increasing the likelihood of dam failure. The safety of dams for the future climate can be based on an evaluation of changes in design floods and the freeboard available to accommodate an increase in flood levels.

### SECTION III. DROUGHT

- A. Hazard Identification:** The committee reviewed historical data from the Palmer Drought Index, NCEI, DNR, and USDA in researching drought conditions in Jenkins County. Drought conditions are identified by a prolonged period of moisture deficiency. Climatologists and hydrologists use five indicators of drought: rainfall, soil moisture, stream flows, lake levels and groundwater level. Drought conditions affect the cultivation of crops as well as water availability and water quality. Drought is also a key factor in wildfire development. Wildfire is addressed in a separate HRV.
- B. Hazard Profile:** Drought is not spatially defined and has the potential to affect the entire planning area equally. Jenkins County consists of 233,291 acres with 54,832 acres (23.5 percent) dedicated to agriculture and 149,305 acres (64 percent) dedicated to forestry. According to the USDA 2022 Census of Agriculture 6,000 heads of livestock. Agricultural losses due to drought are

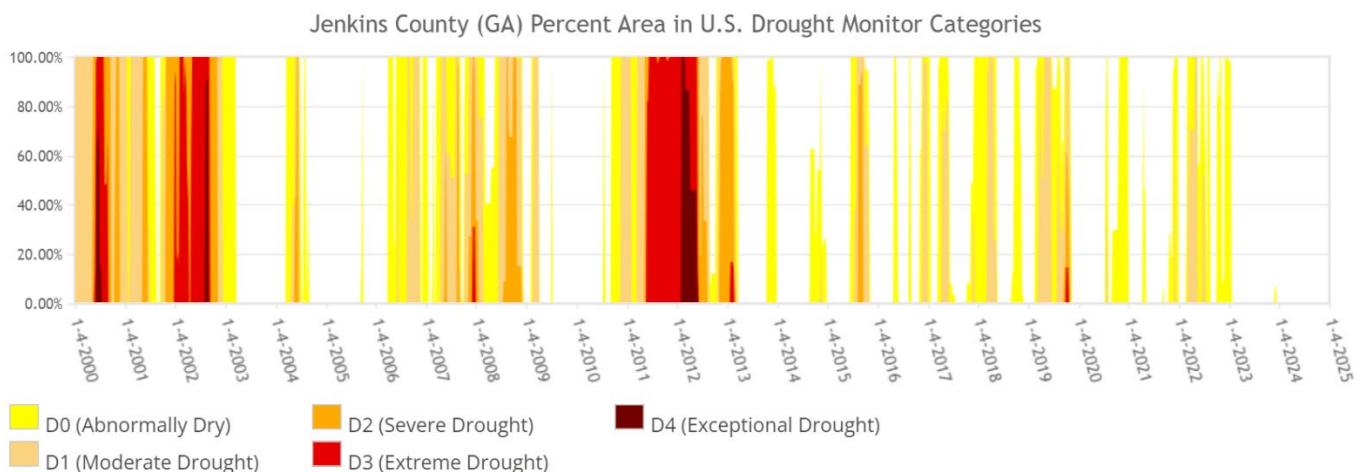
the primary losses. No critical facilities have sustained any damage or functional downtime due to dry weather conditions.

There have been 32 drought events recorded in the last 69 years with four occurring since the last update. According to the EWG Farm Subsidies Database, from 1995-2023, there has been a total of \$120,220.00 million in disaster assistance. The pie chart below depicts amounts and type of assistance.



Source: <https://farm.ewg.org>

NCEI data for surrounding counties and a review of The Palmer Index (from <https://www.NCEI.noaa.gov/temp-and-precip/drought/historical-palmers/>) reveals there have been 32 drought events. One of the longest running droughts in recent history began in April 2011 and ended in January 2013. The County was in a moderate drought from April 2019 to June 2019. The average based on historical data is a -3.00 on the Palmer Index. The chart on the next page shows drought conditions from 2000 to 2024.



From the U.S. Drought Monitor website, <https://droughtmonitor.unl.edu/DmData/TimeSeries.aspx>, 4-19-2024



Based on the weekly data from the US Drought Monitor (<https://droughtmonitor.unl.edu>) from January 2004 to June 2024 the county has experienced the following drought conditions:

- 714 weeks where all or a portion of the county has experienced of D0 - Abnormally Dry;
- 427 weeks where all or a portion of the county has experienced of D1 - Moderate Drought;
- 212 weeks where all or a portion of the county has experienced levels of D2 - Severe Drought;
- 113 weeks where all or a portion of the county has experienced levels of D3 - Extreme Drought; and
- 25 weeks where all or a portion of the county has experienced levels of D4 - Exceptional Drought. (*US Drought Monitor Tables can be found in Appendix A.*)

**Historical data is only for the county.** A severe, prolonged drought would mainly affect the 87.5 percent of the county that makes up the timber and agriculture business. This could result in loss of crops, livestock and create the conditions for a major wildfire event. This would also have an impact on the incorporated cities, as water restrictions would be enforced. Based on a 20-year hazard cycle history there is a 155 percent chance of an annual drought event for the county as well as Millen. (*See Appendix D for Worksheet 3a and Hazard Frequency Tables.*)

- C. Assets Exposed to Hazard and Estimate of Potential Losses:** Drought conditions typically pose little or no threat to structures; however, fires can occur as a result of dry weather. The greatest threat to assets in the county is to forestry and agricultural properties and livestock. No damage to critical facilities is anticipated as a result of drought conditions. Crop damage cannot be accurately quantified due to several unknown variables: duration of the drought, temperatures during the drought, severity of the drought, different crops require different amounts of rainfall, and different growing seasons. Based on FEMA Worksheet #3a the potential loss in agricultural and forestry properties for each jurisdiction is:

- Millen has 43 agricultural/forestry structures/properties valued at approximately \$1,171,368 with an estimated population of 8.
- Unincorporated Jenkins County has 7,343 agricultural/forestry structures/properties valued at approximately \$364 million with an estimated population of 158.

There is a total of 7,386 agricultural/forestry properties in all of Jenkins County valued at more than \$365 million with a population of 164 that are at the greatest risk due to a drought event (*Appendix A and Appendix D*).

- D. Land Use and Development Trends:** Jenkins County currently has no land use or development trends related to drought conditions. When drought conditions occur, the municipalities follow the restrictions set forth by the Georgia DNR Drought Management Plan and the Statewide Outdoor Water Use Schedule. The Millen Water Department enforces these guidelines.

The Georgia Water Stewardship Act went into effect statewide on June 2, 2010. It allows daily outdoor watering for purposes of planting, growing, managing, or maintaining ground cover, trees, shrubs, or other plants only between 4 p.m. and 10 a.m. by anyone whose water is supplied by a water system permitted by the Environmental Protection Division. The following outdoor water uses also are allowed daily at any time of the day by anyone:



- Commercial Agriculture
- Alternative sources of water (grey water, rainwater, condensate, etc.)
- Irrigation of food gardens
- Irrigation of newly installed or reseeded turf for the first 30 days
- Drip irrigation or soaker hoses
- Hand watering with a shut off nozzle
- Water from a private well
- Irrigation of plants for sale
- Irrigation of athletic fields, golf courses or public recreational turf
- Hydroseeding

Outdoor water-use for any purposes other than watering of plants, such as power washing or washing cars, is still restricted to the current odd/even watering schedule.

- Odd-numbered addresses can water on Tuesdays, Thursdays and Sundays.
- Even-numbered and unnumbered addresses are allowed to water on Mondays, Wednesdays and Saturdays.

Limited growth or new development is expected in the County. Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard. The vulnerability, in terms of future buildings, infrastructure and critical facilities located in the identified hazard areas, is unknown since there is no planned or approved future development. Thus, it is impossible to determine the vulnerability of future buildings, infrastructure, and critical facilities.

- E. Multi-Jurisdictional Concerns:** Agricultural losses associated with drought are more likely to occur in the rural, less concentrated areas of the county. Although Millen is less likely to experience drought related losses, they should not be excluded from mitigation considerations. Drought creates a deficiency in water supply that affects water availability and water quality. Drought may increase the likelihood of wildfires and flooding. Water shortages can impede firefighting efforts at all levels. Drought creates a deficiency in water supply that affects water availability and water quality. Droughts can and have severely affected private wells, municipal and industrial water supplies, agriculture, stream water quality, recreation at major reservoirs hydropower generation, navigation, and forest resources.
- F. Hazard Summary:** Drought is not spatially defined and equally affects the entire planning area. Droughts do not have the immediate effects of other natural hazards, but sustained drought can cause severe economic stress to the agricultural interests in Jenkins County. The potential negative effects of sustained drought are numerous. *Historical data is available only for the county as a whole.* Based on a 20-year cycle hazard history along with available data there is a 155% chance of an annual drought event in Jenkins County. In addition to an increased threat of wildfires, drought can affect municipal and industrial water supplies, stream-water quality, water recreation facilities, hydropower generation, as well as agricultural and forest resources.

In summary, for Jenkins County as a whole, there are a total of 7,386 agricultural/forestry properties valued at approximately \$365 million and include 6,000 heads of livestock and an estimated population of 164 which have the greatest potential to be damaged by drought.

- G. Climate Change:** The Fourth National Climate Assessment reports that average and extreme temperatures are increasing across the country and average annual precipitation is decreasing in the Southeast. Heavy precipitation events are becoming more frequent, meaning that there will likely be an increase in the average number of consecutive dry days. As temperature is projected to continue rising, evaporation rates are expected to increase, resulting in decreased surface soil moisture levels. Together, these factors suggest that drought will increase in intensity and duration in Jenkins County.

## SECTION IV. WILDFIRE

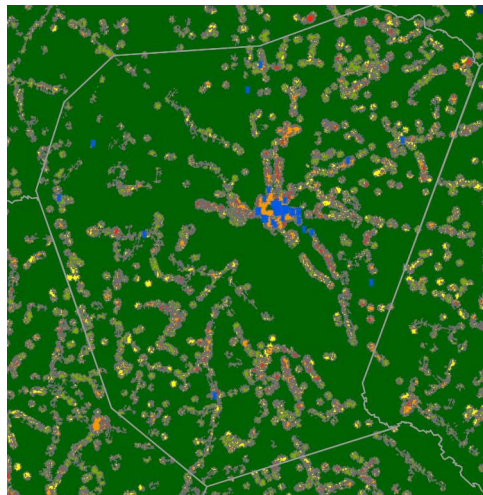
- A. Hazard Identification:** A wildfire is any uncontrolled fire occurring on undeveloped land that needs fire suppression. The potential for wildfire is influenced by three factors: the presence of fuel, the area's topography and air mass. There are three different classes of wildland fires. A surface fire is the most common type and burns along the floor of a forest, moving slowly and killing or damaging trees. A ground fire is usually started by lightning and burns on or below the forest floor. Crown fires spread rapidly by wind and move quickly by jumping along the tops of trees. Wildfires are usually signaled by dense smoke that fills the area for miles around. Wildfires by lightning have a very strong probability of occurring during drought conditions. Drought conditions make natural fuels (grass, brush, trees, dead vegetation) more fire-prone.



- B. Hazard Profile:** Jenkins County is comprised of 233,291 acres with acres 52,956 (23.5 percent) dedicated to agricultural and 144,450 acres (64 percent) dedicated to forestry. Given the right weather conditions and variables, wildfire, due to natural causes, creates a potential threat to the lives of residents and property in the planning area. The NCEI has never reported a significant wildfire event in Jenkins County.

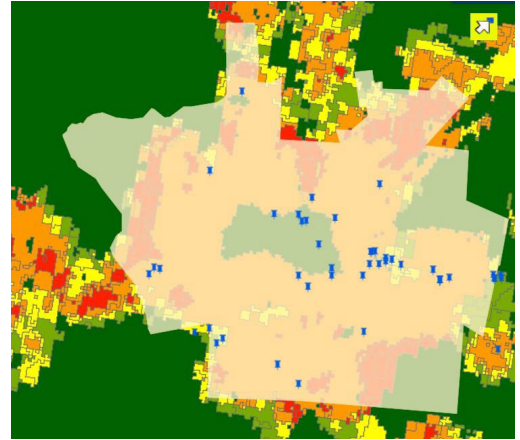
The committee reviewed historical data from the Georgia Forestry Commission, which is not found in the NCEI database, to research wildfire events. According to Georgia Forestry data, from 1957 to 2022, there have been 3,681 fire events burning a total of 25,486 acres for an average extent of 6.92

acres. Based on a 20-year hazard cycle there is a 2,915 percent chance of an annual event. The drier the condition the more susceptible the county is to wildfire. (See Appendix A).



GMIS wildfire maps for Millen and Jenkins County

Score	Description
4	High
3	Moderate
2	Low
1	Very Low
0	No Houses
	Agriculture
	Water
	City



- C. Assets Exposed to Hazard and Estimate of Potential Losses:** While wildfires are more likely to occur in the county outside of the incorporated areas where forestry and woodland are prevalent. The committee concluded that wildfires present a threat to all existing buildings, infrastructure and critical facilities since wildfires can spread throughout the county and into the urban areas. Wildfire does have the potential to spread into the incorporated areas and cause extensive damage to existing structures/properties. FEMA Worksheet #3a located in Appendix D shows the number and types of buildings found in Jenkins County, as well as the value of these structures/properties and the population. Table 2.7 shows assets by jurisdiction could potentially be exposed to wildfire hazard.

**Table 2.7**

Jurisdiction	# of Structure/Properties	Value	Population
Jenkins County (Unincorporated)	19,232	\$777,163,610	5,727
Millen	5,538	\$201,115,235	2,966
TOTAL FOR COUNTY	24,770	\$978,278,8454	8,693

Source: Jenkins County Tax Assessor

Table 2.8 reveals all critical facilities in the county by jurisdiction, number of facilities, hazard score, replacement value, and daily occupancy exposed to wildfire hazard. A complete breakdown of each jurisdiction by hazard can be found in Appendix A.

**Table 2.8**

Jurisdiction	Hazard Score	# of Critical Facilities	Replacement Value \$	Content Value \$	Occupancy	
					Day	Night
Jenkins County	3	13	\$12,144,250	\$1,755,000	143	4
Jenkins County	2	1	\$1,125,000	\$50,000	30	0
Jenkins County	1	5	\$6,422,500	\$70,000	0	0

Jurisdiction	Hazard Score	# of Critical Facilities	Replacement Value \$	Content Value \$	Occupancy	
					Day	Night
Jenkins County	0	8	\$31,070,000	\$8,770,000	1603	0
Millen	4	1	\$100,000	\$0	0	0
Millen	3	17	\$17,245,000	\$1,500,000	13	0
Millen	2	4	\$4,112,000	\$313,000	3	0
Millen	1	3	\$1,515,000	\$0	0	0
Millen	0	4	\$1,730,000	\$100,000	4	0
<b>TOTAL</b>		<b>56</b>	<b>\$75,463,750</b>	<b>\$12,558,000</b>	<b>1,796</b>	<b>4</b>

The GMIS has one critical facility with a hazard score of four (high), 30 with a hazards score of three (moderate), five with a hazard score of 2 (low) and eight with a hazard score of one (very low probability). The remaining 12 critical facilities have a hazard score of zero. The 46 critical facilities with a wildfire hazard score greater than zero have an estimated potential loss of more than \$56.2 million. The loss for all critical facilities is \$75,463,750. According to FEMA Worksheet #3a there are 24,770 structures/properties with a population of 8,693 with a value of slightly more than \$978 million worth of assets countywide. If a wildfire started, it is not likely that all of these structures/properties would be affected (*See Appendix A and Appendix D*).

- D. Land Use and Development Trends:** Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard. Jenkins County currently has no land use or development trends related to wildfire conditions. Land use codes do provide for fire protection to any proposed major and minor developments connected to the public water supply system, and minimum fire flows shall be computed based on standards promulgated by the Millen-Jenkins County Fire Department. For those proposed developments that will not have immediate access to the public water supply system, such standards and computations should be based on the National Fire Protection Association *Standards on Water Supply for Suburban and Rural Fire Fighting*.
- E. Multi-Jurisdictional Concerns:** The majority of Jenkins County is timber, forest or agricultural land. Wildfire does have the potential to spread to urban areas thus affecting the entire county. As a result, any mitigation steps taken related to wildfire should be undertaken on a countywide basis and include all incorporated jurisdictions.
- F. Hazard Summary:** Jenkins County is comprised of 233,291 acres with acres 52,956 (23.5 percent) dedicated to agricultural and 144,450 acres (64 percent) dedicated to forestry. Given the right weather conditions and variables, wildfire due to natural causes creates a potential threat to the lives and property of residents in the planning area. According to Georgia Forestry data, from 1957 to 2022, there have been 3,681 fire events burning a total of 25,000 acres for an average extent of 6.92 acres. Based on a 20-year hazard cycle there is a 5,494 percent chance of an annual event.

The GMIS has one critical facility with a hazard score of four (high), 30 with a hazard score of three (moderate), five with a hazard score of 2 (low) and eight with a hazard score of one (very low probability). The remaining 12 critical facilities have a hazard score of zero. The 44 critical facilities

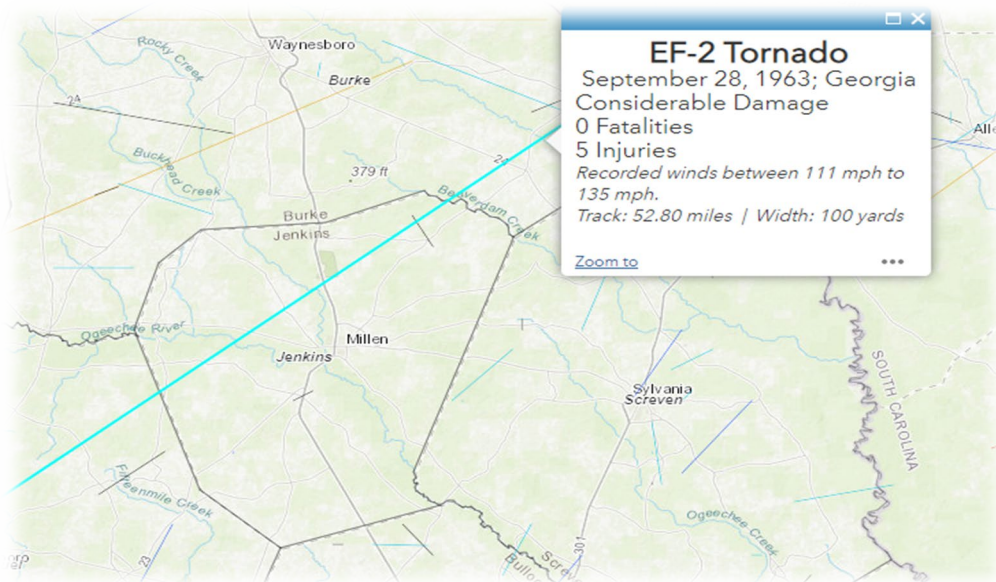


with a wildfire hazard score greater than zero have an estimated potential loss of more than \$42.7 million. The loss for all critical facilities is \$75,463,750. According to FEMA Worksheet #3a there are 24,770 structures/properties with a population of 8,693 with a value of slightly more than \$978 million worth of assets countywide. Mitigation Goals and Objectives concerning wildfires are in Chapter III, Section III.

- G. Climate Change:** It must be taken into consideration that the daily chance of a wildfire event will continue to increase annually as a result of continuous climate changes. The wildfire season has lengthened in many areas due to factors including warmer springs, longer summer dry seasons, drier soils, and dead vegetation.

## SECTION V. TORNADOS

- A. Hazard Identification:** The committee reviewed historical data from the NCEI, SHELDUS™, newspapers and citizen interviews in researching the past effects of tornados in Jenkins County. A tornado is a violent windstorm characterized by a twisting, funnel-shaped cloud. It is spawned by a thunderstorm or the result of a hurricane and is produced when cool air overrides a layer of warm air, forcing the warm air to rise rapidly. Tornados are among the most unpredictable and destructive of weather phenomena and can strike at any time of the year if essential conditions are present. The damage from a tornado is a result of the high wind velocity and wind-blown debris. The positions of the subtropical and polar jet streams often are conducive to the formation of storms in the Gulf region. Table 2.9 shows the original Fujita Scale and the Enhanced Fujita Scale (in use since 2007) to rate the intensity of a tornado by examining the damage caused by the tornado after it has passed over a man-made structure.





**Table 2.9**

FUJITA SCALE			DERIVED EF SCALE		OPERATIONAL EF SCALE	
F Number	Fastest 1/4-mile (mph)	3 Second Gust (mph)	EF Number	3 Second Gust (mph)	EF Number	3 Second Gust (mph)
0	40-72	45-78	0	65-85	<b>0</b>	<b>65-85</b>
1	73-112	79-117	1	86-109	<b>1</b>	<b>86-110</b>
2	113-157	118-161	2	110-137	<b>2</b>	<b>111-135</b>
3	158-207	162-209	3	138-167	<b>3</b>	<b>136-165</b>
4	208-260	210-261	4	168-199	<b>4</b>	<b>166-200</b>
5	261-318	262-317	5	200-234	<b>5</b>	<b>Over 200</b>

Source: NOAA

**B. Hazard Profile:** Tornadoes can affect the entire county given the right conditions. Since the exact time and location of a tornado event is not always predictable, all of Jenkins County is vulnerable to the threat. Based on 74 years of historical data, there have been 15 reported tornadoes in the planning area. None have occurred since the last update. The highest magnitude reported was an EF2. Reported property and crop damages for all 15 events totaled more than \$632,500 with 6 injuries. Using a 20-year hazard cycle, frequency tables calculates an annual chance for a tornado event at:

- 20 percent for Jenkins County as a whole;
- 20 percent for Unincorporated Jenkins County;
- 5 percent for Millen

Table 2.10 shows the event, severity and estimate cost of damages reported. (See Appendix D for Worksheet 3a and Hazard Frequency Tables)

**Table 2.10**

Date	Location	Mag	Inj	PD	CrD
9/28/1963	Jenkins	EF2	5	\$16,666	
5/12/1971	Jenkins	F1	0	\$5,000	
1/11/1972	Jenkins	F1	0	\$5,000	
3/21/1974	Jenkins		0		
6/3/1974	Jenkins		0		
3/16/1976	Jenkins	F2	0	\$250,000	
3/16/1976	Jenkins	F2		\$250,000	
6/5/1978	Jenkins		0		
4/19/1979	Jenkins		0		
9/22/2000	Perkins	F0	0		
7/1/2003	Scarboro	F1	0		
9/27/2004	Perkins	F0	0		
1/2/2006	Millen	F0	0	\$50,000	
3/15/2008	Scarboro	EFO	0		
5/11/2008	Emmalane		1	\$50,000	

- C. Assets Exposed to Hazard and Estimate of Potential Losses:** All structures and facilities within the County could be damaged by a tornado, as tornadoes are among the most unpredictable of weather phenomena and are indiscriminate as to when or where they strike. In evaluating assets exposed to natural hazards, the committee determined that all critical facilities, as well as public, private and commercial property, are susceptible to tornado events. Table 2.11 provides data from FEMA Worksheet #3a that estimates the potential loss for each jurisdiction.

**Table 2.11**

Jurisdiction	Number of Structure/Properties	Value	Population
Jenkins County (Unincorporated)	19,232	\$777,163,610	5,727
Millen	5,538	\$201,115,235	2,966
TOTAL FOR COUNTY	24,770	\$978,278,845	8,693

Source: Jenkins County Tax Assessor

Table 2.12 shows the number of critical facilities by jurisdiction, hazard score, replacement value, content value, and daily occupancy. GMIS critical facility reports and FEMA Worksheet #3a are located in Appendix A for each individual jurisdiction and the county as a whole.

**Table 2.12**

Jurisdiction	Hazard Score	# of Critical Facilities	Replacement Value \$	Content Value \$	Occupancy	
					Day	Night
Jenkins County (Unincorporated)	2	27	\$50,761,750	\$10,645,000	1776	4
Millen	2	29	\$24,702,000	\$1,913,000	20	0
TOTAL FOR COUNTY		<b>56</b>	<b>\$75,463,750</b>	<b>\$12,558,000</b>	<b>1,796</b>	<b>4</b>

- D. Land Use & Development Trends:** Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard. Currently, the county has no land use or development trends related to tornado events. Information on current land use and future land use projections can be found in Appendix B
- E. Multi-Jurisdictional Concerns** – Tornadoes tend to follow a straight path regardless of natural features or political boundaries, and no difference in severity is expected between jurisdictions. However, the impact may be more severe in places with higher population density due to more people being in danger, more people needing to evacuate, more debris from damaged buildings, and other impacts associated with higher population density. In jurisdictions without building codes and inspections, structures may exist that are not built to code and therefore may be especially vulnerable to the effects of strong winds and other hazards. In jurisdictions with a large number of mobile homes, the damage can be expected to be more severe.
- F. Hazard Summary:** Tornadoes do not touch down as frequently; however, the unpredictability and the potential for excessive damage caused by tornadoes makes it imperative that mitigation measures identified in this plan receive full consideration. Based on 74 years of historical data, there have been

15 reported tornados in the planning area. The highest magnitude reported was an EF2. Reported property and crop damages for all 15 events totaled more than \$632,500 with 6 injuries. Tornados tend to strike in somewhat random fashion, making the task of calculating a recurrence interval extremely difficult. There is a 20 percent annual chance of a tornado event for the County as a whole.

The GMIS has the entire county with a wind hazard score of two, where wind speed is between 90 to 99 mph. All 56 critical facilities have a wind hazard score of two with a replacement cost of more than \$75 million. To summarize, there are approximately 24,770 structures/properties in the county totaling slightly more than \$978 million with a population of 8,693. A breakdown of information for individual jurisdictions can be found in Appendix A and Appendix D. Specific mitigation actions for tornado events are identified in Chapter III, Section III.

- G. Climate Change:** Another aspect that must be taken into consideration is the effect climate change can have on the frequency, probability, and intensity of tornados. Increased greenhouse gases in the atmosphere are known to cause atmospheric warming. This warming raises convective available potential energy (CAPE), which is the measure of energy available for storms to form. This warming and increase of CAPE can significantly increase the number of days, frequency, and intensity of thunderstorm winds that affect Jenkins County and its municipalities. It's important to note that while there is a scientific consensus that climate change is happening and is largely driven by human activities, its exact impacts on specific weather phenomena like thunderstorm winds can also vary based on location and other natural factors such as changes in wind patterns, changes in land use and/or topography, etc.

## SECTION VI. TROPICAL STORMS

- A. Hazard Identification:** The committee reviewed historical data from the NCEI, SHELDUS<sup>TM</sup>, newspapers and citizen interviews in researching the past effects of Tropical Storms in Jenkins County. Tropical Storms are an organized system of strong thunderstorms with a defined surface circulation and maximum sustained winds of 39–73 MPH (34–63 knots). In this area they generally occur as a result of a hurricane or tropical system that has come inland.

Tropical storms begin as tropical depressions over warm oceanic water, then develop into tropical cyclones. A tropical cyclone life span can last from a few hours to close to three weeks. Most tropical cyclones last approximately five to ten days. If the winds are under or up to 39 mph, it is a tropical depression. If winds speeds are between 39 to 73 mph, it is considered a tropical storm. Any storm with over 74 mph wind speed is called a hurricane. As a rule, hurricanes occur in the western Atlantic Ocean when warm, humid conditions are prevailing. Hurricanes are usually accompanied by excessive rain, thunder and lightning. When hurricanes make landfall, they typically slow down. Unfortunately, at that time, another danger often appears – tornados. A storm surge, which is an abnormal rise in water levels in a coastal area, usually occurs with tropical storms. Jenkins County is not likely to experience a hurricane or storm surges.

**Table 2.13**

Saffir Simpson Scale for Hurricanes		
Category	Wind Speed	Expected Damage
One	74-95 mph	No real damage to building structures; primarily damage to trees, shrubbery, unanchored manufactured homes
Two	96-110 mph	Some roofing material, door, window damage; considerable damage to vegetation, manufactured homes.
Three	111-130 mph	Some structural damage to small residences and utility buildings; manufactured homes destroyed.
Four	131-155 mph	Some complete roof structure failure on small residences; more extensive curtain wall failures.
Five	155 mph up	Complete roof failure on many residences and industrial buildings; some complete building failures with small utility buildings blown over or away.

**B. Hazard Profile:** Tropical storms impact the entire county, with Jenkins County particularly susceptible to strong winds, heavy rainfall, and isolated tornadoes. Historical data spanning 74 years shows that there have been 20 tropical storms, with eight occurring in the last decade. In 2024, Jenkins County experienced back-to-back tropical systems that led to flooding and power outages. Hurricane Debby resulted in nearly seven inches of rain and wind gusts reaching 38 mph, causing significant flooding that washed out several roads. Later in September, Hurricane Helene brought more than five inches of rain and wind gusts of nearly 50 mph, leading to numerous reports of downed trees, power outages, and some damage to homes and businesses. The county is actively conducting damage assessments for these storms, and total damages are yet to be finalized by local officials. The hazard frequency table shows a 27 percent chance of an annual tropical storm event for the county. (See Appendix D). Table 2.14 was produced from interviews, *The Millen News*, and the NCEI and SHELDUSTM databases and shows the event and estimate cost of damages reported.

**Table 2.14**

Details	Date	PrD	CrD
A result of Hurricane Flossy	10/2/1956		
A result of Hurricane Cleo	08/28/1964	1,136.36	113.64
A result of Hurricane Dora	09/9/1964	147,058.82	
A result of Hurricane Alma	06/8/1966		1,470.59
A result of Tropical Storm Abby	06/6/1968		
A result of Hurricane Angus	06/19/1972		314.46
A result of Hurricane Kate	11/21/1985		
A result of Tropical Storm Charley	8/28/1986		
A result of Tropical Storm Allison	8/8/1995		
A result of Hurricane Earl	9/7/1998		
A result of Result of Hurricane Floyd	09/15/1999		
A result of Hurricane Jeanne	09/27/2004		
A result of Hurricane Alberto	06/12/2006		

A result of Hurricane Matthew	10/08/2016		
A result of Hurricane Irma	09/11/2017	200,000	
A result of Hurricane Michael	10/10/2018		
A result of Tropical Storm Nestor	10/20/2019		
A result of Hurricane Elsa	7/9/2021		
A result of Hurricane Debby	8/7/2024	TBT	TBT
A result of Hurricane Helene	9/27/2024	TBT	TBT

- C. Assets Exposed to Hazard and Estimate of Potential Losses:** In evaluating assets exposed to the natural hazard, the committee determined that all critical facilities, as well as all public, private and commercial property, are susceptible to tropical storms. The GMIS has the entire county with a wind hazard score of two, where wind speed is between 90 to 99 mph. Table 2.15 provides data from FEMA Worksheet #3a that estimates the potential loss for each jurisdiction.

**Table 2.15**

Jurisdiction	Number of Structure/Properties	Value	Population
Jenkins County (Unincorporated)	19,232	\$ 777,163,610	5,727
Millen	5,538	\$ 201,115,235	2,966
TOTAL FOR COUNTY	24,770	\$ 978,278,845	8,693

Source: Jenkins County Tax Assessor

Table 2.16 shows the number of critical facilities by jurisdictions, hazard score, replacement value, content value, and daily occupancy.

**Table 2.16**

Jurisdiction	Hazard Score	# of Critical Facilities	Replacement Value \$	Content Value \$	Occupancy	
					Day	Night
Jenkins County (Unincorporated)	2	27	\$50,886,750	\$10,920,000	1776	4
Millen	2	29	\$24,702,000	\$1,913,000	20	0
TOTAL FOR COUNTY		<b>56</b>	<b>\$75,588,750</b>	<b>\$12,833,000</b>	<b>1,796</b>	<b>4</b>

GMIS critical facility reports and FEMA Worksheet #3a are located in Appendix D for each individual jurisdiction and the county as a whole.

- D. Land Use & Development Trends:** Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard. Jenkins County is located in FEMA wind zone III, which is associated with 200-mph wind speeds. Currently, the county has no land use or development trends related to tropical storms. Information on current land use and future land use projections can be found in Appendix B.



- E. Multi-Jurisdictional Concerns** – All of Jenkins County has the same design wind speed of 200 mph. The entire county has the potential to be affected by tropical storms. As a result, any mitigation steps taken related should be considered on a county-wide basis to include all jurisdictions.
- F. Hazard Summary:** The entire county has the potential to be affected by tropical storms. Based on 74 years of historical data, there have been seven tropical storms reported by the NCEI and SHELDUS<sup>TM</sup> with reported property and crop damage. The county is actively conducting damage assessments for these Hurricane Debby and Hurricane Helene, and total damages are yet to be finalized by local officials.. To summarize, there are approximately 24,770 structures/properties in the county totaling slightly more than \$978 million with a population of 8,693. A breakdown of information for individual jurisdictions can be found in Appendix A and Appendix D. Specific mitigation actions for tropical storms are identified in Chapter III, Section III.
- G. Climate Change:** Another important factor to consider is the impact of climate change on the frequency, probability, and intensity of tropical storms. As global temperatures rise, we can expect an increase in both the number and intensity of these storms. The Geophysical Fluid Dynamics Laboratory predicts that the intensity of tropical storms will rise, with more Category 4 and 5 hurricanes becoming likely. Additionally, tropical cyclone rainfall rates are projected to increase by 10 to 15%, as a warming climate will slow the movement of these storms, resulting in more flooding.

## **SECTION VII. SEVERE WEATHER (THUNDERSTORM WINDS, LIGHTNING, HAIL)**

- A. Hazard Identification:** The committee reviewed historical data from the NCEI, SHELDUS<sup>TM</sup>, newspapers and citizen interviews in researching the past effects of severe weather in Jenkins County. The month of February marks the beginning of the severe weather season in the South, which can last until the month of August. Three types of severe weather were identified by the mitigation team: (1) thunderstorm winds, (2) lightning and (3) hail.

The first severe weather event, thunderstorm winds, can cause death and injury, power outages, property damage, and can disrupt telephone service, severely affect radio communications and surface/air transportation which may seriously impair the emergency management capabilities of the affected jurisdictions.

Thunderstorm winds arise from convection (with or without lightning), with speeds of at least 50 knots (58 mph), or winds of any speed producing a fatality, injury, or damage. Severe thunderstorms develop powerful updrafts and downdrafts. An updraft of warm, moist air helps to fuel a towering cumulonimbus cloud reaching tens of thousands of feet into the atmosphere. A downdraft of relatively cool, dense air develops as precipitation begins to fall through the cloud. Winds in the downdraft can reach in excess of 100 miles per hour. When the downdraft reaches the ground, it spreads out forming a gust front: the strong wind that kicks up just before the storm hits. As the thunderstorm moves through the area, the full force of the downdraft in a severe thunderstorm can be felt as horizontal, straight-line winds with speeds well over 50 miles per hour. Straight-line winds are often responsible for most of the damage associated with a severe thunderstorm. Damaging straight-line winds occur over a range of scales. At one extreme, a severe single-cell thunderstorm may cause localized damage from a microburst, a severe downdraft extending not more than about

two miles across. In contrast, a powerful thunderstorm complex that develops as a squall line can produce damaging winds that carve a path as much as 100 miles wide and 500 miles long.

The second severe weather event is lightning. Lightning results from the buildup and discharge of electrical energy between positively and negatively charged areas. Rising and descending air within a thunderstorm separates these positive and negative charges. Water and ice particles also affect charge distribution. A cloud-to-ground lightning strike begins as an invisible channel of electrically charged air moving from the cloud toward the ground. When one channel nears an object on the ground, a powerful surge of electricity from the ground moves upward to the clouds and produces the visible lightning strike. Lightning often strikes outside of heavy rain and may occur as far as 10 miles away from any rainfall.

The final severe weather event is hail. Hailstones are created when strong rising currents of air called updrafts carry water droplets high into the upper reaches of thunderstorms where they freeze. These frozen water droplets fall back toward the earth in downdrafts. In their descent, these frozen droplets bump into and coalesce with unfrozen water droplets and are then carried back up high within the storm where they refreeze into larger frozen drops. This cycle may repeat itself several times until the frozen water droplets become so large and heavy that the updraft can no longer support their weight. Eventually, the frozen water droplets fall back to earth as hailstones.

Hail can also be a destructive aspect of severe thunderstorms. Hail causes more monetary loss than any other type of thunderstorm-spawned severe weather in the United States, annually producing about one billion dollars in crop damage. Storms that produce hailstones only the size of a dime can produce dents in the tops of vehicles, damage roofs, break windows and cause significant injury or even death.

- B. Hazard Profile:** Thunderstorm winds, lightning and hail can affect the entire county given the right conditions. Since the exact time and location of a severe weather event is not always predictable, all of Jenkins County is vulnerable to the threats of severe weather.

Thunderstorms normally occur during the spring and summer months and often carry strong winds. There have been 117 events recorded in the last 50 years with winds speeds up to 96 mph reported. Over \$1,036,100 in property and crop damages were reported with one injury. Table 2.17 breaks down the thunderstorm events by jurisdiction. A complete table of thunderstorm wind events can be found in Appendix A.

**Table 2.17**

Location	Total # of events per jurisdiction
Jenkins County(Unincorporated)	66
Millen	51
TOTAL FOR COUNTY	<b>117</b>

*Source: NCEI and SHELDUS*

Using a 20-year hazard cycle, the frequency table calculates an annual chance for a thunderstorm event producing high winds is 132 percent for the unincorporated areas of the county and 114

percent for Millen. Jenkins County as a whole has an overall probability of 234 percent for a significant thunderstorm. Hazard frequency tables for individual jurisdictions are in Appendix D.

The second weather event is lightning. During the spring and summer months the county experiences numerous storms that can often produce lightning. There have been 82 lightning strikes recorded in the past 67 years that resulted in wildfires. These fires have burned nearly 700 acres. There have been lightning one lightning event recorded since the last update that caused a wildfire. Jenkins County experiences 6-12 flashes per square mile per year. Specific information and maps can be found <https://www.vaisala.com/en/digital-and-data-services/lightning>. (Note: Information on the Vaisala website is copyrighted and for display purposes only). Based on a 20-year hazard cycle there is a 123 percent chance of an annual lightning strike in Jenkins County.

The final severe event is hail. In the last 74 years there have been 23 hail events reported to the NCEI and SHELDUS™ databases with slightly more than \$1,000 in property and crop damages and no injuries reported. Hail ranged in size from .75 to 1.75 inches. Using a 20-year hazard cycle, frequency tables calculates an annual chance for a hail event at:

- 35 percent for the unincorporated areas of the county;
- 35 percent for Millen;

Overall, there is a 85 percent chance that an annual hail event in Jenkins County. A complete list of all hazards is in Appendix A and hazard frequency tables for individual jurisdictions are in Appendix D.

- C. Assets Exposed to Hazard and Estimate of Potential Losses:** In evaluating assets exposed to the natural hazard, the committee determined that all critical facilities, as well as all public, private and commercial property, are susceptible to thunderstorm winds, lightning and hail events. The GMIS has the entire county with a wind hazard score of two, where wind speed is between 90 to 99 mph. Table 2.18 provides data from FEMA Worksheet #3a that estimates the potential loss for each jurisdiction.

**Table 2.18**

Jurisdiction	Number of Structure/Properties	Value	Population
Jenkins County (Unincorporated)	19,232	\$777,163,610	5,727
Millen	5,538	\$201,115,235	2,966
TOTAL FOR COUNTY	27,770	\$978,278,845	8,693

*Source: Jenkins County Tax Assessor*

All 56 critical facilities have a wind hazard score of two placing the critical facilities in Zone IV which has a wind speed of 90 to 99 mph. Table 2.19 shows the number of critical facilities by jurisdictions, hazard score, replacement value, content value, and daily occupancy.

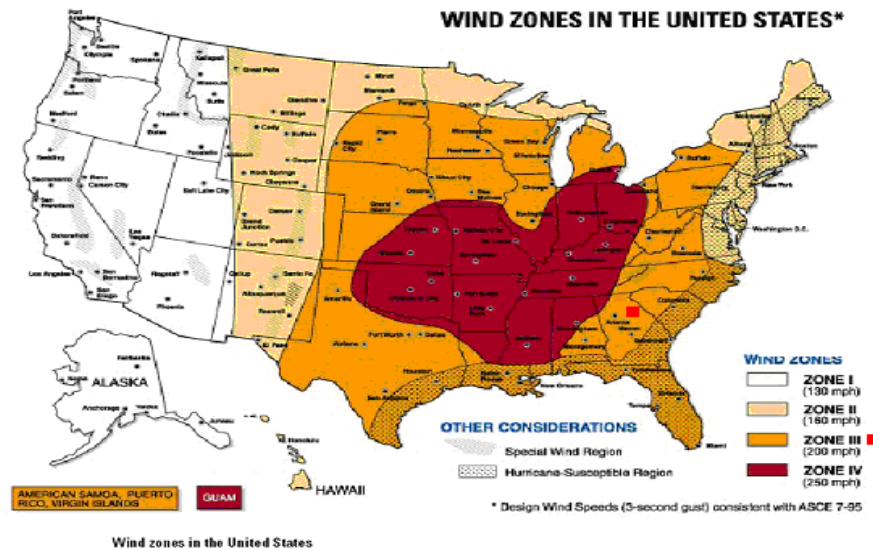
**Table 2.19**

Jurisdiction	Hazard Score	# of Critical Facilities	Replacement Value \$	Content Value \$	Occupancy	
					Day	Night
Jenkins County (Unincorporated)	2	27	\$50,761,750	\$10,645,000	1,776	4
Millen	2	29	\$24,702,000	\$1,913,000	20	0
TOTAL FOR COUNTY		56	\$75,463,750	\$12,558,000	1,796	4

GMIS critical facility reports for wind and FEMA Worksheet #3a are located in Appendix D for each individual jurisdiction and the county as a whole.

- D. Land Use & Development Trends:** Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard. Jenkins County is located in FEMA wind zone III, which is associated with 200-mph wind speeds. Currently, the county has no land use or development trends related to tornados, tropical storm, thunderstorm winds, lightning, or hail events.

- E. Multi-Jurisdictional Concerns** – All of Jenkins County has the same design wind speed of 200 mph as determined by the American Society of Civil Engineers (ASCE) as evidenced by the map and table below.



		WIND ZONE			
		I	II	III	IV
NUMBER OF TORNADOES PER 1,000 SQUARE MILES	<1	LOW RISK	LOW RISK ★	LOW RISK ★	MODERATE RISK
	1 - 5	LOW RISK	MODERATE RISK ★	HIGH RISK	HIGH RISK
	6 - 10	LOW RISK	MODERATE RISK ★	HIGH RISK	HIGH RISK
	11 - 15	HIGH RISK	HIGH RISK	HIGH RISK	HIGH RISK
	>15	HIGH RISK	HIGH RISK	HIGH RISK	HIGH RISK

LOW RISK	MODERATE RISK	HIGH RISK
Need for high-wind shelter is a matter of homeowner preference	Shelter should be considered for protection from high winds	Shelter is preferred method of protection from high winds

★ Shelter is preferred method of protection from high winds if house is in hurricane-susceptible region

The entire county has the potential to be affected by thunderstorm winds, lightning and hail. As a result, any mitigation steps taken related for these three severe weather events should be considered on a county-wide basis to include all jurisdictions.

- F. Hazard Summary:** The entire county has the potential to be affected by severe weather. Table 2.20 provides a summary of all severe weather events

**Table 2.20**

Weather Event	#	Fatalities	Injuries	Approximate Property/Crop Damage
Thunderstorm Winds	117	0	0	\$1,036,100
Lightning	82	0	0	0
Hail	23	0	0	\$1,000

The GMIS has the entire county with a wind hazard score of two, where wind speed is between 90 to 99 mph. All 56 critical facilities have a wind hazard score of two with a replacement cost of more than \$75 million. To summarize, there are approximately 24,770 structures/properties in the county totaling slightly more than \$978 million with a population of 8,693. A breakdown of information for individual jurisdictions can be found in Appendix A and Appendix D. Specific mitigation actions for thunderstorm winds, lightning and hail events are identified in Chapter III, Section III.

- G. Climate Change:** Another aspect that must be taken into consideration is the effect climate change can have on the frequency, probability, and intensity of thunderstorms. Increased greenhouse gases in the atmosphere are known to cause atmospheric warming. This warming raises convective available potential energy (CAPE), which is the measure of energy available for storms to form. This warming and increase of CAPE can significantly increase the number of days, frequency, and intensity of thunderstorm winds that affect Jenkins County and its municipalities. It's important to



note that while there is a scientific consensus that climate change is happening and is largely driven by human activities, its exact impacts on specific weather phenomena like thunderstorm winds can also vary based on location and other natural factors such as changes in wind patterns, changes in land use and/or topography, etc.

## SECTION VIII. WINTER STORMS

- A. Hazard Identification:** Southeastern snow or ice storms often form when an area of low pressure moves eastward across the northern Gulf of Mexico. To produce a significant winter storm in the south, not only must temperatures be cold enough, but there must also be enough moisture in the atmosphere to produce adequate precipitation. A major winter storm can last for several days and be accompanied by high winds, ice and freezing rain, heavy snowfall, and cold temperatures. These conditions can make driving conditions very dangerous, as well as bring down trees and power lines.
- B. Hazard Profile:** Winter storms are not spatially defined and affect the entire planning equally. The committee researched historical data from the NCEI, SHELDUS<sup>TM</sup>, and SERCC, as well as information from past newspaper articles relating to winter storms in Jenkins County. There have been 33 winter storm events recorded in the county over the last 74 years with an estimated property damage of \$135,150.

The ice storm on February 11-13, 2014, had freezing rain and sleet with accumulations of up to 1½ inches of ice across the area. Approximately 98 percent of local residents were without power at the height of the storm as ice accumulated on electric lines and falling trees and limbs brought them down.

A shelter for around 50 persons without electricity and heat was established at West Millen Baptist Church for several days. Some residents chose to stay at area hotels that still had electricity. Icy roads, along with falling trees and limbs, kept traffic at a standstill. Several city streets were closed due to fallen debris and numerous county roads had to be cleared of fallen trees and limbs. One local death was attributed to the storm. The city of Millen removed approximately 13,000 tons of debris while the County removed around 81,000 tons' cubic yards with a removal cost of approximately \$70,000.

The timber industry was severely affected by the storm. Jenkins was one of the nine counties hit by the storm and had moderate to severe timber damage according to the GFC. The GFC examined the levels of damage within two types of pine that were most frequently damaged: the young pine stands and pine stands on which a first thinning had recently occurred. The moderate to severe damage has branches and limbs broken from the trees with damage to the overall stand, having more than 25 percent of branches damaged.

Although winter storms are infrequent in the south, they have the potential to cause excessive damage to a community and disrupt the lives of residents. Based on the hazard frequency table located in Appendix D there is a 30 percent chance of an annual winter storm event for the entire county.

- C. Assets Exposed to Hazard and Estimate of Potential Losses:** In evaluating assets that may potentially be impacted by the effects of winter storms, the committee determined that all critical facilities, as well as all public, private and commercial property, are susceptible. Table 2.21 shows assets by jurisdiction that could be at potential risk of damage from a winter storm event.

**Table 2.21**

Jurisdiction	# of Structure/Properties	Value	Population
Jenkins County (Unincorporated)	19,232	\$777,163,610	5,727
Millen	5,538	\$201,115,235	2,966
<b>TOTAL FOR COUNTY</b>	<b>24,770</b>	<b>\$978,278,845</b>	<b>8,693</b>

*Source: Jenkins County Tax Assessor*

The GMIS does not provide a report for winter storm damage but there is slightly more than \$978 million worth of assets with potential loss to winter storm hazards countywide. Table 2.22 shows the number of critical facilities by jurisdiction, hazard score, replacement value and daily occupancy (See Appendix D for Worksheet 3a and Hazard Frequency Tables).

**Table 2.22**

Jurisdiction	# of Critical Facilities	Replacement Value \$	Content Value \$	Occupancy	
				Day	Night
Jenkins County (Unincorporated)	27	\$50,761,750	\$10,645,000	1,776	4
Millen	29	\$24,702,000	\$1,913,000	20	0
<b>TOTAL FOR COUNTY</b>	<b>56</b>	<b>\$75,463,750</b>	<b>\$12,558,000</b>	<b>1,976</b>	<b>4</b>

- D. Land Use & Development Trends:** Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard. Jenkins County currently has no land use or development trends related to winter storms. Projected changes in land use based on the county's multi-jurisdictional comprehensive plan has minimal or no change to land use within the incorporated jurisdictions. The greatest change in land use and future development has a decrease in forest land that will be converted to residential. Since it is impossible to determine where future residents will move in the unincorporated areas of the county, vulnerability in terms of future buildings, infrastructure and critical facilities is not known at this time. It can be surmised that this will bring an increase in population and homes.
- E. Multi-Jurisdictional Concerns:** Jenkins County currently has no land use or development trends related to winter storms. All of the county can potentially be negatively impacted by winter storms. As a result, any mitigation steps taken related to winter storms should be undertaken on a countywide basis and include all incorporated jurisdictions. A concern is the lack of available data for the county and city of Millen. A database needs to be created and maintained that provides information on past and future occurring winter storm events.

Another major issue is county-wide communications capabilities. During a natural hazard it is imperative that all emergency personnel can communicate with each other throughout the entire planning area. The county and its jurisdictions have numerous dead spots throughout the area due to

topography and lack of adequate communication equipment. The county and its emergency personnel are dependent on the private sector for towers to use for signals. If these towers are ever removed the county will be without any adequate means to bounce signals. The county and all jurisdictions are aware of the need to develop communication capabilities that will serve the entire county.

- F. Hazard Summary:** There have been 34 recorded winter storms. There is a 27 percent chance of an annual winter storm event. Winter storms can be more accurately predicted than most other natural hazards, making it possible to give advance warning to communities. The National Weather Service issues winter storm warnings and advisories as these storms make their way south. Given the infrequency of these types of storms, southern communities are still not properly equipped to sustain the damage and destruction caused by severe winter storms. To summarize, there are approximately 24,770 structures/properties in the county totaling slightly more than \$978 million with a population of 8,693. The committee recognized the dangers posed by winter storms and identified specific mitigation actions in Chapter III, Section III.
- G. Climate Change:** The Environment Protection Agency reported in 2016 that the state of Georgia, including Jenkins County, will continue to experience an annual warming trend as a result of broader climate change. Though this may decrease the future risk of ice storms and severe winter weather, Jenkins County must remain vigilant in preparing for winter hazards, given its proclivity of unexpected storms to shudder the county's response resources.

## CHAPTER III. MITIGATION STRATEGIES

Table 3.1 provides a brief description of each section in this chapter and a summary of the changes that have been made.

**Table 3.1**

Chapter III. Section	Updates to Section
I. Flooding	Completed action steps were removed. All text was reviewed and edited as needed. Goals, Objective, and Actions Steps were updated ad needed.
II. Dam Failure	Completed action steps were removed. All text was reviewed and edited as needed. Goals, Objective, and Actions Steps were updated ad needed.
III. Drought	Completed action steps were removed. All text was reviewed and edited as needed. Goals, Objective, and Actions Steps were updated ad needed.
IV. Wildfire	Completed action steps were removed. All text was reviewed and edited as needed. Goals, Objective, and Actions Steps were updated ad needed.
V. Tornado	Completed action steps were removed. All text was reviewed and edited as needed. Goals, Objective, and Actions Steps were updated ad needed.
VI. Tropical Storms	Completed action steps were removed. All text was reviewed and edited as needed. Goals, Objective, and Actions Steps were updated ad needed.
VII. Severe Weather	Completed action steps were removed. All text was reviewed and edited as needed. Goals, Objective, and Actions Steps were updated ad needed.
VIII. Winter	Completed action steps were removed. All text was reviewed and edited as needed. Goals, Objective, and Actions Steps were updated ad needed.
IX. All Hazards	Completed action steps were removed. All text was reviewed and edited as needed. Goals, Objective, and Actions Steps were updated ad needed.

### SECTION I. INTRODUCTION TO MITIGATION STRATEGY

This chapter addresses the mitigation strategy requirements of 44 CFR Section 201.6 (c)(3): “A mitigation strategy that provides the jurisdiction’s blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools. This section shall include:

- i) A description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.
- ii) A section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure. All plans

- approved by FEMA after October 1, 2008, must also address the jurisdiction's participation in the NFIP, and continued compliance with NFIP requirements, as appropriate.
- iii) An action plan describing how the actions identified in paragraph (c)(3)(ii) of this section will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost-benefit review of the proposed projects and their associated costs.
  - iv) For multi-jurisdictional plans there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.”

#### **A. Priority Changes from Previously Approved Plan**

There have been no significant priority changes from the previous plan. The goal of Jenkins County and Millen is to protect the safety, health and well-being of all county citizens, and to protect public and private property and to lessen the overall effects of a hazard event.

There has been limited new development since the previous plan and no increase in population that would affect the overall vulnerability of the community from identified hazards. This has been no new adoption of development or building regulations to increase or decrease the overall vulnerability to hazard events.

#### **B. Capability Assessment**

The County identified current capabilities for implementing hazard mitigation activities. The capability assessment identifies administrative, technical, legal and fiscal capabilities. This includes a summary of departments, and their responsibilities associated with hazard mitigation as well as codes, ordinances, and plans already in place that contain mitigation activities or programmatic structure. The second part of the assessment examined the fiscal capabilities applicable to providing financial resources to implement identified mitigation action items. Jenkins County has an annual budget of approximately \$12,241,473 and Millen's budget is \$8,593,99. It should be noted that mitigation action steps with high dollar amounts cannot be completed without grant funds and careful budget planning by each jurisdiction.

While not all technical and administrative skills are found in-house, all jurisdictions have access to multiple staff through the RC and can contract with private firms or any professional services needed. Jurisdictions can expand their capabilities measures such as the adoption of zoning, land-use practices, and building codes. Additional staff can be hired when funding becomes available. The three tables below identify the administrative, technical, legal and fiscal capabilities of each jurisdiction.

**Table 3. 2 Legal and Regulatory Capability (Y/N)**

Regulatory Tools (ordinances, codes, plans)	Jenkins County	Millen	Does State Prohibit
Building code	N	Y	N
Zoning ordinance	N	Y	N
Subdivision ordinance or regulations	Y	Y	N



Regulatory Tools (ordinances, codes, plans)	Jenkins County	Millen	Does State Prohibit
Special purpose ordinances (floodplain management, storm water management, soil erosion)	Y	Y	N
Growth management ordinances (also called “smart growth” or anti- sprawl programs)	N	N	N
Site plan review requirements	Y	Y	N
General or comprehensive plan	Y	Y	N
A capital improvement plan	Y	Y	N
An economic development plan	Y	Y	N
An emergency response plan	Y	Y	N
A post-disaster recovery plan	Y	Y	N
A post-disaster recovery ordinance	N	N	N
Real estate disclosure requirements	N	N	N

**Table 3.3 Fiscal Capability**

Financial Resources	Jenkins County	Millen	Accessible or Eligible to Use (Yes/No)
Community Development Block Grants (CDBG)	Y	Y	Y
Capital improvements project funding	Y	Y	Y
Authority to levy taxes for specific purposes	Y	Y	Y – Vote required
Fees for water, sewer, gas, or electric service	N	Y	Y
Impact fees for homebuyers or developers for new developments/homes	N	N	N
Incur debt through general obligation bonds	Y	Y	Y
Incur debt through special tax and revenue bonds	Y	Y	Y – Vote required
Withhold spending in hazard-prone areas	N	N	N
Other Grants	Y	Y	N

**Table 3.4 Administrative and Technical Capacity**

Staff/Personnel Resources	Jenkins County	Millen	Dept./Agency and Position
Planner(s) or engineer(s) with knowledge of land development and land management practices	Y	Y	Building Dept./ Code Enforcement/ Public Works CSRA RC
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Y	Building Dept./ Code Enforcement
Planners or Engineer(s) with an understanding of natural and/or manmade hazards	Y	Y	Public Works/CSRA RC Staff
Floodplain manager	Y	Y	Building Dept.
Surveyors	N	N	Contracted as needed
Staff with education or expertise to assess the community’s vulnerability to hazards	Y	Y	Public Safety/EMA
Personnel skilled in GIS and/or HAZUS	Y	Y	CSRA RC Various
Emergency manager	Y	Y	EMA

Staff/Personnel Resources	Jenkins County	Millen	Dept./Agency and Position
Grant writers	Y	Y	CSRA RC

### C. Community Mitigation Goals

Collectively, the jurisdictions reviewed the hazard profiles, and the loss estimates information in Section II and used it as a basis for developing mitigation goals, objectives and action steps. Mitigation goals are preventive measures to lessen the effect of and losses due to hazard events and are typically long-range visions adapted toward jurisdictional policy. Mitigation objectives are strategies to attain identified goals. Goals and objectives are formulated by reviewing hazard historical data, existing local plans, policy documents, regulations, and public input. Each jurisdiction developed objectives and actions unique to specific vulnerabilities or concerns within its boundaries.

Mitigation actions were developed as the means to carry out the objectives and attain goals. All action steps should be compatible with the plans, policies, and regulations of each jurisdiction. The jurisdictions must also have the legal, administrative, fiscal, and technical capacities to perform each action.

The capabilities assessment above aided in forming realistic mitigation actions. This capabilities assessment can then incorporate results of the STAPLEE worksheet to identified obstacles that may hinder the completion actions. Each jurisdiction identified, and prioritized actions steps along with an implementation schedule, funding source, and coordinating individual or agency.

Based on the capability's assessment, the STAPLEE and six categories listed above the county and all jurisdictions identified the following goals:

- Goal 1: Protect the safety, health and well-being of all county citizens;
- Goal 2: Protect public infrastructure and private property;
- Goal 3: Educate the community about natural hazards;
- Goal 4: Manage development to minimize loss;
- Goal 5: Natural Resources Protection; and
- Goal 6: Structural modifications to reduce the impacts of hazard events.

### D. Identification & Analysis of Range of Mitigation Actions

The framework used to guide jurisdictions in identifying mitigation measures was developed by FEMA and is captured by the following six categories:

- **Prevention:** Government administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities that reduce hazard losses. Examples include building and construction code revisions; zoning regulation changes; and computer hazard modeling.

- **Property Protection:** Actions that involve the modifications of existing buildings or structures to protect them from a hazard, or removal from the hazard area. Examples include roadway elevations, improving wind and impact resistance, and flood proofing.
- **Public Education and Awareness:** Action to inform and educate citizens, elected officials, and property owners about the hazards and potential ways to mitigate them. Examples include programs that target repetitive loss properties and vulnerable populations.
- **Natural Resources Protection:** Actions that, in addition to minimizing hazard losses, also preserve or restore the function of natural systems. Examples include projects to create open space, green space, and stream restoration.
- **Structural Projects:** Actions that involve the construction of structures to reduce the impact of a hazard. Examples include projects that control floodwater, reconstruction of dams, and construction of regional retention areas.
- **Emergency Services:** Actions that protect people and property during and immediately after a disaster event or hazard event. Examples include enhancements that provide advanced warning and redundant communications.

i. **Structural and Non-Structural**

Mitigation relates to concrete actions which are put into practice to reduce the risk of destruction and casualties. Mitigation is generally split into two main types of activities: structural and non-structural. Structural mitigation refers to any physical construction to reduce or avoid possible impacts of hazards, which include engineering measures and the construction of hazard-resistant and protective structures and infrastructure. Non-structural mitigation refers to policies, awareness, knowledge development, public commitment, and methods and operating practices, including participatory mechanisms and the provision of information, which can reduce risk with related impacts. The committee has identified both structural and non-structural mitigation measures to ensure that the community adequately addresses all hazard events. Structural and non-structural actions are identified in Section III. Mitigation Action Table.

ii. **Existing Policies, Regulations, Ordinances, and Land Use**

Jenkins County and Millen have adopted the following Mandatory codes:

- Georgia State Minimum Standard Building Code (International Building Code 2018 with Georgia State Amendments 2020, 2022, 2024).
- Georgia State Minimum Standard One- and Two-Family Dwelling Code (International Residential Code 2018 for One- and Two-Family Dwellings with Georgia State Amendments 2020).
- Georgia State Minimum Standard Fire Code (International Fire Code 2018 with Georgia State Amendments 2020, 2022, 2023, 2024).
- Georgia State Minimum Standard Plumbing Code (International Plumbing Code 2018 with Georgia State Amendments 2020, 2022, 2023, 2024).
- Georgia State Minimum Standard Mechanical Code (International Mechanical Code 2018 with Georgia State Amendments 2020, 2022).
- Georgia State Minimum Standard Gas Code (International Fuel Gas Code 2018 with Georgia State Amendments 2020, 2022).

- Georgia State Minimum Standard Electrical Code (National Electrical Code 2020 with Georgia State Amendments 2020, 2022, 2023).
- Georgia State Minimum Standard Energy Code (International Energy Conservation Code 2015 with Georgia State Supplements and Amendments 2020, 2022, 2023).

Life Safety Code (NFPA 101, 2021).

They have also adopted the Permissive codes:

- International Property Maintenance Code.
- International Existing Building Code.

Other types of ordinances that have been adopted are:

- Mobile home ordinances to regulate location.
- Jenkins County and Millen have flood plain ordinances.
- Millen has adopted zoning ordinances and subdivision regulations.
- Public Nuisance Code/ Dilapidated Building Ordinance.

The Jenkins County Board of Commissioners and the City Council of Millen adopted the *Joint Millen-Jenkins County Comprehensive Plan 2023-2028* by resolution. The planning process examines the current and future trends and assesses the strengths and opportunities available to achieve their community vision. This document drives the decision-making process for the County and Millen. The joint comprehensive plan also examines existing land use and projects for future land use.

### iii. NFIP Code Adherence

Millen-Jenkins' Zoning Administrator is the designee that enforces the National Flood Insurance Program requirements for unincorporated Jenkins County and the City of Millen. They also oversee the NFIP requirements and flood prevention within its jurisdiction. The office reviews any permit applications or zoning complaints for their respective jurisdictions. Permits are not approved until signed off as compliant with all building codes and NFIP requirements. As the agencies that implement the addressed commitments and requirements of the NFIP, they also administer and oversee the process of substantial improvement (SI)/substantial damage (SD) regulations post-disaster. Assessment of damages after a disaster helps in community resiliency and future mitigation strategies. Implementing existing guidelines and local regulations such as building codes, zoning ordinances, and disaster management plans continues to help these communities recover from natural disasters.

Duties of the zoning administrator shall include, but not be limited to:

- Reviewing proposed development to ensure that the permit requirements of this article have been satisfied.
- Reviewing proposed development to ensure that all necessary permits have been received from governmental agencies from which approval is required by federal or state law, including section 404 of the Federal Water Pollution

Control Act Amendments of 1972, 33 USC 1344. Copies of such permits are required to be provided and maintained on file.

- Reviewing all permit applications to determine whether proposed building sites will be reasonably safe from flooding.
- When base flood elevation data or floodway data have not been provided in accordance with section 16-25, obtaining, reviewing and reasonably utilizing any base flood elevation and floodway data available from a federal, state or other sources in order to administer the provisions of sections 16-35 through 16-40.
- Reviewing and recording the actual elevation in relation to mean sea level (or highest adjacent grade) of the lowest floor, including basement, of all new or substantially improved structures in accordance with section 16-33(2).
- Reviewing and recording the actual elevation, in relation to mean sea level to which any new or substantially improved structures have been floodproofed, in accordance with section 16-33(2).
- Obtaining certification of design criteria from a registered professional engineer or architect in accordance with sections 16-33(1)c and 16-36(2) when floodproofing is utilized for a structure.
- Making substantial damage determinations following a flood event or any other event that causes damage to structures in flood hazard areas.
- Performing damage assessments after each hazard event; informing property owners of how to apply for permits for repairs and determining if the damage that has occurred qualifies as substantial damage.
- Reviewing permit applications for buildings located within the special flood hazard area to determine if the work being requested constitutes SI or SD repairs, and ensuring all requirements are addressed.
- Reviewing cost estimates of the proposed work to ensure they are reasonable using the current market value of the structure and its characteristics, while excluding land value. Using the market value to determine if the proposed improvements meet SI requirements or using market value prior to the damage to determine if repairs meet SD requirements.
- Conduct field inspections during construction to ensure it complies with issued permits and work with owners to correct any violations found.
- Retain all FIRMs and maintain all SFHA permits. Accessible by the general public.
- Coordinate with property owners and insurance adjusters on all NFIP flood insurance claims and Increased Cost of Compliance (ICC) coverage.
- Notifying adjacent communities and the state department of natural resources prior to any alteration or relocation of a watercourse and submitting evidence of such notification to the Federal Emergency Management Agency (FEMA).
- For any altered or relocated watercourse, submitting engineering data/analysis within six months to FEMA to ensure accuracy of community flood maps through the letter of map revision process. Ensure flood carrying capacity of any altered or relocated watercourse is maintained.
- Making the necessary interpretation where interpretation is needed as to the exact location of boundaries of the areas of special flood hazard (for example,



where there appears to be a conflict between a mapped boundary and actual field conditions). Any person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this article.

- Maintaining all records pertaining to the provisions of this article in the office of the code enforcement officer which shall be open for public inspection.

(Ord. No. 06102010, art. 3, § C, 6-10-2010)

Assessment of substantial damage after a disaster helps in resilience and mitigation strategies. Implementing existing guidelines and local regulations such as building codes, zoning ordinances, and disaster management plans has helped recover from natural disasters' aftermath. Documentation and Reporting: Prepare detailed documentation of the damage assessment, cost estimation, and calculations. This documentation will be essential for official determinations, insurance claims, or assistance applications.


## E. Community Values, Historic & Special Considerations

### Historical-Cultural

There are currently six buildings and sites presently listed in the National Register of Historic Places (NR) in Millen and Jenkins County:

- *Birdsville Plantation* (listed 1971). Dating to the eighteenth century and held by one family from the time of a land grant by King George III, Birdsville Plantation is architecturally significant for its large number of standing outbuildings.
- *Camp Lawton* (also known as *Magnolia Springs State Park*), (listed 1978). Camp Lawton was a Confederate prison camp holding 10,000 Union soldiers from the overflow at Andersonville Prison Camp in Georgia during the Civil War. Three earthworks surround the stockade area.
- *Jenkins County Courthouse* (listed 1980 pictured). Built in 1910, the building was designed by L.F. Goodrich in the Neoclassical Revival style. This courthouse replaced one destroyed by fire, and the present courthouse suffered from a severe fire in 1919.



- *Carswell Grove Baptist Church and Cemetery* (listed 1996). The building's Gothic Revival-style details include pointed-arch windows with simple tracery and drip-molds, blind pointed arches applied to above the entrance doors, and a scalloped raking cornice along the front gable. The property is significant in African-American heritage and religion because it has served the religious, social and cultural needs of a remote, rural African-American community.
- 
- *Downtown Millen Historic District* (listed 1996). Located in the central business district of Millen. The district extends over portions of six city blocks along Cotton Avenue.
  - *Millen High School* (listed 2002). Located on a large corner lot in a residential area of Millen. Three buildings, two contributing and one noncontributing, constructed at different times, make up the school campus. The complex is significant in the area of architecture as a good example of a school constructed over time for a small Georgia community.

### **Recreation**

Magnolia Springs State Park, located 5 miles north of Millen on U.S. Hwy. 25 in north Jenkins County, is known for its crystal-clear springs flowing 7 million gallons of water per day and the beautiful boardwalk which spans the cool water. The park covers over 1,700 acres of recreational and park space. During warmer months, visitors may watch alligators, turtles and other wildlife near the springs. A free, freshwater aquarium features native species, and a 28-acre lake with accessible dock available for fishing and boating. There is also over 10-miles of hiking and biking trails, camping facilities, three playgrounds, a swimming pool, picnic areas, and many more amenities for visitors.

The Ogeechee River runs through Jenkins County, and it is one of the county's largest tourist attractions. The Ogeechee is the largest continuous flowing river east of the Mississippi River. People enjoy fishing, boating, swimming, camping and other recreational activities on the Ogeechee.

### **Economic Drivers**

The County lies strategically between Augusta and Savannah and is striving to benefit from the growth of both regional centers. The county has access to I-20, I-16 and I-95 via U.S. 25. The Savannah River Parkway, a four-lane divided highway connects Augusta to Savannah. Millen, Georgia is the HUB of this Parkway and the 4-lane highway that continues from Millen on to Statesboro and to I-16.

Jenkins County also has convenient access to the international Port of Savannah, serviced by over 100 daily motor carriers and the capacity to handle thousands of

containers. Other transportation related opportunities include rail service provided by Norfolk Southern Railway. Millen serves as the switching station for the Norfolk Southern Railway from Atlanta to Savannah, to Augusta, etc. With direct access to the ports of Savannah, hundreds of trains are routed through Millen and switched to many different destinations.

**i. Prioritization of Actions:**

Those Mitigation Actions given high priority are in two groups: life safety-related actions that can be accomplished relatively quickly and changes to protect critical facilities on which other emergency management systems are dependent, for example communications focal points. Those actions are likely to require extended time frames to accomplish received medium or low priority status.

The committee used the STAPLEE worksheet to select and prioritize the most appropriate mitigation alternatives. This methodology requires that seven categories be considered when reviewing potential actions. This process helped ensure that the most equitable and feasible actions would be undertaken based on each jurisdiction's capability. Table 3.5 provides information regarding the review and selection criteria for alternatives.

**Table 3.5**

**STAPLEE REVIEW AND SELECTION CRITERIA FOR ALTERNATIVES**

- Is the proposed action acceptable by the community?
- Is the action compatible with current and future community values?
- Are equity concerns involved that would result in unjust treatment of any segment of the population?
- Will the proposed action cause social disruption?

**TECHNICAL**

- Will the proposed action achieve the stated objective and further mitigation goals?
- Will the proposed action create more problems than it solves?
- Does the proposed action resolve the problem completely or partially?
- It is the most useful action in light of other community values?

**ADMINISTRATIVE**

- Does the community have the capability to implement proposed action?
- Is there someone to lead or coordinate the proposed action?
- Is there sufficient funding, staff and technical support to implement the proposed action step?
- Are there ongoing administrative needs that are required?

**POLITICAL**

- Is the proposed action politically acceptable?
- Have political leaders participated in the planning process?
- Who are the stakeholders for this proposed action?
- Have all stakeholders been afforded an opportunity to participate in the planning process?
- Is there public support to implement and maintain the action?

**LEGAL**

- Does the community have the authority to implement the proposed action?

- Is there a clear legal basis for the proposed action?
- Are there legal side effects? (i.e. could the action be construed as a taking)
- IS the proposed action allowed in the general plan?
- Will the community be liable for action or lack thereof?
- Will the proposed action be challenged??

#### ECONOMIC

- What is the cost-benefit of the proposed action (do the benefits exceed the cost)?
- Have initial, maintenance and administrative costs been taken into account??
- Has funding been secured for the proposed action? If not have funding sources been identified?
- Will the proposed action affect the fiscal capabilities and/ or budget of the jurisdiction?
- Will the proposed action place a tax burden on the community?
- Does the proposed action contribute to other community goals? (capital improvements, economic development)

#### ENVIRONMENTAL

- Will the proposed action have a positive or negative effect on the environment?
- Does the proposed action require environmental regulatory approvals?
- Does the proposed action meet local and state regulations?
- Does the proposed action impact a threatened or endangered species?

### F. Introduction to Action Plan

The next two sections of Chapter III., Section II. Natural Hazards and Section III. Mitigation Actions, comprise the strategies that Jenkins County together with Millen have identified to reduce the effects of natural hazards. Mitigation actions given high priority are in two groups: (1) life safety-related actions that can be accomplished relatively quickly and (2) changes to protect critical facilities on which other emergency management systems are dependent, for example communications focal points. Those actions are likely to require extended time frames to accomplish received medium or low priority status.

## SECTION II. NATURAL HAZARDS

### A. Flooding Action Plan

The committee determined that due to the presence of flood plains in the county efforts to reduce the level of exposure to flooding should be considered. In previous flooding instances, damage has been sustained primarily to roads, bridges and natural resources. Specific mitigation measures identified by the committee are designed to lessen the effects of such damage to new and existing structures in the future.

**Objective A1.** Improve the effectiveness of existing flood insurance programs.

**Objective A2.** Evaluate and improve the present drainage infrastructure.

**Objective A3.** Warn citizens when the potential for flooding exist.

**Objective A4.** Lessen the impact to existing buildings, critical facilities and infrastructure as a result of flooding.

**Objective A5.** Limit future development in flood prone areas.

**Objective A6.** Reduce the threat of water contamination caused by flooding.

### B. Dam Failure Action Plan

Dam failure mainly affects areas that are downstream of the event. Further study of this type event is required to determine where property damage and loss of life has the greatest potential to occur. Critical facilities and vulnerable populations are located in all jurisdictions as well as the unincorporated areas of the County. As a result, any mitigation steps taken related to dam failure events should be undertaken on a countywide basis and specifically include all incorporated jurisdictions.

**Objective B1.** Identify at risk population and properties.

**Objective B2.** Develop proposal to regulate protective measures for dam breach zones

### C. Drought Action Plan

As indicated in Chapter II, Section III, drought conditions can cause costly damage to crops. However, from a danger or hazard perspective, the greatest threat posed by drought conditions is from potential wildfires. As 62% of the county is made up of forest and woodlands, the possibility for wildfires is distinct and poses a significant threat. In general, wildfires are the result of dry conditions combined with lightning or carelessness. The committee determined that mitigation goals were necessary to prevent crop damage, as well as damage to new and existing structures.

**Objective C1.** Ensure that there is an adequate water supply during periods of drought.

**Objective C2.** Educate citizens on water conservation issues.

### D. Wildfire Action Plan

As indicated in Chapter II, Section IV, wildfires have the potential to cause costly damage in Jenkins County. From a danger or hazard perspective, the greatest threat posed by wildfire is the damage to forest, woodlands and agriculture property. The possibility for wildfires is distinct and poses a significant threat to the county. Forest fires are generally the result of dry conditions combined with lightning or carelessness. The committee determined that mitigation goals were necessary to prevent damage to undeveloped areas of the county as well as damage to new and existing structures caused by wildfires.

**Objective D1.** Ensure that adequate fire protection is available.

**Objective D2.** Reduce the threat of wildfire occurrence.

**Objective D3.** Increase public awareness of wildfire dangers.

### E. Tornado

Since the exact time and location of a tornado is not always predictable, all of Jenkins County is vulnerable. A tornado can cause significant damage to both property and agricultural crops could result. In addition, the potential for injuries and loss of life is substantial due to the unpredictability and violent nature of these storms. The committee recognizes the important role advance planning plays in the mitigation process. There is great benefit in identifying appropriate steps that can be taken to help minimize losses to new and existing structures in Jenkins County as a result of a tornado event. The committee has identified several courses of action that both local officials and citizens can use in their mitigation efforts against the effects of tornadoes.

**Objective G1.** Minimize damage to property from tornado events.

**Objective G2.** Minimize damage to public buildings and critical facilities to ensure continual operations of vital services.

**Objective G3.** Protect vulnerable populations from the effects of severe weather events.



**Objective G4.** Educate the public including citizens and business owners on disaster preparedness and safety.

#### **F. Tropical Storm**

As with many Georgia communities, if a tropical storm were to strike Jenkins County, significant damage to both property and agricultural crops could result. In addition, the potential for injuries and loss of life is substantial due to the unpredictability and violent nature of these storms. The committee recognizes the important role advance planning plays in the mitigation process. There is great benefit in identifying appropriate steps that can be taken to help minimize losses to new and existing structures in Jenkins County as a result of a tropical storm. The committee has identified several courses of action that both local officials and citizens can use in their mitigation efforts against the effects of tornados

**Objective F1.** Minimize damage to property from tropical storm events.

**Objective F2.** Minimize damage to public buildings and critical facilities to ensure continual operations of vital services.

**Objective F3.** Protect vulnerable populations from the effects of tropical storm events.

**Objective F4.** Educate the public including citizens and business owners on disaster preparedness and safety.

**G. Severe Weather (Thunderstorm Winds, Lightning, Hail)** Thunderstorm winds, lightning and hail can affect the entire county given the right conditions. As with many Georgia communities, if a tornado or tropical storm were to strike Jenkins County, significant damage to both property and agricultural crops could result. In addition, the potential for injuries and loss of life is substantial due to the unpredictability and violent nature of these storms. The committee recognizes the important role advance planning plays in the mitigation process. There is great benefit in identifying appropriate steps that can be taken to help minimize losses to new and existing structures in Jenkins County as a result of a severe weather event. Thunderstorm winds are the most frequently occurring natural hazard in the county and have the greatest chance of affecting the county each year. The committee has identified several courses of action that both local officials and citizens can use in their mitigation efforts against the effects of thunderstorm winds, lightning and hail to both new and existing structures.

**Objective G1.** Minimize damage to property from severe weather events.

**Objective G2.** Minimize damage to public buildings and critical facilities to ensure continual operations of vital services.

**Objective G3.** Protect vulnerable populations from the effects of severe weather events.

**Objective G4.** Educate the public including citizens and business owners on disaster preparedness and safety.

#### **H. Winter Storms Action Plan**

Within Jenkins County, and the southeast region in general, there is great concern over the threat of winter storms. Although this area does not typically receive the amounts of snow and ice that other regions do, nor do they experience winter storms as frequently as other regions, Jenkins County and other southeastern communities must be prepared for the damage caused by winter storms. The fact that winter storms hit Jenkins County infrequently results in other problems, such as lack of equipment and supplies to combat treacherous winter storm conditions. In Jenkins County, the formation of ice on roads and bridges, tree

limbs, and power lines is the cause of most damage. In Chapter II, Section VIII additional winter storm hazards are addressed, as well as information related to potential losses for the county. The Committee has determined that several steps could be undertaken to minimize the effects of winter storms to protect the health and safety of citizens, as well as damage to new and existing structures.

**Objective H1.** Educate the public on preparedness and safety issues for winter storm events.

**Objective H2.** Prevent property damage as a result of a winter storm event.

**Objective H3.** Minimize power outages during winter storms.

## **I. All Hazard Action Steps**

The purpose of this section is to allow the committee to recommend mitigation measures within this plan that transcend individual hazards. Certain common mitigation measures are needed regardless of the specific hazard event. Rather than list these multiple times within each different hazard category, the committee decided to list these “all-hazards” mitigation measures within a separate section of the plan. The goal with these mitigation measures is again to minimize the loss of life and property, and to prevent disruption of services to the public to the greatest extent possible.

**Objective I1.** Ensure communication capabilities exist between all Emergency Service Personnel and Agencies.

**Objective I2.** Ensure the ability to travel for county residents, organizations, and providers of essential services such as Law Enforcement Personnel, hospitals and utilities after a hazard event.

**Objective I3.** Protect critical facilities from the effects due to power outages as a result of all hazards to ensure a continuation of all vital services.

**Objective I4.** Provide adequate notification to citizens of Jenkins County pertaining to hazard event.

**Objective I5.** Guarantee all evacuation plans are up to date and adequate to meet the needs of the citizens of Jenkins County.

**Objective I6.** Guarantee that all Emergency Response Plans are up to date and adequate to meet the needs of citizens of Jenkins County.

**Objective I7.** Ensure all emergency shelters are ready to meet the needs of the population of Jenkins County and Millen.

**Objective I8.** Provide the citizens of Jenkins County with educational information on Emergency Preparedness.

**Objective I9.** Provide the citizens of Jenkins County with accurate and timely information pertaining to Emergency Preparedness.

**Objective I10.** Collect accurate and complete data pertaining to hazard events within Jenkins County and all jurisdictions.

**SECTION III. MITIGATION ACTIONS****Table 3.6**

Action #	Mitigation Action and Description	Jurisdiction	Implement Agency	Hazards Addressed	Objective Supported	Goal	Structural/ Non-Structural	Estimated Project Cost	Possible Funding Source	Time Frame	Status	Priority
1.	Continue to assess storm water runoff.	Jenkins County/ Millen	Public Works	Flood	A5, C2	2, 6	Non-Structural	Staff time	General Funds	2025-2030	Ongoing Done as part of public works job	High
2.	Construct as needed, more storm water retention facilities, storm drain improvements and channel improvements to protect existing and new developments. Identified projects to date: <ul style="list-style-type: none"> <li>West Old Savannah Road.</li> <li>Elam Road between Hwy 25&amp;121</li> <li>Clayton Road</li> <li>Johnson &amp; Herndon Roads</li> <li>Washington Street Neighborhood</li> </ul>	Jenkins County/ Millen	BOC/City Council/ Public Works	Flood/ Drought	A3, A5, C2	2, 6	Structural	\$3,000,000	General Funds	2025-2030	Ongoing As funding becomes available	High
3.	Clear run-off and water retention ditches.	Jenkins County/ Millen	Public Works/ Road Dept.	Flood	A5	2, 1	Structural	Staff Time	General Funds	2025-2030	Ongoing Ditches are cleared by Road Dept. as part of their work load.	High
4.	Seek funding for communication towers and voice repeater systems.	Jenkins County/ Millen	BOC/City Council/ EMA/Police /Sheriff	All hazards	I1, I9	1	Structural	\$750,000	General Fund, FEMA, CJCC, JAG, USDA, DOJ	2019-2022	Ongoing As funding becomes available	High
5.	Evaluate existing water system upgrade as needed	Millen	Public Works	Flood/ Drought/ Wildfire	A6, C1, D1	1, 2, 6	Structural	2,000,000	General Fund, CDBG, USDA, EPA, DNR	2025-2030	Ongoing As funding becomes available	High

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Action #	Mitigation Action and Description	Jurisdiction	Implement Agency	Hazards Addressed	Objective Supported	Goal	Structural/ Non-Structural	Estimated Project Cost	Possible Funding Source	Time Frame	Status	Priority
6.	Investigate methods to reduce non-point source pollution.	Jenkins County/ Millen	Public Works	Flood	A1	1, 2, 5	Non-Structural	\$1,000,000	USDA, EPA, DNR	2019-2022	No projects have been identified	Low
7.	Enact a program to educate the residents about water conservation issues	Jenkins County/ Millen	BOC/City Council/ Public Works	Drought	C1, C2	1, 3	Non-Structural	\$2,000.00	USDA, EPA, DNR, General Funds	2025-2030	Stalled due to staff time	High
8.	Increase public awareness of watering restrictions and bans.	Jenkins County/ Millen	Public Works	Drought	C1, C2	1, 3	Non-Structural	Staff Time	General Funds	2025-2030	This is done during state declared droughts	High
9.	Develop a public awareness campaign to promote water-saving campaigns (i.e. low-flow water saving devices)	Jenkins County/ Millen	Public Works/ Building Inspection	Drought	C1, C2	1, 3	Non-Structural	Staff Time	General Funds	2025-2030	This is done as part of building permits and water department	Low
10.	Continue training of all firefighters to include wildland fire training.	Jenkins County/ Millen	BOC/City Council /EMA/Fire Dept.	Wildfire	D1	1, 2	Non-Structural	\$50,000	General Funds, FEMA	2025-2030	Ongoing Training is ongoing through the year	High
11.	Seek funding for needed firefighting equipment	Jenkins County/ Millen	BOC/City Council /EMA/Fire Dept.	Wildfire	D1	1, 2	Non-Structural	\$100,000	General Funds, FEMA	2025-2030	Ongoing As funding becomes available	High
12.	Inventory and replace or install more fire hydrants as needed.	Jenkins County/ Millen	BOC/City Council/ Public Works	Wildfire	D1	1, 2	Structural	\$50,000	General Funds, FEMA	2025-2030	Ongoing As funding becomes available	High
13.	Seek funding for fire engines, wildland brush truck, and tankers for local fire departments.	Jenkins County /Millen	BOC/City Council /EMA/Fire Dept.	Wildfire	D1	1, 2	Non-Structural	\$750,000	General Funds, FEMA	2025-2030	Ongoing As funding becomes available	High
14.	Implement the Fire wise Community Initiative where appropriate	Jenkins County/ Millen	BOC/City Council/ EMA/ Planning	Wildfire	D2, D3	1, 2, 3	Non-Structural	\$25,000	General Funds, GFC	2025-2030	Stalled as no communities have been identified to participate	Low

*2024 Multi-Hazard Pre-Disaster Mitigation Plan Update*

Action #	Mitigation Action and Description	Jurisdiction	Implement Agency	Hazards Addressed	Objective Supported	Goal	Structural/ Non-Structural	Estimated Project Cost	Possible Funding Source	Time Frame	Status	Priority
15.	Improve public awareness of wildfire techniques and awareness of wildfire dangers.	Jenkins County/ Millen	EMA/Fire Dept.	Wildfire	D2, D3	1, 2, 3	Non-Structural	Staff time	General Funds	2025-2030	Ongoing Info will be added to website and Facebook page as appropriate	High
16.	Equip all county and city recreation parks with adequate early severe weather warning and lightning detection devices.	Jenkins County/ Millen	BOC/City Council/ Recreation Dept.	Tornado, Severe Weather	E1, E2, E3 G1, G2, G3	1, 2, 6	Structural	\$50,000	General Funds, FEMA	2019-2021	Ongoing As funding becomes available	High
17.	Inspects public buildings and critical facilities and retrofit to reinforce windows, doors, and roofs as needed	Jenkins County/ Millen	Code Enforcement and Building Inspection	Tornado/ tropical Storms/ Severe Weather/ Winter Storm	E1, E2, E3 F1, F2, F3 G1, G2, G3	1, 2, 6	Structural	\$100,000	General Funds, FEMA	2019-2021	Ongoing As funding becomes available and projects are identified	Medium
18.	Enforce building codes for all new buildings and critical facilities.	Jenkins County/ Millen	Code Enforcement and Building Inspection	Flood, Tornado/ tropical Storms/ Severe Weather/ Winter Storm	A5, A6, E1, E2, F1, F2, G1, G2	1, 2, 6	Structural/ Non-Structural	Staff time	General Funds, FEMA	2025-2030	Ongoing Enforced when Building Permits are issued.	High
19.	Install lightning rods in high value critical facilities.	Jenkins County/ Millen	Public Works/ Building Dept.	Severe Weather	G1,G2, G3	1, 2, 6	Structural	\$100,000	General Funds, FEMA	2019-2021	Ongoing As funding becomes available	High
20.	Review current Emergency Response Plan and update when needed.	Jenkins County	EMA	All hazards	I6, I8	1, 2, 3	Non-Structural	Staff Time	General Funds	2019-2021	Updated as required Update is in process now. Should be completed by the end of the year.	High

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Action #	Mitigation Action and Description	Jurisdiction	Implement Agency	Hazards Addressed	Objective Supported	Goal	Structural/ Non-Structural	Estimated Project Cost	Possible Funding Source	Time Frame	Status	Priority
21.	Review current evacuation plans paying particular attention to vulnerable populations and update as needed.	Jenkins County/ Millen	EMA/ Board of Education	Flood, Wildfire, Dam Failure, Tornado/ tropical Storms, Severe Weather, Winter Storm	I5, I8	1, 2, 3	Non-Structural	Staff Time	General Funds	2019-2021	Updated as required	High
22.	Develop a public awareness program about the installation of lightning grounding systems on critical infrastructure, residential and business properties.	Jenkins County/ Millen	EMA/ Code Enforcement and Building Inspection/ Public Works	Lightning	G4	1, 2, 3	Non-Structural	Staff Time	General Funds	2019-2021	Stalled due to lack of staff	Low
23.	Inventory all critical facilities and assess generator needs. Install generators where needed.	Jenkins County/ Millen	BOC/City Council/ EMA/ Fire Dept./ Sheriff/ Public Works	All hazards	I3	1, 2, 3, 6	Structural/Non-Structural	\$100,000	General Funds, FEMA	2025-2030	Ongoing As funding becomes available	High
24.	Seek funding to ensure all current and future emergency shelters have back-up generators.	Jenkins County/ Millen	BOC/City Council/ EMA/ Board of Education	All hazards	I7	1, 2, 3, 6	Structural/	\$50,000	General Funds, FEMA	2025-2030	Ongoing As funding becomes available	High
25.	Educate the public on shelter locations and evacuation routes	Jenkins County/ Millen	EMA	Flood, Wildfire, Dam Failure, Tornado/ tropical Storms, Severe Weather, Winter Storm	I8, I9	3	Non-Structural	Staff Time	General Funds	2025-2030	Information is posted on Facebook and EMA website as needed	High



*2024 Multi-Hazard Pre-Disaster Mitigation Plan Update*

Action #	Mitigation Action and Description	Jurisdiction	Implement Agency	Hazards Addressed	Objective Supported	Goal	Structural/ Non-Structural	Estimated Project Cost	Possible Funding Source	Time Frame	Status	Priority
26.	Develop public education and awareness programs regarding severe weather events to include home safety measures, purchase of weather radio and personal safety measures before, during and after an event.	Jenkins County/ Millen	EMA	Flood, Wildfire, Dam Failure, Tornado/ tropical Storms, Severe Weather, Winter Storm	I8, I9	3	Non-Structural	\$10,000 and Staff Time	General Funds, FEMA	2025-2030	Information is posted on Facebook and EMA website as needed	Medium
27.	Implement a winter storm education program to include winterization of home and/or business and what to do before, during and after.	Jenkins County/ Millen	EMA/ Building Dept.	Winter Storm	H1	3	Non-Structural	\$10,000 and Staff Time	General Funds	2019-2021	Information is posted on Facebook and EMA website as needed	Medium
28.	Create a data base to record hazard event information.	Jenkins County/ Millen	BOC/City Council/ EMA	All hazards	I10	1, 2, 3,	Non-Structural	Staff Time	General Funds	2019-2021	Stalled due to lack of staff	Low
29.	Conduct dam breach analysis to identify assets and population at risk in the event of a failure.	Jenkins County/ Millen	BOC/City Council/ EMA	Dam Failure	B1, B2	1, 2,	Non-Structural	\$100,000	General Funds, DNR	2025-2030	Stalled due to funding	Low
30.	Draft ordinance prohibiting development in dam breach zone.	Jenkins County/ Millen	BOC/City Council/ Planning and Zoning	Dam Failure	B2	1, 2, 4	Non-Structural	Staff Time	General Funds	2019-2020	In progress	Medium
31.	Inventory existing road equipment and purchase needed equipment to maintain roads before, during and after a hazard event.	Jenkins County/ Millen	BOC/City Council/ EMA/Public Works/ Road Dept.	Flood, Tornado/ tropical Storms/ Severe Weather, Winter Storm	I2	1, 2	Non-Structural	\$150,000	General Funds, FEMA	2025-2030	Ongoing As funding becomes available	Medium

Action #	Mitigation Action and Description	Jurisdiction	Implement Agency	Hazards Addressed	Objective Supported	Goal	Structural/ Non-Structural	Estimated Project Cost	Possible Funding Source	Time Frame	Status	Priority
32.	Develop coordinated management strategies for deicing, snow plowing, and clearing roads of fallen trees and debris	Jenkins County/ Millen	BOC/City Council/ EMA/Public Works/ Road Dept.	Flood, Tornado/ tropical Storms/ Severe Weather, Winter Storm	I2	1, 2	Non-Structural	Staff Time	General Funds	2019-2021	Stalled due to staff time	Low
33.	Promote the construction of safe rooms in shelter areas and in public buildings.	Jenkins County/ Millen	BOC/City Council/ EMA	Flood, Wildfire, Dam Failure, Tornado/ tropical Storms/ Severe Weather, Winter Storm	I3	1, 2, 6	Structural	\$100,000	General Funds, FEMA	2025-2030	Ongoing as funding becomes available Have applied for a FEMA Grant in 2019	Medium
34.	Promote and participate in the following American Red Cross Programs • Disaster Resistant Neighborhoods Program • Business and Industry Preparedness Seminar • Community Disaster Education Preparedness presentations	Jenkins County/ Millen	BOC/ City Council/ EMA	All hazards	I4, I8, I9	1, 2 ,3	Non-Structural	\$10,000	General Funds, FEMA	2019-2022	Ongoing	Low
35.	Continue update of EMA website and Facebook page with information pertaining to Emergency Preparedness/ Weather Events and Education.	Jenkins County	EMA	All hazards	I4, I5, I6, I7, I8, I9.	1, 2 ,3	Non-Structural	Staff Time	General Funds	2025-2030	Ongoing updated as needed	High
36.	Implement GIS technology on fire and emergency management vehicles so data can be readily available in the field so more accurate, timely assessments for future mitigation planning activities.	Jenkins County/ Millen	BOC/ City Council/ EMA/ Fire Dept./	All hazards	I9, I10	1, 2, 6	Non-Structural	\$50,000	General Funds, FEMA	2019-2021	Ongoing As funding becomes available	Low

*2024 Multi-Hazard Pre-Disaster Mitigation Plan Update*

Action #	Mitigation Action and Description	Jurisdiction	Implement Agency	Hazards Addressed	Objective Supported	Goal	Structural/ Non-Structural	Estimated Project Cost	Possible Funding Source	Time Frame	Status	Priority
37.	Pave Roads in county that are unpassable due to flooding.	Jenkins County/ Millen	Road Dept.	Flood/ Tornado/ tropical Storms/ Severe Weather/			Structural	\$1,500,000	General Funds T-SPLOST FEMA, DOT	2025-2030	Ongoing As funding becomes available	High
38.	Purchase a Wheeled Excavator	Jenkins County/ Millen	BOC/City Council/ EMA/ EMS	All Hazards	I2	1, 2	Non-Structural	\$250,000	General Funds, FEMA	2019-2021	Ongoing As funding becomes available	High
39.	Provide NOAA weather radios to elderly and handicap populations	Jenkins County/ Millen	BOC/City Council	Flood, Wildfire, Dam Failure, Tornado/ tropical Storms/ Severe Weather, Winter Storm	14, 18, 19	1, 2,3	Non-Structural	\$50,000	General Funds, FEMA	2019-2021	Ongoing As funding becomes available	Medium
40.	Seek funding to purchase two 6x6 off road UTV transport vehicles for Jenkins County EMS.	Jenkins County/ Millen	BOC/City Council/ EMA/ EMS	All hazards	E3, F3, G3,	1	Non-Structural	\$90,000	General Funds, FEMA	2019-2021	Ongoing As funding becomes available	High
41.	Preform procurement to contract with debris removal firm to have contract in place before hazards to ensure firm can move in immediately.	Jenkins County/ Millen	BOC/City Council	Winter Storm, Tornado/ tropical Storms/ Severe Weather, Flood, Wildfire,	I2	1, 2	Non-Structural	Staff Time	General Funds	2019-2022	Ongoing	Low

- A. New Buildings and Infrastructure:** All objectives and action steps are applicable to new buildings and infrastructure.
- B. Existing Buildings and Infrastructure:** All objectives and action steps are applicable to existing buildings and infrastructure except adopt building codes. Enforcing building codes on existing buildings is not always feasible. Buildings maybe retrofitted but cannot always be brought up to stricter regulations.
- C. Special Multi-Jurisdictional Strategy and Considerations:** During a natural hazard it is imperative that all emergency personnel can communicate with each other throughout the entire planning area. The County and its jurisdictions have numerous dead spots throughout the area due to topography and lack of adequate communication equipment. The County and its emergency personnel are dependent on the private sector for towers to use for signals. If these towers are ever removed the County will be without any adequate means to transmit signals. The County and all jurisdictions are aware of the need to develop communication capabilities that will serve their County.

Another concern is the lack of available data for the county and individual jurisdictions on hazard events. A database needs to be created and maintained that provides information on all hazard events that occur countywide. This database should include information such as location (road names, neighborhoods, GPS coordinates, etc.), damages reported, power outages, road closures, county and city personnel that are dispatched to the area, etc.

#### **D. COMPLETED AND DELETED ACTION STEPS/ UNCHANGED AND/OR CONTINUAL ACTION STEPS**

**Table 3.7**

Action #	Completed and Deleted Action Steps Unchanged and/or Continual Action Steps	Hazards	Status	Comments / Accomplishments
1.	Investigate greater participation Level in the NFIP and CRS	Flood	Deleted	The cost of participation in the CRS is too costly for this small city and county
2.	Continue to assess storm water runoff.	Flood	Continual/ Unchanged	
3.	Construct as needed, more storm water retention facilities, storm drain improvements and channel improvements to protect existing and new developments.	Flood/ Drought	Continual/ Unchanged	Jenkins County completed a flood and drainage project on Brannen Road and Edgar Lane Road \$100,000 using Community Development Block Funds and General Funds. Millen will start another flood/drainage project in Oct 2019 in the Washington Street Neighborhood
4.	Clear run-off and water retention ditches.	Flood	Continual/ Unchanged	
5.	Seek funding for communication towers and voice repeater systems.	All hazards	Continual/ Unchanged	
6.	Adopt ordinances to limit and control building and development in known flood prone areas.	Flood	Completed	Both Jenkins County and Millen have adopted flood plain ordinances
7.	Promote the preservation of areas in and around watercourses.	Flood	Deleted	Development is limited due to flood ordinances.

Action #	Completed and Deleted Action Steps Unchanged and/or Continual Action Steps	Hazards	Status	Comments / Accomplishments
8.	Add greenspace to known flood prone areas.	Flood	Deleted	
9.	Evaluate existing water system upgrade as needed	Drought/ Wildfire	Continual/ Unchanged	
10.	Investigate methods to reduce non-point source pollution.	Flood	Continual/ Unchanged	
11.	Promote increased surface water usage and surface artesian flow for irrigation.	Drought	Deleted	
12.	Enact a program to educate the residents about water conservation issues	Drought	Continual/ Unchanged	
13.	Increase public awareness of watering restrictions and bans.	Drought	Continual	GA EPD water restrictions are posted and advertised as required by law.
14.	Develop a public awareness campaign to promote water-saving campaigns (i.e. low-flow water saving devices)	Drought	Continual/ Unchanged	
15.	Continue training of all firefighters to include wildland fire training.	Wildfire	Continual/ Unchanged	All paid firefighters have had 240 hours of annual training. All volunteer firefighters have completed annual fire training requirements
16.	Seek funding for needed firefighting equipment	Wildfire	Continual/ Unchanged	Millen purchased 10 sets of turnout gear for \$20,000
17.	Inventory and replace or install more fire hydrants as needed.	Wildfire	Continual/ Unchanged	Millen installed seven fire hydrants for \$24,605
18.	Seek funding fire engines and tankers for local fire departments.	Wildfire	Continual/ Unchanged	
19.	Enforce defensible space (30-ft minimum setbacks) between buildings and flammable brush and forestland where possible.	Wildfire	Completed	This is followed to the greatest extent possible
20.	Continue following GFC service of construction and maintenance of firebreaks around forests and structures, along abandoned roadbeds.	Wildfire	Completed	This is followed to the greatest extent possible
21.	Strictly follow GFC's guidelines for control burns and permits.	Wildfire	Completed	This is strictly enforced
22.	Implement the Fire wise Community Initiative where appropriate	Wildfire	Continual/ Unchanged	
23.	Improve public awareness of wildfire techniques and awareness of wildfire dangers.	Wildfire	Continual/ Unchanged	
24.	Adopt Building Codes	Flood, Severe Weather, Winter Storm	Completed	Both Jenkins County and Millen have adopted building codes. These are revised and revised as needed and during the Comprehensive Plan Update
25.	Adopt Zoning Regulations	Flood, Severe Weather, Winter Storm	Completed	Both Jenkins County and Millen have adopted zoning regulations. These are revised and revised as needed and during the Comprehensive Plan Update

Action #	Completed and Deleted Action Steps Unchanged and/or Continual Action Steps	Hazards	Status	Comments / Accomplishments
26.	To the greatest extent possible, identify all owners of inadequately installed manufactured homes offer a financial incentive to retrofit them with an appropriate level of anchoring and support.	Severe Weather	Deleted	No funding exists for this activity.
27.	Equip all county and city recreation parks with adequate early severe weather warning and lightning detection devices.	Severe Weather	Continual/ Unchanged	Have applied for a grant for a lightning detection system.
28.	Inspects public buildings and critical facilities and retrofit to reinforce windows, doors, and roofs as needed	Severe Weather, Winter Storms	Continual/ Unchanged	
29.	Enforce building codes for all new buildings and critical facilities.	Flood, Severe Weather, Winter Storm	Continual/ Unchanged	This is accomplished when new building permits are issued, and inspections take place.
30.	Inspect all county and municipal critical facilities for proper grounding.	Flood, Severe Weather, Winter Storm	Completed	All facilities have proper grounding
31.	Install lightning rods in high value critical facilities.	Severe Weather, Lightning	Continual/ Unchanged	
32.	Install surge protectors on critical facilities' electronic equipment in essential county and city facilities.	Severe Weather, Lightning , Winter Storm	Completed	All facilities have surge protectors.
33.	Review current Emergency Response Plan and update when needed.	All hazards	Continual/ Unchanged	LEOP is under revision and should be completed this year.
34.	Review current evacuation plans paying particular attention to vulnerable populations and update as needed.	Flood, Wildfire, Dam Failure, Severe Weather, Winter Storm	Continual/ Unchanged	
35.	Provide boat owners with safety tie down procedures with boat registration.	Severe Weather, Winter Storm	Deleted	
36.	Develop a public awareness program about the installation of lightning grounding systems on critical infrastructure, residential and business properties.	Severe Weather, Lightning	Continual/ Unchanged	
37.	Inventory all critical facilities and assess generator needs. Install generators where needed.	All hazards	Continual/ Unchanged	



Action #	Completed and Deleted Action Steps Unchanged and/or Continual Action Steps	Hazards	Status	Comments / Accomplishments
38.	Seek funding to ensure all current and future emergency shelters have back-up generators.	All hazards	Continual/Unchanged	
39.	Educate the public on shelter locations and evacuation routes	Flood, Wildfire, Dam Failure, Severe Weather, Winter Storm	Continual/Unchanged	The EMA has set up a Facebook with educational information
40.	Develop public education and awareness programs regarding severe weather events to include home safety measures, purchase of weather radio and personal safety measures before, during and after an event.	Flood, Wildfire, Dam Failure, Severe Weather, Winter Storm	Continual/Unchanged	The EMA has set up a Facebook with educational information
41.	Implement a winter storm education program to include winterization of home and/or business and what to do before, during and after.	Winter Storm	Continual/Unchanged	The EMA has set up a Facebook with educational information
42.	Review current codes to comply with and enforce the State building code with criteria for design snow load for buildings and structures.	Winter Storm	Completed	Both Jenkins County and Millen adhere to State building Codes
43.	Create a data base to record hazard event information.	All hazards	Continual/Unchanged	
44.	Conduct dam breach analysis to identify assets and population at risk in the event of a failure.	Dam Failure	Continual/Unchanged	
45.	Draft ordinance prohibiting development in dam breach zone.	Dam Failure	Continual/Unchanged	
46.	Install dam failure alert systems.	Dam Failure	Deleted	All dams have an alert system
47.	Inventory existing road equipment and purchase needed equipment to maintain roads before, during and after a hazard event.	Flood, Severe Weather, Winter Storm	Continual/Unchanged	
48.	Develop coordinated management strategies for deicing, snow plowing, and clearing roads of fallen trees and debris	Flood, Severe Weather, Winter Storm	Continual/Unchanged	
49.	Promote the construction of safe rooms in shelter areas and in public buildings.	Flood, Wildfire, Dam Failure, Severe Weather, Winter Storm	Continual/Unchanged	Have applied for a FEMA grant for a safe room.

*2024 Multi-Hazard Pre-Disaster Mitigation Plan Update*

Action #	Completed and Deleted Action Steps Unchanged and/or Continual Action Steps	Hazards	Status	Comments / Accomplishments
50.	Update 911 equipment as needed.	All hazards	Continual/Unchanged	
51.	Request that all new education facilities be designed to serve as public shelters for emergency purposes.	All hazards	Deleted	All emergency shelters have been removed from schools. They do not want to remove children from schools to house evacuees.
52.	Promote and participate in the following American Red Cross Programs • Disaster Resistant Neighborhoods Program • Business and Industry Preparedness Seminar • Community Disaster Education Preparedness presentations	All hazards	Continual/Unchanged	
53.	Create an EMA website with information pertaining to Emergency Preparedness.	All hazards	Continual/Unchanged	EMA website is updated as needed
54.	Work with local cable and radio providers to enhance and broadcast public education on Emergency Preparedness.	All hazards	Completed	The county and city have a good relationship with media
55.	Implement GIS technology on fire and emergency management vehicles so data can be readily available in the field so more accurate, timely assessments for future mitigation planning activities.	Flood, Wildfire, Dam Failure, Severe Weather, Winter Storm	Continual/Unchanged	
56.	Purchase a portable sewer transfer pumping unit	Flood, Severe Weather, Winter Storm	Deleted	It is more cost effect to rent one if need than to won and have to maintain.
57.	Herman Nelson Warming System AIR HEATER w/TRAILER	Winter Storm	Deleted	Not cost effective.
58.	Purchase New UHF System and bring all jurisdictions into the new system	All hazards	Completed	Both the city and county are on the UHF.
59.	Storm Drainage Improvements on Plum Street by the Community House.	Flood/	Completed	Storm Drainage Improvements on Plum Street by the Community House. Millen in 2016 for \$565,000 using Community Development Block Funds and General Funds
60.	Purchase a Brush Fire Truck	Wildfire	Continual/Unchanged	<b>Moved to action step # 13 in Table 3.6</b>
61.	Purchase a Bucket Truck to Remove Limbs along county road rights-of-way	Flood, Severe Weather, Winter Storm	Deleted	Limbs are removed by Electric Companies.
62.	Pave Roads in county that are unpassable due to flooding	Flood, Severe Weather,	Continual	Reagan Road, Brannen Road and Edgar Lane Road were paved for 400,000 using CDBG and local funds

Action #	Completed and Deleted Action Steps Unchanged and/or Continual Action Steps	Hazards	Status	Comments / Accomplishments
63.	Storm Drainage Improvements on West Old Savannah Road.	Flood, Severe Weather,	Unchanged	Moved to Action Step #2 in Table 3.6
64.	Storm Drainage Improvements Elam Road between Hwy 25&121	Flood, Severe Weather,	Unchanged	Moved to Action Step #2 in Table 3.6
65.	Storm Drainage Improvements on Clayton Road.	Flood, Severe Weather,	Unchanged	Moved to Action Step #2 in Table 3.6
66.	Purchase generators for the following critical facilities: County Annex, .E.M.S. station, Court House, County Maintenance Shop, County Road Department Headquarters, and County Fuel Port (which supports Fire, E.M.S., Sheriff, City Police, School Busses, City Utility, County Road Department and Landfill.)	All hazards	Continual	Jenkins County installed a generator at the fuel station maintenance shop for \$76,600.
67.	Work with hospital and nursing home to ensure their generators are operational	Flood, Wildfire, Dam Failure, Severe Weather, Winter Storm	Completed	The EMA director has worked with the facilities, and all is operational. He checks them twice a year for maintenance.
68.	Storm Drainage Improvements at Johnson & Herndon road	Flood, Severe Weather,	Unchanged	Moved to Action Step #2 in Table 3.6
69.	Purchase a Wheeled Excavator	Wildfire	Continual/ Unchanged	
70.	Identify property owners who reside on Plum Ave that are continually subject to flooding and relocate or mitigate.	Flood/ Severe	Deleted	The problems have been resolved as a result of the storm drainage project listed in Action Step # 59 above
71.	Provide NOAA weather radios to elderly and handicap populations (moved to all hazards).	Flood, Wildfire, Dam Failure, Severe Weather, Winter Storm	Continual	Purchased 300 NOAA radios under a grant for 7,500 and will purchase 250 more with grant funds within the next year.
72.	Seek funding for Code Red System	All Hazards	Completed	Jenkins County has implemented Code Red.
73.	Seek funding to construct a lake/reservoir as an alternate water source	Drought	Deleted	Not cost effective
74.	Seek funding to purchase two off road UTV transport vehicles for Jenkins County EMS.	All hazards	Continual/ Unchanged	
75.	Seek funding for a 50kw generator to use at the EMS station	All hazards	Completed	

*2024 Multi-Hazard Pre-Disaster Mitigation Plan Update*

Action #	Completed and Deleted Action Steps Unchanged and/or Continual Action Steps	Hazards	Status	Comments / Accomplishments
76.	Seek funding for a wildland brush truck.	Wildfire	Unchanged	
77.	Install a safe room in the new school that is being constructed.	Severe Weather	Deleted	
78.	Preform procurement to contract with debris removal firm to have contract in place before hazards to ensure firm can move in immediately.	Winter Storm, Severe Weather, Flood, Wildfire,	Continual/ Unchanged	
79.	Run HAZUS scenarios once the software is updated and compatible to RC ArcGIS 10.2 and updated estimated losses.	Flood/ Severe Weather	Completed	A copy can be found in Appendix C
80.	Install Tornado outdoor emergency warning sirens	Tornado	Completed	While this was not in the mitigation strategies the county installed two for \$60,000

## CHAPTER IV. PLAN INTEGRATION AND MAINTENANCE

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

**Table 4.1**

Chapter I. Section	Updates to Section
I. Implementation Action Plan	General text edits based on current conditions and schedules; elaborated on how HMP is incorporated into other plans.
II. Evaluation, Monitoring, Updating Note whether the original method and schedule worked	Text edits based on previous experiences and future public involvement.
III. Plan update and maintenance	Regulated update and maintenance schedule and public involvement

### SECTION I. Implementation Action Plan

**A. Administrative Actions:** Jenkins County Emergency Management Agency was responsible for overseeing the original planning process and the plan update. Facilitation of the planning process was conducted by the Central Savannah River Area Regional Commission. The Jenkins County Board of Commissioners has authorized the submission of this plan to both GEMA and FEMA for their respective approvals. The Jenkins County Board of Commissioners and the City Council of Millen have formally adopted this plan after approval from GEMA and FEMA.

**B. Authority and Responsibility:** Upkeep and maintenance of the plan shall be the responsibility of the EMA Director, as determined during the planning process. It shall be the responsibility of the EMA Director to ensure that this plan is utilized as a guide for initiating the identified mitigation measures within the community. The Jenkins County Board of Commissioners and the Mayor of Millen will be responsible for assigning appropriate staff members to implement the action steps identified in this plan for their jurisdictions. The EMA Director, or his designee, shall be authorized to call the committee to review and update this plan periodically (at least annually) throughout the useful life of the plan, not to exceed five years.

During the plan update process, the EMA Director and committee members shall identify projects that have been successfully undertaken in initiating mitigation measures within the community. These projects shall be noted within the planning document to indicate their completion. Additionally, the committee called together by the EMA Director shall discuss and identify any additional mitigation projects that are necessary in the community.

**C. Prioritization:** The mitigation goals, objectives and related action items were initially compiled from the input of the committee, as well as from others in the community. The committee prioritized the mitigation actions based on what would be perceived as most beneficial to the community, and the action steps have been listed in this plan as the committee prioritized them. Several criteria were established to assist committee members in the

prioritization of these suggested mitigation actions. Criteria included perceived cost benefit or cost effectiveness, availability of potential funding sources, overall feasibility, measurable milestones, multiple objectives, and both public and political support for the proposed actions.

1. **Methodology for prioritization:** To assist with the prioritization of mitigation actions, the STAPLEE worksheet and criteria recommended by FEMA was used. STAPLEE is a tool used to assess the costs and benefits and overall feasibility of mitigation actions. STAPLEE stands for the following:
  - i. **Social:** Will the action be acceptable to the community? Could it have an unfair effect on a particular segment of the population?
  - ii. **Technical:** Is the action technically feasible? Are there secondary impacts? Does it offer a long-term solution?
  - iii. **Administrative:** Are there adequate staffing, funding and maintenance capabilities to implement the project?
  - iv. **Political:** Will there be adequate political and public support for the project?
  - v. **Legal:** Does your jurisdiction have the legal authority to implement the action?
  - vi. **Economic:** Is the action cost-beneficial? Is there funding available: Will the action contribute to the local economy?
  - vii. **Environmental:** Will there be negative environmental consequences from the action? Does it comply with environmental regulations? Is it consistent with community environmental goals?

The committee was asked to review the STAPLEE score sheet and list of mitigation actions. Each action item was discussed and a consensus reached by the group on the importance of each item. A score of high, medium or low was assigned to each to each item to help determine the priority level.

- High: Strategies that would have a direct, large impact on mitigation of hazards. A project that meets multiple plan goals and objectives, benefits exceed cost, has funding secured under existing programs or authorizations, or is grant-eligible, and can be completed in 1 to 5 years. It may also be a project that just requires staff time but has great benefit, i.e., adoption of flood plain ordinances.
  - Medium: Strategies that meet at least one plan goal and objective, benefits exceed costs, funding has not been secured or requires substantial staff time and can be completed in 1 to 5 years.
  - Low: Strategies that are important but requires substantial staff time, or addition of staff and resources that are not readily available to implement.
2. **Use of cost benefit refer to Worksheet #4:** Through the STAPLEE prioritization process, several projects emerged as being a greater priority than others. Some of the projects involved expending considerable amounts of funds to initiate the required actions. Other projects allowed the community to pursue completion of the project using potential grant funding. Still others required no significant financial commitment by the community.  
 The determination of the cost benefit of a project was based upon the anticipated cost in relation to the perceived benefit of the action taken. A proposed action with a high price tag, but minimal benefit to the community, was considered to have a low cost



- benefit. Conversely, if minimal expenditures were required and the entire community would benefit, this received a favorable cost benefit rating. All proposed mitigation actions were evaluated to determine the favorability of the benefit in relation to the cost associated with completing the project. Determining the economic feasibility of mitigating hazards can provide decision makers with an understanding of the potential benefits and costs of an activity, as well as a basis upon which to compare alternative projects.
3. **Use of other calculations:** Estimation of potential damages and costs in the event of a natural hazard achieves two ends: (1) it enables the identification of critical economic targets for mitigation measures and (2) to enhance the ability to prioritize post-disaster response in aiding the community to recover.
  4. **Use of other review structure:** All goals were discussed in detail to determine what was considered a priority for the EMA personnel.
- D. Incorporation of Local PDM Plan into other plans/planning measures:** The 2019 plan was reviewed to determine if any of the mitigation activities need to be added to the above-mentioned documents. The requirements of this Hazard Mitigation Plan were taken into consideration and incorporated into Comprehensive Plans, Five-Year Short-Term Work Program, Local Emergency Operations Plans, and all other such Plans as part of the planning process and incorporated as needed. The County along with Millen worked jointly to produce these planning documents.

The STWP will be updated in 2023, and the Joint Comprehensive Plan is due for an update in 2028. The RC facilitates the planning process for both documents and updates both plans. The County takes the lead, and all jurisdictions must participate to complete the comp plan and STWP. This update will be reviewed by the County and Millen. The current update will be taken into consideration and will be incorporated into Comprehensive Plans, Five-Year Short-Term Work Program, Local Emergency Operations Plans, and all other such Plans as appropriate. This hazard plan will be reviewed and incorporated into the Joint Comprehensive plan and STWP update as needed. Goals and strategies will be incorporated in the land use section of the comprehensive plan update. Mitigation strategies will be listed in the STWP to ensure their eligibility for funding from the state if available. In addition, relevant sections will be included in the revision of the LEOP which is currently being updated.

Once this plan is approved, it will be used by the consultants and planning committees responsible for the update process for the Joint Comprehensive Plan, Short-Term Work Programs, and all other plans that could incorporate the requirements of this plan. To facilitate inclusion of this plan, Jenkins County will provide a copy of this plan to the persons and/or committees responsible for writing and updating plans.

## SECTION II. EVALUATION, MONITORING AND UPDATING

- A. Method:** The Plan is intended to be a ‘living’ document that informs stakeholders about hazard mitigation projects and plans undertaken by the county and their jurisdictions. In

accordance with the requirements set forth in the Disaster Mitigation Act of 2000, Jenkins County is required to review the PDM Plan annually and revise the plan every five years. The revision process will be consistent with the FEMA planning requirements as stipulated in 44 CFR 201.6.

**B. Criteria to be used to monitor and evaluate the plan annually or after any natural disaster event.**

- a. Each hazard will be reviewed. Any new information pertaining to new and/or previous events will be added to the plan.
- b. Any new critical facilities will be added to the plan.
- c. Critical facilities information will be updated as needed.
- d. All mitigation goals, objectives and action steps will be reviewed for relevance and completion status. All mitigation goals, objectives and action steps that have been completed or are no longer relevant will be documented.
- e. New mitigation activities will be added if necessary.
- f. Public participation will be monitored and documented.

**C. Responsibility:** At the direction of the EMA Director, the committee shall be reconvened for the revision process which will include a schedule, timeline, and a list of the agencies or organizations participating in the plan revision. Jenkins County and all incorporated jurisdictions have designated the following participants of the committee to guide plan maintenance and update activities to ensure that the information in the plan is current. The update committee will also be responsible for disseminating information to stakeholders within their respective jurisdictions.

**Table 4.2**

Jurisdiction	Hazard Mitigation Update Committee	Review
	Point-of-Contact	Schedule
Jenkins County	Emergency Management Director	Annually
Millen	City Manager	Annually

**D. Timeframe:** The committee has set the third Thursday of every January for the annual review of the plan update and within two months after any natural disaster event. A public notice will be submitted to the legal organ of each jurisdiction and the notice will be published at all government and community buildings.

### **SECTION III. PLAN UPDATE AND MAINTENANCE**

**A. Public involvement:** Jenkins County is committed to having active public participation during reviews and updates of the PDM Plan. Public participation will follow the guidelines set forth in 44 CFR 201.6. Future public involvement of the community will be more stringent. The original method was not as successful as anticipated in ensuring community involvement. With this in mind, two weeks before the annual January review meeting, a notice will be published in the legal organ of Jenkins County. Flyers will be placed at all government and community gathering places to ensure that citizens of the county are made

aware of the annual review process. The new EMA website will also provide ongoing information about the plan and its implementation.

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

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

## CHAPTER V. Conclusion

### SECTION I. Summary

Through the update process of this plan, Jenkins County has developed a more thorough hazard history, an inventory of critical facilities, and an updated contact list for emergency contacts at critical facilities. Natural hazards have been identified countywide. Goals, objectives and mitigation actions have been compiled and prioritized that would reduce the risk of lives and property as a result of the identified hazards. The committee has been able to work together effectively and efficiently to produce this document and establish a greater awareness of our risks and our mitigation strategies.

As a result of the update PDM planning process, Jenkins County officials have obtained more complete and accurate information and knowledge regarding the County's disaster history, the presence of natural hazards, and the likelihood of each of these hazards occurring within the County, and the potential impacts and challenges these hazards present to the community.

All meetings were open to the public and advertised in *The Millen News*, providing Jenkins County citizens with the opportunity to comment on and offer suggestions concerning disaster mitigation actions within the community.

The committee found that it is difficult to predict the geographic threat, and therefore the resulting impact of some natural disasters as compared to others. Tornadoes and related severe weather strike randomly, usually affecting a small, localized area. On the other hand, natural disasters such as winter ice storms and drought can blanket the entire county, affecting all businesses, public facilities, and residents.

Recognizing this challenge, the committee identified both general and specific measures to aid in the mitigation of several natural hazards most likely to impact Jenkins County. These measures include, but are not limited to, the protection of critical facilities and infrastructure, progressive governmental policies, and the proactive use of codes and regulations. It is worth noting that local government policies can often be the single most important and cost-efficient component of PDM.

The mission of the Jenkins County Pre-Disaster Hazard Mitigation Planning Committee is to *"Make the citizens, businesses, communities and local governments of Jenkins County less vulnerable to the effects of natural hazards through the effective administration of hazard mitigation grant programs, hazard risk assessments, wise floodplain management and a coordinated approach to mitigation policy through state, regional and local planning activities."*

The committee feels that this plan, when implemented, will help to make all of Jenkins County a safer place to live and work for all of its citizens.

## SECTION II – REFERENCES

Numerous sources were utilized to ensure the most complete planning document could be assembled. In an effort to ensure that all data sources consulted are cited, references are listed in the following format: 1) Publications, 2) Web Sites, 3) Other Sources.

### **Publications:**

FEMA Pre-Disaster Mitigation *How-to Guides* #1, 2, 3, 7 (FEMA)  
GEMA Supplements to FEMA Pre-Disaster Mitigation How-to Guides (GEMA)  
*The Millen News*  
*The Augusta Chronicle*  
Summary of Floods in the United States During 1990 and 1991  
<http://pubs.er.usgs.gov/publication/wsp2474>  
FLOODS IN GEORGIA. FREQUENCY AND MAGNITUDE. By. R. W. Carter.  
<Http://pubs.usgs.gov/circ/1951/0100/report.pdf>  
Georgia Archives University System of Georgia  
<http://cdm.sos.state.ga.us:2011/cdm/search/searchterm/FLOOD/mode/all/order/subjec/ad/desc>

### **Web Sites:**

FEMA [www.fema.gov](http://www.fema.gov)  
GEMA [www.gema.state.ga.us](http://www.gema.state.ga.us)  
Georgia Department of Community Affairs <http://www.dca.state.ga.us/>  
Georgia Forestry Commission <http://weather.gfc.state.ga.us>  
NOAA NCEI [www.ncdc.noaa.gov](http://www.ncdc.noaa.gov)  
SHELDUS™ | Spatial Hazard Events and Losses Database for the United States  
<https://sheldus.asu.edu/SHELDUS>  
National Inventory of Dams <https://nid.sec.usace.army.mil/>  
<http://www.placenames.com>  
New Georgia Encyclopedia <http://www.georgiaencyclopedia.org/nge/Home.jsp>  
Georgia Archives University System of Georgia  
<http://cdm.sos.state.ga.us:2011/cdm/search/searchterm/FLOOD/mode/all/order/subjec/ad/desc>  
United States Census Bureau <http://www.census.gov/>  
USDA, NASS, 2017 CENSUS OF AGRICULTURE  
[http://www.nass.usda.gov/Census\\_of\\_Agriculture/index.asp](http://www.nass.usda.gov/Census_of_Agriculture/index.asp)  
<http://www.sercc.com/> The Southeast Regional Climate Center (SERCC)  
<http://www.tornadohistoryproject.com/tornado/Georgia> Tornado History Project

### **Other Sources:**

American Red Cross  
CSRA Regional Commission  
Georgia Department of Natural Resources  
Georgia Forestry Commission  
Jenkins County, City of Millen  
Jenkins County Board of Education  
Jenkins County Tax Assessor

## APPENDICES

### Appendix A – Hazard Identification, Risk Assessment and Vulnerability (HRV)

- I. Hazard A - Flood
  - a. Description
  - b. Historical Event Table
  - c. Data – GEMA Critical Facility Inventory Report
  - d. Maps
- II. Hazard B– Dam Failure
  - a. Description
  - b. Historical Event Table
  - c. Data – GEMA Critical Facility Inventory Report
  - d. Maps
- III. Hazard C - Drought
  - a. Description
  - b. Historical Event Table
  - c. Data – GEMA Critical Facility Inventory Report
  - d. Maps
- IV. Hazard D - Wildfire
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  - b. Historical Event Table
  - c. Data – GEMA Critical Facility Inventory Report
  - d. Maps
- V. Hazard E - Tornado
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  - b. Historical Event Table
  - c. Data – GEMA Critical Facility Inventory Report
  - d. Maps
- VI. Hazard F – Tropical Storms
  - a. Description
  - b. Historical Event Table
  - c. Data – GEMA Critical Facility Inventory Report
  - d. Maps
- VII. Hazard G – Severe Weather, Including Thunder Storms, Lightning, Hail
  - a. Description
  - b. Historical Event Table
  - c. Data – GEMA Critical Facility Inventory Report
  - d. Maps
- VIII. Hazard F – Winter Storm
  - a. Description



- b. Historical Event Table
- c. Data – GEMA Critical Facility Inventory Report
- d. Maps

Appendix B – Growth and Development Trends / Community Information

- I. Local Comp Plan Executive Summary
- II. Statistics/tables from Local Comp Plan
- III. Community Information

Appendix C –Planning documents

- I. Executive Summary Local Emergency Operations
- II. Executive Summary GEMA State Emergency Operations
- III. Hazard Risk Analysis
- IV. Flood Insurance Study
- V. Community Wildfire Protection Plan
- VI. Timber Impact Assessment GFC
- VII. Executive Summary CSRA Regional Commission Regional Plan

Appendix D – Worksheets used in planning process

- I. Completed GEMA/local worksheets
- II. Blank GEMA/local worksheets
- III. Other misc. worksheets or planning process documents

Appendix E – Copies of Required Planning Documentation

- I. Public notice
- II. Meeting Agendas / Meeting Minutes
- III. Sign-in sheets
- IV. Local proclamations (copy of all resolution)
- V. GEMA/FEMA correspondence

**APPENDIX A**

**HAZARD IDENTIFICATION,  
RISK ASSESSMENT  
AND  
VULNERABILITY**

## **FLOOD**

Flood plains are relatively flat lands that border streams and rivers that are normally dry but are covered with water during floods. The susceptibility of a stream to flooding is dependent upon several different variables. Among these are topography, ground saturation, rainfall intensity and duration, soil types, drainage, drainage patterns of streams, and vegetative cover. A large amount of rainfall over a short period can result in flash flood conditions. A small amount of rain can also result in floods where the soil is saturated from a previous wet period or if rain is concentrated in an area of impermeable surfaces such as large parking lots, paved roadways, etc. Topography and ground cover are contributing factors for floods where water runoff is greater in areas with steep slopes and little or no vegetation. The severity of a flood is usually measured in terms of depth of flooding.

Flooding occurs when the volume of water exceeds the ability of a water body (stream, river, or lake) to contain it within its normal banks. Floodplains serve three major purposes: Natural water storage and conveyance, water quality maintenance, and groundwater recharge. These three purposes are greatly inhibited when floodplains are misused or abused through improper and unsuitable land development. For example, if floodplains are filled to construct a building, valuable water storage and recharge areas are lost. This causes unnecessary flooding in previously dry areas and can damage buildings and other structures.

Severe flooding within Jenkins County is a relatively infrequent event. The county has over 35,292 acres of wetlands, 14 lakes, 33 rivers/streams and 14 reservoirs. Slopes in Jenkins County ranges from nearly level in the low-lying floodplain areas to around 17-20 percent along the side slopes of some ridgelines and bluffs. Floodplains are narrow except along the principal rivers which have a wide expanse of swamp bordering both sides of the channel. Relief varies from 100 to 150 feet. Elevations in the district range from 500 feet in the northwest to 100 feet in the southeast indicating the regional dip.

Over the last 95 years, there have been 14 documented flooding events, resulting in nearly \$700,000 in damages. Throughout this period, a total of three fatalities and one injury have been attributed to flooding event. One particularly tragic incident occurred during the flood in October 1992, when a 2-week-old infant was swept from the arms of their mother as the family was evacuated. Hurricane Debby and Hurricane Helene produced heavy rainfall totals across the county, however no widespread flooding was reported.

Based on tax data, parcel and flood maps all or a portion of 281 known structures/properties valued at approximately \$35 million and a population of 135 located in known floodplains. The committee identified specific mitigation goals, objectives and action items related to flooding, which can be found in Chapter III, Section III.

Location	Date	Type	Mag	Dth	Inj	PrD	CrD	Episode Narrative
JENKINS CO.	9/25/1929							The worst recorded flooding in Je nkins County occurred between September 25 and October 3, 1929, as a result of two heavy thunderstorms that passed through the area within a period of ten days. The first storm, which occurred September 25-27, 1929, was prolonged and intense. The second stom1 was the result of a tropical hurricane tbat passed around the Florida peninsula, turned northwest. and moved inland near the City of Pensacola, Florida on September 30. It moved northeast across northern Florida and southeastern Georgia and then up the Atlantic coast.
JENKINS CO.	3/20/1980	Flooding						Heavy rainfall caused flash flooding in parts of the county.
JENKINS CO.	10/11/1990	Flooding		0	0	500000	0	
JENKINS CO.	10/14/1990	Flooding		0	0	50000	0	Flooding widespread along County rivers and roads due to heavy rainfall.
JENKINS CO.	2/14/1991	Flooding		0	0	0	500	
JENKINS CO.	8/26/1991	Flooding		0	0	50000	0	
JENKINS CO.	10/2/1992	Flooding		0	0	100000	0	
JENKINS CO.	10/8/1992	Flooding		0	1	0	0	
JENKINS CO.	3/11/1998	Flooding						Flooding at Buckhead creek
JENKINS CO.	4/10/2003	Flooding						Heavy rainfall on saturated ground caused several roads to become impassable as water ponded on the roads.
MILLEN	7/26/2003	Flash Flood		0	0	0	0	Very heavy rain caused flooding which washed out Savannah Road and Spencer Road. Highway 25 to the north of Millen was also flooded.
MILLEN	6/29/2010	Flash Flood		0	0	0	0	The public reported seven inches of rainfall with widespread flooding on roadways in Millen.
ROGERS	5/29/2012	Flash Flood		0	0	0	0	Three feet of water across State Road 17 in Herndon near Birdsville Road

Critical Facilities Flood Hazard Scores

<b>Jurisdiction</b>	<b>Name</b>	<b>Hazard Score</b>	<b>Replacement Value</b>	<b>Valuation Year</b>	<b>Content value</b>	<b>Facility type</b>	<b>Risk</b>	<b>Day</b>	<b>Night</b>
Jenkins County	Herdon Bridge	3	6000000	2024		Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Transportation		
Millen city	City of Millen Wastewater Lift Station #2	3	100000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important	1	0
Millen city	City of Millen Wastewater Lift Station #3	3	100000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important	1	0
Millen city	City of Millen Wastewater Treatment Plant	3	4000000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important	2	0
Millen city	City of Millen Wastewater Lift Station #4	3	90000	2024		Government, Government, Water/Sewer, Water/Sewer	Economic Assets		

[illegible]



Jenkins County	County Community Service Board of Georgia	0	250000	2024	15000	NGO, NGO, Transportation, Transportation	Important, Vulnerable Population	20	
Jenkins County	Jenkins Co. Health Dept.	0	1125000	2024	150000	Government, Government, Water/Sewer, Water/Sewer	Essential	8	0
Jenkins County	JENKINS CO-CR54 PHASE 2 MSWL & C&D SITE	0	1000000	2024		Government, Government, Water/Sewer, Water/Sewer	Economic Assets, Hazardous Materials		
Jenkins County	Jenkins County Extension Office	0	250000	2024	25000	Government, Government, Water/Sewer, Water/Sewer	Essential	10	
Jenkins County	Jenkins County Ag Center	0	150000	2024	10000	Government, Government, Water/Sewer, Water/Sewer	Essential	4	
Jenkins County	Jenkins County Annex Building	0	1200000	2024	100000	Government, Government, Water/Sewer, Water/Sewer	Essential, Important	10	
Jenkins County	Jenkins County BOE Office and Bus Shop	0	1500000	2014	300000	Emergency Services, Fire Fighters	Important	25	

Jenkins County	Jenkins County Courthouse	0	5500000	2024	250000	Government, Government, Water/Sewer, Water/Sewer	Essential, Historic Consideration	15	
Jenkins County	Jenkins County Elem School	0	4500000	2024	2500000	Education, Education, K - 12, K - 12	Essential, Vulnerable Population	725	
Jenkins County	Jenkins County EMS	0	350000	2024	750000	Government, Government, Water/Sewer, Water/Sewer	Essential, Important, Lifeline, Vulnerable Population	4	4
Jenkins County	Jenkins County Fuel Station	0	150000	2024		NGO, NGO, Transportation, Transportation	Essential, Transportation	0	0
Jenkins County	Jenkins County Headstart	0	800000	2024	100000	Government, Government, Water/Sewer, Water/Sewer	Important, Vulnerable Population	45	
Jenkins County	Jenkins County High School	0	10500000	2024	2500000	Education, Education, K - 12, K - 12	Essential, Vulnerable Population	457	
Jenkins County	Jenkins County Library	0	600000	2014	225000	Education, Library	Important	20	

Jenkins County	Jenkins County Maintenance Shop	0	114250	2024	30000	NGO, NGO, Transportation, Transportation	Important, Transportation	14	0
Jenkins County	Jenkins County Medical Center	0	0	2024		Medical, Medical, Medical Offices, Medical Offices			
Jenkins County	Jenkins County Middle School	0	9000000	2024	2500000	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Important, Vulnerable Population	387	
Jenkins County	Jenkins County Roads and Bridges Office	0	75000	2024	10000	Education, Education, Library, Library	Important	2	
Jenkins County	Jenkins County Senior Citizens Center	0	1125000	2024	50000	Government, Government, Water/Sewer, Water/Sewer	Important, Vulnerable Population	30	0
Jenkins County	Millen-Jenkins County Airport	0	6000000	2024	1000000	NGO, NGO, Transportation, Transportation	Important, Transportation	0	0

Jenkins County	North Jenkins Co. VFD #3	0	70000	2024	10000	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential		
Jenkins County	North Jenkins Co. Volunteer Fire Dept. #7	0	70000	2024	10000	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential, Important	0	0
Jenkins County	North Jenkins Co. Volunteer Fire Dept. #9	0	80000	2024	50000	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential, Important	0	0
Jenkins County	North Jenkins VFD #2	0	80000	2024	10000	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential		
Jenkins County	South Jenkins Co. Volunteer Fire Dept. #5	0	162500	2024	50000	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	0	0

Jenkins County	South Jenkins VFD #6	0	110000	2024		Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	0	
Millen city	Barney Overpass	0	3000000	2024		Government, Government, Water/Sewer, Water/Sewer	Transportation		
Millen city	City of Millen Groundwater Elevated Tank #2	0	750000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		
Millen city	City of Millen Groundwater Well #1	0	500000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important, Special Consideration	0	0
Millen city	City of Millen Groundwater Well #2	0	500000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		
Millen city	City of Millen Natural Gas Regulation Station #1	0	150000	2024		Government, Government, Water/Sewer, Water/Sewer	High Potential Loss, Important		

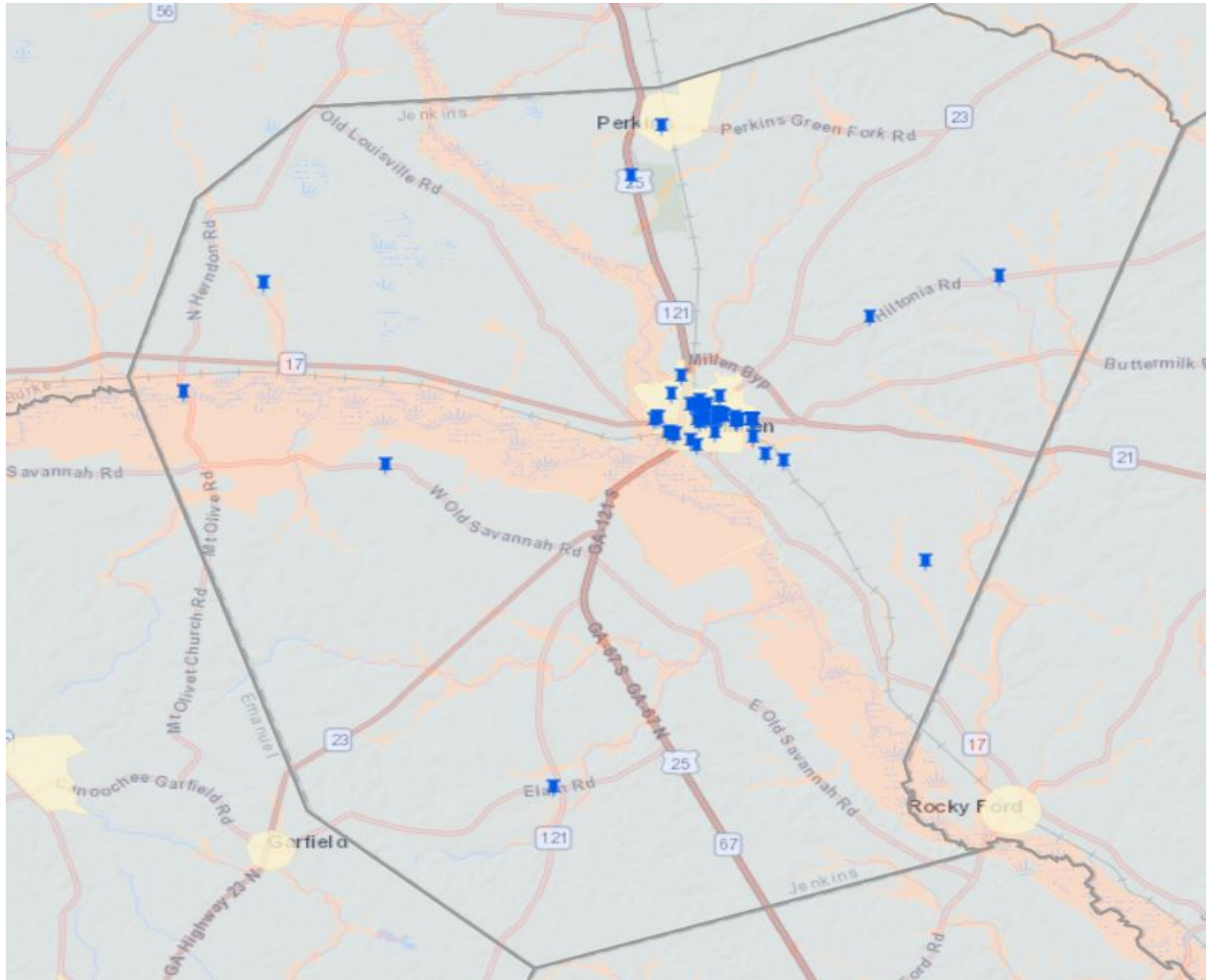
Millen city	City of Millen Natural Gas Regulation Station #2	0	150000	2024		Education, Education, Government Offices, Government Offices	High Potential Loss, Important	0	0
Millen city	City of Millen Natural Gas Regulator Station #3	0	150000	2024		Government, Government, Water/Sewer, Water/Sewer	Hazardous Materials, Important, Lifeline		
Millen city	Millen City Hall/FD/PD	0	5500000	2024	1500000	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	10	
Millen city	Millen Community House	0	780000	2024	50000	Government, Government, Water/Sewer, Water/Sewer	Important		
Millen city	Millen Elevated Tank #1	0	750000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		
Millen city	Millen Elevated Tank #4	0	750000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		



Millen city	Millen Groundwater Elevated Tank #1	0	750000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	0	0
Millen city	Millen Groundwater Well #3	0	500000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		
Millen city	Millen Natural Gas Odorizer	0	100000	2024		Education, Education, Government Offices, Government Offices	Essential	0	0
Millen city	Millen Utility Warehouse	0	372000	2024	280000	Government, Government, Water/Sewer, Water/Sewer	Important		
Millen city	Millen Well #4	0	500000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		
Millen city	Solar Array #1	0	115000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential		
Millen city	Solar Array #2	0	50000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential		

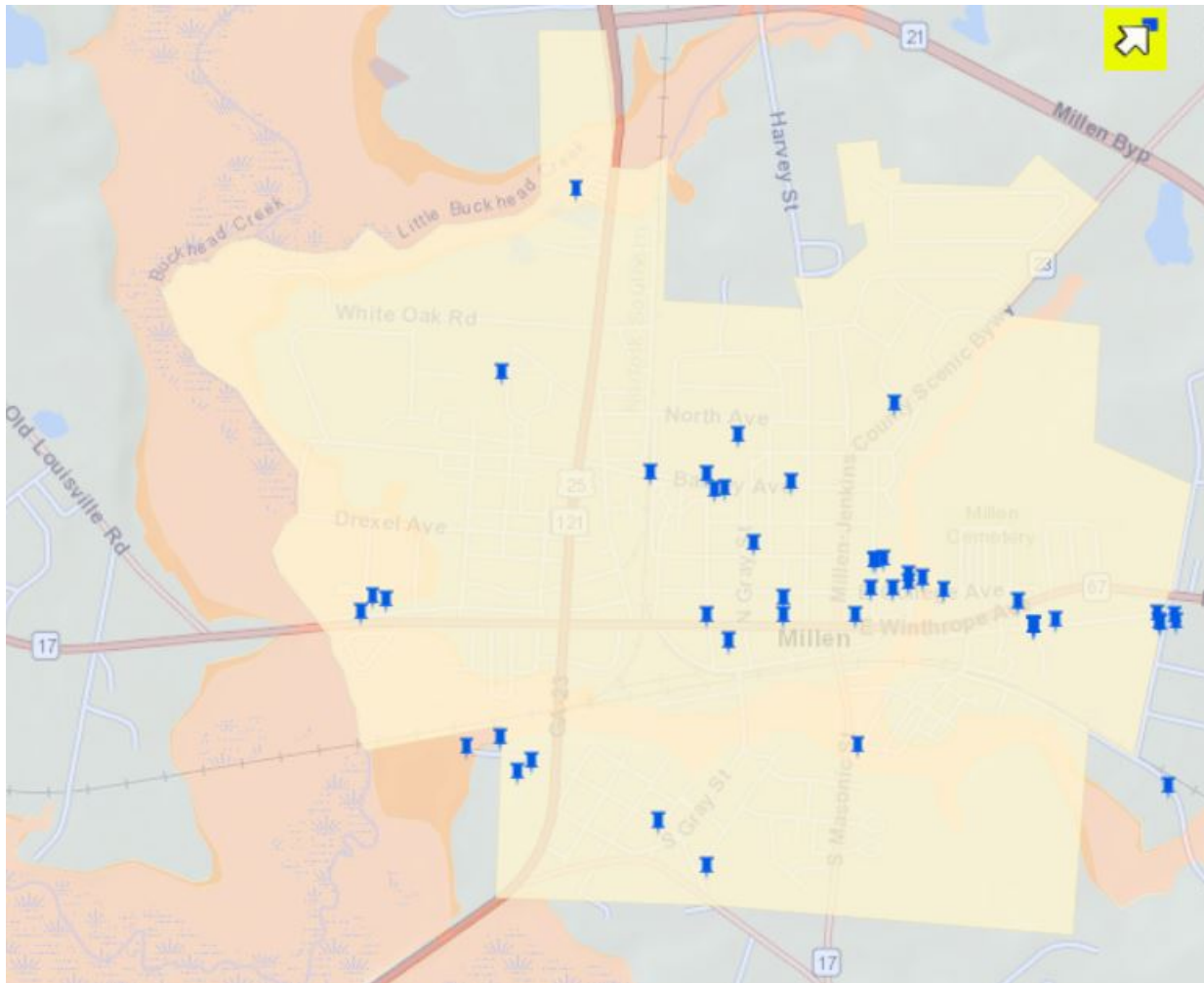
Millen city	Solar Array 3	0	865000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential		
<b>45</b>			<b>\$ 60,993,750.00</b>		<b>\$ 12,475,000.00</b>			<b>1786</b>	<b>4</b>
<b>TOTAL</b>									
<b>56</b>			<b>\$ 75,463,750.00</b>		<b>\$ 12,558,000.00</b>			<b>1796</b>	<b>4</b>

## Jenkins County Flood Plains Georgia Mitigation Information System



Score	Original Value	Description
4	Floodway	Floodway (within zone AE)
	V	1% with Velocity no Base Flood Elevation (BFE)
	VE	1% with Velocity BFE
3	A	1% Annual Chance no BFE
	A99	1% Federal flood protection system
	AE	1% has BFE
	AH	1% Ponding has BFE
	AO	1% Sheet Flow has depths
	AR	1% Federal flood protection system
2	X500	0.2% Annual Chance
1	ANI	Area not included in survey
	D	Undetermined but possible
0	UNDES	Undesignated
	X	Outside Flood Zones

## Millen Flood Plains Georgia Mitigation Information System



Score	Original Value	Description
4	Floodway	Floodway (within zone AE)
	V	1% with Velocity no Base Flood Elevation (BFE)
	VE	1% with Velocity BFE
3	A	1% Annual Chance no BFE
	A99	1% Federal flood protection system
	AE	1% has BFE
	AH	1% Ponding has BFE
	AO	1% Sheet Flow has depths
	AR	1% Federal flood protection system
2	X500	0.2% Annual Chance
1	ANI	Area not included in survey
	D	Undetermined but possible
0	UNDES	Undesignated
	X	Outside Flood Zones

## **DAM**

Dam failures and incidents involve unintended release or surges of impounded water. They can destroy property and cause injury and death downstream. While they may involve the total collapse of a dam, that is not always the case. Damaged spillways, overtopping of a dam or other problems may result in a hazardous situation. Dam failures may be caused by structural deficiencies in the dam itself. Dam failures may also come from other factors including but not limited to debris blocking spillways, flooding, improper operation and vandalism. Dam failures are potentially the worst flood events. When a dam fails, a large quantity of water is suddenly released downstream, destroying anything in its path and posing a threat to life and property.

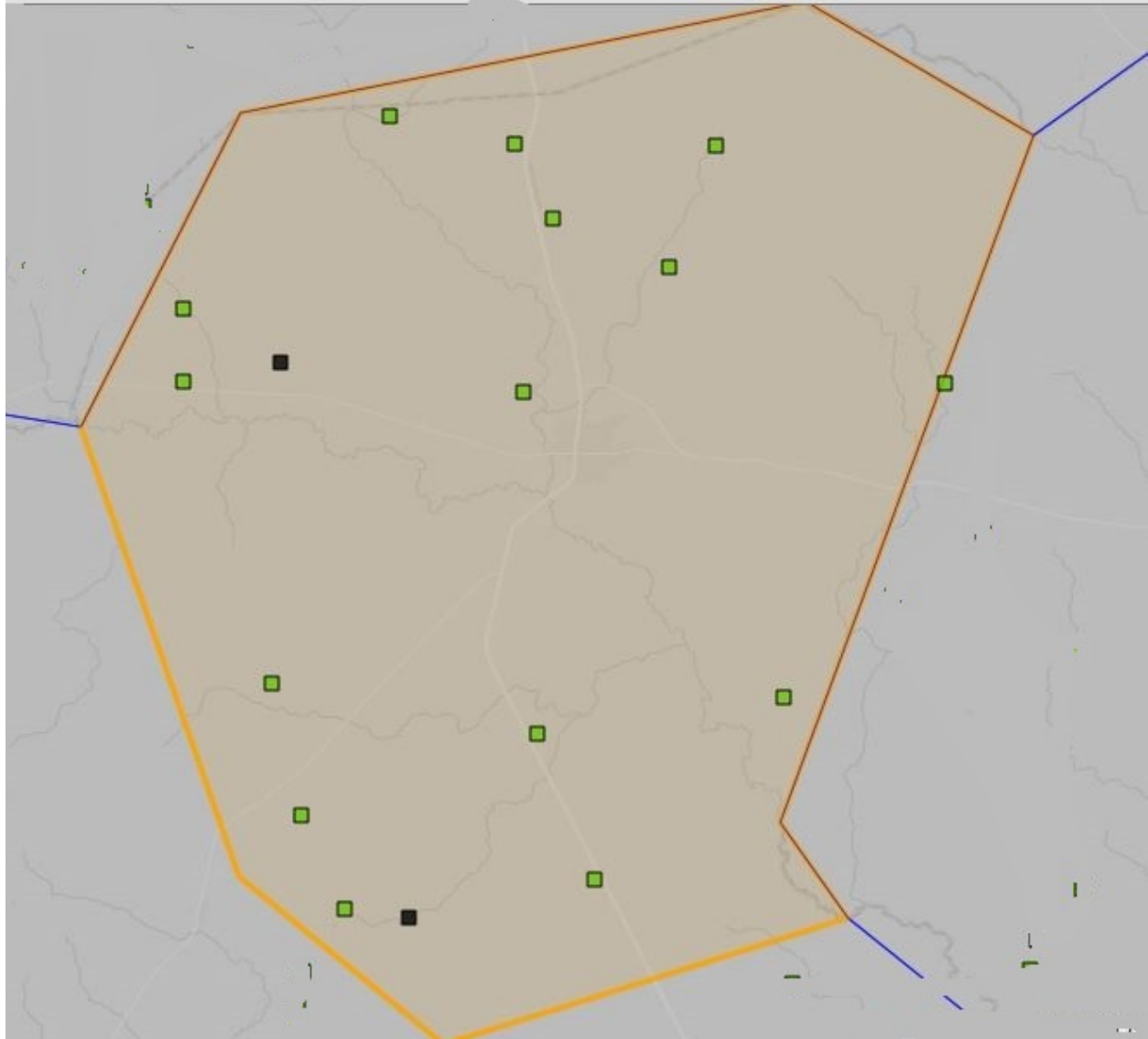
Based on the 2023 National Inventory of Dams there are 18 dams in Jenkins County where 16 are low hazard and two are classified as undetermined. The average dam age is 59 years and there are no dams regulated by state or federal agencies. All are located in the unincorporated areas of the county

Based on interviews and best available data there have been two dam failure events within the last 95 years: one in 1929 and one in 1990. The dam failures were a result of the flooding events that occurred in the aforementioned section. There were three deaths and one injury as a result of the flood event. Based on a 20-year hazard cycle the chance of an annual dam failure occurring is less than one percent for all of Jenkins County.

The number of dams posing potential loss of life hazards to Jenkins County residents and the number of residents living downstream from these potentially hazardous dams is unknown at this time. Based on the best available data, the residents of Millen do not appear to be at risk due to dam failure. Data is not available at this time for the committee to determine what assets are exposed to risk due to dam failure in the unincorporated areas of Jenkins County. The GMIS report has critical facilities replacement value at more than \$75 million with a population of 1,800. The County has a population of 8,693 and 24,770 structures/properties valued at more than \$978 million at risk of potential loss.

DAM_DESIGNER	PRIVATE_ DAM	DAM TYPE	CORE	FOUNDATI ON	PURPOSES	YEAR_ COMPLETED	HAZARD	EAP
USDA NRCS	N	RE	X	U	R	1965	L	NR
USDA NRCS	N	RE	X	U	R	1967	L	NR
UNKNOWN	N	RE	X	U	I	1978	L	NR
USDA NRCS	N	RE	X	U	R	1963	L	NR
UNKNOWN	N	RE	X	U	O		L	NR
UNKNOWN	N	RE	X	U	R	1960	L	NR
GRADY HENDLEY	N	RE	X	U	R	1960	L	NR
OLD STATE PARK SERVICE	N	RE	X	U	R	1942	L	NR
UNKNOWN	N	RE	X	U	R	1940	L	NR
SCS	N	RE	X	U	R	1978	L	NR
UNKNOWN	N	RE	X	U	R	1960	L	NR
JOYNER	N	RE	X	U	R		L	NR
CLAUD HOWARD	N	RE	X	U	R		L	NR
SCS	N	RE	X	U	R	1978	L	NR
UNKNOWN	N	RE	X	U	O		L	NR
UNKNOWN	N	RE	X	U	O		U	NR
NRCS	N	RE	X	U	O		U	NR

## Jenkins County Dams



### Hazard Potential Type

- High
- Significant
- Low
- Undetermined
- Not Available



Critical Facilities Flood Hazard Scores

<b>Jurisdiction</b>	<b>Name</b>	<b>Hazard Score</b>	<b>Replacement Value</b>	<b>Valuation Year</b>	<b>Content value</b>	<b>Facility type</b>	<b>Risk</b>	<b>Day</b>	<b>Night</b>
Jenkins County	Herdon Bridge	3	6000000	2024		Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Transportation		
Millen city	City of Millen Wastewater Lift Station #2	3	100000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important	1	0
Millen city	City of Millen Wastewater Lift Station #3	3	100000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important	1	0
Millen city	City of Millen Wastewater Treatment Plant	3	4000000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important	2	0
Millen city	City of Millen Wastewater Lift Station #4	3	90000	2024		Government, Government, Water/Sewer, Water/Sewer	Economic Assets		

[illegible]

Jenkins County	County Community Service Board of Georgia	0	250000	2024	15000	NGO, NGO, Transportation, Transportation	Important, Vulnerable Population	20	
Jenkins County	Jenkins Co. Health Dept.	0	1125000	2024	150000	Government, Government, Water/Sewer, Water/Sewer	Essential	8	0
Jenkins County	JENKINS CO-CR54 PHASE 2 MSWL & C&D SITE	0	1000000	2024		Government, Government, Water/Sewer, Water/Sewer	Economic Assets, Hazardous Materials		
Jenkins County	Jenkins County Extension Office	0	250000	2024	25000	Government, Government, Water/Sewer, Water/Sewer	Essential	10	
Jenkins County	Jenkins County Ag Center	0	150000	2024	10000	Government, Government, Water/Sewer, Water/Sewer	Essential	4	
Jenkins County	Jenkins County Annex Building	0	1200000	2024	100000	Government, Government, Water/Sewer, Water/Sewer	Essential, Important	10	
Jenkins County	Jenkins County BOE Office and Bus Shop	0	1500000	2014	300000	Emergency Services, Fire Fighters	Important	25	

Jenkins County	Jenkins County Courthouse	0	5500000	2024	250000	Government, Government, Water/Sewer, Water/Sewer	Essential, Historic Consideration	15	
Jenkins County	Jenkins County Elem School	0	4500000	2024	2500000	Education, Education, K - 12, K - 12	Essential, Vulnerable Population	725	
Jenkins County	Jenkins County EMS	0	350000	2024	750000	Government, Government, Water/Sewer, Water/Sewer	Essential, Important, Lifeline, Vulnerable Population	4	4
Jenkins County	Jenkins County Fuel Station	0	150000	2024		NGO, NGO, Transportation, Transportation	Essential, Transportation	0	0
Jenkins County	Jenkins County Headstart	0	800000	2024	100000	Government, Government, Water/Sewer, Water/Sewer	Important, Vulnerable Population	45	
Jenkins County	Jenkins County High School	0	10500000	2024	2500000	Education, Education, K - 12, K - 12	Essential, Vulnerable Population	457	
Jenkins County	Jenkins County Library	0	600000	2014	225000	Education, Library	Important	20	

Jenkins County	Jenkins County Maintenance Shop	0	114250	2024	30000	NGO, NGO, Transportation, Transportation	Important, Transportation	14	0
Jenkins County	Jenkins County Medical Center	0	0	2024		Medical, Medical, Medical Offices, Medical Offices			
Jenkins County	Jenkins County Middle School	0	9000000	2024	2500000	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Important, Vulnerable Population	387	
Jenkins County	Jenkins County Roads and Bridges Office	0	75000	2024	10000	Education, Education, Library, Library	Important	2	
Jenkins County	Jenkins County Senior Citizens Center	0	1125000	2024	50000	Government, Government, Water/Sewer, Water/Sewer	Important, Vulnerable Population	30	0
Jenkins County	Millen-Jenkins County Airport	0	6000000	2024	1000000	NGO, NGO, Transportation, Transportation	Important, Transportation	0	0

Jenkins County	North Jenkins Co. VFD #3	0	70000	2024	10000	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential		
Jenkins County	North Jenkins Co. Volunteer Fire Dept. #7	0	70000	2024	10000	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential, Important	0	0
Jenkins County	North Jenkins Co. Volunteer Fire Dept. #9	0	80000	2024	50000	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential, Important	0	0
Jenkins County	North Jenkins VFD #2	0	80000	2024	10000	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential		
Jenkins County	South Jenkins Co. Volunteer Fire Dept. #5	0	162500	2024	50000	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	0	0

Jenkins County	South Jenkins VFD #6	0	110000	2024		Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	0	
Millen city	Barney Overpass	0	3000000	2024		Government, Government, Water/Sewer, Water/Sewer	Transportation		
Millen city	City of Millen Groundwater Elevated Tank #2	0	750000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		
Millen city	City of Millen Groundwater Well #1	0	500000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important, Special Consideration	0	0
Millen city	City of Millen Groundwater Well #2	0	500000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		
Millen city	City of Millen Natural Gas Regulation Station #1	0	150000	2024		Government, Government, Water/Sewer, Water/Sewer	High Potential Loss, Important		



Millen city	City of Millen Natural Gas Regulation Station #2	0	150000	2024		Education, Education, Government Offices, Government Offices	High Potential Loss, Important	0	0
Millen city	City of Millen Natural Gas Regulator Station #3	0	150000	2024		Government, Government, Water/Sewer, Water/Sewer	Hazardous Materials, Important, Lifeline		
Millen city	Millen City Hall/FD/PD	0	5500000	2024	1500000	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	10	
Millen city	Millen Community House	0	780000	2024	50000	Government, Government, Water/Sewer, Water/Sewer	Important		
Millen city	Millen Elevated Tank #1	0	750000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		
Millen city	Millen Elevated Tank #4	0	750000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		

Millen city	Millen Groundwater Elevated Tank #1	0	750000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	0	0
Millen city	Millen Groundwater Well #3	0	500000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		
Millen city	Millen Natural Gas Odorizer	0	100000	2024		Education, Education, Government Offices, Government Offices	Essential	0	0
Millen city	Millen Utility Warehouse	0	372000	2024	280000	Government, Government, Water/Sewer, Water/Sewer	Important		
Millen city	Millen Well #4	0	500000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		
Millen city	Solar Array #1	0	115000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential		
Millen city	Solar Array #2	0	50000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential		

Millen city	Solar Array 3	0	865000	2024		Government, Government, Water/Sewer, Water/Sewer	Essential		
<b>45</b>			<b>\$ 60,993,750.00</b>		<b>\$ 12,475,000.00</b>			<b>1786</b>	<b>4</b>
<b>TOTAL</b>									
<b>56</b>			<b>\$ 75,463,750.00</b>		<b>\$ 12,558,000.00</b>			<b>1796</b>	<b>4</b>

## DOUGHT

Drought conditions are identified by a prolonged period of moisture deficiency. Climatologists and hydrologists use five indicators of drought: rainfall, soil moisture, stream flows, lake levels and groundwater level. Drought conditions affect the cultivation of crops as well as water availability and water quality. Drought is also a key factor in wildfire development.

Agricultural losses associated with drought are more likely to occur in the rural, less concentrated areas of the county. Although Millen is less likely to experience drought related losses, they should not be excluded from mitigation considerations. Drought creates a deficiency in water supply that affects water availability and water quality. Drought may increase the likelihood of wildfires and flooding. Water shortages can impede firefighting efforts at all levels. Drought creates a deficiency in water supply that affects water availability and water quality. Droughts can and have severely affected private wells, municipal and industrial water supplies, agriculture, stream water quality, recreation at major reservoirs hydropower generation, navigation, and forest resources.

Drought is not spatially defined and equally affects the entire planning area. Droughts do not have the immediate effects of other natural hazards, but sustained drought can cause severe economic stress to the agricultural interests in Jenkins County. The potential negative effects of sustained drought are numerous. ***Historical data is available only for the county as a whole.*** Based on a 20-year cycle hazard history along with available data there is a 155% chance of an annual drought event in Jenkins County. In addition to an increased threat of wildfires, drought can affect municipal and industrial water supplies, stream-water quality, water recreation facilities, hydropower generation, as well as agricultural and forest resources.

For Jenkins County as a whole, there are a total of 7,386 agricultural/forestry properties valued at approximately \$365 million and include 6,000 heads of livestock and an estimated population of 164 which have the greatest potential to be damaged by drought.

County	Details	Date	Type	PrD
County wide		8/1/1999	Drought	0
County wide		9/1/1999	Drought	0
County wide		5/15/2000	Drought	0
County wide		6/1/2000	Drought	0
County wide		7/1/2000	Drought	0
County wide		8/1/2000	Drought	0
County wide		4/1/2001	Drought	0
County wide		5/1/2001	Drought	0
County wide		10/1/2001	Drought	0
County wide		11/1/2001	Drought	0
County wide		12/1/2001	Drought	0
County wide		1/1/2002	Drought	0
County wide		3/1/2002	Drought	0
County wide		4/1/2002	Drought	0
County wide		5/1/2002	Drought	0
County wide		6/1/2002	Drought	0
County wide		7/1/2002	Drought	0
County wide		8/1/2002	Drought	0
County wide		9/1/2002	Drought	0
County wide		8/1/2006	Drought	
County wide	Drought is ongoing and expected to last into the summer of 2008.	05/01/2007-	Drought	
County wide		9/1/2007	Drought	
County wide		10/1/2007	Drought	

County wide	<p>Drought conditions continued to worsen across north and central Georgia during November. Rainfall deficits continued to grow, with many locations across the north and central part of the state reporting rainfall deficits of 15 to 20 inches. With the exception of the Columbus area and the far northern part of the state, most of north and central Georgia received only about 50 percent of their normal rainfall during the month. Many lake and river levels across north and central Georgia continued near all time record low levels. Above ground water supplies were severely taxed. Lake Lanier in northeast Georgia, the main water source for metropolitan Atlanta reached a new record low level of 1052.63 feet on November 20th. This was the lowest reading recorded since December 24th of 1981, when a level of 1052.66 feet was observed. Lake Allatoona in northwest Georgia and West Point Lake in west central Georgia were also nearing record levels, but fell several feet short of record values. Significant water restrictions remained in place across many counties in north Georgia. Only a minor recovery from the record low stream gage levels recorded on creeks and rivers in north and central Georgia during October was noted, mainly as a result of reduced evaporation rates attending the late fall period</p>	11/1/2007	Drought	
County wide	<p>Drought conditions persisted and actually continued to worsen during December. This was especially true during the first half of the month when unseasonably warm, dry weather prevailed across the region thanks to a large upper-level ridge of high pressure. Rainfall deficits continued to grow during this time and lake levels fell to record or near record low levels. Lake Lanier in northeast Georgia and the main water supply for the Atlanta metropolitan area, dropped to its lowest level in history on December 28, 2007 with a reading of 1050.75 feet. New records were set nearly every day after November 20th, when the previous record low-level of 1052.63 feet was reached. Lake Allatoona in northwest Georgia and West Point Lake in west central Georgia were also near record low levels, but never reached previously established record low levels. While rivers and streams remained near record low levels as well, lower evaporation rates and slightly better overall rainfall allowed minor rises at many locations. Significant water conservation measures were being implemented in many cities across north and central Georgia.</p>	12/1/2007	Drought	

County wide	Burke County declared Primary Natural Disaster Area from summer months of excessive heat and drought, which essentially began April 15, 2011. Crop loss was deemed at the 30 percent or greater level.	9/1/2011	Drought	
County wide	County declared Primary Natural Disaster Area from summer months of excessive heat and drought.	7/12/2012	Drought	
	Severe Drought last for five weeks.	8/18/2015	Drought	
County wide	Moderate drought lasted for five weeks	11/29/2016	Drought	
County wide	Moderate drought lasted for seven weeks	4/1/2018	Drought	
County wide	Moderate drought lasted for nine weeks	5/1/2019	Drought	

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
4/23/2024	100	0	0	0	0	0	0
4/16/2024	100	0	0	0	0	0	0
4/9/2024	100	0	0	0	0	0	0
4/2/2024	100	0	0	0	0	0	0
3/26/2024	100	0	0	0	0	0	0
3/19/2024	100	0	0	0	0	0	0
3/12/2024	100	0	0	0	0	0	0
3/5/2024	100	0	0	0	0	0	0
2/27/2024	100	0	0	0	0	0	0
2/20/2024	100	0	0	0	0	0	0
2/13/2024	100	0	0	0	0	0	0
2/6/2024	100	0	0	0	0	0	0
1/30/2024	100	0	0	0	0	0	0
1/23/2024	100	0	0	0	0	0	0
1/16/2024	100	0	0	0	0	0	0
1/9/2024	100	0	0	0	0	0	0
1/2/2024	100	0	0	0	0	0	0
12/26/2023	100	0	0	0	0	0	0
12/19/2023	100	0	0	0	0	0	0
12/12/2023	93.04	6.96	0	0	0	0	7
12/5/2023	93.04	6.96	0	0	0	0	7
11/28/2023	99.8	0.2	0	0	0	0	0
11/21/2023	99.8	0.2	0	0	0	0	0
11/14/2023	100	0	0	0	0	0	0
11/7/2023	100	0	0	0	0	0	0
10/31/2023	100	0	0	0	0	0	0
10/24/2023	100	0	0	0	0	0	0
10/17/2023	100	0	0	0	0	0	0
10/10/2023	100	0	0	0	0	0	0
10/3/2023	100	0	0	0	0	0	0
9/26/2023	100	0	0	0	0	0	0
9/19/2023	100	0	0	0	0	0	0
9/12/2023	100	0	0	0	0	0	0
9/5/2023	100	0	0	0	0	0	0
8/29/2023	100	0	0	0	0	0	0
8/22/2023	100	0	0	0	0	0	0
8/15/2023	100	0	0	0	0	0	0
8/8/2023	100	0	0	0	0	0	0
8/1/2023	100	0	0	0	0	0	0
7/25/2023	100	0	0	0	0	0	0



7/18/2023	100	0	0	0	0	0	0
7/11/2023	100	0	0	0	0	0	0
7/4/2023	100	0	0	0	0	0	0
6/27/2023	100	0	0	0	0	0	0
6/20/2023	100	0	0	0	0	0	0
6/13/2023	100	0	0	0	0	0	0
6/6/2023	100	0	0	0	0	0	0
5/30/2023	100	0	0	0	0	0	0
5/23/2023	100	0	0	0	0	0	0
5/16/2023	100	0	0	0	0	0	0
5/9/2023	100	0	0	0	0	0	0
5/2/2023	100	0	0	0	0	0	0
4/25/2023	100	0	0	0	0	0	0
4/18/2023	100	0	0	0	0	0	0
4/11/2023	100	0	0	0	0	0	0
4/4/2023	100	0	0	0	0	0	0
3/28/2023	100	0	0	0	0	0	0
3/21/2023	100	0	0	0	0	0	0
3/14/2023	100	0	0	0	0	0	0
3/7/2023	100	0	0	0	0	0	0
2/28/2023	100	0	0	0	0	0	0
2/21/2023	100	0	0	0	0	0	0
2/14/2023	100	0	0	0	0	0	0
2/7/2023	100	0	0	0	0	0	0
1/31/2023	100	0	0	0	0	0	0
1/24/2023	94.13	5.87	0	0	0	0	6
1/17/2023	2.11	97.89	0.2	0	0	0	98
1/10/2023	2.11	97.89	0.23	0	0	0	98
1/3/2023	0.61	99.39	0	0	0	0	99
12/27/2022	0.61	99.39	0	0	0	0	99
12/20/2022	0.61	99.39	0	0	0	0	99
12/13/2022	0.04	99.96	0	0	0	0	100
12/6/2022	0.04	99.96	0	0	0	0	100
11/29/2022	90.28	9.72	0	0	0	0	10
11/22/2022	91.22	8.78	0	0	0	0	9
11/15/2022	91.22	8.78	0	0	0	0	9
11/8/2022	0	100	0	0	0	0	100
11/1/2022	0	100	0	0	0	0	100
10/25/2022	16.43	83.57	0	0	0	0	84
10/18/2022	16.43	83.57	0	0	0	0	84
10/11/2022	0	100	0	0	0	0	100

10/4/2022	100	0	0	0	0	0	0
9/27/2022	100	0	0	0	0	0	0
9/20/2022	100	0	0	0	0	0	0
9/13/2022	100	0	0	0	0	0	0
9/6/2022	100	0	0	0	0	0	0
8/30/2022	100	0	0	0	0	0	0
8/23/2022	100	0	0	0	0	0	0
8/16/2022	0.01	99.99	0	0	0	0	100
8/9/2022	0	100	0	0	0	0	100
8/2/2022	0	100	0	0	0	0	100
7/26/2022	100	0	0	0	0	0	0
7/19/2022	39.46	60.54	0	0	0	0	61
7/12/2022	30.61	69.39	51.56	0	0	0	121
7/5/2022	6.86	93.14	51.56	0	0	0	145
6/28/2022	0	100	57.98	0	0	0	158
6/21/2022	0	100	0	0	0	0	100
6/14/2022	0	100	0	0	0	0	100
6/7/2022	43.56	56.44	0	0	0	0	56
5/31/2022	43.56	56.44	0	0	0	0	56
5/24/2022	43.56	56.44	0	0	0	0	56
5/17/2022	0	100	100	0	0	0	200
5/10/2022	0	100	100	0	0	0	200
5/3/2022	0	100	100	0	0	0	200
4/26/2022	0	100	69.89	0	0	0	170
4/19/2022	0	100	69.89	0	0	0	170
4/12/2022	0	100	69.89	0	0	0	170
4/5/2022	0	100	71.45	0	0	0	171
3/29/2022	0	100	71.45	0	0	0	171
3/22/2022	0	100	45.5	0	0	0	146
3/15/2022	0	100	80.48	0	0	0	180
3/8/2022	0	100	0	0	0	0	100
3/1/2022	68.41	31.59	0	0	0	0	32
2/22/2022	100	0	0	0	0	0	0
2/15/2022	100	0	0	0	0	0	0
2/8/2022	100	0	0	0	0	0	0
2/1/2022	100	0	0	0	0	0	0
1/25/2022	100	0	0	0	0	0	0
1/18/2022	100	0	0	0	0	0	0
1/11/2022	100	0	0	0	0	0	0
1/4/2022	100	0	0	0	0	0	0
12/28/2021	0	100	0	0	0	0	100

12/21/2021	0	100	0	0	0	0	100
12/14/2021	0	100	0	0	0	0	100
12/7/2021	0	100	81.18	0	0	0	181
11/30/2021	5.05	94.95	0	0	0	0	95
11/23/2021	5.05	94.95	0	0	0	0	95
11/16/2021	81.12	18.88	0	0	0	0	19
11/9/2021	81.12	18.88	0	0	0	0	19
11/2/2021	71.23	28.77	0	0	0	0	29
10/26/2021	71.23	28.77	0	0	0	0	29
10/19/2021	100	0	0	0	0	0	0
10/12/2021	100	0	0	0	0	0	0
10/5/2021	100	0	0	0	0	0	0
9/28/2021	100	0	0	0	0	0	0
9/21/2021	100	0	0	0	0	0	0
9/14/2021	92.61	7.39	0	0	0	0	7
9/7/2021	100	0	0	0	0	0	0
8/31/2021	100	0	0	0	0	0	0
8/24/2021	100	0	0	0	0	0	0
8/17/2021	100	0	0	0	0	0	0
8/10/2021	100	0	0	0	0	0	0
8/3/2021	100	0	0	0	0	0	0
7/27/2021	100	0	0	0	0	0	0
7/20/2021	100	0	0	0	0	0	0
7/13/2021	100	0	0	0	0	0	0
7/6/2021	100	0	0	0	0	0	0
6/29/2021	100	0	0	0	0	0	0
6/22/2021	100	0	0	0	0	0	0
6/15/2021	100	0	0	0	0	0	0
6/8/2021	100	0	0	0	0	0	0
6/1/2021	100	0	0	0	0	0	0
5/25/2021	100	0	0	0	0	0	0
5/18/2021	100	0	0	0	0	0	0
5/11/2021	100	0	0	0	0	0	0
5/4/2021	53.34	46.66	0	0	0	0	47
4/27/2021	53.76	46.24	0	0	0	0	46
4/20/2021	9.65	90.35	0	0	0	0	90
4/13/2021	100	0	0	0	0	0	0
4/6/2021	100	0	0	0	0	0	0
3/30/2021	100	0	0	0	0	0	0
3/23/2021	100	0	0	0	0	0	0
3/16/2021	100	0	0	0	0	0	0

3/9/2021	100	0	0	0	0	0	0
3/2/2021	100	0	0	0	0	0	0
2/23/2021	100	0	0	0	0	0	0
2/16/2021	100	0	0	0	0	0	0
2/9/2021	100	0	0	0	0	0	0
2/2/2021	100	0	0	0	0	0	0
1/26/2021	100	0	0	0	0	0	0
1/19/2021	100	0	0	0	0	0	0
1/12/2021	100	0	0	0	0	0	0
1/5/2021	100	0	0	0	0	0	0
12/29/2020	0	100	0	0	0	0	100
12/22/2020	0	100	0	0	0	0	100
12/15/2020	0	100	0	0	0	0	100
12/8/2020	0	100	0	0	0	0	100
12/1/2020	0	100	0	0	0	0	100
11/24/2020	0	100	0	0	0	0	100
11/17/2020	0	100	0	0	0	0	100
11/10/2020	0	100	0	0	0	0	100
11/3/2020	0	100	0	0	0	0	100
10/27/2020	0	100	0	0	0	0	100
10/20/2020	41.01	58.99	0	0	0	0	59
10/13/2020	70.25	29.75	0	0	0	0	30
10/6/2020	70.25	29.75	0	0	0	0	30
9/29/2020	70.25	29.75	0	0	0	0	30
9/22/2020	70.25	29.75	0	0	0	0	30
9/15/2020	70.25	29.75	0	0	0	0	30
9/8/2020	69.92	30.08	0	0	0	0	30
9/1/2020	100	0	0	0	0	0	0
8/25/2020	100	0	0	0	0	0	0
8/18/2020	98.99	1.01	0	0	0	0	1
8/11/2020	99.6	0.4	0	0	0	0	0
8/4/2020	0	100	0.87	0	0	0	101
7/28/2020	0.42	99.58	44.89	0	0	0	144
7/21/2020	21.83	78.17	0	0	0	0	78
7/14/2020	100	0	0	0	0	0	0
7/7/2020	100	0	0	0	0	0	0
6/30/2020	100	0	0	0	0	0	0
6/23/2020	100	0	0	0	0	0	0
6/16/2020	100	0	0	0	0	0	0
6/9/2020	100	0	0	0	0	0	0
6/2/2020	100	0	0	0	0	0	0

5/26/2020	100	0	0	0	0	0	0
5/19/2020	100	0	0	0	0	0	0
5/12/2020	100	0	0	0	0	0	0
5/5/2020	100	0	0	0	0	0	0
4/28/2020	100	0	0	0	0	0	0
4/21/2020	100	0	0	0	0	0	0
4/14/2020	100	0	0	0	0	0	0
4/7/2020	100	0	0	0	0	0	0
3/31/2020	100	0	0	0	0	0	0
3/24/2020	100	0	0	0	0	0	0
3/17/2020	100	0	0	0	0	0	0
3/10/2020	100	0	0	0	0	0	0
3/3/2020	100	0	0	0	0	0	0
2/25/2020	100	0	0	0	0	0	0
2/18/2020	100	0	0	0	0	0	0
2/11/2020	100	0	0	0	0	0	0
2/4/2020	100	0	0	0	0	0	0
1/28/2020	100	0	0	0	0	0	0
1/21/2020	100	0	0	0	0	0	0
1/14/2020	100	0	0	0	0	0	0
1/7/2020	100	0	0	0	0	0	0
12/31/2019	100	0	0	0	0	0	0
12/24/2019	100	0	0	0	0	0	0
12/17/2019	100	0	0	0	0	0	0
12/10/2019	100	0	0	0	0	0	0
12/3/2019	100	0	0	0	0	0	0
11/26/2019	100	0	0	0	0	0	0
11/19/2019	100	0	0	0	0	0	0
11/12/2019	51.65	48.35	0	0	0	0	48
11/5/2019	0	100	33.78	0	0	0	134
10/29/2019	0	100	100	31.17	0	0	231
10/22/2019	0	100	100	50.7	14.64	0	265
10/15/2019	0	100	100	61.12	14.64	0	276
10/8/2019	0	100	100	61.12	14.64	0	276
10/1/2019	0	100	62.12	14.83	0	0	177
9/24/2019	0	100	62.12	14.83	0	0	177
9/17/2019	34.79	65.21	30.39	0	0	0	96
9/10/2019	33.6	66.4	30.39	0	0	0	97
9/3/2019	45.15	54.85	26.46	0	0	0	81
8/27/2019	9.45	90.55	44.13	0	0	0	135
8/20/2019	0.63	99.37	28.53	0	0	0	128

8/13/2019	0	100	74.35	0	0	0	174
8/6/2019	0	100	51.04	0	0	0	151
7/30/2019	12.76	87.24	0	0	0	0	87
7/23/2019	12.76	87.24	0	0	0	0	87
7/16/2019	12.76	87.24	0	0	0	0	87
7/9/2019	12.76	87.24	0	0	0	0	87
7/2/2019	12.76	87.24	0	0	0	0	87
6/25/2019	2.1	97.9	0	0	0	0	98
6/18/2019	0	100	97.67	0	0	0	198
6/11/2019	0	100	100	0	0	0	200
6/4/2019	0	100	100	0	0	0	200
5/28/2019	0	100	100	0	0	0	200
5/21/2019	0	100	100	0	0	0	200
5/14/2019	0	100	100	0	0	0	200
5/7/2019	0	100	100	0	0	0	200
4/30/2019	0	100	100	0	0	0	200
4/23/2019	0	100	50.41	0	0	0	150
4/16/2019	0	100	50.41	0	0	0	150
4/9/2019	0	100	64.1	0	0	0	164
4/2/2019	0	100	100	0	0	0	200
3/26/2019	0	100	90.62	0	0	0	191
3/19/2019	0	100	53.07	0	0	0	153
3/12/2019	0	100	0	0	0	0	100
3/5/2019	4.8	95.2	0	0	0	0	95
2/26/2019	4.78	95.22	0	0	0	0	95
2/19/2019	100	0	0	0	0	0	0
2/12/2019	100	0	0	0	0	0	0
2/5/2019	100	0	0	0	0	0	0
1/29/2019	100	0	0	0	0	0	0
1/22/2019	100	0	0	0	0	0	0
1/15/2019	100	0	0	0	0	0	0
1/8/2019	100	0	0	0	0	0	0
1/1/2019	100	0	0	0	0	0	0
12/25/2018	100	0	0	0	0	0	0
12/18/2018	100	0	0	0	0	0	0
12/11/2018	100	0	0	0	0	0	0
12/4/2018	100	0	0	0	0	0	0
11/27/2018	96.46	3.54	0	0	0	0	4
11/20/2018	96.46	3.54	0	0	0	0	4
11/13/2018	45.42	54.58	0	0	0	0	55
11/6/2018	25.73	74.27	0	0	0	0	74

10/30/2018	0.08	99.92	0	0	0	0	100
10/23/2018	0.08	99.92	0	0	0	0	100
10/16/2018	0.08	99.92	0	0	0	0	100
10/9/2018	0	100	0	0	0	0	100
10/2/2018	0	100	0	0	0	0	100
9/25/2018	0	100	0	0	0	0	100
9/18/2018	87.06	12.94	0	0	0	0	13
9/11/2018	87.06	12.94	0	0	0	0	13
9/4/2018	96.18	3.82	0	0	0	0	4
8/28/2018	100	0	0	0	0	0	0
8/21/2018	100	0	0	0	0	0	0
8/14/2018	100	0	0	0	0	0	0
8/7/2018	100	0	0	0	0	0	0
7/31/2018	100	0	0	0	0	0	0
7/24/2018	100	0	0	0	0	0	0
7/17/2018	100	0	0	0	0	0	0
7/10/2018	100	0	0	0	0	0	0
7/3/2018	100	0	0	0	0	0	0
6/26/2018	100	0	0	0	0	0	0
6/19/2018	100	0	0	0	0	0	0
6/12/2018	100	0	0	0	0	0	0
6/5/2018	100	0	0	0	0	0	0
5/29/2018	100	0	0	0	0	0	0
5/22/2018	85.26	14.74	0	0	0	0	15
5/15/2018	0	100	25.46	0	0	0	125
5/8/2018	0	100	25.46	0	0	0	125
5/1/2018	0	100	25.46	0	0	0	125
4/24/2018	0	100	100	0	0	0	200
4/17/2018	0	100	100	0	0	0	200
4/10/2018	0	100	100	0	0	0	200
4/3/2018	0	100	100	0	0	0	200
3/27/2018	0	100	100	0	0	0	200
3/20/2018	0	100	93.9	0	0	0	194
3/13/2018	0	100	93.9	0	0	0	194
3/6/2018	0	100	0	0	0	0	100
2/27/2018	0	100	0	0	0	0	100
2/20/2018	0	100	0	0	0	0	100
2/13/2018	0	100	0	0	0	0	100
2/6/2018	0	100	0	0	0	0	100
1/30/2018	0	100	0	0	0	0	100
1/23/2018	0	100	0	0	0	0	100

1/16/2018	0	100	0	0	0	0	100
1/9/2018	0	100	0	0	0	0	100
1/2/2018	0	100	0	0	0	0	100
12/26/2017	0	100	0	0	0	0	100
12/19/2017	0	100	0	0	0	0	100
12/12/2017	0	100	0	0	0	0	100
12/5/2017	0	100	37.18	0	0	0	137
11/28/2017	51.07	48.93	27.02	0	0	0	76
11/21/2017	51.07	48.93	0	0	0	0	49
11/14/2017	51.07	48.93	0	0	0	0	49
11/7/2017	91.88	8.12	0	0	0	0	8
10/31/2017	91.88	8.12	0	0	0	0	8
10/24/2017	91.88	8.12	0	0	0	0	8
10/17/2017	91.29	8.71	0	0	0	0	9
10/10/2017	100	0	0	0	0	0	0
10/3/2017	100	0	0	0	0	0	0
9/26/2017	100	0	0	0	0	0	0
9/19/2017	100	0	0	0	0	0	0
9/12/2017	100	0	0	0	0	0	0
9/5/2017	100	0	0	0	0	0	0
8/29/2017	100	0	0	0	0	0	0
8/22/2017	100	0	0	0	0	0	0
8/15/2017	100	0	0	0	0	0	0
8/8/2017	100	0	0	0	0	0	0
8/1/2017	100	0	0	0	0	0	0
7/25/2017	100	0	0	0	0	0	0
7/18/2017	96.44	3.56	0	0	0	0	4
7/11/2017	96.44	3.56	0	0	0	0	4
7/4/2017	96.44	3.56	0	0	0	0	4
6/27/2017	92.06	7.94	0	0	0	0	8
6/20/2017	92.06	7.94	0	0	0	0	8
6/13/2017	92.06	7.94	0	0	0	0	8
6/6/2017	9.33	90.67	0	0	0	0	91
5/30/2017	0	100	80.72	0	0	0	181
5/23/2017	0	100	84.79	0	0	0	185
5/16/2017	0	100	76.99	0	0	0	177
5/9/2017	0	100	69.89	0	0	0	170
5/2/2017	0	100	69.89	0	0	0	170
4/25/2017	0	100	69.89	0	0	0	170
4/18/2017	0	100	87.64	0	0	0	188
4/11/2017	0	100	0	0	0	0	100



4/4/2017	0	100	0	0	0	0	100
3/28/2017	0	100	0	0	0	0	100
3/21/2017	5.12	94.88	0	0	0	0	95
3/14/2017	100	0	0	0	0	0	0
3/7/2017	100	0	0	0	0	0	0
2/28/2017	100	0	0	0	0	0	0
2/21/2017	100	0	0	0	0	0	0
2/14/2017	100	0	0	0	0	0	0
2/7/2017	100	0	0	0	0	0	0
1/31/2017	100	0	0	0	0	0	0
1/24/2017	100	0	0	0	0	0	0
1/17/2017	0	100	0	0	0	0	100
1/10/2017	0	100	0	0	0	0	100
1/3/2017	0	100	0	0	0	0	100
12/27/2016	0	100	97.08	0	0	0	197
12/20/2016	0	100	97.08	0	0	0	197
12/13/2016	0	100	97.08	0	0	0	197
12/6/2016	0	100	100	0	0	0	200
11/29/2016	0	100	100	0	0	0	200
11/22/2016	0	100	0	0	0	0	100
11/15/2016	38.34	61.66	0	0	0	0	62
11/8/2016	38.34	61.66	0	0	0	0	62
11/1/2016	100	0	0	0	0	0	0
10/25/2016	100	0	0	0	0	0	0
10/18/2016	100	0	0	0	0	0	0
10/11/2016	100	0	0	0	0	0	0
10/4/2016	100	0	0	0	0	0	0
9/27/2016	100	0	0	0	0	0	0
9/20/2016	100	0	0	0	0	0	0
9/13/2016	100	0	0	0	0	0	0
9/6/2016	100	0	0	0	0	0	0
8/30/2016	0	100	0	0	0	0	100
8/23/2016	0	100	0	0	0	0	100
8/16/2016	100	0	0	0	0	0	0
8/9/2016	100	0	0	0	0	0	0
8/2/2016	100	0	0	0	0	0	0
7/26/2016	100	0	0	0	0	0	0
7/19/2016	100	0	0	0	0	0	0
7/12/2016	100	0	0	0	0	0	0
7/5/2016	100	0	0	0	0	0	0
6/28/2016	100	0	0	0	0	0	0

6/21/2016	100	0	0	0	0	0	0
6/14/2016	100	0	0	0	0	0	0
6/7/2016	100	0	0	0	0	0	0
5/31/2016	94.85	5.15	0	0	0	0	5
5/24/2016	25.79	74.21	0	0	0	0	74
5/17/2016	0	100	0	0	0	0	100
5/10/2016	0	100	0	0	0	0	100
5/3/2016	0	100	0	0	0	0	100
4/26/2016	100	0	0	0	0	0	0
4/19/2016	100	0	0	0	0	0	0
4/12/2016	100	0	0	0	0	0	0
4/5/2016	100	0	0	0	0	0	0
3/29/2016	100	0	0	0	0	0	0
3/22/2016	100	0	0	0	0	0	0
3/15/2016	100	0	0	0	0	0	0
3/8/2016	100	0	0	0	0	0	0
3/1/2016	100	0	0	0	0	0	0
2/23/2016	100	0	0	0	0	0	0
2/16/2016	100	0	0	0	0	0	0
2/9/2016	100	0	0	0	0	0	0
2/2/2016	100	0	0	0	0	0	0
1/26/2016	100	0	0	0	0	0	0
1/19/2016	100	0	0	0	0	0	0
1/12/2016	100	0	0	0	0	0	0
1/5/2016	100	0	0	0	0	0	0
12/29/2015	100	0	0	0	0	0	0
12/22/2015	100	0	0	0	0	0	0
12/15/2015	100	0	0	0	0	0	0
12/8/2015	100	0	0	0	0	0	0
12/1/2015	100	0	0	0	0	0	0
11/24/2015	100	0	0	0	0	0	0
11/17/2015	100	0	0	0	0	0	0
11/10/2015	100	0	0	0	0	0	0
11/3/2015	35.55	64.45	0	0	0	0	64
10/27/2015	5.23	94.77	63.75	0	0	0	159
10/20/2015	5.23	94.77	63.75	0	0	0	159
10/13/2015	5.23	94.77	63.82	0	0	0	159
10/6/2015	5.23	94.77	63.82	0	0	0	159
9/29/2015	0	100	100	0	0	0	200
9/22/2015	0	100	100	0	0	0	200
9/15/2015	0	100	100	93.73	0	0	294

9/8/2015	0	100	100	93.73	0	0	294
9/1/2015	0	100	100	88.62	0	0	289
8/25/2015	0	100	100	88.62	0	0	289
8/18/2015	0	100	100	88.62	0	0	289
8/11/2015	0	100	100	0	0	0	200
8/4/2015	0	100	100	0	0	0	200
7/28/2015	0	100	38.12	0	0	0	138
7/21/2015	0	100	37.59	0	0	0	138
7/14/2015	0	100	0	0	0	0	100
7/7/2015	0	100	0	0	0	0	100
6/30/2015	0	100	0	0	0	0	100
6/23/2015	0	100	0	0	0	0	100
6/16/2015	100	0	0	0	0	0	0
6/9/2015	100	0	0	0	0	0	0
6/2/2015	100	0	0	0	0	0	0
5/26/2015	100	0	0	0	0	0	0
5/19/2015	100	0	0	0	0	0	0
5/12/2015	100	0	0	0	0	0	0
5/5/2015	100	0	0	0	0	0	0
4/28/2015	100	0	0	0	0	0	0
4/21/2015	100	0	0	0	0	0	0
4/14/2015	100	0	0	0	0	0	0
4/7/2015	100	0	0	0	0	0	0
3/31/2015	100	0	0	0	0	0	0
3/24/2015	100	0	0	0	0	0	0
3/17/2015	100	0	0	0	0	0	0
3/10/2015	100	0	0	0	0	0	0
3/3/2015	100	0	0	0	0	0	0
2/24/2015	100	0	0	0	0	0	0
2/17/2015	100	0	0	0	0	0	0
2/10/2015	100	0	0	0	0	0	0
2/3/2015	100	0	0	0	0	0	0
1/27/2015	100	0	0	0	0	0	0
1/20/2015	100	0	0	0	0	0	0
1/13/2015	100	0	0	0	0	0	0
1/6/2015	100	0	0	0	0	0	0
12/30/2014	100	0	0	0	0	0	0
12/23/2014	73.78	26.22	0	0	0	0	26
12/16/2014	73.78	26.22	0	0	0	0	26
12/9/2014	73.78	26.22	0	0	0	0	26
12/2/2014	76.63	23.37	0	0	0	0	23

11/25/2014	76.96	23.04	0	0	0	0	23
11/18/2014	0.7	99.3	21.82	0	0	0	121
11/11/2014	45.8	54.2	1.63	0	0	0	56
11/4/2014	45.8	54.2	1.63	0	0	0	56
10/28/2014	45.8	54.2	0	0	0	0	54
10/21/2014	45.8	54.2	0	0	0	0	54
10/14/2014	71.77	28.23	0	0	0	0	28
10/7/2014	70.86	29.14	0	0	0	0	29
9/30/2014	37.41	62.59	0	0	0	0	63
9/23/2014	37.41	62.59	0	0	0	0	63
9/16/2014	37.41	62.59	0	0	0	0	63
9/9/2014	37.41	62.59	0	0	0	0	63
9/2/2014	37.41	62.59	0	0	0	0	63
8/26/2014	100	0	0	0	0	0	0
8/19/2014	100	0	0	0	0	0	0
8/12/2014	100	0	0	0	0	0	0
8/5/2014	100	0	0	0	0	0	0
7/29/2014	100	0	0	0	0	0	0
7/22/2014	100	0	0	0	0	0	0
7/15/2014	100	0	0	0	0	0	0
7/8/2014	100	0	0	0	0	0	0
7/1/2014	100	0	0	0	0	0	0
6/24/2014	100	0	0	0	0	0	0
6/17/2014	100	0	0	0	0	0	0
6/10/2014	100	0	0	0	0	0	0
6/3/2014	100	0	0	0	0	0	0
5/27/2014	100	0	0	0	0	0	0
5/20/2014	100	0	0	0	0	0	0
5/13/2014	100	0	0	0	0	0	0
5/6/2014	100	0	0	0	0	0	0
4/29/2014	100	0	0	0	0	0	0
4/22/2014	100	0	0	0	0	0	0
4/15/2014	100	0	0	0	0	0	0
4/8/2014	100	0	0	0	0	0	0
4/1/2014	100	0	0	0	0	0	0
3/25/2014	100	0	0	0	0	0	0
3/18/2014	100	0	0	0	0	0	0
3/11/2014	100	0	0	0	0	0	0
3/4/2014	100	0	0	0	0	0	0
2/25/2014	100	0	0	0	0	0	0
2/18/2014	100	0	0	0	0	0	0

2/11/2014	100	0	0	0	0	0	0
2/4/2014	100	0	0	0	0	0	0
1/28/2014	100	0	0	0	0	0	0
1/21/2014	100	0	0	0	0	0	0
1/14/2014	100	0	0	0	0	0	0
1/7/2014	100	0	0	0	0	0	0
12/31/2013	100	0	0	0	0	0	0
12/24/2013	12.27	87.73	0	0	0	0	88
12/17/2013	12.27	87.73	0	0	0	0	88
12/10/2013	12.27	87.73	0	0	0	0	88
12/3/2013	0	100	0	0	0	0	100
11/26/2013	0	100	0	0	0	0	100
11/19/2013	0	100	0	0	0	0	100
11/12/2013	2.21	97.79	0	0	0	0	98
11/5/2013	1.04	98.96	0	0	0	0	99
10/29/2013	1.04	98.96	0	0	0	0	99
10/22/2013	1.04	98.96	0	0	0	0	99
10/15/2013	100	0	0	0	0	0	0
10/8/2013	100	0	0	0	0	0	0
10/1/2013	100	0	0	0	0	0	0
9/24/2013	100	0	0	0	0	0	0
9/17/2013	100	0	0	0	0	0	0
9/10/2013	100	0	0	0	0	0	0
9/3/2013	100	0	0	0	0	0	0
8/27/2013	100	0	0	0	0	0	0
8/20/2013	100	0	0	0	0	0	0
8/13/2013	100	0	0	0	0	0	0
8/6/2013	100	0	0	0	0	0	0
7/30/2013	100	0	0	0	0	0	0
7/23/2013	100	0	0	0	0	0	0
7/16/2013	100	0	0	0	0	0	0
7/9/2013	100	0	0	0	0	0	0
7/2/2013	100	0	0	0	0	0	0
6/25/2013	100	0	0	0	0	0	0
6/18/2013	100	0	0	0	0	0	0
6/11/2013	100	0	0	0	0	0	0
6/4/2013	100	0	0	0	0	0	0
5/28/2013	100	0	0	0	0	0	0
5/21/2013	100	0	0	0	0	0	0
5/14/2013	100	0	0	0	0	0	0
5/7/2013	100	0	0	0	0	0	0

4/30/2013	100	0	0	0	0	0	0
4/23/2013	100	0	0	0	0	0	0
4/16/2013	100	0	0	0	0	0	0
4/9/2013	100	0	0	0	0	0	0
4/2/2013	100	0	0	0	0	0	0
3/26/2013	100	0	0	0	0	0	0
3/19/2013	0	100	0	0	0	0	100
3/12/2013	0	100	12.92	0	0	0	113
3/5/2013	0	100	12.92	0	0	0	113
2/26/2013	0	100	89.43	12.92	0	0	202
2/19/2013	0	100	100	89.68	14.49	0	304
2/12/2013	0	100	100	89.68	16.93	0	307
2/5/2013	0	100	100	100	16.93	0	317
1/29/2013	0	100	100	100	16.93	0	317
1/22/2013	0	100	100	100	0	0	300
1/15/2013	0	100	100	100	0	0	300
1/8/2013	0	100	100	100	0	0	300
1/1/2013	0	100	100	100	0	0	300
12/25/2012	0	100	100	100	0	0	300
12/18/2012	0	100	100	100	0	0	300
12/11/2012	0	100	100	100	0	0	300
12/4/2012	0	100	100	100	0	0	300
11/27/2012	0	100	100	100	0	0	300
11/20/2012	0	100	100	97.52	0	0	298
11/13/2012	0	100	100	84.25	0	0	284
11/6/2012	0	100	100	0	0	0	200
10/30/2012	0	100	100	0	0	0	200
10/23/2012	0	100	0	0	0	0	100
10/16/2012	0	100	0	0	0	0	100
10/9/2012	87.83	12.17	0	0	0	0	12
10/2/2012	87.83	12.17	0	0	0	0	12
9/25/2012	87.83	12.17	0	0	0	0	12
9/18/2012	87.83	12.17	0	0	0	0	12
9/11/2012	87.83	12.17	0	0	0	0	12
9/4/2012	93.05	6.95	0	0	0	0	7
8/28/2012	93.05	6.95	0	0	0	0	7
8/21/2012	0	100	100	0	0	0	200
8/14/2012	0	100	100	0	0	0	200
8/7/2012	0	100	100	33.52	0	0	234
7/31/2012	0	100	100	33.52	0	0	234
7/24/2012	0	100	100	33.52	0	0	234

7/17/2012	0	100	100	33.52	0	0	234
7/10/2012	0	100	100	75.64	0	0	276
7/3/2012	0	100	100	75.64	0	0	276
6/26/2012	0	100	100	19.29	0	0	219
6/19/2012	0	100	100	19.29	0	0	219
6/12/2012	0	100	100	100	0	0	300
6/5/2012	0	100	100	100	13.61	0	314
5/29/2012	0	100	100	100	100	12.79	413
5/22/2012	0	100	100	100	100	45.92	446
5/15/2012	0	100	100	100	100	45.92	446
5/8/2012	0	100	100	100	100	45.92	446
5/1/2012	0	100	100	100	100	45.92	446
4/24/2012	0	100	100	100	100	45.92	446
4/17/2012	0	100	100	100	100	45.92	446
4/10/2012	0	100	100	100	100	45.92	446
4/3/2012	0	100	100	100	100	86.51	487
3/27/2012	0	100	100	100	100	86.51	487
3/20/2012	0	100	100	100	100	86.51	487
3/13/2012	0	100	100	100	100	86.51	487
3/6/2012	0	100	100	100	100	86.51	487
2/28/2012	0	100	100	100	100	100	500
2/21/2012	0	100	100	100	100	100	500
2/14/2012	0	100	100	100	100	100	500
2/7/2012	0	100	100	100	100	100	500
1/31/2012	0	100	100	100	100	0	400
1/24/2012	0	100	100	100	100	0	400
1/17/2012	0	100	100	100	100	0	400
1/10/2012	0	100	100	100	100	0	400
1/3/2012	0	100	100	100	100	0	400
12/27/2011	0	100	100	100	100	0	400
12/20/2011	0	100	100	100	100	0	400
12/13/2011	0	100	100	100	100	0	400
12/6/2011	0	100	100	100	100	0	400
11/29/2011	0	100	100	100	100	0	400
11/22/2011	0	100	100	100	100	0	400
11/15/2011	0	100	100	100	100	0	400
11/8/2011	0	100	100	100	100	0	400
11/1/2011	0	100	100	100	98.5	0	399
10/25/2011	0	100	100	100	98.5	0	399
10/18/2011	0	100	100	100	100	0	400
10/11/2011	0	100	100	100	100	0	400

10/4/2011	0	100	100	100	100	0	400
9/27/2011	0	100	100	100	100	0	400
9/20/2011	0	100	100	100	100	0	400
9/13/2011	0	100	100	100	100	0	400
9/6/2011	0	100	100	100	100	0	400
8/30/2011	0	100	100	100	100	0	400
8/23/2011	0	100	100	100	97.71	0	398
8/16/2011	0	100	100	100	97.71	0	398
8/9/2011	0	100	100	100	100	0	400
8/2/2011	0	100	100	100	100	0	400
7/26/2011	0	100	100	100	100	0	400
7/19/2011	0	100	100	100	100	0	400
7/12/2011	0	100	100	100	100	0	400
7/5/2011	0	100	100	100	100	0	400
6/28/2011	0	100	100	100	100	0	400
6/21/2011	0	100	100	100	100	0	400
6/14/2011	0	100	100	100	100	0	400
6/7/2011	0	100	100	100	81.25	0	381
5/31/2011	0	100	100	100	82.29	0	382
5/24/2011	0	100	100	100	0	0	300
5/17/2011	0	100	100	100	0	0	300
5/10/2011	0	100	100	0	0	0	200
5/3/2011	0	100	100	0	0	0	200
4/26/2011	0	100	100	0	0	0	200
4/19/2011	0	100	100	0	0	0	200
4/12/2011	0	100	100	0	0	0	200
4/5/2011	0	100	100	0	0	0	200
3/29/2011	0	100	100	0	0	0	200
3/22/2011	0	100	100	0	0	0	200
3/15/2011	0	100	0	0	0	0	100
3/8/2011	0	100	0	0	0	0	100
3/1/2011	0	100	0	0	0	0	100
2/22/2011	0	100	0	0	0	0	100
2/15/2011	0	100	0	0	0	0	100
2/8/2011	0	100	0	0	0	0	100
2/1/2011	0	100	100	0	0	0	200
1/25/2011	0	100	100	0	0	0	200
1/18/2011	0	100	100	0	0	0	200
1/11/2011	0	100	100	0	0	0	200
1/4/2011	0	100	100	0	0	0	200
12/28/2010	0	100	100	0	0	0	200



12/21/2010	0	100	100	0	0	0	200
12/14/2010	0	100	100	0	0	0	200
12/7/2010	0	100	100	0	0	0	200
11/30/2010	0	100	100	0	0	0	200
11/23/2010	0	100	100	0	0	0	200
11/16/2010	0	100	0	0	0	0	100
11/9/2010	0	100	0	0	0	0	100
11/2/2010	0	100	0	0	0	0	100
10/26/2010	0	100	0	0	0	0	100
10/19/2010	0	100	0	0	0	0	100
10/12/2010	0	100	0	0	0	0	100
10/5/2010	0	100	0	0	0	0	100
9/28/2010	0	100	0	0	0	0	100
9/21/2010	0	100	0	0	0	0	100
9/14/2010	0	100	0	0	0	0	100
9/7/2010	100	0	0	0	0	0	0
8/31/2010	100	0	0	0	0	0	0
8/24/2010	100	0	0	0	0	0	0
8/17/2010	99.79	0.21	0	0	0	0	0
8/10/2010	99.93	0.07	0	0	0	0	0
8/3/2010	99.93	0.07	0	0	0	0	0
7/27/2010	62.13	37.87	0	0	0	0	38
7/20/2010	0	100	0	0	0	0	100
7/13/2010	100	0	0	0	0	0	0
7/6/2010	100	0	0	0	0	0	0
6/29/2010	100	0	0	0	0	0	0
6/22/2010	100	0	0	0	0	0	0
6/15/2010	100	0	0	0	0	0	0
6/8/2010	100	0	0	0	0	0	0
6/1/2010	100	0	0	0	0	0	0
5/25/2010	100	0	0	0	0	0	0
5/18/2010	100	0	0	0	0	0	0
5/11/2010	100	0	0	0	0	0	0
5/4/2010	100	0	0	0	0	0	0
4/27/2010	100	0	0	0	0	0	0
4/20/2010	100	0	0	0	0	0	0
4/13/2010	100	0	0	0	0	0	0
4/6/2010	100	0	0	0	0	0	0
3/30/2010	100	0	0	0	0	0	0
3/23/2010	100	0	0	0	0	0	0
3/16/2010	100	0	0	0	0	0	0

3/9/2010	100	0	0	0	0	0	0
3/2/2010	100	0	0	0	0	0	0
2/23/2010	100	0	0	0	0	0	0
2/16/2010	100	0	0	0	0	0	0
2/9/2010	100	0	0	0	0	0	0
2/2/2010	100	0	0	0	0	0	0
1/26/2010	100	0	0	0	0	0	0
1/19/2010	100	0	0	0	0	0	0
1/12/2010	100	0	0	0	0	0	0
1/5/2010	100	0	0	0	0	0	0
12/29/2009	100	0	0	0	0	0	0
12/22/2009	100	0	0	0	0	0	0
12/15/2009	100	0	0	0	0	0	0
12/8/2009	100	0	0	0	0	0	0
12/1/2009	100	0	0	0	0	0	0
11/24/2009	100	0	0	0	0	0	0
11/17/2009	100	0	0	0	0	0	0
11/10/2009	100	0	0	0	0	0	0
11/3/2009	100	0	0	0	0	0	0
10/27/2009	100	0	0	0	0	0	0
10/20/2009	100	0	0	0	0	0	0
10/13/2009	100	0	0	0	0	0	0
10/6/2009	100	0	0	0	0	0	0
9/29/2009	100	0	0	0	0	0	0
9/22/2009	100	0	0	0	0	0	0
9/15/2009	100	0	0	0	0	0	0
9/8/2009	100	0	0	0	0	0	0
9/1/2009	100	0	0	0	0	0	0
8/25/2009	100	0	0	0	0	0	0
8/18/2009	100	0	0	0	0	0	0
8/11/2009	100	0	0	0	0	0	0
8/4/2009	100	0	0	0	0	0	0
7/28/2009	100	0	0	0	0	0	0
7/21/2009	100	0	0	0	0	0	0
7/14/2009	100	0	0	0	0	0	0
7/7/2009	0	100	0	0	0	0	100
6/30/2009	100	0	0	0	0	0	0
6/23/2009	100	0	0	0	0	0	0
6/16/2009	100	0	0	0	0	0	0
6/9/2009	100	0	0	0	0	0	0
6/2/2009	100	0	0	0	0	0	0

5/26/2009	100	0	0	0	0	0	0
5/19/2009	100	0	0	0	0	0	0
5/12/2009	100	0	0	0	0	0	0
5/5/2009	100	0	0	0	0	0	0
4/28/2009	100	0	0	0	0	0	0
4/21/2009	100	0	0	0	0	0	0
4/14/2009	100	0	0	0	0	0	0
4/7/2009	100	0	0	0	0	0	0
3/31/2009	0	100	100	0	0	0	200
3/24/2009	0	100	100	0	0	0	200
3/17/2009	0	100	100	0	0	0	200
3/10/2009	0	100	100	0	0	0	200
3/3/2009	0	100	100	0	0	0	200
2/24/2009	0	100	100	0	0	0	200
2/17/2009	0	100	0	0	0	0	100
2/10/2009	0	100	0	0	0	0	100
2/3/2009	100	0	0	0	0	0	0
1/27/2009	100	0	0	0	0	0	0
1/20/2009	100	0	0	0	0	0	0
1/13/2009	100	0	0	0	0	0	0
1/6/2009	100	0	0	0	0	0	0
12/30/2008	100	0	0	0	0	0	0
12/23/2008	100	0	0	0	0	0	0
12/16/2008	100	0	0	0	0	0	0
12/9/2008	83.81	16.19	0	0	0	0	16
12/2/2008	0	100	14.25	0	0	0	114
11/25/2008	0	100	99.16	15.08	0	0	214
11/18/2008	0	100	99.16	15.08	0	0	214
11/11/2008	0	100	99.16	15.08	0	0	214
11/4/2008	0	100	99.16	15.08	0	0	214
10/28/2008	0	100	99.16	15.08	0	0	214
10/21/2008	0	100	100	99.52	0	0	300
10/14/2008	0	100	100	99.5	0	0	300
10/7/2008	0	100	100	99.83	0	0	300
9/30/2008	0	100	100	99.83	0	0	300
9/23/2008	0	100	100	67.45	0	0	267
9/16/2008	0	100	100	67.45	0	0	267
9/9/2008	0	100	100	67.45	0	0	267
9/2/2008	0	100	100	67.45	0	0	267
8/26/2008	0	100	100	73.14	0	0	273
8/19/2008	0	100	100	100	0	0	300

8/12/2008	0	100	100	100	0	0	300
8/5/2008	0	100	100	9.12	0	0	209
7/29/2008	0	100	100	9.12	0	0	209
7/22/2008	0	100	100	9.12	0	0	209
7/15/2008	0	100	100	0	0	0	200
7/8/2008	0	100	100	0	0	0	200
7/1/2008	0	100	100	0	0	0	200
6/24/2008	0	100	100	0	0	0	200
6/17/2008	0	100	100	0	0	0	200
6/10/2008	0	100	0	0	0	0	100
6/3/2008	0	100	0	0	0	0	100
5/27/2008	0	100	0	0	0	0	100
5/20/2008	0	100	0	0	0	0	100
5/13/2008	44.88	55.12	0	0	0	0	55
5/6/2008	44.88	55.12	0	0	0	0	55
4/29/2008	44.88	55.12	0	0	0	0	55
4/22/2008	44.88	55.12	0	0	0	0	55
4/15/2008	59.49	40.51	0	0	0	0	41
4/8/2008	59.49	40.51	0	0	0	0	41
4/1/2008	59.49	40.51	0	0	0	0	41
3/25/2008	59.49	40.51	0	0	0	0	41
3/18/2008	59.49	40.51	0	0	0	0	41
3/11/2008	59.49	40.51	0	0	0	0	41
3/4/2008	0	100	0	0	0	0	100
2/26/2008	0	100	0	0	0	0	100
2/19/2008	0	100	75.12	0	0	0	175
2/12/2008	0	100	75.12	0	0	0	175
2/5/2008	0	100	75.12	0	0	0	175
1/29/2008	0	100	75.12	0	0	0	175
1/22/2008	0	100	75.12	0	0	0	175
1/15/2008	0	100	98.86	33.77	0	0	233
1/8/2008	0	100	98.86	33.77	0	0	233
1/1/2008	0	100	98.86	33.77	0	0	233
12/25/2007	0	100	100	90.79	31.18	0	322
12/18/2007	0	100	100	100	31.18	0	331
12/11/2007	0	100	100	100	31.18	0	331
12/4/2007	0	100	100	81.53	0	0	282
11/27/2007	0	100	100	27.27	0	0	227
11/20/2007	0	100	100	27.27	0	0	227
11/13/2007	0	100	100	27.27	0	0	227
11/6/2007	0	100	52.71	0	0	0	153

10/30/2007	0	100	52.71	0	0	0	153
10/23/2007	0	100	52.71	0	0	0	153
10/16/2007	0	100	52.71	0	0	0	153
10/9/2007	25.36	74.64	0	0	0	0	75
10/2/2007	98.57	1.43	0	0	0	0	1
9/25/2007	98.57	1.43	0	0	0	0	1
9/18/2007	98.57	1.43	0	0	0	0	1
9/11/2007	0	100	13.08	0	0	0	113
9/4/2007	0	100	13.08	0	0	0	113
8/28/2007	0	100	100	95.46	0	0	295
8/21/2007	0	100	100	98.72	0	0	299
8/14/2007	0	100	100	0	0	0	200
8/7/2007	0	100	100	0	0	0	200
7/31/2007	0	100	51.02	0	0	0	151
7/24/2007	0	100	51.02	0	0	0	151
7/17/2007	0	100	51.02	0	0	0	151
7/10/2007	0	100	51.02	0	0	0	151
7/3/2007	0	100	51.02	0	0	0	151
6/26/2007	0	100	60.92	0	0	0	161
6/19/2007	0	100	60.92	0	0	0	161
6/12/2007	0	100	60.92	0	0	0	161
6/5/2007	0	100	60.92	0	0	0	161
5/29/2007	0	100	100	63.64	0	0	264
5/22/2007	0	100	100	43.94	0	0	244
5/15/2007	0	100	100	0	0	0	200
5/8/2007	0	100	100	0	0	0	200
5/1/2007	0	100	100	0	0	0	200
4/24/2007	0	100	97.64	0	0	0	198
4/17/2007	0	100	0	0	0	0	100
4/10/2007	0	100	0	0	0	0	100
4/3/2007	0	100	0	0	0	0	100
3/27/2007	0	100	0	0	0	0	100
3/20/2007	0	100	0	0	0	0	100
3/13/2007	100	0	0	0	0	0	0
3/6/2007	100	0	0	0	0	0	0
2/27/2007	0	100	0	0	0	0	100
2/20/2007	81.48	18.52	0	0	0	0	19
2/13/2007	100	0	0	0	0	0	0
2/6/2007	100	0	0	0	0	0	0
1/30/2007	100	0	0	0	0	0	0
1/23/2007	100	0	0	0	0	0	0

1/16/2007	28.03	71.97	0	0	0	0	72
1/9/2007	0	100	0	0	0	0	100
1/2/2007	0	100	0	0	0	0	100
12/26/2006	0	100	0	0	0	0	100
12/19/2006	0	100	0	0	0	0	100
12/12/2006	0	100	0	0	0	0	100
12/5/2006	100	0	0	0	0	0	0
11/28/2006	100	0	0	0	0	0	0
11/21/2006	0	100	0	0	0	0	100
11/14/2006	0	100	100	0	0	0	200
11/7/2006	0	100	100	0	0	0	200
10/31/2006	0	100	100	0	0	0	200
10/24/2006	0	100	100	0	0	0	200
10/17/2006	0	100	100	0	0	0	200
10/10/2006	0	100	100	0	0	0	200
10/3/2006	0	100	100	0	0	0	200
9/26/2006	0	100	34.05	0	0	0	134
9/19/2006	0	100	34.05	0	0	0	134
9/12/2006	0	100	74.15	0	0	0	174
9/5/2006	0	100	100	0	0	0	200
8/29/2006	0	100	100	0	0	0	200
8/22/2006	0	100	100	0	0	0	200
8/15/2006	0	100	0	0	0	0	100
8/8/2006	0	100	0	0	0	0	100
8/1/2006	0	100	0	0	0	0	100
7/25/2006	0	100	0	0	0	0	100
7/18/2006	0	100	0	0	0	0	100
7/11/2006	0	100	0	0	0	0	100
7/4/2006	0	100	0	0	0	0	100
6/27/2006	0	100	0	0	0	0	100
6/20/2006	0	100	0	0	0	0	100
6/13/2006	0	100	87.05	0	0	0	187
6/6/2006	0	100	0	0	0	0	100
5/30/2006	0	100	0	0	0	0	100
5/23/2006	73.21	26.79	0	0	0	0	27
5/16/2006	77.87	22.13	0	0	0	0	22
5/9/2006	0	100	0	0	0	0	100
5/2/2006	0	100	0	0	0	0	100
4/25/2006	0	100	0	0	0	0	100
4/18/2006	0	100	0	0	0	0	100
4/11/2006	0	100	0	0	0	0	100

4/4/2006	0	100	0	0	0	0	100
3/28/2006	100	0	0	0	0	0	0
3/21/2006	100	0	0	0	0	0	0
3/14/2006	100	0	0	0	0	0	0
3/7/2006	100	0	0	0	0	0	0
2/28/2006	100	0	0	0	0	0	0
2/21/2006	100	0	0	0	0	0	0
2/14/2006	100	0	0	0	0	0	0
2/7/2006	100	0	0	0	0	0	0
1/31/2006	100	0	0	0	0	0	0
1/24/2006	100	0	0	0	0	0	0
1/17/2006	100	0	0	0	0	0	0
1/10/2006	100	0	0	0	0	0	0
1/3/2006	100	0	0	0	0	0	0
12/27/2005	100	0	0	0	0	0	0
12/20/2005	100	0	0	0	0	0	0
12/13/2005	100	0	0	0	0	0	0
12/6/2005	100	0	0	0	0	0	0
11/29/2005	100	0	0	0	0	0	0
11/22/2005	100	0	0	0	0	0	0
11/15/2005	100	0	0	0	0	0	0
11/8/2005	100	0	0	0	0	0	0
11/1/2005	100	0	0	0	0	0	0
10/25/2005	100	0	0	0	0	0	0
10/18/2005	100	0	0	0	0	0	0
10/11/2005	100	0	0	0	0	0	0
10/4/2005	100	0	0	0	0	0	0
9/27/2005	0	100	0	0	0	0	100
9/20/2005	84.97	15.03	0	0	0	0	15
9/13/2005	100	0	0	0	0	0	0
9/6/2005	100	0	0	0	0	0	0
8/30/2005	100	0	0	0	0	0	0
8/23/2005	100	0	0	0	0	0	0
8/16/2005	100	0	0	0	0	0	0
8/9/2005	100	0	0	0	0	0	0
8/2/2005	100	0	0	0	0	0	0
7/26/2005	100	0	0	0	0	0	0
7/19/2005	100	0	0	0	0	0	0
7/12/2005	100	0	0	0	0	0	0
7/5/2005	100	0	0	0	0	0	0
6/28/2005	100	0	0	0	0	0	0

6/21/2005	100	0	0	0	0	0	0
6/14/2005	100	0	0	0	0	0	0
6/7/2005	100	0	0	0	0	0	0
5/31/2005	100	0	0	0	0	0	0
5/24/2005	100	0	0	0	0	0	0
5/17/2005	100	0	0	0	0	0	0
5/10/2005	100	0	0	0	0	0	0
5/3/2005	100	0	0	0	0	0	0
4/26/2005	100	0	0	0	0	0	0
4/19/2005	100	0	0	0	0	0	0
4/12/2005	100	0	0	0	0	0	0
4/5/2005	100	0	0	0	0	0	0
3/29/2005	100	0	0	0	0	0	0
3/22/2005	100	0	0	0	0	0	0
3/15/2005	100	0	0	0	0	0	0
3/8/2005	100	0	0	0	0	0	0
3/1/2005	100	0	0	0	0	0	0
2/22/2005	100	0	0	0	0	0	0
2/15/2005	100	0	0	0	0	0	0
2/8/2005	100	0	0	0	0	0	0
2/1/2005	100	0	0	0	0	0	0
1/25/2005	100	0	0	0	0	0	0
1/18/2005	100	0	0	0	0	0	0
1/11/2005	100	0	0	0	0	0	0
1/4/2005	100	0	0	0	0	0	0
12/28/2004	100	0	0	0	0	0	0
12/21/2004	100	0	0	0	0	0	0
12/14/2004	100	0	0	0	0	0	0
12/7/2004	100	0	0	0	0	0	0
11/30/2004	100	0	0	0	0	0	0
11/23/2004	100	0	0	0	0	0	0
11/16/2004	100	0	0	0	0	0	0
11/9/2004	100	0	0	0	0	0	0
11/2/2004	100	0	0	0	0	0	0
10/26/2004	100	0	0	0	0	0	0
10/19/2004	100	0	0	0	0	0	0
10/12/2004	100	0	0	0	0	0	0
10/5/2004	100	0	0	0	0	0	0
9/28/2004	100	0	0	0	0	0	0
9/21/2004	100	0	0	0	0	0	0
9/14/2004	100	0	0	0	0	0	0



9/7/2004	100	0	0	0	0	0	0
8/31/2004	52.47	47.53	0	0	0	0	48
8/24/2004	83.45	16.55	0	0	0	0	17
8/17/2004	99.31	0.69	0	0	0	0	1
8/10/2004	0	100	0	0	0	0	100
8/3/2004	0	100	0	0	0	0	100
7/27/2004	37.97	62.03	0	0	0	0	62
7/20/2004	100	0	0	0	0	0	0
7/13/2004	100	0	0	0	0	0	0
7/6/2004	70.62	29.38	0	0	0	0	29
6/29/2004	0	100	0	0	0	0	100
6/22/2004	0	100	100	0	0	0	200
6/15/2004	0	100	100	100	0	0	300
6/8/2004	0	100	100	100	0	0	300
6/1/2004	0	100	100	42.92	0	0	243
5/25/2004	0	100	100	42.92	0	0	243
5/18/2004	0	100	39.86	0	0	0	140
5/11/2004	0	100	39.86	0	0	0	140
5/4/2004	0	100	39.86	0	0	0	140
4/27/2004	0	100	5.26	0	0	0	105
4/20/2004	0	100	0	0	0	0	100
4/13/2004	0	100	0	0	0	0	100
4/6/2004	0	100	0	0	0	0	100
3/30/2004	0	100	0	0	0	0	100
3/23/2004	0	100	0	0	0	0	100
3/16/2004	100	0	0	0	0	0	0
3/9/2004	100	0	0	0	0	0	0
3/2/2004	100	0	0	0	0	0	0
2/24/2004	100	0	0	0	0	0	0
2/17/2004	100	0	0	0	0	0	0
2/10/2004	100	0	0	0	0	0	0
2/3/2004	100	0	0	0	0	0	0
1/27/2004	100	0	0	0	0	0	0
1/20/2004	100	0	0	0	0	0	0
1/13/2004	100	0	0	0	0	0	0
1/6/2004	100	0	0	0	0	0	0
12/30/2003	100	0	0	0	0	0	0
12/23/2003	100	0	0	0	0	0	0
12/16/2003	100	0	0	0	0	0	0
12/9/2003	100	0	0	0	0	0	0
12/2/2003	100	0	0	0	0	0	0

11/25/2003	100	0	0	0	0	0	0
11/18/2003	100	0	0	0	0	0	0
11/11/2003	100	0	0	0	0	0	0
11/4/2003	100	0	0	0	0	0	0
10/28/2003	100	0	0	0	0	0	0
10/21/2003	100	0	0	0	0	0	0
10/14/2003	100	0	0	0	0	0	0
10/7/2003	100	0	0	0	0	0	0
9/30/2003	100	0	0	0	0	0	0
9/23/2003	100	0	0	0	0	0	0
9/16/2003	100	0	0	0	0	0	0
9/9/2003	100	0	0	0	0	0	0
9/2/2003	100	0	0	0	0	0	0
8/26/2003	100	0	0	0	0	0	0
8/19/2003	100	0	0	0	0	0	0
8/12/2003	100	0	0	0	0	0	0
8/5/2003	100	0	0	0	0	0	0
7/29/2003	100	0	0	0	0	0	0
7/22/2003	100	0	0	0	0	0	0
7/15/2003	100	0	0	0	0	0	0
7/8/2003	100	0	0	0	0	0	0
7/1/2003	100	0	0	0	0	0	0
6/24/2003	100	0	0	0	0	0	0
6/17/2003	100	0	0	0	0	0	0
6/10/2003	100	0	0	0	0	0	0
6/3/2003	100	0	0	0	0	0	0
5/27/2003	100	0	0	0	0	0	0
5/20/2003	100	0	0	0	0	0	0
5/13/2003	100	0	0	0	0	0	0
5/6/2003	100	0	0	0	0	0	0
4/29/2003	100	0	0	0	0	0	0
4/22/2003	100	0	0	0	0	0	0
4/15/2003	100	0	0	0	0	0	0
4/8/2003	100	0	0	0	0	0	0
4/1/2003	100	0	0	0	0	0	0
3/25/2003	100	0	0	0	0	0	0
3/18/2003	0	100	0	0	0	0	100
3/11/2003	0	100	0	0	0	0	100
3/4/2003	0	100	0	0	0	0	100
2/25/2003	0	100	0	0	0	0	100
2/18/2003	0	100	0	0	0	0	100

2/11/2003	0	100	0	0	0	0	100
2/4/2003	0	100	0	0	0	0	100
1/28/2003	0	100	0	0	0	0	100
1/21/2003	0	100	0	0	0	0	100
1/14/2003	0	100	0	0	0	0	100
1/7/2003	0	100	0	0	0	0	100
12/31/2002	0	100	0	0	0	0	100
12/24/2002	0	100	0	0	0	0	100
12/17/2002	0	100	0	0	0	0	100
12/10/2002	0	100	100	0	0	0	200
12/3/2002	0	100	100	0	0	0	200
11/26/2002	0	100	100	0	0	0	200
11/19/2002	0	100	100	0	0	0	200
11/12/2002	0	100	100	0	0	0	200
11/5/2002	0	100	100	100	0	0	300
10/29/2002	0	100	100	100	0	0	300
10/22/2002	0	100	100	100	0	0	300
10/15/2002	0	100	100	100	0	0	300
10/8/2002	0	100	100	100	0	0	300
10/1/2002	0	100	100	100	0	0	300
9/24/2002	0	100	100	100	0	0	300
9/17/2002	0	100	100	100	0	0	300
9/10/2002	0	100	100	100	100	0	400
9/3/2002	0	100	100	100	100	0	400
8/27/2002	0	100	100	100	100	92.78	493
8/20/2002	0	100	100	100	100	90.97	491
8/13/2002	0	100	100	100	100	87.36	487
8/6/2002	0	100	100	100	100	0	400
7/30/2002	0	100	100	100	100	0	400
7/23/2002	0	100	100	100	100	0	400
7/16/2002	0	100	100	100	100	0	400
7/9/2002	0	100	100	100	100	0	400
7/2/2002	0	100	100	100	100	0	400
6/25/2002	0	100	100	100	100	0	400
6/18/2002	0	100	100	100	100	0	400
6/11/2002	0	100	100	100	100	0	400
6/4/2002	0	100	100	100	100	0	400
5/28/2002	0	100	100	100	100	0	400
5/21/2002	0	100	100	100	100	0	400
5/14/2002	0	100	100	100	100	0	400
5/7/2002	0	100	100	100	100	0	400

4/30/2002	0	100	100	100	64.83	0	365
4/23/2002	0	100	100	100	0	0	300
4/16/2002	0	100	100	100	0	0	300
4/9/2002	0	100	100	100	55.87	0	356
4/2/2002	0	100	100	100	40.84	0	341
3/26/2002	0	100	100	100	87.61	0	388
3/19/2002	0	100	100	100	99.27	0	399
3/12/2002	0	100	100	100	84.7	0	385
3/5/2002	0	100	100	100	100	0	400
2/26/2002	0	100	100	100	100	0	400
2/19/2002	0	100	100	100	100	0	400
2/12/2002	0	100	100	100	100	0	400
2/5/2002	0	100	100	100	100	0	400
1/29/2002	0	100	100	100	14.89	0	315
1/22/2002	0	100	100	100	20.96	0	321
1/15/2002	0	100	100	100	17.55	0	318
1/8/2002	0	100	100	100	89.85	0	390
1/1/2002	0	100	100	100	94.26	0	394
12/25/2001	0	100	100	100	0	0	300
12/18/2001	0	100	100	100	0	0	300
12/11/2001	0	100	100	100	0	0	300
12/4/2001	0	100	100	100	0	0	300
11/27/2001	0	100	100	100	0	0	300
11/20/2001	0	100	100	100	0	0	300
11/13/2001	0	100	100	100	0	0	300
11/6/2001	0	100	100	100	0	0	300
10/30/2001	0	100	100	100	0	0	300
10/23/2001	0	100	100	0	0	0	200
10/16/2001	0	100	82.4	0	0	0	182
10/9/2001	0	100	82.53	0	0	0	183
10/2/2001	0	100	70.56	0	0	0	171
9/25/2001	0	100	0	0	0	0	100
9/18/2001	0	100	0	0	0	0	100
9/11/2001	100	0	0	0	0	0	0
9/4/2001	100	0	0	0	0	0	0
8/28/2001	100	0	0	0	0	0	0
8/21/2001	97.99	2.01	0	0	0	0	2
8/14/2001	44.85	55.15	0	0	0	0	55
8/7/2001	0.03	99.97	0	0	0	0	100
7/31/2001	0	100	0	0	0	0	100
7/24/2001	0	100	0	0	0	0	100

7/17/2001	0	100	0	0	0	0	100
7/10/2001	0	100	0	0	0	0	100
7/3/2001	0	100	0	0	0	0	100
6/26/2001	0	100	30.92	0	0	0	131
6/19/2001	0	100	30.92	0	0	0	131
6/12/2001	0	100	100	100	0	0	300
6/5/2001	0	100	100	100	0	0	300
5/29/2001	0	100	100	100	0	0	300
5/22/2001	0	100	100	100	0	0	300
5/15/2001	0	100	100	100	0	0	300
5/8/2001	0	100	100	0	0	0	200
5/1/2001	0	100	100	0	0	0	200
4/24/2001	0	100	100	0	0	0	200
4/17/2001	0	100	100	0	0	0	200
4/10/2001	0	100	100	0	0	0	200
4/3/2001	0	100	100	0	0	0	200
3/27/2001	0	100	100	0	0	0	200
3/20/2001	0	100	100	0	0	0	200
3/13/2001	0	100	100	0	0	0	200
3/6/2001	0	100	100	0	0	0	200
2/27/2001	0	100	100	0	0	0	200
2/20/2001	0	100	100	0	0	0	200
2/13/2001	0	100	100	0	0	0	200
2/6/2001	0	100	17.54	0	0	0	118
1/30/2001	0	100	0	0	0	0	100
1/23/2001	0	100	0	0	0	0	100
1/16/2001	0	100	100	0	0	0	200
1/9/2001	0	100	100	0	0	0	200
1/2/2001	0	100	100	0	0	0	200
12/26/2000	0	100	100	0	0	0	200
12/19/2000	0	100	100	0	0	0	200
12/12/2000	0	100	100	0	0	0	200
12/5/2000	0	100	100	0	0	0	200
11/28/2000	0	100	100	0	0	0	200
11/21/2000	0	100	100	100	0	0	300
11/14/2000	0	100	100	100	0	0	300
11/7/2000	0	100	100	100	0	0	300
10/31/2000	0	100	100	100	0	0	300
10/24/2000	0	100	100	56.85	0	0	257
10/17/2000	0	100	100	0	0	0	200
10/10/2000	0	100	100	0	0	0	200

10/3/2000	0	100	100	0	0	0	200
9/26/2000	0	100	100	0	0	0	200
9/19/2000	0	100	100	100	0	0	300
9/12/2000	0	100	100	100	0	0	300
9/5/2000	0	100	100	100	0	0	300
8/29/2000	0	100	100	100	67.68	0	368
8/22/2000	0	100	100	100	48.23	0	348
8/15/2000	0	100	100	100	48.29	0	348
8/8/2000	0	100	100	100	48.29	0	348
8/1/2000	0	100	100	100	100	0	400
7/25/2000	0	100	100	100	100	0	400
7/18/2000	0	100	100	100	100	0	400
7/11/2000	0	100	100	100	100	17.24	417
7/4/2000	0	100	100	100	100	11.19	411
6/27/2000	0	100	100	100	100	78.27	478
6/20/2000	0	100	100	100	100	64.24	464
6/13/2000	0	100	100	100	100	71.44	471
6/6/2000	0	100	100	100	98.02	0	398
5/30/2000	0	100	100	100	13.6	0	314
5/23/2000	0	100	100	100	0	0	300
5/16/2000	0	100	100	100	0	0	300
5/9/2000	0	100	100	0	0	0	200
5/2/2000	0	100	100	0	0	0	200
4/25/2000	0	100	100	0	0	0	200
4/18/2000	0	100	100	0	0	0	200
4/11/2000	0	100	100	0	0	0	200
4/4/2000	0	100	100	0	0	0	200
3/28/2000	0	100	100	0	0	0	200
3/21/2000	0	100	100	0	0	0	200
3/14/2000	0	100	100	0	0	0	200
3/7/2000	0	100	100	0	0	0	200
2/29/2000	0	100	100	0	0	0	200
2/22/2000	0	100	100	0	0	0	200
2/15/2000	0	100	100	0	0	0	200
2/8/2000	0	100	100	0	0	0	200
2/1/2000	0	100	100	0	0	0	200
1/25/2000	0	100	100	0	0	0	200
1/18/2000	0	100	100	0	0	0	200
1/11/2000	0	100	100	0	0	0	200
1/4/2000	0	100	100	0	0	0	200

	D0	D1	D2	D3	D4	Total	
	714	427	212	113	25	1491	
	63209.5	38231.9	18629.35	9667.05	1680.27	131418.1	

## Jenkins County, GA

[Home](#) / Jenkins County, GA

Map released: Thurs. December 12, 2024

Data valid: December 10, 2024 at 7 a.m. EST

### Intensity

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data

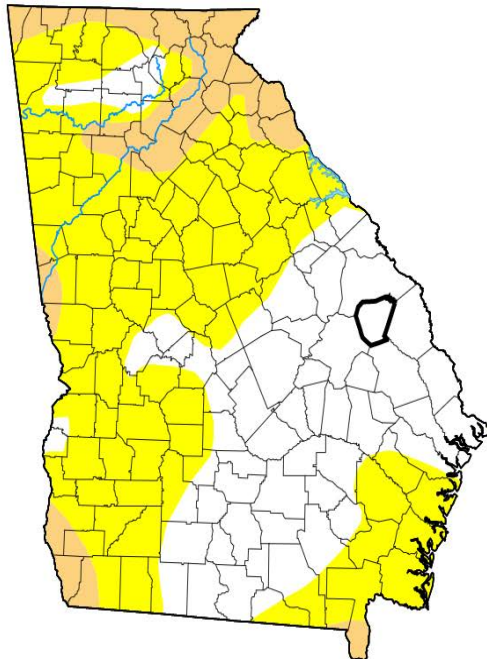
### Authors

United States and Puerto Rico Author(s):

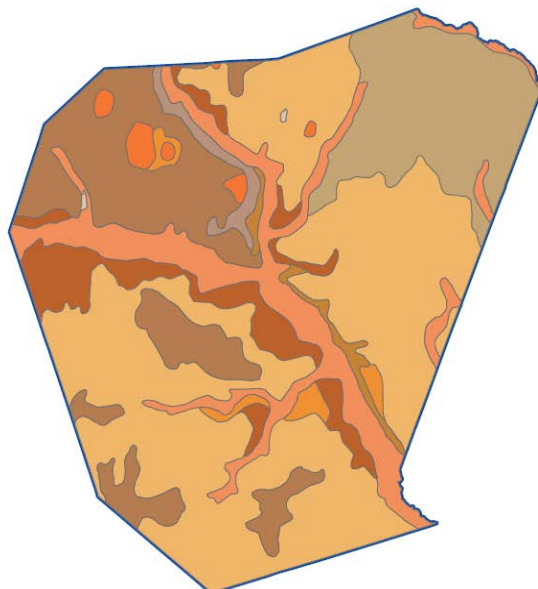
[Curtis Riganti](#), National Drought Mitigation Center

Pacific Islands and Virgin Islands Author(s):

[Lindsay Johnson](#), National Drought Mitigation Center



## Jenkins County Soil Map



### Legend

- Jenkins County
- Soils**
- Cowarts-Sawyer-Susquehanna
- Dothan-Orangeburg-Tifton
- Dunbar-Bladen-Rains
- Esto-Sawyer-Susquehanna
- Grady-Plummer
- Kershaw-Plummer
- Meggett-Rains-Bibb-Wehadkee
- Norfolk-Tifton-Fuquay
- Troup-Fuquay-Dothan
- Water



Central Savannah River Area  
Regional Commission  
GIS Department  
3023 River Watch Parkway, Suite A  
Augusta, GA 30907-2016  
[www.csra-rc.ga.gov](http://www.csra-rc.ga.gov)

0 1.5 3 6 Miles

### Critical Facilities Wildfire Hazard Scores

<b>Jurisdiction</b>	<b>Name</b>	<b>Hazard Score</b>	<b>Replacement Value</b>	<b>Content value</b>	<b>Valuation Year</b>	<b>Facility type</b>	<b>Risk</b>	<b>Day</b>	<b>Night</b>
Millen city	Millen Natural Gas Odorizer	4	100000		2024	Education, Education, Government Offices, Government Offices	Essential	0	0
<b>1</b>			<b>\$ 100,000</b>	<b>0</b>				<b>0</b>	<b>0</b>
Jenkins County	County Community Service Board of Georgia	3	250000	15000	2024	NGO, NGO, Transportation, Transportation	Important, Vulnerable Population	20	
Jenkins County	Jenkins Co. Health Dept.	3	1125000	150000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential	8	0
Jenkins County	JENKINS CO-CR54 PHASE 2 MSWL & C&D SITE	3	1000000		2024	Government, Government, Water/Sewer, Water/Sewer	Economic Assets, Hazardous Materials		



Jenkins County	Jenkins County Annex Building	3	1200000	100000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Important	10	
Jenkins County	Jenkins County BOE Office and Bus Shop	3	1500000	300000	2014	Emergency Services, Fire Fighters	Important	25	
Jenkins County	Jenkins County Courthouse	3	5500000	250000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Historic Consideration	15	
Jenkins County	Jenkins County EMS	3	350000	750000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Important, Lifeline, Vulnerable Population	4	4
Jenkins County	Jenkins County Fuel Station	3	150000		2024	NGO, NGO, Transportation, Transportation	Essential, Transportation	0	0
Jenkins County	Jenkins County Headstart	3	800000	100000	2024	Government, Government, Water/Sewer, Water/Sewer	Important, Vulnerable Population	45	
Jenkins County	Jenkins County Maintenance Shop	3	114250	30000	2024	NGO, NGO, Transportation, Transportation	Important, Transportation	14	0

Jenkins County	Jenkins County Medical Center	3	0		2024	Medical, Medical, Medical Offices, Medical Offices			
Jenkins County	Jenkins County Roads and Bridges Office	3	75000	10000	2024	Education, Education, Library, Library	Important	2	
Jenkins County	North Jenkins Co. Volunteer Fire Dept. #9	3	80000	50000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential, Important	0	0
Millen city	Barney Overpass	3	3000000		2024	Government, Government, Water/Sewer, Water/Sewer	Transportation		
Millen city	City of Millen Groundwater Elevated Tank #2	3	750000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		
Millen city	City of Millen Groundwater Well #1	3	500000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important, Special	0	0

							Consideration		
Millen city	City of Millen Groundwater Well #2	3	500000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		
Millen city	City of Millen Natural Gas Regulation Station #1	3	150000		2024	Government, Government, Water/Sewer, Water/Sewer	High Potential Loss, Important		
Millen city	City of Millen Natural Gas Regulation Station #2	3	150000		2024	Education, Education, Government Offices, Government Offices	High Potential Loss, Important	0	0
Millen city	City of Millen Wastewater Lift Station #3	3	100000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important	1	0
Millen city	City of Millen Wastewater Treatment Plant	3	4000000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important	2	0

Millen city	City of Millen Wastewater Lift Station #4	3	90000		2024	Government, Government, Water/Sewer, Water/Sewer	Economic Assets		
Millen city	Millen City Hall/FD/P D	3	5500000	1500000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	10	
Millen city	Millen Elevated Tank #1	3	750000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		
Millen city	Millen Groundwater Elevated Tank #1	3	750000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	0	0
Millen city	Millen Lift Station #1-A	3	170000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential		
Millen city	Millen Wastewater Lift Station #1	3	170000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		
Millen city	Millen Well #4	3	500000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		

Millen city	Solar Array #1	3	115000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential		
Millen city	Solar Array #2	3	50000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential		
<b>30</b>			<b>\$ 29,389,250</b>	<b>\$ 3,255,000</b>				<b>156</b>	<b>4</b>
Jenkins County	Jenkins County Senior Citizens Center	2	1125000	50000	2024	Government, Government, Water/Sewer, Water/Sewer	Important, Vulnerable Population	30	0
Millen city	Milen Public Works Office	2	320000	33000	2024	Government, Government, Water/Sewer, Water/Sewer	Important	3	
Millen city	Millen Gas System	2	3250000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Hazardous Materials, Lifeline		
Millen city	Millen Lift Station #1B	2	170000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		

Millen city	Millen Utility Warehouse	2	372000	280000	2024	Government, Government, Water/Sewer, Water/Sewer	Important		
<b>5</b>			<b>\$ 5,237,000</b>	<b>\$ 363,000</b>				<b>33</b>	<b>0</b>
Jenkins County	Herdon Bridge	1	6000000		2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Transportation		
Jenkins County	North Jenkins Co. Volunteer Fire Dept. #7	1	70000	10000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential, Important	0	0
Jenkins County	North Jenkins VFD #2	1	80000	10000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential		
Jenkins County	South Jenkins Co. Volunteer Fire Dept. #5	1	162500	50000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	0	0

Jenkins County	South Jenkins VFD #6	1	110000		2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	0	
Millen city	City of Millen Natural Gas Regulator Station #3	1	150000		2024	Government, Government, Water/Sewer, Water/Sewer	Hazardous Materials, Important, Lifeline		
Millen city	Millen Groundwater Well #3	1	500000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		
Millen city	Solar Array 3	1	865000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential		
<b>8</b>			<b>\$ 7,937,500</b>	<b>\$ 70,000</b>				<b>0</b>	<b>0</b>
Jenkins County	Jenkins County Extension Office	0	250000	25000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential	10	
Jenkins County	Jenkins County Ag Center	0	150000	10000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential	4	

Jenkins County	Jenkins County Elem School	0	4500000	2500000	2024	Education, Education, K - 12, K - 12	Essential, Vulnerable Population	725	
Jenkins County	Jenkins County High School	0	10500000	2500000	2024	Education, Education, K - 12, K - 12	Essential, Vulnerable Population	457	
Jenkins County	Jenkins County Library	0	600000	225000	2014	Education, Library	Important	20	
Jenkins County	Jenkins County Middle School	0	9000000	2500000	2014	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Important, Vulnerable Population	387	
Jenkins County	Millen-Jenkins County Airport	0	6000000	1000000	2024	NGO, NGO, Transportation, Transportation	Important, Transportation	0	0
Jenkins County	North Jenkins Co. VFD #3	0	70000	10000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential		
Millen city	City of Millen Wastewater Lift Station #2	0	100000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important	1	0



Millen city	Millen Community House	0	780000	50000	2024	Government, Government, Water/Sewer, Water/Sewer	Important		
Millen city	Millen Elevated Tank #4	0	750000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		
Millen city	Millen Mechanic Shop	0	100000	50000	2024	Government, Government, Water/Sewer, Water/Sewer	Important	3	
<b>12</b>			<b>\$ 32,800,000</b>	<b>\$ 8,870,000</b>				<b>1607</b>	<b>0</b>
<b>56</b>			<b>\$ 75,463,750</b>	<b>\$ 12,558,000</b>				<b>1796</b>	<b>4</b>

## **WILFIRE**

A wildfire is any uncontrolled fire occurring on undeveloped land that needs fire suppression. The potential for wildfire is influenced by three factors: the presence of fuel, the area's topography and air mass. There are three different classes of wildland fires. A surface fire is the most common type and burns along the floor of a forest, moving slowly and killing or damaging trees. A ground fire is usually started by lightning and burns on or below the forest floor. Crown fires spread rapidly by wind and move quickly by jumping along the tops of trees. Wildfires are usually signaled by dense smoke that fills the area for miles around. Wildfires caused by lightning have a very strong probability of occurring during drought conditions. Drought conditions make natural fuels (grass, brush, trees, dead vegetation) more fire prone.

Jenkins County is comprised of 233,291 acres with acres 52,956 (23.5 percent) dedicated to agricultural and 144,450 acres (64 percent) dedicated to forestry. Given the right weather conditions and variables, wildfire due to natural causes creates a potential threat to the lives and property of residents in the planning area. According to Georgia Forestry data, from 1957 to 2022, there have been 3,681 fire events burning a total of 25,000 acres for an average extent of 6.92 acres. Based on a 20-year hazard cycle there is a 5,494 percent chance of an annual event.

The GMIS has one critical facility with a hazard score of four (high), 30 with a hazard score of three (moderate), five with a hazard score of 2 (low) and eight with a hazard score of one (very low probability). The remaining 12 critical facilities have a hazard score of zero. The 44 critical facilities with a wildfire hazard score greater than zero have an estimated potential loss of more than \$42.7 million. The loss for all critical facilities is \$75,463,750. According to FEMA Worksheet #3a there are 24,770 structures/properties with a population of 8,693 with a value of slightly more than \$978 million worth of assets countywide.

Year	TOTAL	LIGHT	MACHI	CAMP	SMOKE	DEBRI	ARSON	RAIL	CHILD
1957	1248.75	0	0	107	77.25	684.5	380	0	0
1958	243.5	0	0	19.5	29.75	128.5	53.25	1.5	0
1959	1325.8	0	39	56.1	77.7	656.5	415.3	0	0
1960	254.6	0	0	9	15	78.1	131.5	10	0
1961	1228.6	0.5	98	320.6	79.5	386.3	115.6	62.1	0
1962	567.88	0.01	0.3	27.6	7.58	395.63	70.7	4.6	0
1963	657.35	0	80.8	8.82	38.37	35.4	426.26	67.7	0
1964	596.75	2.2	9.5	0.2	84.89	101.22	236.93	161.81	0
1965	262.04	6.5	0	6.4	22.28	89.68	122.89	14.29	0
1966	652.03	4.95	3.3	19.04	159.42	195.15	190.28	79.89	0
1967	581.29	0	11.3	0	156.67	261.06	72.14	80.12	0
1968	992.58	0	18.18	61.6	88.69	539.11	246.09	38.91	0
1969	455.36	0	10.7	3.85	17.35	278.76	51.88	92.82	0
1970	623.91	31.03	0.4	0	193.89	258.97	116.25	23.37	0
1971	538.59	0	12.23	33.07	76.33	114.93	298.8	3.23	0
1972	396.1	0	0	128.33	16.97	86.82	110.11	53.87	0
1973	220.46	0	3.46	6.65	34.91	28.1	122.28	25.06	0
1974	337.39	0	3.19	1.68	21.2	119.51	189.13	2.68	0
1975	232.43	0	0.68	3.18	11.17	38.49	170.03	8.88	0
1976	466.42	0	35.6	1.26	28.9	186.89	191.25	0	1.36
1977	459.65	2.63	0.35	8.33	46.09	248.64	104.96	0	7.36
1978	305.38	8.13	1.54	0	9.15	111.42	167.5	0	6
1979	775.95	0	0.05	0	18.34	360.7	375.77	0	0
1980	151.57	0	1.34	0	4.8	41.73	88.84	0	3.34
1981	502.28	28.27	56.17	0	0	116.34	293.18	0	0
1982	236.59	48	10.43	0.08	0	83.05	94.55	0	0
1983	382.63	0	14.5	1.83	0	255.17	93.85	16.11	0
1984	464.66	0	0.17	0	1.71	179.39	280.66	0	0
1985	861.67	8.98	21.2	30.19	0.12	405.69	375.45	0	0.71
1986	152.71	0	3.62	0	0.09	97.76	49.15	0.92	0
1987	130.25	7.06	12.33	0.66	0.41	41.07	60.08	0.1	0.02
1988	454.07	35.88	3.62	0	12.87	149.38	246.34	0	0
1989	129.13	1.56	2.28	0	0	60.69	60.51	0	0.5
1990	168.92	11.93	34.14	0	0	85.77	36.28	0.25	0
1991	210.27	20.9	16.2	0	5.24	91.4	41.71	0	16.65
1992	458.77	47.02	52.82	5.64	0	171.82	121.95	0.1	2.1
1993	226.53	27.85	7.72	2.4	0	47.6	131.83	0	0.64
1994	203.97	1.21	15.58	0	0	139.44	38.99	1.27	0
1995	191.6	23.05	40.62	0	0.03	110.67	16.43	0	0.56
1996	180.02	7.38	20.76	0	2.02	110.24	34.65	0	4.96
1997	327.06	0	5	6.97	4.94	115.48	182.58	0.26	3.79



Jenkins	Number of Wildfires							
Year	OTAL	LIGHT	MACHI	CAMP	SMOKE	DEBRI	ARSON	RAIL
1957	73	0	0	6	12	39	16	0
1958	37	0	0	3	6	16	9	1
1959	90	0	2	8	5	42	27	0
1960	33	0	0	2	2	12	13	1
1961	87	1	3	9	10	36	18	4
1962	58	1	1	5	5	26	11	5
1963	68	0	4	3	11	13	35	2
1964	92	2	3	1	14	21	36	15
1965	50	1	0	2	11	17	16	3
1966	92	1	3	5	16	27	29	11
1967	81	0	3	0	17	22	22	17
1968	121	0	1	1	27	39	46	7
1969	59	0	4	1	8	27	13	6
1970	95	2	1	0	16	38	30	8
1971	82	0	8	2	12	21	36	3
1972	48	0	0	1	5	17	20	5
1973	48	0	2	2	5	15	17	7
1974	60	0	4	1	7	21	22	5
1975	45	0	2	3	4	12	16	8
1976	81	0	2	1	12	28	33	0
1977	75	1	1	4	6	28	19	0
1978	57	1	3	0	5	21	23	0
1979	98	0	1	0	6	29	58	0
1980	44	0	1	0	1	11	24	0
1981	99	2	6	0	0	24	61	0
1982	64	4	5	1	0	19	33	0
1983	50	0	3	1	0	22	20	1
1984	69	0	2	0	1	34	28	0
1985	110	1	5	3	1	54	31	0
1986	60	0	4	0	1	19	31	2
1987	47	2	6	1	1	16	15	1
1988	79	3	4	0	1	33	36	0
1989	70	1	7	0	0	30	27	0
1990	42	1	8	0	0	14	13	2
1991	42	3	6	0	1	13	8	0
1992	63	3	7	2	0	26	16	1
1993	32	2	3	1	0	9	15	0
1994	63	2	5	0	0	37	15	1
1995	51	3	12	0	1	22	9	0
1996	58	2	4	0	1	36	13	0
1997	59	0	10	2	1	34	8	1
1998	33	0	7	1	0	14	10	0

1999	75	3	6	0	0	41	22	0
2000	61	0	16	0	0	34	6	0
2001	70	3	6	1	0	36	12	8
2002	78	3	6	1	1	45	17	0
2003	38	7	4	0	0	11	13	0
2004	64	1	7	0	0	32	20	0
2005	40	0	6	0	0	19	11	0
2006	54	2	13	1	0	20	16	0
2007	55	3	12	0	1	23	10	0
2008	30	5	4	0	0	14	4	0
2009	37	2	10	0	0	13	11	0
2010	8	1	0	1	0	4	1	0
2011	39	1	2	1	0	15	15	0
2012	35	4	9	1	0	14	3	0
2013	23	3	1	0	1	10	4	0
2014	19	0	0	0	0	11	0	0
2015	19	0	0	1	0	9	1	0
2016	17	3	2	0	0	9	0	0
2017	36	0	2	0	1	19	9	0
2018	31	1	2	0	0	17	6	0
2019	21	1	3	0	0	11	2	1
2020	11	0	1	0	0	8	0	0
2021	30	0	3	1	0	14	5	0
2022	25	0	1	1	0	14	6	0
2023	10	1	0	0	0	5	3	0
2024	0	0	0	0	0	0	0	0
2025	0	0	0	0	0	0	0	0
2026	0	0	0	0	0	0	0	0
2027	0	0	0	0	0	0	0	0
2028	0	0	0	0	0	0	0	0
2029	0	0	0	0	0	0	0	0

### Critical Facilities Wildfire Hazard Scores

Jurisdiction	Name	Hazard Score	Replacement Value	Content value	Valuation Year	Facility type	Risk	Day	Night
Millen city	Millen Natural Gas Odorizer	4	100000		2024	Education, Education, Government Offices, Government Offices	Essential	0	0
<b>1</b>			<b>\$ 100,000</b>	<b>0</b>				<b>0</b>	<b>0</b>
Jenkins County	County Community Service Board of Georgia	3	250000	15000	2024	NGO, NGO, Transportation, Transportation	Important, Vulnerable Population	20	
Jenkins County	Jenkins Co. Health Dept.	3	1125000	150000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential	8	0
Jenkins County	JENKINS CO-CR54 PHASE 2 MSWL & C&D SITE	3	1000000		2024	Government, Government, Water/Sewer, Water/Sewer	Economic Assets, Hazardous Materials		

Jenkins County	Jenkins County Annex Building	3	1200000	100000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Important	10	
Jenkins County	Jenkins County BOE Office and Bus Shop	3	1500000	300000	2014	Emergency Services, Fire Fighters	Important	25	
Jenkins County	Jenkins County Courthouse	3	5500000	250000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Historic Consideration	15	
Jenkins County	Jenkins County EMS	3	350000	750000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Important, Lifeline, Vulnerable Population	4	4
Jenkins County	Jenkins County Fuel Station	3	150000		2024	NGO, NGO, Transportation, Transportation	Essential, Transportation	0	0
Jenkins County	Jenkins County Headstart	3	800000	100000	2024	Government, Government, Water/Sewer, Water/Sewer	Important, Vulnerable Population	45	
Jenkins County	Jenkins County Maintenance Shop	3	114250	30000	2024	NGO, NGO, Transportation, Transportation	Important, Transportation	14	0



Jenkins County	Jenkins County Medical Center	3	0		2024	Medical, Medical, Medical Offices, Medical Offices			
Jenkins County	Jenkins County Roads and Bridges Office	3	75000	10000	2024	Education, Education, Library, Library	Important	2	
Jenkins County	North Jenkins Co. Volunteer Fire Dept. #9	3	80000	50000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential, Important	0	0
Millen city	Barney Overpass	3	3000000		2024	Government, Government, Water/Sewer, Water/Sewer	Transportation		
Millen city	City of Millen Groundwater Elevated Tank #2	3	750000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		
Millen city	City of Millen Groundwater Well #1	3	500000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important, Special	0	0

							Consideration		
Millen city	City of Millen Groundwater Well #2	3	500000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		
Millen city	City of Millen Natural Gas Regulation Station #1	3	150000		2024	Government, Government, Water/Sewer, Water/Sewer	High Potential Loss, Important		
Millen city	City of Millen Natural Gas Regulation Station #2	3	150000		2024	Education, Education, Government Offices, Government Offices	High Potential Loss, Important	0	0
Millen city	City of Millen Wastewater Lift Station #3	3	100000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important	1	0
Millen city	City of Millen Wastewater Treatment Plant	3	4000000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important	2	0

Millen city	City of Millen Wastewater Lift Station #4	3	90000		2024	Government, Government, Water/Sewer, Water/Sewer	Economic Assets		
Millen city	Millen City Hall/FD/P D	3	5500000	1500000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	10	
Millen city	Millen Elevated Tank #1	3	750000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		
Millen city	Millen Groundwater Elevated Tank #1	3	750000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	0	0
Millen city	Millen Lift Station #1-A	3	170000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential		
Millen city	Millen Wastewater Lift Station #1	3	170000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		
Millen city	Millen Well #4	3	500000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		

Millen city	Solar Array #1	3	115000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential		
Millen city	Solar Array #2	3	50000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential		
<b>30</b>			<b>\$ 29,389,250</b>	<b>\$ 3,255,000</b>				<b>156</b>	<b>4</b>
Jenkins County	Jenkins County Senior Citizens Center	2	1125000	50000	2024	Government, Government, Water/Sewer, Water/Sewer	Important, Vulnerable Population	30	0
Millen city	Milen Public Works Office	2	320000	33000	2024	Government, Government, Water/Sewer, Water/Sewer	Important	3	
Millen city	Millen Gas System	2	3250000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Hazardous Materials, Lifeline		
Millen city	Millen Lift Station #1B	2	170000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		

Millen city	Millen Utility Warehouse	2	372000	280000	2024	Government, Government, Water/Sewer, Water/Sewer	Important		
<b>5</b>			<b>\$ 5,237,000</b>	<b>\$ 363,000</b>				<b>33</b>	<b>0</b>
Jenkins County	Herdon Bridge	1	6000000		2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Transportation		
Jenkins County	North Jenkins Co. Volunteer Fire Dept. #7	1	70000	10000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential, Important	0	0
Jenkins County	North Jenkins VFD #2	1	80000	10000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential		
Jenkins County	South Jenkins Co. Volunteer Fire Dept. #5	1	162500	50000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	0	0

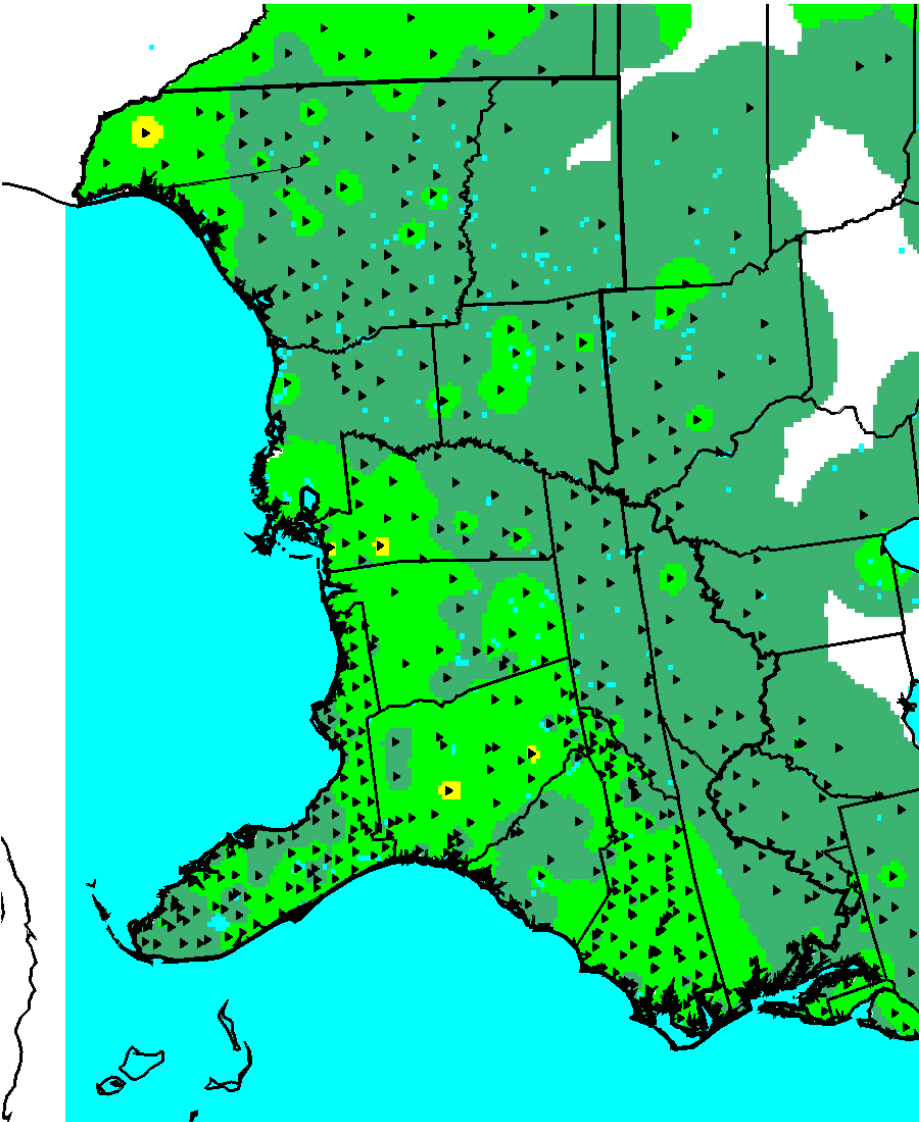
Jenkins County	South Jenkins VFD #6	1	110000		2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	0	
Millen city	City of Millen Natural Gas Regulator Station #3	1	150000		2024	Government, Government, Water/Sewer, Water/Sewer	Hazardous Materials, Important, Lifeline		
Millen city	Millen Groundwater Well #3	1	500000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		
Millen city	Solar Array 3	1	865000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential		
<b>8</b>			<b>\$ 7,937,500</b>	<b>\$ 70,000</b>				<b>0</b>	<b>0</b>
Jenkins County	Jenkins County Extension Office	0	250000	25000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential	10	
Jenkins County	Jenkins County Ag Center	0	150000	10000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential	4	

Jenkins County	Jenkins County Elem School	0	4500000	2500000	2024	Education, Education, K - 12, K - 12	Essential, Vulnerable Population	725	
Jenkins County	Jenkins County High School	0	10500000	2500000	2024	Education, Education, K - 12, K - 12	Essential, Vulnerable Population	457	
Jenkins County	Jenkins County Library	0	600000	225000	2014	Education, Library	Important	20	
Jenkins County	Jenkins County Middle School	0	9000000	2500000	2014	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Important, Vulnerable Population	387	
Jenkins County	Millen-Jenkins County Airport	0	6000000	1000000	2024	NGO, NGO, Transportation, Transportation	Important, Transportation	0	0
Jenkins County	North Jenkins Co. VFD #3	0	70000	10000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential		
Millen city	City of Millen Wastewater Lift Station #2	0	100000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important	1	0

Millen city	Millen Community House	0	780000	50000	2024	Government, Government, Water/Sewer, Water/Sewer	Important		
Millen city	Millen Elevated Tank #4	0	750000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline		
Millen city	Millen Mechanic Shop	0	100000	50000	2024	Government, Government, Water/Sewer, Water/Sewer	Important	3	
<b>12</b>			<b>\$ 32,800,000</b>	<b>\$ 8,870,000</b>				<b>1607</b>	<b>0</b>
<b>56</b>			<b>\$ 75,463,750</b>	<b>\$ 12,558,000</b>				<b>1796</b>	<b>4</b>



Southern Area Observed Fire Danger Class: 09-Jul-19



LEGEND

- Low
- Moderate
- High
- Very High
- Extreme
- Water

**Firelab**  
MISSOULA, MONTANA



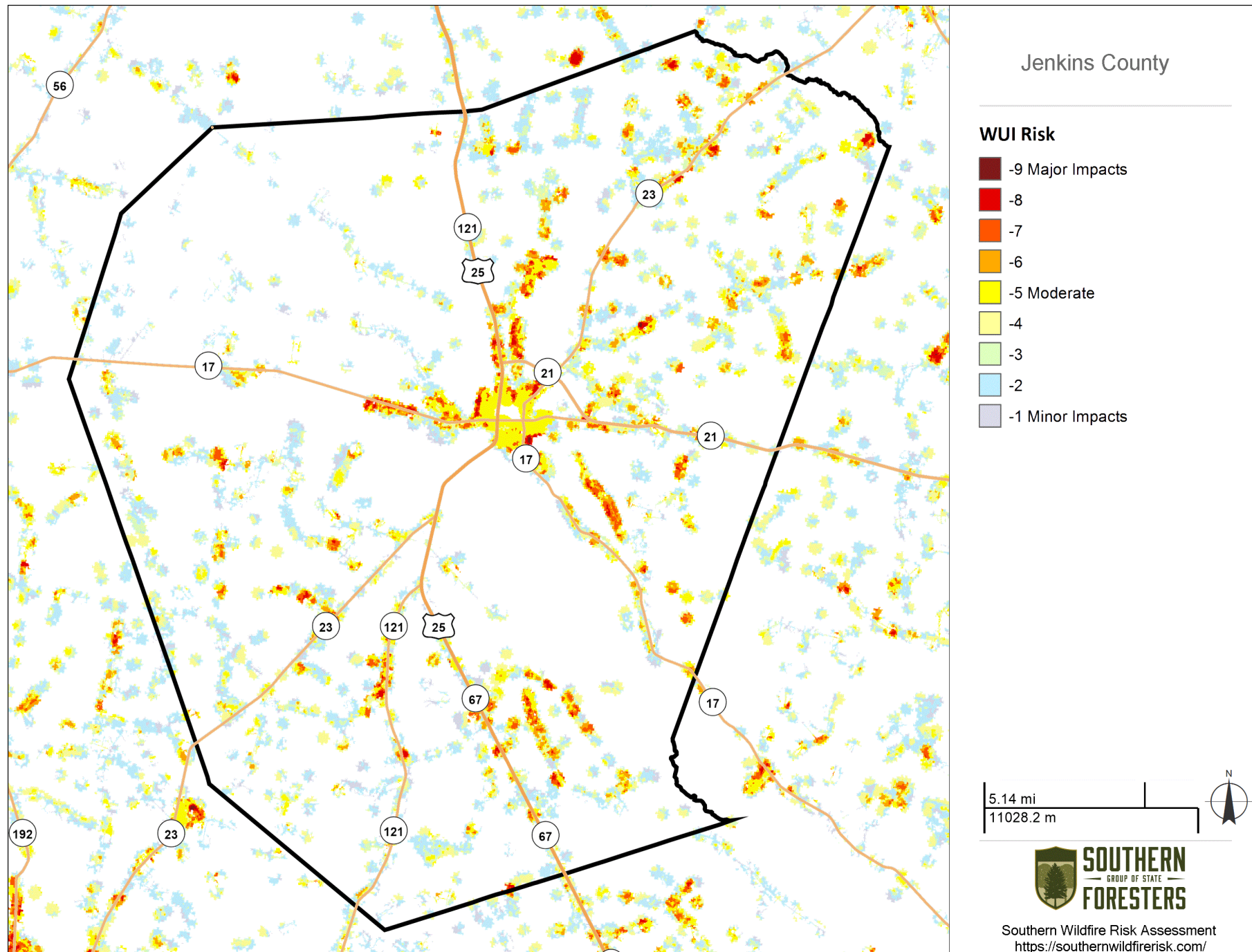
WFAS-MAPS National Interagency Fire Center



# JENKINS COUNTY GMIS WILDFIRE RISK MAP

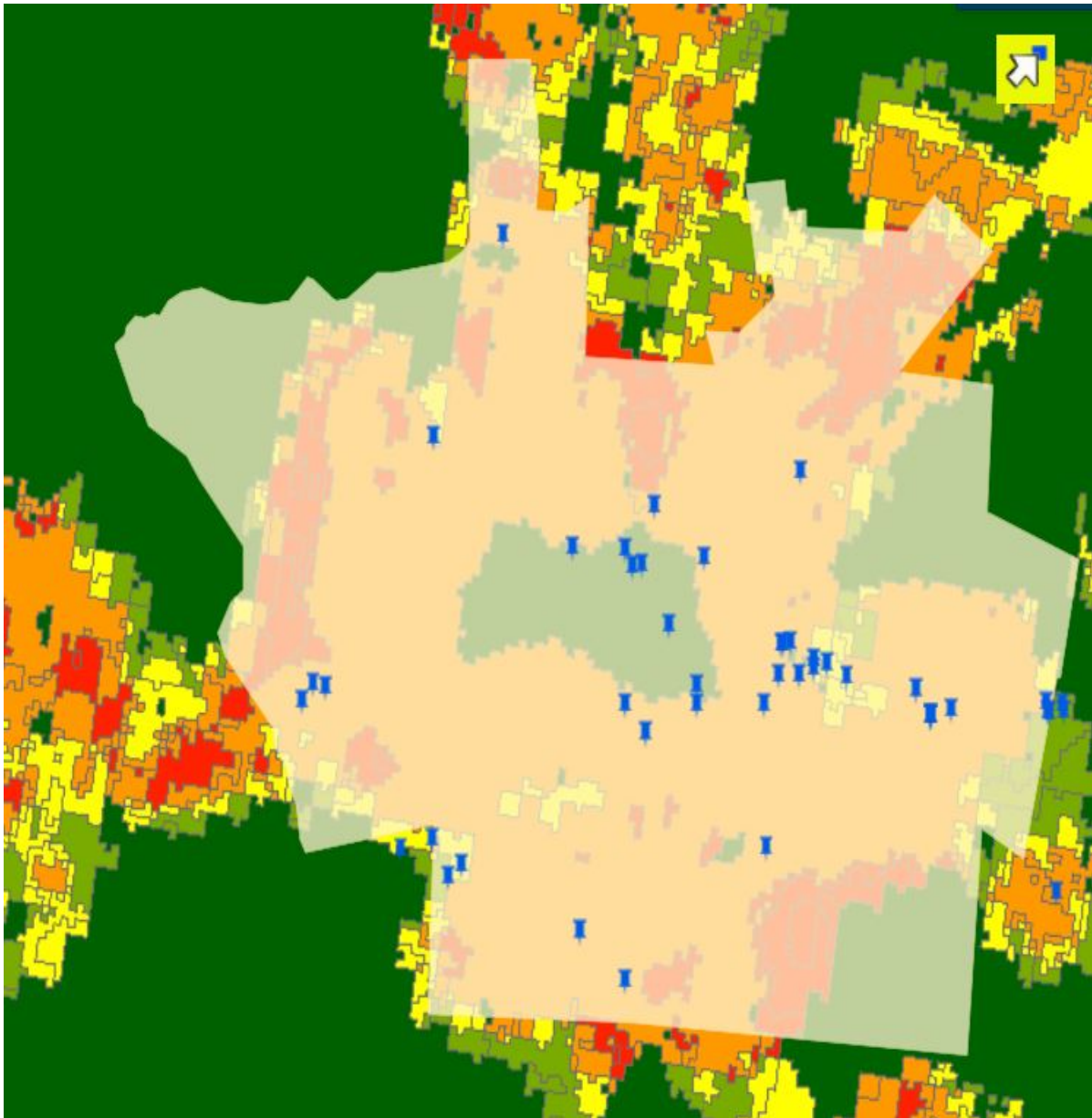


Score	Description
4	High
3	Moderate
2	Low
1	Very Low
0	No Houses
	Agriculture
	Water
	City





# MILLEN GMIS WILDFIRE RISK MAP



Score	Description
4	High
3	Moderate
2	Low
1	Very Low
0	No Houses
	Agriculture
	Water
	City

## Tornadoes

A tornado is a violent windstorm characterized by a twisting, funnel-shaped cloud. It is spawned by a thunderstorm or the result of a hurricane and is produced when cool air overrides a layer of warm air, forcing the warm air to rise rapidly. Tornadoes are among the most unpredictable and destructive weather phenomena and can strike at any time of the year if essential conditions are present. The damage from a tornado is a result of the high wind velocity and wind-blown debris.

Tornadoes do not touch down as frequently; however, the unpredictability and the potential for excessive damage caused by tornadoes makes it imperative that mitigation measures identified in this plan receive full consideration. Based on 74 years of historical data, there have been 15 reported tornadoes in the planning area. The highest magnitude reported was an EF2. Reported property and crop damages for all 15 events totaled more than \$632,500 with 6 injuries. Tornadoes tend to strike in somewhat random fashion, making the task of calculating a recurrence interval extremely difficult. There is a 20 percent annual chance of a tornado event for the County as a whole.

The GMIS has the entire county with a wind hazard score of two, where wind speed is between 90 to 99 mph. All 56 critical facilities have a wind hazard score of two with a replacement cost of more than \$75 million. To summarize, there are approximately 24,770 structures/properties in the county totaling slightly more than \$978 million with a population of 8,693.

Location	Date	Type	Mag	Dth	Inj	Pr-D	Cr-D	Episode	Narrative
Jenkins	9/28/1963	Tornado			1	\$16,666	\$166		
Jenkins	5/12/1971	Tornado				\$5,000	\$0		
Jenkins	1/11/1972	Tornado				\$5,000	\$0		
Jenkins	3/21/1974	Tornado							
Jenkins	6/3/1974	Tornado							
Jenkins	3/16/1976	Tornado	F2			\$250,000	\$5,000		
Jenkins	10/6/1976	Tornado							
Jenkins	6/5/1978	Tornado						Near oak hill section of county	Near oak hill section of county
Jenkins	4/19/1979	Tornado							Damaged one Mobile home
PERKINS	9/22/2000	Tornado	F0	0	0				Several trees and numerous limbs down.
SCARBORO	7/1/2003	Tornado	F1	0	0			Much of WFO Charleston's CWA was impacted by the remnants of Tropical Storm Bill as it tracked to the northeast across the extreme northern section of Georgia. The mini outbreak of tornadoes started around 8 p.m. on the night of July 1st and did not stop until after 115 a.m. on the morning of July 2nd. Fortunately, there were no deaths with the tornadoes. Screven County was hardest hit with three separate tornadoes and three areas of wind damage.	A tornado caused extensive damage to trees in the northeast part of the county
PERKINS	9/27/2004	Tornado	F0	0	0				A weak tornado knocked down trees and large limbs
MILLEN	1/2/2006	Tornado	F0	0	0	\$50,000			A tornado briefly touched down severely damaging a mobile home, causing minor damage to another mobile home, and knocking down trees

Location	Date	Type	Mag	Dth	Inj	Pr-D	CrD	Episode	Narrtive
SCARBORO	3/15/2008	Funnel Cloud		0	0				Several trees and numerous limbs down.
EMMALANE	5/11/2008	Tornado	EF1	0	1	\$50,000	\$0	A warm front lifted northward through southern South Carolina and southeast Georgia during the morning, with a strong cold front then sweeping through the area during the evening. This resulted in several rounds of severe weather across the region	A Tornado touched down near the community of Emmalane, Georgia around 733 AM EDT southwest of the intersection of US-25 and Old Savannah Road. The Tornado continued northeast 1.7 miles and had a maximum width of 1200 yards. The observed damage indicated that an EF-1 Tornado had occurred. The maximum sustained winds with the Tornado were estimated at 95 mph. Damage occurred to a mobile home where the roof was uplifted and the structure shifted from its foundation. There was also significant damage to nearby sheds and trees

\$376,666

\$5,166

\$381,832

Jurisdiction	Name	Hazard Score	Replacement Value	Content value	Valuation Year	Facility type	Risk	Day
Jenkins County	County Community Service Board of Georgia	2	250000	15000	2024	NGO, NGO, Transportation, Transportation	Important, Vulnerable Population	20
Jenkins County	Herdon Bridge	2	6000000		2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Transportation	
Jenkins County	Jenkins Co. Health Dept.	2	1125000	150000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential	8
Jenkins County	JENKINS CO-CR54 PHASE 2 MSWL & C&D SITE	2	1000000		2024	Government, Government, Water/Sewer, Water/Sewer	Economic Assets, Hazardous Materials	
Jenkins County	Jenkins County Extension Office	2	250000	25000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential	10
Jenkins County	Jenkins County Ag Center	2	150000	10000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential	4
Jenkins County	Jenkins County Annex Building	2	1200000	100000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Important	10



Jenkins County	Jenkins County BOE Office and Bus Shop	2	1500000	300000	2014	Emergency Services, Fire Fighters	Important	25
Jenkins County	Jenkins County Courthouse	2	5500000	250000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Historic Consideration	15
Jenkins County	Jenkins County Elem School	0	4500000	2500000	2024	Education, Education, K - 12, K - 12	Essential, Vulnerable Population	725
Jenkins County	Jenkins County EMS	2	350000	750000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Important, Lifeline, Vulnerable Population	4
Jenkins County	Jenkins County Fuel Station	2	150000		2024	NGO, NGO, Transportation, Transportation	Essential, Transportation	0
Jenkins County	Jenkins County Headstart	2	800000	100000	2024	Government, Government, Water/Sewer, Water/Sewer	Important, Vulnerable Population	45
Jenkins County	Jenkins County High School	2	10500000	2500000	2024	Education, Education, K - 12, K - 12	Essential, Vulnerable Population	457
Jenkins County	Jenkins County Library	2	600000	225000	2014	Education, Library	Important	20

Jenkins County	Jenkins County Maintenance Shop	2	114250	30000	2024	NGO, NGO, Transportation, Transportation	Important, Transportation	14
Jenkins County	Jenkins County Medical Center	2	0		2024	Medical, Medical, Medical Offices, Medical Offices		
Jenkins County	Jenkins County Middle School	0	9000000	2500000	2014	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Important, Vulnerable Population	387
Jenkins County	Jenkins County Roads and Bridges Office	2	75000	10000	2024	Education, Education, Library, Library	Important	2
Jenkins County	Jenkins County Senior Citizens Center	2	1125000	50000	2024	Government, Government, Water/Sewer, Water/Sewer	Important, Vulnerable Population	30
Jenkins County	Millen-Jenkins County Airport	2	6000000	1000000	2024	NGO, NGO, Transportation, Transportation	Important, Transportation	0

Jenkins County	North Jenkins Co. VFD #3	2	70000	10000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	
Jenkins County	North Jenkins Co. Volunteer Fire Dept. #7	2	70000	10000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential, Important	0
Jenkins County	North Jenkins Co. Volunteer Fire Dept. #9	2	80000	50000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential, Important	0
Jenkins County	North Jenkins VFD #2	2	80000	10000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	
Jenkins County	South Jenkins Co. Volunteer Fire Dept. #5	2	162500	50000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	0

Jenkins County	South Jenkins VFD #6	2	110000		2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	0
Millen city	Barney Overpass	2	3000000		2024	Government, Government, Water/Sewer, Water/Sewer	Transportation	
Millen city	City of Millen Groundwater Elevated Tank #2	2	750000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	
Millen city	City of Millen Groundwater Well #1	2	500000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important, Special Consideration	0
Millen city	City of Millen Groundwater Well #2	2	500000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	
Millen city	City of Millen Natural Gas Regulation Station #1	2	150000		2024	Government, Government, Water/Sewer, Water/Sewer	High Potential Loss, Important	
Millen city	City of Millen Natural Gas Regulation Station #2	2	150000		2024	Education, Education, Government Offices, Government Offices	High Potential Loss, Important	0

Millen city	City of Millen Natural Gas Regulator Station #3	2	150000		2024	Government, Government, Water/Sewer, Water/Sewer	Hazardous Materials, Important, Lifeline	
Millen city	City of Millen Wastewater Lift Station #2	2	100000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important	1
Millen city	City of Millen Wastewater Lift Station #3	2	100000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important	1
Millen city	City of Millen Wastewater Treatment Plant	2	4000000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important	2
Millen city	City of Millen Wastwater Lift Station #4	2	90000		2024	Government, Government, Water/Sewer, Water/Sewer	Economic Assets	
Millen city	Milen Public Works Office	2	320000	33000	2024	Government, Government, Water/Sewer, Water/Sewer	Important	3
Millen city	Millen City Hall/FD/PD	2	5500000	1500000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	10

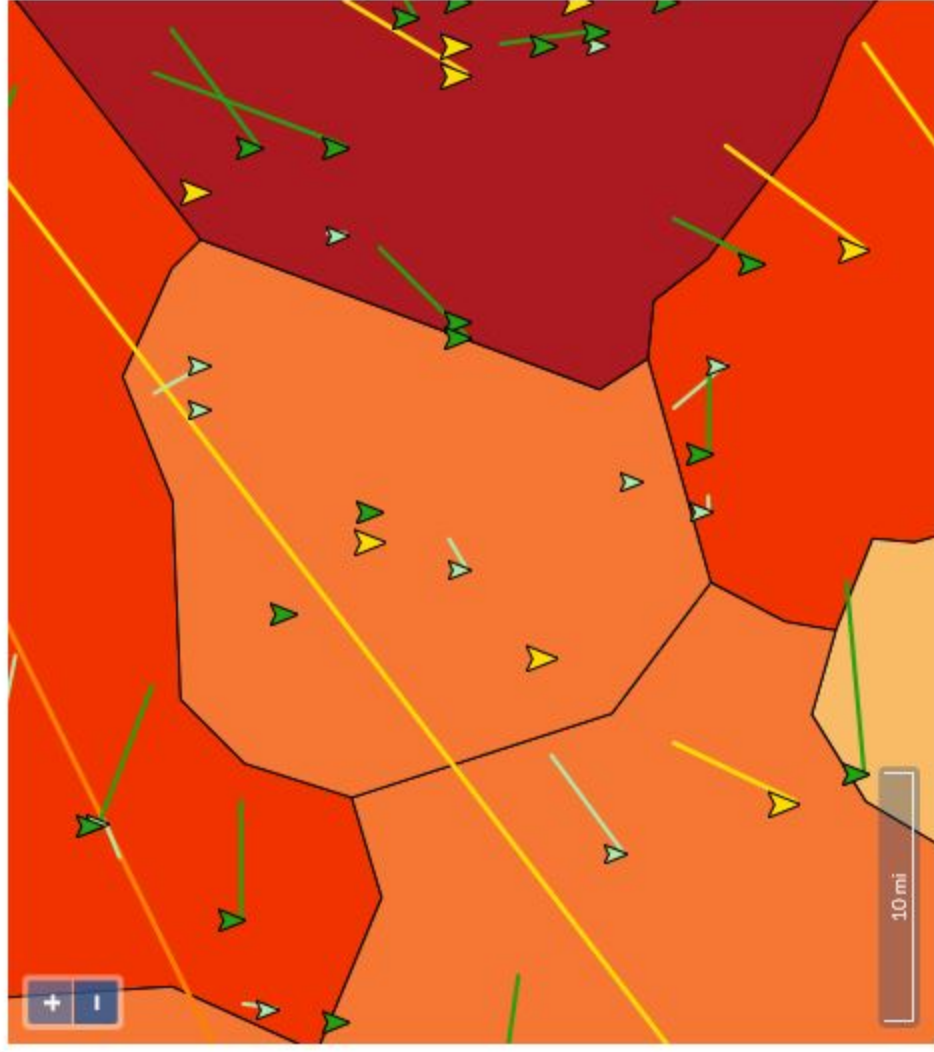
Millen city	Millen Community House	2	780000	50000	2024	Government, Government, Water/Sewer, Water/Sewer	Important	
Millen city	Millen Elevated Tank #1	2	750000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	
Millen city	Millen Elevated Tank #4	2	750000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	
Millen city	Millen Gas System	2	3250000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Hazardous Materials, Lifeline	
Millen city	Millen Groundwater Elevated Tank #1	2	750000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	0
Millen city	Millen Groundwater Well #3	2	500000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	
Millen city	Millen Lift Station #1-A	2	170000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential	
Millen city	Millen Lift Station #1B	2	170000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	

Millen city	Millen Mechanic Shop	2	100000	50000	2024	Government, Government, Water/Sewer, Water/Sewer	Important	3
Millen city	Millen Natural Gas Odorizer	2	100000		2024	Education, Education, Government Offices, Government Offices	Essential	0
Millen city	Millen Utility Warehouse	2	372000	280000	2024	Government, Government, Water/Sewer, Water/Sewer	Important	
Millen city	Millen Wasterwater Lift Station #1	2	170000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	
Millen city	Millen Well #4	2	500000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	
Millen city	Solar Array #1	2	115000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential	
Millen city	Solar Array #2	2	50000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential	

Millen city	Solar Array 3	2	865000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential	
56			\$ 75,463,750.00	\$ 12,558,000.00				1796



## Map of Storm Reports



## Tropical Storms and Hurricanes

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)<sup>1</sup>. 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.

The entire county has the potential to be affected by tropical storms. Based on 74 years of historical data, there have been seven tropical storms reported by the NCEI and SHELDUS<sup>TM</sup> with reported property and crop damage. The county is actively conducting damage assessments for Hurricane Debby and Hurricane Helene, and total damages are yet to be finalized by local officials. To summarize, there are approximately 24,770 structures/properties in the county totaling slightly more than \$978 million with a population of 8,693

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<sup>1</sup> 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.

<b>Details</b>	<b>Date</b>	<b>PrD</b>	<b>CrD</b>
A result of Hurricane Flossy	10/2/1956		
A result of Hurricane Cleo	8/28/1964	1136.36	113.64
A result of Hurricane Dora	9/9/1964	147058.82	
A result of Hurricane Alma	6/8/1966		
A result of Tropical Storm Abby	6/6/1968		
A result of Hurricane Angus	6/19/1972		314.46
A result of Hurricane Kate	11/21/1985		
A result of Tropical Storm Charley	8/28/1986		
A result of Tropical Storm Allison	8/8/1995		
A result of Hurricane Earl	9/7/1998		
A result of Result of Hurricane Floyd	9/15/1999		
A result of Hurricane Jeanne	9/27/2004		
A result of Hurricane Alberto	6/12/2006		
A result of Hurricane Matthew	10/8/2016		
A result of Hurricane Irma	9/11/2017	200,000	
A result of Hurricane Michael	10/10/2018		
A result of Tropical Storm Nestor	10/20/2019		
A result of Hurricane Elsa	7/9/2021		
A result of Hurricane Debby	8/7/2024	TBT	TBT
A result of Hurricane Helene	9/27/2024	TBT	TBT
		<b>\$ 348,195.18</b>	<b>\$ 428.10</b>

Jurisdiction	Name	Hazard Score	Replacement Value	Content value	Valuation Year	Facility type	Risk	Day
Jenkins County	County Community Service Board of Georgia	2	250000	15000	2024	NGO, NGO, Transportation, Transportation	Important, Vulnerable Population	20
Jenkins County	Herdon Bridge	2	6000000		2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Transportation	
Jenkins County	Jenkins Co. Health Dept.	2	1125000	150000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential	8
Jenkins County	JENKINS CO-CR54 PHASE 2 MSWL & C&D SITE	2	1000000		2024	Government, Government, Water/Sewer, Water/Sewer	Economic Assets, Hazardous Materials	
Jenkins County	Jenkins County Extension Office	2	250000	25000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential	10
Jenkins County	Jenkins County Ag Center	2	150000	10000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential	4
Jenkins County	Jenkins County Annex Building	2	1200000	100000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Important	10

Jenkins County	Jenkins County BOE Office and Bus Shop	2	1500000	300000	2014	Emergency Services, Fire Fighters	Important	25
Jenkins County	Jenkins County Courthouse	2	5500000	250000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Historic Consideration	15
Jenkins County	Jenkins County Elem School	0	4500000	2500000	2024	Education, Education, K - 12, K - 12	Essential, Vulnerable Population	725
Jenkins County	Jenkins County EMS	2	350000	750000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Important, Lifeline, Vulnerable Population	4
Jenkins County	Jenkins County Fuel Station	2	150000		2024	NGO, NGO, Transportation, Transportation	Essential, Transportation	0
Jenkins County	Jenkins County Headstart	2	800000	100000	2024	Government, Government, Water/Sewer, Water/Sewer	Important, Vulnerable Population	45
Jenkins County	Jenkins County High School	2	10500000	2500000	2024	Education, Education, K - 12, K - 12	Essential, Vulnerable Population	457
Jenkins County	Jenkins County Library	2	600000	225000	2014	Education, Library	Important	20

Jenkins County	Jenkins County Maintenance Shop	2	114250	30000	2024	NGO, NGO, Transportation, Transportation	Important, Transportation	14
Jenkins County	Jenkins County Medical Center	2	0		2024	Medical, Medical, Medical Offices, Medical Offices		
Jenkins County	Jenkins County Middle School	0	9000000	2500000	2014	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Important, Vulnerable Population	387
Jenkins County	Jenkins County Roads and Bridges Office	2	75000	10000	2024	Education, Education, Library, Library	Important	2
Jenkins County	Jenkins County Senior Citizens Center	2	1125000	50000	2024	Government, Government, Water/Sewer, Water/Sewer	Important, Vulnerable Population	30
Jenkins County	Millen-Jenkins County Airport	2	6000000	1000000	2024	NGO, NGO, Transportation, Transportation	Important, Transportation	0

Jenkins County	North Jenkins Co. VFD #3	2	70000	10000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	
Jenkins County	North Jenkins Co. Volunteer Fire Dept. #7	2	70000	10000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential, Important	0
Jenkins County	North Jenkins Co. Volunteer Fire Dept. #9	2	80000	50000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential, Important	0
Jenkins County	North Jenkins VFD #2	2	80000	10000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	
Jenkins County	South Jenkins Co. Volunteer Fire Dept. #5	2	162500	50000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	0

Jenkins County	South Jenkins VFD #6	2	110000		2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	0
Millen city	Barney Overpass	2	3000000		2024	Government, Government, Water/Sewer, Water/Sewer	Transportation	
Millen city	City of Millen Groundwater Elevated Tank #2	2	750000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	
Millen city	City of Millen Groundwater Well #1	2	500000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important, Special Consideration	0
Millen city	City of Millen Groundwater Well #2	2	500000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	
Millen city	City of Millen Natural Gas Regulation Station #1	2	150000		2024	Government, Government, Water/Sewer, Water/Sewer	High Potential Loss, Important	
Millen city	City of Millen Natural Gas Regulation Station #2	2	150000		2024	Education, Education, Government Offices, Government Offices	High Potential Loss, Important	0



Millen city	City of Millen Natural Gas Regulator Station #3	2	150000		2024	Government, Government, Water/Sewer, Water/Sewer	Hazardous Materials, Important, Lifeline	
Millen city	City of Millen Wastewater Lift Station #2	2	100000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important	1
Millen city	City of Millen Wastewater Lift Station #3	2	100000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important	1
Millen city	City of Millen Wastewater Treatment Plant	2	4000000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important	2
Millen city	City of Millen Wastwater Lift Station #4	2	90000		2024	Government, Government, Water/Sewer, Water/Sewer	Economic Assets	
Millen city	Milen Public Works Office	2	320000	33000	2024	Government, Government, Water/Sewer, Water/Sewer	Important	3
Millen city	Millen City Hall/FD/PD	2	5500000	1500000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	10

Millen city	Millen Community House	2	780000	50000	2024	Government, Government, Water/Sewer, Water/Sewer	Important	
Millen city	Millen Elevated Tank #1	2	750000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	
Millen city	Millen Elevated Tank #4	2	750000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	
Millen city	Millen Gas System	2	3250000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Hazardous Materials, Lifeline	
Millen city	Millen Groundwater Elevated Tank #1	2	750000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	0
Millen city	Millen Groundwater Well #3	2	500000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	
Millen city	Millen Lift Station #1-A	2	170000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential	
Millen city	Millen Lift Station #1B	2	170000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	

Millen city	Millen Mechanic Shop	2	100000	50000	2024	Government, Government, Water/Sewer, Water/Sewer	Important	3
Millen city	Millen Natural Gas Odorizer	2	100000		2024	Education, Education, Government Offices, Government Offices	Essential	0
Millen city	Millen Utility Warehouse	2	372000	280000	2024	Government, Government, Water/Sewer, Water/Sewer	Important	
Millen city	Millen Wasterwater Lift Station #1	2	170000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	
Millen city	Millen Well #4	2	500000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	
Millen city	Solar Array #1	2	115000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential	
Millen city	Solar Array #2	2	50000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential	

Millen city	Solar Array 3	2	865000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential	
56			\$ 75,463,750.00	\$ 12,558,000.00				1796

## **Severe Weather (Thunderstorm Wind, Lightning, and Hail)**

The month of February marks the beginning of the severe weather season in the South, which can last until the month of August. Three types of severe weather were identified by the mitigation team: (1) thunderstorm winds, (2) lightning and (3) hail.

The first severe weather event, thunderstorm winds, can cause death and injury, power outages, property damage, and can disrupt telephone service, severely affect radio communications and surface/air transportation which may seriously impair the emergency management capabilities of the affected jurisdictions.

Thunderstorm winds arise from convection (with or without lightning), with speeds of at least 50 knots (58 mph), or winds of any speed producing a fatality, injury, or damage. Severe thunderstorms develop powerful updrafts and downdrafts. An updraft of warm, moist air helps to fuel a towering cumulonimbus cloud reaching tens of thousands of feet into the atmosphere. A downdraft of relatively cool, dense air develops as precipitation begins to fall through the cloud. Winds in the downdraft can reach in excess of 100 miles per hour. When the downdraft reaches the ground, it spreads out forming a gust front: the strong wind that kicks up just before the storm hits. As the thunderstorm moves through the area, the full force of the downdraft in a severe thunderstorm can be felt as horizontal, straight-line winds with speeds well over 50 miles per hour. Straight-line winds are often responsible for most of the damage associated with a severe thunderstorm. Damaging straight-line winds occur over a range of scales. At one extreme, a severe single-cell thunderstorm may cause localized damage from a microburst, a severe downdraft extending not more than about two miles across. In contrast, a powerful thunderstorm complex that develops as a squall line can produce damaging winds that carve a path as much as 100 miles wide and 500 miles long.

The second severe weather event is lightning. Lightning results from the buildup and discharge of electrical energy between positively and negatively charged areas. Rising and descending air within a thunderstorm separates these positive and negative charges. Water and ice particles also affect charge distribution. A cloud-to-ground lightning strike begins as an invisible channel of electrically charged air moving from the cloud toward the ground. When one channel nears an object on the ground, a powerful surge of electricity from the ground moves upward to the clouds and produces the visible lightning strike. Lightning often strikes outside of heavy rain and may occur as far as 10 miles away from any rainfall.

The final severe weather event is hail. Hailstones are created when strong rising currents of air called updrafts carry water droplets high into the upper reaches of thunderstorms where they freeze. These frozen water droplets fall back toward the earth in downdrafts. In their descent, these frozen droplets bump into and coalesce with unfrozen water droplets and are then carried back up high within the storm where they refreeze into larger frozen drops. This cycle may repeat itself several times until the frozen water droplets become so large and heavy that the updraft can no longer support their weight. Eventually, the frozen water droplets fall back to earth as hailstones.

Hail can also be a destructive aspect of severe thunderstorms. Hail causes more monetary loss than any other type of thunderstorm-spawned severe weather in the United States, annually producing about one billion dollars in crop damage. Storms that produce hailstones only the size of a dime can produce dents in the tops of vehicles, damage roofs, break windows and cause significant injury or even death.

The GMIS has the entire county with a wind hazard score of two, where wind speed is between 90 to 99 mph. All 56 critical facilities have a wind hazard score of two with a replacement cost of more than \$75 million. To summarize, there are approximately 24,770 structures/properties in the county totaling slightly more than \$978 million with a population of 8,693.

Location	Date	Event	Mag	Deaths	Injuries	PrD	CrD
Jenkins	5/16/1975	Thunderstorm Wind	0	0	0	0	0
Jenkins	7/4/1976	Thunderstorm Wind	0	0	0	0	0
Jenkins	9/29/1976	Thunderstorm Wind	0	0	0	0	0
Jenkins	6/5/1978	Thunderstorm Wind	0	0	0	0	0
Jenkins	4/13/1979	Thunderstorm Wind	0	0	0	0	0
Jenkins	6/17/1989	Thunderstorm Wind	0	0	0	0	0
Jenkins	7/1/1992	Thunderstorm Wind	56	0	0	0	0
Jenkins	5/13/1993	Thunderstorm Wind	0	0	0	5000	0
Jenkins	7/11/1995	Thunderstorm Wind	0	0	0	8000	0
Jenkins	3/16/1996	Thunderstorm Wind	50	0	0	0	0
Jenkins	5/3/1997	Thunderstorm Wind	50	0	0	0	0
Jenkins	4/18/1998	Thunderstorm Wind	50	0	0	0	0
Jenkins	5/13/2002	Thunderstorm Wind	50	0	0	0	0
Jenkins	2/22/2003	Thunderstorm Wind	50	0	0	0	0
Jenkins	2/6/2004	Thunderstorm Wind	50	0	0	0	0
Jenkins	7/12/2004	Thunderstorm Wind	50	0	0	0	0
Jenkins	8/22/2005	Thunderstorm Wind	50	0	0	0	0
Jenkins	1/2/2006	Thunderstorm Wind	55	0	0	5000	0
Jenkins	1/2/2006	Thunderstorm Wind	55	0	0	5000	0
Jenkins	5/5/2006	Thunderstorm Wind	50	0	0	1000	0
Jenkins	5/27/2006	Thunderstorm Wind	50	0	0	2000	0
Jenkins	5/27/2006	Thunderstorm Wind	50	0	0	5000	0
Jenkins	4/15/2007	Thunderstorm Wind	50	0	0	500	0
Jenkins	5/4/2007	Thunderstorm Wind	50	0	0	2000	0
Jenkins	6/5/2007	Thunderstorm Wind	50	0	0	500	0
Jenkins	6/5/2007	Thunderstorm Wind	50	0	0	250	0
Jenkins	6/5/2007	Thunderstorm Wind	50	0	0	750	0
Jenkins	7/11/2007	Thunderstorm Wind	50	0	0	2000	0
Jenkins	8/11/2007	Thunderstorm Wind	50	0	0	500	0
Jenkins	3/19/2008	Thunderstorm Wind	50	0	0	500	0
Jenkins	5/11/2008	Thunderstorm Wind	96	0	1	780000	0
Jenkins	3/1/2009	Thunderstorm Wind	50	0	0	500	0

Jenkins	6/18/2009	Thunderstorm Wind	55	0	0	3000	0
Jenkins	6/18/2009	Thunderstorm Wind	55	0	0	3000	0
Jenkins	8/5/2009	Thunderstorm Wind	56	0	0	3000	0
Jenkins	8/12/2009	Thunderstorm Wind	50	0	0	500	0
Jenkins	9/26/2009	Thunderstorm Wind	50	0	0	1000	0
Jenkins	6/15/2010	Thunderstorm Wind	50	0	0	1000	0
Jenkins	6/15/2010	Thunderstorm Wind	55	0	0	10000	0
Jenkins	7/15/2010	Thunderstorm Wind	50	0	0	500	0
Jenkins	7/21/2010	Thunderstorm Wind	50	0	0	1500	0
Jenkins	4/5/2011	Thunderstorm Wind	55	0	0	0	10000
Jenkins	4/5/2011	Thunderstorm Wind	50	0	0	0	5000
Jenkins	11/16/2011	Thunderstorm Wind	50	0	0	1000	0
Jenkins	6/11/2012	Thunderstorm Wind	50	0	0	2000	0
Jenkins	6/11/2012	Thunderstorm Wind	50	0	0	1000	0
Jenkins	4/11/2013	Thunderstorm Wind	50	0	0	500	0
Jenkins	4/11/2013	Thunderstorm Wind	50	0	0	500	0
Jenkins	6/4/2013	Thunderstorm Wind	50	0	0	1000	0
Jenkins	6/7/2013	Thunderstorm Wind	50	0	0	2250	0
Jenkins	6/22/2015	Thunderstorm Wind	50	0	0	0	0
Jenkins	8/6/2015	Thunderstorm Wind	50	0	0	0	0
Jenkins	6/17/2016	Thunderstorm Wind	65	0	0	0	0
Jenkins	3/21/2017	Thunderstorm Wind	50	0	0	0	0
Jenkins	4/3/2017	Thunderstorm Wind	60	0	0	0	0
Jenkins	3/20/2018	Thunderstorm Wind	50	0	0	0	0
Jenkins	8/9/2018	Thunderstorm Wind	50	0	0	0	0
Jenkins	6/20/2019	Thunderstorm Wind	50	0	0	0	0
Jenkins	6/20/2019	Thunderstorm Wind	50	0	0	0	0
Jenkins	6/20/2019	Thunderstorm Wind	50	0	0	0	0
Jenkins	2/6/2020	Thunderstorm Wind	60	0	0	0	0
Jenkins	2/6/2020	Thunderstorm Wind	60	0	0	0	0
Jenkins	4/13/2020	Thunderstorm Wind	50	0	0	0	0
Jenkins	4/13/2020	Thunderstorm Wind	50	0	0	0	0
Jenkins	6/14/2022	Thunderstorm Wind	50	0	0	0	0



Jenkins	5/9/2024	Thunderstorm Wind	45	0	0	1000	0
Millen	5/15/1994	Thunderstorm Wind	0	0	0	500	0
Millen	6/9/1994	Thunderstorm Wind	0	0	0	5000	0
Millen	1/7/1995	Thunderstorm Wind	52	0	0	0	0
Millen	1/14/1995	Thunderstorm Wind	52	0	0	100	0
Millen	6/9/1995	Thunderstorm Wind	0	0	0	2000	0
Millen	7/6/1995	Thunderstorm Wind	0	0	0	2000	0
MILLEN	4/26/1996	Thunderstorm Wind	52	0	0	0	0
MILLEN	4/22/1997	Thunderstorm Wind	55	0	0	0	0
MILLEN	5/3/1997	Thunderstorm Wind	55	0	0	20000	0
MILLEN	6/18/1997	Thunderstorm Wind	50	0	0	0	0
MILLEN	6/23/1997	Thunderstorm Wind	50	0	0	0	0
MILLEN	8/20/1999	Thunderstorm Wind	50	0	0	0	0
MILLEN	3/4/2001	Thunderstorm Wind	50	0	0	0	0
MILLEN	7/6/2002	Thunderstorm Wind	50	0	0	0	0
MILLEN	7/31/2002	Thunderstorm Wind	50	0	0	0	0
MILLEN	9/18/2002	Thunderstorm Wind	50	0	0	0	0
MILLEN	5/2/2003	Thunderstorm Wind	50	0	0	0	0
MILLEN	3/8/2005	Thunderstorm Wind	50	0	0	0	0
MILLEN	7/29/2005	Thunderstorm Wind	55	0	0	0	0
MILLEN	5/27/2006	Thunderstorm Wind	50	0	0	5000	0
MILLEN	5/27/2006	Thunderstorm Wind	50	0	0	1000	0
MILLEN	5/27/2006	Thunderstorm Wind	60	0	0	100000	0
MILLEN	5/27/2006	Thunderstorm Wind	50	0	0	2000	0
MILLEN	5/4/2007	Thunderstorm Wind	50	0	0	1000	0
MILLEN	5/4/2007	Thunderstorm Wind	50	0	0	10000	0
MILLEN	7/1/2007	Thunderstorm Wind	50	0	0	500	0
MILLEN	8/11/2007	Thunderstorm Wind	50	0	0	1500	0
MILLEN	8/13/2007	Thunderstorm Wind	55	0	0	13000	0
MILLEN	8/13/2007	Thunderstorm Wind	50	0	0	500	0
MILLEN	6/22/2008	Thunderstorm Wind	50	0	0	2000	0
MILLEN	12/11/2008	Thunderstorm Wind	50	0	0	1000	0
MILLEN	6/29/2010	Thunderstorm Wind	50	0	0	3500	0

MILLEN	6/29/2010	Thunderstorm Wind	50	0	0	0	0
MILLEN	6/11/2012	Thunderstorm Wind	50	0	0	1000	0
MILLEN	7/3/2012	Thunderstorm Wind	50	0	0	2000	0
MILLEN	7/5/2012	Thunderstorm Wind	60	0	0	8000	0
MILLEN	3/18/2013	Thunderstorm Wind	50	0	0	2250	0
MILLEN	7/2/2015	Thunderstorm Wind	50	0	0	0	0
MILLEN	7/3/2015	Thunderstorm Wind	50	0	0	0	0
MILLEN	3/21/2017	Thunderstorm Wind	50	0	0	0	0
MILLEN	2/6/2020	Thunderstorm Wind	60	0	0	0	0
MILLEN	4/13/2020	Thunderstorm Wind	50	0	0	0	0
MILLEN	4/13/2020	Thunderstorm Wind	50	0	0	0	0
MILLEN	4/13/2020	Thunderstorm Wind	50	0	0	0	0
MILLEN	4/13/2020	Thunderstorm Wind	50	0	0	0	0
MILLEN	4/13/2020	Thunderstorm Wind	50	0	0	0	0
MILLEN	5/11/2021	Thunderstorm Wind	50	0	0	0	0
MILLEN	4/5/2022	Thunderstorm Wind	50	0	0	0	0
MILLEN	6/11/2023	Thunderstorm Wind	45	0	0	1000	0
MILLEN	6/10/2024	Thunderstorm Wind	50	0	0	0	0
MILLEN	6/10/2024	Thunderstorm Wind	50	0	0	0	0
<b>117</b>				<b>0</b>	<b>1</b>	<b>\$ 1,036,100.00</b>	<b>\$ 15,000.00</b>

Location	Date	Type	Size	Deaths	Injuries	Property
County	6/19/1987	Hail	1.75	0	0	0
MILLEN	4/3/1998	Hail	1	0	0	0
MILLEN	5/3/1998	Hail	0.75	0	0	0
PERKINS	5/17/1998	Hail	0.88	0	0	0
MILLEN	5/1/2003	Hail	0.75	0	0	0
MILLEN	5/2/2003	Hail	0.75	0	0	0
MILLEN	5/10/2005	Hail	0.88	0	0	0
MILLEN	5/4/2007	Hail	0.88	0	0	0
MILLEN	5/4/2007	Hail	1	0	0	0
PERKINS	5/4/2007	Hail	1.25	0	0	0
MILLEN	5/20/2008	Hail	1.75	0	0	0
BUTTS	6/28/2008	Hail	0.75	0	0	0
THRIFT	2/18/2009	Hail	1.75	0	0	0
PERKINS	5/4/2009	Hail	1	0	0	0
MILLEN	6/11/2009	Hail	0.75	0	0	1000
MILLEN	6/11/2009	Hail	1	0	0	0
SCARBORO	3/26/2011	Hail	1.75	0	0	0
THRIFT	3/26/2011	Hail	0.88	0	0	0
PARAMORE	9/27/2011	Hail	0.75	0	0	0
MILLEN	5/25/2014	Hail	1	0	0	0
MILLEN	5/11/2021	Hail	0.75	0	0	0
MILLEN	3/16/2022	Hail	1	0	0	0
MILLEN	5/23/2022	Hail	0.75	0	0	0

Critical Facilities Wind Hazard Score								
Jurisdiction	Name	Hazard Score	Replacement Value	Content value	Valuation Year	Facility type	Risk	Day
Jenkins County	County Community Service Board of Georgia	2	250000	15000	2024	NGO, NGO, Transportation, Transportation	Important, Vulnerable Population	20
Jenkins County	Herdon Bridge	2	6000000		2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Transportation	
Jenkins County	Jenkins Co. Health Dept.	2	1125000	150000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential	8
Jenkins County	JENKINS CO-CR54 PHASE 2 MSWL & C&D SITE	2	1000000		2024	Government, Government, Water/Sewer, Water/Sewer	Economic Assets, Hazardous Materials	
Jenkins County	Jenkins County Extension Office	2	250000	25000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential	10
Jenkins County	Jenkins County Ag Center	2	150000	10000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential	4

Jenkins County	Jenkins County Annex Building	2	1200000	100000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Important	10
Jenkins County	Jenkins County BOE Office and Bus Shop	2	1500000	300000	2014	Emergency Services, Fire Fighters	Important	25
Jenkins County	Jenkins County Courthouse	2	5500000	250000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Historic Consideration	15
Jenkins County	Jenkins County Elem School	0	4500000	2500000	2024	Education, Education, K - 12, K - 12	Essential, Vulnerable Population	725
Jenkins County	Jenkins County EMS	2	350000	750000	2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Important, Lifeline, Vulnerable Population	4
Jenkins County	Jenkins County Fuel Station	2	150000		2024	NGO, NGO, Transportation, Transportation	Essential, Transportation	0
Jenkins County	Jenkins County Headstart	2	800000	100000	2024	Government, Government, Water/Sewer, Water/Sewer	Important, Vulnerable Population	45
Jenkins County	Jenkins County High School	2	10500000	2500000	2024	Education, Education, K - 12, K - 12	Essential, Vulnerable Population	457
Jenkins County	Jenkins County Library	2	600000	225000	2014	Education, Library	Important	20

Jenkins County	Jenkins County Maintenance Shop	2	114250	30000	2024	NGO, NGO, Transportation, Transportation	Important, Transportation	14
Jenkins County	Jenkins County Medical Center	2	0		2024	Medical, Medical, Medical Offices, Medical Offices		
Jenkins County	Jenkins County Middle School	0	9000000	2500000	2014	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Important, Vulnerable Population	387
Jenkins County	Jenkins County Roads and Bridges Office	2	75000	10000	2024	Education, Education, Library, Library	Important	2
Jenkins County	Jenkins County Senior Citizens Center	2	1125000	50000	2024	Government, Government, Water/Sewer, Water/Sewer	Important, Vulnerable Population	30
Jenkins County	Millen-Jenkins County Airport	2	6000000	1000000	2024	NGO, NGO, Transportation, Transportation	Important, Transportation	0

Jenkins County	North Jenkins Co. VFD #3	2	70000	10000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	
Jenkins County	North Jenkins Co. Volunteer Fire Dept. #7	2	70000	10000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential, Important	0
Jenkins County	North Jenkins Co. Volunteer Fire Dept. #9	2	80000	50000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential, Important	0
Jenkins County	North Jenkins VFD #2	2	80000	10000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	
Jenkins County	South Jenkins Co. Volunteer Fire Dept. #5	2	162500	50000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	0

Jenkins County	South Jenkins VFD #6	2	110000		2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	0
Millen city	Barney Overpass	2	3000000		2024	Government, Government, Water/Sewer, Water/Sewer	Transportation	
Millen city	City of Millen Groundwater Elevated Tank #2	2	750000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	
Millen city	City of Millen Groundwater Well #1	2	500000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important, Special Consideration	0
Millen city	City of Millen Groundwater Well #2	2	500000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	
Millen city	City of Millen Natural Gas Regulation Station #1	2	150000		2024	Government, Government, Water/Sewer, Water/Sewer	High Potential Loss, Important	
Millen city	City of Millen Natural Gas Regulation Station #2	2	150000		2024	Education, Education, Government Offices, Government Offices	High Potential Loss, Important	0



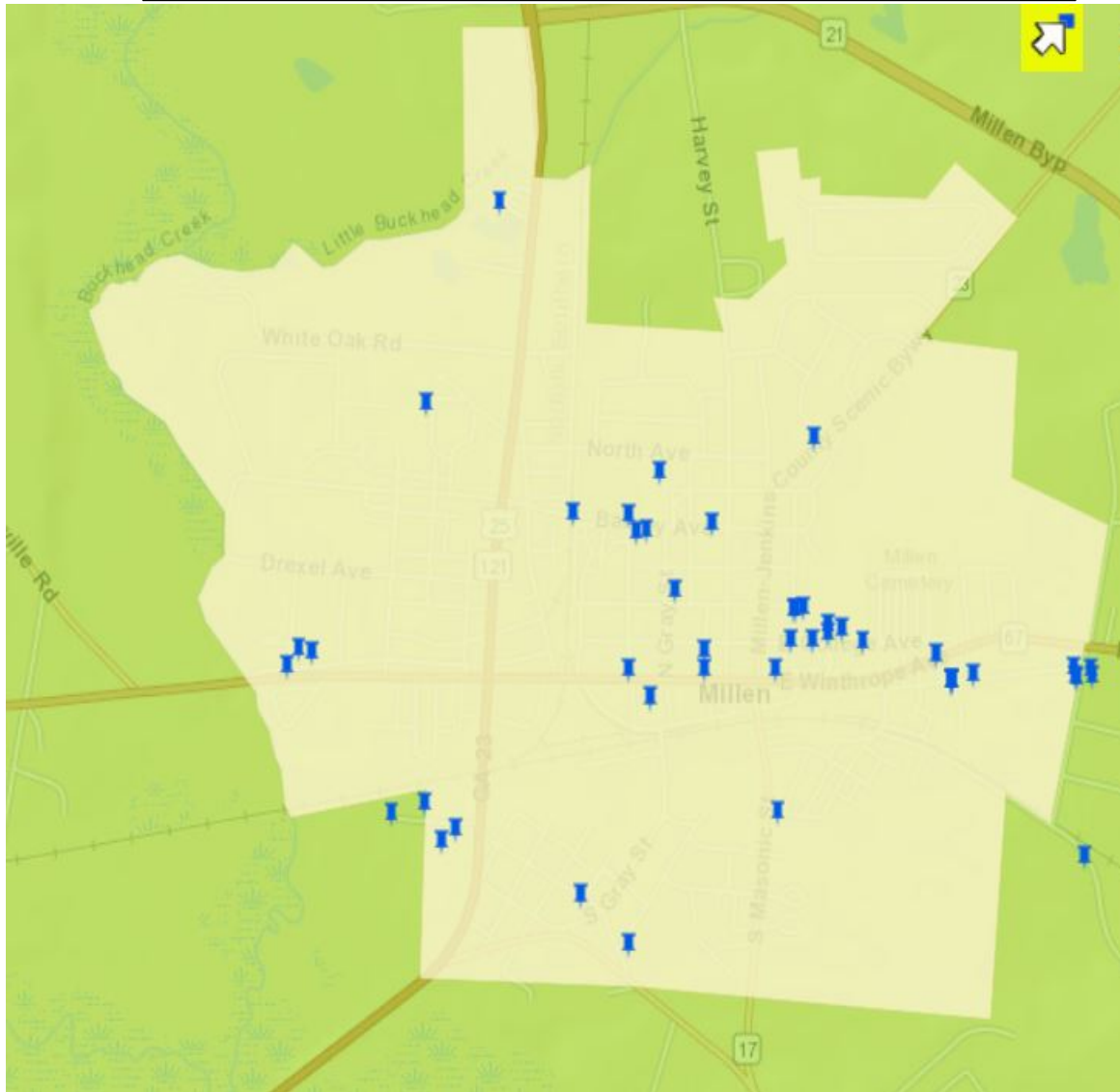
Millen city	City of Millen Natural Gas Regulator Station #3	2	150000		2024	Government, Government, Water/Sewer, Water/Sewer	Hazardous Materials, Important, Lifeline	
Millen city	City of Millen Wastewater Lift Station #2	2	100000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important	1
Millen city	City of Millen Wastewater Lift Station #3	2	100000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important	1
Millen city	City of Millen Wastewater Treatment Plant	2	4000000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, High Potential Loss, Important	2
Millen city	City of Millen Wastwater Lift Station #4	2	90000		2024	Government, Government, Water/Sewer, Water/Sewer	Economic Assets	
Millen city	Milen Public Works Office	2	320000	33000	2024	Government, Government, Water/Sewer, Water/Sewer	Important	3
Millen city	Millen City Hall/FD/PD	2	5500000	1500000	2024	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	Essential	10

Millen city	Millen Community House	2	780000	50000	2024	Government, Government, Water/Sewer, Water/Sewer	Important	
Millen city	Millen Elevated Tank #1	2	750000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	
Millen city	Millen Elevated Tank #4	2	750000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	
Millen city	Millen Gas System	2	3250000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Hazardous Materials, Lifeline	
Millen city	Millen Groundwater Elevated Tank #1	2	750000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	0
Millen city	Millen Groundwater Well #3	2	500000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	
Millen city	Millen Lift Station #1-A	2	170000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential	
Millen city	Millen Lift Station #1B	2	170000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	

Millen city	Millen Mechanic Shop	2	100000	50000	2024	Government, Government, Water/Sewer, Water/Sewer	Important	3
Millen city	Millen Natural Gas Odorizer	2	100000		2024	Education, Education, Government Offices, Government Offices	Essential	0
Millen city	Millen Utility Warehouse	2	372000	280000	2024	Government, Government, Water/Sewer, Water/Sewer	Important	
Millen city	Millen Wasterwater Lift Station #1	2	170000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	
Millen city	Millen Well #4	2	500000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential, Lifeline	
Millen city	Solar Array #1	2	115000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential	
Millen city	Solar Array #2	2	50000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential	

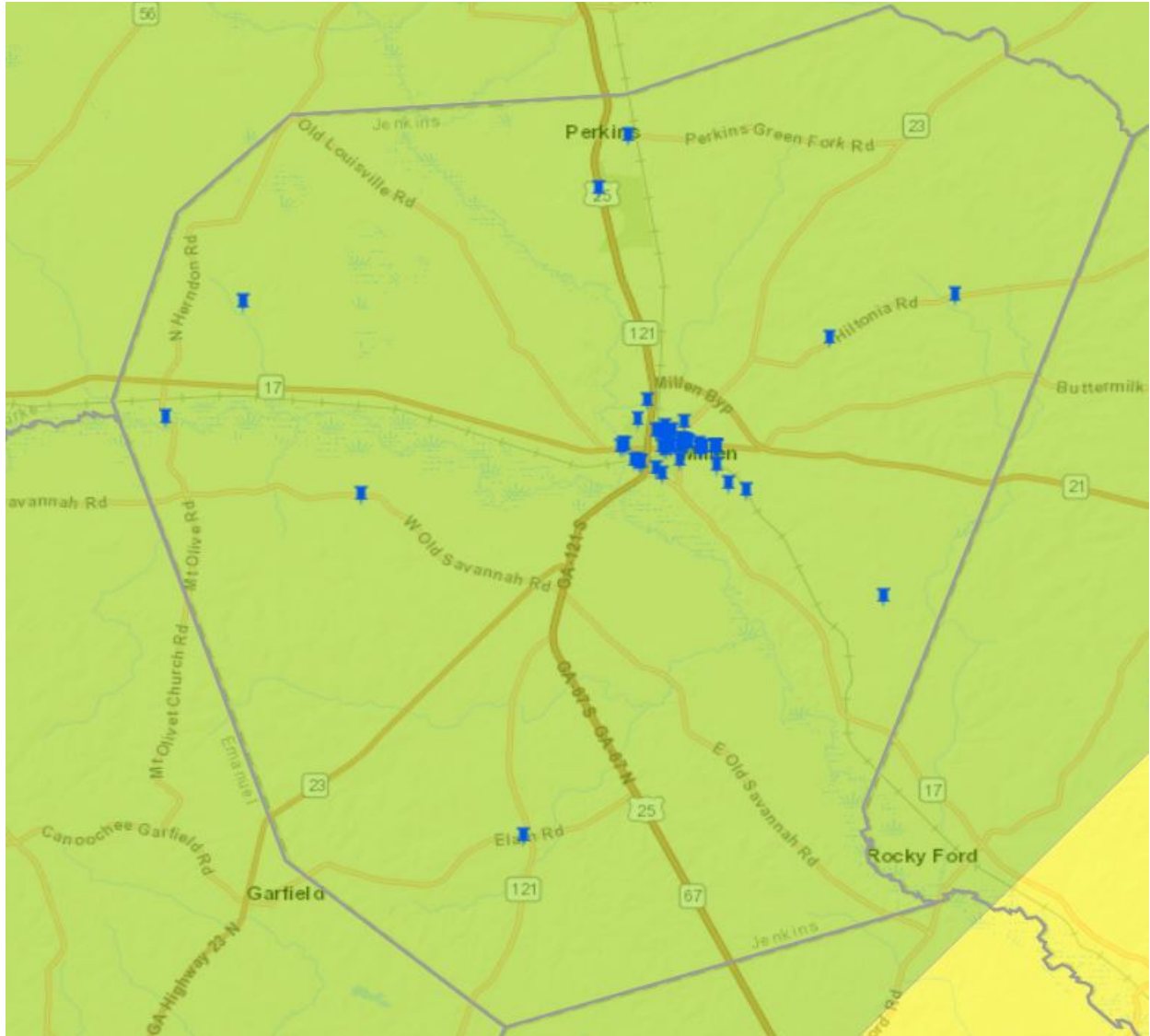
Millen city	Solar Array 3	2	865000		2024	Government, Government, Water/Sewer, Water/Sewer	Essential	
56			\$ 75,463,750.00	\$ 12,558,000.00				1796

# MILLEN GMIS WIND MAP



Score	Original Value	Description
5	> 120 mph	3 second gust greater than 120 mph
4	110 to 119 mph	
3	100 to 109 mph	
2	90 to 99 mph (or ZONE IV)	This score is also given to an area with Zone IV of the "Design Wind Speed Map for Community Shelters," representing an area exposed to 250 mph winds. This area is the Northwestern corner of the state.
1	< 90 mph	

# JENKINS COUNTY GMIS WIND MAP



Score	Original Value	Description
5	> 120 mph	3 second gust greater than 120 mph
4	110 to 119 mph	
3	100 to 109 mph	
2	90 to 99 mph (or ZONE IV)	This score is also given to an area with Zone IV of the "Design Wind Speed Map for Community Shelters," representing an area exposed to 250 mph winds. This area is the Northwestern corner of the state.
1	< 90 mph	

## **Winter Storms**

Southeastern snow or ice storms often form when an area of low pressure moves eastward across the northern Gulf of Mexico. To produce a significant winter storm in the south, not only must temperatures be cold enough, but there must also be enough moisture in the atmosphere to produce adequate precipitation. A major winter storm can last for several days and be accompanied by high winds, ice and freezing rain, heavy snowfall, and cold temperatures. These conditions can make driving conditions very dangerous, as well as bring down trees and power lines.

There have been 34 recorded winter storms. There is a 27 percent chance of an annual winter storm event. Winter storms can be more accurately predicted than most other natural hazards, making it possible to give advance warning to communities. The National Weather Service issues winter storm warnings and advisories as these storms make their way south. Given the infrequency of these types of storms, southern communities are still not properly equipped to sustain the damage and destruction caused by severe winter storms. To summarize, there are approximately 24,770 structures/properties in the county totaling slightly more than \$978 million with a population of 8,693

County/Zone	Date	Type	Dth	Inj	PrD	CrD	Event Narrative
	12/00/1901						2.70 inches
	2/00/1901						4 inches
	12/1/1943						1.5 inches
Jenkins Co	2/13/1960	Wind - Winter Weather	0	0	121.95	0	
Jenkins Co	1/26/1961	Winter Weather	0	0	314.46	0	
Jenkins Co	12/13/1962	Winter Weather	0	0	314.47	3.14	
Jenkins Co	1/25/1963	Winter Weather	0	0	31.45	31.45	
Jenkins Co	12/31/1963	Winter Weather	0	0	31,446.54	0	
Jenkins Co	1/13/1964	Winter Weather	0	0	3.14	0	
Jenkins Co	3/31/1964	Winter Weather	0	0	31.45	3144.65	
Jenkins Co	2/25/1965	Wind - Winter Weather	0	0	314.47	0	
Jenkins Co	1/31/1966	Winter Weather	0	0	314.47	314.47	
	2/1/1968	Snow					1.5 inches
Jenkins Co	1/10/1970	Winter Weather	0	0	314.46	0	
Jenkins Co	2/10/1973	Winter Weather	0	0	40,000.00	0	14 inches of snow fell throughout the county. Schools were closed; power outages across county, trees limbs down.
Jenkins Co	1/31/1977	Winter Weather	0	0	31,446.54	0	
Jenkins Co	2/18/1979	Winter Weather	0	0	5,208.33	520.83	
Jenkins Co	2/6/1980	Winter Weather	0	0	549.45	0	
Jenkins Co	1/21/1983	Winter Weather	0	0	5,208.33	0	
Jenkins Co	1/14/1988	Ice					2-3 inches of sleet
Jenkins Co	Feb-89	Snow					1 inch
Jenkins Co	12/23/1993	Snow					2 inches
Jenkins Co	1/15/1994	Winter Weather	0	0	515.46	0	
Jenkins Co	2/3/1996	Snow					Light blanket of snow covered the county
Jenkins Co	1/28/2000	Ice Storm					1/4 to 1/2 inch of ice accumulation icing roads and bridges minimal power outages across.
Jenkins Co	1/2/2002	Ice Storm					6.5 inches of snow, schools closed, trees and limbs were broken, several roads impassable due to ice, power outages over 50% of county.
Jenkins Co	2/28/2003	Snow					Light snow
Jenkins Co	1/26/2004	Ice Storm					There were large limbs and power lines down that disrupted the power over the northern portions of Jenkins
Jenkins Co	1/28/2005	Ice Storm					1/4 in of glaze ice. Power outages up to three days in parts of County.
Jenkins Co	1/10/2011	Winter Weather	0	0	15,000.00	0	



County/Zone	Date	Type	Dth	Inj	PrD	CrD	Event Narrative
Jenkins	1/28/2014	Snow					
JENKINS (ZONE)	2/12/2014	Ice Storm	0	0		0	Storm total ice accumulations across Jenkins County ranged up to three quarters of an inch. Widespread trees and large tree limbs were reported down due to the ice. An area of low pressure tracked from the Gulf of Mexico to off the southeast coast, producing widespread precipitation across southeast Georgia. A wedge of high pressure provided shallow, cold air, supporting the development of freezing rain at many locations away from the immediate coast. Across many inland areas, a major ice storm occurred with one to three quarters of an inch of ice accumulation and even a few one inch accumulation amounts reported. Widespread trees, large tree limbs, and power lines were reported down due to ice. Many trees were down and blocking area roadways. Widespread, long duration power outages also occurred especially across inland areas of Jenkins, Bulloch, and Screven counties.
Jenkins		Winter Weather	0	0	0	0	A developing surface low pressure system offshore and an amplifying upper level trough approaching from the west combined with unusually cold air to produce widespread significant winter precipitation across southeast Georgia. Most of the precipitation fell as snow, with amounts ranging from a few tenths of an inch up to 6 inches. The event began as rain for many areas before changing over to snow, with a period of freezing rain along the coast where up to a quarter of an inch of ice accumulation occurred. The official storm total snowfall for the day at the Savannah-Hilton Head International Airport was 1.2 inches which ranks as the 7th highest one day snowfall on record, dating back to 1871. The event caused significant disruption to travel, with many businesses and schools closed the day of the event as well as the following day. Black ice was also an issue following the event, as well as several days of frigid wind chills.
	1/3/2018				131134.97	4014.54	135149.51

Name	Jurisdiction	Facility Types	Building Value	Valuation Year	Contents Value	Day	Night
Barney Overpass?	Millen city?	Government, Government, Water/Sewer, Water/Sewer?	3000000	2024?			
City of Millen Groundwater Elevated Tank #2?	Millen city?	Government, Government, Water/Sewer, Water/Sewer?	750000	2024?			
City of Millen Groundwater Well #1?	Millen city?	Government, Government, Water/Sewer, Water/Sewer?	500000	2024?		0	0
City of Millen Groundwater Well #2?	Millen city?	Government, Government, Water/Sewer, Water/Sewer?	500000	2024?			
City of Millen Natural Gas Regulation Station #1?	Millen city?	Government, Government, Water/Sewer, Water/Sewer?	150000	2024?			
City of Millen Natural Gas Regulation Station #2?	Millen city?	Education, Education, Government Offices, Government Offices?	150000	2024?		0	0
City of Millen Natural Gas Regulator Station #3?	Millen city?	Government, Government, Water/Sewer, Water/Sewer?	150000	2024?			

City of Millen Wastewater Lift Station #2	Millen city	Government, Government, Water/Sewer, Water/Sewer	100000	2024		1	0
City of Millen Wastewater Lift Station #3	Millen city	Government, Government, Water/Sewer, Water/Sewer	100000	2024		1	0
City of Millen Wastewater Treatment Plant	Millen city	Government, Government, Water/Sewer, Water/Sewer	4000000	2024		2	0
City of Millen Wastwater Lift Station #4	Millen city	Government, Government, Water/Sewer, Water/Sewer	90000	2024			
County Community Service Board of Georgia	Jenkins County	NGO, NGO, Transportation, Transportation	250000	2024	15000	20	
Herdon Bridge	Jenkins County	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	6000000	2024			
Jenkins Co. Health Dept.	Jenkins County	Government, Government, Water/Sewer, Water/Sewer	1125000	2024	150000	8	0
JENKINS CO-CR54 PHASE 2 MSWL & C&D SITE	Jenkins County	Government, Government, Water/Sewer, Water/Sewer	1000000	2024			

Jenkins County Extension Office?	Jenkins County?	Government, Government, Water/Sewer, Water/Sewer?	250000	2024?	25000	10	
Jenkins County Ag Center?	Jenkins County?	Government, Government, Water/Sewer, Water/Sewer?	150000	2024?	10000	4	
Jenkins County Annex Building?	Jenkins County?	Government, Government, Water/Sewer, Water/Sewer?	1200000	2024?	100000	10	
Jenkins County BOE Office and Bus Shop?	Jenkins County?	Emergency Services, Fire Fighters?	1500000	2014?	300000	25	
Jenkins County Courthouse?	Jenkins County?	Government, Government, Water/Sewer, Water/Sewer?	5500000	2024?	250000	15	
Jenkins County Elem School?	Jenkins County?	Education, Education, K - 12, K - 12?	4500000	2024?	2500000	725	
Jenkins County EMS?	Jenkins County?	Government, Government, Water/Sewer, Water/Sewer?	350000	2024?	750000	4	4
Jenkins County Fuel Station?	Jenkins County?	NGO, NGO, Transportation, Transportation?	150000	2024?		0	0
Jenkins County Headstart?	Jenkins County?	Government, Government, Water/Sewer, Water/Sewer?	800000	2024?	100000	45	

Jenkins County High School?	Jenkins County?	Education, Education, K - 12, K - 12?	10500000	2024?	2500000	457	
Jenkins County Library?	Jenkins County?	Education, Library?	600000	2014?	225000	20	
Jenkins County Maintenance Shop?	Jenkins County?	NGO, NGO, Transportation, Transportation?	114250	2024?	30000	14	0
Jenkins County Medical Center?	Jenkins County?	Medical, Medical, Medical Offices, Medical Offices?	0	2024?			
Jenkins County Middle School?	Jenkins County?	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters?	9000000	2024?	2500000	387	
Jenkins County Roads and Bridges Office?	Jenkins County?	Education, Education, Library, Library?	75000	2024?	10000	2	
Jenkins County Senior Citizens Center?	Jenkins County?	Government, Government, Water/Sewer, Water/Sewer?	1125000	2024?	50000	30	0
Millen Public Works Office?	Millen city?	Government, Government, Water/Sewer, Water/Sewer?	320000	2024?	33000	3	
Millen City Hall/FD/PD?	Millen city?	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters?	5500000	2024?	1500000	10	

Millen Community House?	Millen city?	Government, Government, Water/Sewer, Water/Sewer?	780000	2024?	50000		
Millen Elevated Tank #1?	Millen city?	Government, Government, Water/Sewer, Water/Sewer?	750000	2024?			
Millen Elevated Tank #4?	Millen city?	Government, Government, Water/Sewer, Water/Sewer?	750000	2024?			
Millen Gas System?	Millen city?	Government, Government, Water/Sewer, Water/Sewer?	3250000	2024?			
Millen Groundwater Elevated Tank #1?	Millen city?	Government, Government, Water/Sewer, Water/Sewer?	750000	2024?		0	0
Millen Groundwater Well #3?	Millen city?	Government, Government, Water/Sewer, Water/Sewer?	500000	2024?			
Millen Lift Station #1-A?	Millen city?	Government, Government, Water/Sewer, Water/Sewer?	170000	2024?			
Millen Lift Station #1B?	Millen city?	Government, Government, Water/Sewer, Water/Sewer?	170000	2024?			

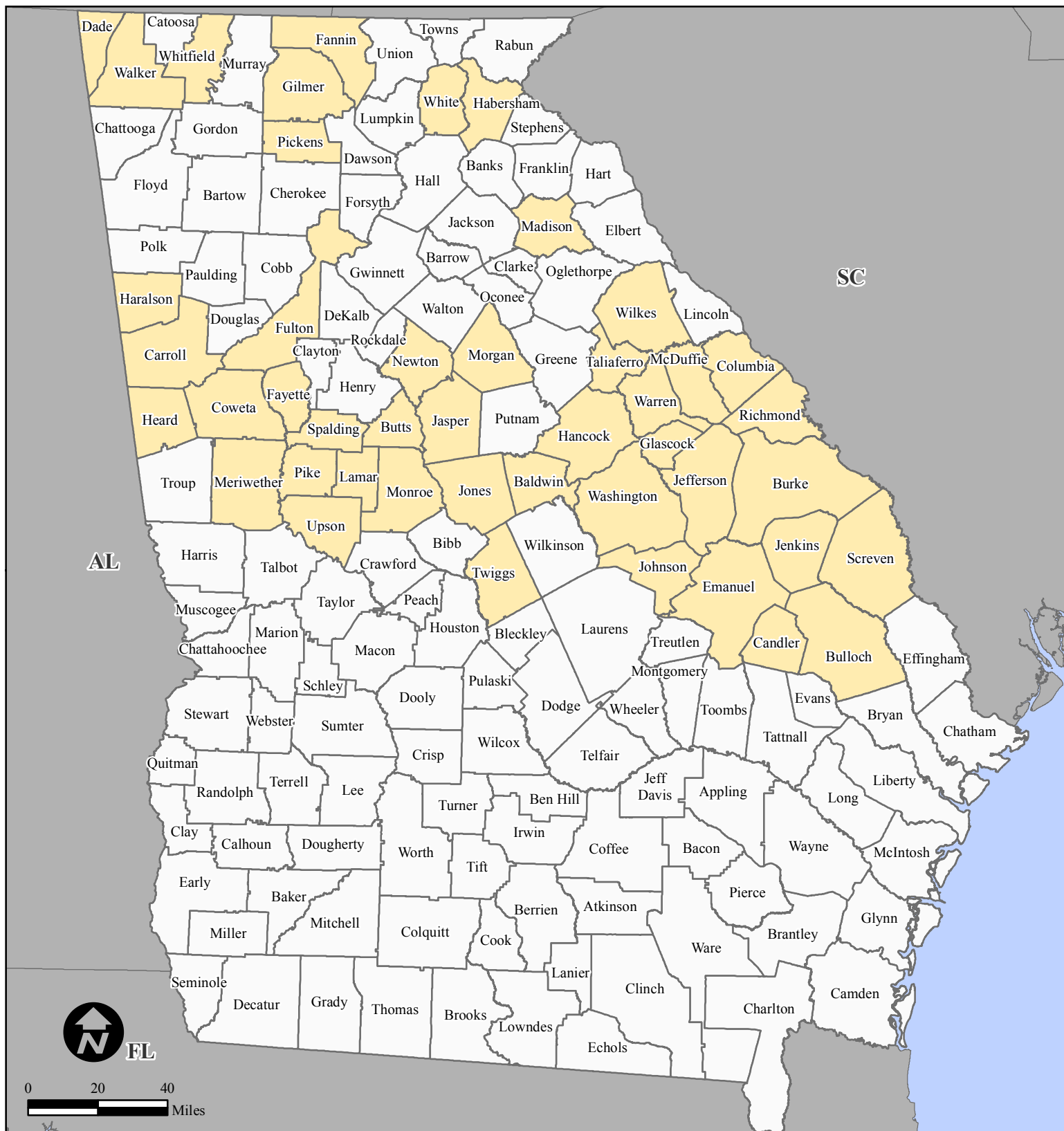
Millen Mechanic Shop?	Millen city?	Government, Government, Water/Sewer, Water/Sewer?	100000	2024?	50000	3	
Millen Natural Gas Odorizer?	Millen city?	Education, Education, Government Offices, Government Offices?	100000	2024?		0	0
Millen Utility Warehouse?	Millen city?	Government, Government, Water/Sewer, Water/Sewer?	372000	2024?	280000		
Millen Wasterwater Lift Station #1?	Millen city?	Government, Government, Water/Sewer, Water/Sewer?	170000	2024?			
Millen Well #4?	Millen city?	Government, Government, Water/Sewer, Water/Sewer?	500000	2024?			
Millen-Jenkins County Airport?	Jenkins County?	NGO, NGO, Transportation, Transportation?	6000000	2024?	1000000	0	0
North Jenkins Co. VFD #3?	Jenkins County?	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters?	70000	2024?	10000		

North Jenkins Co. Volunteer Fire Dept. #7	Jenkins County	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	70000	2024	10000	0	0
North Jenkins Co. Volunteer Fire Dept. #9	Jenkins County	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	80000	2024	50000	0	0
North Jenkins VFD #2	Jenkins County	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	80000	2024	10000		
Solar Array #1	Millen city	Government, Government, Water/Sewer, Water/Sewer	115000	2024			
Solar Array #2	Millen city	Government, Government, Water/Sewer, Water/Sewer	50000	2024			
Solar Array 3	Millen city	Government, Government, Water/Sewer, Water/Sewer	865000	2024			



South Jenkins Co. Volunteer Fire Dept. #5	Jenkins County	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	162500	2024	50000	0	0
South Jenkins VFD #6	Jenkins County	Emergency Services, Emergency Services, Fire Fighters, Fire Fighters	110000	2024		0	
			<b>\$ 75,463,750.00</b>		<b>\$12,558,000.00</b>	<b>1796</b>	<b>4</b>

# FEMA-4165-DR, Georgia Disaster Declaration as of 04/24/2014



**Location Map**



## Designated Counties

- No Designation
- Public Assistance

*All counties in the State of Georgia are eligible to apply for assistance under the Hazard Mitigation Grant Program*



**FEMA**

MSB-OCIO-AEES

Enterprise Geospatial  
Information Services (EGIS)

04/24/14 -- 3:23 PM EST

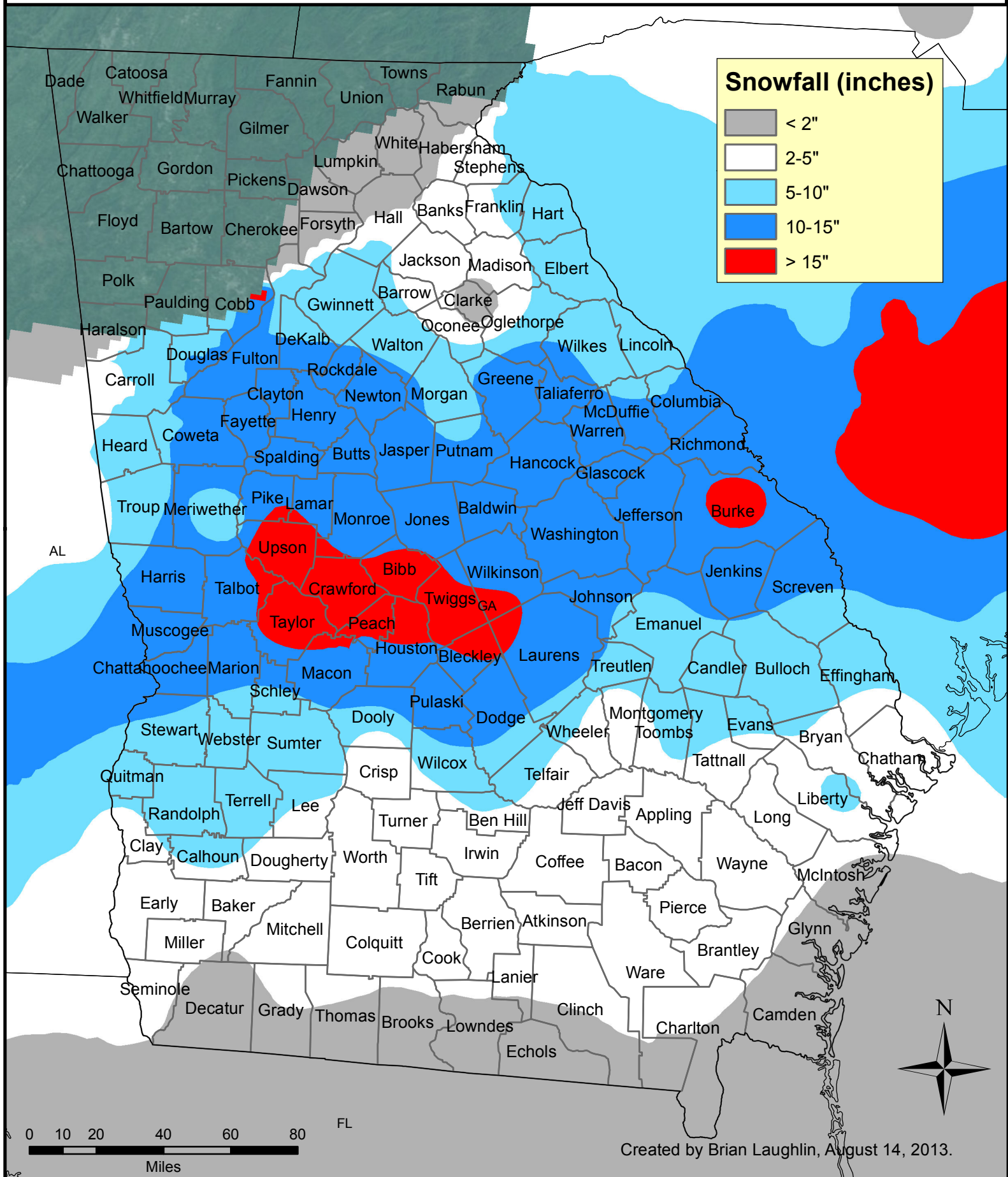
Source: Disaster Federal Registry Notice  
Amendment No. 3: 04/24/2014



# February 9-11, 1973 Winter Storm

RSI = 12.52, Category 4

NOAA

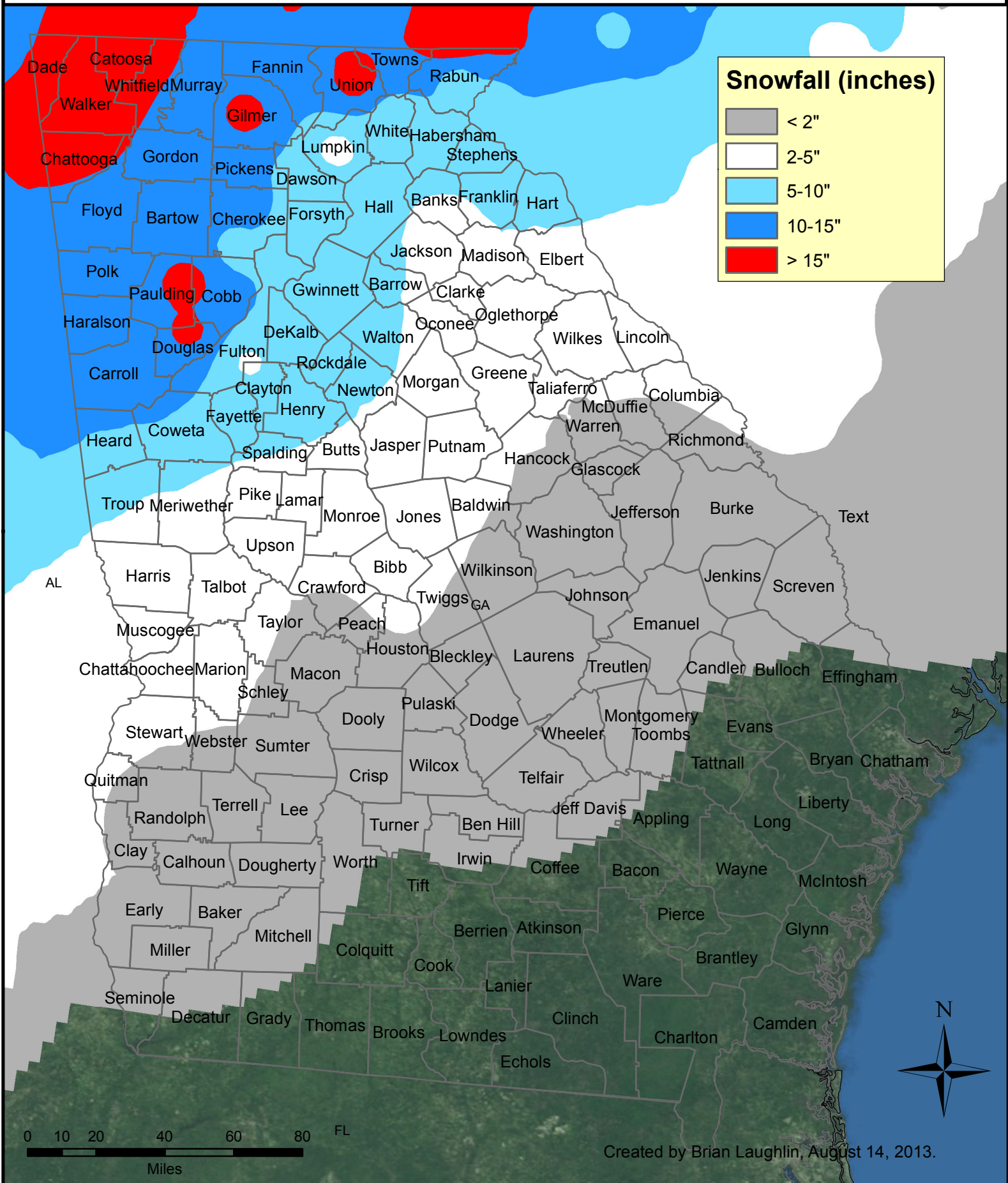




# March 12-15, 1993 Winter Storm

RSI = 20.572, Category 5

NOAA



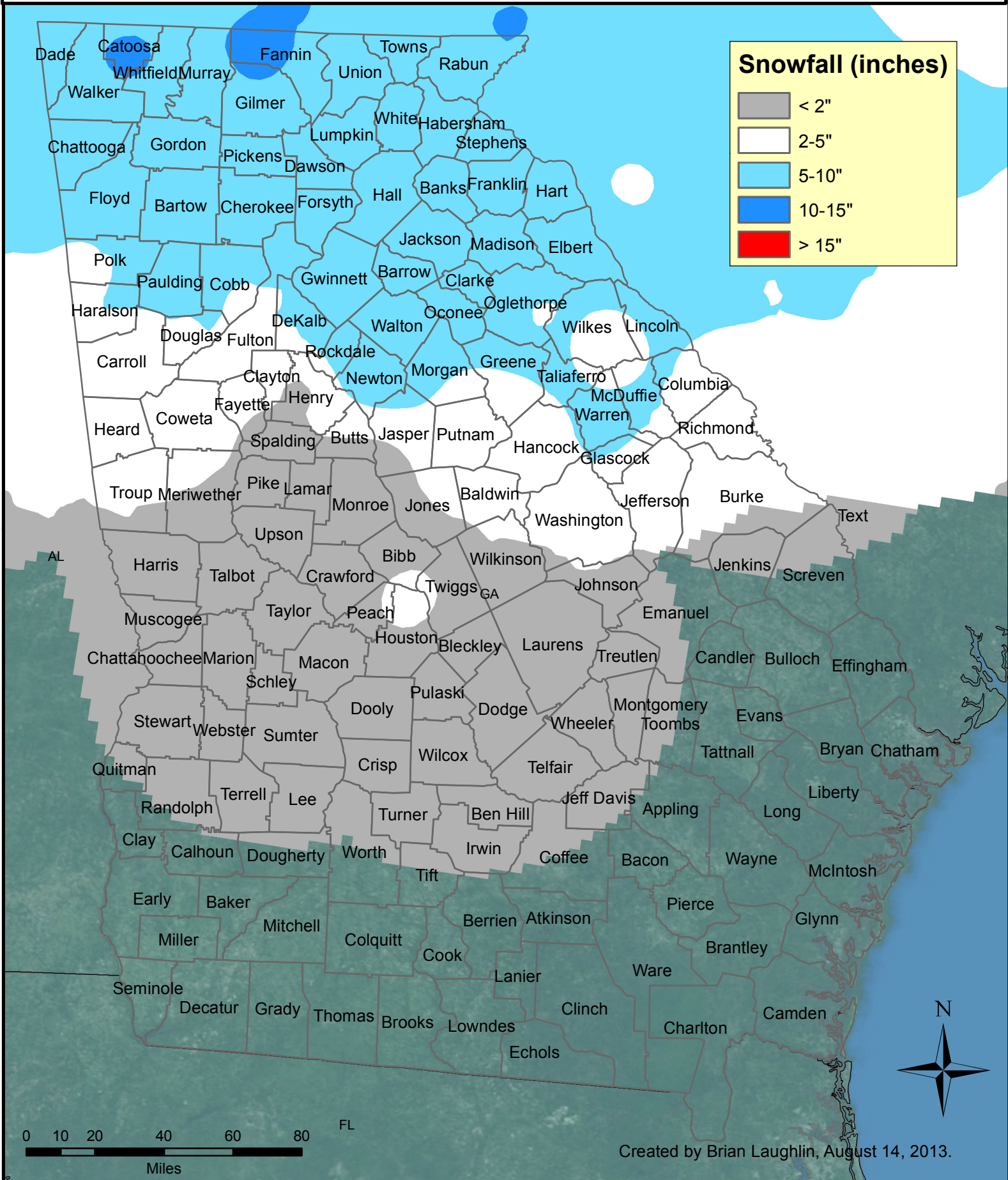




# January 9-11, 2011 Winter Storm

RSI = 4.158, Category 2

NOAA



**APPENDIX B**

**GROWTH  
AND  
DEVELOPMENT TRENDS  
COMMUNITY INFORMATION**



A photograph of the Jenkins County Courthouse, a large, two-story brick building with a prominent portico supported by four white columns. The building features a central clock tower with a white clock face and a statue on top. The roof is light blue, and the sky is blue with scattered white clouds. The text "JENKINS COUNTY" is overlaid in a white box with a black border.

# JENKINS COUNTY

JOINT COMPREHENSIVE PLAN 2023-28







## CONTENTS

INTRODUCTION	4
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## INTRODUCTION

Georgia counties and cities desire economic and population growth. The ability of these jurisdictions to anticipate and accommodate changes over a period provides them the ability to survive and potentially thrive over time. Uncontrollable variables (ex. national, state, and regional economic issues, etc.) can either have a positive or negative impact on the ability of a jurisdiction to remain a viable place to reside and work.

Change is an inevitable event in most communities through political leadership and ideology, population change, and development or stagnant development, which can lead to dilapidated buildings and increasing blight. Community stabilization is a vital factor in remaining viable and encouraging quality growth. A vision which is consistent and locally generated in conjunction with an implementation plan can ignite economic opportunities and encourage social cohesiveness in any given jurisdiction.

The elected officials, city, and county leaders of the City of Millen and Jenkins County recognize the importance of a comprehensive planning process which is coordinated between the county and city that addresses the needs and opportunities each jurisdiction has regarding development, housing, vitality, and the maintaining of

character which makes Jenkins County and Millen unique. This comprehensive plan document presents these issues and agreed upon solutions.

The Jenkins County - City of Millen Joint Comprehensive Plan is the official guiding document for Jenkins County and the City of Millen and serves to:

- OUTLINE A DESIRED FUTURE
- PROVIDE A GUIDE FOR HOW TO ACHIEVE THAT FUTURE
- FORMULATE A COORDINATED LONG-TERM PLAN

The comprehensive plan also seeks to capitalize on opportunities in the areas of economic development, pedestrian facilities, and cultural and natural resources. This is accomplished by providing guidance regarding:

- LAND DEVELOPMENT
- ATTRACTION AND RETENTION OF JOBS
- IMPROVEMENTS TO AMENITIES
- EFFICIENT PROVISION OF PUBLIC SERVICE

In conjunction with the Jenkins County Service Delivery Strategy, this document is a resource to provide a roadmap for each jurisdiction. Appointed and elected officials should use this resource as they deliberate land development issues and help their respective residents understand the benefits of the policy.



Georgia's Minimum Standards and Procedures for Local Comprehensive Planning are regulated by the Department of Community Affairs (DCA) and are intended to help local governments address immediate needs and opportunities while moving toward realization of long-term goals. The comprehensive plan should be referenced by local elected and appointed officials in the decision making process.

## **WHAT IS THE COMPREHENSIVE PLAN?**

The Comprehensive Plan is a policy document that guides the future growth of Millen and Jenkins County. It is designed to facilitate a coordinated planning program that ultimately leads to desired future social and economic outcomes for both jurisdictions. It serves as a guide to both the public and private sector, providing guidance on items such as land development, housing improvements, economic development, cultural/environmental asset protection, and provision of community services and facilities. In short, the comprehensive plan is a unified document encouraging overarching consistency and coherence in county and municipal policies.

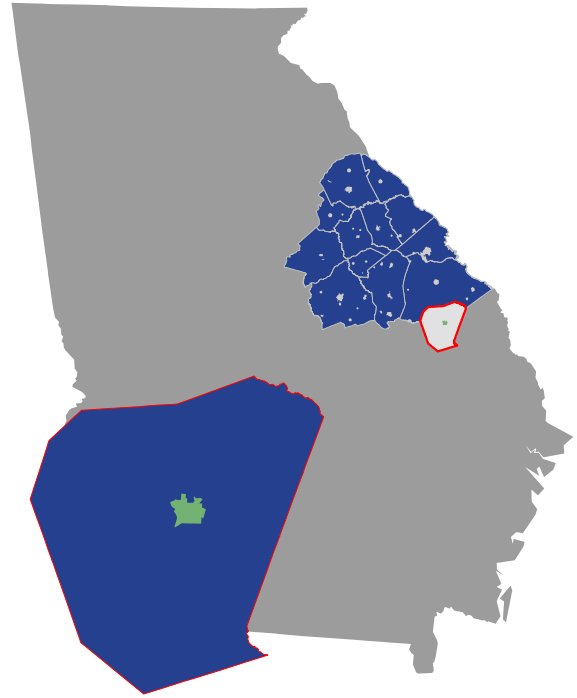
The comprehensive plan is structured as a dynamic document that should be amended when local priorities or conditions change. Periodic updates are necessary to ensure that the document's stated policies align with the needs and aspirations of residents. Over time, local and external conditions have changed. Some objectives have been met, and others have changed or been overtaken by competing priorities. The current comprehensive planning effort addresses these changes and integrates new or evolving priorities among residents and community leaders.

## **HOW TO USE THE COMPREHENSIVE PLAN**

This comprehensive plan is a guide for action and is intended to serve as a reference for potential users. A member of the City Council, Board of Commissioners or government staff should refer to this plan's policies when deciding on the approval of a rezoning or location of new development. Companion planning documents should be used in conjunction with the comprehensive plan. These include but are not limited to the CSRA Regional Plan, the Jenkins County Solid Waste Management Plan, the comprehensive and solid waste plans of other nearby jurisdictions, the Regional Water Plan, the CSRA Regionally Important Resource Plan, and other local and state regulatory documents (e.g. zoning ordinance, subdivision regulations).

## COMMUNITY BACKGROUND

Jenkins County was created by an act of the Georgia Assembly on August 17, 1905, making it the 140th county formed in the State of Georgia. The county was formed from parts of Bulloch, Burke, Emanuel, and Screven Counties. Jenkins County was named after Charles J. Jenkins, the 44th Governor of the State of Georgia. The City of Millen was founded prior to the creation of Jenkins County. It was originally a settlement named “79” which was the approximate distance to Savannah, Georgia from the settlement. Railroad expansion between 1840 and 1850 allowed the area to flourish, and eventually the settlement was named Miller’s Junction after Mr. McPherson B. Millen, former Superintendent of the Central Georgia Railroad. The Civil War played an important role in the development of the area as a Confederate prison for Union soldiers was placed at Fort Lawton (Magnolia Springs State Park) near Miller’s Junction due to proximity to fresh water and the railroad network. This Fort was decommissioned due to Sherman’s campaign known as the “March to the Sea.” Railroad expansion into Jenkins County spurred growth. As a result of this growth, the junction point grew into an active hub which would eventually become the City of Millen. The Savannah to Macon rail-line spurred the area’s first residential and commercial growth boom.



The great depression of the 1930’s and both world wars had a negative effect on Jenkins County and the City of Millen as economic cutbacks and railroad rationing forced Jenkins County to begin competing with other regional centers in Georgia. The 1940’s saw a decline in population of 17 percent, and unfortunately this trend of population loss continued until the 1970’s. By this time the county lost a total of 41 percent of its population. Jenkins County and the City of Millen have, through recent times, seen economic up swings and downturns. The most recent economic recession hindered industry in Jenkins County and Millen as industries that provided numerous jobs to residents were lost. The county and city have been working successfully to bring new employment opportunities to the area.

## **THE COMPREHENSIVE PLAN COMPONENTS**

The CSRA-RC is the county's selected planning coordinator for the Jenkins County Joint Comprehensive Plan 2023-2028. This document has been prepared to exceed the minimum requirements of Georgia DCA's 2018 Minimum Standards and Procedures For Local Comprehensive Planning (effective October 2018). The 2023 Comprehensive Plan includes the following state-required and elective components:

Community Goals | Needs and Opportunities | Report of Accomplishments  
Community Work Program | Public Involvement Overview  
Economic Development | Land Use | Housing | Broadband Services  
Natural & Cultural Resources | Community Facilities & Services

All state-required comprehensive planning components and additional elective elements listed are distributed throughout the Jenkins County Joint Comprehensive Plan in various chapters and appendices.

## **THE SERVICE DELIVERY STRATEGY**

The state of Georgia's "Service Delivery Strategy Act" (O.C.G.A 36-70) was adopted in 1997 by the Georgia General Assembly. It required all Georgia counties and incorporated municipalities to adopt a joint "service delivery strategy" document by July 1, 1990.

The service delivery strategy document is an action plan supported by appropriate ordinances and intergovernmental agreements, for providing local government services and resolving land use conflicts within a county.

The purpose of this Act - and the service delivery strategy document - is for local governments to examine public services, identify overlaps or gaps in service provisions, and develop a better approach to allocating the delivery and funding of these services among local governments and other authorities within each county.

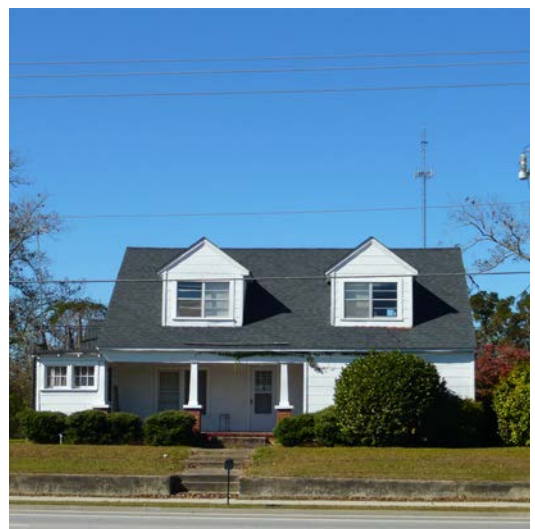
The Jenkins County joint service delivery strategy document has been reviewed and updated in coordination with this comprehensive planning effort.



## COMMUNITY SNAPSHOT

### Jenkins County

Total Population	8,674
Median Household Income	\$29,061
Residents With a Bachelor's Degree or Higher	8%
Total Housing Units	4,066
Residents Without Health Care Coverage	19.0%
Total Households	3,290
Population Hispanic or Latino (of any race)	303
Median Gross Rent	\$636
Median Age	43.2
Homeownership Rate	76%
Poverty Rate	27.9%



### City of Millen

Total Population	2,966
Median Household Income	\$35,146
Residents With a Bachelor's Degree or higher	9.6%
Total Housing Units	1,531
Residents Without Health Care Coverage	11.0%
Total Households	1,265
Population Hispanic or Latino (of any race)	103
Median Gross Rent	\$765
Median Age	48.8
Homeownership Rate	70.8%
Poverty Rate	24.9%

Data sources: 2021 American Community Survey 5-year estimates

## PRIOR PLANS

A comprehensive plan is a dynamic document which should be altered as community conditions change. Updates of these documents are required to ensure community needs are met. Prior versions of the Jenkins County Joint Comprehensive Plan have diminished in relevance as implementation recommendations have been completed or, due to the passage of time, have been found to be no longer a community priority. This allows the new plan to address relative community changes since the prior plan was adopted.

The Joint Millen/Jenkins County Comprehensive Plan 2005 - 2025 was completed by the Central Savannah River Area Regional Development Center and adopted in March 2005. The format of the document was consistent with the standards established by the Georgia Department of Community Affairs (DCA) prior to 2005. This document outlined county and municipal conditions of significance to each community and created goals with regards to economic development, natural and cultural resources, land uses, housing, and community facilities. The comprehensive plan was to be used by community leaders to make coordinated decisions regarding public expenditures and land uses.

Partial updates to the comprehensive plan were produced in 2010 by the Central Savannah River Area Regional Commission (formally the Central Savannah River Area Regional Development Center). These updates addressed changed in the DCA requirements while identifying new issues and opportunities and updating the work program of activities. The 2023 Jenkins County Joint Comprehensive Plan supersedes all prior plans once adopted by each individual community.

“Moving Forward: Urban Redevelopment Plan - Millen, Georgia” was initiated by the City of Millen in order to provide information and guidance for areas within the city in need of assistance. The Millen Urban Redevelopment Plan is a catalyst for the renewal and reinvigoration of multiple areas which includes valuable data and steps to move forward to address needs in targeted areas.



## OVERVIEW OF THE PLAN DEVELOPMENT PROCESS

**First Required Public Hearing:** Briefs the public on the process and describes opportunities to participate

**Plan Development:** Includes data collection and analysis; includes opportunities for involvement from stakeholders and community members

**Second Public Hearing:** Provides an opportunity for comment on the publicly available draft plan and notifies the public of plan submittal for official review

**Submittal of Draft Plan for Review:** Requires a formal letter from the highest elected official to the CSRA-RC; CSRA-RC submits the plan to DCA

**Notification of Interested Parties:** Provides all interested parties (other governments, state agencies, etc.) the opportunity for plan for review and comment

**Regional Commission & DCA Review:** Includes CSRA-RC review for potential conflicts and DCA review for statute compliance

**Report of Findings and Recommendations:** Is transmitted within 40 days after submittal

**Plan Revisions:** May be made to the plan to meet state requirements or address comments from interested parties

**Plan Adoption:** Occurs after official DCA approval of the plan

**Notification of Local Adoption:** Requires the submittal of a signed resolution and adopted plan to the CSRA-RC within 7 days; CSRA-RC forwards this to DCA

**Qualified Local Government status (QLG):** Includes a written notification from DCA that the jurisdiction's QLG status has been extended

**Publicizing the Plan:** Occurs after plan adoption and informs citizens of final plan availability

## **PUBLIC INVOLVEMENT OVERVIEW**

A comprehensive plan should be composed to reflect the shared vision, goals and objectives for all communities involved in the process. The Georgia Department of Community Affairs requires the planning process for comprehensive plans to follow a set of minimum procedures to ensure the public has the opportunity to provide input and review the comprehensive plan document as it is created.

Consistent public input is a necessary component for the creation and completion of the comprehensive plan document. One significant part of the process is forming a stakeholder committee of community members. This group of people is critical to the plan creation and informs the decision-making process. A primary purpose of the stakeholder committee was ensuring that CSRA-RC staff adequately presented the aforementioned shared vision, goals, and objectives of the community.

The members of the Jenkins County stakeholder committee for this planning process were:

Grady Saxon, County Administrator, Jenkins County

Jeff Brantley, City Manager, City of Millen

Hiller Spann, County Commission, Jenkins County

King Rocker, Mayor, City of Millen

Darrel Clifton, City Council, City of Millen

Pamela Dwight, County Commissioner, Jenkins County

Mandy Underwood, Executive Director, Jenkins County Development Authority and Chamber of Commerce

Stakeholder meetings were held on the following dates to provide information, review data, and gain community perspective:

August 25, 2022 | November 28, 2022 | January 27, 2023

Two public hearings were also held as a part of this process on August 25, 2022 and February 14, 2023.

New to the community planning process this iteration was an electronic survey that recieved 66 responses. The survey responses were reviewed and used to generate new ideas and provide community confirmation of priorities created by the stakeholder committee. Staff compared what the stakeholder committee developed with what survey results revealed when crafting the plan to ensure that voices were being heard. Local officials also retained survey results, including open ended responses for future consultation.

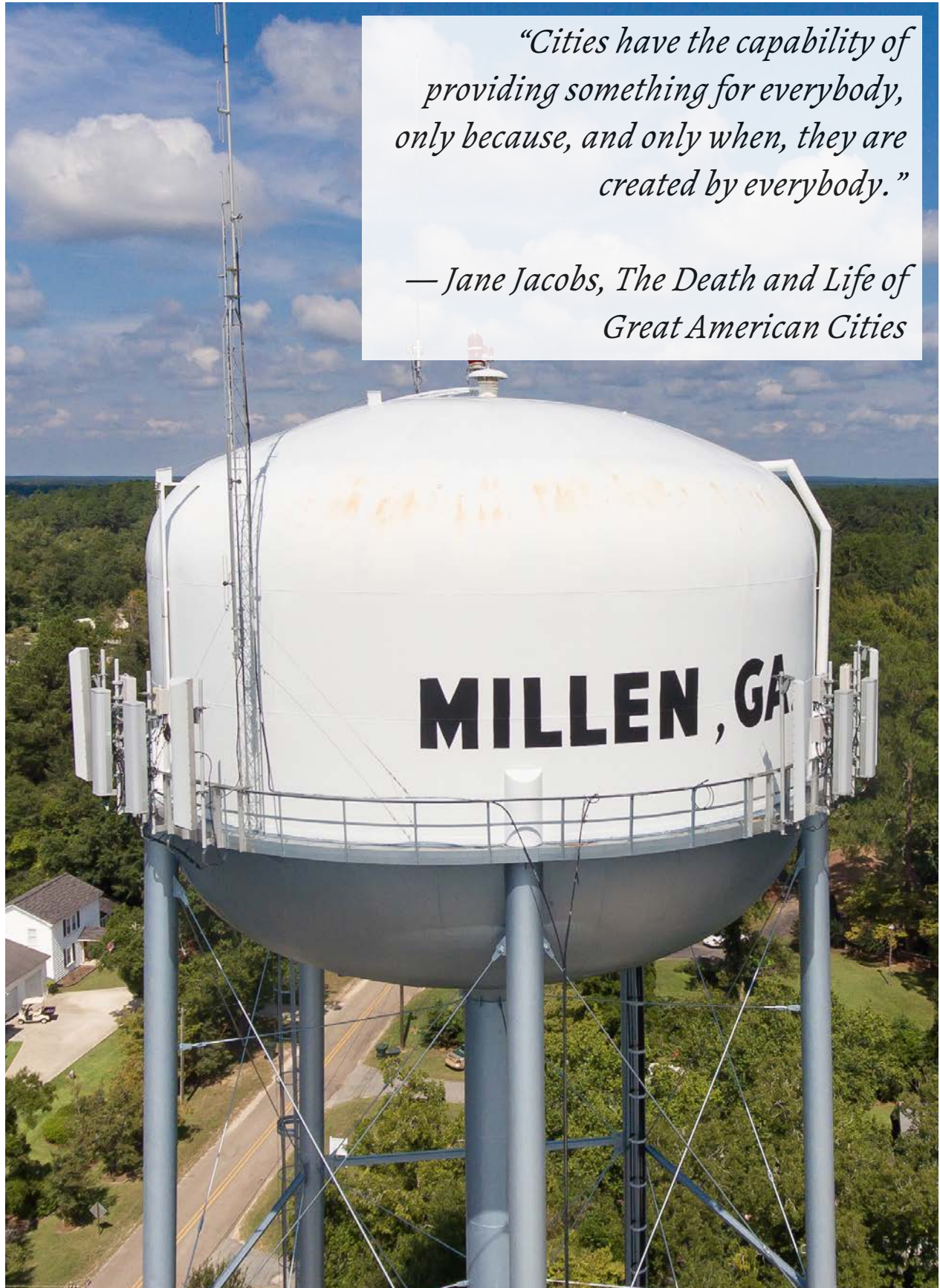
Public awareness efforts included the newspaper, website posts, social media posts, and online document hosting.



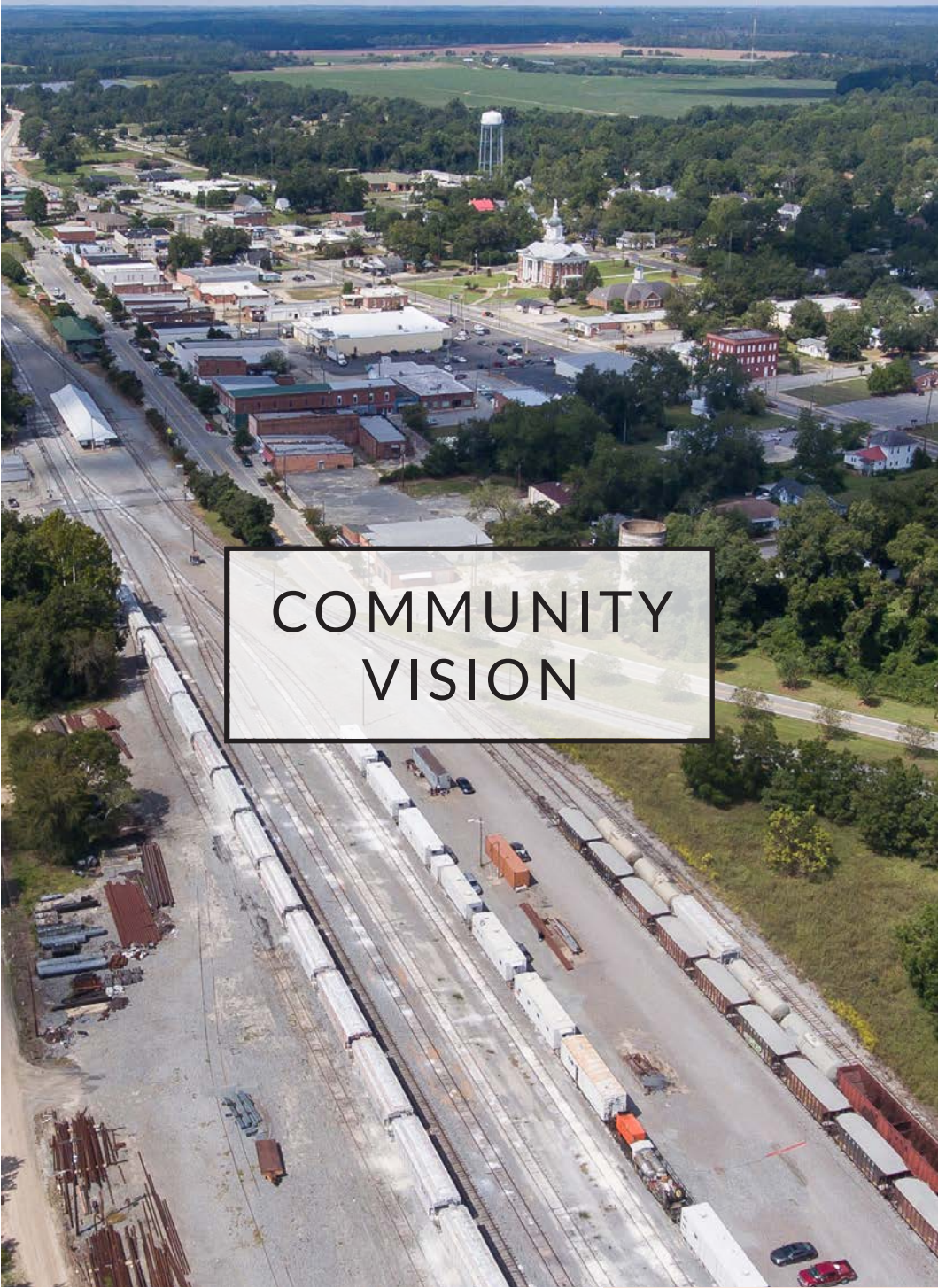


*"Cities have the capability of  
providing something for everybody,  
only because, and only when, they are  
created by everybody."*

*— Jane Jacobs, The Death and Life of  
Great American Cities*







# COMMUNITY VISION

# S.W.O.T. Analysis Summary

Stakeholders participated in several activities and facilitated discussions to define the needs, goals, and community work program projects. The foundation of moving forward with the aforementioned items was an understanding of the current position of both the county and city. The creation of a S.W.O.T (Strengths, Weaknesses, Opportunities, and Threats) analysis for both Jenkins County and the City of Millen provided a foundation for the steering committee to move forward in this planning process. Combined with information provided by CSRA Regional Commission staff, the S.W.O.T. analysis provided support for establishing long-term goals.

## STRENGTHS

- Good schools
- Small town
- Good people
- Hospital
- Railroad
- Low crime
- City and county work together
- Historical attractions
- Highway intersections
- Progress on broadband network
- Located within 90 minutes of major communities: Augusta, Dublin, Savannah, and Statesboro
- Downtown revitalization is underway

## WEAKNESSES

- No playground
- Curbs are not wheelchair accessible
- Population can only support one grocery store
- Lack of jobs
- Lack of affordable housing
- Need better Internet connection
- Not enough restaurants and retail
- Insufficient hotels to support tourism
- Lack of childcare
- Lack of trained laborforce
- Need funding/strategies to support road improvement
- Need roadway beautification
- Need new signs, sidewalks, and bike lanes to enhance community appeal
- Need access to infrastructure support/resources for construction, rehabilitation and maintenance projects/construction teams

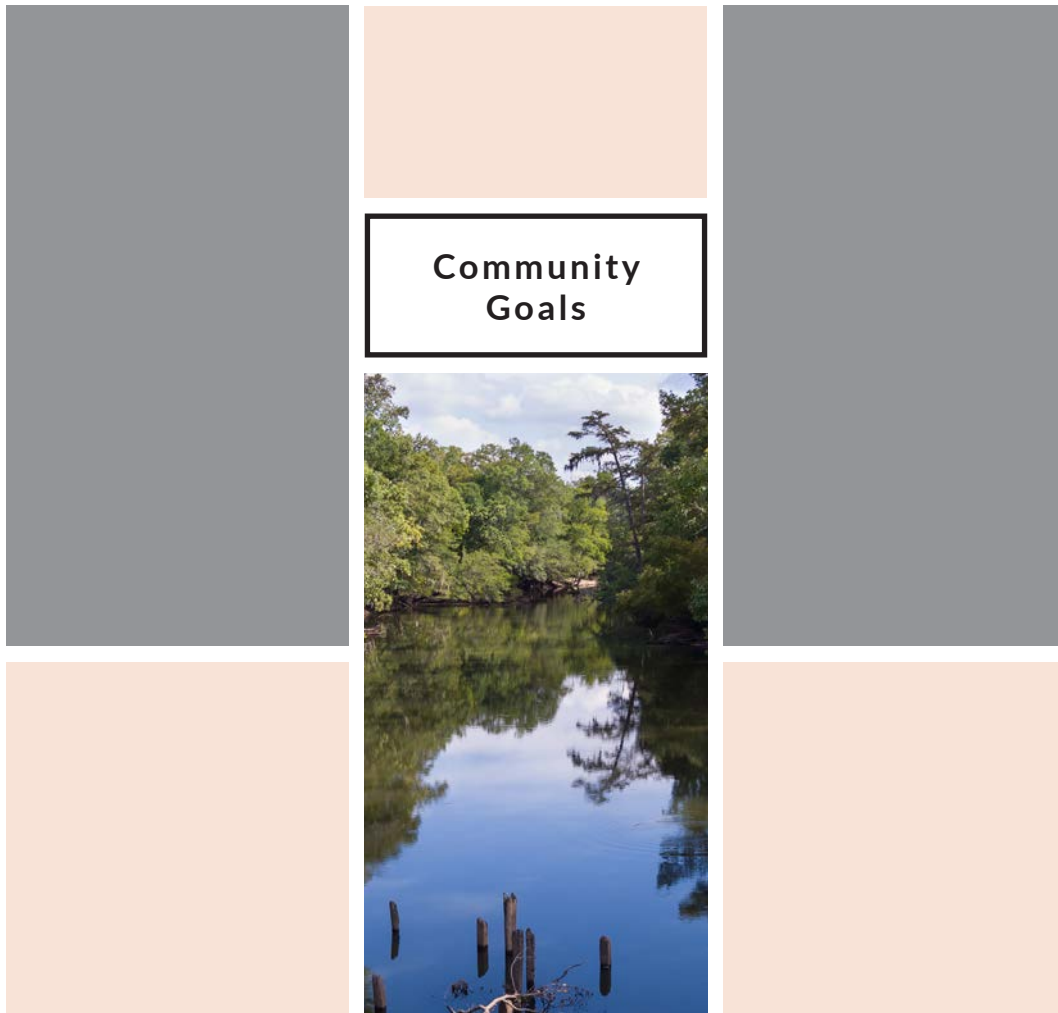
## OPPORTUNITIES

- Ability to expand Magnolia Springs/tourism
- Adult learning center development of Ogeechee River
- Room for growth in downtown area/revitalization
- Continue to upgrade community facilities: ag center, community center, library, courthouse
- Expand on new hospital services
- Planters fiber optic internet
- Bike and running trails
- Rejuvenate recreation program
- Home buyer assistance and lending programs
- Encourage building projects
- Sponsor construction teams to rehabilitate homes, promote business development, and eliminate blighted areas
- Promote youth trade skill training/coordinate with school system/trade schools
- Provide stronger programming/funding for library, senior center, and recreation department
- Market destination experiences for visitors, great escape adventure, promoting the southern experience

## THREATS

- Unemployment
- Loss of small businesses
- Surrounding communities have more growth than Jenkins/Millen
- Younger generations moving away from community
- Drug and alcohol addiction
- Big box businesses
- Extended train blockage of roadways causing excessive traffic
- Does not have public relations/marketing/social media presence
- Community needs ore opportunities for internships/entrepreneurial experience





Concurrent with completion of the 2023 Comprehensive Plan final list of needs and opportunities, stakeholders and other planning participants identified the shared planning goals of Jenkins County and the City of Millen.

The “Community Goals” component includes the following elements:

**Goals:** Broad statements of understanding and intent regarding the long-term growth and development of both jurisdictions. In addition to the “Needs and Opportunities” the Georgia Department of Community Affairs “Quality Community Objectives” were reviewed in order to create goals to guide the implementation strategies contained in the work program.

**Policies:** To accompany the goals, supporting policies were developed, some as ongoing initiatives, maintenance, and general best practices for local action. When the opportunity presents itself, potential actions derived from the policy statements contained in this section of the 2023 Comprehensive Plan may be incorporated as amendments into the Community Work Program at a future date.



**GOAL: IDENTIFY AND ACCESS RESOURCES IN ORDER TO FACILITATE AND COMPLEMENT EFFORTS TO PROMOTE LAND USES AND DEVELOPMENT PATTERNS IN BOTH JENKINS COUNTY AND THE CITY OF MILLEN.**

Continue to seek access to financial and other resources as they become available and opportunities allow in order to promote and implement the development of character area development patterns proposed in this comprehensive plan.

**GOAL: PROVIDE FOR THE DELIVERY OF PUBLIC SERVICES TO THE RESIDENTS OF JENKINS COUNTY AND THE CITY OF MILLEN IN A MORE UNIFORM AND EFFICIENT MANNER.**

Continue to improve Internet capacity to the extent of having fiber optic Internet service available to the entire city and majority of the county.

Continue to work to improve water and sewerage services to its residents and provide capacity for potential new occupants in the industrial park.

**GOAL: REVITALIZE AREAS WITHIN THE CITY OF MILLEN TO IMPROVE THE “QUALITY OF LIFE” FOR NEIGHBORHOOD RESIDENTS.**

Demolish dangerous structures and assign property liens.

Promote the use of historic color palat and facade reimbursement grants.

Continue collaboration between the City of Millen and the Jenkins County Development Authority to develop targeted areas for new housing and commercial improvements.

**GOAL: INCREASE ACCESS TO HIGH-SPEED INTERNET THROUGHOUT THE COUNTY FOR RESIDENTS, BUSINESSES, AND INSTITUTIONS OF VARIOUS SIZES.**

Facilitate the ease of ISPs providing service through ordinance(s).

## Needs and Opportunities



The needs and opportunities included in this section of the plan present issues to address and possibilities to pursue across both jurisdictions. These items were generated during the 2023 comprehensive planning process utilizing: input from the stakeholder committee, the previous plan, community survey, and SWOT analysis. This plan section also informed other parts of the plan, including goals and work program activities. As a reminder, these aren't the only possible needs and opportunities, and this document is flexible to change as the community does.

ECONOMIC DEVELOPMENT		
	NEEDS	OPPORTUNITIES
Jenkins County	Inability to capitalize on resources and assets present in the county	Expand current 5th grade downtown historic tours
	Improve promotion of WIOA job training program	Work with WIOA program to increase knowledge within community
	Limited incentives to attract businesses and industries	Airport (Master's week traffic)
		Reopening of the fish hatchery
City of Millen	New industrial / manufacturing jobs to replace jobs lost	Location of Millen in relation to Fort Gordon and Cyber Command
	Increase the number of occupied store fronts in downtown	Traffic from the Port of Savannah
	Disconnect U.S. Highway 25 and City Center Millen	Cotton Avenue (structures and location)
		Reopening of the fish hatchery
HOUSING		
Jenkins County	Multi-family rental housing	Reducing utility cost by fostering green technology
	Single-family housing	Incentives for developers to increase higher-quality housing stock
	Housing rehab in targeted areas	
City of Millen	Multi-family rental housing	Apartment complex that meets certain design standards
	Single family housing stock	Design guide for potential development
LAND USE		
Jenkins County	Establish county zoning or land use regulations are not in place	Create a zoning ordinance based on a model from similarly sized area
City of Millen	Increase land zoned for residential housing	Increase amount of land zoned for industrial development

## COMMUNITY FACILITIES

	NEEDS	OPPORTUNITIES
Jenkins County	County-wide fiber optics	Promotion of Scenic - byways
City of Millen	Pal Theater updates	Activity center on Cotton Avenue
	Activities are limited within the city	
	Need facilities which can be rented for parties, etc.	
	Need parks which will be viewed as regional destinations	
	Improving the railroad crossing	State wrote a grant for funding an overpass

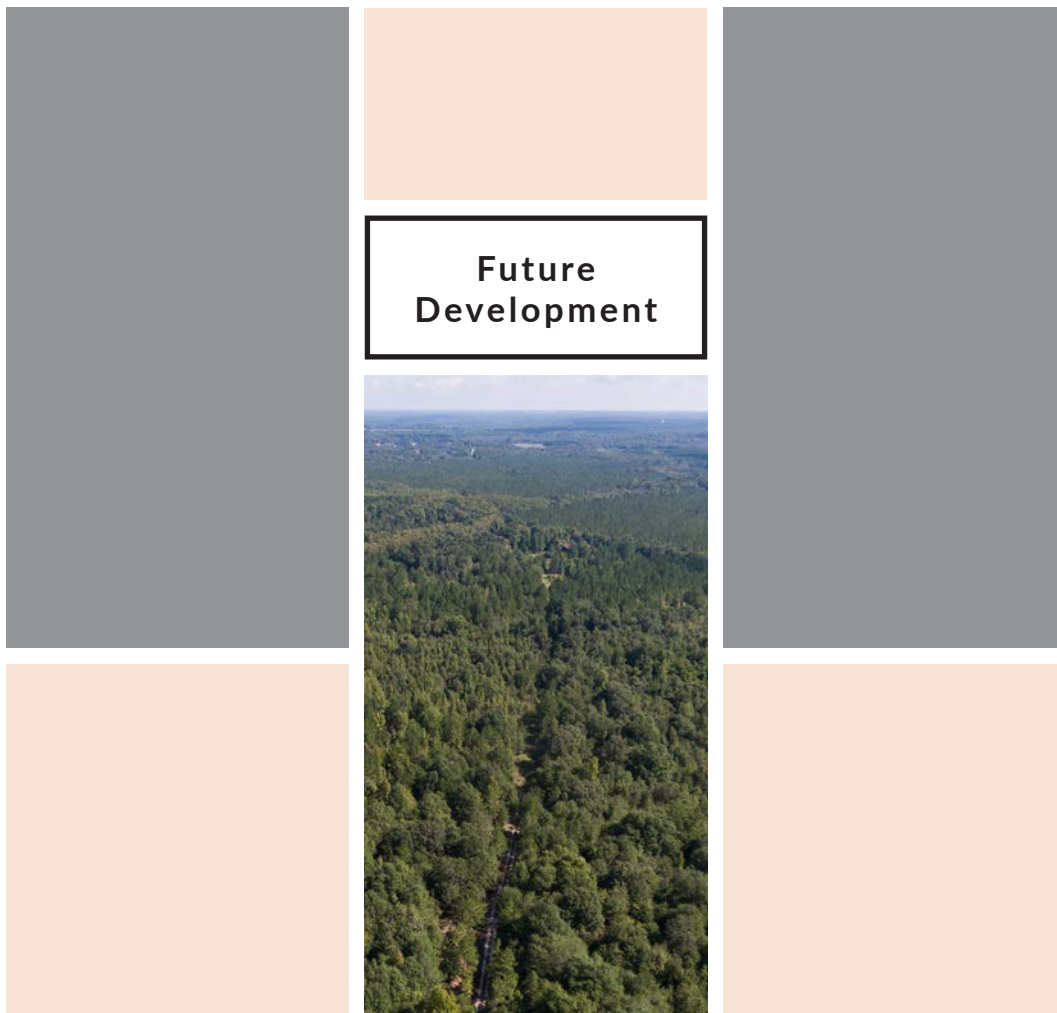
## NATURAL AND CULTURAL RESOURCES

Jenkins County	Not capitalizing on resources and assets	Promote fishing as recreational / competitive sport
	Promotion of Camp Lawton site and museum	
	Trails to Magnolia Spring from city to encourage activity	Magnolia Springs State Park
	Vegetation has over run Magnolia Springs and hindered activities.	Publicize the Ogeechee River for something other than fishing
		Encourage possible kayak course
		Reduce fees for regular visitors / annual pass to Magnolia Springs to encourage activity
City of Millen	Historic property preservation	Historic properties that are unable to be maintained
		Sherman's March / Civil War Heritage Trail
	City museum needs physical updates and organization of artifacts	

## BROADBAND SERVICES

Jenkins County	Seek opportunities to make broadband more affordable and/or more widely available to Jenkins County residents.	Actively seek opportunities to utilize available broadband infrastructure to support workforce development, and to promote local economic development.
City of Millen	Seek opportunities to make broadband more affordable and/or more widely available to Jenkins County residents.	Actively seek opportunities to utilize available broadband infrastructure to support workforce development, and to promote local economic development.





The demographic trends, economic circumstances, and social attitudes of local governments provide guidance to meet certain needs through the designation of land for particular uses. These land uses should ensure that land is equitably distributed, prevents/mitigates nuisances, and provides an appropriate amount of area for a designated use and limits disturbance of other surrounding land uses.

***Existing land uses for both the city and county include the following:***

***Agriculture / Forestry | Commercial | Industrial  
Parks / Recreation / Conservation | Public / Institutional  
Residential | Transportation / Communication / Utilities***

This comprehensive plan includes the use of character areas in lieu of a parcel-based future land use map.

## CHARACTER AREAS

Jenkins County contains approximately 225,527 acres of land. The majority of this land is categorized as Agriculture / Forestry and contains multiple uses including farms, residences, and livestock production. This is the most abundant land use in the county, comprising approximately 96 percent of the county. Although residential is the second most abundant use of land in the county, it only accounts for 3 percent of categorized land in the unincorporated area. Other land uses represent the remaining 1 percent.

Land use in the city of Millen represents a much more diverse use of land than Jenkins County due to concentration of population within the city. Residential land use represents the largest use within the city as nearly 35 percent of Millen is categorized for residential use. Agriculture / Forestry represents the second largest use at 32 percent of land.

Jenkins County does not have zoning. The City of Millen adopted its city zoning ordinance in 1992 and it was part of the Millen Code of Ordinance update adopted on August 2, 2011. The city initiated a zoning ordinance in order to “Establish a precise and detailed plan for the purpose of promoting health, safety, morals, convenience, order prosperity, and general welfare of the present and future inhabitants of the city.” (Millen, GA Municipal Code § 38-3)

The 2023 Jenkins County Joint Comprehensive Plan incorporates Character Area Maps as its principal means by which to address long-term use goals and policies of Jenkins County and the City of Millen. Four character areas have been created for Jenkins County and four character areas have been created for the City of Millen.

***The character areas created for Jenkins County are:***

***Rural Residential Development | Industrial Development  
Peripheral Commercial | Residential Development***

Character areas developed for the City of Millen are in line with areas developed within their Urban Redevelopment Plan as the presented area provide an opportunity to link these planning efforts.

***The character areas created for the City of Millen are:***

***Downtown Revitalization | City Residential  
Industrial - Rural Development | Commercial Corridor***



The 2023 presented comprehensive plan character area maps and supporting character area narratives are located on the following pages. When determining how best to use the character area maps and supporting narratives, the reader should be mindful of the follow parameters:

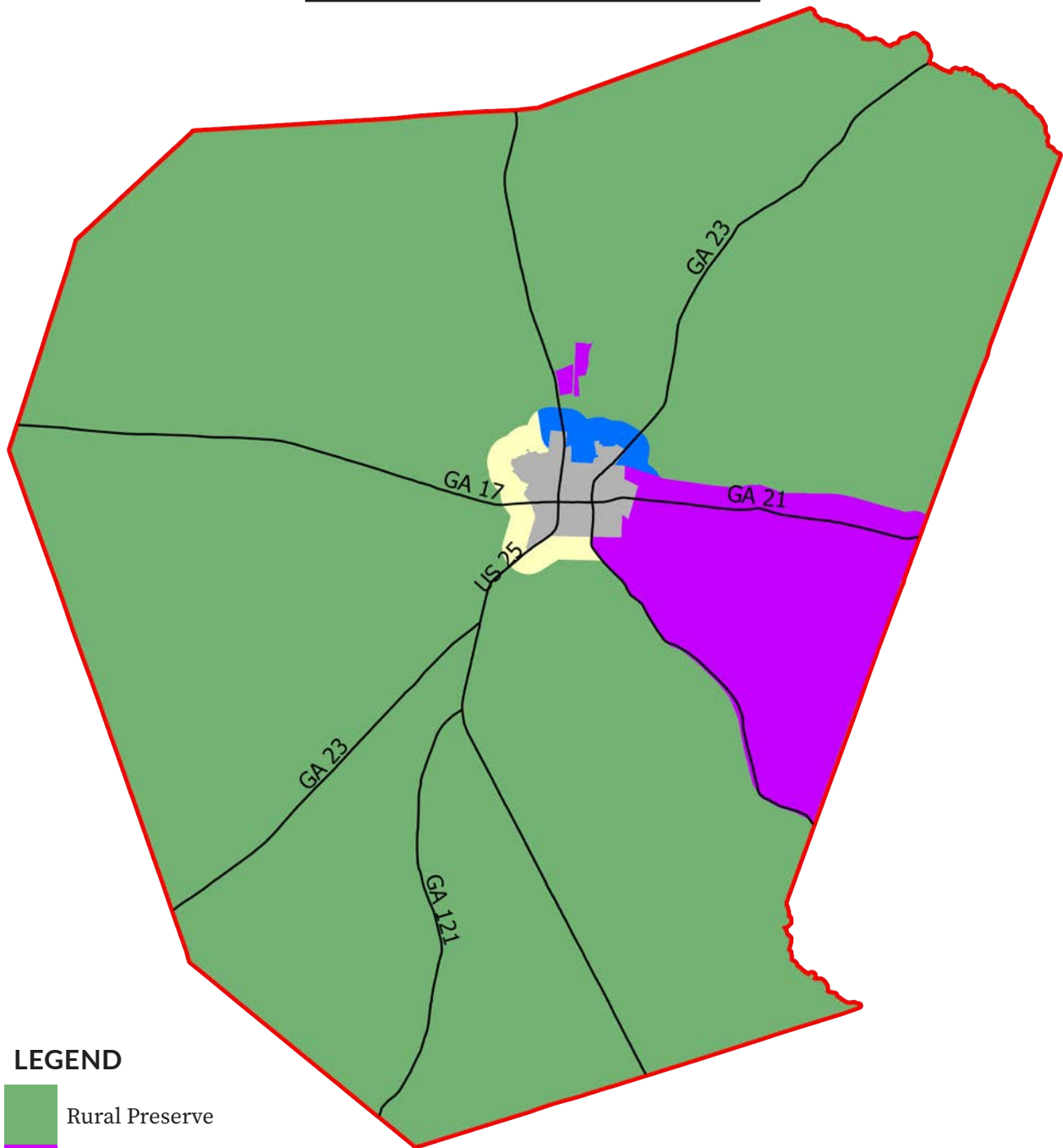
#### Character Area Boundaries

Unlike a parcel-specific future land use map, character area boundaries are conceptual and may cross parcel lines. The character area boundaries in this document represent “approximate” character area location. This flexibility allows the governing body charged with implementing the plan to make decisions based on changing conditions while reducing the need to continually amend the comprehensive plan. As a result, it is possible to assume that small parcels located directly adjacent to one or more character areas may be permitted by the local government to develop according to the parameters of the adjacent area rather than the area in which it is located. Such an action should be taken sparingly and the decision should only be made if the local government can show that it is consistent with the recommendations provided in other sections of the 2023 Comprehensive Plan or other local policy document. For the most part however, tracts should develop according to the parameters established in the specific character area in which it is located. Each jurisdiction is strongly encouraged to initiate amendments to their Character Area Map whenever the community intends to promote a development pattern in an area that is contrary to the adopted map.

#### Character Area Narratives

The narratives corresponding to the Character Area Map should be viewed as general policy statements - as statements of intent. Their use and applicability is similar to those other goals and policy statements found in the Community Goals section. They should inform future development decisions and perhaps form the basis for more detailed topic-specific studies in the future.

# JENKINS COUNTY CHARACTER AREAS



## LEGEND

-  Rural Preserve
-  Industrial Development
-  Peripheral Commercial
-  Rural Residential Development
-  Jenkins County

0 1.75 3.5 7 Miles

# JENKINS COUNTY CHARACTER AREAS



## RURAL PRESERVE



### GENERAL DESCRIPTION

The Rural Residential character area comprises the majority of unincorporated Jenkins County. It's largely defined by agricultural and forestry uses - with low-density residential uses scattered throughout. The emphasis of this character area will be to preserve the pastoral nature of existing open space - encouraging the productive use of naturally regenerative resources (e.g. crops, pasture, silviculture) as opposed to building and other hard-scape development. Residential development should occur at low-densities - either on large lots or within clustered developments that preserve open space. Commercial enterprise should be largely limited to agrarian and recreational enterprises in order to leverage the economic value of open space retention.

### LAND USE AND ZONING CATEGORIES

Low Density Residential | Agriculture | Forestry | Recreation

### IMPLEMENTATION MEASURES

- Policy adoption limiting major development for the protection of rural context Enforcement of limited residential development



# JENKINS COUNTY CHARACTER AREAS



## INDUSTRIAL DEVELOPMENT



### GENERAL DESCRIPTION

The Industrial Development character area delineates an area of the county where industrial uses are currently located with the potential of further expansion of similar uses. Manufacturing is currently the major industry located in the area with mineral processing present. Potential exist for the expansion of manufacturing activities and mineral processing with this area having access to major roads and rail access.

### LAND USE AND ZONING CATEGORIES

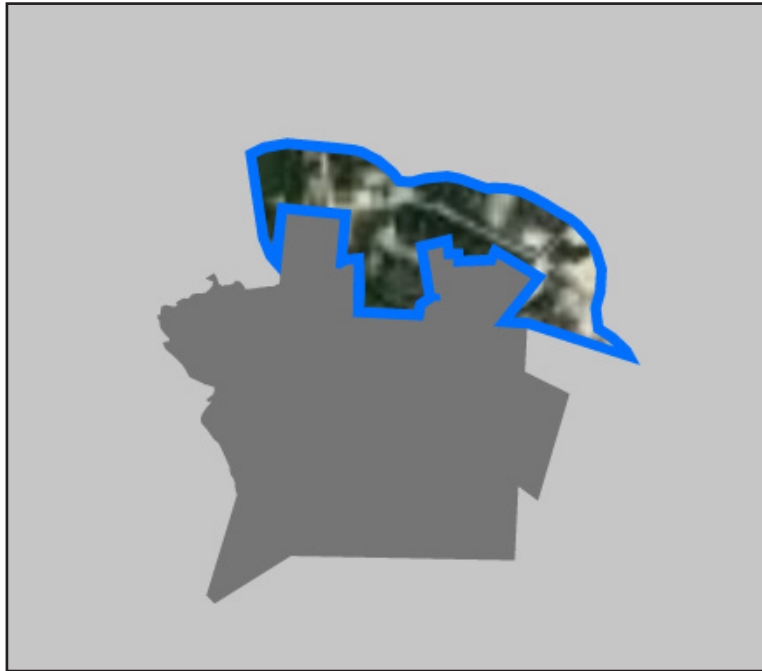
Industrial  
Agriculture  
Forestry  
Mining

### IMPLEMENTATION MEASURES

- Incentives for industrial location to this area
- Increase necessary infrastructure to facilitate increase facilities



# JENKINS COUNTY CHARACTER AREAS



## PERIPHERAL COMMERCIAL



### GENERAL DESCRIPTION

The Peripheral Commercial character area contains mix of commercial developments along the by-pass which is ripe for commercial development geared towards industrial support and commercial services aimed at the traveling public.

### LAND USE AND ZONING CATEGORIES

Commercial  
Forestry  
Light industry



### IMPLEMENTATION MEASURES

- Incentives for commercial development in this area
- Increase necessary infrastructure to facilitate increase facilities



# JENKINS COUNTY CHARACTER AREAS



## RURAL RESIDENTIAL DEVELOPMENT



### GENERAL DESCRIPTION

The Rural Residential Development Character area is the area with potential for low and medium density residential development to occur. This area is framed by the Ogeechee River and has potential for recreational activities.

### LAND USE AND ZONING CATEGORIES

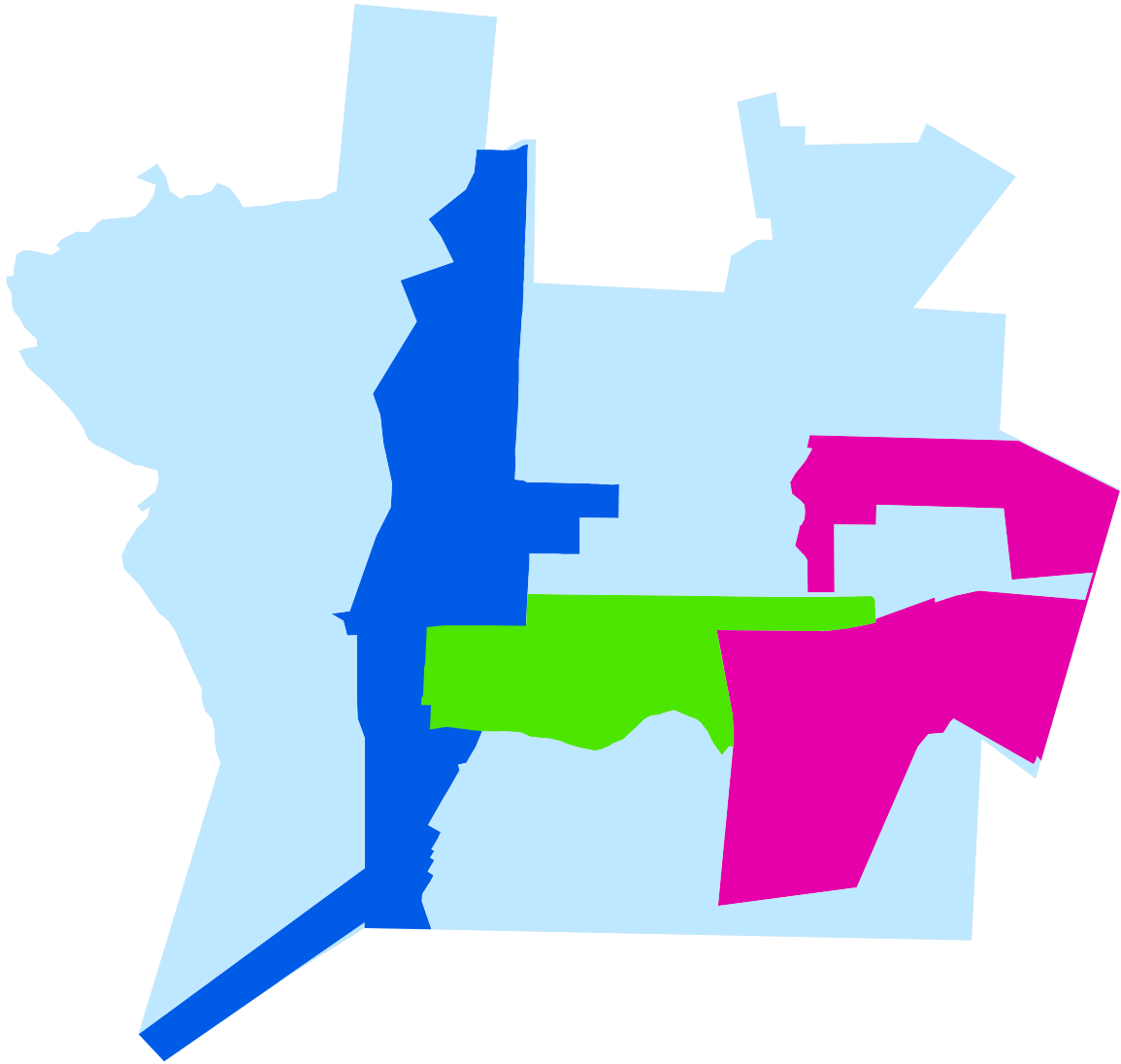
Residential  
Agriculture  
Forestry  
Parks and Recreation

### IMPLEMENTATION MEASURES

- Limitation of residential development in areas where potential environmental concerns are present
- Enforce location residential development to locations where appropriate
- Seek assistance from state agencies to provide information regarding conservation
- Provide access points to the river



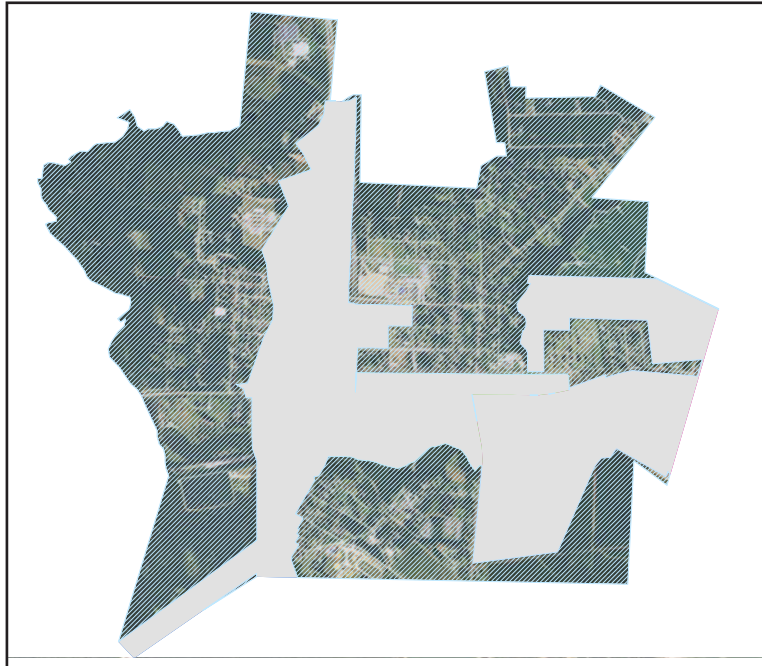
## CITY OF MILLEN CHARACTER AREAS



### LEGEND



# CITY OF MILLEN CHARACTER AREAS



## CITY RESIDENTIAL



### GENERAL DESCRIPTION

The City Residential character area represents the majority of the city of Millen. This area is primarily comprised of small lot residential homes and institutions such as churches and schools. The primary goal of this area is to preserve the character of the walkable small town while improving infrastructure to improve the quality of life for residents.

### LAND USE AND ZONING CATEGORIES

Neighborhood Commercial  
Medium density residential

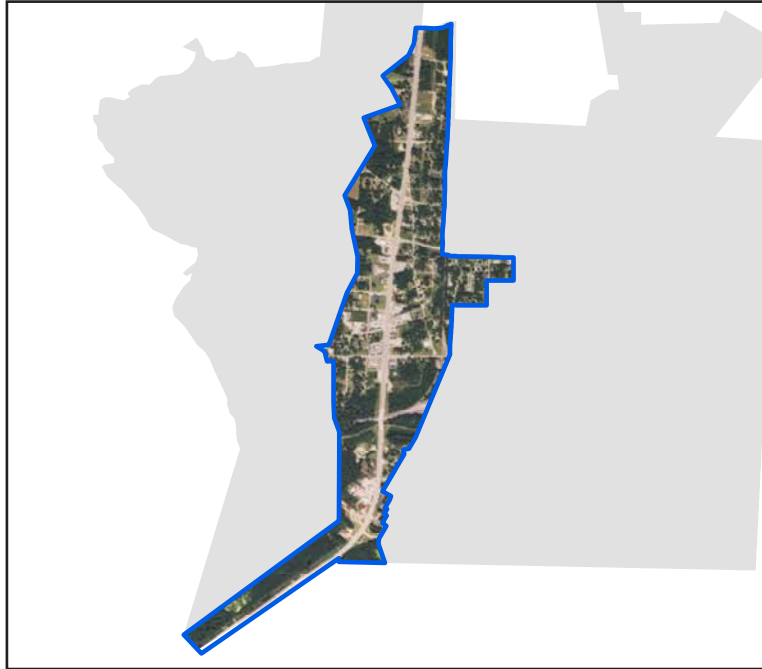


### IMPLEMENTATION MEASURES

- Enforce limited commercial development within the area
- Ensure appropriate commercial development takes place



## CITY OF MILLEN CHARACTER AREAS



### CORRIDOR DEVELOPMENT



#### GENERAL DESCRIPTION

The Corridor Development character area is located along the main commercial corridor for the city of Millen. Development along this roadway provides services to the traveling public in conjunction with offering a majority of the shopping options for the city of Millen. This area is part of the Millen Urban Redevelopment Plan.

#### LAND USE AND ZONING CATEGORIES

Commercial  
Residential  
Park and Recreation

#### IMPLEMENTATION MEASURES

- Incentives for commercial development
- Infrastructure improvements to allow for better non-vehicular access to the area



# CITY OF MILLEN CHARACTER AREAS



## DOWNTOWN DEVELOPMENT



### GENERAL DESCRIPTION

The Downtown Development character area is the heart of the City of Millen. It contains two distinct areas of different character. Cotton Avenue is a walkable area with storefront commercial and restaurants. East Winthroe is a car oriented street with larger stores and parking in front. This area has the capability to become a charming area which can attract the traveling public. This area is part of the Millen Urban Redevelopment Plan.

### LAND USE AND ZONING CATEGORIES

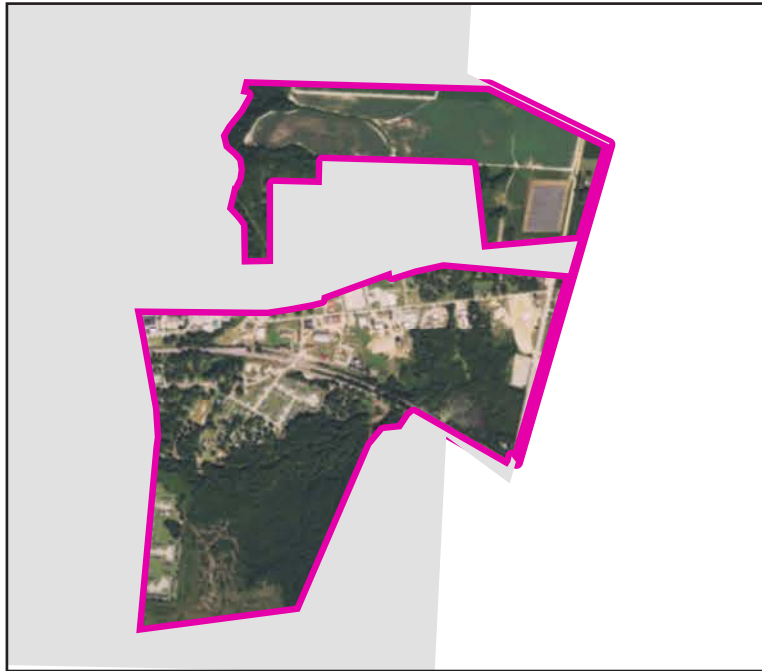
Commercial  
Public Buildings - Museums  
Pocket Parks

### IMPLEMENTATION MEASURES

- Create incentives for businesses to relocate to this area.
- Infrastructure improvements to better connect East Winthroe and Cotton Ave.



## CITY OF MILLEN CHARACTER AREAS



### CITY INDUSTRIAL DEVELOPMENT



#### GENERAL DESCRIPTION

The City Industrial Area is similar to the County Industrial Character Area as the county's character area is an expansion of the city's industrial space. Manufacturing was a major industry in Millen and there is a push to bring manufacturing back to the industrial area. This area is primarily contained and is poised for manufacturing uses.

#### LAND USE AND ZONING CATEGORIES

Industrial  
Commercial

#### IMPLEMENTATION MEASURES

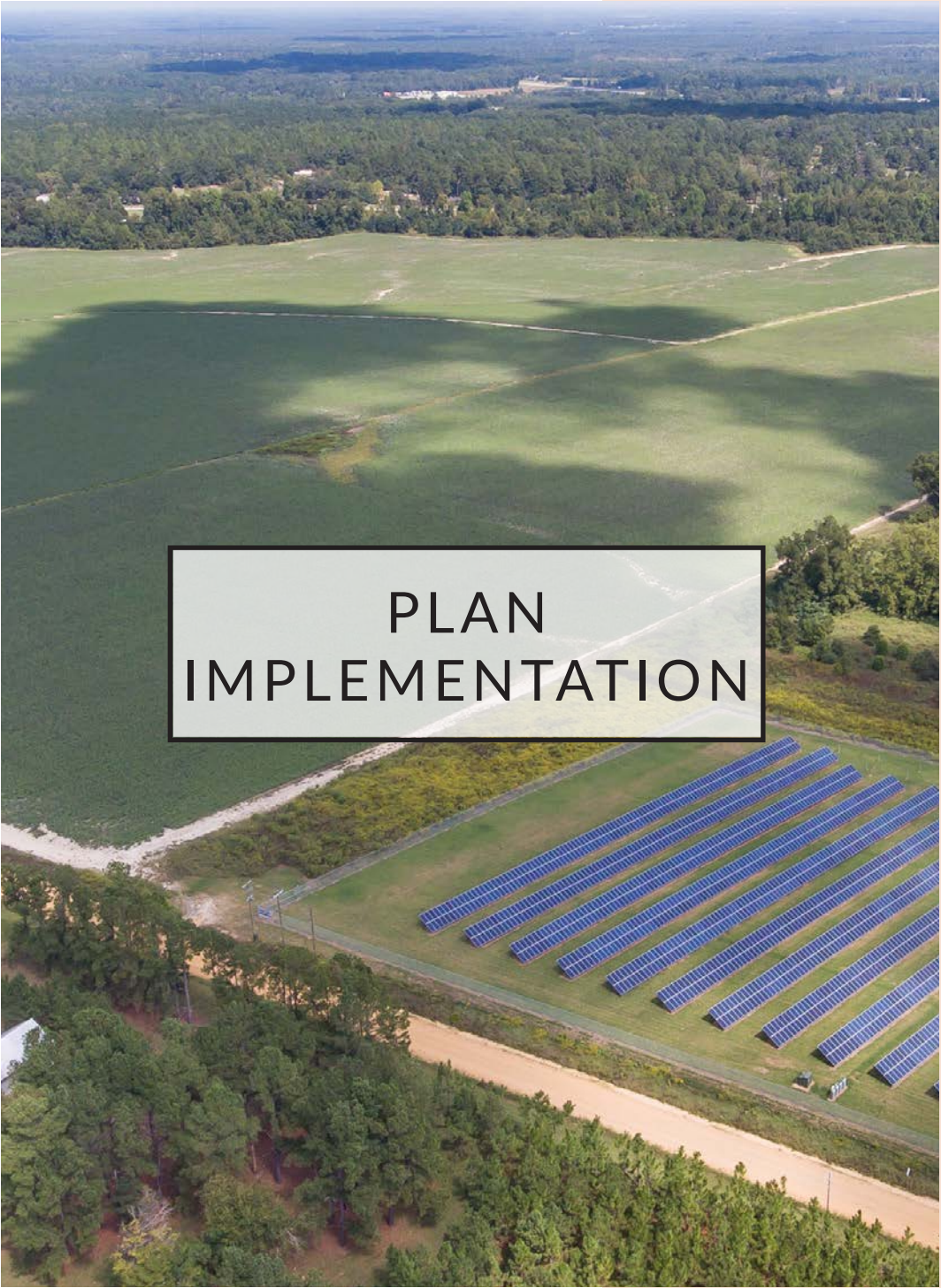
- Incentives for manufacturing companies to locate within the industrial park
- Ensure infrastructure is adequate for industrial expansion.











# PLAN IMPLEMENTATION





## Report of Accomplishments



As part of the report, a list of activities from the prior community work programs is included on the following pages, and activities are assigned the following identifiers to acknowledge the status of each project as:

- Completed: the listed activity has been concluded
- Underway: the listed activity has started and is continuing
- Postponed: the listed activity has not been started or has halted for some reason
- Not Accomplished: the listed activity has not and will not move forward

## ECONOMIC DEVELOPMENT

ACTIVITY/PROJECT		STATUS				COMMENTS
		COMPLETED	ONGOING	POSTPONED	NOT ACCOMPLISHED	
CITY OF MILLEN	Initiate a fee abatement program for Cotton Avenue to attract businesses to increase vitality on this corridor.			X		Postponed because the city is currently utilizing their Rural Zone designation in this area.
	Target a space in the downtown area in which to create a business incubator for potential new businesses in the area.	X				One location has been occupied and a second is being marketed by a private owner.
	Apply for Rural Downtown Development Grant.	X				One RDF project is complete. A second grant has been approved by the DCA and is in process.
JENKINS COUNTY	Improve technological capabilities of the county through the expansion of broadband Internet services.		X			
	Build spec building on industrial property owned by the JCDA.	X				



## NATURAL AND CULTURAL RESOURCES

	ACTIVITY/PROJECT	STATUS				COMMENTS
		COMPLETED	ONGOING	POSTPONED	NOT ACCOMPLISHED	
CITY OF MILLEN	Create a historic district in downtown Millen.				X	This is no longer a supported by the community and not a priority of the city at this time.
JENKINS COUNTY	Compete Phase 3 of the renovation of the Jenkins County Courthouse.	X				
	Re-initiate the hatchery pond at Bo Ginn National Fish Hatchery.		X			The property is being rented to GA Southern not currently open to the public. Georgia Southern has began courses since stopping due to Covid-19.
	Expand park land for Jenkins county parks and recreation department.		X			
	Make improvements to park and recreation infrastructure and equipment.		X			

# HOUSING

Activity/Project	Status				Comments
	Completed	Ongoing	Postponed	Not Accomplished	
City of Millen	Identify area within the community for potential residential development or redevelopment.	X			A 48 unit LIHTC apartment complex is under construction, to be completed in April.
	Demolish dangerous structures and assign property liens.		X		This is considered an ongoing operating policy and not included in the 2023 CWP.
	Update nuisance property list for city properties.		X		The new code enforcement officer is working on the list.
	Prepare CHIP Application for housing.	X			
	Initiate a housing study in conjunction with the CSRA-RC.			X	Planning has not occurred, but a study will be needed in the future.
	Research the feasibility of Form Based Codes.			X	This is no longer a priority.
	Research the creation of a Land Bank Authority.			X	Participation requires the county. This is no longer a county priority.
	Construct joint City-County apartment complex.	X			
	City will provide a housing rehabilitation program that includes, the clearance of vacant buildings, housing rehab, and housing reconstruction.		X		The 2018 CDBG is completed. 2020 and 2021 CDBGs are in progress.

# HOUSING

	Activity/Project	Status				Comments
		Completed	Ongoing	Postponed	Not Accomplished	
Jenkins County	Update Jenkins County Subdivision Ordinance.		X			
	Construct joint City-County Apartment Complex.				X	This became the city's responsibility only.
	Update nuisance property list for county properties.		X			
	Research the creation of a Land Bank Authority.				X	This is no longer a county priority.

## COMMUNITY FACILITIES

	Activity/Project	Status				Comments
		Completed	Ongoing	Postponed	Not Accomplished	
City of Millen	Provide infrastructure on Old Waynesboro Road Phase 1.	X				
	Provide infrastructure on Old Waynesboro Road Phase 2.				X	This is no longer a community priority. Not able to obtain funding due to community not have enough housing units to obtain funds.
	Increase sewer line size for service to new K-12 school.	X				
	Open a K-12 school.	X				
	Complete street scape on Winthrop Ave Phase 3.		X			Approved in 2023 TIA.
	Begin targeting “Black Bottom” for infrastructure improvements.	X				LIHTC grant approved for current construction. No other plans at this time.
	Communicate with GDOT vision for U.S. Highway 25.	X				GDOT has applied for federal grant to build overpass. This project is pending approval in late spring.
	Prepare CDBG application for all infrastructure to include storm water for Warren, Lincoln, and Washington Streets.	X				

# COMMUNITY FACILITIES

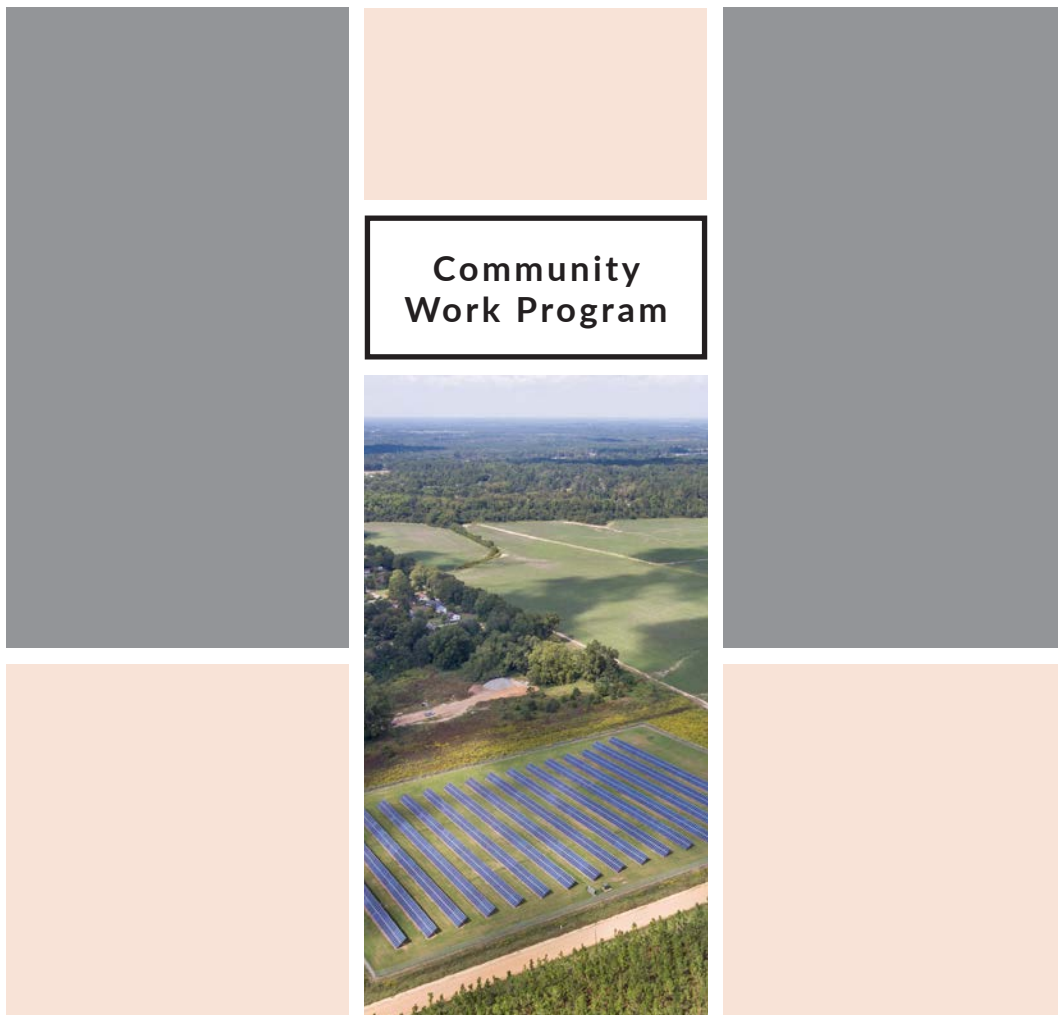
	Activity/Project	Status				Comments
		Completed	Ongoing	Postponed	Not Accomplished	
City of Millen	Replace and upgrade existing sewer lines throughout the city - in, but not limited to, Washington Street area.		X			Reworded in the 2023 CWP as water, sewer, storm water, flood and drainage improvements throughout the city. and street improvements. Washington Street is complete.
	Add flood and drainage improvements (curb and gutter and storm water infrastructure) throughout the city - in, but not limited to, the Washington Street area.		X			Reworded in the 2023 CWP as Water, sewer, storm water, flood and drainage improvements throughout the city. and street improvements. Washington Street is complete.
	Repave streets throughout the city - in, but not limited to, the Washington Street area.		X			Continuing through CDBG and LMIG.
Jenkins County	Designate an area for industrial infill development.		X			
	Recruit YMCA or Boys and Girls club to county space.				X	This activity was cost prohibitive.
	Create a transportation program for technical college for transportation to post-secondary institutions.				X	Tried it; the program was not feasible due to lack of participation.
	Buy new equipment for E911.	X				
	Relocate E911 to the Sheriff's office.	X				
	Conduct street and drainage improvements on B B Lane.		X			CDBG obtained in 2022. The work should be completed by 2024.
	Expand the Senior Center.				X	Applied for grant. Application was not funded. County has decided not to reapply at this time.

# LAND USE

	Activity/Project	Status				Comments
		Completed	Ongoing	Postponed	Not Accomplished	
City of Millen	Begin the development of sub-division regulations for the City of Millen.				X	This is no longer a city priority.
	Initiate the creation of community design standards.		X			The city has developed a historic color palate and facade grant.
	Begin research into feasibility of Land Bank Participation.				X	Participation requires the county. No longer a priority for the county.
	Adopt a “Planned Unit Development” zoning district for the purpose of allowing unique development meeting the needs of the community.				X	No unique development has been identified. No land area has been identified.
	Identify area within the community for potential residential development or redevelopment.		X			The city’s working through CDBG grants on rehab.
Jenkins County	Research the feasibility of land use.	X				Land use was determined not feasible.
	Begin research into feasibility of Land Bank Participation.				X	This is no longer a county priority.
	Create a Land Use (zoning) ordinance.				X	The Board of Commissioners is not currently interested in establishing zoning.

## BROADBAND SERVICES

Activity/Project		Status				Comments
		Completed	Ongoing	Postponed	Not Accomplished	
City of Millen	Adopt a resolution that the city of Millen desires to be fully served by Broadband.	X				
	Identify community buildings that would benefit from enhanced broadband and/or could be considered for Broadband Ready designation.	X				
	Apply for Broadband Ready designation for chosen community sites.	X				
	Apply for Broadband Infrastructure grant funding.	X				
Jenkins County	Adopt a resolution that Jenkins County desires to be fully served by broadband.	X				Adopted a Broadband Ready Community ordinance.
	Identify community buildings that would benefit from enhanced broadband and/or could be considered for Broadband Ready designation.	X				The county has been designated at Broadband Ready. A separate listing for buildings will not be pursued.
	Apply for Broadband Ready designation for chosen community sites.	X				
	Apply for broadband infrastructure grant funding.	X				The community received funding in 2022.



The Community Work Program component establishes priority activities (divided by topic area) that the county, city, and/or other vested or partnering agencies will undertake over the next five (5) years. It is the key implementation tool for addressing the needs and opportunities identified during this planning process. Although designed by local planning participants to guide community building activities prioritized from the local level, the community work program is structured to adhere to DCA minimum state comprehensive planning standards. Consistent with state rules, the 2023 Joint Comprehensive Plan's Community Work Program includes the following information:

Description of each activity | Time-frame for undertaking the activity  
 Responsible party and potential partners for implementing the activity  
 Estimated Cost (if any) of implementing the activity | Funding Source(s)



## BROADBAND SERVICES

	Activity/Project	Time frame					Responsible Party	Cost Estimate	Funding Source(s)
		2023-24	2024-25	2025-26	2026-27	2027-28			
City of Millen	Initiate a fee abatement program for Cotton Avenue to attract businesses to increase vitality on this corridor.				X		City/County	Staff Time	Local Funds
	Apply for Rural Downtown Development Grant.	X					City/JCDA	Staff Time	Local Funds
	Stabilize the historic building located at 455 Cotton Ave.	X					City/JCDA	\$750k	RDF Grant
	Add a new well and tank, run water to an industrial park in the county.	X					City/JCDA	\$3 million	EDA
	Initiate downtown historic tour for adults.	X					City/JCDA	Staff Time	JCDA/ Main street Millen
	Replace seats, lighting, and sound equipment at the Pal Theater.	X					Chamber	TBD	Donations/ Grants
	Start quarterly movies at the Pal Theater.	X					Main street/ City/ Chamber	Staff Time	Main Street/ Local Funds/ Chamber
	Apply for grants to support a theatrical summer camp for kids at the Pal Theater.		X				Chamber	Staff Time	Grants
	Find an artist to paint fire hydrants for the Downtown Historic District tour.		X				Chamber	Staff Time	Chamber
	Initiate self guided fire-hydrant tour using Chamber brochure.	X					Chamber	Staff Time	Chamber

## ECONOMIC DEVELOPMENT

	Activity/Project	Time frame					Responsible Party	Cost Estimate	Funding Source(s)
		2023-24	2024-25	2025-26	2026-27	2027-28			
Jenkins County	Improve technological capabilities of the county through the expansion of broadband internet services.	X					City/County through JCDA	\$6 million	JCDA
	Collaborate with Fish and Wildlife and DNR to promote Magnolia Springs and Camp Lawton		X	X	X		JCDA	Staff Time	JCDA

## NATURAL AND CULTURAL RESOURCES

	Activity/Project	Time frame					Responsible Party	Cost Estimate	Funding Source(s)
		2023-24	2024-25	2025-26	2026-27	2027-28			
	Conduct a museum assessment to determine facility needs.		X	X			City/CSRARC	TBD	SEMC/AAM
	Utilize facade grant program and promote use of historic color palate.	X	X	X	X	X	DDA	\$ 500+ per owner	DDA
Jenkins County	Expand park land for county parks and recreation department.	X					County/JCDA	\$185,000	County/ Grants
	Re-initiate the hatchery pond at Bo Ginn National Fish Hatchery.		X				County	TBD	Local Funds/ Grants
	Make improvements to park and recreation infrastructure and equipment.	X					County/JCDA	\$75,000	County

# HOUSING

Activity/Project	Time frame					Responsible Party	Cost Estimate	Funding Source(s)
	2023-24	2024-25	2025-26	2026-27	2027-28			
City of Millen	Identify area within the community for potential residential development or redevelopment.	X				City	Staff Time	Local Funds
	Update nuisance property list for city properties	X		X	X	City	Staff Time	Local Funds
	Continue work in RAS area between Gilmer Street and Buckhead Road with water, sewer,(storm water infrastructure, street improvements, and housing.	X	X	X	X	City/CSRARC	\$1.25 Million	CDBG/CHIP/ Grants
	Continue operation of the city housing program that includes the clearance of vacant buildings, housing rehab, and housing reconstruction.	X	X	X	X	City/CSRARC	\$400k - \$1million	CDBG, CHIP, local funds, Grants
	Initiate housing study in conjunction with the CSRARC		X			city/CSRARC	TBD	local funds/ Grants
	Construct housing in the RAS, including reconstruction and rehab.	X	X	X	X	City/CSRARC	\$1 million	CDBG/CHIP/ Grants

# HOUSING

Activity/Project		Time frame					Responsible Party	Cost Estimate	Funding Source(s)
		2023-24	2024-25	2025-26	2026-27	2027-28			
Jenkins County	Update nuisance property list for county properties.	X		X		X	County	Staff Time	Local Funds
	Work with a developer to secure property and construct a LIHTC development.	X	X	X	X	X	County/JCDA	TBD	Local Funds, LIHTC, private funds
	Update Jenkins County Subdivision Ordinance.	X	X				County	Staff Time	Local Funds

## COMMUNITY FACILITES

	Activity/Project	Timeframe					Responsible Party	Cost Estimate	Funding Source(s)
		2023-24	2024-25	2025-26	2026-27	2027-28			
City of Millen	Complete street scape on Winthrop Ave Phase 3.	X					GDOT	\$200,000 approx	TIA
	Repave streets throughout the city.	X	X	X	X	X	City	\$1 Million	CDBG, Local Funds/TIA/LMIG
	Continue work in RAS area between Gilmer Street and Buckhead Road with water, sewer, storm water, street improvements, and housing.	X	X	X	X	X	City/CSRARC	\$1.25 Million	CDBG
	Replace and upgrade existing sewer lines throughout the city. Add flood and drainage improvements (curb, gutter, and storm water infrastructure.	X	X	X	X	X	City/CSRARC	\$1 Million	CDBG, ARPA, local funds/FEMA, GEFA, USDA, other Grants
	Install playground behind the Community House.		X				City	TBD	Grants
	Construct a walking trail within city limits by the canal to include lighting.		X				DDA	TBD	Grants
	Complete preliminary engineering for sidewalk from Winthrope ave to Barney Ave.		X				City	\$283,800	TAP

## COMMUNITY FACILITIES

	Activity/Project	Timeframe					Responsible Party	Cost Estimate	Funding Source(s)
		2023-24	2024-25	2025-26	2026-27	2027-28			
Jenkins County	Designate an area for industrial infill development.	X					County	Staff Time	Local Funds
	Complete street and drainage improvements on BB Lane.	X	X				County/CSRARC	\$ 926,760	CDBG/Local Funds
	Begin construction of railroad overpass.		X				County/GDOT	\$80 Million	Grants
	Make improvements to park and recreation infrastructure and equipment. Make improvements to lighting and batting cages.		X	X	X		County/CSRA/JCDA	\$ 2 Million	Grants

## LAND USE

Activity/Project		Timeframe					Responsible Party	Cost Estimate	Funding Source(s)
		2023-24	2024-25	2025-26	2026-27	2027-28			
City of Millen	Initiate the creation of community design standards.	X					City	Staff Time	Local Funds
	Identify areas within the community for potential residential development or redevelopment.	X					City	Staff Time	Local Funds
Jenkins County	Adopt a blight tax similar to that of Millen.	X	X				County	TBD	Local Funds



## BROADBAND SERVICES

	Activity/Project	Timeframe					Responsible Party	Cost Estimate	Funding Source(s)
		2023-24	2024-25	2025-26	2026-27	2027-28			
City of Millen	Evaluate opportunities to provide public wi-fi at various locations throughout the city and begin deployment	X	X				City	TBD	Local Funds, Grants
Jenkins County	Evaluate opportunities to provide public wi-fi at various locations throughout the county and begin deployment	X	X	X	X	X	County	TBD	Local Funds
	Install fiber optic Internet throughout the county	X	X	X			County	\$ 13 Million	Grants/ Local Funds





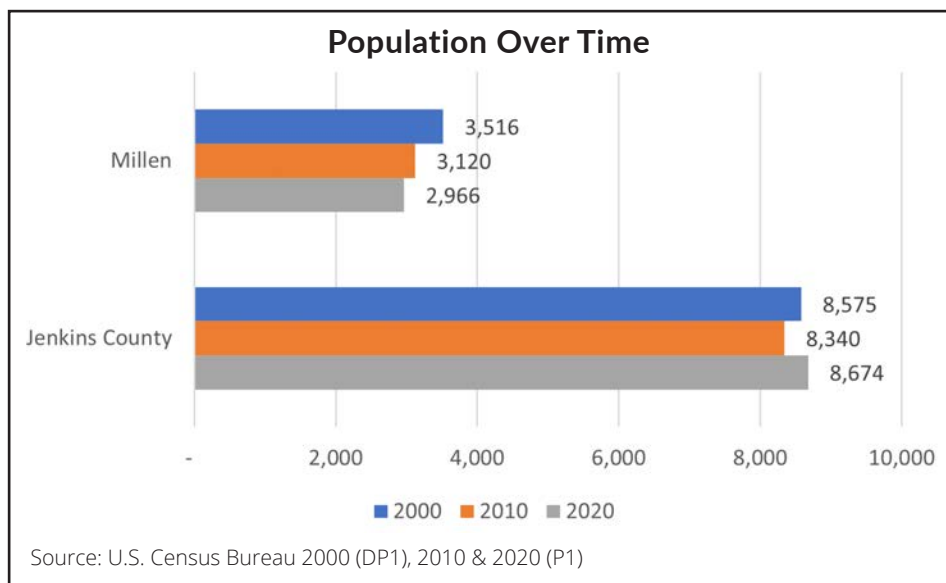


## APPENDIX A: Existing Conditions

## GENERAL DEMOGRAPHICS

Demographics, or the statistical data regarding a population or particular group, are significant for identifying trends within each community. While geography may remain the same, the character of a community can shift overnight as new citizens arrive or established businesses leave. Effective local governments analyze their respective demographics and adjust the policies that will allow their communities to flourish.

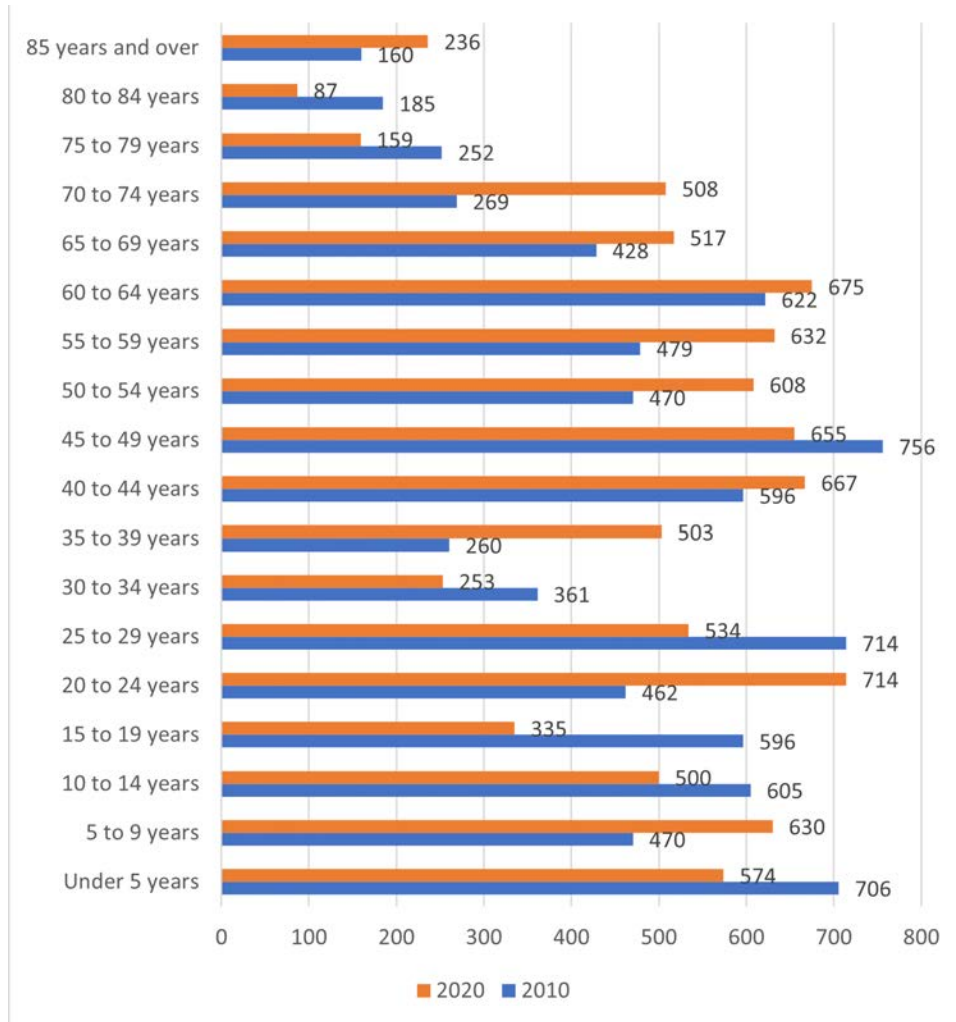
Data collected from the U.S. Census Bureau is the basis for the analysis of demographic and related changes throughout this document. Census data from the years 2000 and 2010, along with the 2016-2020 American Community Survey 5-year estimates (2020 ACS) are used.



### Population

According to the U. S. Census Bureau, the population in Jenkins County in 2020 was 8,674, which reflects an increase of 4% from 2010. During this ten-year time period, Millen experienced a 5% decrease in population, and in 2020 the city had an estimated population of 2,966. Most citizens live in the unincorporated areas of Jenkins County. As of 2020, the median age was 42 in Jenkins County and 48 in the City of Millen.

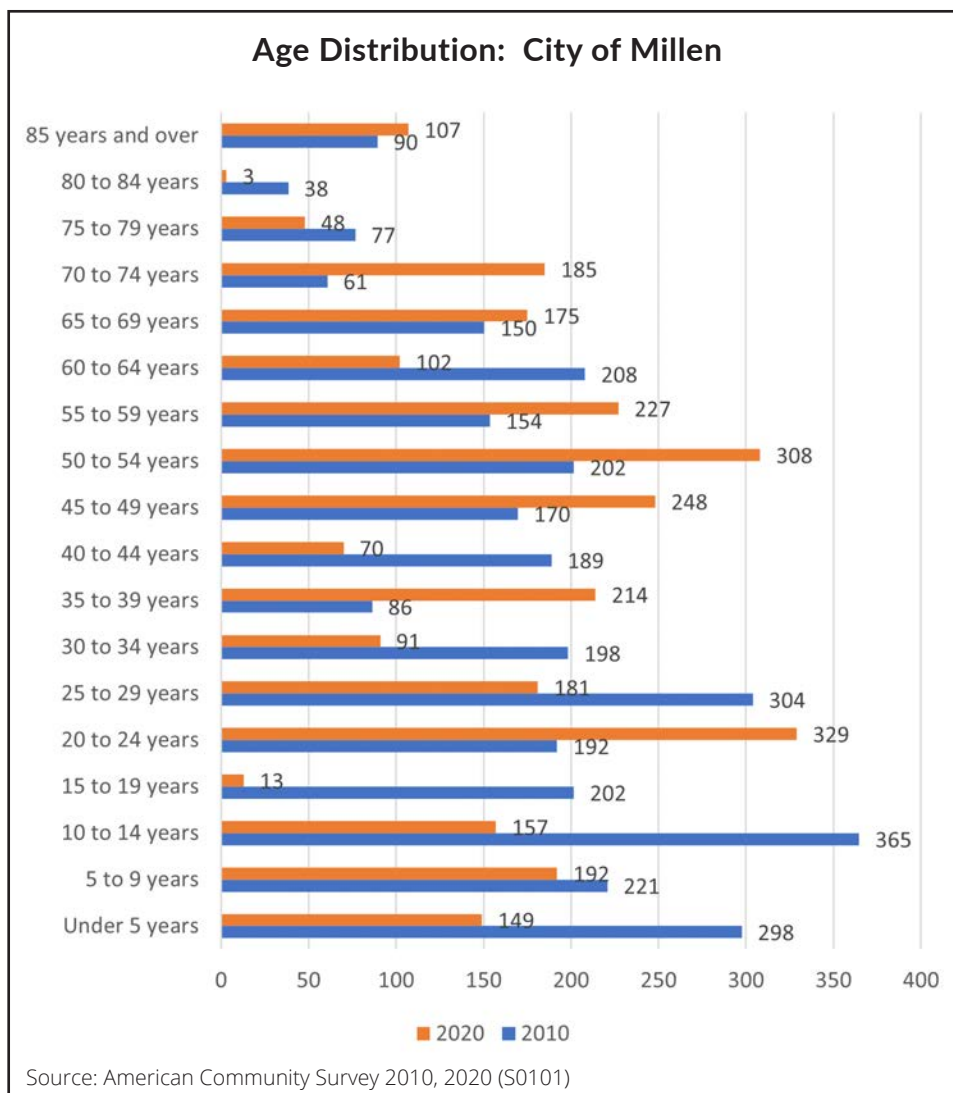
### Age Distribution: Jenkins County



Source: American Community Survey 2010, 2020 (S0101)

### Age Distribution

In Jenkins County, the age groups with the largest portions of the population in 2020 were 20-24 years and 60-64 years. The age groups with the most gains in Jenkins County between 2010 and 2020 were 35 -39 years (93% increase) and 70-74 years (89% increase) in 2020. The largest decrease in population were age groups 80-84 years (53% decrease) and 15-19 years (44% decrease) in population.

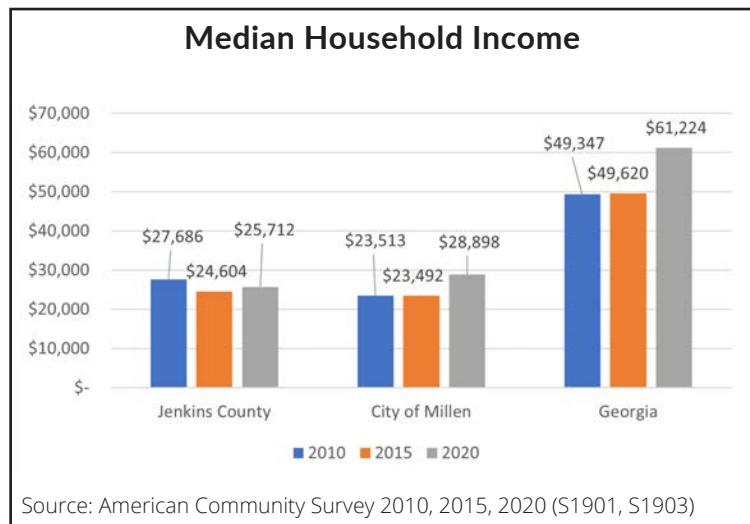


In Millen, the age groups with the largest portions of the population in 2020 were 20-24 years and 50-54 years. In Millen between 2010 and 2020, all age groups below the age of 20 experienced a decline. Of those, the group to experience the greatest decline was ages 15-19 (93.5%). In contrast, nearly all age groups over 35-39 years experienced an increase. Of those, the group to experience the greatest increase in number was ages 70-74. With the population of seniors increasing, service provision and quality of life measures for them must be taken into account.

## Income and Poverty

In general, poverty describes an absence of money or resources that would allow an individual to satisfy their basic needs. In an effort to better quantify poverty, the U.S. Census Bureau along with the Office of Management and Budget (OMB) established monetary thresholds to determine poverty status. The thresholds are updated for inflation using the Consumer Price Index, but they do not change based on geography. For example, in 2021, a family of four was considered to be living beneath the poverty threshold if their combined income was under \$27,479.

The U. S. Census Bureau gauges a geographic area's income using Median Household Income (MHI). The MHI is meant to represent the average person living in a respective area. The MHI in Jenkins County has grown \$1,108 in the last five years. The city of Millen has experienced an MHI increase of 5,406 in the same time period. The state of Georgia MHI has grown by \$11,604 since 2015.



Both Jenkins County and the City of Millen had a decrease in the overall number of residents living in poverty. The population of Jenkins County decreased by 7.3% and the overall number of residents living in poverty decreased by 5.2%. The population of Millen grew by almost 19% while decreasing its number of residents living in poverty by 21%.

### Community Poverty

	Jenkins County	City of Millen
2015 Total Population Estimate	8,831	2,291
2015 Below Poverty Level	2,984	1,274
2015 % Below Poverty Level	33.80%	43.60%
2020 Total Population Estimate	8,183	2,722
2020 Below Poverty Level	2,826	1,006
2020 % Below Poverty Level	34.50%	37%

Source: American Community Survey 2015 & 2020 S1701



# BROADBAND SERVICES

Throughout this country and the world, the value of reliable Internet service is important. As technology advances, high-speed connections are becoming increasingly critical parts of everyday life. This high-speed Internet is also known as “broadband,” and it impacts many industries, including agriculture, retail, and education. Rural communities like Jenkins County tend to lag behind their urban counterparts in broadband access, and this insufficient access affects the community’s ability to grow, recruit business, and retain residents.

## What is Broadband?

Broadband is high speed Internet as defined by the Federal Communications Commission (FCC). The FCC has set minimum standards for the speed at which the consumer receives data (25 Mbps) and the rate at which the consumer sends data back to the data provider (3 Mbps). Slow data speeds are frustrating for computer and smartphone users and can also have a negative impact upon business, education, and healthcare access.

## The ACE Act

The Federal Communications Commission (FCC) currently defines high-speed Internet access as download speeds of at least 25 Mbps and upload speeds of at least 3 Mbps. The infrastructure of broadband is often described in three different sections: backbone, middle mile, and last mile. The backbone (aka trunk lines) are the major high-speed transmission lines linking smaller networks across the country.

The middle mile is the connection between the backbone network and local networks. The last mile is the connection between the local network and end users (homes, institutions, businesses, etc.). Broadband includes several high-speed transmission technologies, such as fiber optic, wireless, Digital Subscriber Line (DSL), coaxial cable, and satellite.

In 2018, the Georgia General Assembly passed the “Achieving Connectivity Everywhere (ACE) Act” as Senate Bill 402. The ACE Act enables several things, including:

- local governments to apply for financial incentives for broadband services
- the Georgia Department of Transportation to use interstate highway rights-of-way for deployment of broadband services and other emerging communications technologies.



The ACE Act also requires each local government in the state to incorporate a “Broadband Services Element” into its local comprehensive plan.

## **Served and Unserved Areas**

Working with several other state agencies, providers and the regional commissions, the Georgia DCA has mapped areas in the state that are served and unserved areas for broadband availability. Information on census-block level access was provided by the Georgia Broadband Deployment Initiative (GBDI) for this section of the plan. The GBDI, launched in 2018, represents a collaborative effort by multiple state agencies to promote and deploy broadband level Internet in unserved areas across Georgia. This service is for a minimum of 25 Mbps download and 3 Mbps upload speeds. An “unserved” area means a census block in which broadband services are not available to 20% or more of the locations in that block (as determined by DCA). A “served” area does not imply subscription, only access. Additionally, it is still possible to have individual homes or businesses within a served area that are unserved. Jenkins County, as displayed in the map on the next page, is 51% unserved, with 2,444 served locations in the county.

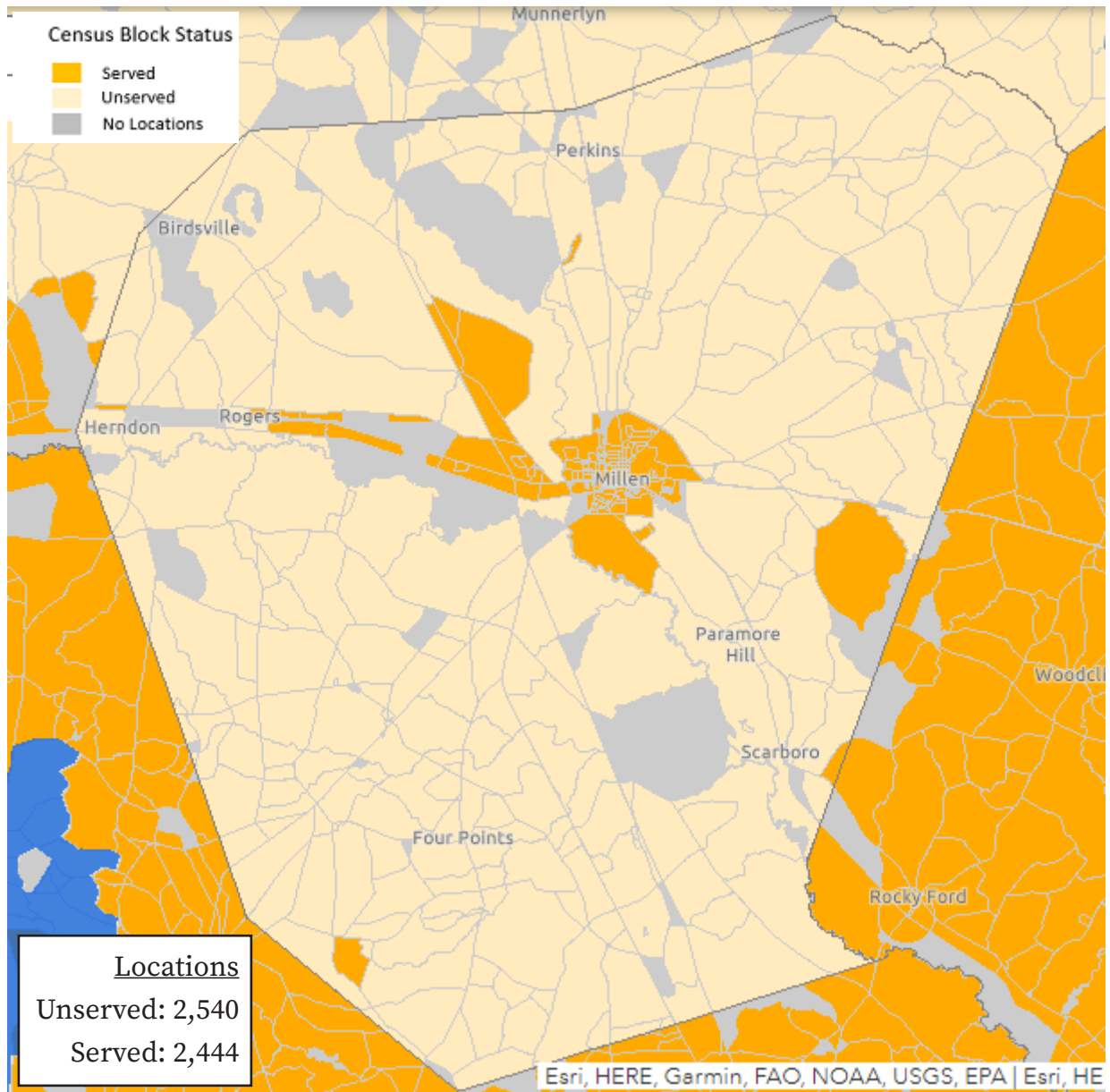
## **Rate of Broadband Adoption**

Research on the outcomes of broadband expansion has revealed that provision of the infrastructure itself is not typically sufficient to realize the myriad benefits touted. Results suggest that policy makers must broaden their focus to include adoption and efficient use of the technology. Once broadband is available, residents must be willing and able to pay for subscriptions and adequate hardware, and competent to use it for their personal/professional benefit. Research sponsored by the Benton Institute for Broadband and Society developed a four part strategy as being essential to promoting meaningful broadband adoption. The four-part strategy is below.

1. Providing low-cost broadband
2. Connecting digital literacy training with relevant content and services
3. Making low-cost computers available
4. Operating public access computer centers

Jenkins County has received funding to install fiberoptic internet throughout the county. It will be available to residents, and county buildings will be connected. Second stage efforts will include supporting adoption of the newly installed broadband.

## Served/Unserved Jenkins County



Source: [broadband.georgia.gov/maps](http://broadband.georgia.gov/maps)

# ECONOMIC DEVELOPMENT

## Labor Force Participation

Census data reveals that the population over age 16 has grown in Jenkins County since 2011; and there was also a rise in the total number in the labor force. The percentage of the age 16+ population that is unemployed has decreased from 5% (347 people) to 1.9% (134 people). This decrease in the number of unemployed citizens should have decreased the number of citizens not in the labor force. The percentage of residents not in the labor force remained relatively stable.

### Labor Force Participation

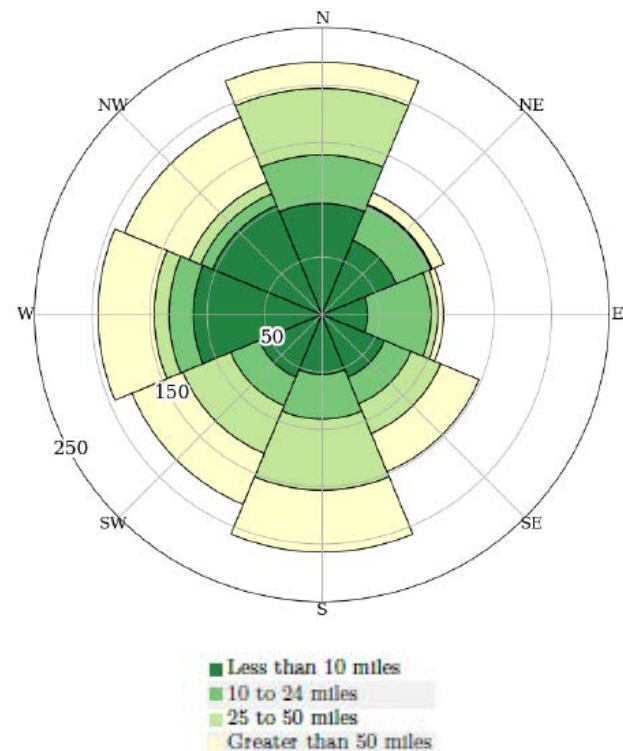
Jenkin's County Labor Force Participation and Unemployment Rates						
	2011-2015	Percent 16+ Population	2016-2020 ACS	Percent 16+ Population	Change	Percent Change
Population 16+	6,909	100%	7,041	100%	132	2%
Total in Labor Force	3,382	49%	3,430	48.7%	48	1.4%
Civilian Labor Force	3,382	49%	3,430	48.7%	48	1.4%
Employed	3,035	43.9%	3,296	46.8%	261	8.6%
Unemployed	347	5%	134	1.9%	-213	-61.3%
Armed Forces	0	0%	0	0.0%	0	0%
Not in Labor Force	3,527	51%	3,611	51.3%	84	2.4%

Source: American Community Survey 2015, 2020 (DP03)

## Jobs by Distance/Destination

The direction and volume of traffic leaving Jenkins County for employment purposes is depicted in the radial diagram below. The majority of the labor force works inside Jenkins County. According to the American Community Survey, 62.4% of residents drive under 25 miles for work purposes. The residents that travel between 25 and 50 miles for work is 16.5%; while the remaining 21.2% travel over 50 miles away.

Distance	2019	
	Count	Share
<b>Total All Jobs</b>	<b>1,356</b>	<b>100.0</b>
Less than 10 miles	592	43.7
10 to 24 miles	253	18.7
25 to 50 miles	224	16.5
Greater than 50 miles	287	21.2

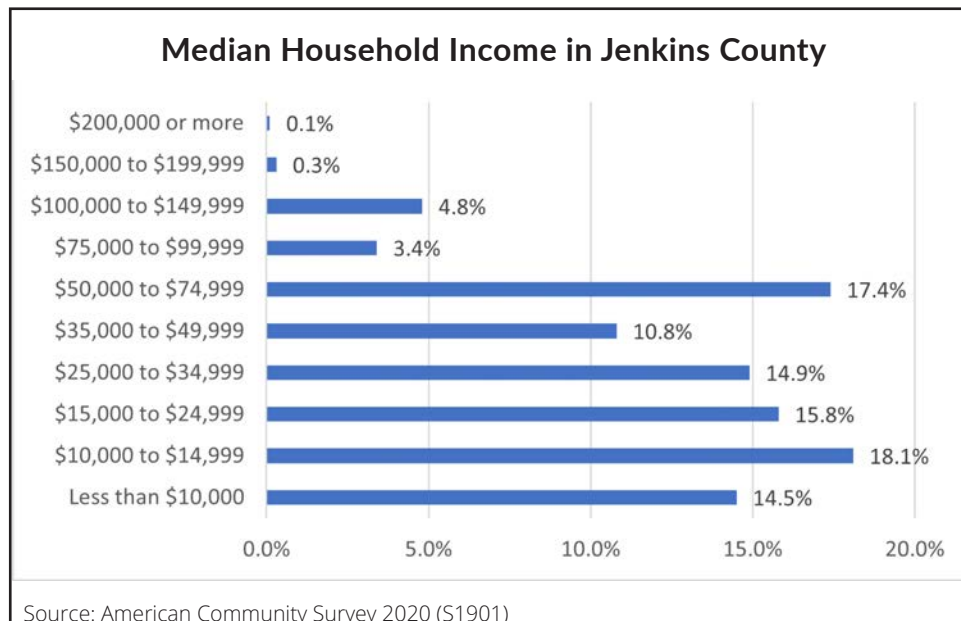


Source: U.S. Census Bureau, OnTheMap 2019

According to the 2020 ACS, the largest industry sectors for employment are educational services, healthcare and social assistance, and manufacturing.

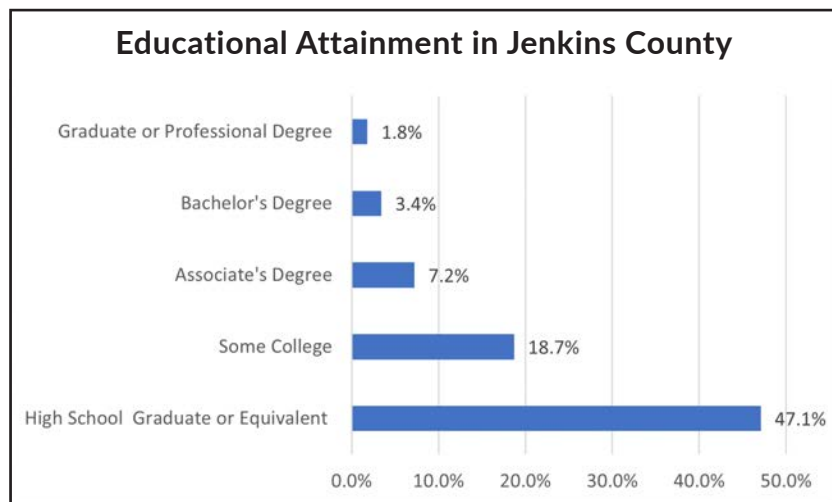
## Median Household Income

The median household income in Jenkins County in 2020 was \$25,712. Over 36% of the county residents make over \$35,000 a year income. Approximately 14% of the population makes \$10,000 or less a year.



## Educational Facilities and Attainment

The Jenkins County public school system includes three (3) schools - one elementary, middle and high school. Total system enrollment for 2022 was 1,146 students: 569 elementary school, 256 middle school, and 321 high school. The represents a decrease over the last decade. In 2010, total school enrollment was 1,502.

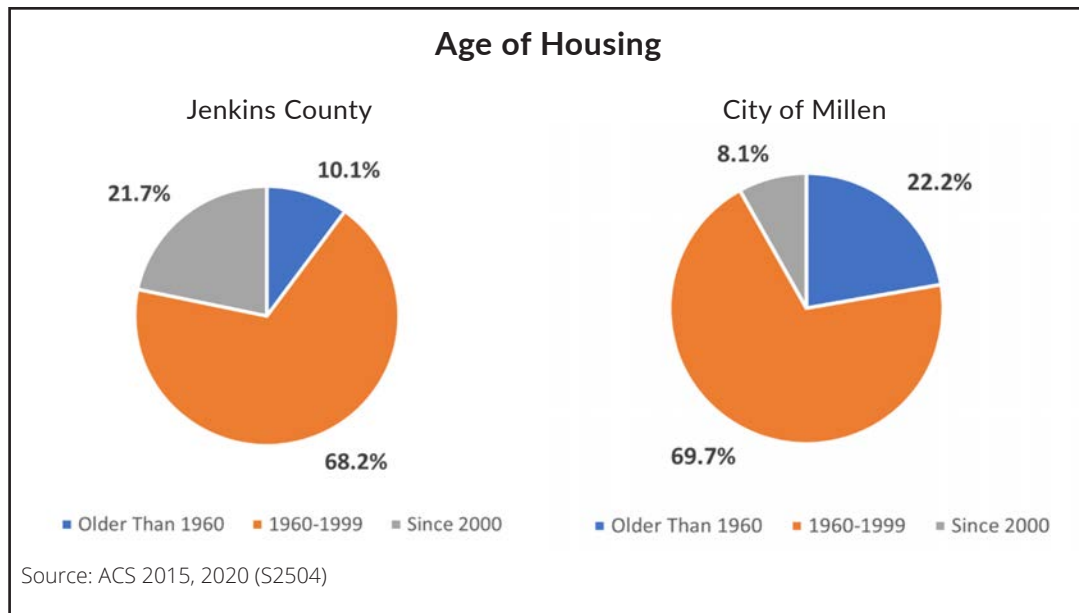


For the 2021 graduating class of 82 students, the graduation rate was 81.7%. The 2020 ACS data indicates that 78.2% of Jenkins County's population has an education that is either equivalent to high school or some or some other form of educational degree.

# HOUSING

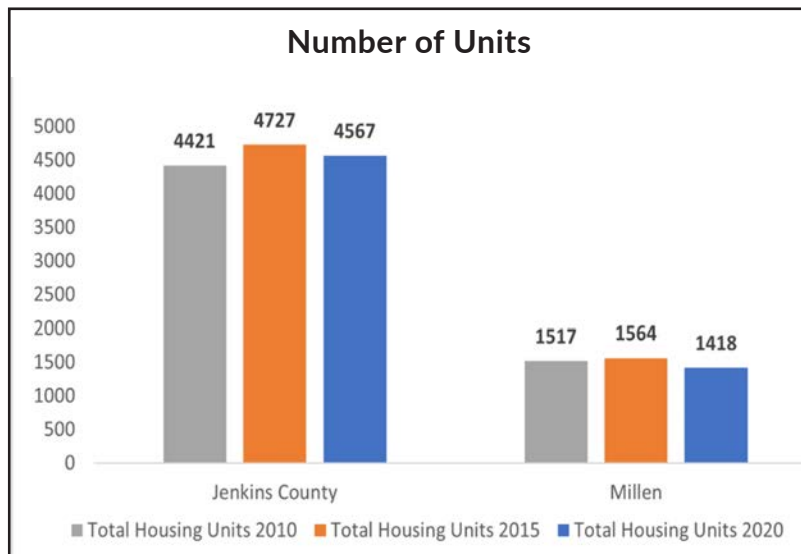
## Age of Housing

Housing units built in between 1960-1999 is the largest group of housing in Jenkins County. Only 10.1% of the existing housing units were built prior to 1960. Similar to the county, the majority of existing housing units within the City of Millen were built between 1960-1999. Older housing built prior to 1960 makes up 22.2% of housing units. As with a number of rural communities in the CSRA, new construction of affordable housing is a challenge. The City of Millen has started a housing development through the Low Income Housing Tax Credit program to construct a much-needed apartment complex.



## Number of Housing Units

Housing unit comparisons show that both Jenkins County and Millen lost housing units between 2010-2020. Jenkins County housing units decreased by 3.4%, while Millen decreased by an even greater 9.3%. In comparison, the state of Georgia saw a 4.8% increase

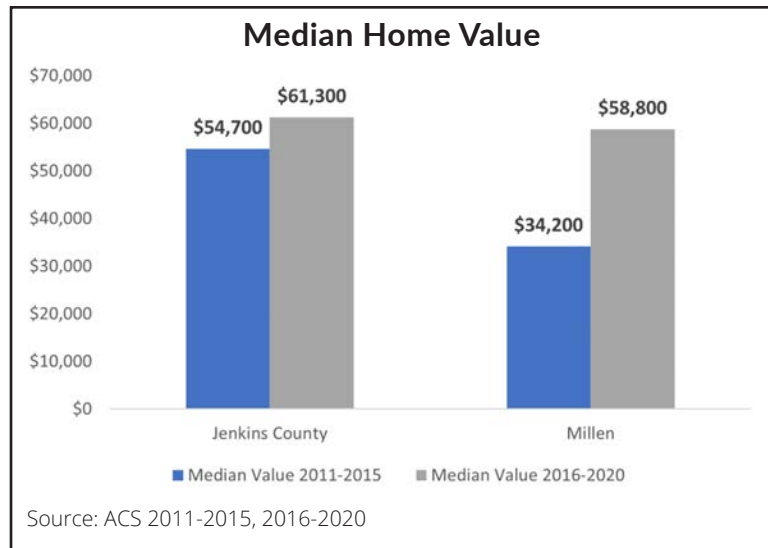


in housing units between 2010-2020. Overall, there are more people and less housing now than in 2010. The population of Jenkins County increased 334 between 2010-2020, while the City of Millen saw a loss of 154 citizens. Encouraging population growth would be greatly aided by adequate levels of affordable housing units.

## Housing Cost

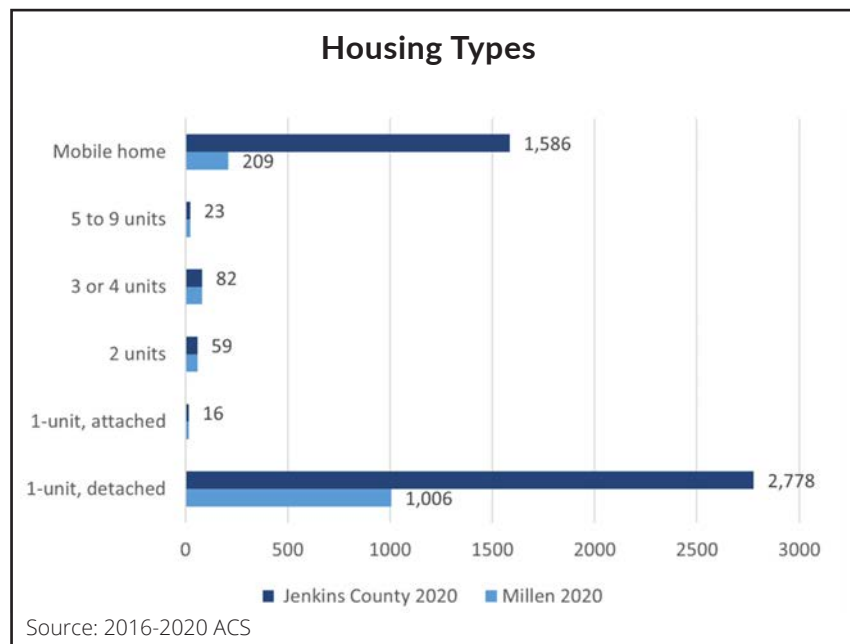
Median home values increased in both the city and county between 2011 and 2020.

The City of Millen experienced increases of 72% in median home values, and Jenkins County experienced a 12% increase. Between 2011 and 2020, Jenkins County median rent increased 13% to \$574. The City of Millen's increased 19% to \$706. The state of Georgia saw a 28.4% increase in median home values and an 18.5% increase in median rent during the same period.



## Housing Types

There is little diversity in the types of housing found within Jenkins County. Citizens must choose between a mobile home or a detached single family home if they choose to live in the county. The lack of multi-family units makes it hard to accommodate seniors and potential homeowners that are seeking smaller units requiring less upkeep. The City of Millen has all of the multi-family housing that is found within both municipalities.



## **Housing Occupancy**

Occupancy and home ownership shifted between 2011-2020 for both Millen and Jenkins County. Owner-occupied housing units predominate in Jenkins County at over 75.4% of all units. Owner-occupied properties increased by 9.5% in Jenkins County and 0.5% in Millen. The state of Georgia had similar changes in vacancy rates, but home ownership dropped by 6.6%. The City of Millen has 38.6% renter-occupied housing units as of 2020, but it also has the only multi-family housing in either jurisdiction.

Vacancy rates in Jenkins County decreased by 0.4% and by 7% in Millen. Although the vacancy rates have decreased, they are still high at 25.7% and 22.5% respectively as of 2020. The state of Georgia's vacancy rate is 11.5%.



# COMMUNITY FACILITIES

## **Water Supply**

The ability to provide potable water to both citizens, businesses, and industries within the city and county is fundamental to having a sustainable community. A surplus of potable water allows for further economic and residential development.

Jenkins County residents primarily use private wells for potable water. Business and residents within the Millen public water service area being the exception. The City of Millen public water service area covers 80 percent of the city and can provide up to 3.816 million gallons per day (GPD) with an average daily demand 500,000 GPD. This water is provided by four deep water wells and three storage tanks with the ability to hold 950,000 gallons combined.

## **Sewerage**

A sewerage system is another fundamental component of a sustainable community which serves as a separate but necessary companion to the water supply. Jenkins County does not offer a sanitary sewer services, however, a limited area outside of Millen is provided by City of Millen. These areas are primarily in the industrial area located along the southeastern boarder of Millen.

The City of Millen has the capacity to treat 990,000 GPD however the daily demand has an average of 400,000 GPD. Treatment is provided through an oxidation pond in the southwestern section of the City of Millen with an entrance located on Highway 25.

## **Public Safety**

Jenkins County and the City of Millen both operate separate law enforcement agencies. The Jenkins County Sheriff's Department currently has eight sworn law enforcement officers including the Sheriff, Chief Deputy Sheriff, 6 deputies, and one K-9 unit operated by the Chief Deputy Sheriff. This number of law enforcement officers provides an adequate level of coverage per ideal ratio from the United States Department of Justice Bureau of Statistics. The City of Millen operates a police force comprised of 11 sworn law enforcement officers. Jenkins County operates it own jail system and contracts use with the city.



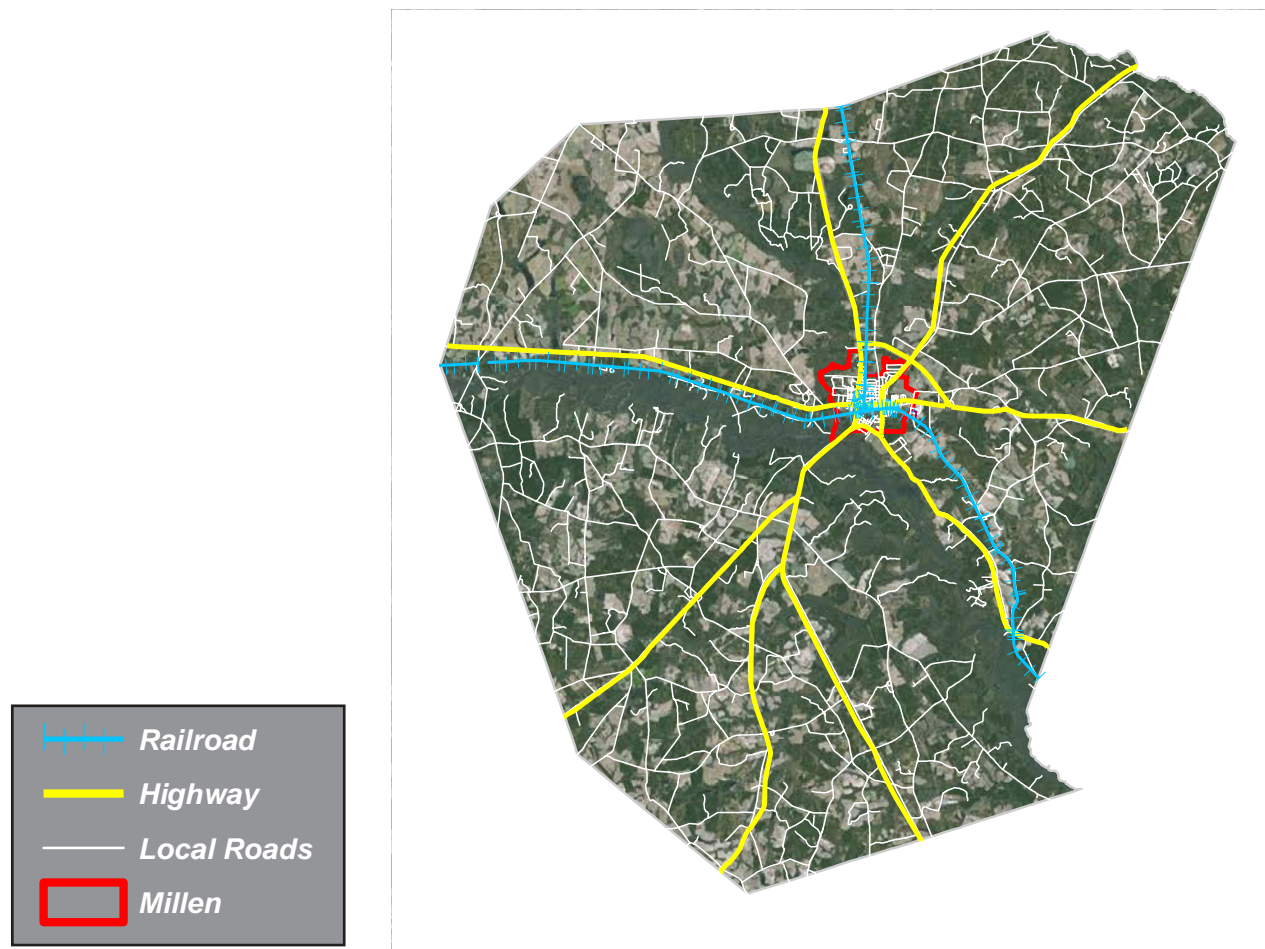
## Fire

Fire fighting services are provided by two volunteer county fire departments and supported by a city fire department with 9 full time fire fighters and 23 volunteer fire fighters. The Fire Department currently carries a Insurance Service Office (ISO) rating of class 5.

## Roadways and Railroads

Jenkins County currently contains a total of 722.01 miles of local roads, state and federal highways. Primary north south corridors include U.S. Highway 25 (Statesboro Road) and State Highway 67. The primary east-west routes is Georgia Highway 17 (Winthrop Ave.) and Georgia Highway 21.

The City of Millen is a railway hub for the area. Norfolk Southern operates a class 1 freight corridor through most parts of Georgia. There are currently 31.7 miles of railroad tracks within the county leading to the north and along an east-west line.



# NATURAL AND CULTURAL RESOURCES

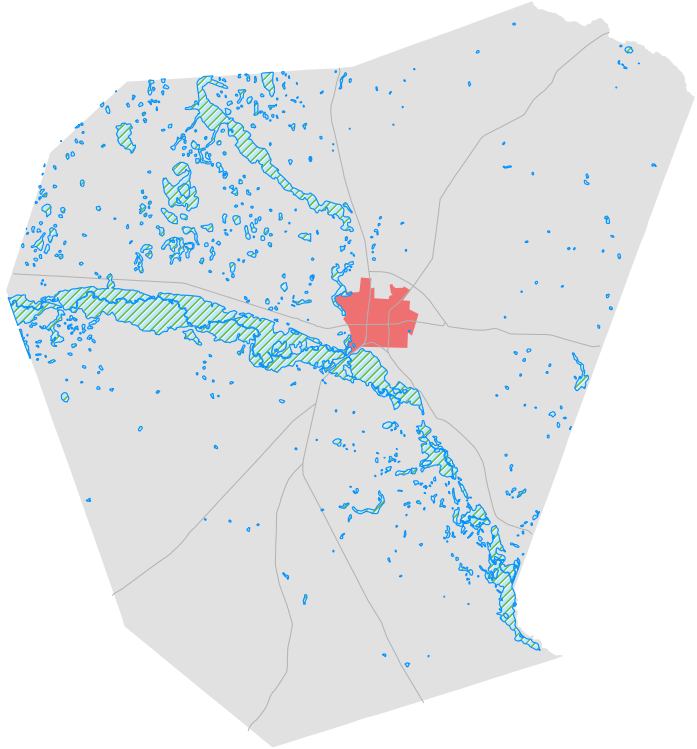
## Wetlands

Wetlands are lands which are permanently or seasonally saturated with water from a nearby water body or through prolonged rain events. These areas contain a unique ecosystem with vegetation characteristic to the southern United States. Wetlands provide a singular habitat for fish and certain types of wildlife, breeding grounds, and an ecosystem for plant life and animal species that have adapted to these special conditions.

There are five specific categories of wetlands that are required by the Georgia Department of Natural Resources to have special protection. They are as follows: open water, non-forested, scrub-scrub, forested, and altered.

There are approximately 15,804 acres of wetlands covering over 7 percent of the county. The wetlands in Jenkins County and the City of Millen are not categorized. In the future, when time and funds are available, the local governments may wish to work the Georgia EPD to complete a survey of wetlands in the area.

Jenkins County Wetlands



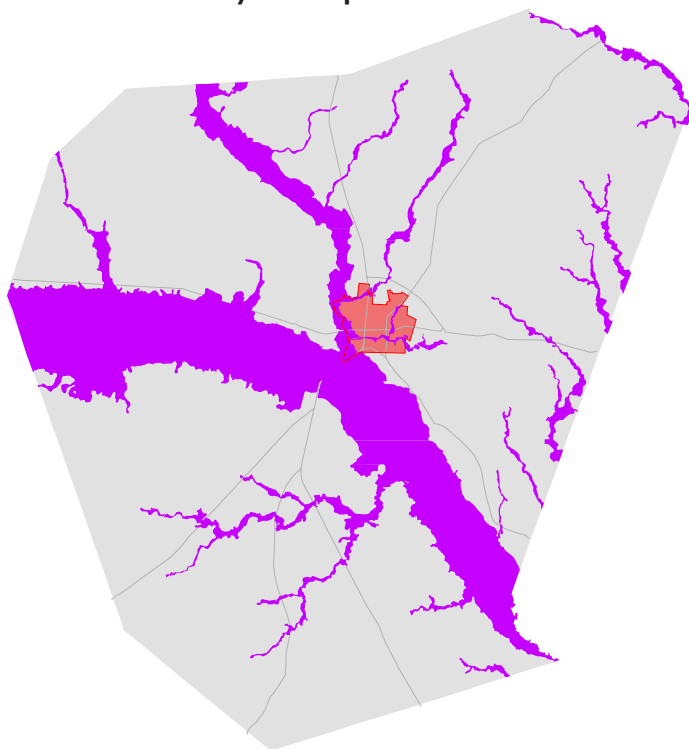
## Flood Plains

Flooding can be defined as a situation in which the overflow of water submerges land that is not usually inundated with water. A floodplain is an area designated to store natural water and conveyance, maintain water quality, and provide for ground water recharge. Floodplains sometime contribute to community issues such as property damage and the loss of potentially developable land. Land development has also had the impact of creating new flood areas due to a mix of increased storm water runoff,

lack of storm water draining to accommodate increased runoff, and continuous development with impervious surfaces.

Jenkins County contains 41,349 acres of flood plains, according to the United States Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map. The areas identified on the adjacent map are in the 100-year floodplain. That encompasses approximately 18 percent of the county. These corridors primarily align with existing water courses in the county.

**Jenkins County Floodplains**



## **Cultural Resources**

Jenkins County and the City of Millen have a rich heritage of historic resources and cultural sites that the County and City have aggressively worked to develop for public use in partnership with federal, state, and local historical agencies and organizations in the past decade. These resources pose an opportunity to better understand how historic resources locally contributed to the Civil War, Reconstruction, and more well into the twenty-first century. The preservation and interpretation of these resources is important to understanding the environment in which they were created and who we are as a culture in this rural setting.

There are four listings in the National Register of Historic Places for Jenkins County and the City of Millen:

Birdsville Plantation, Jenkins County

Camp Lawton, Jenkins County

Downtown Millen Historic District, City of Millen

Jenkins County Courthouse (Part of a Thematic Statewide National Register listing)

Jenkins County has a nationally important Civil War historic site known as Camp Lawton within the boundaries of Magnolia Springs State Park. During 2010-2011, Georgia Southern University's Department of Sociology and Anthropology discovered the boundaries of the stockade and remaining earthworks. The Department excavated artifacts and collected primary information that is housed both in a museum in the state park and at Georgia Southern University Museum.

During the latter part of the Civil War, when Confederate prison Camp Sumter (in Andersonville, Georgia) became hopelessly overcrowded, Camp Lawton was built. Over 10,000 soldiers were transferred there. Operating only three months, 725 died there and were buried in the two adjacent cemeteries. The soldier bodies were later re-interred at the Beaufort National Cemetery. Camp Lawton was ultimately abandoned as news of Union General William Tecumseh Sherman arrived that he was advancing towards Millen on his March to the Sea through Georgia. Prisoner exchanges were made and the last prisoners were evacuated on November 22, 1864. When Union cavalry forces invaded the camp only four days later, they burned the stockade and any outbuildings. Interpretive signage and remains of the forts and earthwork can be viewed by visitors.

Jenkins County has a designated Scenic Byway with a Corridor Management Plan. The Scenic Byway program was developed to preserve Georgia's legacy of scenic heritage woven together by an extensive system of roads and highways in a way that enhances economic development. The Millen-Jenkins County Scenic Byway is a 35-mile loop that begins in the Downtown Millen Historic District. The Byway travels along Cotton Avenue past the city's two railroad depots, one of which is the city-county history museum and Chamber of Commerce.

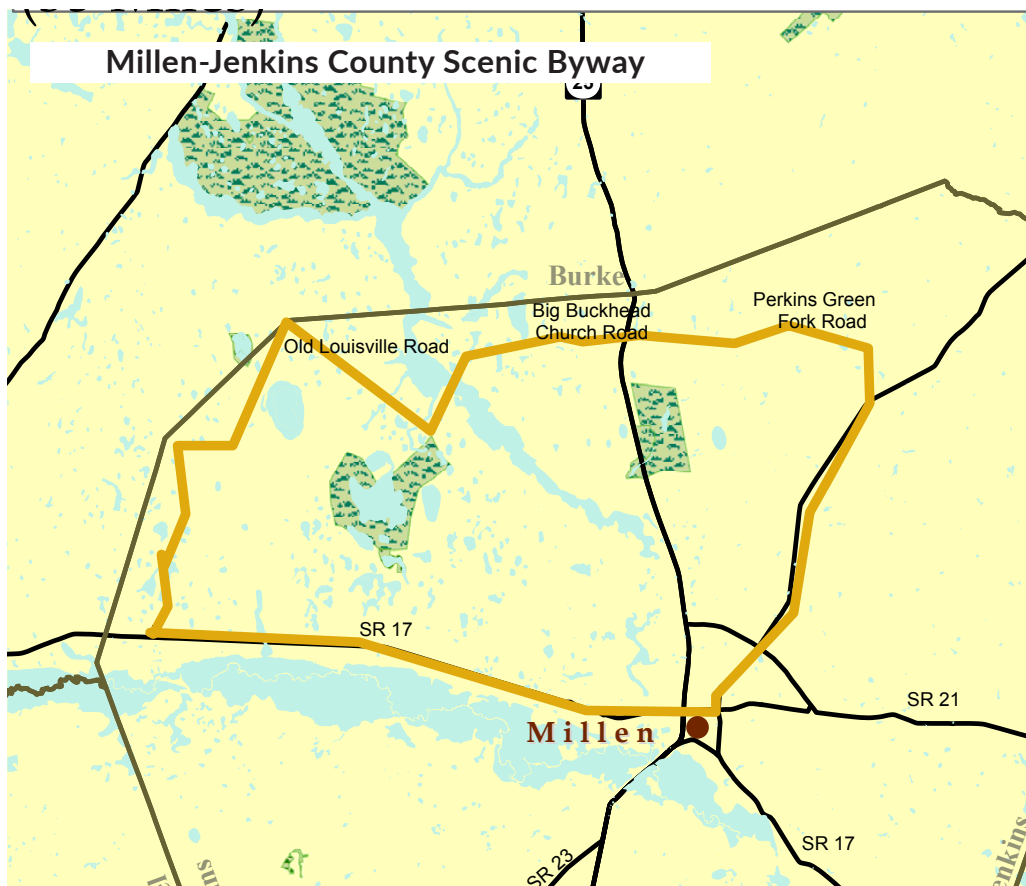
The Byway proceeds to SR 23 and to Perkins Green Fork Road, whose scenic character is exhibited by woodlands, pasturelands, and historic farmhouses in scattered communities. Distinctive viewsheds are found on Herndon Road, along with several historic churches. SR 17 heads back to Cotton Avenue and is characterized by open farmland stretching for miles.

The City of Millen has a dynamic Main Street program with a Facebook page that keeps abreast of promoting events for community revitalization and for economic development.

Main Street Millen’s mission is “to make Millen a place where people want to stay and live through improvement of its economic, cultural, aesthetic, and social aspects while maintaining its historic quality and small town atmosphere...” The Main Street Millen program has become a center for events that bring people downtown while creating a sense of place and vitality.

The City has utilized Transportation Enhancement funds to complete a network of revitalized downtown streets for enhancement of pedestrian use as connecting sidewalks, amenities such as lighting, benches, and trash receptacles, and street crosswalks and paving are installed with sensitivity to the historic landscape.

The Jenkins County Courthouse is the county’s largest community landmark. Built in 1910 in the Neoclassical Revival style by architect L.F. Goodrich, Jenkins County has completed much work towards restoration of this public place where most of the legal functions of the county take place. In 2011, with assistance of grant funds, the County invested in a historic preservation plan to guide the County’s courthouse restoration efforts. This plan should continue to be followed.









This portion of the planning document provides the following: Steering Committee Members | Meeting Dates | Sign In-Sheets  
Newspaper Ads

## Hearings & Meetings

Page 10 - Wednesday, August 10, 2022

The stork made a special delivery last Thursday afternoon at 12:58 p.m., when Lillian James Johnson was born to proud parents Joshua and Lauren Johnson. Lillian James weighed 6lbs and was 19 1/2 inches long. Her three brothers, Jude, Jax and Jett couldn't wait to meet her! Joshua is the pastor of Oak Hill Baptist Church.

### Public Hearing Notice Jenkins County-City of Millen Joint Comprehensive Plan

Jenkins County and the City of Millen will hold a joint public hearing on Thursday, August 25, 2022, at 11:00 a.m. in the Jenkins County Board of Commissioners' Meeting Room (833 East Winthrop Ave. Millen, GA 30442). The purpose of this meeting will be to initiate the comprehensive plan process for Jenkins County and the City of Millen by briefing members of the community on the process for plan development and pending opportunities for public participation and gather general input. The Comprehensive Plan document establishes long-term goals and policies and a short-term action plan by which the governments will manage future community growth and development. Residents wishing to comment or make suggestions should be in attendance.

For more information,  
Contact: Grady Saxon, Jenkins County Administrator, Phone: (478) 982-2563  
Contact: Jeff Brantley, City of Millen Administrator, Phone: (478) 982-6100

Jenkins County and the City of Millen are local government jurisdictions committed to providing all persons with equal access to its services, programs, activities, education and employment regardless of race, color, national origin, religion, sex, familial status, disability or age. For a reasonable accommodation or if you need an alternative format or language, please call the contact person listed for the public hearing at least two business days prior to the public hearing during the following hours: 8:00 a.m. - 5:00 p.m. Monday-Friday except holidays. Persons with hearing disabilities can contact the Georgia Relay Service, at (TDD) 1-800-255-0056, (Voice) 1-800-255-0135, 7-1-1.

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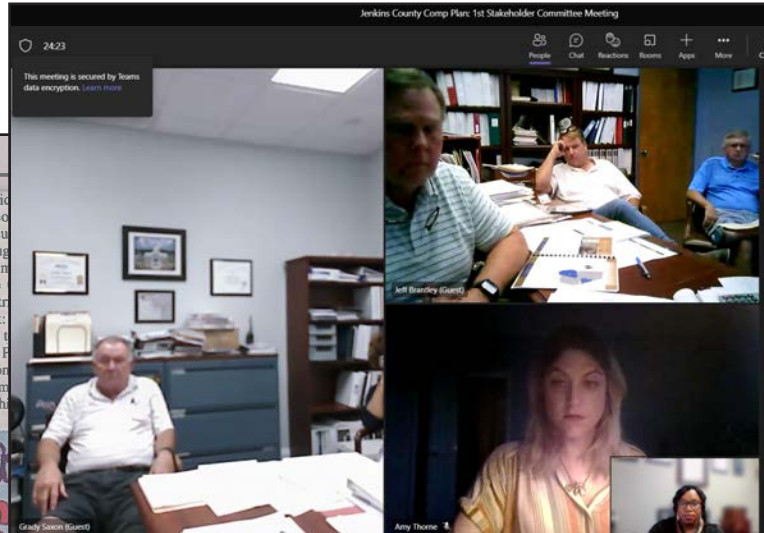
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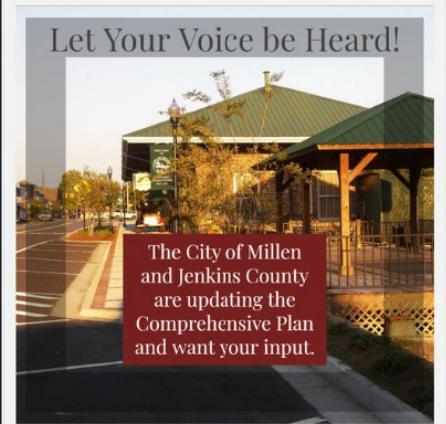
**www.la**

There will be a 10% Buyer's Fee with a  
There will be a \$25  
There will be a \$75 title fee  
ALL SALES ARE FINAL  
or good personal or company check a  
Georgia Sales Tax will be added to y



**CSRA Regional Commission**  
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The City of Millen and Jenkins County are updating the 2023-28 joint comprehensive plan. This joint effort is led by a stakeholder committee that wants the input of those who live, work and own property in the city and county. The plan serves as an update to the 2018 plan and will be the guiding document for community projects over the next 5 years. The final plan will include information on economic development, housing, broadband, community facilities and cultural resources... See more



Jenkins County Joint Comprehensive Plan  
Stakeholder's Meeting #2  
November 28, 2022 | 11am | Jenkins Co. Board of Commissioners Meeting Room

Name	Email	Affiliation (City Department Name, Organization Name, or Resident)
Nicee D Long	nlong@csra.rc.ga.gov	CSRA RC
April Young	ayoung@csra.rc.ga.gov	CSRA RC
Heidi Spaul	GH.SPAN@GMAIL.COM	JENKINS Co. Comm.
Monica Underwood	jcd@bellsouth.net	Jenkins County Development Authority
Jeff Brantley	jbrantley@cityofmillen.ga.gov	City of Millen
Grady Saxon	gradysaxon@jenkinscounty.ga.gov	Jenkins County
Theresa Becker	rockerine@bellsouth.net	City of Millen
Sara L. Kite	DOLPHIN229@gmail.com	City of Millen



## Burke Health brings in nuclear medicine

LACEY ZORN  
lzorn@burkehealth.com

Nuclear Medicine is a specialized area of radiology that uses a small amount of radioactive material to examine organ function and structure.

Last week, Burke Health completed its first round of Nuclear Cardiac Stress Testing using state-of-the-art technology purchased for the Burke Imaging clinic that recently relocated to the former library on 4th Street.

A nuclear cardiac stress test helps cardiologists diagnose and monitor heart problems,

such as coronary artery disease, by injecting a small amount of the radioactive substance into your bloodstream. Then, a special camera takes pictures of blood flow in and around the heart in two phases: resting and after exercise.

The test can also determine whether your heart muscles are pumping well, identify poor blood flow, locate blocked arteries, and show whether your heart has been damaged, for example, by a heart attack.

The addition of nuclear medicine at Burke Health is part of their broader plan for implementing a wide range of

cardiovascular services.

The Cardiac CathLab has completed diagnostic procedures since last summer and will be fully operational in February as the unit continues to climb the certification ladder successfully.

Cardiac Cath ICU and 24/7 Emergency Cardiac Coverage are set to be in tandem with the Cath Lab Interventional Procedure Certs in the coming weeks.

"Providing access to cardiovascular services is vital in rural communities because every second counts when you have heart failure. The additions of

preventative care and diagnostic imaging provide convenient access to vital healthcare that many rural Americans lack. We are excited about this milestone and the ones coming next month in our cardiology unit," stated Paul Thompson, Director of Emergency Services & Cardiac Cath.

While providing services for Burke Health and its affiliated clinics, Burke Imaging also offers outpatient services through referrals from other practicing physicians.



Continued from front

## Edenfield

Leesburg, SC, contacted Emily and asked her to continue her counseling work at this camp and she accepted the invitation.

"I love counseling. You like to think that you're making a difference in the lives of the kids that attend, but they're making a difference in my life. There's one camper who started attending when she was six. She's now 16, and it's heartwarming to watch her grow up. She messages me and wants to make sure that I'm going to be at camp," Emily said.

"I'm just so proud of her. When she was diagnosed, she was the only student in the local school system with a diagnosis of diabetes," said Susan. "Emily started wanting to give back, even then. She did Hats on for Diabetes when she was in middle and high school. Those events benefitted the Juvenile Diabetic Research Foundation. This has been a learning experience for our entire family," said Susan.

Acting on their desire to help others, Emily and

her dad, Tracy Edenfield, are coordinating a local event that will support the camp in SC. The Camp Sweet Escape 5K fundraiser will be held Feb. 11th in Millen at the Jenkins County Courthouse. A fun run/walk will begin at 8 a.m. and the 5K at 8:30 a.m. The cost is \$15 for the fun run and \$25 for the 5K. Participants can register on [runsignup.com](http://runsignup.com) or on the day of the event at 7:00 a.m. on the lawn of the courthouse. The deadline to guarantee a long-sleeved T-shirt is Jan. 31.

Sponsors for the event are needed. The deadline for signing up as a sponsor is also Jan. 31. Bronze level is \$100; Silver is \$200; and Gold is \$250. All sponsors will receive a T-shirt, and names of all sponsors will be included on the back of the T-shirts with the Gold levels having their logos displayed. Interested sponsors can request sponsorship forms from [sweetescapesk@gmail.com](mailto:sweetescapesk@gmail.com) or from Emily or Tracy. There will also be a drawing for some great prizes.

"When Emily attended as a camper, the cost was \$50 for the week. Today, the cost is \$499 per camper," said Susan. "The cost is a hardship for a lot of the campers who really need this counseling for their diabetes management."

Camp Sweet Escape is a non-profit and was created to allow Type 1 Diabetes children to enjoy a normal summer camp experience surrounded by others with Type 1 while promoting diabetes education and ensuring their safety.



Emily Edenfield, wearing sunglasses in first row, is shown with other counselors at Camp Sweet Escape.

### Public Hearing Notice Jenkins County Joint Comprehensive Plan

Jenkins County and the City of Millen will hold a joint public hearing on Tuesday, February 14, 2023, at 11:00 a.m. in the Jenkins County Board of Commissioners' Room 833 East Winthrop Ave. Millen, GA 30442. The purpose of this hearing is to brief the community on the contents of the Jenkins County Joint Comprehensive Plan and notify residents of when the plan will be submitted for review. Residents wishing to comment or make suggestions should be in attendance.

The draft plan is available digitally on the CSRA Regional Commission's website (<https://csrac.org/planning-documents>) and in hard copy at Millen city hall and the Jenkins County courthouse.

For more information,

Contact: Grady Saxon, Jenkins County Administrator, Phone: (478) 982-2563

Contact: Jeff Brantley, City of Millen Administrator, Phone: (478) 982-6100

Jenkins County and the City of Millen are local government jurisdictions committed to providing all persons with equal access to its services, programs, activities, education, and employment regardless of race, color, national origin, religion, sex, familial status, disability, or age. For a reasonable accommodation or if you need an alternative format or language, please call the contact person listed for the public hearing at least two business days prior to the public hearing during the following hours: 8:00 a.m. - 5:00 p.m. Monday-Friday except holidays. Persons with hearing disabilities can contact the Georgia Relay Service, at (TDD) 1-800-255-0056, (Voice) 1-800-255-0135, 7-1-1.

### Jenkins County Joint Comprehensive Plan Stakeholders Meeting #3 January 27, 2023 | 2pm | Jenkins Co. City Hall



Name	Email	Affiliation (City Department Name, Organization Name, or Resident)
Dwight, Pamela	<a href="mailto:pamelia.dwight@corecivic.com">pamelia.dwight@corecivic.com</a>	Commissioner
Parrel Clifton	<a href="mailto:DClifton229@gmail.com">DClifton229@gmail.com</a>	City Council
Grady Saxon	<a href="mailto:gsaxon@bellsouth.net">gsaxon@bellsouth.net</a>	Development Authority
King, Rocker	<a href="mailto:rockering@bellsouth.net">rockering@bellsouth.net</a>	City of Millen Mayor
Jeff Brantley	<a href="mailto:jbrantley@cityofmillen.ga.gov">jbrantley@cityofmillen.ga.gov</a>	City of Millen

Jenkins County Joint Comprehensive Plan Public Hearing August 25, 2022   11am   Jenkins Co. Board of Commissioners Meeting Room		
Name	Email	Affiliation (City Department Name, Organization Name, or Resident)
<i>Alvin Rucker</i>	<i>rockerville@bellsouth.net</i>	<i>City of Millen</i>
<i>Grady Saxon</i>	<i>gsaxon@jenkinscountyga.gov</i>	<i>Jenkins County</i>
<i>Jeff Brantley</i>	<i>jbrantley@cityofmillen.ga.gov</i>	<i>City of Millen</i>
<i>Darrel Clifton</i>	<i>dclifton329@gmail.com</i>	<i>City of Millen</i>

## Stakeholder Committee

The members of the Jenkins County stakeholder committee for this planning process were:

Grady Saxon, County Administrator, Jenkins County  
 Jeff Brantley, City Manager, City of Millen  
 Hiller Spann, County Commission, Jenkins County  
 King Rocker, Mayor, City of Millen  
 Darrel Clifton, City Council, City of Millen  
 Pamela Dwight, County Commissioner, Jenkins County  
 Mandy Underwood, Executive Director, Jenkins County Development Authority and Chamber of Commerce

Stakeholder meetings were held on the following dates to provide information, review data, and gain community perspective:

August 25, 2022 | November 28, 2022 | January 27, 2023

Two public hearings were also held as a part of this process on August 25, 2022 and February 14, 2023.

New t



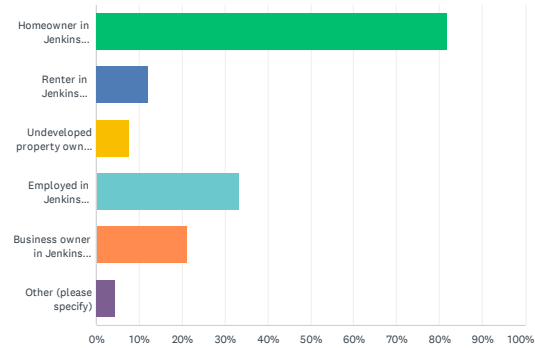
Name	Email	Affiliation (City Department Name, Organization Name, or Resident)
Wendy L. Howard	jcd@bellsouth.net	Development Authority
Jeff Brantley	jbrantley@cityofmillen.ga.gov	City of Millen
Pamela Dwight	pamela.dwight@corecivic.com	JC Boc
Patricia Clifton	P.Clifton229@gmail.com	City of Millen
Grady Saxon	gradysaxon@jenkinscounty.ga.gov	Jenkins County

## Community Survey

The following are summary response charts of select questions from the community survey. Open-ended questions are not included herein, but those questions are covered areas such as SWOT and Needs and Opportunities. The local government officials have retained copies of open-ended responses, including redevelopment ideas and general comments for future use.

Q1 Which of the following categories currently describes you? Check all that apply.

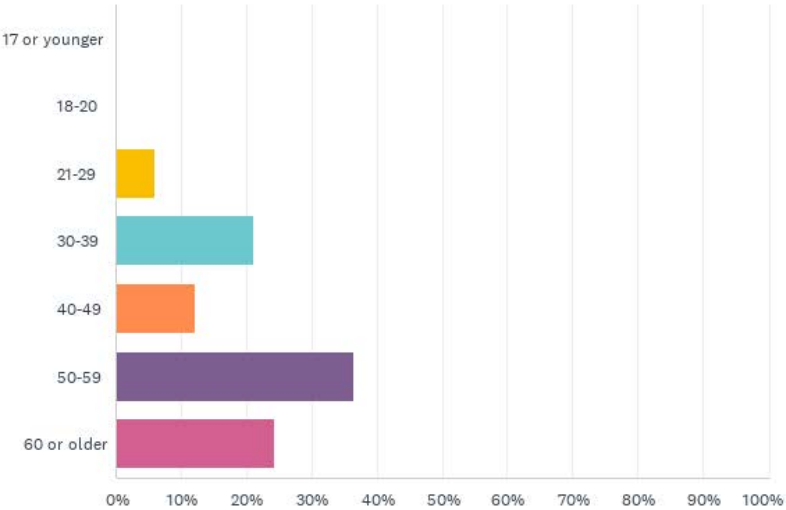
Answered: 66 Skipped: 0



ANSWER CHOICES	RESPONSES	
Homeowner in Jenkins County/Millen	81.82%	54
Renter in Jenkins County/Millen	12.12%	8
Undeveloped property owner in Jenkins County/Millen	7.58%	5
Employed in Jenkins County/Millen	33.33%	22
Business owner in Jenkins County/Millen	21.21%	14
Other (please specify)	4.55%	3
Total Respondents: 66		

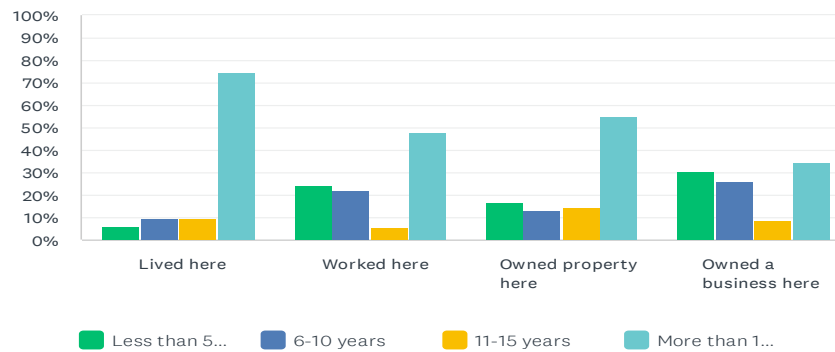
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Q2 What is your age?

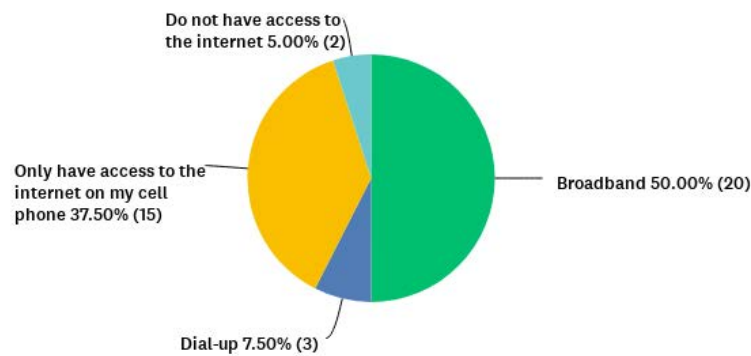


### Q3 How long have you lived, worked, or owned property in our community?

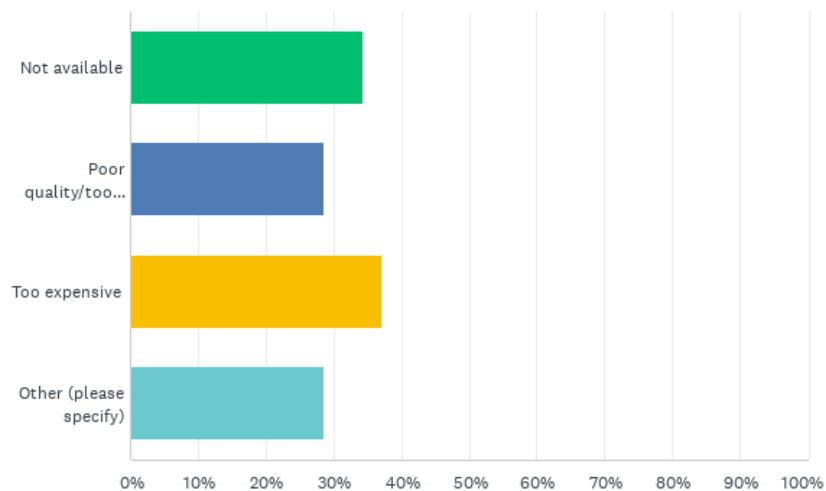
Answered: 66 Skipped: 0



### Q8 What type of internet access do you have at home?

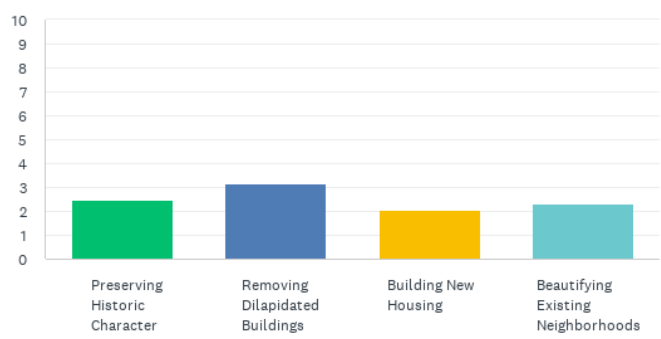


### Q9 What issues do you have with internet at home? Check all that apply.

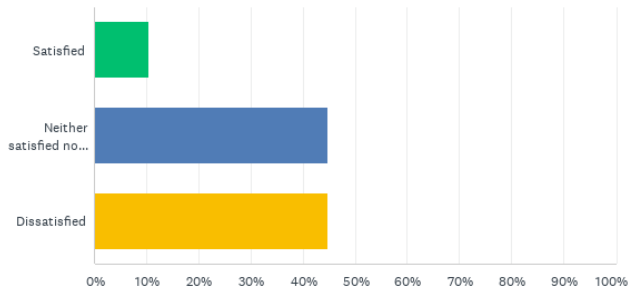




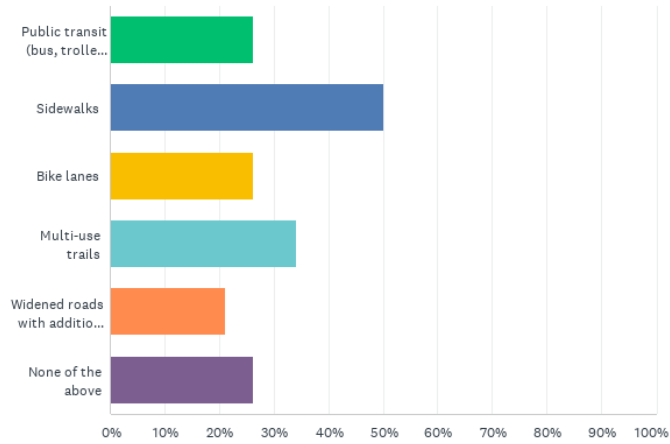
Q10 Please rank the following housing topics based on their importance to you from 1 to 4 (with 1 being most important). Each answer option does require a number rank, and each number can only be used once.



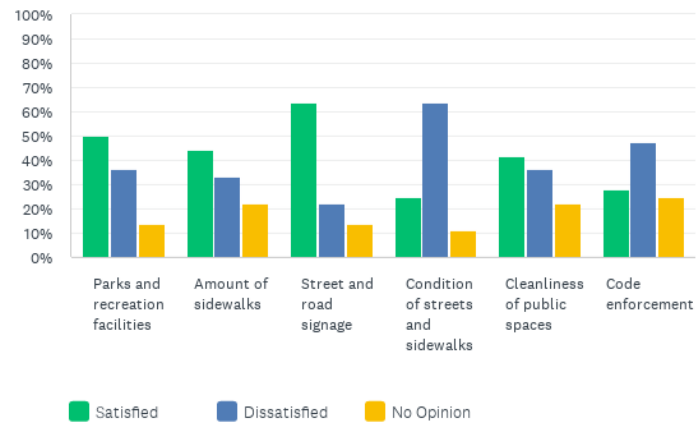
Q11 How satisfied are you with the variety of housing in our community?



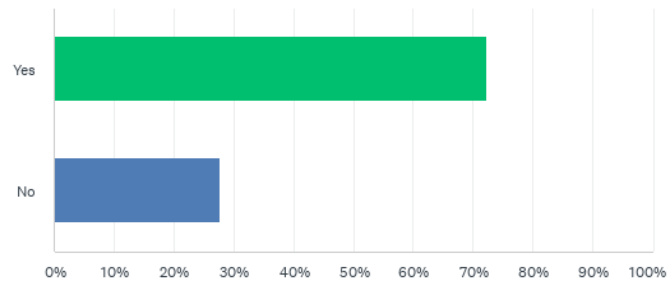
Q12 Which transportation improvements would you like to see more of in our community? Check all that apply.



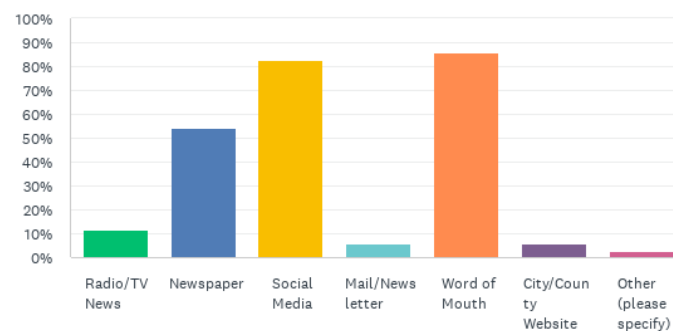
Q13 Please rate your level of satisfaction with each of the following public services or facilities.



Q15 Do you use public facilities such as parks, trails, and ball fields?



Q19 How do you typically find out about what's happening in our community? Check all that apply.



**A Resolution of Jenkins County for the Adoption of  
the  
Jenkins County Joint Comprehensive Plan  
2023-2028**

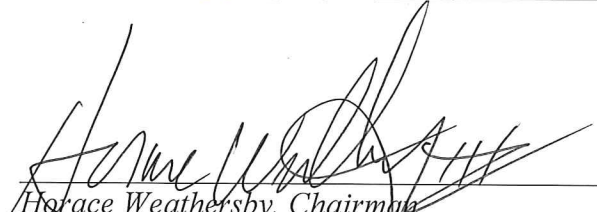
**WHEREAS**, the Jenkins County Board of Commissioners, the governing authority of Jenkins County in conjunction with the City of Millen, Georgia, has prepared the *Jenkins County Joint Comprehensive Plan 2023-2028* to replace their prior joint comprehensive plan and joint comprehensive plan update and,

**WHEREAS**, the *Jenkins County Joint Comprehensive Plan 2023-2028* was prepared in accordance with the Rules and Procedures of the Georgia Department of Community Affairs; and,

**WHEREAS**, the *Jenkins County Joint Comprehensive Plan 2023-2028* has been reviewed by the Central Savannah River Area Regional Commission and the Georgia Department of Community Affairs and found to be in compliance with the minimum "Standards and Procedures for Local Comprehensive Planning;"

**NOW, THEREFORE, BE IT RESOLVED** by the Jenkins County Board of Commissioners that the *Jenkins County Joint Comprehensive Plan 2023-2028* is hereby adopted and that a copy of this resolution shall be submitted to the Central Savannah River Area Regional Commission.

Adopted this 14<sup>th</sup> day of March, 2023

  
\_\_\_\_\_  
Horace Weathersby, Chairman  
Jenkins County Board of Commissioners

**ATTEST:**

  
\_\_\_\_\_  
Grady Saxon, Administrator  
Jenkins County Board of Commissioners



**A Resolution of the City of Millen for Adoption of the  
Jenkins County  
Joint Comprehensive Plan: 2023-2028**

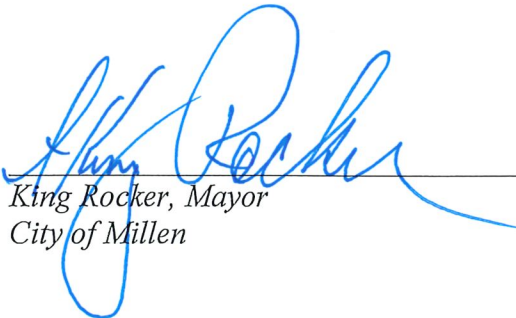
**WHEREAS**, the Millen City Council, the governing authority of the City of Millen, Georgia, has prepared the *Jenkins County Joint Comprehensive Plan: 2023-2028* to replace their prior comprehensive plan and comprehensive plan update and,

**WHEREAS**, the *Jenkins County Joint Comprehensive Plan: 2023-2028* was prepared in accordance with the Rules and Procedures of the Georgia Department of Community Affairs; and,

**WHEREAS**, the *Jenkins County Joint Comprehensive Plan: 2023-2028* has been reviewed by the Central Savannah River Area Regional Commission and the Georgia Department of Community Affairs and found to be in compliance with the minimum "Standards and Procedures for Local Comprehensive Planning;" and,

**NOW, THEREFORE, BE IT RESOLVED** by the Millen City Council that the *Jenkins County Comprehensive Plan: 2023-2028* is hereby adopted and that a copy of this resolution shall be submitted to the Central Savannah River Area Regional Commission.

Adopted this 7<sup>th</sup> day of March, 2023

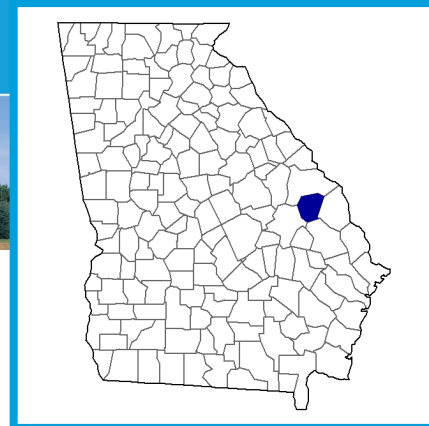
  
\_\_\_\_\_  
King Rocker, Mayor  
City of Millen

**ATTEST:**

  
\_\_\_\_\_  
Jeff Brantley, City Manager  
City of Millen



## Jenkins County Georgia



### Total and Per Farm Overview, 2022 and change since 2017

	2022	% change since 2017
Number of farms	214	+2
Land in farms (acres)	74,888	-6
Average size of farm (acres)	350	-7
<b>Total</b>	<b>(\$)</b>	
Market value of products sold	23,339,000	+8
Government payments	929,000	-66
Farm-related income	2,283,000	+13
Total farm production expenses	21,594,000	+18
Net cash farm income	4,958,000	-39
<b>Per farm average</b>	<b>(\$)</b>	
Market value of products sold	109,062	+6
Government payments <sup>a</sup>	13,090	-53
Farm-related income <sup>a</sup>	33,092	+8
Total farm production expenses	100,905	+16
Net cash farm income	23,170	-40

### (Z) Percent of state agriculture sales

#### Share of Sales by Type (%)

Crops	89
Livestock, poultry, and products	11

#### Land in Farms by Use (acres)

Cropland	33,107
Pastureland	4,310
Woodland	29,457
Other	8,014

#### Acres irrigated: 6,043

8% of land in farms

#### Land Use Practices (% of farms)

No till	21
Reduced till	18
Intensive till	11
Cover crop	15

### Farms by Value of Sales

	Number	Percent of Total <sup>b</sup>
Less than \$2,500	80	37
\$2,500 to \$4,999	20	9
\$5,000 to \$9,999	17	8
\$10,000 to \$24,999	35	16
\$25,000 to \$49,999	13	6
\$50,000 to \$99,999	11	5
\$100,000 or more	38	18

### Farms by Size

	Number	Percent of Total <sup>b</sup>
1 to 9 acres	6	3
10 to 49 acres	49	23
50 to 179 acres	85	40
180 to 499 acres	33	15
500 to 999 acres	24	11
1,000+ acres	17	8

## Market Value of Agricultural Products Sold

	Sales (\$1,000)	Rank in State <sup>c</sup>	Counties Producing Item	Rank in U.S. <sup>c</sup>	Counties Producing Item
<b>Total</b>	<b>23,339</b>	<b>101</b>	<b>159</b>	<b>2,412</b>	<b>3,078</b>
<b>Crops</b>	<b>20,877</b>	<b>56</b>	<b>159</b>	<b>1,816</b>	<b>3,074</b>
Grains, oilseeds, dry beans, dry peas	1,813	70	147	2,054	2,917
Tobacco	-	-	17	-	267
Cotton and cottonseed	11,160	37	92	173	647
Vegetables, melons, potatoes, sweet potatoes	156	78	155	1,563	2,831
Fruits, tree nuts, berries	633	64	157	769	2,711
Nursery, greenhouse, floriculture, sod	-	-	139	-	2,660
Cultivated Christmas trees, short rotation woody crops	-	-	49	-	1,274
Other crops and hay	7,116	41	152	496	3,035
<b>Livestock, poultry, and products</b>	<b>2,462</b>	<b>119</b>	<b>159</b>	<b>2,663</b>	<b>3,076</b>
Poultry and eggs	7	143	154	2,141	3,027
Cattle and calves	1,631	72	156	2,225	3,047
Milk from cows	(D)	41	66	(D)	1,770
Hogs and pigs	(D)	75	124	(D)	2,814
Sheep, goats, wool, mohair, milk	28	76	155	2,098	2,967
Horses, ponies, mules, burros, donkeys	433	9	140	673	2,907
Aquaculture	(D)	15	41	(D)	1,190
Other animals and animal products	-	-	143	-	2,909

Producers <sup>d</sup>	365	Percent of farms that:	Top Crops in Acres <sup>e</sup>
<b>Sex</b>			
Male	227	Have internet access	69
Female	138		
<b>Age</b>			
<35	48	Farm organically	-
35 – 64	188		
65 and older	129		
<b>Race</b>			
American Indian/Alaska Native	-	Sell directly to consumers	6
Asian	1		
Black or African American	23		
Native Hawaiian/Pacific Islander	-	Hire farm labor	28
White	339		
More than one race	2		
<b>Other characteristics</b>			
Hispanic, Latino, Spanish origin	3	Are family farms	94
With military service	48		
New and beginning farmers	117		
			<b>Livestock Inventory (Dec 31, 2022)</b>
			Broilers and other meat-type chickens (D)
			Cattle and calves 5,179
			Goats 387
			Hogs and pigs (D)
			Horses and ponies 134
			Layers 300
			Pullets -
			Sheep and lambs (D)
			Turkeys -

<sup>a</sup> Average per farm receiving. <sup>b</sup> May not add to 100% due to rounding. <sup>c</sup> Among counties whose rank can be displayed. <sup>d</sup> Data collected for a maximum of four producers per farm. <sup>e</sup> Crop commodity names may be shortened; see full names at [www.nass.usda.gov/go/cropnames.pdf](http://www.nass.usda.gov/go/cropnames.pdf). <sup>f</sup> Position below the line does not indicate rank. (D) Withheld to avoid disclosing data for individual operations. (NA) Not available. (Z) Less than half of the unit shown. (-) Represents zero.



# Jenkins

## County



Updated: Nov 2024

## Area Labor Profile

### Labor Force Activity

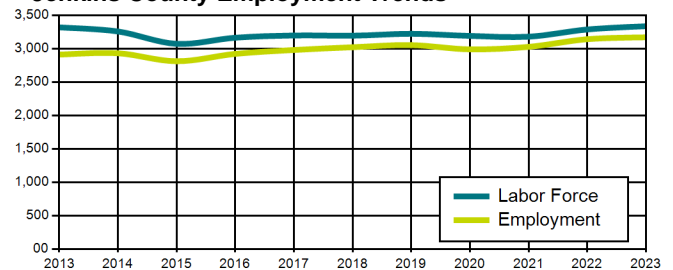
**September 2024**

	Labor Force	Employed	Unemployed	Rate
Jenkins	3,447	3,285	162	4.7%
Bulloch	39,885	38,529	1,356	3.4%
Burke	9,128	8,579	549	6.0%
Emanuel	9,140	8,700	440	4.8%
Screven	4,942	4,677	265	5.4%
<b>Jenkins Area</b>	<b>66,542</b>	<b>63,770</b>	<b>2,772</b>	<b>4.2%</b>
Georgia	5,410,794	5,226,303	184,491	3.4%
United States	168,569,000	162,046,000	6,524,000	3.9%

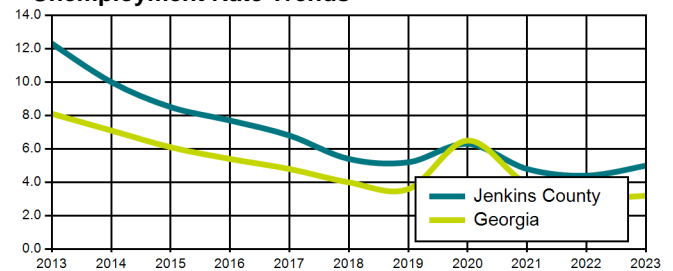
Note: This series reflects the latest information available. Labor Force includes residents of the county who are employed or actively seeking employment.

Source: Georgia Department of Labor; U.S. Bureau of Labor Statistics.

### Jenkins County Employment Trends



### Unemployment Rate Trends

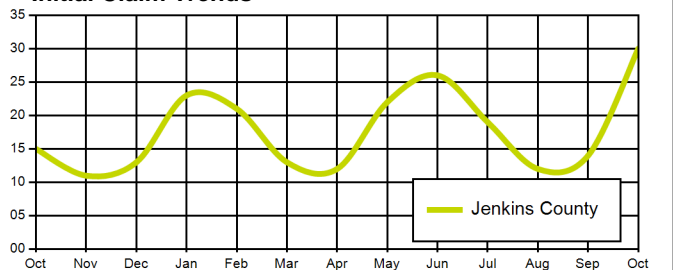


### Initial Claims Activity

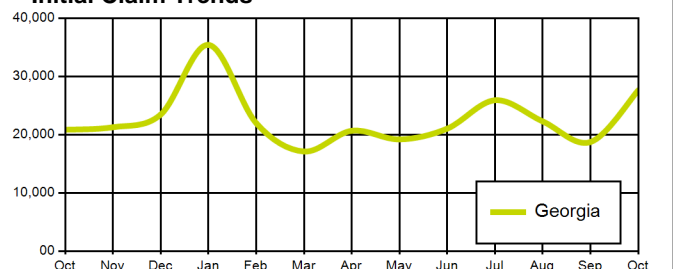
	October 2024	September 2024	August 2024	Total
Jenkins	30	14	12	56
Bulloch	162	116	149	427
Burke	292	79	103	474
Emanuel	172	52	59	283
Screven	131	31	31	193
<b>Jenkins Area</b>	<b>787</b>	<b>292</b>	<b>354</b>	<b>1,433</b>

Source: Georgia Department of Labor; U.S. Bureau of Labor Statistics.

### Initial Claim Trends



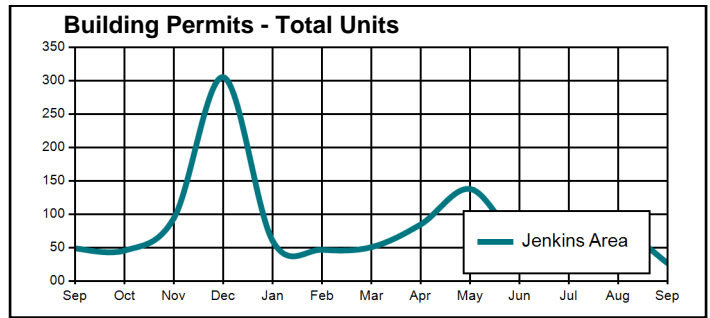
### Initial Claim Trends



## Building Permit Construction Activity

	Jenkins Area			
	September 2024	August 2024	July 2024	Total
Totals	27	79	75	181
Family residential	25	73	71	169
Multi family resident	2	6	4	12

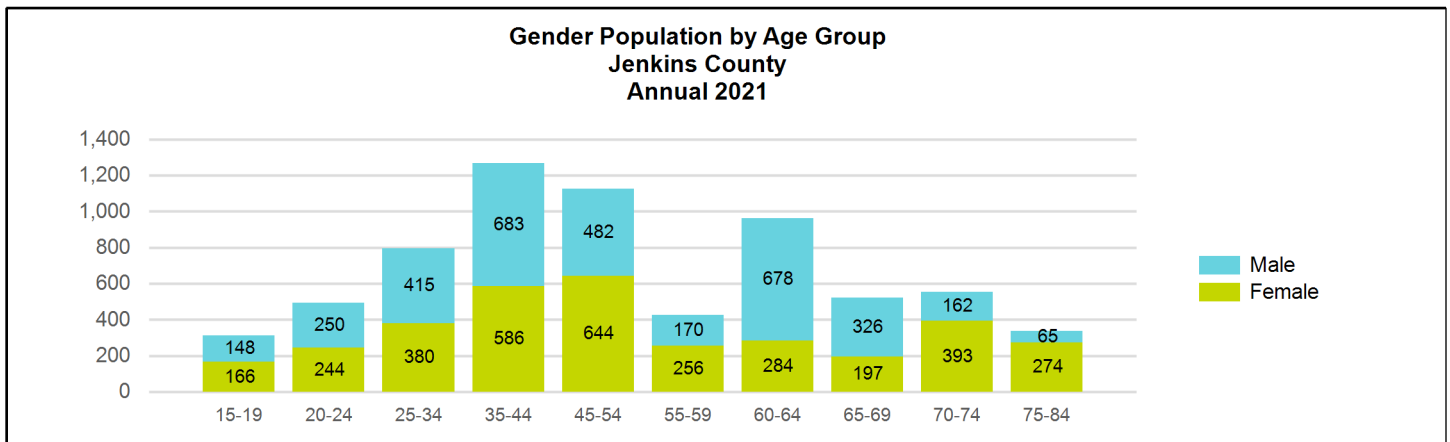
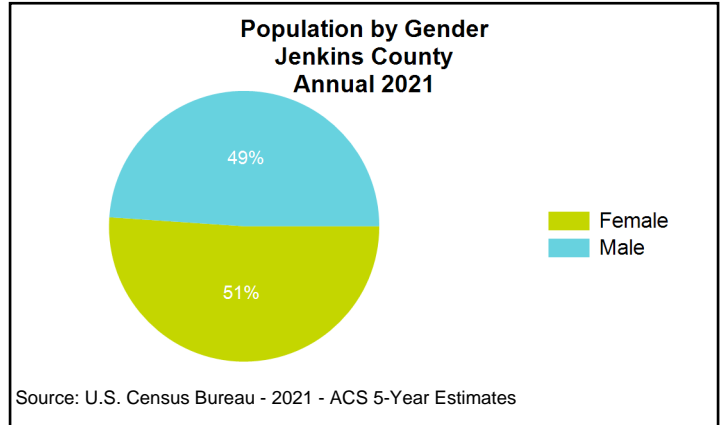
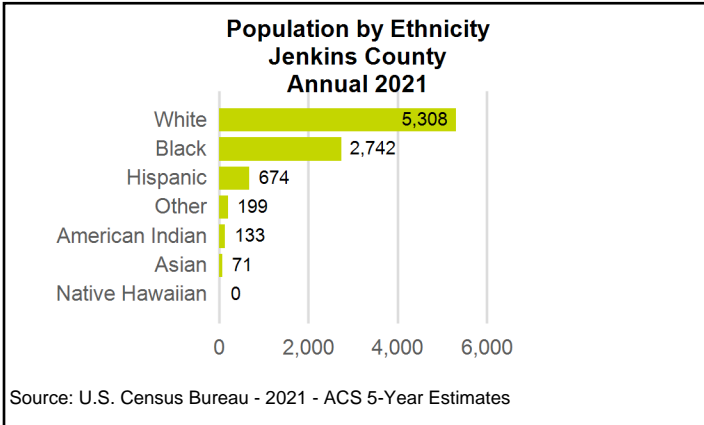
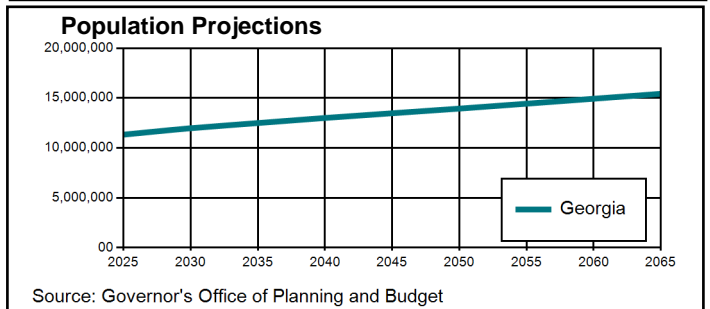
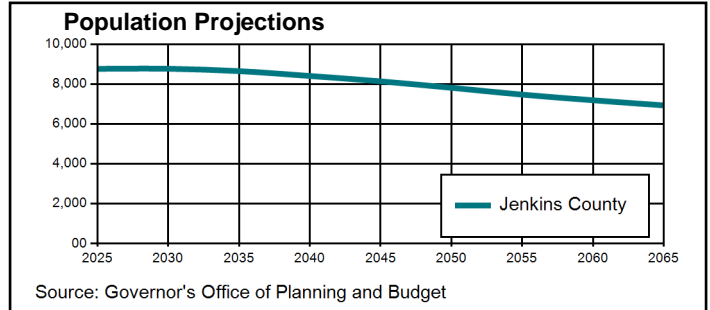
Source: U.S. Census Bureau.



## Population Activity

	Annual 2023	Annual 2022	Difference
Jenkins	8,627	8,689	-62
Bulloch	84,327	83,059	1,268
Burke	24,438	24,388	50
Emanuel	23,119	22,929	190
Screven	14,174	13,977	197
<b>Jenkins Area</b>	<b>154,685</b>	<b>153,042</b>	<b>1,643</b>
Georgia	11,029,227	10,912,876	116,351
United States	334,914,895	333,287,557	1,627,338

Source: Georgia Department of Labor; U.S. Census Bureau.



# Industry Mix - 2nd Quarter of 2024

INDUSTRY	Jenkins				Jenkins Area			
	NUMBER	EMPLOYMENT		WEEKLY	NUMBER	EMPLOYMENT		WEEKLY
	OF FIRMS	NUMBER	PERCENT	WAGE	OF FIRMS	NUMBER	PERCENT	WAGE
<b>Goods-Producing</b>	<b>21</b>	<b>319</b>	<b>19.3</b>	<b>1,002</b>	<b>537</b>	<b>7,417</b>	<b>15.7</b>	<b>1,093</b>
Agriculture, Forestry, Fishing and Hunting	7	20	1.2	981	109	580	1.2	931
Mining, Quarrying, and Oil and Gas Extraction	0	0	0.0	0	3	*	*	*
Construction	9	*	*	*	308	2,265	4.8	1,121
Manufacturing	5	*	*	*	117	4,571	9.7	1,099
Food	1	*	*	*	12	915	1.9	1,090
Chemical	1	*	*	*	7	52	0.1	965
Nonmetallic Mineral Product	1	*	*	*	11	178	0.4	1,051
Primary Metal	1	*	*	*	2	*	*	*
Machinery	1	*	*	*	6	*	*	*
Beverage and Tobacco Product	0	0	0.0	0	1	*	*	*
Petroleum and Coal Products	0	0	0.0	0	1	*	*	*
Textile Mills	0	0	0.0	0	1	*	*	*
Apparel	0	0	0.0	0	2	*	*	*
Electrical Equipment, Appliance, and Component	0	0	0.0	0	2	*	*	*
Printing and Related Support Activities	0	0	0.0	0	3	*	*	*
Plastics and Rubber Products	0	0	0.0	0	3	73	0.2	1,383
Textile Product Mills	0	0	0.0	0	3	91	0.2	316
Computer and Electronic Product	0	0	0.0	0	5	*	*	*
Transportation Equipment	0	0	0.0	0	6	809	1.7	1,151
Furniture and Related Product	0	0	0.0	0	8	56	0.1	889
Miscellaneous	0	0	0.0	0	8	76	0.2	717
Wood Product	0	0	0.0	0	10	419	0.9	1,222
Fabricated Metal Product	0	0	0.0	0	26	1,039	2.2	1,062
<b>Service-Providing</b>	<b>86</b>	<b>928</b>	<b>56.2</b>	<b>852</b>	<b>2,444</b>	<b>28,245</b>	<b>59.8</b>	<b>913</b>
Utilities	1	*	*	*	11	*	*	*
Wholesale Trade	3	21	1.3	1,120	117	1,308	2.8	1,064
Retail Trade	24	178	10.8	535	525	5,965	12.6	619
Transportation and Warehousing	6	20	1.2	1,000	141	1,865	3.9	933
Information	0	0	0.0	0	35	345	0.7	1,245
Finance and Insurance	6	17	1.0	914	180	1,027	2.2	1,134
Real Estate and Rental and Leasing	4	8	0.5	500	124	563	1.2	838
Professional, Scientific, and Technical Services	6	6	0.4	1,137	248	1,279	2.7	1,410
Management of Companies and Enterprises	0	0	0.0	0	10	*	*	*
Administrative and Support and Waste Management and Remediation Services	6	*	*	*	155	1,543	3.3	802
Educational Services	0	0	0.0	0	18	309	0.7	657
Health Care and Social Assistance	11	247	15.0	1,032	356	5,684	12.0	928
Arts, Entertainment, and Recreation	0	0	0.0	0	23	386	0.8	792
Accommodation and Food Services	12	162	9.8	322	300	5,053	10.7	359
Other Services (except Public Administration)	7	16	1.0	781	201	896	1.9	730
<b>Unclassified - industry not assigned</b>	<b>8</b>	<b>2</b>	<b>0.1</b>	<b>713</b>	<b>150</b>	<b>91</b>	<b>0.2</b>	<b>917</b>
<b>Total - Private Sector</b>	<b>115</b>	<b>1,249</b>	<b>75.6</b>	<b>890</b>	<b>3,131</b>	<b>35,753</b>	<b>75.7</b>	<b>950</b>
<b>Total - Government</b>	<b>15</b>	<b>401</b>	<b>24.3</b>	<b>724</b>	<b>206</b>	<b>11,486</b>	<b>24.3</b>	<b>978</b>
Federal Government	4	19	1.2	1,065	39	280	0.6	1,258
State Government	7	28	1.7	707	78	3,800	8.0	1,154
Local Government	4	354	21.4	707	89	7,406	15.7	877
<b>ALL INDUSTRIES</b>	<b>130</b>	<b>1,652</b>	<b>100.0</b>	<b>849</b>	<b>3,337</b>	<b>47,239</b>	<b>100.0</b>	<b>957</b>
<b>ALL INDUSTRIES - Georgia</b>					<b>392,216</b>	<b>4,866,656</b>		<b>1,297</b>

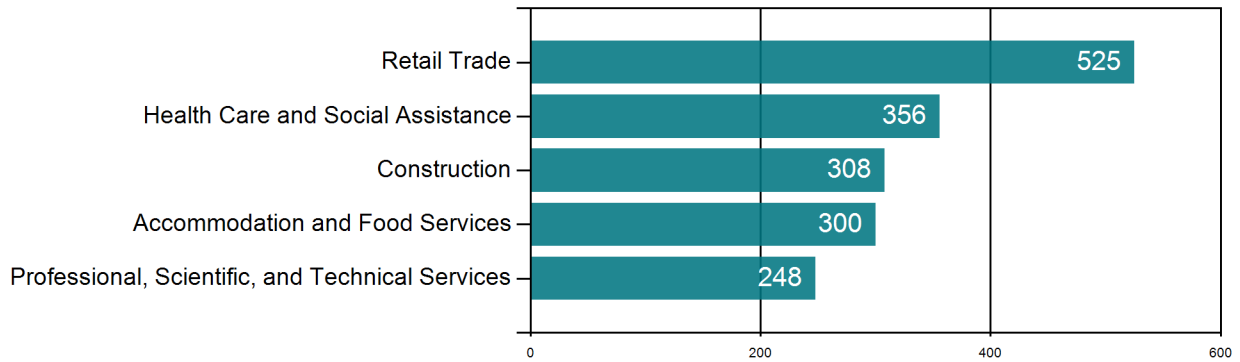
Note: \*Denotes confidential data relating to individual employers and cannot be released. These data use the North American Industrial Classification System (NAICS) categories. Average weekly wage is derived by dividing gross payroll dollars paid to all employees - both hourly and salaried - by the average number of employees who had earnings; average earnings are then divided by the number of weeks in a reporting period to obtain weekly figures. Figures in other columns may not sum accurately due to rounding. All figures are 2nd Quarter of 2024.

Source: Georgia Department of Labor. These data represent jobs that are covered by unemployment insurance laws.

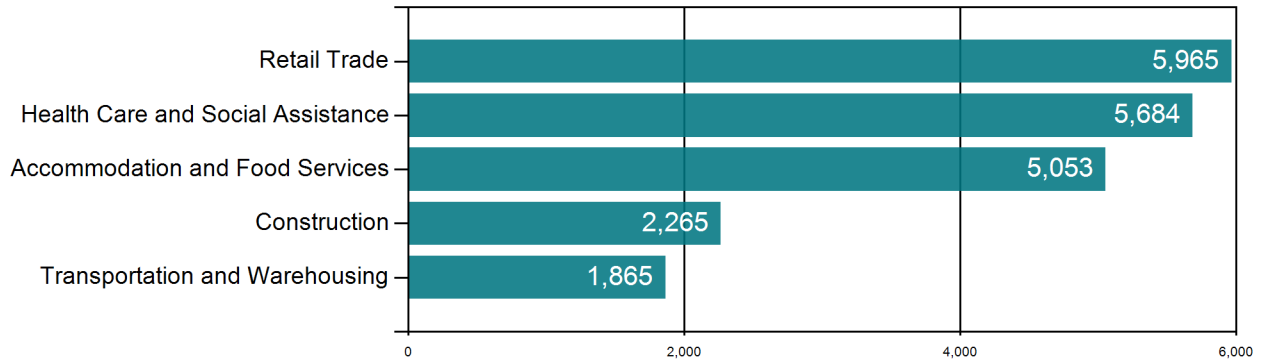
# Top Industries - 2nd Quarter of 2024

## Jenkins Area

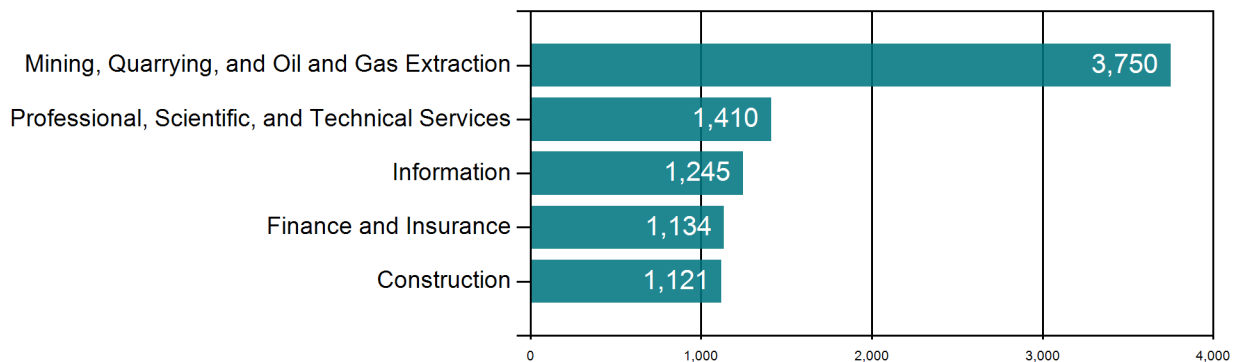
### Top Industries by Firms



### Top Industries by Employment



### Top Industries by Weekly Wages



Source: Georgia Department of Labor. These data represent jobs that are covered by unemployment insurance laws.



## Technical College Certificate Graduates - 2023

PROGRAMS	TOTAL GRADUATES			PERCENT CHANGE	
	2021	2022	2023	2021-2022	2022-2023
Welding Technology/Welder	128	113	172	-11.7	52.2
Truck and Bus Driver/Commercial Vehicle Operator and Instructor	90	130	105	44.4	-19.2
Nursing Assistant/Aide and Patient Care Assistant/Aide	84	51	90	-39.3	76.5
Cosmetology/Cosmetologist, General	42	66	59	57.1	-10.6
Aesthetician/Esthetician and Skin Care Specialist	22	45	44	104.5	-2.2
Accounting Technology/Technician and Bookkeeping	56	57	38	1.8	-33.3
Allied Health and Medical Assisting Services, Other	56	45	35	-19.6	-22.2
Child Care Provider/Assistant	40	49	29	22.5	-40.8
Business Administration and Management, General	27	29	27	7.4	-6.9
Criminal Justice/Safety Studies	55	55	22	0.0	-60.0

Source: Technical College System of Georgia

Note: Please visit TCSG website for any college configuration changes.

## Technical College Diploma Graduates - 2023

PROGRAMS	TOTAL GRADUATES			PERCENT CHANGE	
	2021	2022	2023	2021-2022	2022-2023
Licensed Practical/Vocational Nurse Training	41	40	37	-2.4	-7.5
Cosmetology/Cosmetologist, General	23	24	35	4.3	45.8
Business Administration and Management, General	23	18	21	-21.7	16.7
Electrician	18	15	21	-16.7	40.0
Medical/Clinical Assistant	21	16	19	-23.8	18.8
Accounting Technology/Technician and Bookkeeping	12	13	18	8.3	38.5
Emergency Medical Technology/Technician (EMT Paramedic)	23	15	12	-34.8	-20.0
Dental Assisting/Assistant	6	11	11	83.3	0.0
Early Childhood Education and Teaching	9	14	8	55.6	-42.9
Automobile/Automotive Mechanics Technology/Technician	6	10	5	66.7	-50.0

Source: Technical College System of Georgia

Note: Please visit TCSG website for any college configuration changes.

## Technical College Degree Graduates - 2023

PROGRAMS	TOTAL GRADUATES			PERCENT CHANGE	
	2021	2022	2023	2021-2022	2022-2023
Funeral Service and Mortuary Science, General	8	19	31	137.5	63.2
Accounting Technology/Technician and Bookkeeping	17	15	17	-11.8	13.3
Health Information/Medical Records Technology/Technician	26	13	14	-50.0	7.7
Early Childhood Education and Teaching	15	12	9	-20.0	-25.0
Criminal Justice/Safety Studies	16	15	9	-6.3	-40.0
Radiologic Technology/Science - Radiographer	12	6	8	-50.0	33.3
Opticianry/Ophthalmic Dispensing Optician	5	1	4	-80.0	300.0
Administrative Assistant and Secretarial Science, General	9	5	1	-44.4	-80.0

Source: Technical College System of Georgia

Note: Please visit TCSG website for any college configuration changes.



# Top Ten Largest Employers - 2024\*

## Jenkins County

Brunson & Triplett Enterprise  
 Champion Home Builders, Inc.  
 Dairy Queen  
 Family First Vision Care Georgia, LLC  
 Jenkins Correctional Center  
 Jenkins County  
 McDonalds  
 MI Metals, Inc.  
 Planters Electric Membership Corporation  
 UHS-Bethany

\*Note: Represents employment covered by unemployment insurance excluding all government agencies except correctional institutions, state and local hospitals, state colleges and universities. Data shown for the Second Quarter of 2024. Employers are listed alphabetically by area, not by the number of employees.

Source: Georgia Department of Labor

## Jenkins Area

Briggs & Stratton, LLC  
 Crider, Inc.  
 East Georgia Regional Medical Center  
 Georgia Living Management, Inc.  
 Georgia Southern University  
 Great Dane Limited Partnership  
 Koyo Bearings USA, LLC  
 Southern Nuclear Operating Co  
 Walmart  
 Walmart

## COUNTY

Bulloch  
 Emanuel  
 Bulloch  
 Bulloch  
 Bulloch  
 Bulloch  
 Screven  
 Burke  
 Bulloch  
 Emanuel

# Education of the Labor Force

## Jenkins Area

### PERCENT DISTRIBUTION BY AGE

	PERCENT OF TOTAL	18-24	25-34	35-44	45-64	65+
Elementary	3.6%	1.8%	1.9%	2.4%	3.8%	7.8%
Some High School	10.0%	7.2%	9.7%	8.8%	11.1%	12.6%
High School Grad/GED	32.6%	24.0%	33.8%	34.6%	35.5%	35.5%
Some College	28.7%	57.4%	24.7%	21.3%	21.0%	16.7%
College Grad 2 Yr	7.7%	3.6%	10.1%	10.6%	8.1%	7.4%
College Grad 4 Yr	11.1%	5.5%	14.3%	12.9%	12.4%	11.4%
Post Graduate Studies	6.3%	0.3%	5.6%	9.6%	8.1%	8.6%
Totals	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Note: Totals are based on the portion of the labor force between ages 18 - 65+. Some College category represents workers with some

Source: U.S. Census Bureau - 2021: ACS 5-Year Estimates.

# Georgia Department of Labor Location(s)

## Career Center(s)

601 Greene Street  
 Augusta, GA 30901

Phone: (706) 721 - 3131

Fax: (706) 721 - 7680

For copies of Area Labor Profiles, please visit our website at: <http://dol.georgia.gov> or contact Workforce Statistics Division, Georgia Department of Labor, 148 Andrew Young International Blvd N.E. Atlanta, GA. 30303-1751. Phone: 404-232-3875; Fax: 404-232-3888 or Email us at [workforce\\_info@gdol.ga.gov](mailto:workforce_info@gdol.ga.gov)

**BRUCE THOMPSON - COMMISSIONER, GEORGIA DEPARTMENT OF LABOR**

**Equal Opportunity Employer/Program**

**Auxiliary Aids and Services Available upon Request to Individuals with Disabilities**

**Workforce Statistics Division; E-mail: [Workforce\\_Info@gdol.ga.gov](mailto:Workforce_Info@gdol.ga.gov) Phone: (404) 232-3875**

# **APPENDIX C**

## **OTHER PLANNING DOCUMENTS**

# Jenkins County Emergency Management Agency Emergency Operations Plan

Plan Approved:  
15-OCT-08

Revised:  
25-JUN-13

## RECORD OF REVISIONS

Date	Author	Section	Detail
06-25-2013 09:20:30	Jenkins	ESF 15	
06-25-2013 09:19:03	Jenkins	ESF 14	
06-25-2013 09:17:36	Jenkins	ESF 13	
06-25-2013 09:08:19	Jenkins	ESF 12	
06-25-2013 09:07:03	Jenkins	ESF 11	
06-25-2013 09:05:20	Jenkins	ESF 10	
06-25-2013 09:03:45	Jenkins	ESF 9	
06-25-2013 09:02:16	Jenkins	ESF 8	
06-25-2013 09:00:38	Jenkins	ESF 7	
06-25-2013 08:59:21	Jenkins	ESF 6	
06-25-2013 08:57:48	Jenkins	ESF 5	
06-25-2013 08:56:29	Jenkins	ESF 4	
06-25-2013 08:54:49	Jenkins	ESF 3	
06-25-2013 08:53:30	Jenkins	ESF 2	
06-25-2013 08:51:57	Jenkins	ESF 1	
06-23-2013 08:34:28	Jenkins	Agencies	
06-23-2013 08:33:18	Jenkins	Agencies	
10-15-2008 08:26:21	Cray	Plan Approved	
10-15-2008 08:23:44	Cray	ESF 5	
10-15-2008 08:23:09	Cray	ESF 8	
10-15-2008 08:22:35	Cray	ESF 10	
10-15-2008 08:22:09	Cray	ESF 12	
10-15-2008 08:21:39	Cray	ESF 15	
10-15-2008 08:21:19	Cray	ESF 13	
10-09-2008 09:53:06	Jenkins	ESF 4	
10-09-2008 09:52:08	Jenkins	Agencies	
10-09-2008 09:50:19	Jenkins	Agencies	
10-09-2008 09:47:28	Jenkins	ESF 14	
10-09-2008 09:44:28	Jenkins	ESF 4	
10-09-2008 09:43:09	Jenkins	ESF 3	
10-09-2008 09:17:47	Jenkins	Government Officials	

10-09-2008 09:17:33	Jenkins	Government Officials	
10-09-2008 09:16:41	Jenkins	Agencies	
10-09-2008 09:15:51	Jenkins	Agencies	
10-09-2008 09:14:54	Jenkins	Agencies	
10-09-2008 09:14:15	Jenkins	Agencies	
10-09-2008 09:13:42	Jenkins	Agencies	
10-09-2008 09:12:28	Jenkins	Agencies	
10-09-2008 09:11:15	Jenkins	Agencies	
10-09-2008 09:07:59	Jenkins	Agencies	
10-09-2008 09:03:25	Jenkins	Agencies	
10-09-2008 09:01:40	Jenkins	Agencies	
10-09-2008 08:59:57	Jenkins	Agencies	
10-09-2008 08:58:14	Jenkins	Agencies	
10-09-2008 08:56:32	Jenkins	Agencies	
10-09-2008 08:56:02	Jenkins	Agencies	
05-25-2007 01:26:38	Jenkins	Esf15	
05-25-2007 01:26:29	Jenkins	Esf6	
05-25-2007 01:26:12	Jenkins	Esf5	

## Distribution List

Agency	Number of Copies
American Red Cross	1
Board of Education	1
City of Millen	1
City of Millen Animal Control	1
City of Millen Public Works Department	1
City of Millen Utilities Department	1
Jenkins County 911	1
Jenkins County Board of Commissioners	1
Jenkins County Coroner	0
Jenkins County DeFACS	1
Jenkins County EMA	0
Jenkins County Emergency Management Agency	1
Jenkins County Emergency Medical Services	1
Jenkins County Extension Service	1
Jenkins County Health Department	1
Jenkins County Memorial Hospital	1
Jenkins County Road Department	1
Jenkins County Sheriff's Department	1
Millen Police Department	1
Millen/Jenkins County Fire-Rescue	1
North Jenkins VFD	0
Planter's Electric	1
South Jenkins VFD	0

Jenkins County  
EMERGENCY OPERATIONS PLAN

Local Resolution

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## **PREFACE**

This Emergency Operations Plan (EOP) describes the management and coordination of resources and personnel during periods of major emergency. This comprehensive local emergency operations plan is developed to ensure mitigation and preparedness, appropriate response and timely recovery from natural and man made hazards which may affect residents of Jenkins County.

This plan supersedes the Emergency Operations Plan dated from old eLEOP. It incorporates guidance from the Georgia Emergency Management Agency (GEMA) as well as lessons learned from disasters and emergencies that have threatened Jenkins County. The Plan will be updated at the latest, every four years. The plan:

- Defines emergency response in compliance with the State-mandated Emergency Operations Plan process.
- Establishes emergency response policies that provide Departments and Agencies with guidance for the coordination and direction of municipal plans and procedures.
- Provides a basis for unified training and response exercises.

### **The plan consists of the following components:**

- The Basic Plan describes the structure and processes comprising a county approach to incident management designed to integrate the efforts of municipal governments, the private sector, and non-governmental organizations. The Basic Plan includes the: purpose, situation, assumptions, concept of operations, organization, assignment of responsibilities, administration, logistics, planning and operational activities.
- Appendices provide other relevant supporting information, including terms, definitions, and authorities.
- Emergency Support Function Annexes detail the missions, policies, structures, and responsibilities of County agencies for coordinating resource and programmatic support to municipalities during Incidents of Critical Significance.
- Support Annexes prescribe guidance and describe functional processes and administrative requirements necessary to ensure efficient and effective implementation of incident management objectives.
- Incident Annexes address contingency or hazard situations requiring specialized application of the EOP. The Incident Annexes describe the missions, policies, responsibilities, and coordination processes that govern the interaction of public and private entities engaged in incident management and emergency response operations across a spectrum of potential hazards. Due to security precautions and changing nature of their operational procedures, these Annexes, their supporting plans, and operational supplements are published separately.

**The following is a summary of the 15 Emergency Support Functions:**

1. *Transportation*: Support and assist municipal, county, private sector, and voluntary organizations requiring transportation for an actual or potential Incident of Critical Significance.
2. *Communications*: Ensures the provision of communications support to municipal, county, and private-sector response efforts during an Incident of Critical Significance.
3. *Public Works and Engineering*: Coordinates and organizes the capabilities and resources of the municipal and county governments to facilitate the delivery of services, technical assistance, engineering expertise, construction management, and other support to prevent, prepare for, respond to, and/or recover from an Incident of Critical Significance.
4. *Firefighting*: Enable the detection and suppression of wild-land, rural, and urban fires resulting from, or occurring coincidentally with an Incident of Critical Significance.
5. *Emergency Management Services*: Responsible for supporting overall activities of the County Government for County incident management.
6. *Mass Care, Housing and Human Services*: Supports County-wide, municipal, and non-governmental organization efforts to address non-medical mass care, housing, and human services needs of individuals and/or families impacted by Incidents of Critical Significance.
7. *Resource Support*: Supports volunteer services, County agencies, and municipal governments tracking, providing, and/or requiring resource support before, during, and/or after Incidents of Critical Significance.
8. *Public Health and Medical Services*: Provide the mechanism for coordinated County assistance to supplement municipal resources in response to public health and medical care needs (to include veterinary and/or animal health issues when appropriate) for potential or actual Incidents of Critical Significance and/or during a developing potential health and medical situation.
9. *Search and Rescue*: Rapidly deploy components of the National US Response System to provide specialized life-saving assistance to municipal authorities during an Incident of Critical Significance.
10. *Hazardous Materials*: Coordinate County support in response to an actual or potential discharge and/or uncontrolled release of oil or hazardous materials during Incidents of Critical Significance.
11. *Agriculture and Natural Resources*: supports County and authorities and other agency efforts to address: Provision of nutrition assistance; control and eradication of an outbreak of a highly contagious or economically devastating animal/zoonotic

disease; assurance of food safety and food security and; protection of natural and cultural resources and historic properties.

12. *Energy*: Restore damaged energy systems and components during a potential of actual Incident of Critical Significance.
13. *Public Safety and Security Services*: Integrates County public safety and security capabilities and resources to support the full range of incident management activities associated with potential or actual Incidents of Critical Significance.
14. *Long Term Recovery and Mitigation*: Provides a framework for County Government support to municipal governments, nongovernmental organizations, and the private sector designed to enable community recovery from the long-term consequences of an Incident of Critical Significance.
15. *External Affairs*: Ensures that sufficient County assets are deployed to the field during a potential or actual Incident of Critical Significance to provide accurate, coordinated, and timely information to affected audiences, including governments, media, the private sector, and the populace.



# Georgia Emergency Operations Plan

2024

## Promulgation Statement

---

The Georgia Emergency Management and Homeland Security Agency maintains the Georgia Emergency Operations Plan and present the plan to the Governor of Georgia for adoption once every four years, at a minimum.

The Georgia Emergency Operations Plan was developed by the Georgia Emergency Management and Homeland Security Agency in close coordination with other state agencies, non-governmental organizations, voluntary organizations active in disasters, and private sector partners. This base plan and supporting components are aligned with the National Incident Management System as well as the National Response Framework and the National Disaster Recovery Framework. In addition, the Georgia Emergency Management and Homeland Security Agency modified the Georgia Emergency Operations Plan, its Emergency Support Function Annexes, Appendices, Hazard Specific Incident Annexes, and supporting guides to incorporate lessons learned from exercises, events, incidents, and continuous training.



---

James C. Stallings

Director

Georgia Emergency Management and Homeland Security Agency

---

10/28/2024

Date

## **Approval and Implementation**

---

Transmitted herewith is the Georgia Emergency Operations Plan (GEOP). This GEOP supersedes any previous plan of the same name or previous date and any/all previous emergency management/civil defense plans promulgated by the State of Georgia for this purpose. It provides a framework in which all responding entities and agencies of the State of Georgia can plan and perform their respective emergency functions during a disaster or national emergency. All recommended changes can be submitted in accordance with the Georgia Emergency Management and Homeland Security Agency (GEMA/HS) Plans Standardization and Maintenance Policy which might result in its improvement or increase its usefulness. The GEOP will be revised in accordance with paragraph 6.1.2 of the GEMA/HS Plans Standardization and Maintenance Policy.

## Executive Summary

---

The Georgia Emergency Operations Plan describes the necessary steps the State will take to prepare for and respond to an incident that requires the use of personnel, equipment, and funding controlled and/or coordinated by the State of Georgia.

This plan describes the actions taken by the State's agencies that have been assigned Emergency Support Function (ESF) roles and responsibilities within the GEOP.

This plan also identifies the historical hazards experienced in Georgia which includes all natural, human-caused, and technological hazards that can be reasonably presumed to occur within the geographical boundaries of the State of Georgia to effectively coordinate future, emergency response and recovery efforts throughout the state.

This plan is meant to be a guide; it allows the Governor of Georgia and the State of Georgia to adjust its hazard response / recovery based upon the size and scope of the incident. The GEOP is designed to meet Federal Emergency Management Agency (FEMA) standards, Emergency Management Accreditation Program standards, National Incident Management System (NIMS) requirements, and is compliant with the National Response Framework (NRF) and the National Disaster Recovery Framework.



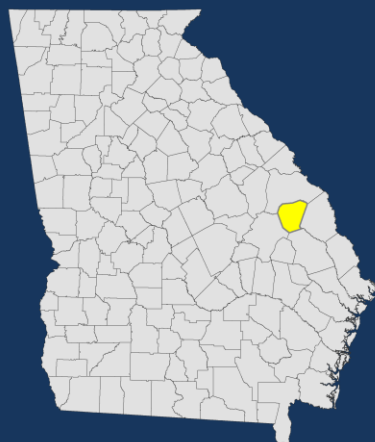
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# Hazard Risk Analyses Supplement to the Jenkins County Joint Hazard Mitigation Plan



**Carl Vinson  
Institute of Government**  
**UNIVERSITY OF GEORGIA**

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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 2024, 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 Jenkins 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 Jenkins 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. Jenkins 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

General Building Stock (GBS) is an inventory category that consists of aggregated data (grouped by census geography — tract or block). Hazus-MH generates a combination of site-specific and aggregated loss estimates based on the given analysis and user input.

The GBS records for Jenkins County were replaced with data derived from parcel and property assessment data obtained from Jenkins County. The county provided property assessment data was current as of October 2024 and the parcel data current as of October 2024. 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 Jenkins County is 99.8%. 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	0	1	\$0	\$128,000
Commercial	51	189	\$8,912,000	\$21,498,000
Education	0	6	\$0	\$59,924,000
Government	10	15	\$9,988,000	\$12,221,000
Industrial	35	61	\$47,621,000	\$11,481,000
Religious	2	44	\$222,000	\$5,915,000
Residential	3,743	4,193	\$351,068,000	\$370,941,000
<b>Total</b>	<b>3,841</b>	<b>4,509</b>	<b>\$417,811,000</b>	<b>\$482,108,000</b>

\*The exposure values represent the total number and replacement cost for all Jenkins County Buildings

For Jenkins 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)<sup>1</sup>, or site-specific points. Figure 1 shows the distribution of buildings as points based on the county provided data.

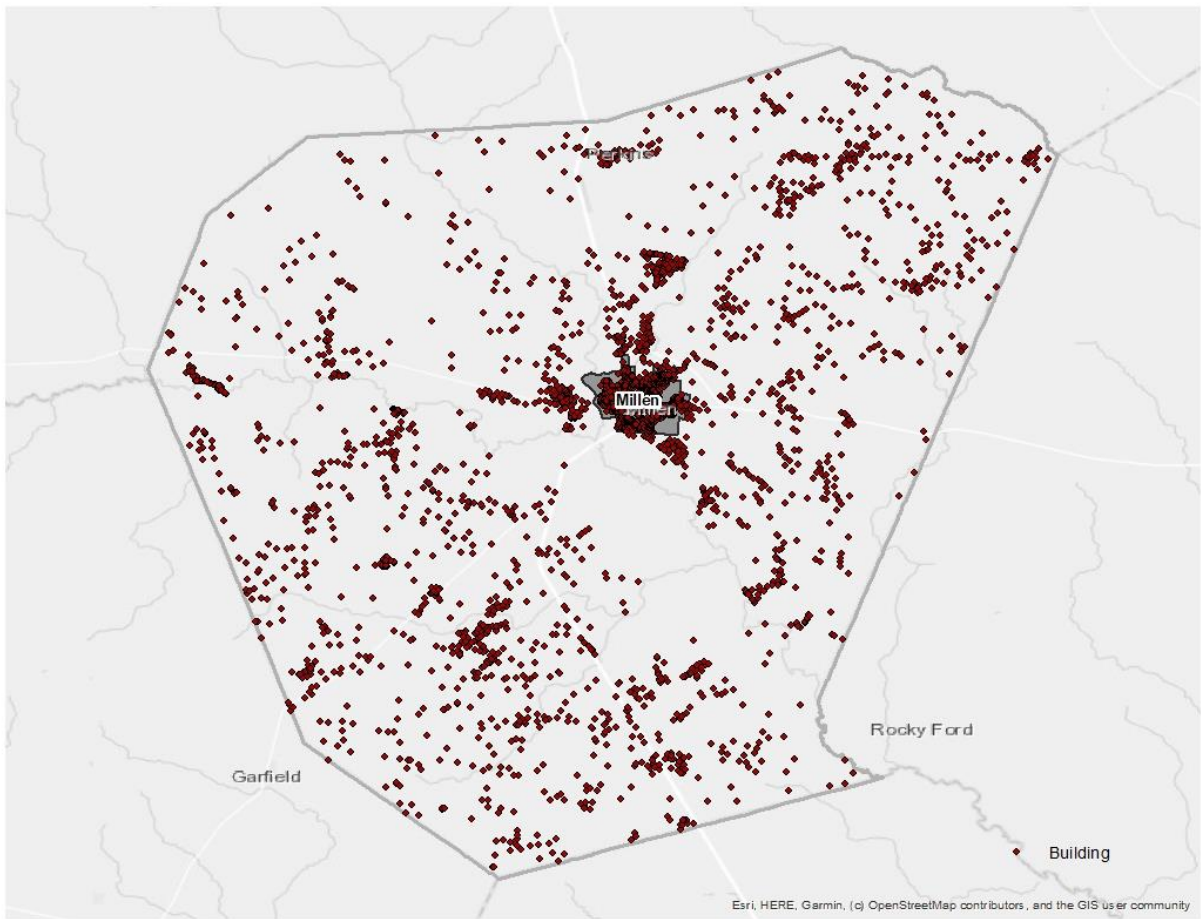


Figure 1: Jenkins County Overview

## 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 October 2024. 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

<sup>1</sup> The UDF inventory category in Hazus-MH allows the user to enter site-specific data in place of GBS data.

Table 2: Updated Essential Facilities

Classification	Updated Count	Updated Exposure
<b>Millen</b>		
EOC	1	\$514,000
Care	2	\$3,686,000
Fire	2	\$5,850,000
Police	1	\$1,355,000
School	3	\$24,000,000
<b>Total</b>	<b>9</b>	<b>\$35,405,000</b>
<b>Unincorporated Areas of Jenkins County</b>		
EOC	0	\$0
Care	0	\$0
Fire	6	\$572,000
Police	0	\$0
School	0	\$0
<b>Total</b>	<b>6</b>	<b>\$572,000</b>

# Assumptions and Exceptions

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

- The Jenkins 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
  - 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)<sup>2</sup>. 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 Jenkins County by creating a 20-mile buffer around the county to include storms that didn't make direct landfall in Jenkins 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 1851, Jenkins County has had 32 tropical systems within 20 miles of its county borders (Table 4).

Table 4: Tropical Systems affecting Jenkins County<sup>3</sup>

YEAR	DATE RANGE	NAME	MAX WIND(Knots)	MAX PRESSURE	MAX CAT
1851	August 16 - 27	UNNAMED	100	0	H3

<sup>2</sup> 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.

<sup>3</sup> Atlantic Oceanic and Meteorological Laboratory (2012). "Data Center." National Oceanic and Atmospheric Administration. [http://www.aoml.noaa.gov/hrd/data\\_sub/re\\_anal.html](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
1852	October 06 - 11	UNNAMED	90	0	H2
1854	September 07 - 12	UNNAMED	110	950	H3
1856	August 25 - September 03	UNNAMED	100	969	H3
1877	September 21 - October 05	UNNAMED	100	0	H3
1884	September 10 - 20	UNNAMED	80	988	H1
1885	October 10 - 14	UNNAMED	60	0	TS
1886	June 27 - July 02	UNNAMED	85	0	H2
1887	October 09 - 22	UNNAMED	75	0	H1
1898	August 30 - September 01	UNNAMED	75	0	H1
1901	September 09 - 19	UNNAMED	70	0	H1
1902	June 12 - 17	UNNAMED	50	0	TS
1904	October 31 - November 06	UNNAMED	45	0	TS
1909	June 26 - July 04	UNNAMED	45	0	TS
1911	August 23 - 31	UNNAMED	85	972	H2
1915	July 31 - August 05	UNNAMED	65	1003	H1
1929	September 19 - October 05	UNNAMED	135	986	H4
1935	August 29 - September 10	UNNAMED	160	996	H5
1940	August 05 - 14	UNNAMED	85	1008	H2
1941	October 03 - 13	UNNAMED	105	1004	H3
1946	October 05 - 14	UNNAMED	85	993	H2
1956	September 20 - October 03	FLOSSY	80	1011	H1
1964	August 20 - September 11	CLEO	130	1007	H4
1968	June 01 - 13	ABBY	65	1005	H1
1985	November 15 - 23	KATE	105	1006	H3
1986	August 13 - 30	CHARLEY	70	1015	H1
1995	June 03 - 11	ALLISON	65	1005	H1
1998	August 31 - September 08	EARL	85	1005	H2
2003	July 25 - 27	UNNAMED	30	1022	TD
2006	June 10 - 19	ALBERTO	60	1004	TS
2019	October 17 - 21	NESTOR	50	1007	TS
2021	June 30 - July 10	ELSA	75	1008	H1

#### Category Definitions:

TS – Tropical storm

TD – Tropical depression

H1 – Category 1 (same format for H2, H3, H4, and H5)

E – Extra-tropical cyclone

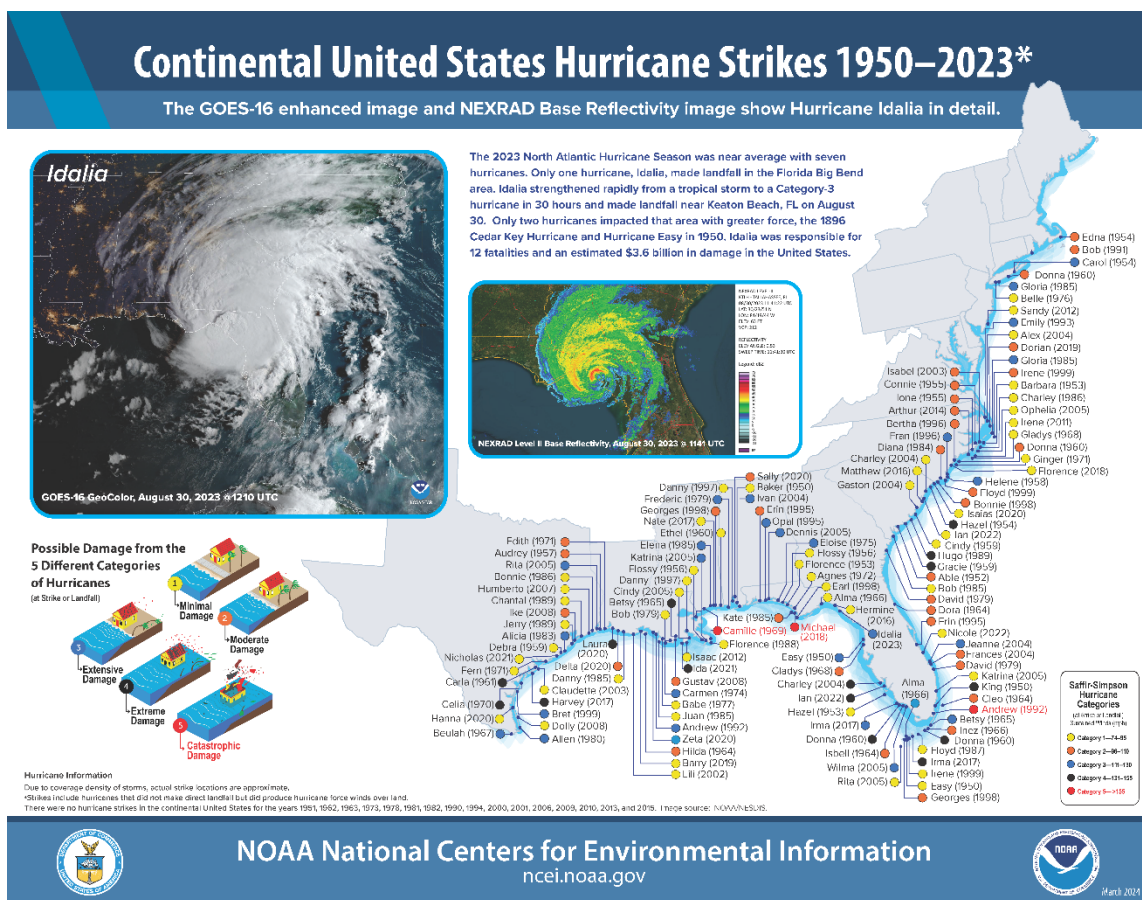


Figure 2: Continental United States Hurricane Strikes: 1950 to 2023<sup>4</sup>

## Probabilistic Hurricane Scenario

The following probabilistic wind damage risk assessment modeled a Category One storm with maximum winds of 83 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 Jenkins County. Wind losses were determined from probabilistic models run for the Category One storm which equates to the 1% chance storm event. Figure 3 shows wind speeds for the modeled Category One storm.

<sup>4</sup> Source: NOAA National Centers for Environmental Information



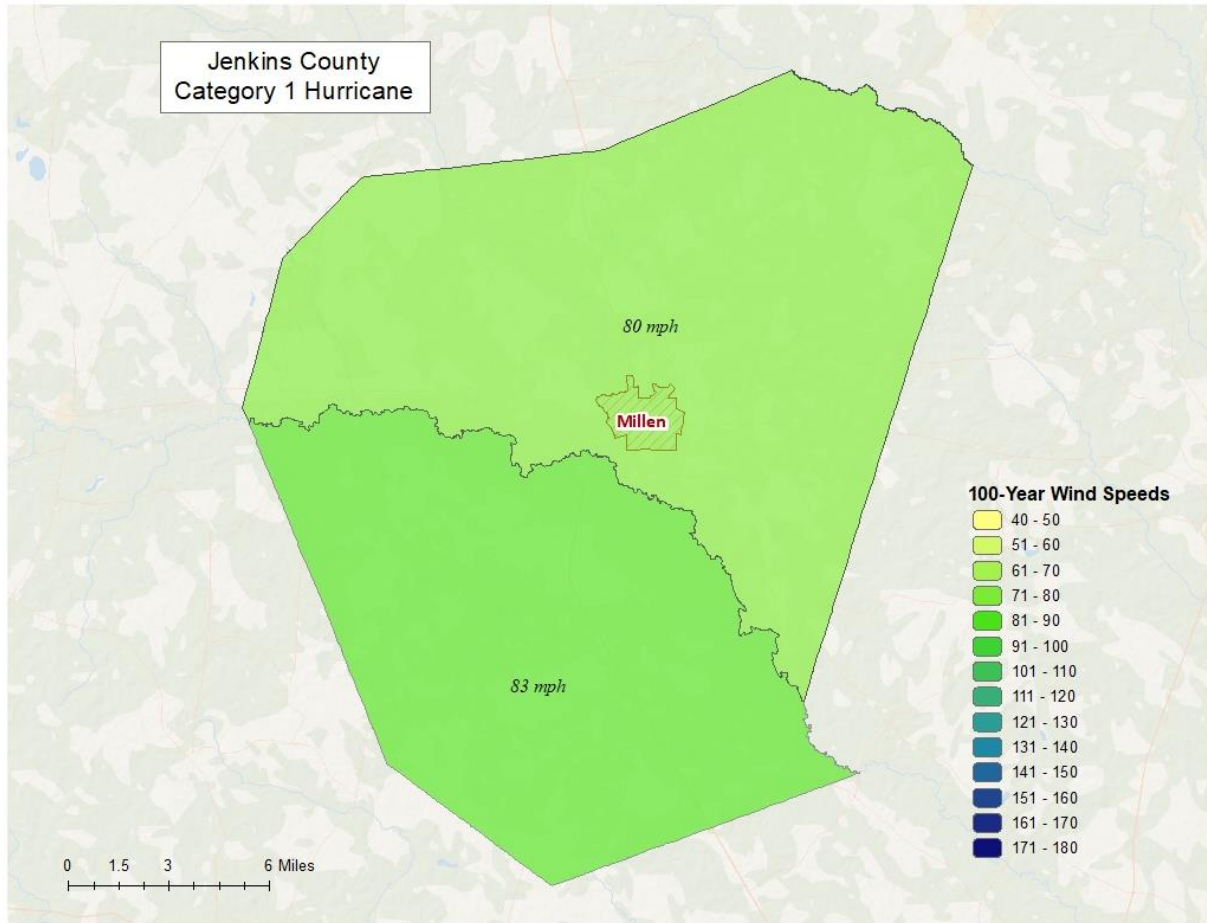


Figure 3: Wind Speeds by Storm Category

## Wind-Related Building Damages

Buildings in Jenkins 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 Jenkins County for the Category One (100 Year Event) storm. The loss ratio expresses building losses as a percentage of total building replacement cost in the county. Figure 4 illustrates the building loss ratios of the modeled Category One storm.

Table 5: Hurricane Wind Building Damage

Classification	Number of Buildings Damaged	Total Building Damage	Total Economic Loss <sup>5</sup>	Loss Ratio
Category One	67	\$1,413,660	\$1,869,330	0.29%

<sup>5</sup> 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.

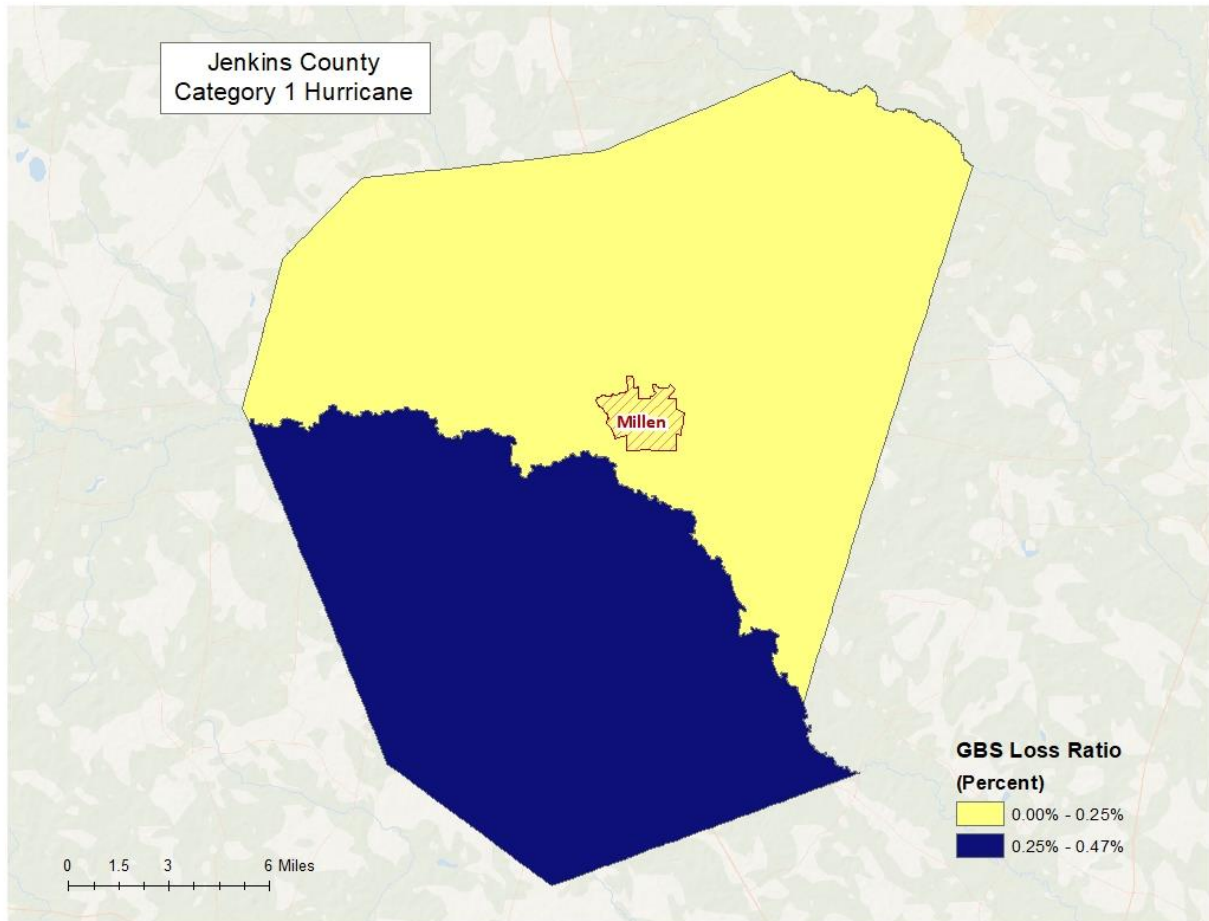


Figure 4: Hurricane Wind Building Loss Ratios

## 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 15 essential facilities in Jenkins County.

Classification	Number
EOCs	1
Fire Stations	8
Care Facilities	2
Police Stations	1
Schools	3



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)
Category One	0	0	15

## 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 Jenkins County is a Category One 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
Category One	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
Category One	201	0	2,001	52,530	54,732

Figure 5 shows the distribution of all wind related debris resulting from a Category One storm. Each dot represents 20 tons of debris within the census tract in which it is located. The dots are randomly distributed within each census tract and therefore do not represent the specific location of debris sites.

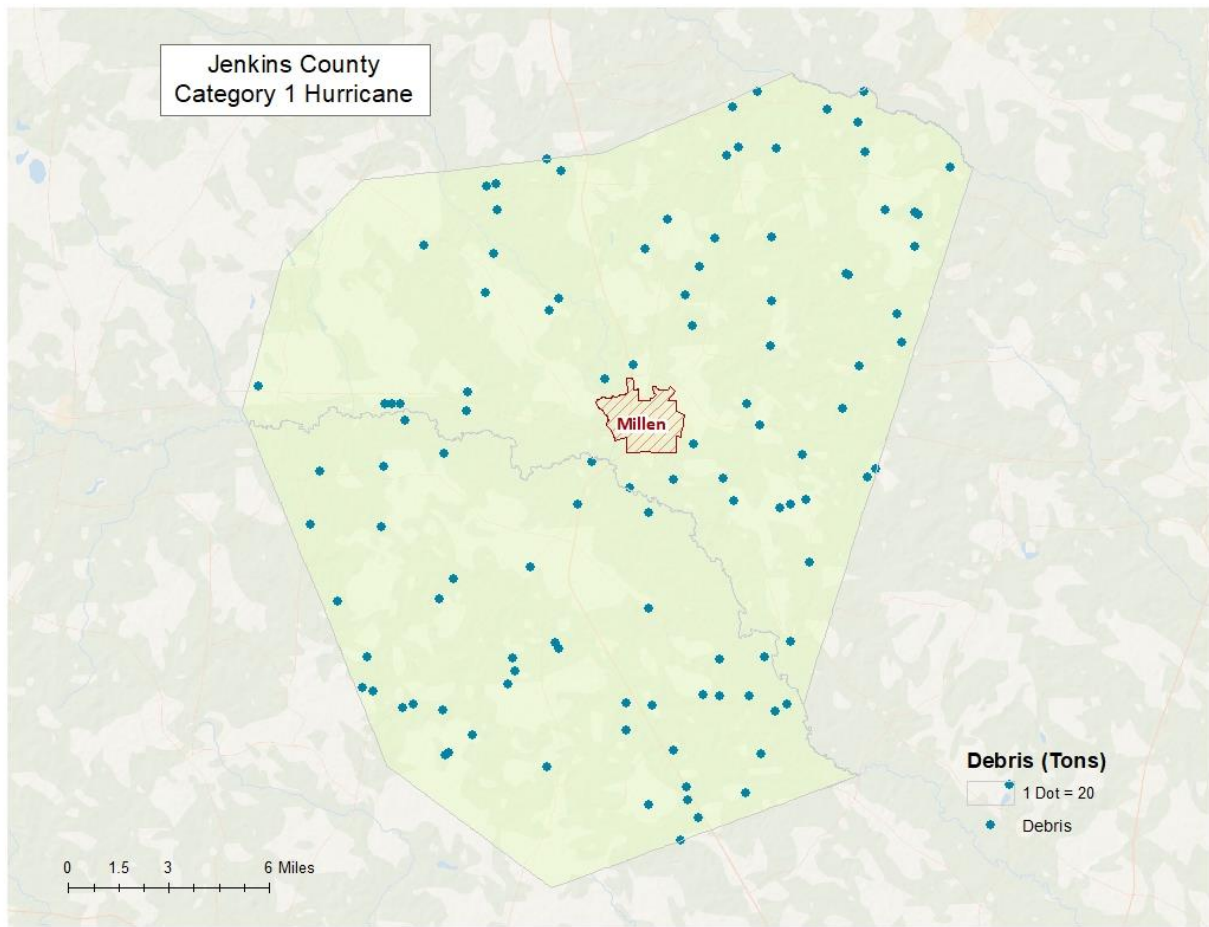


Figure 5: Wind-Related Debris Weight (Tons)

# 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 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 Jenkins County flood risk assessment analyzed at risk structures in the SFHA.

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 October 2024. 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.

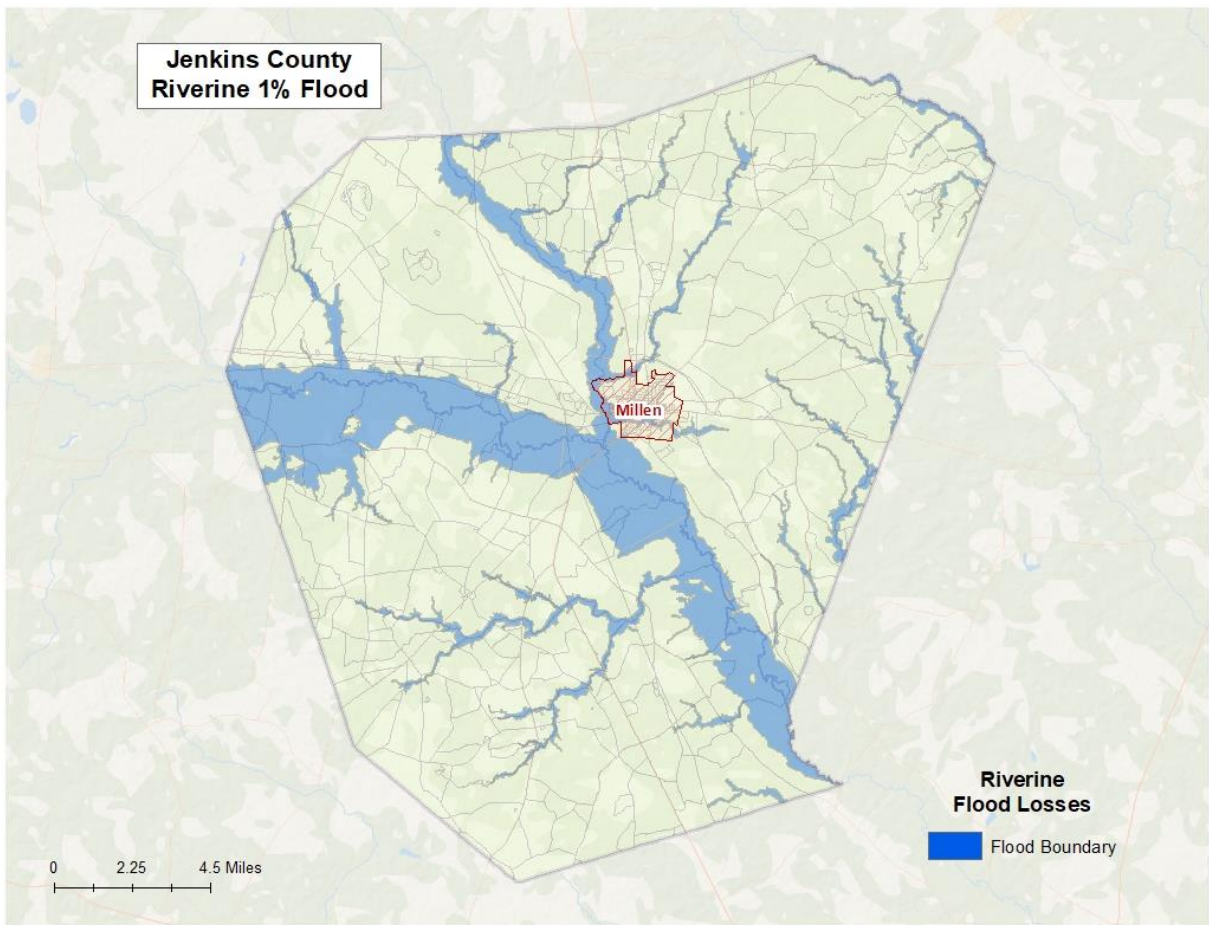


Figure 6: Riverine 1% Flood Inundation

## Riverine 1% Flood Building Damages

Buildings in Jenkins 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 Jenkins 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: Jenkins 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
<b>Millen</b>					
Commercial	153	5	\$17,756,381	\$23,979	0.14%
Residential	1,261	68	\$132,238,098	\$1,159,982	0.88%
Industrial	29	3	\$5,333,088	\$9,011	0.17%
<b>Unincorporated</b>					
Religious	22	1	\$2,879,104	\$10,131	0.35%
Residential	2,932	191	\$238,708,553	\$2,992,557	1.25%
<b>County Total</b>					
	<b>4,397</b>	<b>268</b>	<b>\$396,915,224</b>	<b>\$4,195,660</b>	



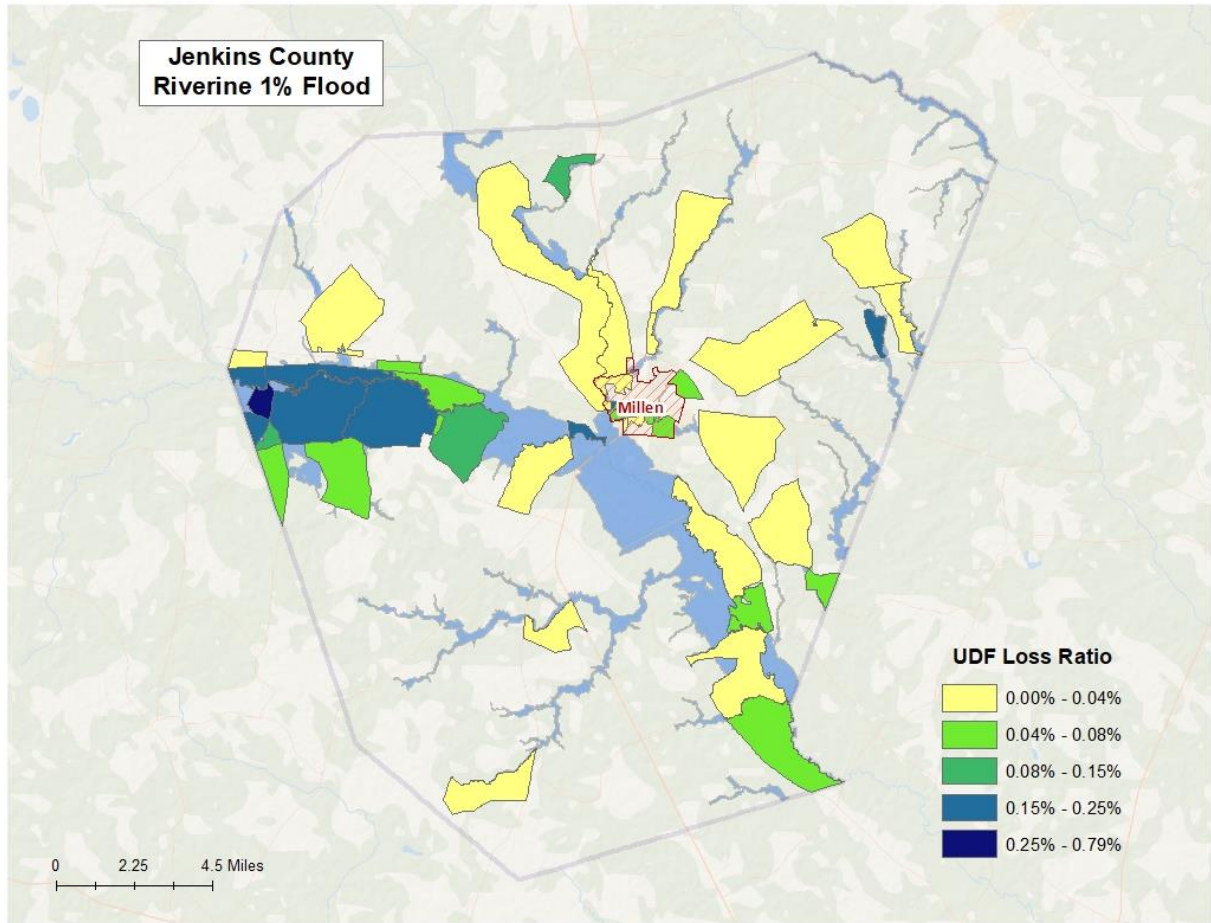


Figure 7: Jenkins County Potential Loss Ratios of Total Building Exposure to Losses Sustained to Buildings from the 1% Riverine Flood by 2010 Census Block

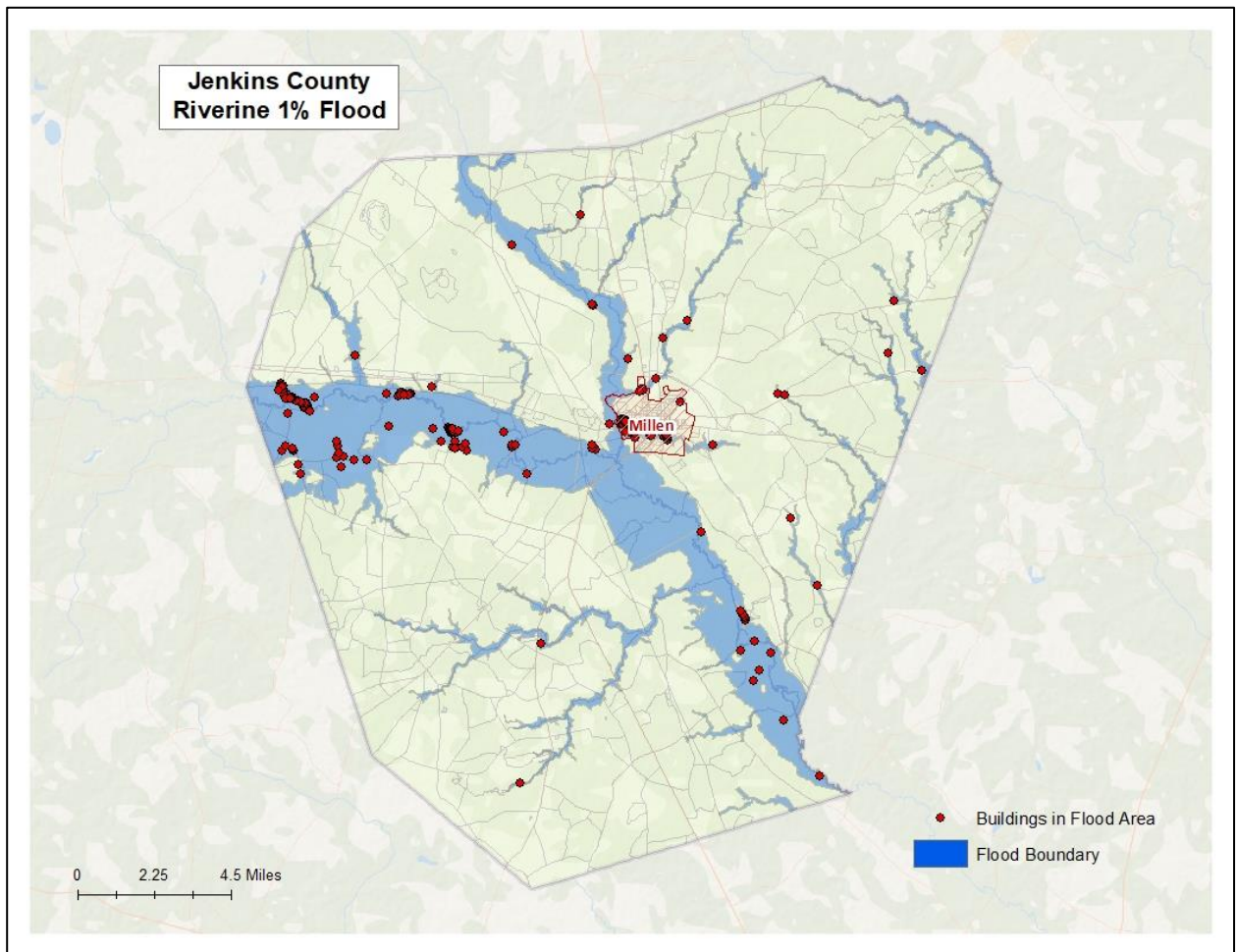


Figure 8: Jenkins County Damaged Buildings in Riverine Floodplain (1% Flood)

## 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 no essential facility that were subject to damage in the Jenkins County riverine 1% probability floodplain.

## 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 244 households might be displaced due to the flood. Displacement includes households evacuated within or very near to the inundated area. Displaced households represent 731 individuals, of which 349 may require short term publicly provided shelter. The results are mapped in Figure 9.

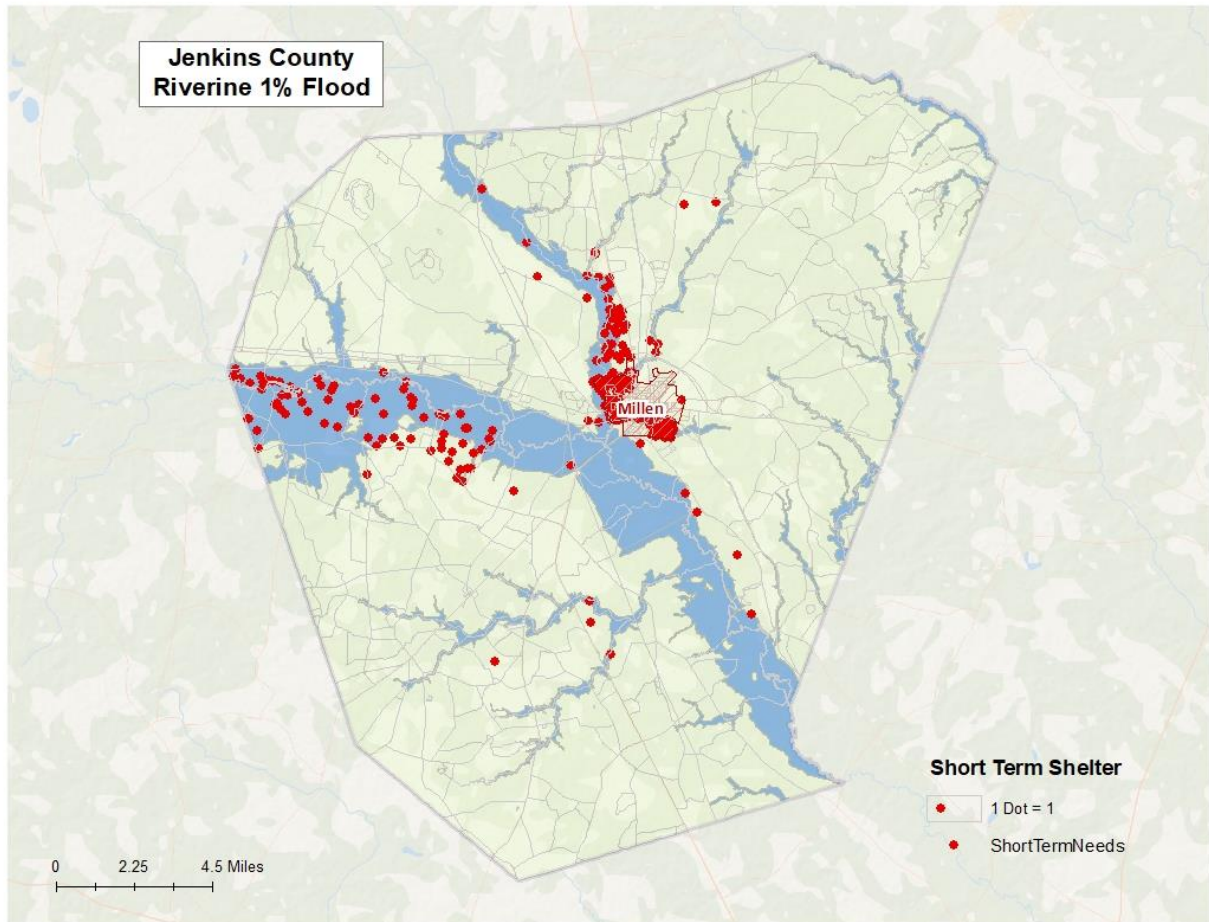


Figure 9: Riverine 1% Estimated Flood Shelter Requirements



## 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 3,002 tons of debris might be generated: 1) Finishes- 1,394 tons; 2) Structural – 545 tons; and 3) Foundations- 1,064 tons. The results are mapped in Figure 10.

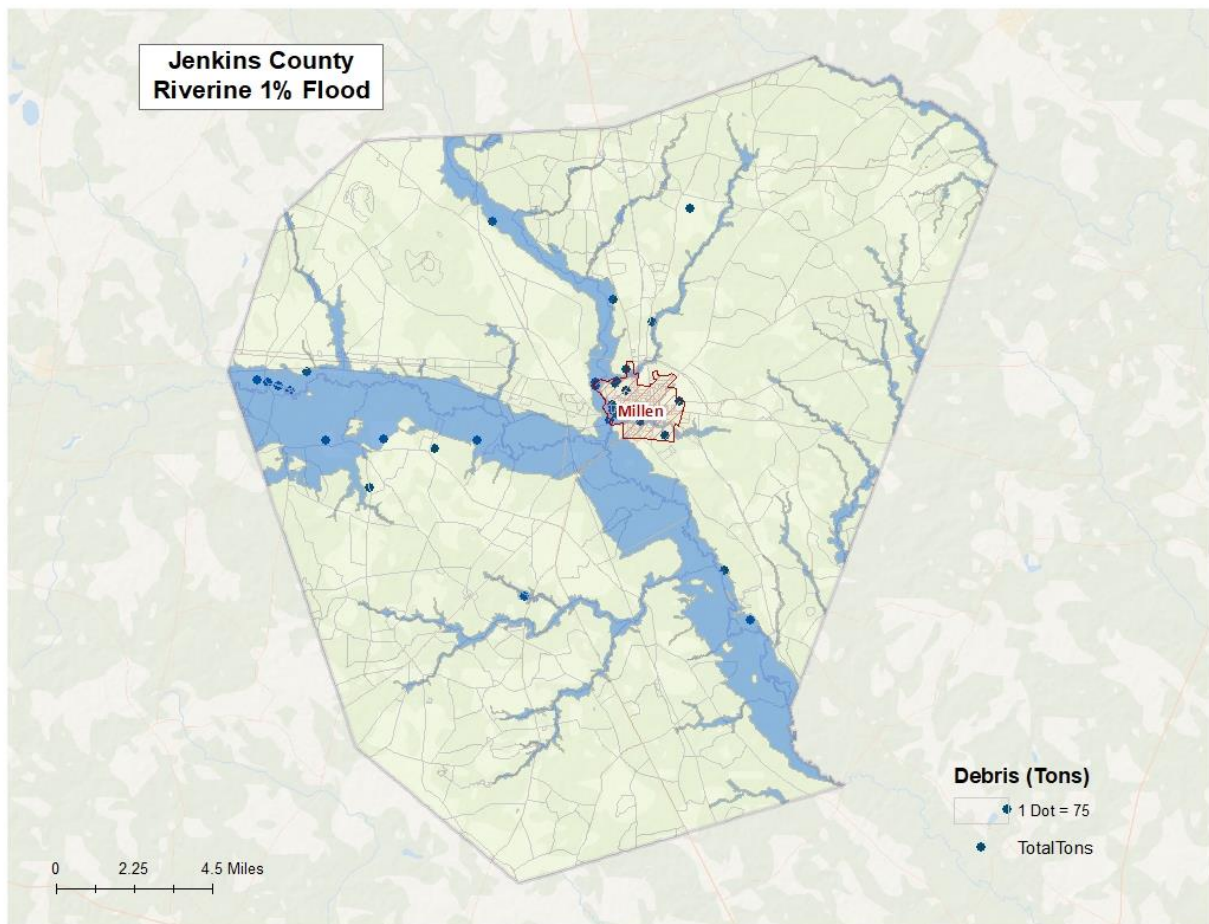


Figure 10: Riverine 1% Flood Debris Weight (Tons)

# 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 10.

Table 10: Enhanced Fujita Tornado Rating

Fujita Number	Estimated Wind Speed	Path Width	Path Length	Description of Destruction
<b>EF0</b> 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.
<b>EF1</b> 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.
<b>EF2</b> 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.
<b>EF3</b> Severe	136-165 mph	176-566 yards	10-31 miles	Severe damage, walls torn from well-constructed houses, trains overturned, most trees in forests uprooted, heavy cars thrown about.
<b>EF4</b> 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.
<b>EF5</b> 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 Millen. 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 11 depicts tornado path widths and expected damage.

Table 11: 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.

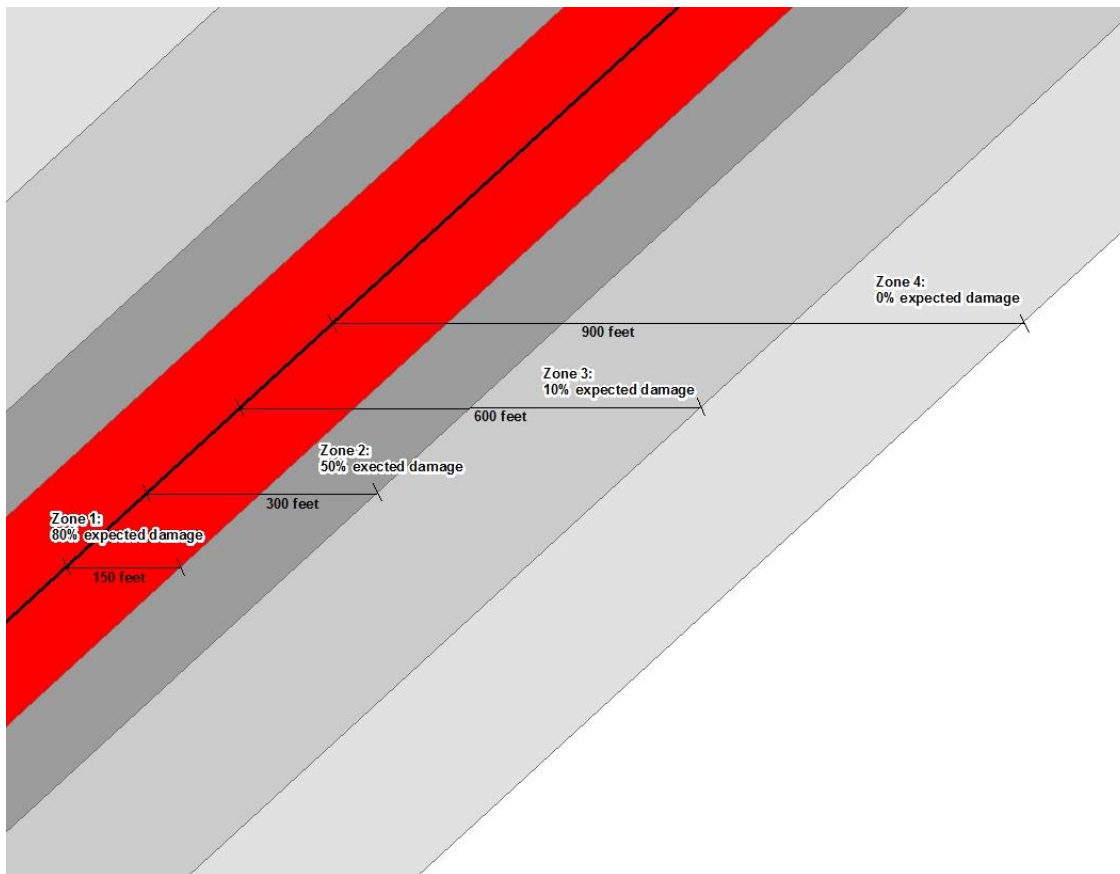


Figure 11: EF Scale Tornado Zones

An EF3 tornado has four damage zones, depicted in Table 12. 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 12: 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%

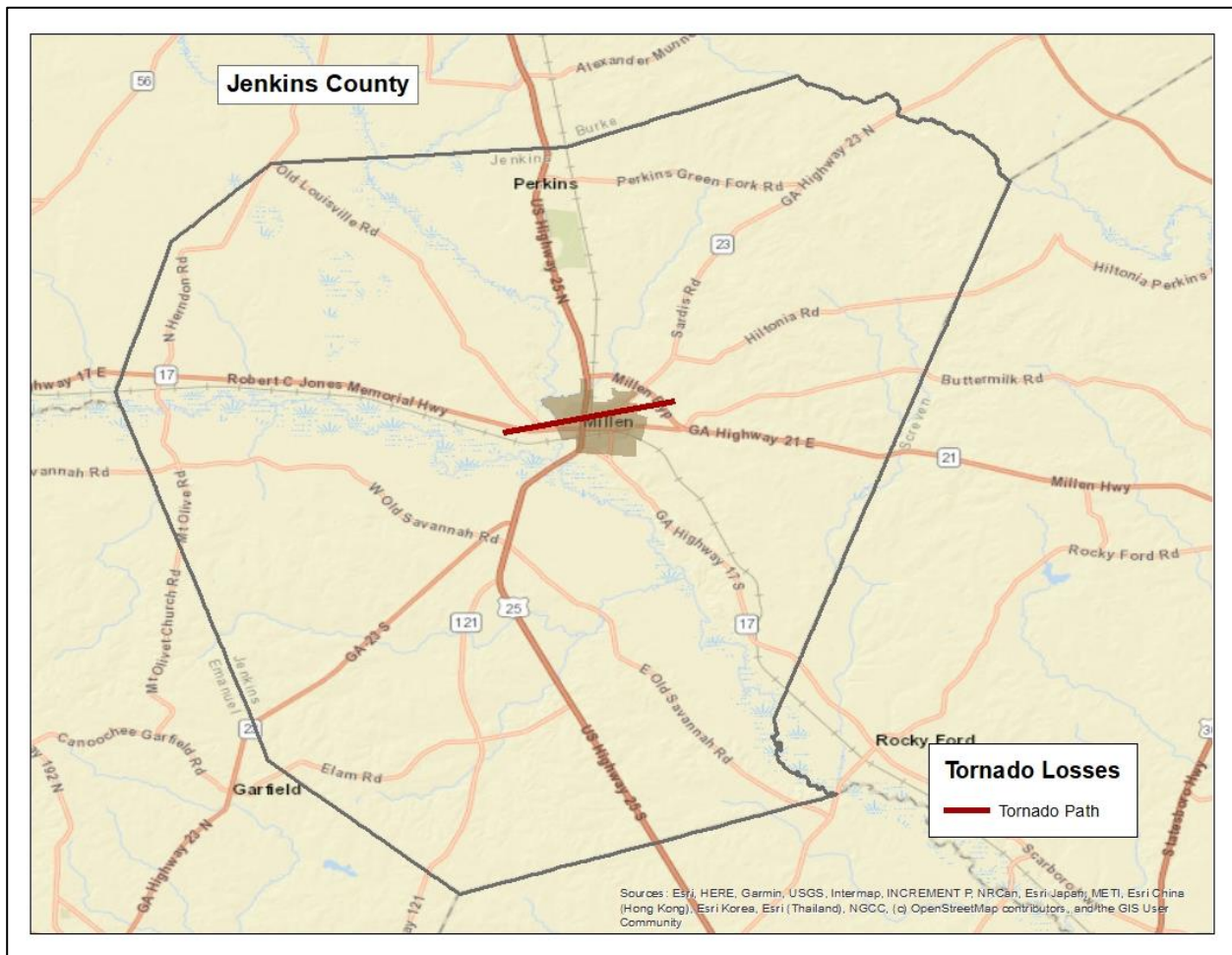


Figure 12: Hypothetical EF3 Tornado Path in Jenkins County



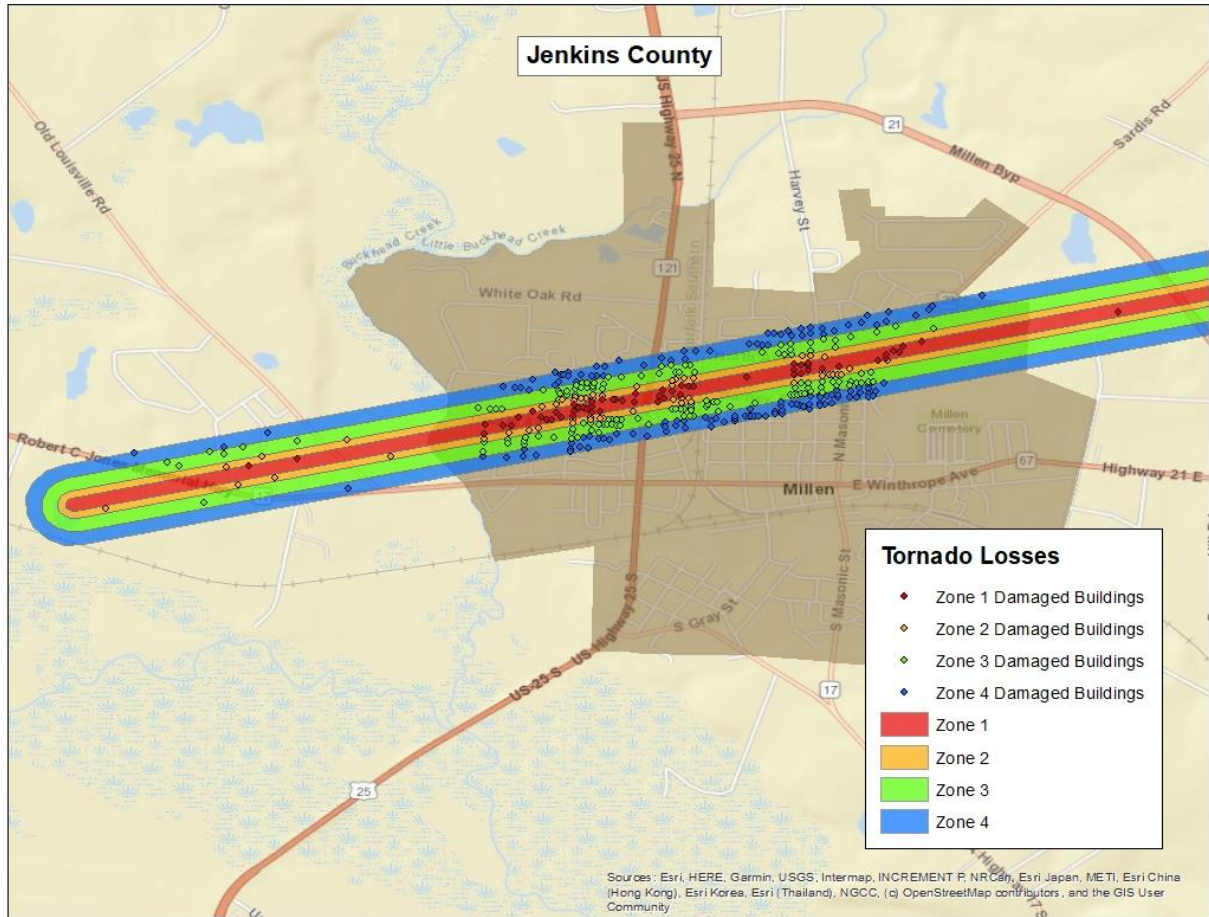


Figure 13: Modeled EF3 Tornado Damage Buffers in Jenkins County

## EF3 Tornado Building Damages

The analysis estimated that approximately 454 buildings could be damaged, with estimated building losses of \$57 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 Jenkins 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 13.

Table 13: Estimated Building Losses by Occupancy Type

Occupancy	Buildings Damaged	Building Losses
Residential	427	\$8,684,101
Commercial	13	\$1,103,235
Industrial	2	\$43,621
Religious	8	\$61,078
Education	4	\$47,015,562
<b>Total</b>	<b>454</b>	<b>\$56,907,597</b>

## EF3 Tornado Essential Facility Damage

There were three essential facilities located in the tornado path – three schools. Table 14 outlines the specific facility and the amount of damage under the scenario.

Table 14: Estimated Essential Facilities Damaged

Facility	Amount of Damage
Jenkins County Elementary School	Major Damage
Jenkins County Middle School	Major Damage
Jenkins County High School	Major Damage

According to the Georgia Department of Education, Jenkins County Elementary School’s enrollment was approximately 587 students, Jenkins County Middle School’s enrollment was approximately 252 students, and Jenkins County High School’s enrollment was approximately 320 students as of March 2024. Depending on the time of day, a tornado strike as depicted in this scenario could result in significant injury and loss of life. In addition, arrangements would have to be made for the continued education of the students in another location.

The location of the damaged Essential Facility is mapped in Figure 14.

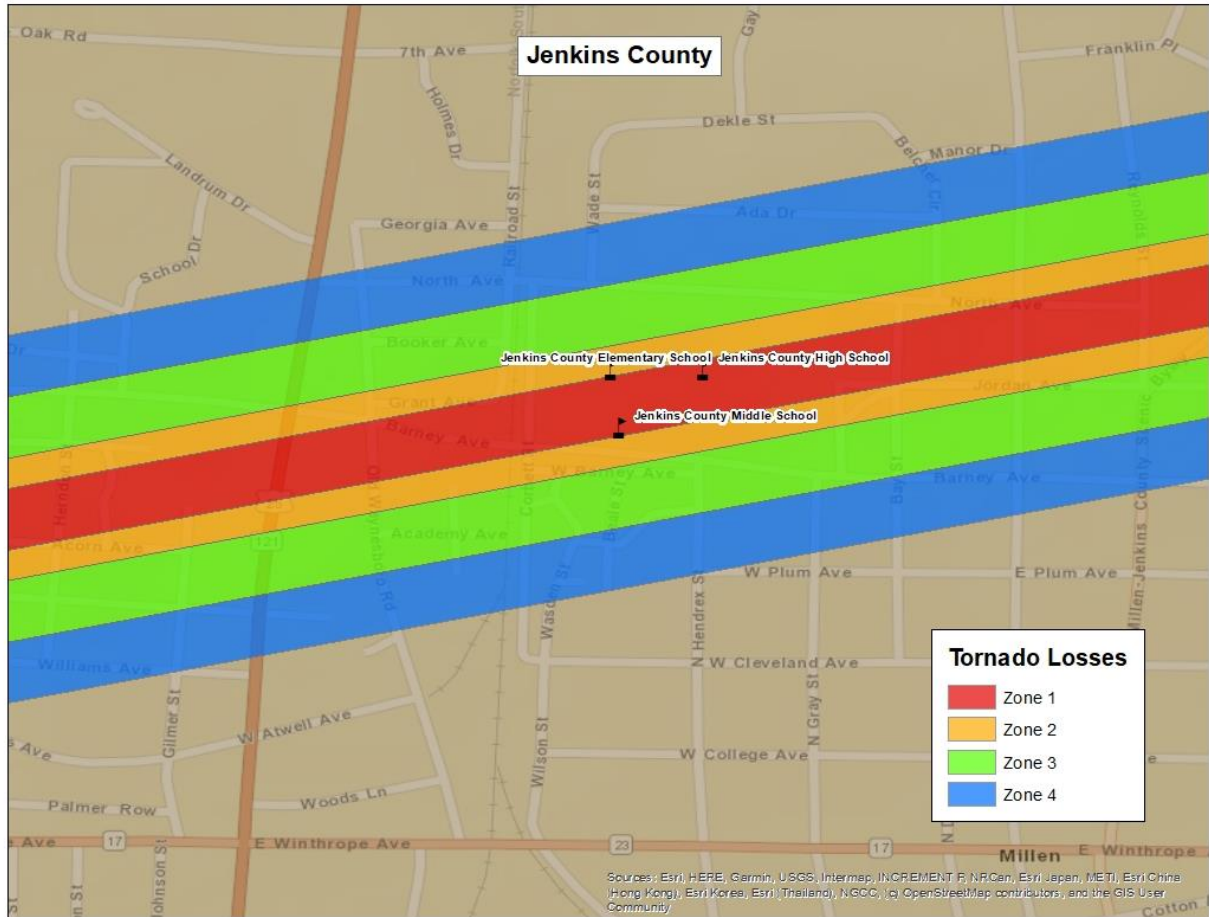


Figure 14: Modeled Essential Facility Damage in Jenkins County



# Exceptions Report

Hazus Version 2.2 SP1 was used to perform the loss estimates for Jenkins 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 Jenkins County.

Updates to the Critical Facility data used in GMIS were provided by Jenkins County in October 2024. These updates were applied by The Carl Vinson Institute of Government at the University of Georgia. Table 15 summarizes the difference between the original Hazus-MH default data and the updated data for Jenkins County.

Table 15: Essential Facility Updates

Site Class	Feature Class	Default Replacement Cost	Default Count	Updated Replacement Cost	Updated Count
EF	Care	\$1,125,000	1	\$3,686,000	2
EF	EOC	\$880,000	1	\$514,000	1
EF	Fire	\$6,352,000	7	\$6,422,000	8
EF	Police	\$3,061,000	2	\$1,355,000	1
EF	School	\$24,000,000	3	\$24,000,000	3

## County Inventory Changes

The GBS records for Jenkins County were replaced with data derived from parcel and property assessment data obtained from Jenkins County. The county provided property assessment data was current as of October 2024 and the parcel data current as of October 2024.

## General Building Stock Updates

The parcel boundaries and assessor records were obtained from Jenkins 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 Jenkins County was 99.8%.

Adjustments were made to records when primary fields did not have a value. In these cases, default values were applied to the fields. Table 16 outlines the adjustments made to Jenkins County records.

Table 16: Building Inventory Default Adjustment Rates

Type of Adjustment	Building Count	Percentage
Area Unknown	624	14%
Construction Unknown	639	14%
Condition Unknown	385	9%
Foundation Unknown	642	14%
Year Built Unknown	313	7%
<b>Total Buildings</b>	<b>4,509</b>	<b>12%</b>

Approximately 12% 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 Jenkins 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 17: User Defined Facility Exposure

Class	Hazus-MH Feature	Counts	Exposure
BI	Building Exposure	4,509	\$482,124,253
Riverine UDF	Structures Inside 1% Annual Chance Riverine Flood Area	276	\$18,688,817

### Assumptions

- Flood analysis was performed on Building Inventory. Building Inventory within the flood boundary was imported as User Defined Facilities. The point locations are parcel centroid accuracy.
- The analysis is restricted to the county boundary. Events that occur near the county boundary do not contain loss estimates from adjacent counties.
- The following attributes were defaulted or calculated:
  - First Floor Height was set from Foundation Type
  - Content Cost was calculated from Building Cost

# FLOOD INSURANCE STUDY



## JENKINS COUNTY, GEORGIA AND INCORPORATED AREAS

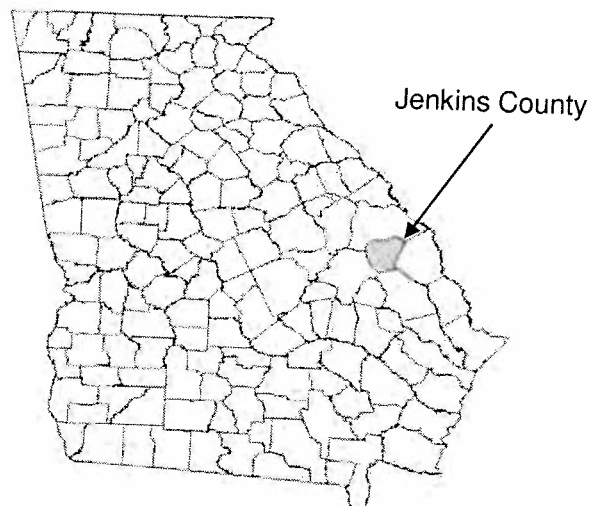
### Community Name

JENKINS COUNTY  
(UNINCORPORATED AREAS)  
MILLEN, CITY OF

### Community Number

130118

130119



Revised: August 5, 2010



Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER  
13165CV000A

**NOTICE TO  
FLOOD INSURANCE STUDY USERS**

Communities participating in the National Flood Insurance Program have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study (FIS) report may not contain all data available within the Community Map Repository. Please contact the Community Map Repository for any additional data.

The Federal Emergency Management Agency (FEMA) may revise and republish part or all of this FIS report at any time. In addition, FEMA may revise part of this FIS report by the Letter of Map Revision process, which does not involve republication or redistribution of the FIS report. Therefore, users should consult with community officials and check the Community Map Repository to obtain the most current FIS report components.

Initial Countywide FIS Effective Date: September 29, 1989

Revised Dates: August 5, 2010

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### **EXHIBITS**

#### Exhibit 1 - Flood Profiles

Buckhead Creek	Panels	01P-04P
Little Buckhead Creek	Panels	05P-06P
Ogeechee River	Panel	07P
The Canal	Panels	08P-10P

#### Exhibit 2 - Flood Insurance Rate Map Index Flood Insurance Rate Map

# **FLOOD INSURANCE STUDY JENKINS COUNTY, GEORGIA AND INCORPORATED AREAS**

## **1.0 INTRODUCTION**

### **1.1 Purpose of Study**

This Flood Insurance Study (FIS) revises and updates information on the existence and severity of flood hazards in the geographic area of Jenkins County, including the City of Millen and the unincorporated areas of Jenkins County (referred to collectively herein as Jenkins County), and 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 at 44 CFR, 60.3.

In some states or communities, floodplain management criteria or regulations may exist that are more restrictive or comprehensive than the minimum Federal requirements. In such cases, the more restrictive criteria take precedence and the State (or other jurisdictional agency) will be able to explain them.

The Digital Flood Insurance Rate Map (DFIRM) and FIS report for this countywide study have been produced in digital format. Flood hazard information was converted to meet the Federal Emergency Management Agency (FEMA) DFIRM database specifications and Geographic Information System (GIS) format requirements. The flood hazard information was created and is provided in a digital format so that it can be incorporated into a local GIS and be accessed more easily by the community.

### **1.2 Authority and Acknowledgments**

The sources of authority for this FIS are the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

#### **September 29, 1989 Initial Countywide FIS Report**

For the initial September 29, 1989, countywide FIS report (FEMA, 1989), the hydrologic and hydraulic analyses were performed by Mayes, Sudderth, & Etheredge, Inc. for FEMA, under Contract No. EMA-86-C-0111. The work was completed in November 1987.



### **This Countywide FIS Report**

For this revision, Ogeechee River, Buckhead Creek, Little Buckhead Creek, and The Canal were redelineated by Post, Buckley, Schuh, and Jernigan, Inc. (PBS&J) for the Georgia Department of Natural Resources (DNR), under contract No. EMA-2008-CA-5870. The work was completed in July 2009.

Base map information shown on the Flood Insurance Rate Map (FIRM) was derived from the National Agriculture Imagery Program (NAIP) produced at a scale of 1:12,000, from aerial photography dated 2007 or later. The projection used in the preparation of this map is State Plane Georgia East, and the horizontal datum used is North American Datum of 1983 (NAD83).

#### **1.3 Coordination**

**September 29, 1989**

### **Initial Countywide FIS Report**

An initial meeting is held with representatives from FEMA, the community, and the study contractor to explain the nature and purpose of a FIS, and to identify the streams to be studied or restudied. A final meeting is held with representatives from FEMA, the community, and the study contractor to review the results of the study.

<u>Community</u>	<u>FIS Date</u>	<u>Initial Meeting</u>	<u>Final Meeting</u>
Jenkins County	September 29, 1989	January 22, 1986	November 1, 1988

### **This Countywide FIS Report**

For this revision, the initial meeting was held on July 9, 2008, and attended by representatives of Georgia DNR, Jenkins County, and URS.

The results of the study were reviewed at the final meeting held on October 7, 2009, and attended by representatives of PBS&J, FEMA, Georgia DNR, and the communities. All problems raised at that meeting have been addressed.

## **2.0 AREA STUDIED**

### **2.1 Scope of Study**

This FIS covers the geographic area of Jenkins County, Georgia, including the incorporated community of Millen. The areas studied by detailed methods were selected with priority given to all known flood hazards and areas of projected development or proposed construction through June 2009.

The following streams were studied by detailed methods in this FIS report:

Buckhead Creek	Ogeechee River
Little Buckhead Creek	The Canal

The limits of detailed study are indicated on the Flood Profiles (Exhibit 1) and on the FIRM (Exhibit 2).

For this countywide revision, reaches of streams that have been studied by detailed methods were selected for redelineation based on more recent topography. The streams and reaches that were redelineated in this revision are shown in Table 1.

Table 1 - Redelineated Streams

<u>Stream</u>	<u>Reach Description</u>
Buckhead Creek	From confluence with Ogeechee River to approximately 19,000 feet upstream of confluence with Ogeechee River.
Little Buckhead Creek	From confluence with Buckhead Creek to approximately 8,778 feet upstream of confluence with Buckhead Creek.
Ogeechee River	From the Jenkins County boundary to a point 32,740 feet upstream of the Jenkins County boundary.
The Canal	From the confluence with Buckhead Creek to approximately 16,250 feet above the confluence with Buckhead Creek.

The vertical datum was converted from the National Geodetic Vertical Datum of 1929 (NGVD) to the North American Vertical Datum of 1988 (NAVD). The projection used in the preparation of this map is State Plane Georgia East. In addition, the Transverse Mercator, State Plane coordinates, previously referenced to the North American Datum of 1927 (NAD27), are now referenced to the NAD83.

Approximate analyses were used to study those areas having low development potential or minimal flood hazards. The scope and methods of study were proposed to and agreed to by FEMA and Jenkins County.

## 2.2 Community Description

Jenkins County, which is located in eastern Georgia, is bordered on the north by Burke County, on the east by Screven County, on the south by Bulloch County, and on the west by Emanuel County.

According to the 2000 Census, the population of Jenkins County was 8,575. The county has a total land area of approximately 350 square miles (U.S. Census Bureau, 2009).

Jenkins County, the 138th county formed in Georgia, was created in 1905 from territory then belonging to the counties of Bulloch, Burke, Emanuel and Screven. The county was named for Governor Charles J. Jenkins. The City of Millen is the County Seat (Georgia, State of, 2009).

The average high temperature, 92 degrees Fahrenheit (°F), occurs in July. The average low temperature is 58°F and occurs in January. Jenkins County receives an average of 43.9 inches of rainfall per year (The Weather Channel, 2009).

## 2.3 Principal Flood Problems

The worst recorded flooding in Jenkins County occurred between September 25 and October 3, 1929, as a result of two heavy thunderstorms that passed through the area within a period of ten days. The first storm, which occurred September 25-27, 1929, was prolonged and intense. The second storm was the result of a tropical hurricane that passed around the Florida peninsula, turned northwest, and moved inland near the City of Pensacola, Florida on September 30. It moved northeast across northern Florida and southeastern Georgia and then up the Atlantic coast.

Based on recent flood-related state and federal disaster declarations, Jenkins County has experienced flooding associated with severe storms, hurricanes, torrential downpours, severe thunderstorms, flash floods, and river flooding (Georgia Emergency Management Agency, 2009).

## 2.4 Flood Protection Measures

Flood protection measures in Jenkins County consist of manmade drainage channels and maintenance programs to keep the culverts and ditches clear of debris. Those measures would have a negligible effect on a major event such as the 1-percent-annual chance flood.

# 3.0 **ENGINEERING METHODS**

For the flooding sources studied by detailed methods in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data

required for this study. Flood events of a magnitude that are expected to be equaled or exceeded once on the average during any 10-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for floodplain management and for flood insurance rates. These events, commonly termed the 10-, 50-, 100-, and 500-year floods, have a 10-, 2-, 1-, and 0.2-percent chance, respectively, of being equaled or exceeded during any year. Although the recurrence interval represents the long-term, average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood that equals or exceeds the 1-percent-annual-chance (100-year) flood in any 50-year period is approximately 40 percent (4 in 10); for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported herein reflect flooding potentials based on conditions existing in the community at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

### 3.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish peak discharge-frequency relationships for each flooding source studied by detailed methods affecting the community.

#### **September 29, 1989**

##### **Initial Countywide Analyses**

Hydrologic analyses of the ungaged streams (Buckhead Creek, Little Buckhead Creek, and The Canal) were based on the U.S. Geological Survey (USGS) regional regression equations relating discharge to drainage area for natural streams in various physiographic provinces in Georgia (USGS, 1979). The regional regression equations were determined by synthesizing 75 years of flood record from short- and long-term streamflow and rainfall data, applying the log-Pearson Type III distribution with regional skew coefficients (WRC, 1976), and regionalizing using multiple regression techniques.

Because the watersheds of the studied streams were developed to varying extents, the equations were adjusted to account for urbanization using the USGS methodology. The modification involves determining an urbanization factor which defines urbanization as a function of the percentage of impervious watershed area and percentage of watershed area served by storm sewers. For the streams studied, the urbanization factor ranged from 1.0 to 1.3 (FEMA, 1989).

Floodflow frequency data for the Ogeechee River was based on a statistical analyses performed by the USGS. Flows were estimated applying the log-Pearson Type III distribution (Water Resources Council, 1979). Data for the stream segment upstream of U.S. Highway 25 was developed from 19 years of flow records from USGS gauge station no. 02201500. Downstream of U.S.

Highway 25, the data were developed from 60 years of flow records from the USGS gauge station no. 02202000.

### This Countywide FIS Report

Discharges for approximate analysis streams were estimated using the published USGS regional regression equations for rural areas in Georgia (Stamey and Hess, 1993). Regression equations estimate the peak discharges for ungauged streams based on characteristics of nearby gauged streams. Drainage areas were developed from USGS 30-meter Digital Elevation Models (DEMs).

Peak discharge-drainage area relationships for each flooding source studied in detail are shown in Table 2.

Table 2 - Summary of Discharges

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	0.2-Percent- Annual-Chance
BUCKHEAD CREEK					
At confluence of Ogeechee River	288.2	6,189	10,036	12,268	17,800
Just upstream of Norfolk Southern Railway	277.7	6,019	9,772	11,950	17,200
Just upstream of Little Buckhead Creek	246.9	5,609	9,095	11,109	17,000
LITTLE BUCKHEAD CREEK					
At confluence with Buckhead Creek	29.4	1,609	2,550	3,084	4,290
Just upstream of Harvey Street	27.5	1,529	2,429	2,905	4,180
OGEECHEE RIVER					
Approximately 4,752 feet downstream of U.S. Highway 25	1,824	28,646	35,523	40,845	53,579
Just downstream of U.S. Highway 25	1,810	28,481	33,963	36,412	42,444
THE CANAL					
At confluence with Buckhead Creek	10.1	985	1,499	1,753	2,300
Just upstream of State Highway 17	7.5	738	1,147	1,349	2,860
Just upstream of Statesboro Road/U.S. Highway 25	3.8	474	738	865	1,215

### 3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of floods of the selected recurrence intervals. Users should be aware that flood elevations shown on the

FIRM represent rounded whole-foot elevations and may not exactly reflect the elevations shown on the Flood Profiles or in the Floodway Data Table in the FIS report. Flood elevations shown on the FIRM are primarily intended for flood insurance rating purposes. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS report in conjunction with the data shown on the FIRM.

**September 29, 1989**

### **Initial Countywide Analyses**

Cross-section data for the backwater analyses of the streams studied in detail were obtained using data from USGS topographic maps (USGS, various dates) and field surveys. Elevation data and structural geometry for culverts and bridges were obtained from field survey or the Georgia Department of Transportation.

Starting water-surface elevations for all studied streams were calculated using the slope-area method. Water-surface elevations of floods of the selected recurrence intervals were computed using the HEC-2 step backwater computer program (HEC, 1984).

### **This Countywide Analyses**

For the streams newly studied by approximate methods, cross section data was obtained from the USGS 10-meter DEMs. Hydraulically significant roads were modeled as bridges, with opening data gathered from available inventory data or approximated from the imagery. Top of road elevations were estimated from the best available topography. The studied streams were modeled using HEC-RAS version 4.0 (HEC, 2008).

Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles (Exhibit 1). For stream segments for which a floodway was computed (Section 4.2), selected cross section locations are also shown on the FIRM (Exhibit 2).

Channel roughness factors (Mannings "n") used in the hydraulic computations were chosen by engineering judgment and based on field observations of the stream channels and overbank areas. The Manning's "n" values for detailed studied streams in Jenkins County are listed below.

#### **Manning's "n" Values**

<u>Stream</u>	<u>Channel "n"</u>	<u>Overbank "n"</u>
Buckhead Creek	0.020-0.055	0.005-0.110
Little Buckhead Creek	0.020-0.055	0.005-0.110
Ogeechee River	0.020-0.055	0.005-0.110
The Canal	0.020-0.055	0.005-0.110

### 3.3 Vertical Datum

All FIS reports and FIRMs are referenced to a specific vertical datum. The vertical datum provides a starting point against which flood, ground, and structure elevations can be referenced and compared. Until recently, the standard vertical datum in use for newly created or revised FIS reports and FIRMs was NGVD. With the finalization of NAVD, many FIS reports and FIRMs are being prepared using NAVD as the referenced vertical datum.

All flood elevations shown in this FIS report and on the FIRM are referenced to NAVD. Structure and ground elevations in the community must, therefore, be referenced to NAVD. It is important to note that adjacent communities may be referenced to NGVD. This may result in differences in Base Flood Elevations (BFEs) across the corporate limits between the communities. Some of the data used in this study were taken from the prior effective FIS reports and adjusted to NAVD. The average conversion factor that was used to convert the data in this FIS report to NAVD was calculated using the National Geodetic Survey's (NGS) VERTCON online utility (NGS, 2009). The data points used to determine the conversion are listed in Table 3.

Table 3- Vertical Datum Conversion

<u>Quad Name</u>	<u>Corner</u>	<u>Latitude</u>	<u>Longitude</u>	Conversion from NGVD29 to NAVD88 (feet)
Scotts Corner	SE	32.875	-82.125	-0.689
Bellevue	SE	32.875	-82.000	-0.741
Perkins	SE	32.875	-81.875	-0.778
Sardis	SE	32.875	-81.750	-0.778
Midville	SE	32.750	-82.125	-0.679
Birdsville	SE	32.750	-82.000	-0.705
Millen	SE	32.750	-81.875	-0.784
Garfield	SE	32.625	-82.000	-0.732
Four Points	SE	32.625	-81.875	-0.771
<b>Average:</b>				<b>-0.740</b>

For additional information regarding conversion between NGVD and NAVD, visit the NGS website at [www.ngs.noaa.gov](http://www.ngs.noaa.gov), or contact the NGS at the following address:

Vertical Network Branch, N/CG13  
National Geodetic Survey, NOAA  
Silver Spring Metro Center 3  
1315 East-West Highway  
Silver Spring, Maryland 20910  
(301) 713-3191

Temporary vertical monuments are often established during the preparation of a flood hazard analysis for the purpose of establishing local vertical control. Although these monuments are not shown on the FIRM, they may be found in the Technical Support Data Notebook associated with the FIS report and FIRM for this community. Interested individuals may contact FEMA to access these data.

To obtain current elevation, description, and/or location information for benchmarks shown on this map, please contact the Information Services Branch of the NGS at (301) 713-3242, or visit their website at [www.ngs.noaa.gov](http://www.ngs.noaa.gov).

#### **4.0 FLOODPLAIN MANAGEMENT APPLICATIONS**

The NFIP encourages State and local governments to adopt sound floodplain management programs. Therefore, each FIS provides 1-percent-annual-chance (100-year) flood elevations and delineations of the 1- and 0.2-percent-annual-chance (500-year) floodplain boundaries and 1-percent-annual-chance floodway to assist communities in developing floodplain management measures. This information is presented on the FIRM and in many components of the FIS report, including Flood Profiles, Floodway Data Table, and Summary of Stillwater Elevations Table. Users should reference the data presented in the FIS report as well as additional information that may be available at the local map repository before making flood elevation and/or floodplain boundary determinations.

##### **4.1 Floodplain Boundaries**

To provide a national standard without regional discrimination, the 1-percent-annual-chance flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2-percent-annual-chance flood is employed to indicate additional areas of flood risk in the community.

For each stream studied by detailed methods, the 1- and 0.2-percent-annual-chance floodplain boundaries have been delineated using the flood elevations determined at each cross section.

The 1- and 0.2-percent-annual-chance floodplain boundaries are shown on the FIRM (Exhibit 2). On this map, the 1-percent-annual-chance floodplain boundary corresponds to the boundary of the areas of special flood hazards (Zones A and AE), and the 0.2-percent-annual-chance floodplain boundary corresponds to the boundary of areas of moderate flood hazards. In cases where the 1- and 0.2-percent-annual-chance floodplain boundaries are close together, only the 1-percent-annual-chance floodplain boundary has been shown. Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.



For the streams studied by approximate methods, only the 1-percent-annual-chance floodplain boundary is shown on the FIRM (Exhibit 2).

#### 4.2 Floodways

Encroachment on floodplains, such as structures and fill, reduces flood-carrying capacity, increases flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard. For purposes of the NFIP, a floodway is used as a tool to assist local communities in this aspect of floodplain management. Under this concept, the area of the 1-percent-annual-chance floodplain is divided into a floodway and a floodway fringe. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that the 1-percent-annual-chance flood can be carried without substantial increases in flood heights. Minimum Federal standards limit such increases to 1 foot, provided that hazardous velocities are not produced. The floodways in this study are presented to local agencies as minimum standards that can be adopted directly or that can be used as a basis for additional floodway studies.

The area between the floodway and 1-percent-annual-chance floodplain boundaries is termed the floodway fringe. The floodway fringe encompasses the portion of the floodplain that could be completely obstructed without increasing the water surface elevation of the 1-percent-annual-chance flood more than 1 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 1.

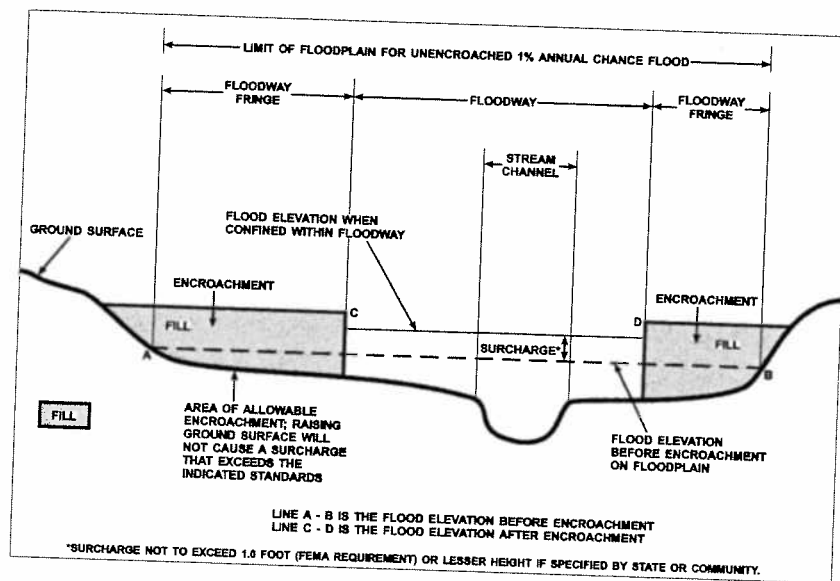


Figure 1 - Floodway Schematic

No floodways were computed for Jenkins County.

## **5.0 INSURANCE APPLICATIONS**

For flood insurance rating purposes, flood insurance zone designations are assigned to a community based on the results of the engineering analyses. These zones are as follows:

### **Zone A**

Zone A is the flood insurance risk zone that corresponds to the 1-percent-annual-chance floodplains that are determined in the FIS by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no BFEs or base flood depths are shown within this zone.

### **Zone AE**

Zone AE is the flood insurance risk zone that corresponds to the 1-percent-annual-chance floodplains that are determined in the FIS by detailed methods. In most instances, whole-foot BFEs derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

### **Zone X**

Zone X is the flood insurance risk zone that corresponds to areas outside the 0.2-percent-annual-chance floodplain, areas within the 0.2-percent-annual-chance floodplain, areas of 1-percent-annual-chance flooding where average depths are less than 1 foot, areas of 1-percent-annual-chance flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 1-percent-annual-chance flood by levees. No BFEs or base flood depths are shown within this zone.

## **6.0 FLOOD INSURANCE RATE MAP**

The FIRM is designed for flood insurance and floodplain management applications.

For flood insurance applications, the map designates flood insurance risk zones as described in Section 5.0 and, in the 1-percent-annual-chance floodplains that were studied by detailed methods, shows selected whole-foot BFEs or average depths. Insurance agents use the zones and BFEs in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

For floodplain management applications, the map shows by tints, screens, and symbols, the 1- and 0.2-percent-annual-chance floodplains, floodways, and the locations of selected cross sections used in the hydraulic analyses and floodway computations.

The countywide FIRM presents flooding information for the entire geographic area of Jenkins County. Previously, FIRMs were prepared for each incorporated community and

the unincorporated areas of the County identified as flood-prone. Historical data relating to the maps prepared for each community are presented in Table 4.

## **7.0 OTHER STUDIES**

This report either supersedes or is compatible with all previous studies on streams studied in this report and should be considered authoritative for purposes of the NFIP.

## **8.0 LOCATION OF DATA**

Information concerning the pertinent data used in the preparation of this study can be obtained by contacting FEMA, Federal Insurance and Mitigation Division, Koger Center – Rutgers Building, 3003 Chamblee Tucker Road, Atlanta, Georgia 30341.

## **9.0 BIBLIOGRAPHY AND REFERENCES**

Federal Emergency Management Agency, Flood Insurance Study, Jenkins County, Georgia and Incorporated Areas, Washington, D.C, September 29, 1989.

Georgia, State of (Georgia.gov), Jenkins County Profile. Retrieved May 5, 2009, from <http://jenkinscounty.georgia.gov>.

Georgia Emergency Management Agency, Georgia Disaster History. Retrieved April 16, 2009, from <http://www.gema.ga.gov>.

Hydrologic Engineering Center, HEC-2 Water Surface Profiles, U.S. Army Corps of Engineers, Davis, California, April 1984.

Hydrologic Engineering Center, HEC-RAS River Analysis System, Version 4.0, U.S. Army Corps of Engineers, Davis, California, March 2008.

National Geodetic Survey, VERTCON-North American Vertical Datum Conversion Utility. Retrieved April 3, 2009, from <http://www.ngs.noaa.gov>.

Stamey, T.C. and G. W. Hess, Techniques for Estimating Magnitude and Frequency of Floods in Rural Basins of Georgia, Water Resources Investigation Report 93-4016, U.S. Geological Survey, 1993.

The Weather Channel, Monthly Averages for Millen, GA. Retrieved March 13, 2009, from <http://www.weather.com>.

U.S. Census Bureau, American FactFinder, Jenkins County, Georgia, 2000. Retrieved March 13, 2009, from <http://factfinder.census.gov>.

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISION DATE	FIRM EFFECTIVE DATE	FIRM REVISION DATE
Jenkins County (Unincorporated Areas)	February 3, 1978	None	September 29, 1989	None
Millen, City of	April 12, 1974	February 6, 1976 April 11, 1980	May 1, 1987	None

FEDERAL EMERGENCY MANAGEMENT AGENCY

## JENKINS COUNTY, GA AND INCORPORATED AREAS

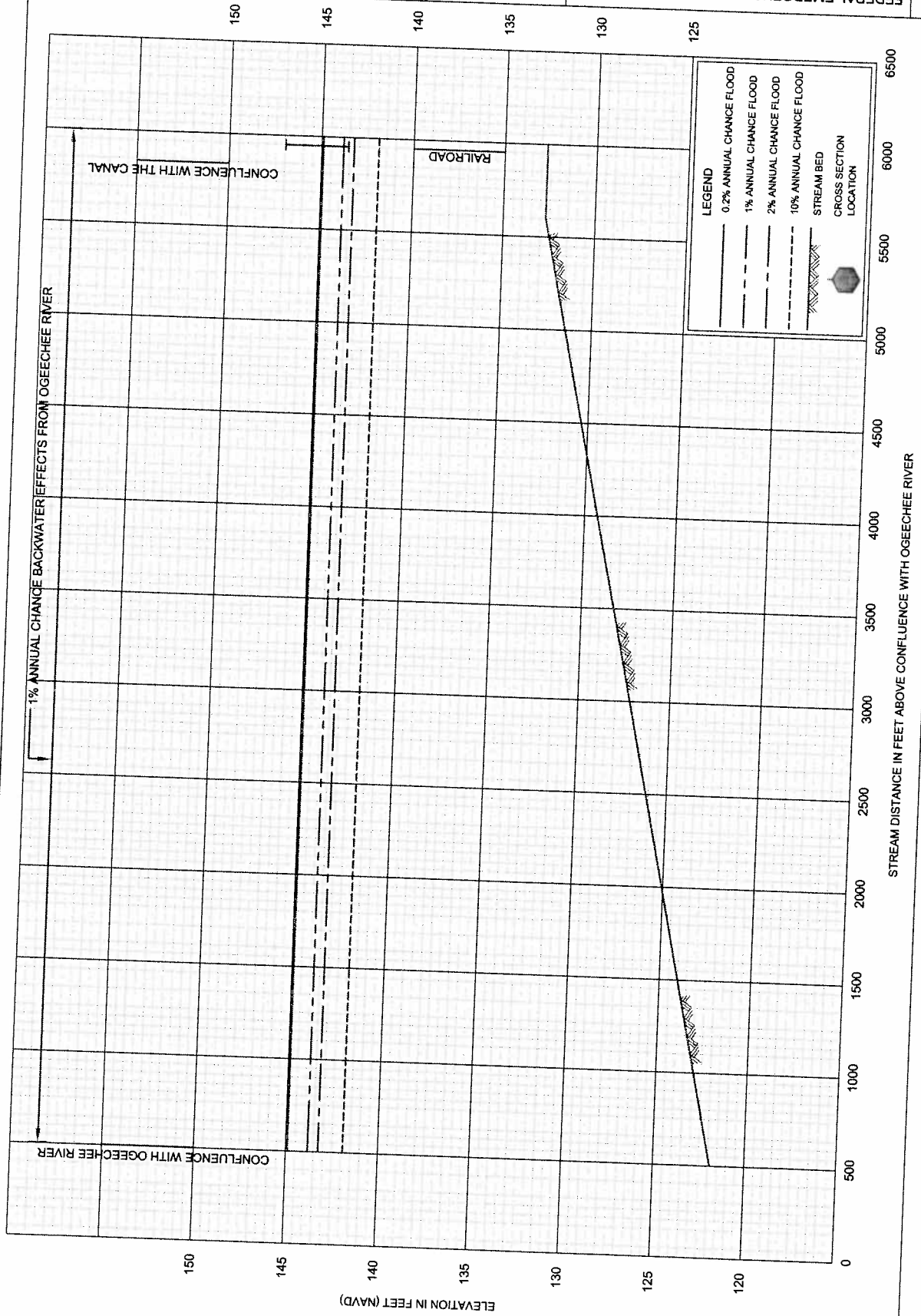
## COMMUNITY MAP HISTORY

**TABLE 4**

U.S. Geological Survey, Floods in Georgia, Magnitude and Frequency, Water Resources Investigations, McGlone Price, U.S. Department of the Interior, 1979.

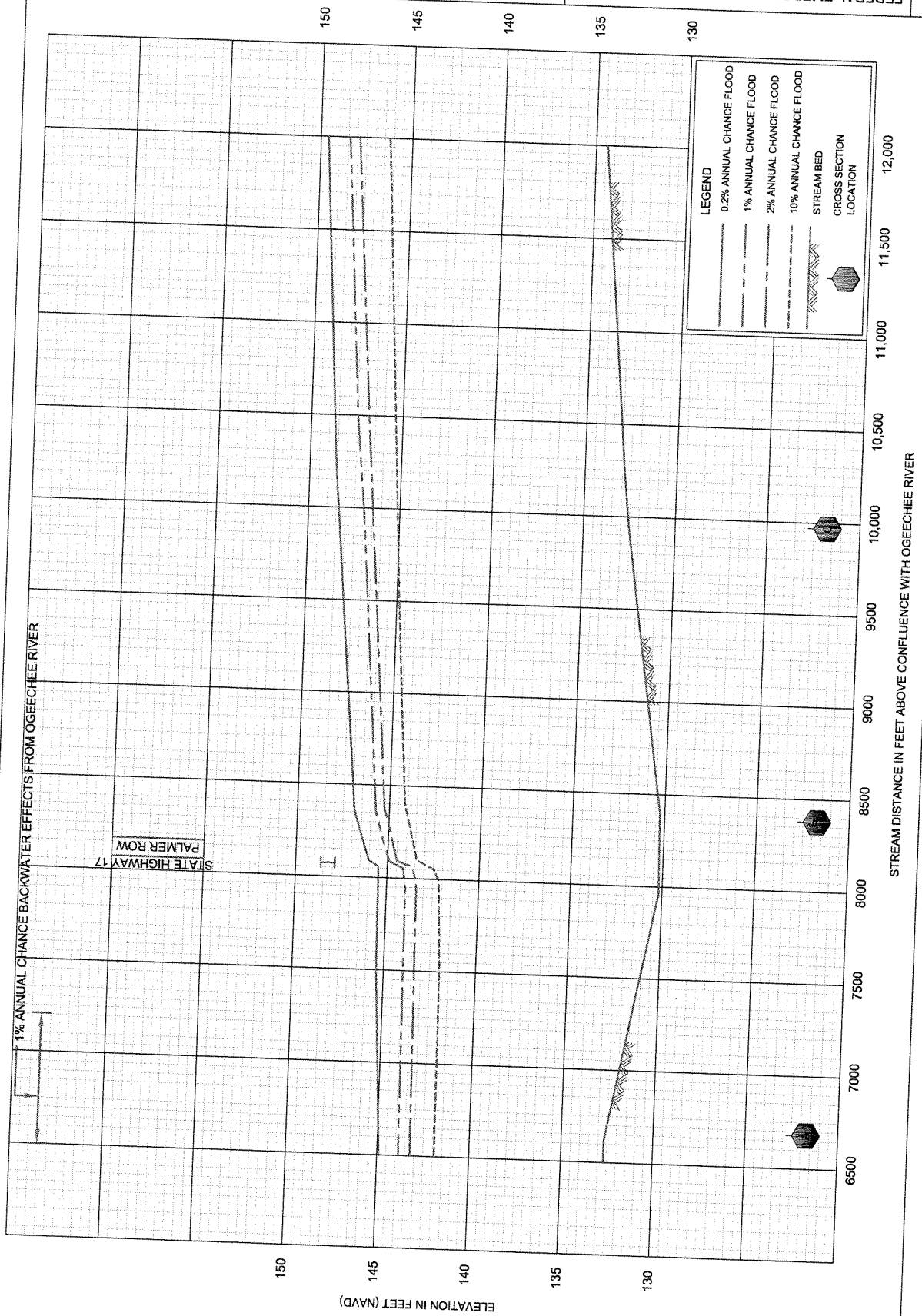
U.S. Geological Survey, 7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 10 Feet: Scotts Corner, Georgia 1974; Bellevue, Georgia, 1974; Perkins, Georgia, 1976; Sardis, Georgia, 1974; Midville, Georgia, 1974; Birdsville, Georgia, 1974; Millen, Georgia, 1975; Bay Branch, Georgia, 1975; Canoochee, Georgia, 1971; Garfield, Georgia, 1971; Four Points, Georgia, 1975; Rocky Ford, Georgia, 1975; Twin City, SE, Georgia, 1971; Portal, Georgia, 1975; various dates.

Water Resources Council, Hydrology Committee, Guidelines for Determining Flood Flow Frequencies, Bulletin #17, March 1976.



FEDERAL EMERGENCY MANAGEMENT AGENCY  
JENKINS COUNTY, GA  
AND INCORPORATED AREAS

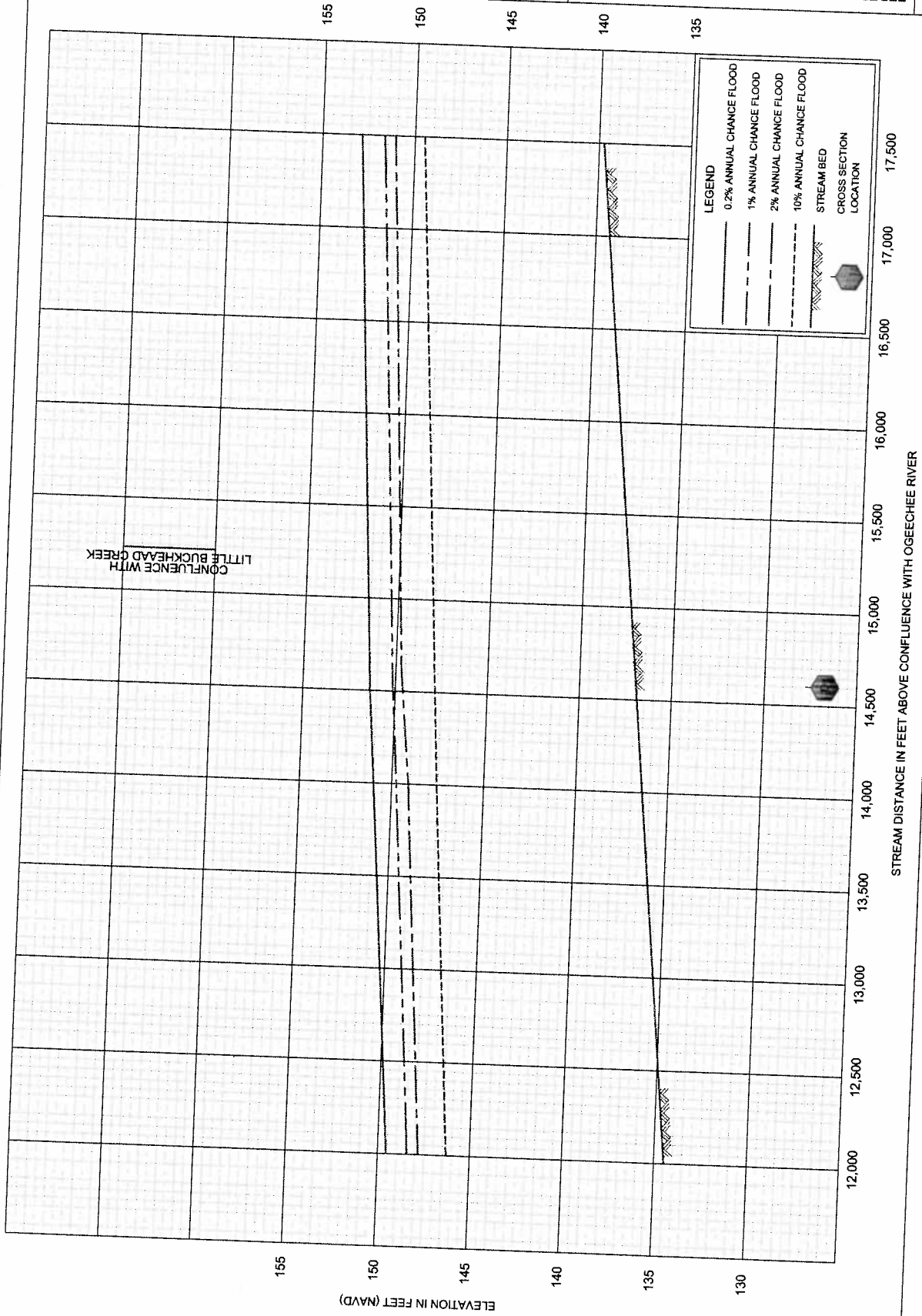
FLOOD PROFILES  
BUCKHEAD CREEK



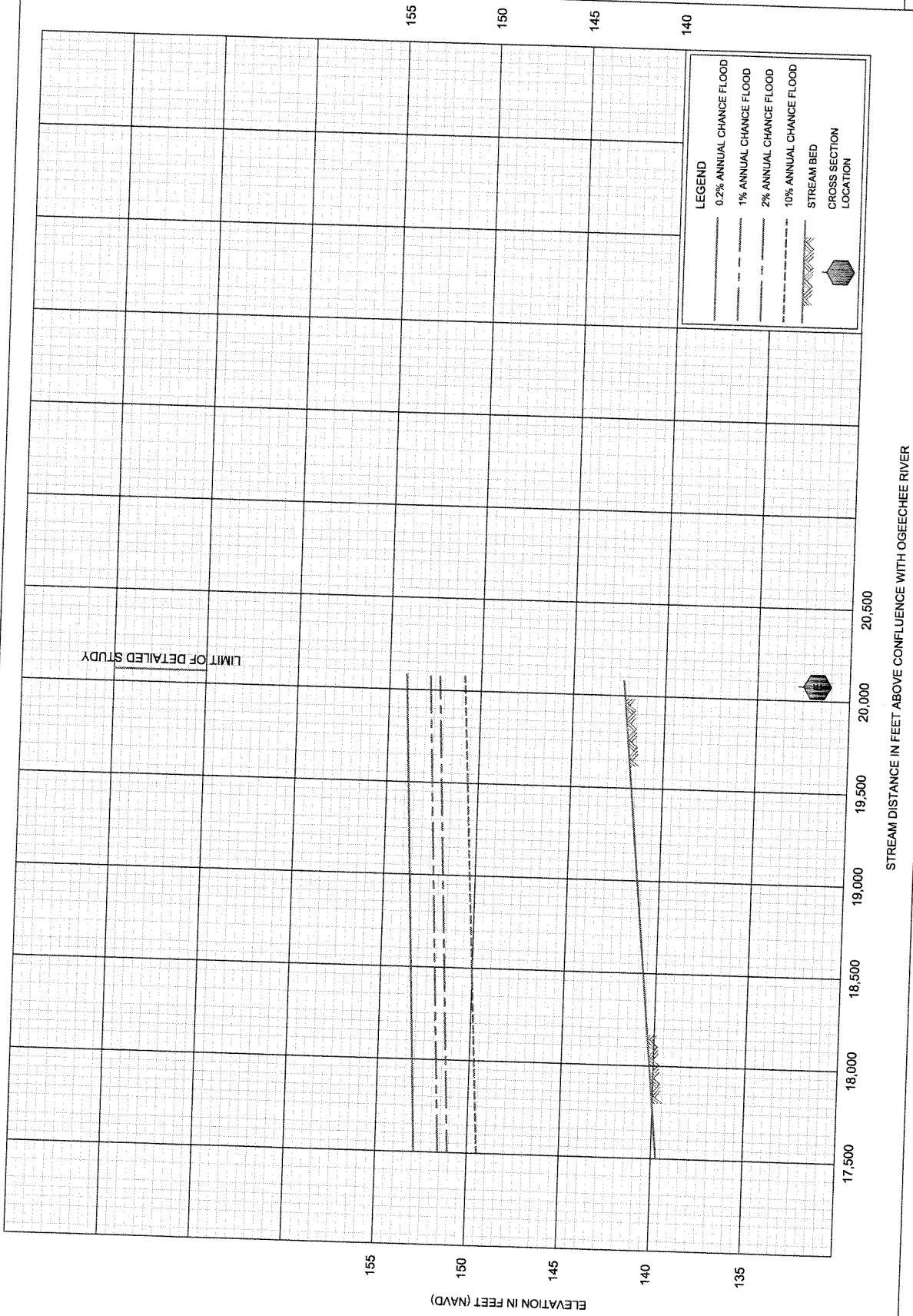
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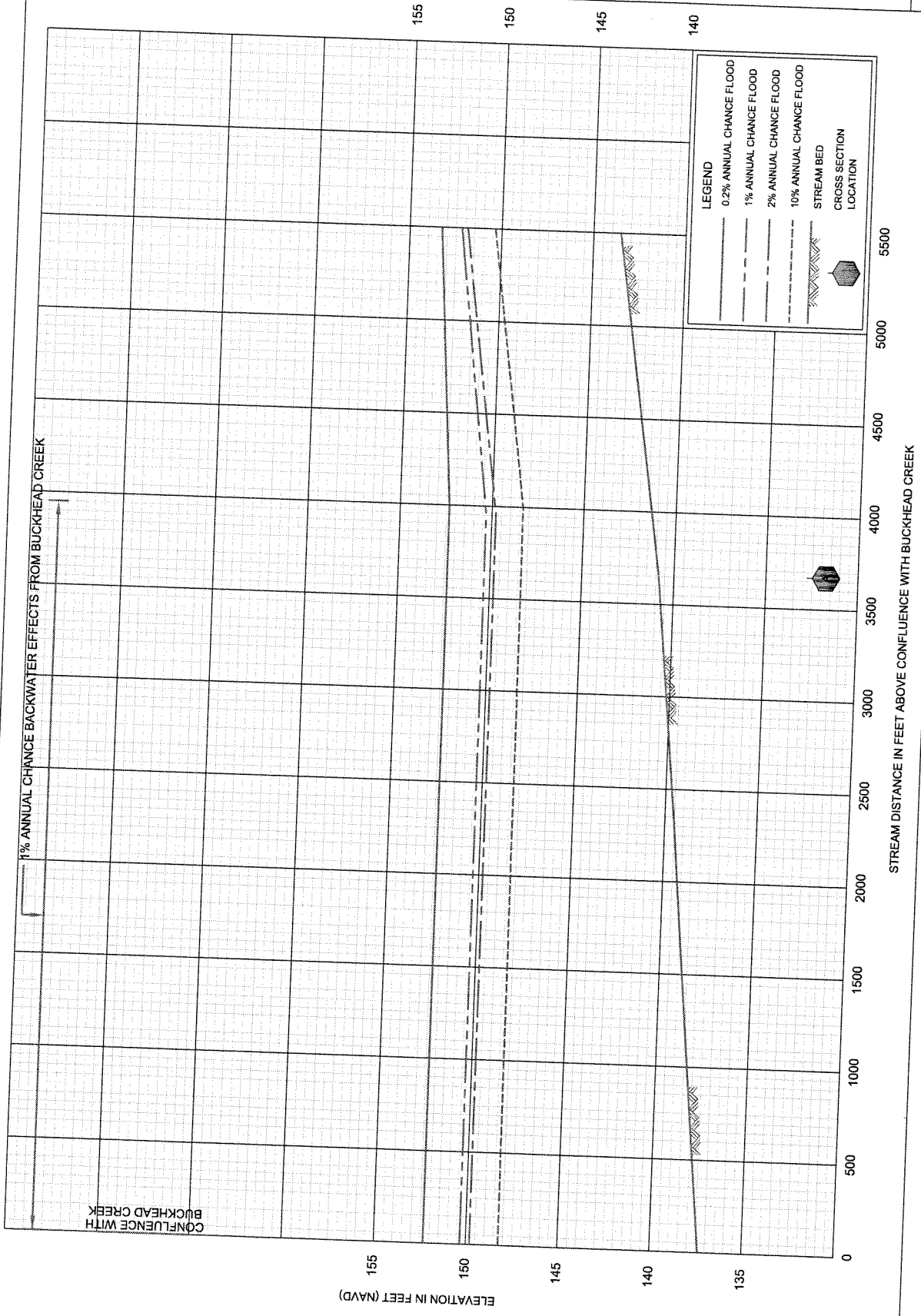
FEDERAL EMERGENCY MANAGEMENT AGENCY  
JENKINS COUNTY, GA  
AND INCORPORATED AREAS

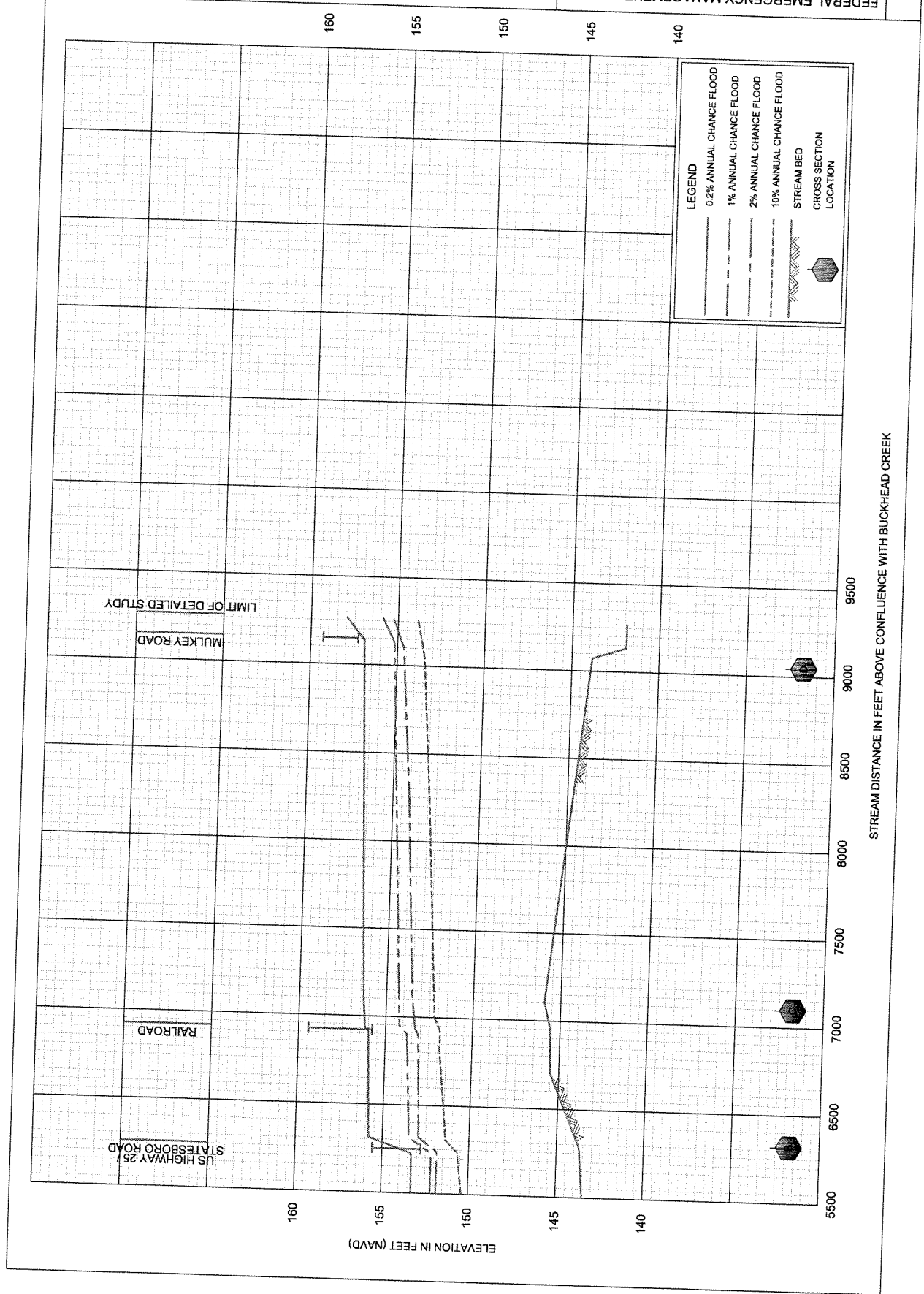
FLOOD PROFILES  
BUCKHEAD CREEK

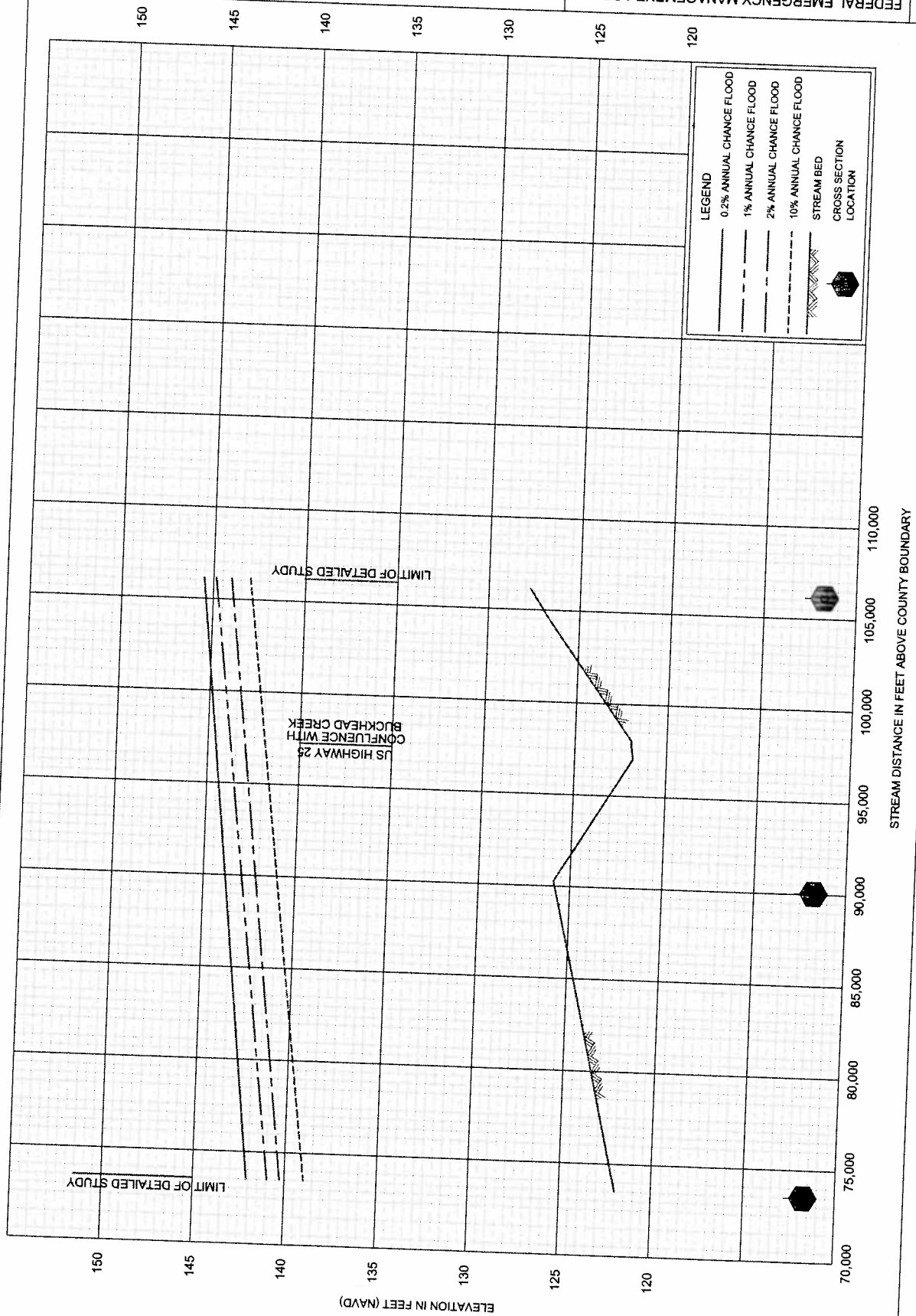


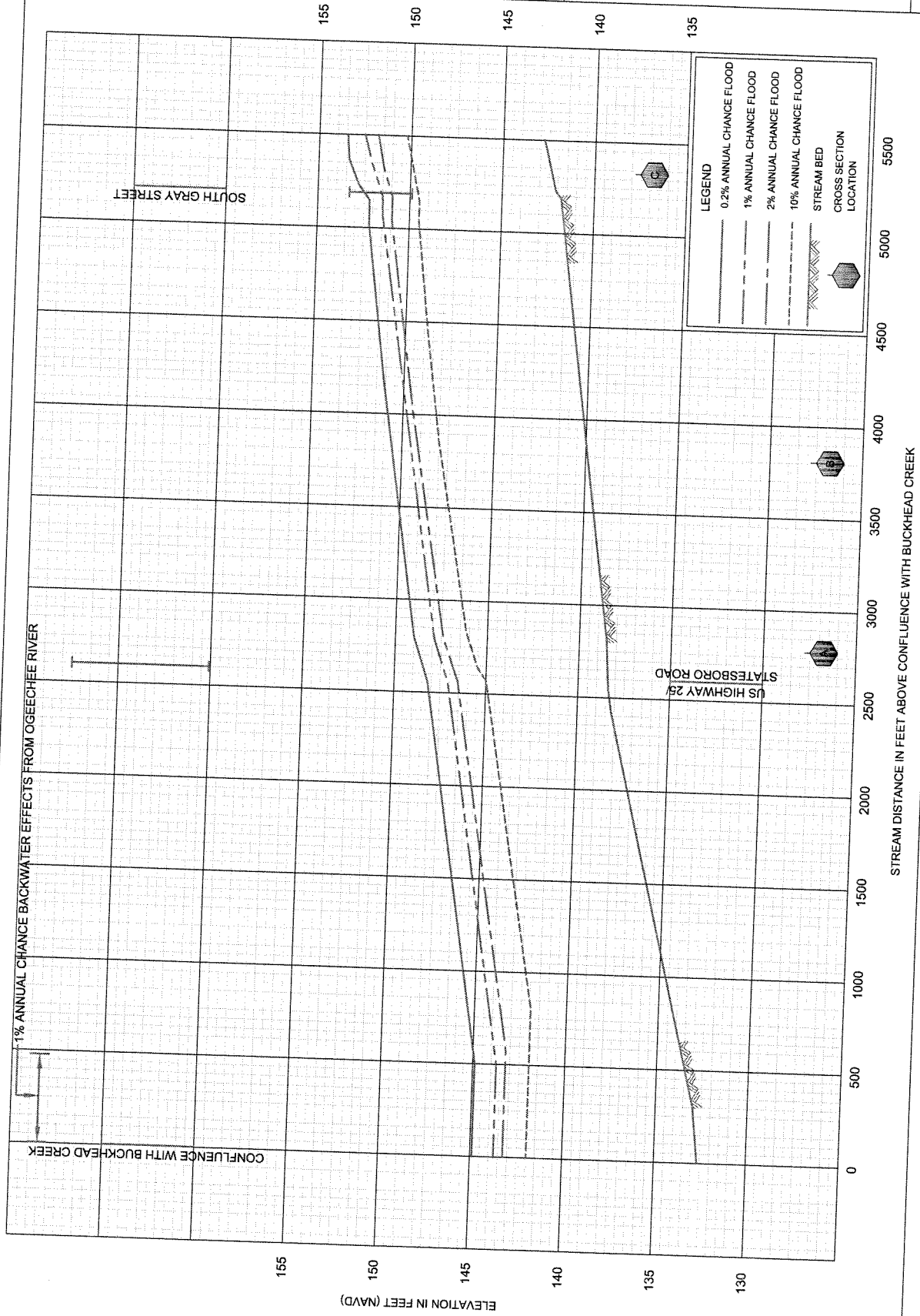




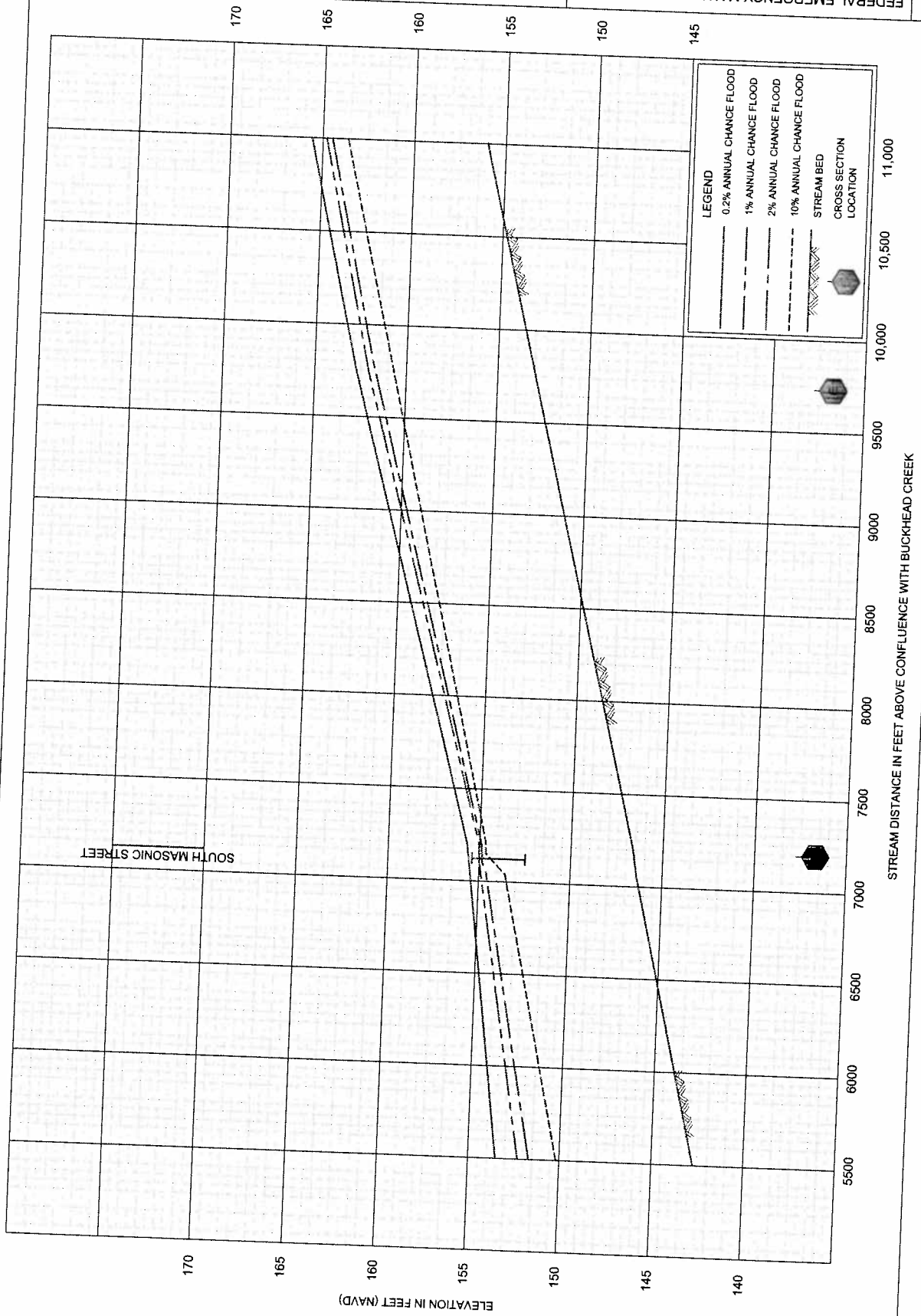




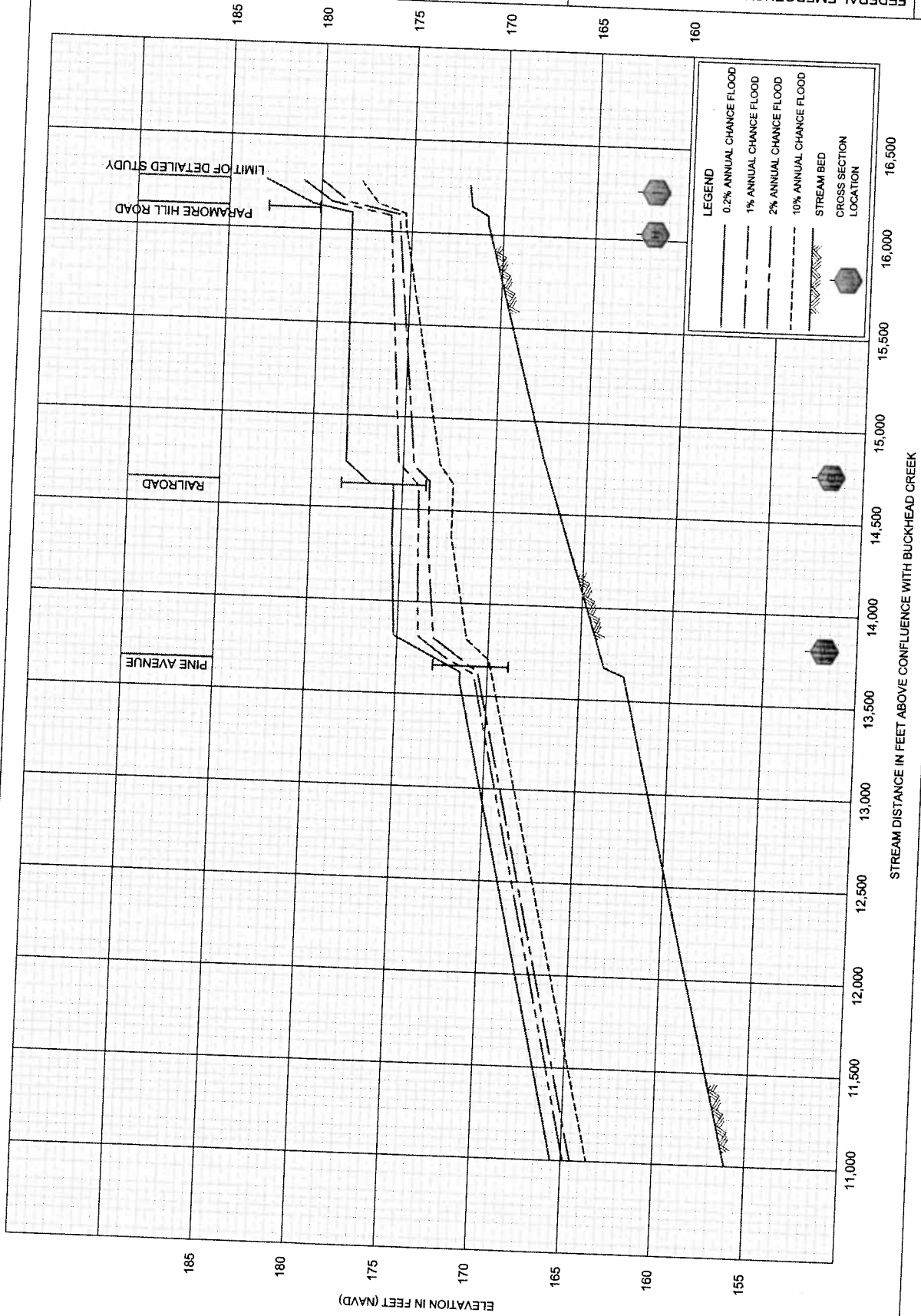




FLOOD PROFILES  
THE CANAL



FLOOD PROFILES  
THE CANAL







A Program of the Georgia Forestry Commission  
with support from the U.S. Forest Service

# **Community Wildfire Protection Plan**

## ***An Action Plan for Wildfire Mitigation and Conservation of Natural Resources***

### **Jenkins County, Georgia**



M A Y      2 0 1 9



Prepared by;  
Rick Lane, Chief Ranger, Jenkins County  
Will Fell, CWPP Specialist (Initial plan 2012)  
Beryl Budd, Wildfire Prevention Specialist (Revised plan 2019)

Georgia Forestry Commission  
3786 Hwy 17 South  
Millen, GA. 30442

The following report is a collaborative effort among various entities; the representatives listed below comprise the core decision-making team responsible for this report and mutually agree on the plan's contents:

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## Appended Documents:

Jenkins County Southern Wildfire Risk Assessment Summary Report

Jenkins County Wildfire Pre-suppression Plan

NFPA 1141 Standard for Fire Protection Infrastructure for Land Development in Suburban and Rural Areas.

## Preface

The extreme weather conditions that are conducive to wildfire disasters (usually a combination of extended drought, low relative humidity and high winds) can occur in this area of Georgia as infrequently as every 10-15 years. This is not a regular event, but as the number of homes that have been built in or adjacent to forested or wildland areas increases, it can turn a wildfire under these weather conditions into a major disaster. Wildfires move fast and can quickly overwhelm the resources of even the best equipped fire department. Advance planning can save lives, homes and businesses.

This Community Wildfire Protection Plan (CWPP) includes a locally assessed evaluation of the wildland urban interface areas of the county, looking at the critical issues regarding access to these areas, risk to properties from general issues such as building characteristics and “fire wise” practices and response from local firefighting resources. It further incorporates a locally devised action plan to mitigate these risks and hazards through planning, education and other avenues that may become available to address the increasing threat of wildland fire. The CWPP does not obligate the county financially in any way, but instead lays a foundation for improved emergency response if and when grant funding is available to the county.

The Plan is provided at no cost to the county and can be very important for county applications for hazard mitigation grant funds through the National Fire Plan, FEMA mitigation grants and Homeland Security. Under the Healthy Forest Restoration Act (HFRA) of 2003, communities (counties) that seek grants from the federal government for hazardous fuels reduction work are required to prepare a Community Wildfire Protection Plan.

This plan will:

- Enhance public safety
- Raise public awareness of wildfire hazards and risks
- Educate homeowners on how to reduce home ignitability
- Build and improve collaboration at multiple levels

The public does not have to fall victim to this type of disaster. Homes and communities can be designed, built and maintained to withstand a wildfire even in the absence of fire equipment and firefighters on the scene. It takes planning and commitment at the local level before the wildfire disaster occurs and that is what the Community Wildfire Protection Plan is all about.

## I. OBJECTIVES

The mission of the following report is to set clear priorities for the implementation of wildfire mitigation in Jenkins County. The plan includes prioritized recommendations for the appropriate types and methods of fuel reduction and structure ignitability reduction that will protect this community and its essential infrastructure. It also includes a plan for wildfire suppression. Specifically, the plan includes community-centered actions that will:

- Educate citizens on wildfire, its risks, and ways to protect lives and properties,
- Support fire rescue and suppression entities,
- Focus on collaborative decision-making and citizen participation,
- Develop and implement effective mitigation strategies, and
- Develop and implement effective community ordinances and codes.

## II. COMMUNITY COLLABORATION

The core team convened on October 11<sup>th</sup> 2011 to assess risks and develop the Community Wildfire Protection Plan. The group is comprised of representatives from local government, local fire authorities, and the state agency responsible for forest management. Below are the groups included in the task force:

Millen Jenkins County Fire Department  
Georgia Forestry Commission

It was decided to conduct community assessments on the basis of individual fire districts in the county. The various fire departments in the county assessed their districts and reconvened on November 8<sup>th</sup> 2011 for the purpose of completing the following:

Risk Assessment	Assessed wildfire hazard risks and prioritized mitigation actions.
Fuels Reduction	Identified strategies for coordinating fuels treatment projects.
Structure Ignitability	Identified strategies for reducing the ignitability of structures within the Wildland interface.
Emergency Management	Forged relationships among local government and fire districts and developed/refined a pre-suppression plan.
Education and Outreach	Developed strategies for increasing citizen awareness and action and to conduct homeowner and community leader workshops.

### III. COMMUNITY & WILDFIRE HISTORY



Jenkins County, located in the southeastern part of the state, is Georgia's 140th county and has an area of 350 square miles. It was created by an act of the state legislature on August 17, 1905, from parts of Bulloch, Burke, Emanuel, and Screven counties. The original name proposed for the new county was Dixie, but it was ultimately decided to name the county in honor of Charles Jones Jenkins, a judge and Reconstruction-era governor of the state.

Millen is the county seat of Jenkins County and is also the reason for its existence. The town had been split between Burke and Screven counties. Residents of this small town had grown weary of its precarious location near the corner of four very large counties because of the impact it had on jurisdictional issues and the distance to the various county seats, which averaged twenty miles.



In 1903 the Millen News Publishing Company was created. The newspaper it published became a mouthpiece for the growing sentiment to create a new county for Millen. In 1905 donations were gathered to send several citizens to Atlanta to petition the legislature for a new county. In August of that year the legislature listened to their pleas, and Jenkins County was created.

**Past and present photo of courthouse in Millen**

Jenkins County contains several historically significant places. Big Buckhead Baptist Church, named for the stream that flows nearby, was constituted in 1787 and is one of the oldest Baptist churches in the state. Four different structures have housed the church on its present site. The church that stands today was constructed in 1830.

The tiny community of Birdsville is the site of an antebellum manor known as the Birdsville Plantation. It sits on a plot that was originally part of a 500-acre land grant to Francis Jones by the governor and council of Georgia before the Revolutionary War (1775-83). When Jones died in 1774, his two sons, Francis and James, inherited the land, which became a thriving plantation. In turn James's son Phillip inherited the property and began construction on the plantation house. Phillip's grandson William Beeman completed the construction in 1847, and the house still stands, though it bears the scars of bullet holes left by the passing army of Union general William T. Sherman.

Another point of interest is Magnolia Springs State Park. The park covers 1,071 acres and contains a clear spring that puts out 7 million gallons of water a day. During the Civil War (1861-65) the area served as a prison camp called Fort Lawton. It was chosen for this purpose because of the readily available supply of water from the springs. The earthen bulwarks of the prison camp are still visible in the park today. The park also contains many recreational opportunities, as well as the Bo Ginn National Fish Hatchery and Aquarium.

According to the 2010 census, the population of Jenkins County is 8,340, a decrease from the 2000 population of 8,575. The county remains mostly rural, with many residents working in agriculture and agribusiness. The major crops are cotton, peanuts, wheat, rye, corn, soybeans, and timber.

## **Wildfire History**

Jenkins County located in southeast Georgia, is still almost 65% forested, despite an agricultural presence scattered throughout the county. Perhaps with the exception of the large blocks of woodlands in the areas along the Ogeechee River, there are homes and communities scattered throughout the county. The risks and hazards from the wildland urban interface are fairly general and substantial throughout the county even on the edges of the incorporated city of Millen.

Jenkins County is protected by the Millen Jenkins County Fire Department with a full time station in Millen along with six volunteer departments located throughout the county. The Georgia Forestry Commission maintains a county protection unit located three miles south of Millen on Hwy 17 to respond to wildfires throughout the county. The city of Millen is serviced by a pressurized water system with hydrants available.

Over the past 55 years, Jenkins County has averaged 62 reported wildland fires per year, burning an average of 387 acres per year. Using more recent figures over the past 20 years, this number has reduced significantly to an average of 50 fires per year burning on average 194 acres annually. The occurrence of these fires during this later period shows a pronounced peak during the months of January, February and March accounting for 48% of the annual fires and 62% of the average acreage burned. There is a significant decrease during the remainder of the year, particularly during the fall months.

Over the past 10 years, FY2008-FY2017, the leading causes of these fires, was debris burning and arson causing 45% and 18% respectively of the fires and 48% and 35% respectively of the acres burned. Another significant cause was machine use accounting for 11% of the fires and 6% of the acreage burned. Over the past ten years records show that over 26% of the debris fires originated from residential burning.

Georgia Forestry Commission Wildfire Records show that in the past five years, FY2014-FY2018, 5 homes have been damaged or lost by wildfire in Jenkins County resulting in estimated loss of \$271,000 along with 2 outbuildings valued at \$4,500. According to reports during this period 16 other homes have been directly or indirectly threatened by these fires. Additionally 2 vehicles valued at \$4,500 and 1 other pieces of mechanized equipment valued at \$10,000 were lost. Agricultural crop damage from these wildfires caused a \$1000 in losses. This is a significant loss of non-timber property attributed to wildfires in Jenkins County.

County = Jenkins	Cause	Fires	Acres	Fires 5 Yr Avg	Acres 5 Yr Avg
<a href="#">Campfire</a>	Campfire	0	0.00	0.20	0.06
<a href="#">Debris: Ag Fields, Pastures, Orchards, Etc</a>	Debris: Ag Fields, Pastures, Orchards, Etc	0	0.00	0.60	3.94
<a href="#">Debris: Construction Land Clearing</a>	Debris: Construction Land Clearing	1	4.10	0.40	0.84
<a href="#">Debris: Escaped Prescribed Burn</a>	Debris: Escaped Prescribed Burn	10	66.55	7.40	50.59
<a href="#">Debris: Household Garbage</a>	Debris: Household Garbage	2	16.25	0.60	3.27
<a href="#">Debris: Other</a>	Debris: Other	0	0.00	0.20	0.04
<a href="#">Debris: Residential, Leafpiles, Yard, Etc</a>	Debris: Residential, Leafpiles, Yard, Etc	2	8.25	3.00	10.77
<a href="#">Debris: Site Prep - Forestry Related</a>	Debris: Site Prep - Forestry Related	2	2.30	0.80	0.54
<a href="#">Incendiary</a>	Incendiary	6	83.82	3.20	35.73
<a href="#">Lightning</a>	Lightning	1	0.65	0.80	0.17
<a href="#">Machine Use</a>	Machine Use	2	1.36	1.20	2.56
<a href="#">Miscellaneous: Other</a>	Miscellaneous: Other	1	0.77	1.00	2.24
<a href="#">Miscellaneous: Power lines/Electric fences</a>	Miscellaneous: Power lines/Electric fences	0	0.00	0.60	0.21
<a href="#">Miscellaneous: Structure/Vehicle Fires</a>	Miscellaneous: Structure/Vehicle Fires	3	1.50	1.40	1.11
<a href="#">Miscellaneous: Woodstove Ashes</a>	Miscellaneous: Woodstove Ashes	1	0.56	0.40	0.19
<a href="#">Smoking</a>	Smoking	0	0.00	0.20	0.13
<a href="#">Undetermined</a>	Undetermined	0	0.00	2.40	7.22
<b>Totals for County: Jenkins Year: 2018</b>		31	186.11	24.40	119.60

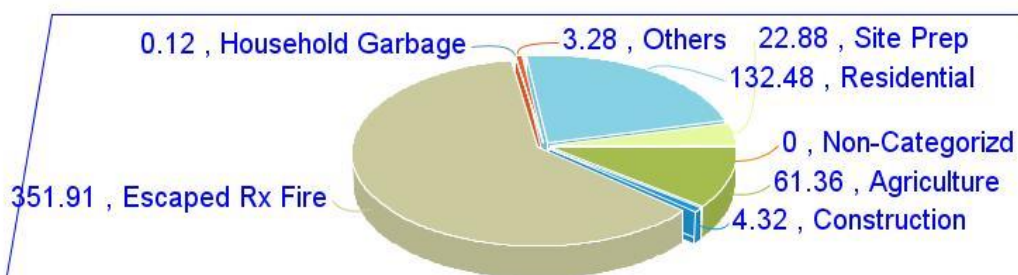
<b>Acreage Burned /Number of Fires For Jenkins County For FY 2008-2017</b>				
<b>Year</b>	<b>Acreage Burned</b>	<b>Number of Fires</b>	<b>Average Size</b>	<b>Statewide Average Size</b>
2008	84.39	30	2.81	4.56
2009	97.99	37	2.65	3.90
2010	20.98	8	2.62	3.93
2011	340.66	39	8.73	17.56
2012	127.50	35	3.64	5.08
2013	122.90	23	5.34	4.53
2014	120.57	19	6.35	5.02
2015	40.66	19	2.14	4.42
2016	85.75	17	5.04	6.29
2017	164.92	36	4.58	11.60

<b>Acreage Burned /Number of Fires by Fire Cause For Jenkins County For FY 2008-2017</b>		
<b>Fire Cause</b>	<b>Acreage Burned</b>	<b>Number of Fires</b>
Campfire	7.62	4
Children	4.60	2
Debris Burning	576.35	118
Incendiary	422.73	48
Lightning	54.55	19
Machine Use	67.53	30
Miscellaneous	33.41	27
Railroad	0.00	0
Smoking	1.34	2
Undetermined	38.19	13
<b>Total</b>	<b>1,206.32</b>	<b>263</b>



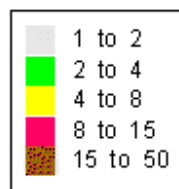
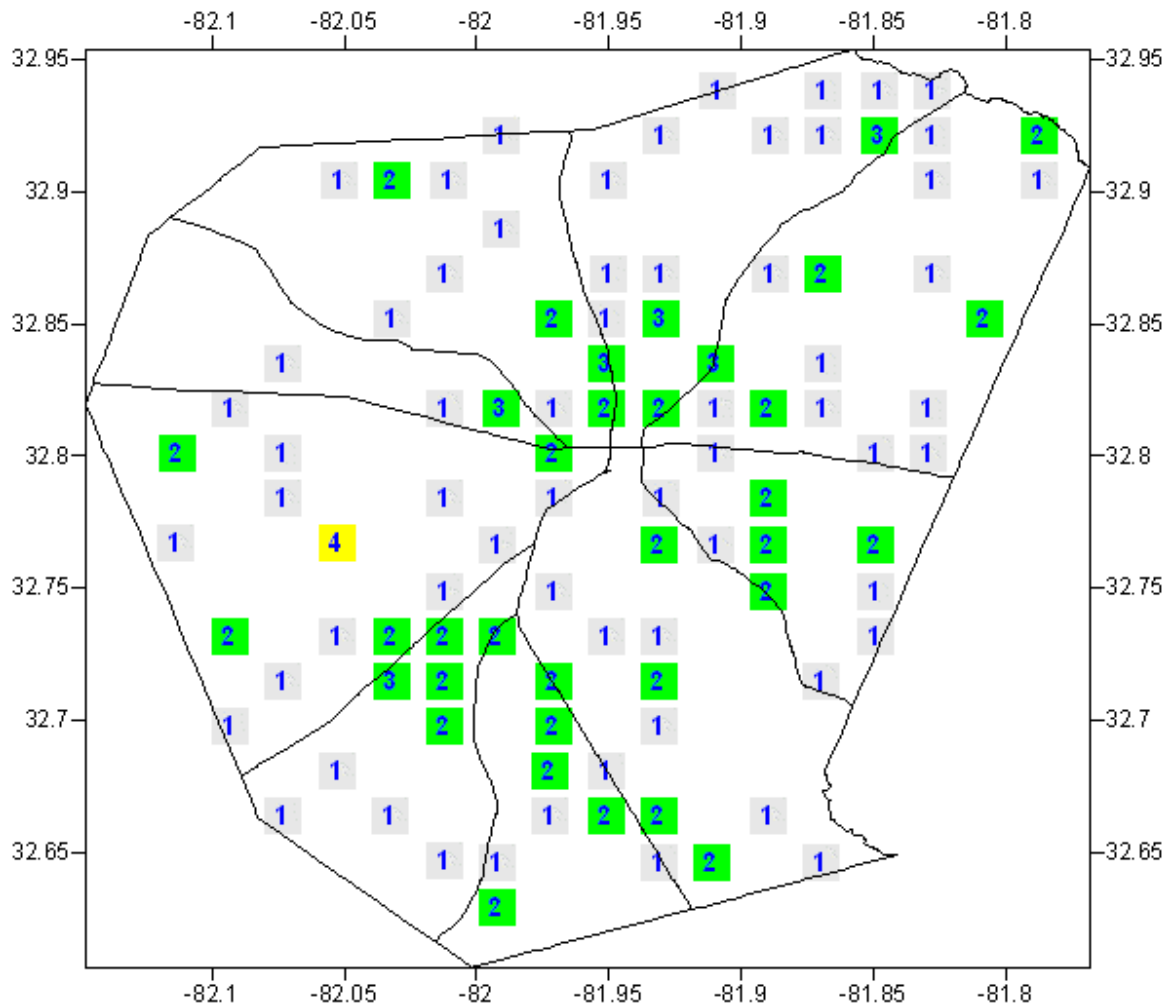
<b>Acreage Burned /Number of Fires by Debris-Burning Sub-cause For Jenkins County For FY 2008-2017</b>		
<b>Debris Burning Sub-Cause</b>	<b>Acreage Burned</b>	<b>Number of Fires</b>
Non-Categorized	0.00	0
Agriculture	61.36	12
Construction	4.32	5
Escaped Rx Fire	351.91	53
Household Garbage	0.12	1
Others	3.28	4
Residential	132.48	31
Site Prep	22.88	12
<b>Total</b>	<b>576.35</b>	<b>118</b>

**Acreage Burned By Debris Burning Sub Cause For Jenkins County For FY 2008-2017**

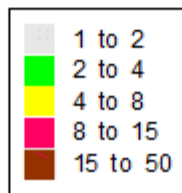
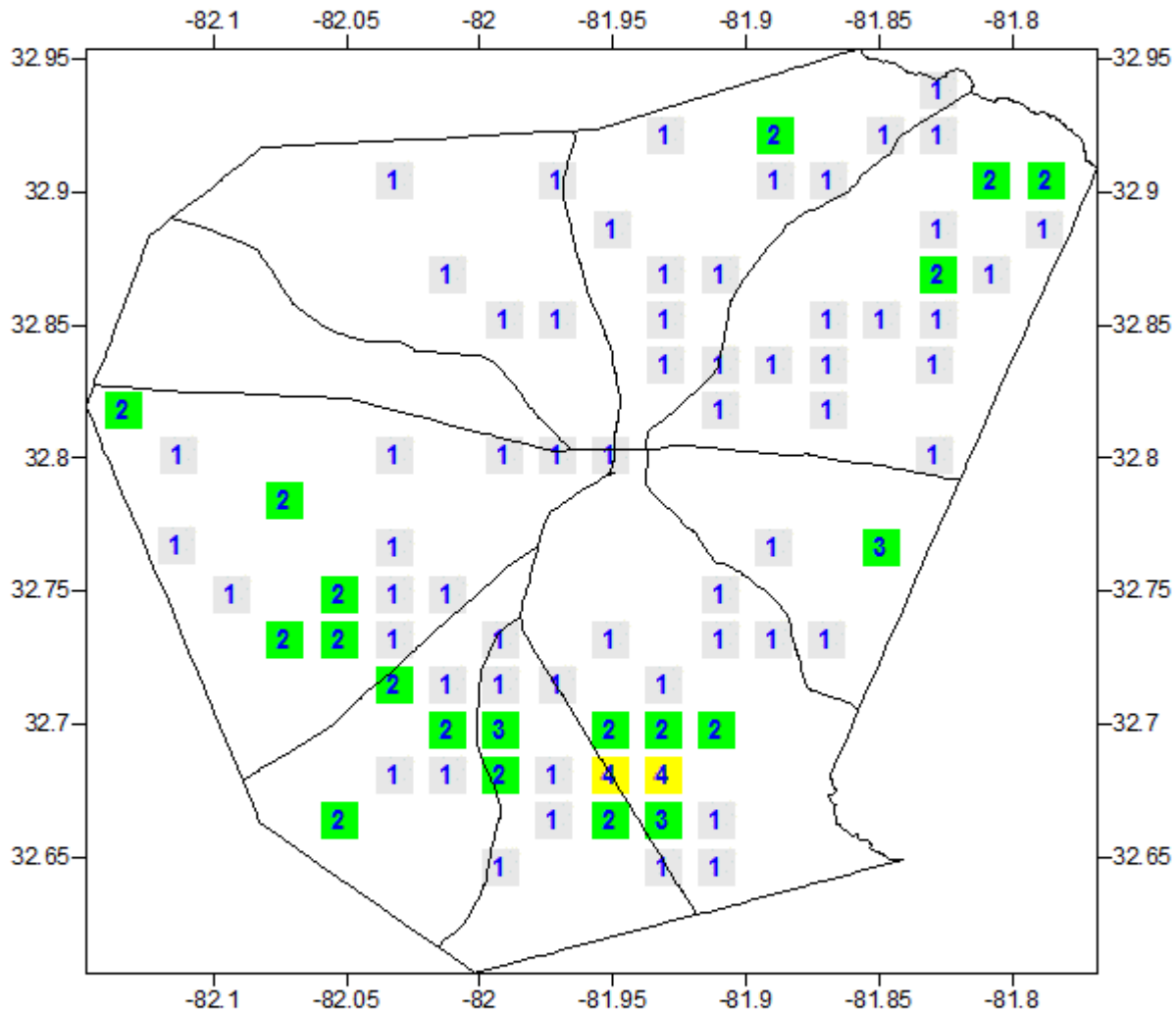


Fire Cause

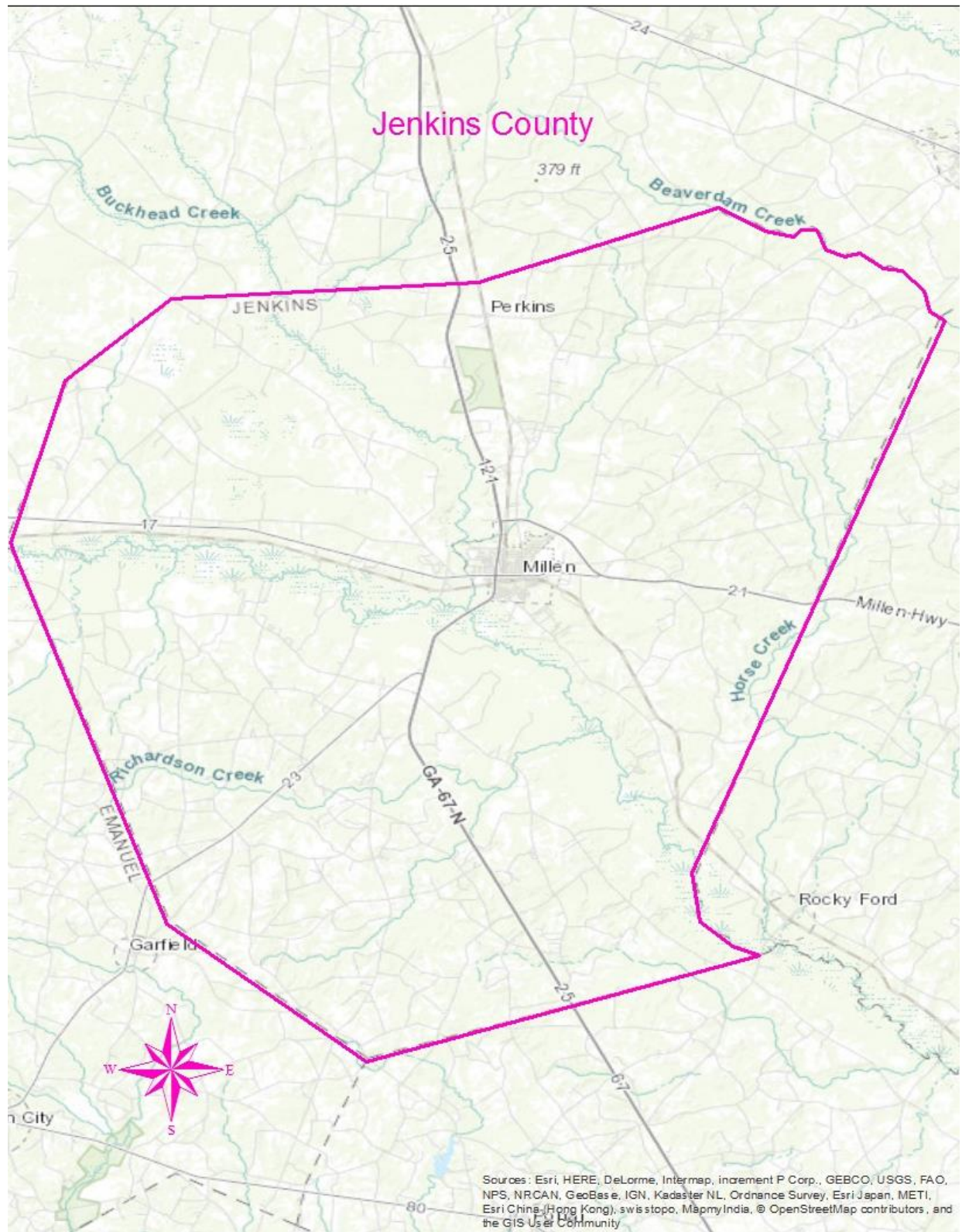
# Fire Occurrence Map for Jenkins County for Fiscal Year 2007-2011



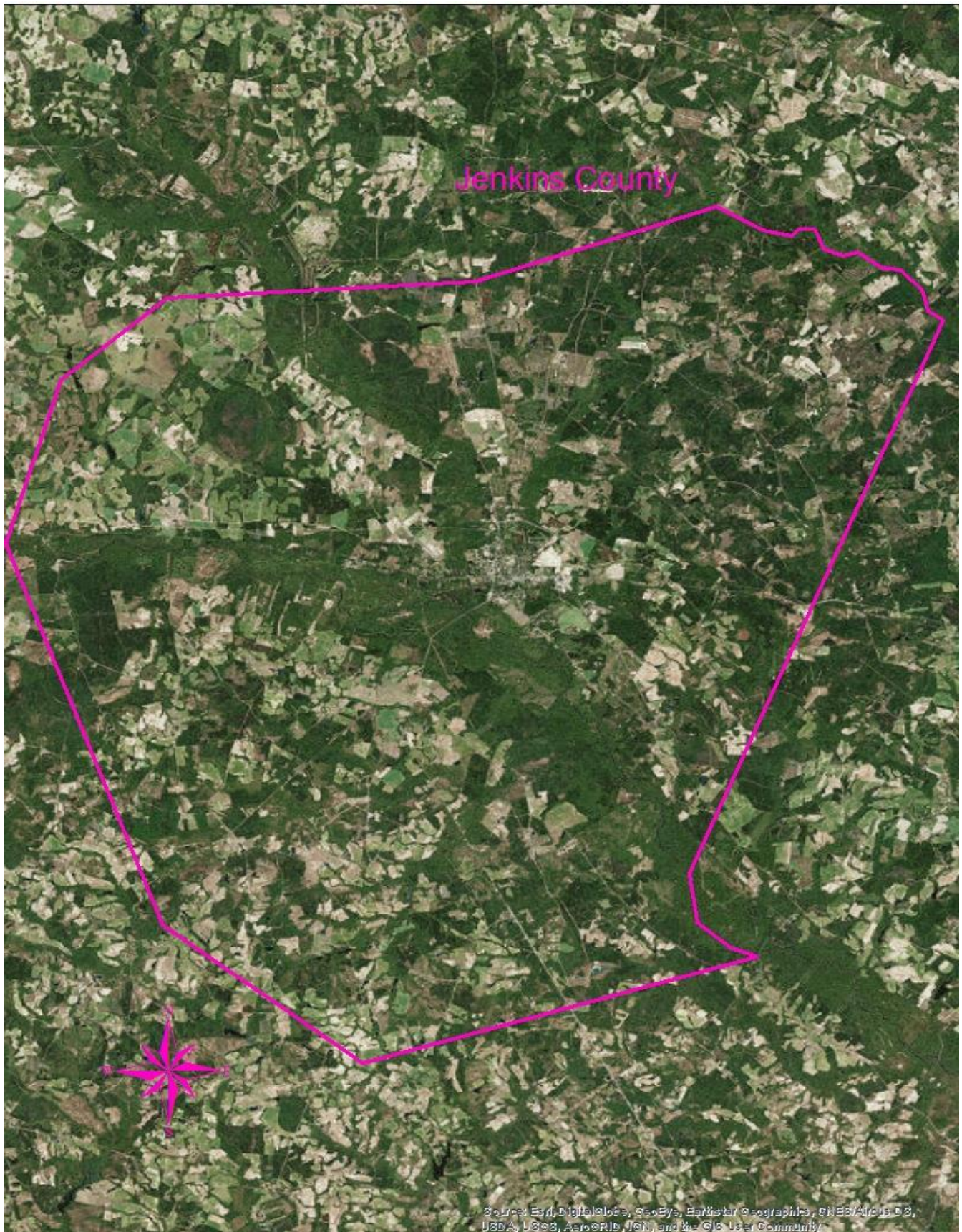
# Fire Occurrence Map for Jenkins County for Fiscal Year 2012-2016



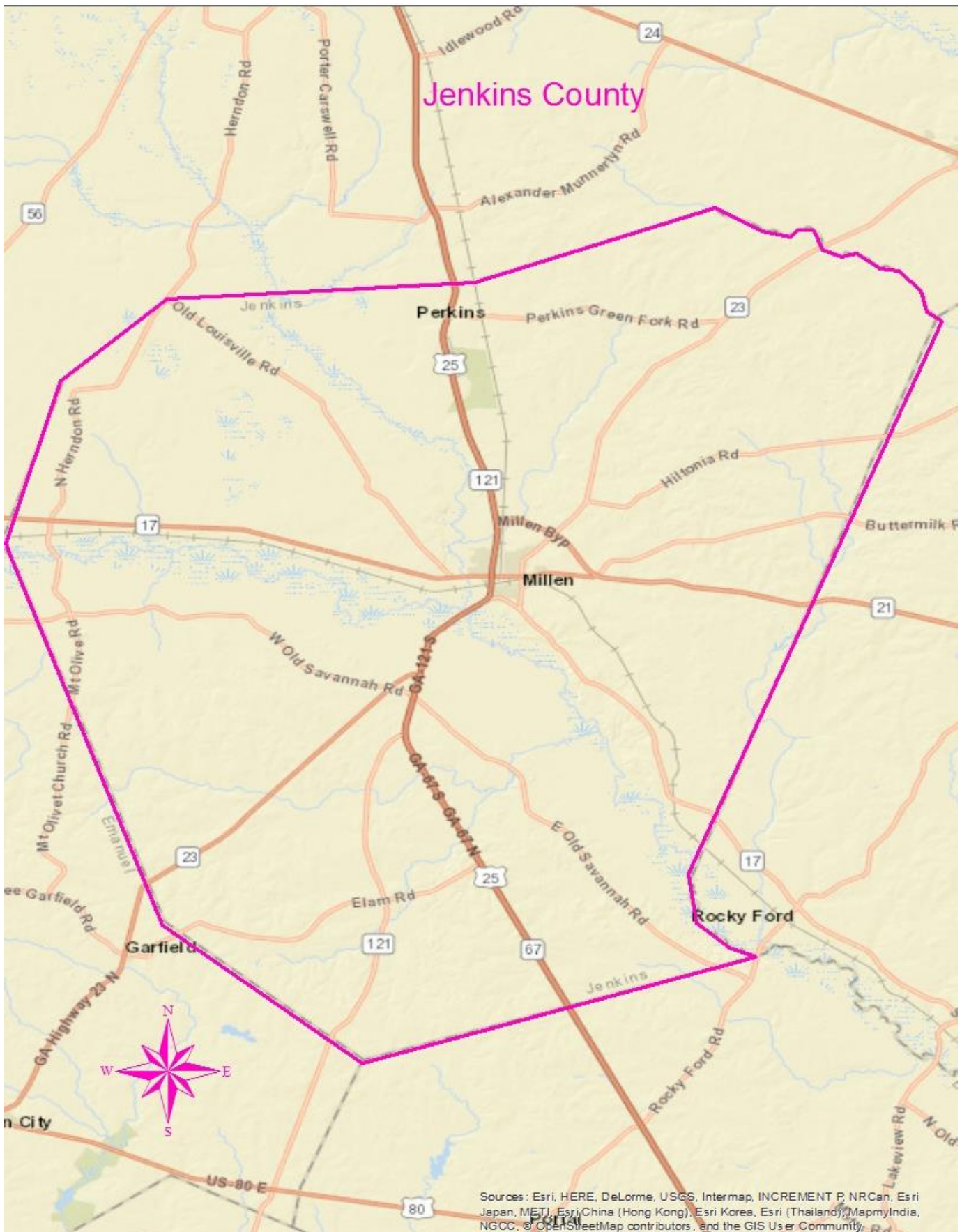
## IV. COMMUNITY BASE MAPS











## V. COMMUNITY WILDFIRE RISK ASSESSMENT

### The Wildland-Urban Interface

There are many definitions of the Wildland-Urban Interface (WUI), however from a fire management perspective it is commonly defined as an area where structures and other human development meet or intermingles with undeveloped wildland or vegetative fuels. As fire is dependent on a certain set of conditions, the National Wildfire Coordinating Group has defined the wildland-urban interface as a set of conditions that exists in or near areas of wildland fuels, regardless of ownership. This set of conditions includes type of vegetation, building construction, accessibility, lot size, topography and other factors such as weather and humidity. When these conditions are present in certain combinations, they make some communities more vulnerable to wildfire damage than others. This “set of conditions” method is perhaps the best way to define wildland-urban interface areas when planning for wildfire prevention, mitigation, and protection activities.

There are three major categories of wildland-urban interface. Depending on the set of conditions present, any of these areas may be at risk from wildfire. A wildfire risk assessment can determine the level of risk.

- 1. “Boundary” wildland-urban interface** 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. This is the classic type of wildland-urban interface, with a clearly defined boundary between the suburban fringe and the rural countryside.
- 2. “Intermix” wildland-urban interface** areas 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 beginning to go through the transition from rural to urban land use.
- 3. “Island” wildland-urban interface**, also called occluded interface, are areas of wildland within predominately urban or suburban areas. As cities or subdivisions grow, islands of undeveloped land may remain, creating remnant forests. Sometimes these remnants exist as parks, or as land that cannot be developed due to site limitations, such as wetlands.

## **Wildland Urban Interface Hazards**

Firefighters in the wildland urban interface may encounter hazards other than the fire itself, such as hazardous materials, utility lines and poor access.

### **Hazardous Materials**

- Common chemicals used around the home may be a direct hazard to firefighters from a flammability, explosion potential and/or vapors or off gassing. Such chemicals include paint, varnish and other flammable liquids, fertilizer, pesticides, cleansers, aerosol cans, fireworks, batteries and ammunition. In addition, some common household products such as plastics may give off very toxic fumes when they burn. Stay out of smoke from burning structures and any unknown sources such as trash piles.

### **Illicit Activities**

- Marijuana plantations or drug production labs may be found in the wildland urban interface areas. Extremely hazardous materials such as propane tanks and flammable/toxic chemicals may be encountered.

### **Propane Tanks**

- Both large (household size) and small (gas grill size) liquefied propane gas (LPG) tanks can present hazards to firefighters, including explosion.

### **Utility Lines**

- Utility Lines may be located above and below ground and may be cut or damaged by tools or equipment. Don't spray water on utility lines or boxes.

### **Septic Tanks and Fields**

- Below ground structures may not be readily apparent and may not support the weight of engines or other equipment.

### **New Construction Materials**

- Many new construction materials have comparatively low melting points and may "off-gas" extremely hazardous vapors. Plastic decking materials that resemble wood are becoming more common and may begin softening and losing structural strength at 180 degrees F, though they normally do not sustain combustion once direct flame is removed. However if they continue to burn they exhibit the characteristics of flammable liquids.



## **Pets and Livestock**

- Pets and livestock may be left when residents evacuate and will likely be highly stressed making them more inclined to bite and kick. Firefighters should not put themselves at risk to rescue pets or livestock.

## **Evacuation Occurring**

- Firefighters may be taking structural protect actions while evacuations of residents are occurring. Be very cautious of people driving erratically. Distraught residents may refuse to leave their property and firefighters may need to disengage from fighting fire to contact law enforcement officers for assistance. In most jurisdictions firefighters do not have the authority to force evacuations. Firefighters should not put themselves at risk trying to protect someone who will not evacuate!

## **Limited Access**

- Narrow one-lane roads with no turn around room, inadequate or poorly maintained bridges and culverts are frequently found in wildland urban interface areas. Access should be sized up and an evacuation plan for all emergency personnel should be developed.



**Wildland Urban Interface (WUI) is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels.**

The wildland fire risk assessments conducted in 2011 by the Jenkins County Fire Departments returned a number of communities in the moderate to high range. The risk assessment instrument used to evaluate wildfire hazards to Jenkins County's WUI was the Hazard and Wildfire Risk Assessment Checklist. The instrument takes into consideration accessibility, vegetation (based on fuel models), roofing assembly, building construction, and availability of fire protection resources, placement of gas and electric utilities, and additional rating factors. The following factors contributed to the wildfire hazard scores for Jenkins County:

- Unpaved roads and private driveways
- Narrow roads without drivable shoulders
- Lack of uniform address signs
- Deadend roads without "turnarounds"
- Minimal defensible space around structures
- Homes with wooden siding
- Unmarked septic tanks in yards
- Lack of pressurized or non-pressurized water systems available
- Large, adjacent areas of forest or wildlands
- Heavy fuel buildup in adjacent wildlands
- Undeveloped lots comprising half the total lots in many rural communities.
- High occurrence of wildfires in the several locations
- Lack of homeowner or community organizations

### Summary of Jenkins County Assessments

Fire District	Community Access	Surrounding Vegetation	Bldg Construction	Fire Protection	Utilities	Add. Factors	Score	Hazard Rating
Millen Jenkins South	7	15	8	5	7	11	53	Moderate
Jenkins St 5 South	16	15	10	17	7	16	81	High
Jenkins St 6 North	9	20	10	17	6	16	78	High
Jenkins	8	20	10	15	5	14	72	Moderate

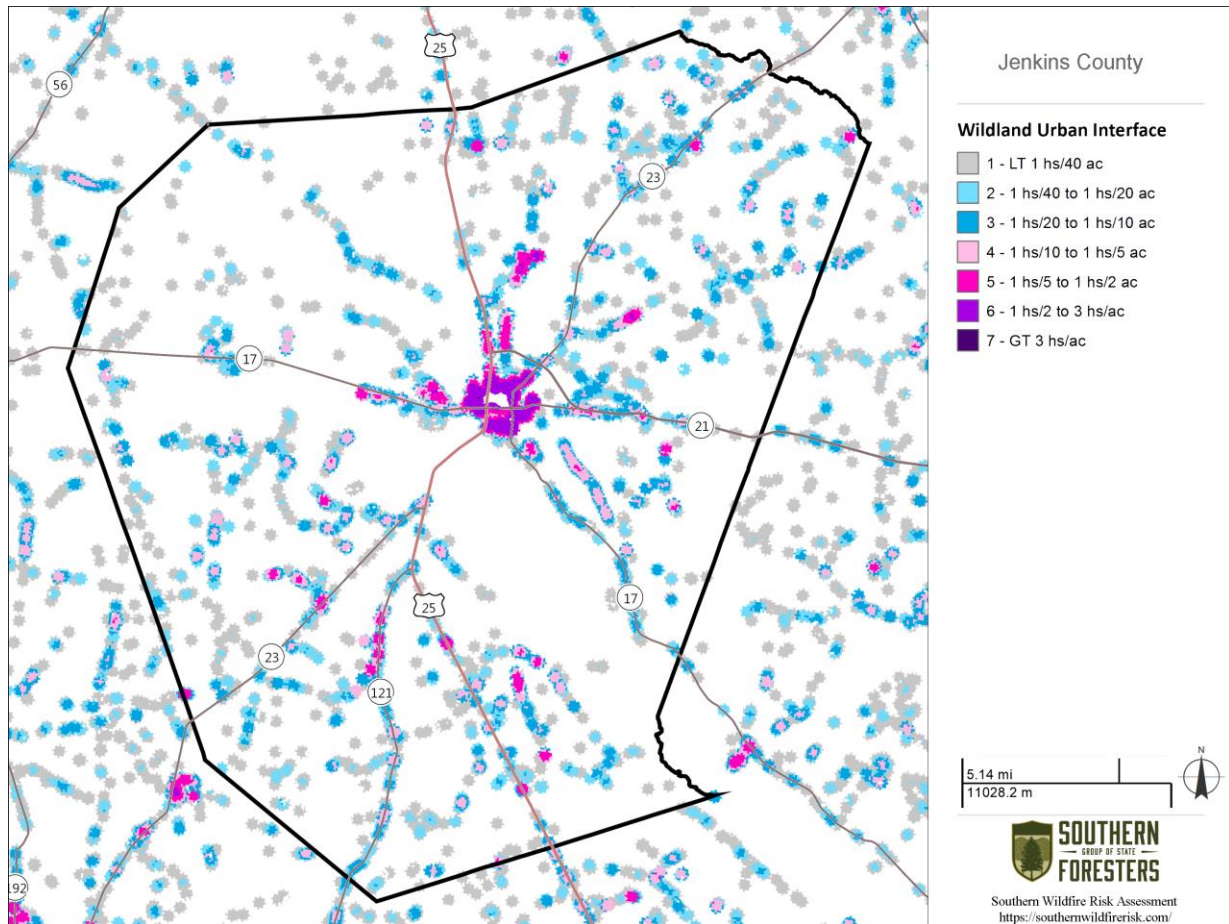
## VI. SOUTHERN WILDFIRE RISK ASSESSMENT & RISK HAZARD MAPS

The Southern Wildfire Risk Assessment tool, developed by the Southern Group of State Foresters, was released to the public in July 2014. This tool allows users of the Professional Viewer application of the Southern Wildfire Risk Assessment (SWRA) web Portal (SouthWRAP) to define a specific project area and summarize wildfire related information for this area. A detailed risk summary report is generated using a set of predefined map products developed by the Southern Wildfire Risk Assessment project which have been summarized explicitly for the user defined project area. A risk assessment summary was generated for Jenkins County. The SouthWRAP (SWRA) products included in this report are designed to provide the information needed to support the following key priorities:

- Identify areas that are most prone to wildfire.
- Identify areas that may require additional tactical planning, specifically related to mitigation projects and Community Wildfire Protection Planning.
- Provide the information necessary to justify resource, budget and funding requests.
- Allow agencies to work together to better define priorities and improve emergency response, particularly across jurisdictional boundaries.
- Define wildland communities and identify the risk to those communities.
- Increase communication and outreach with local residents and the public to create awareness and address community priorities and needs.
- Plan for response and suppression resource needs.
- Plan and prioritize hazardous fuel treatment.

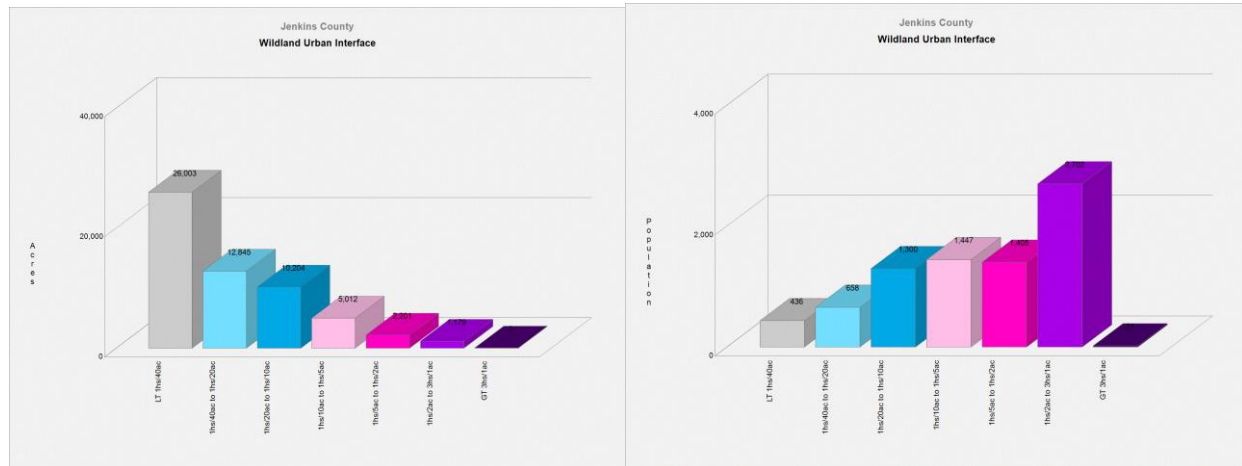


Community Protection Zones map from the Jenkins County SWRA

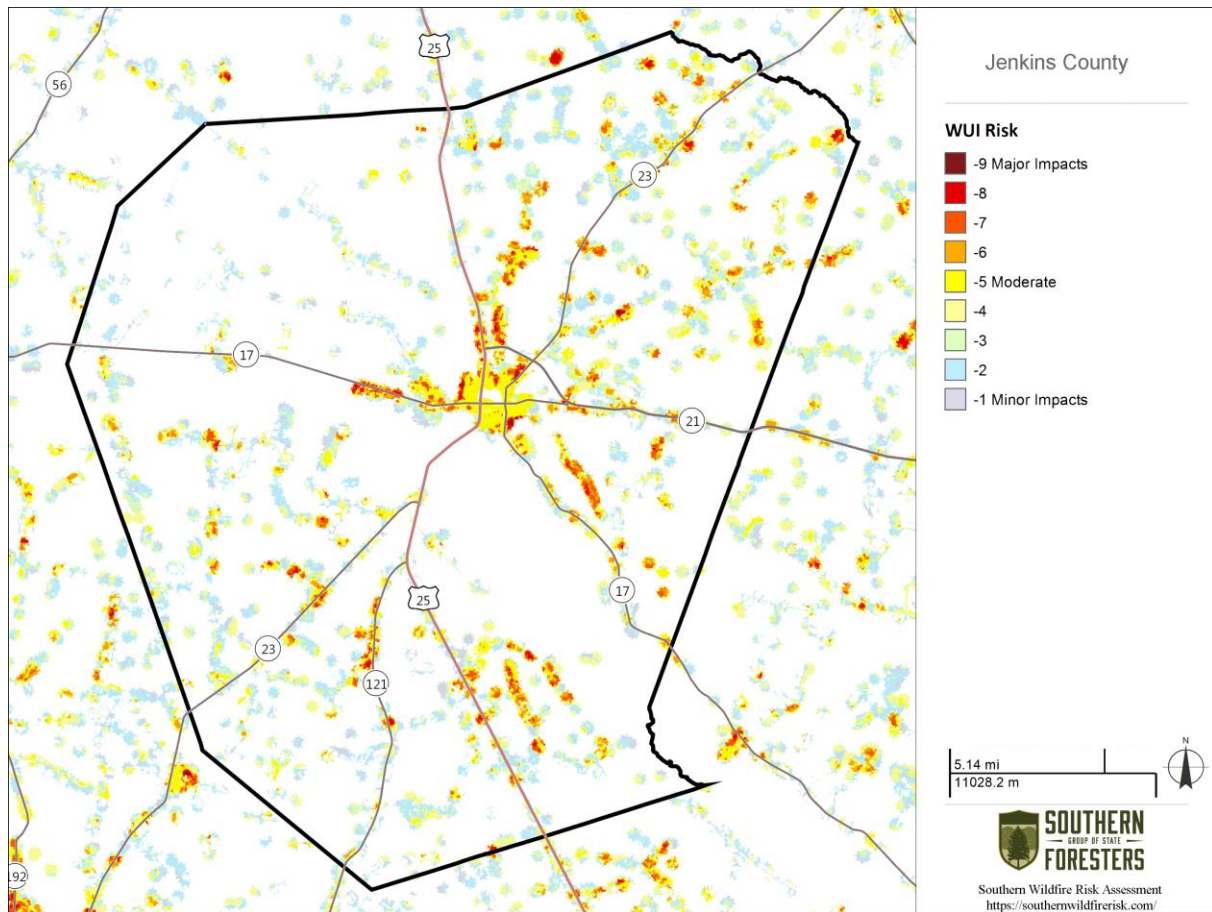


Above: Wildland Urban Interface (WUI) map

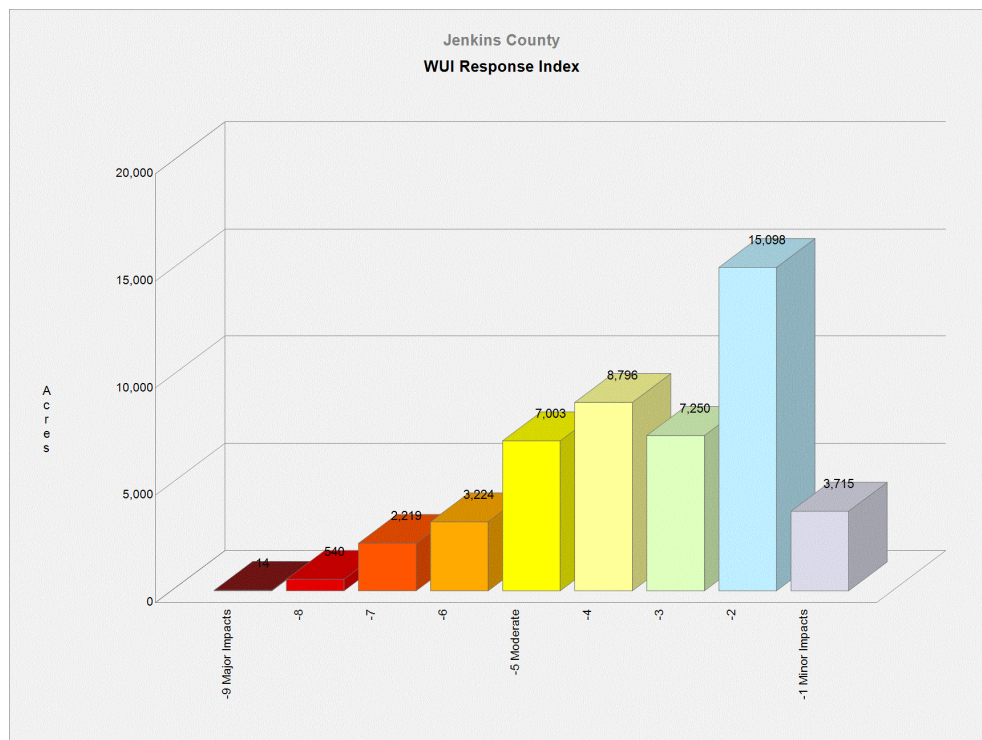
Below: WUI Acres (left) WUI Population (right)



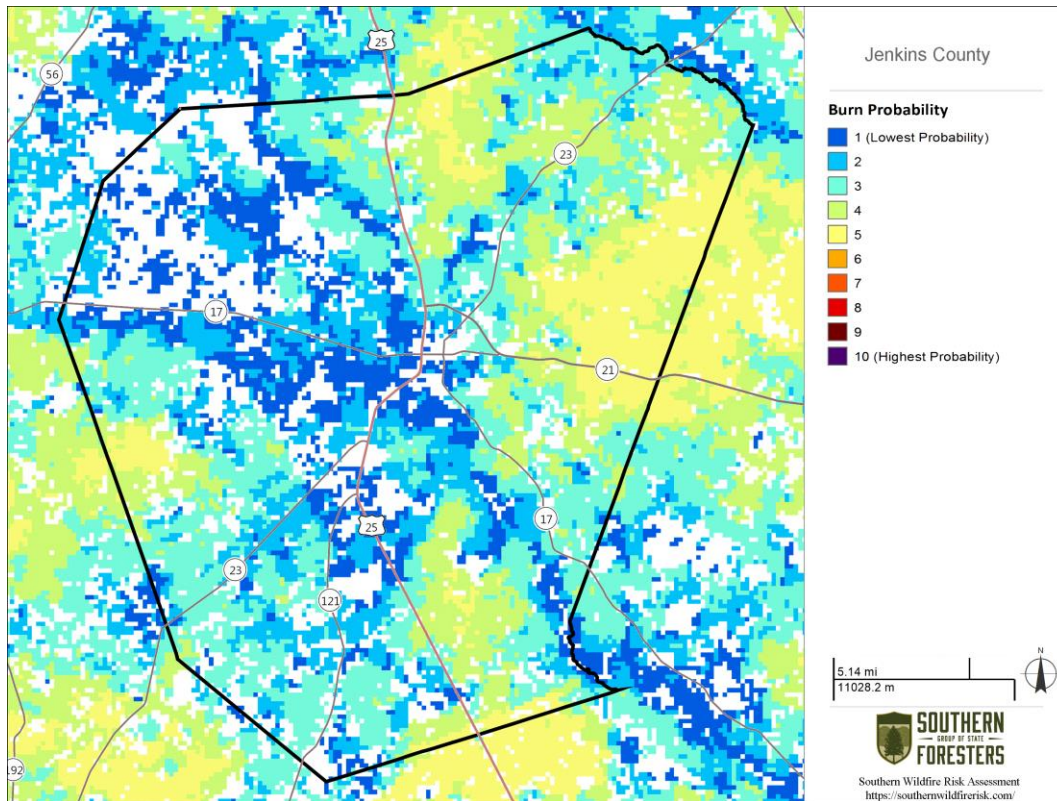




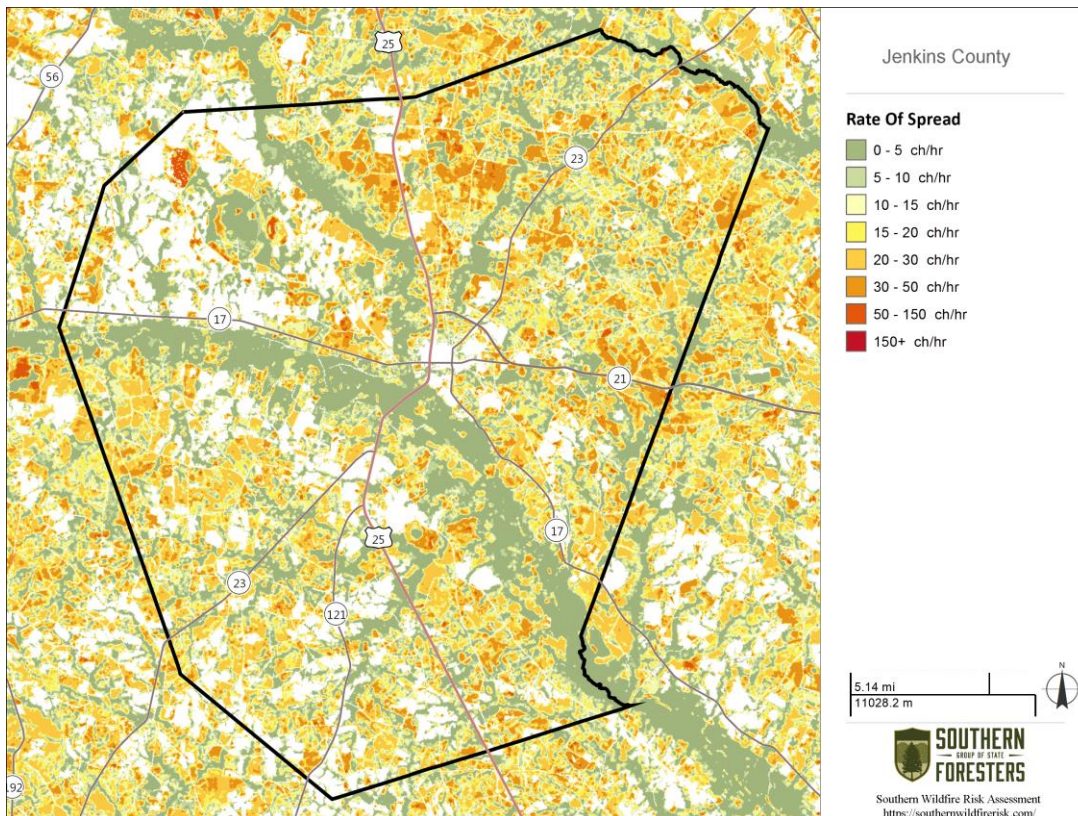
Above: Fire Intensity Scale map      Below: Fire Intensity Scale Acres



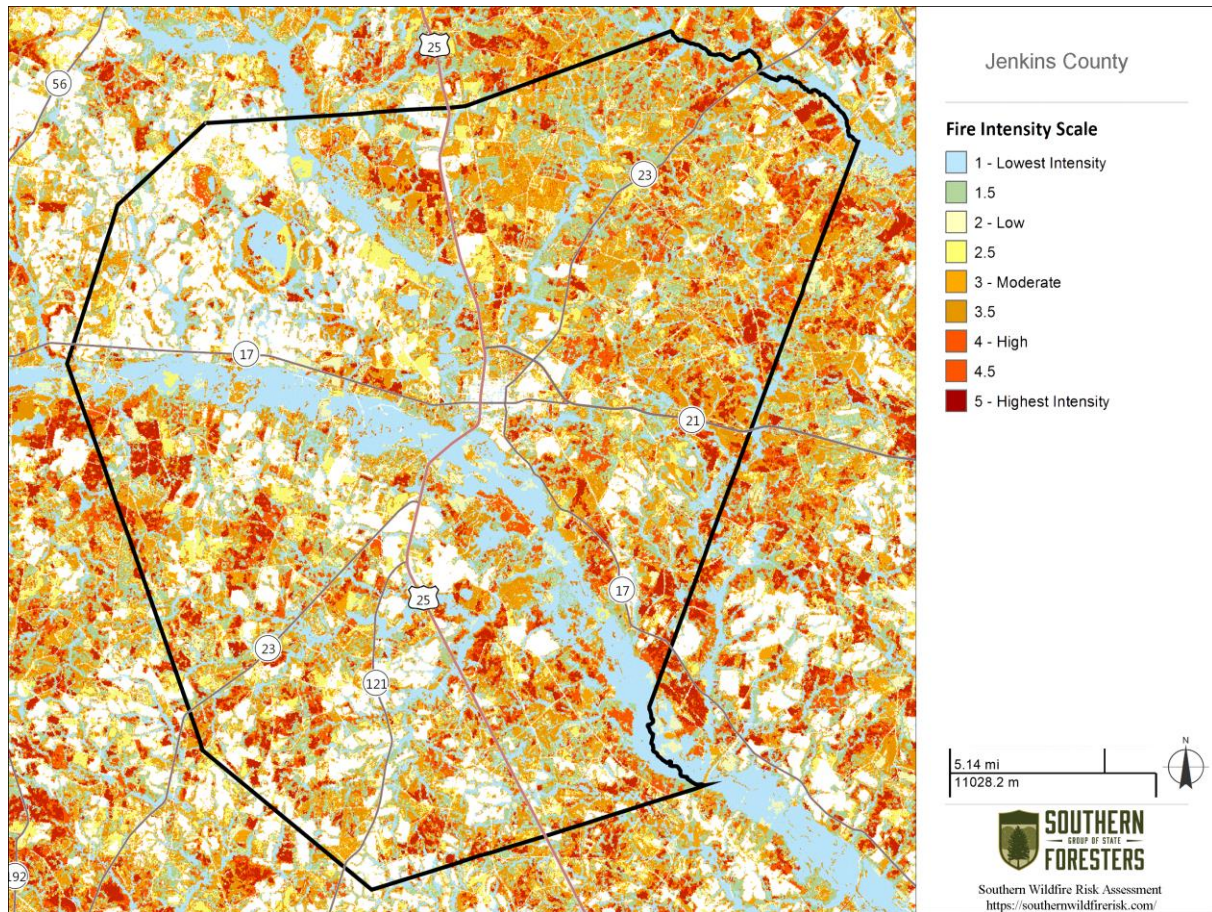




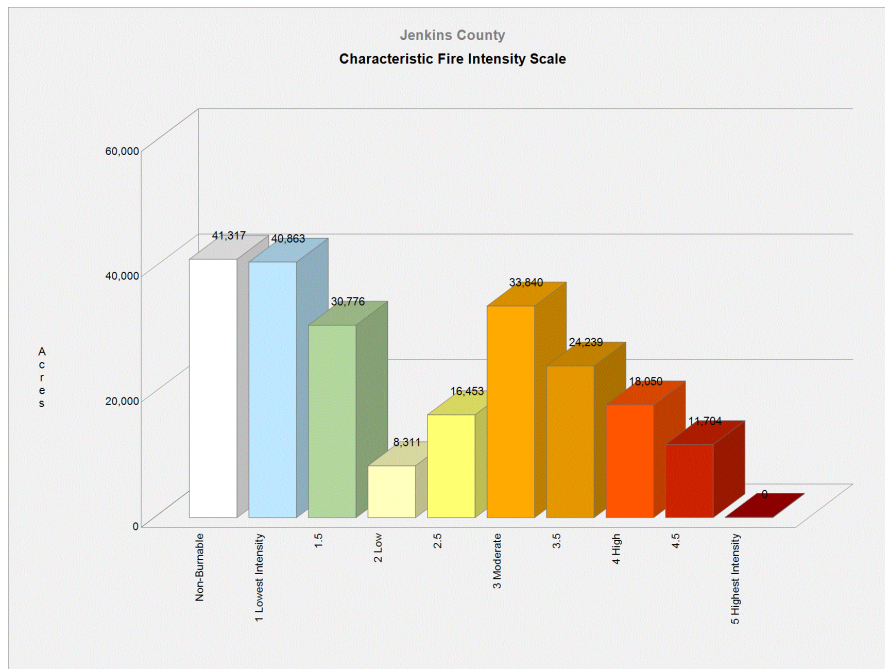
Above: Burn Probability map      Below: Rate of Spread map



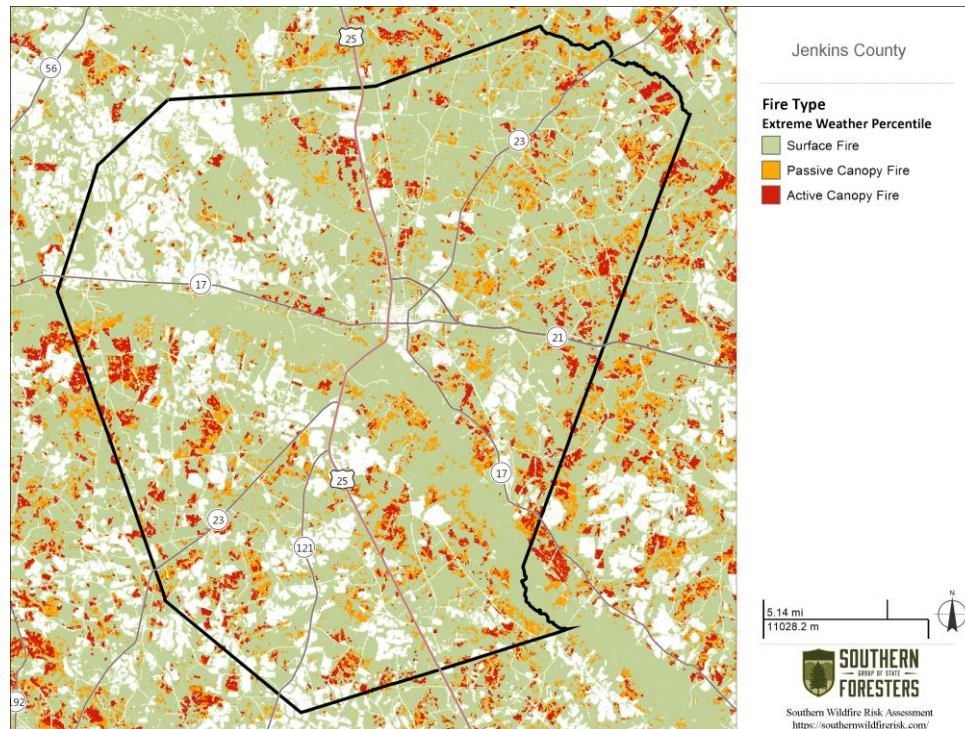




Above: Fire Intensity Scale map      Below: Fire Intensity Scale Acres







Above: Fire Type Map

### Surface Fire

A fire that spreads through surface fuel without consuming any overlying canopy fuel. Surface fuels include grass, timber litter, shrub/brush, slash and other dead or live vegetation within about 6 feet of the ground.



### Passive Canopy Fire

A type of crown fire in which the crowns of individual trees or small groups of trees burn, but solid flaming in the canopy cannot be maintained except for short periods (Scott & Reinhardt, 2001).



### Active Canopy Fire

A crown fire in which the entire fuel complex (canopy) is involved in flame, but the crowning phase remains dependent on heat released from surface fuel for continued spread (Scott & Reinhardt, 2001).





## VII. PRIORITIZED MITIGATION RECOMMENDATIONS

### Executive Summary

As Southeast Georgia continues to see increased growth from other areas seeking less crowded and warmer climates, new development will occur more frequently on forest and wildland areas. Jenkins County will have an opportunity to significantly influence the wildland fire safety of new developments. It is important that new development be planned and constructed to provide for public safety in the event of a wildland fire emergency.

Over the past 20 years, much has been learned about how and why homes burn during wildland fire emergencies. Perhaps most importantly, case histories and research have shown that even in the most severe circumstances, wildland fire disasters can be avoided. Homes can be designed, built and maintained to withstand a wildfire even in the absence of fire services on the scene. The national Firewise Communities program is a national awareness initiative to help people understand that they don't have to be victims in a wildfire emergency. The National Fire Protection Association has produced two standards for reference: NFPA 1144 Standard for Reducing Structure Ignition Hazards from Wildland Fire, 2008 Edition and NFPA 1141 Standard for Fire Protection Infrastructure for Land Development in Suburban and Rural Areas.

When new developments are built in the Wildland/Urban Interface, a number of public safety challenges may be created for the local fire services: (1) the water supply in the immediate areas may be inadequate for fire suppression; (2) if the Development is in an outlying area, there may be a longer response time for emergency services; (3) in a wildfire emergency, the access road(s) may need to simultaneously support evacuation of residents and the arrival of emergency vehicles; and (4) when wildland fire disasters strike, many structures may be involved simultaneously, quickly exceeding the capability of even the best equipped fire departments.

In 2012 the International Code Council developed the International Wildland Urban Interface Code (IWUIC). The code is endorsed by NFPA (National Fire Protection Association) and the Georgia Legislature adopted the code in 2014 for use by Georgia Counties to help reduce risk in the WUI. Counties can utilize this code as a model to develop their own county building and zoning regulations.

The following recommendations were developed by the Jenkins County CWPP Core team as a result of surveying and assessing fuels and structures and by conducting meetings and interviews with county and city officials. A priority order was determined based on which mitigation projects would best reduce the hazard of wildfire in the assessment area.

## Proposed Community Hazard and Structural Ignitability Reduction Priorities

Primary Protection for Community and Its Essential Infrastructure		
Treatment Area	Treatment Types	Treatment Method(s)
1. All Structures	Create minimum of 30-feet of defensible space**	Trim shrubs and vines to 30 feet from structures, trim overhanging limbs, replace flammable plants near homes with less flammable varieties, remove vegetation around chimneys.
2. Applicable Structures	Reduce structural ignitability**	Clean flammable vegetative material from roofs and gutters, store firewood appropriately, install skirting around raised structures, store water hoses for ready access, and replace pine straw and mulch around plantings with less flammable landscaping materials.
3. Driveway Access	Right of Way Clearance	Maintain vertical and horizontal clearance for emergency equipment. See that adequate lengths of culverts are installed to allow emergency vehicle access.
4. Road Access	Identify needed road improvements	As roads are upgraded, widen to minimum standards with at least 50 foot diameter cul de sacs or turn arounds. Particular attention needs to be paid to housing authority properties to add emergency access.  Replace bridge at Herndon, limits access to west Jenkins.
5. Codes and Ordinances	Examine existing codes and ordinances.  Utilize the International Wildland Urban Interface Code IWUIC	Amend and enforce existing building codes as they relate to skirting, propane tank locations, public nuisances (trash/debris on property), Property address marking standards and other relevant concerns  Review the need for subdivision and development ordinances for public safety concerns.  Enforce uniform addressing ordinance.

<b>Proposed Community Wildland Fuel Reduction Priorities</b>		
Treatment Area	Treatment Types	Treatment Method(s)
1. Adjacent WUI Lands	Reduce hazardous fuels	Encourage prescribed burning for private landowners and industrial timberlands particularly adjacent to residential areas.  Seek grant for mowing or prescribed burning in WUI areas.
2. Existing Fire Lines	Reduce hazardous fuels	Clean and re-harrow existing lines.
<b>Proposed Improved Community Wildland Fire Response Priorities</b>		
1. Water Sources	Dry Hydrants & Dip Sites	Inspect, maintain and improve access to existing dry hydrants. Add signage along road to mark the hydrants.  Locate additional dry hydrants as needed.  Need improved drafting equipment and turbo draft pumps and hose.  GFC to locate and pre-clear additional helicopter dip sites for fire emergencies.
2. Fire Stations	Equipment	Wildland hand tools. Lightweight Wildland PPE Gear.
3. Water Handling	Tankers	Investigate need for additional tankers for rural stations.
4. Road Names	Road Signage	Improved Road Signage at Crossroads. “Dead End” or “No Outlet” Tags on Road Signs
5. Personnel	Training	Obtain Wildland Fire Suppression training for Fire Personnel.  Ready Set Go training
**Actions to be taken by homeowners and community stakeholders		

## Proposed Education and Outreach Priorities

1. Conduct “How to Have a Firewise Home” Workshop for Jenkins County Residents
<p>Set up and conduct a workshop for homeowners that teach the principles of making homes and properties safe from wildfire. Topics for discussion include defensible space, landscaping, building construction, etc. Workshop will be scheduled for evenings or weekends when most homeowners are available and advertised through local media outlets. Target local schools, community groups and local senior centers.</p> <p>Distribute materials promoting firewise practices and planning through local community and governmental meetings.</p>
2. Conduct “Firewise” Workshop for Community Leaders
<p>Arrange for GFC Firewise program to work with local community leaders and governmental officials on the importance of “Firewise Planning” in developing ordinances and codes as the county as the need arises. Identify “Communities at Risk” within the county for possible firewise community recognition.</p>
3. Spring Clean-up Event (National Wildfire Preparedness Day – 1 <sup>st</sup> Saturday in May)
<p>Conduct clean-up event every spring involving the Georgia Forestry Commission, Jenkins County Fire Departments and community residents. Set up information table with educational materials and refreshments. Initiate the event with a morning briefing by GFC Firewise coordinator and local fire officials detailing plans for the day and safety precautions. Activities to include the following:</p> <ul style="list-style-type: none"> <li>• Clean flammable vegetative material from roofs and gutters</li> <li>• Trim shrubs and vines to 30 feet away from structures</li> <li>• Trim overhanging limbs</li> <li>• Clean hazardous or flammable debris from adjacent properties</li> </ul> <p>Celebrate the work with a community cookout, with Community officials, GFC and Jenkins County Fire Departments discussing and commending the work accomplished.</p>
4. Informational Packets
<p>Develop and distribute informational packets to be distributed by building permit office, realtors and insurance agents. Included in the packets are the following:</p> <ul style="list-style-type: none"> <li>• Be Firewise Around Your Home</li> <li>• Firewise Guide to Landscape and Construction</li> <li>• Firewise Communities USA Brochures</li> <li>• Ready Set Go information</li> <li>• Fire Adapted Community information</li> </ul>

### 5. Wildfire Protection Display

Create and exhibit a display for the general public at local events as the Fall Festival. Display can be independent or combined with the Georgia Forestry Commission display.

Hold Open House at individual Fire Stations to promote Community Firewise Safety and develop community support and understanding of local fire departments and current issues.

### 6. Media

Invite the local news media to community “Firewise” functions for news coverage and regularly submit press releases documenting wildfire risk improvements in Jenkins County.

Utilize TV, radio, cable access, and social media for outreach.



**Prescribed burning of woodlands is the best management practice to reduce hazardous fuel accumulation. The Georgia Forestry Commission can provide a prescribed burning plan, establish fire breaks, and can also provide equipment standby and assist with burning when personnel are available. Forestry consultants and contractors can also provide this service.**

**Mastication equipment, such as pictured on right, can be very effective in mowing or mulching understory fuels to reduce wildfire hazard. This management practice is practical for areas near homes where prescribed burning may not be possible. This type of service is available from a private contractor.**



## VIII. ACTION PLAN

### Roles and Responsibilities

The following roles and responsibilities have been developed to implement the action plan:

Role	Responsibility
<b>Hazardous Fuels and Structural Ignitability Reduction</b>	
Jenkins County WUI Fire Council	Create this informal team or council comprised of residents, GFC officials, Millen Jenkins County Fire Department officials, a representative from the city and county governments along with the county EMA Director. Meet periodically to review progress towards mitigation goals, appoint and delegate special activities, work with federal, state, and local officials to assess progress and develop future goals and action plans. Work with residents to implement projects and firewise activities.
Key Messages to focus on	<ol style="list-style-type: none"> <li>1 Defensible Space and Firewise Landscaping</li> <li>2 Debris Burning Safety</li> <li>3 Firewise information for homeowners</li> <li>4 Prescribed burning benefits</li> </ol>
Communications objectives	<ol style="list-style-type: none"> <li>1 Create public awareness for fire danger and defensible space issues</li> <li>2 Identify most significant human cause fire issues</li> <li>3 Enlist public support to help prevent these causes</li> <li>4 Encourage people to employ fire prevention and defensible spaces in their communities.</li> </ol>
Target Audiences	<ol style="list-style-type: none"> <li>1 Homeowners</li> <li>2 Forest Landowners and users</li> <li>3 Civic Groups</li> <li>4 School Groups</li> </ol>
Methods	<ol style="list-style-type: none"> <li>1 News Releases</li> <li>2 Radio and TV PSA's for area stations and cable access channels</li> <li>3 Personal Contacts and social media</li> <li>4 Key messages and prevention tips</li> <li>5 Visuals such as signs, brochures and posters</li> </ol>

Spring Clean-up Day (National Wildfire Preparedness Day – 1 <sup>st</sup> Saturday in May)	
Event Coordinator	Coordinate day's events and schedule, catering for cookout, guest attendance, and moderate activities the day of the event.
Event Treasurer	Collect funds from residents to cover food, equipment rentals, and supplies.
Publicity Coordinator	Advertise event through neighborhood newsletter, letters to officials, and public service announcements (PSAs) for local media outlets. Publicize post-event through local paper and radio PSAs.
Work Supervisor	Develop volunteer labor force of community residents; develop labor/advisory force from Georgia Forestry Commission, Millen Jenkins County Fire Departments and Emergency Management Agency. Procure needed equipment and supplies. In cooperation with local city and county officials, develop safety protocol. Supervise work and monitor activities for safety the day of the event.

### Funding Needs

The following funding is needed to implement the action plan:

Project	Estimated Cost	Potential Funding Source(s)
1. Create a minimum of 30 feet of defensible space around structures	Varies	Residents will supply labor and fund required work on their own properties.
2. Reduce structural ignitability by cleaning flammable vegetation from roofs and gutters; appropriately storing firewood, installing skirting around raised structures, storing water hoses for ready access, replacing pine needles and mulch around plantings with less flammable material.	Varies	Residents will supply labor and fund required work on their own properties.
3. Amend codes and ordinances to provide better driveway access, increased visibility of house numbers, properly stored firewood, minimum defensible space brush clearance, required Class A roofing materials and skirting around raised structures, planned maintenance of community lots.	No Cost	To be adopted by city and county governments.
4. Spring Cleanup Day	Varies	Community Business Donations.
5. Fuel Reduction Activities	\$35/acre	FEMA & USFS Grants

## Assessment Strategy

To accurately assess progress and effectiveness for the action plan, the Jenkins County WUI Fire Council will implement the following:

- Annual wildfire risk assessment will be conducted to re-assess wildfire hazards and prioritize needed actions.
- Mitigation efforts that are recurring (such as mowing, burning, and clearing of defensible space) will be incorporated into an annual renewal of the original action plan.
- Mitigation efforts that could not be funded in the requested year will be incorporated into the annual renewal of the original action plan.
- Continuing educational and outreach programs will be conducted and assessed for effectiveness. Workshops will be evaluated based on attendance and post surveys that are distributed by mail 1 month and 6 months following workshop date.
- The Jenkins County WUI Council will publish an annual report detailing mitigation projects initiated and completed, progress for ongoing actions, funds received, funds spent, and in-kind services utilized. The report will include a “state of the community” section that critically evaluates mitigation progress and identifies areas for improvement. Recommendations will be incorporated into the annual renewal of the action plan.
- An annual survey will be distributed to residents soliciting information on individual mitigation efforts on their own property (e.g., defensible space). Responses will be tallied and reviewed at the next Jenkins County WUI Council meeting. Needed actions will be discussed and delegated.

This plan should become a working document that is shared by local, state, and federal agencies that will use it to accomplish common goals. An agreed-upon schedule for meeting to review accomplishments, solve problems, and plan for the future should extend beyond the scope of this plan. Without this follow up this plan will have limited value.



## **IX. MITIGATION ASSISTANCE & GRANT FUNDING**

Community Protection Grant: US Forest Service sponsored prescribed fire program.

Communities with “at-risk” properties that lie within ten miles of a National Forest, National Park Service or Bureau of Land Management tracts may apply with the Georgia Forestry Commission to have their land prescribe burned free-of-charge. Forest mastication, where it is practical with Georgia Forestry Commission equipment, is also available under this grant program.

FEMA Mitigation Policy MRR-2-08-01: through GEMA – Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation Program (PDM).

1. To provide technical and financial assistance to local governments to assist in the implementation of long term, cost effective hazard mitigation accomplishments.
2. This policy addresses wildfire mitigation for the purpose of reducing the threat to all-risk structures through creating defensible space, structural protection through the application of ignition resistant construction and limited hazardous fuel reduction to protect life and property.
3. With a completed registered plan (addendum to the State Plan) counties can apply for pre-mitigation funding. They will also be eligible for HMGP funding if the county is declared under a wildfire disaster.

Georgia Forestry Commission: Plowing and prescribed burning assistance, as well as forest mastication, can be obtained from the GFC as a low-cost option for mitigation efforts.

The Georgia Forestry Commission Firewise Community Mitigation Assistance Grants – Nationally recognized Firewise Communities can receive up to \$5000 grants to help address potential wildfire risk reduction projects. Grant submission can be made through local Georgia Forestry Commission offices or your Regional Wildfire Prevention Specialist.

The International Association of Fire Chiefs (IAFC) and American International Group, Inc. (AIG) offer grants to assist local fire departments in establishing or enhancing their community fuels mitigation programs while educating members of the community about community wildfire readiness and encouraging personal action.

## **X. GLOSSARY**

*Community-At-Risk – A group of two or more structures whose proximity to forested or wildland areas places homes and residents at some degree of risk.*

*Critical Facilities – Buildings, structures or other parts of the community infrastructure that require special protection from an approaching wildfire.*

*CWPP – The Community Wildfire Protection Plan.*

*Defensible Space – The immediate landscaped area around a structure (usually a minimum of 30 ft.) kept “lean, clean and green” to prevent an approaching wildfire from igniting the structure.*

*Dry Hydrant - A non-pressurized pipe system permanently installed in existing lakes, ponds and streams that provides a suction supply of water to a fire department tank truck.*

*FEMA – The Federal Emergency Management Agency whose mission is to support our citizens and first responders to ensure that as a nation we work together to build, sustain, and improve our capability to prepare for, protect against, respond to, recover from, and mitigate all hazards.*

*Fire Adapted Community – A community fully prepared for its wildfire risk by taking actions to address safety, homes, neighborhoods, businesses and infrastructure, forest, parks, open spaces, and other community assets.*

*Firewise Program – A national initiative with a purpose to reduce structural losses from wildland fires.*

*Firewise Community/USA – A national recognition program for communities that take action to protect themselves from wildland fire. To qualify a community must have a wildfire risk assessment by the Georgia Forestry Commission, develop a mitigation action plan, have an annual firewise mitigation/education event, have dedicated firewise leadership, and complete the certification application.*

*Fuels – All combustible materials within the wildland/urban interface or intermix including, but not limited to, vegetation and structures.*

*Fuel Modification – Any manipulation or removal of fuels to reduce the likelihood of ignition or the resistance to fire control.*

*Hazard & Wildfire Risk Assessment – An evaluation to determine an area’s (community’s) potential to be impacted by an approaching wildland fire.*

Healthy Forests Initiative - *Launched in August 2002 by President Bush (following passage of the Healthy Forests Restoration Act by Congress) with the intent to reduce the risks severe wildfires pose to people, communities, and the environment.*

Home Ignition Zone (Structure Ignition Zone) - *Treatment area for wildfire protection. The “zone” includes the structure(s) and their immediate surroundings from 0-200 ft.*

Mitigation – *An action that moderates the severity of a fire hazard or risk.*

National Fire Plan – *National initiative, passed by Congress in the year 2000, following a landmark wildland fire season, with the intent of actively responding to severe wildland fires and their impacts to communities while ensuring sufficient firefighting capacity for the future.*

National Fire Protection Association (NFPA) - *An international nonprofit organization established in 1896, whose mission is to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating consensus codes and standards, research, training, and education.*

National Wildfire Preparedness Day – *Started in 2014 by the National Fire Protection Association as a day for communities to work together to prepare for the approaching wildfire season. It is held annually on the first Saturday in May.*

Prescribed Burning (prescribed fire) –*The use of planned fire that is deliberately set under specific fuel and weather condition to accomplish a variety of management objectives and is under control until it burns out or is extinguished.*

Ready, Set, Go - *A program fire services use to help homeowners understand wildfire preparedness, awareness, and planning procedures for evacuation.*

Southern Group of State Foresters – *Organization whose members are the agency heads of the forestry agencies of the 13 southern states, Puerto Rico and the Virgin Islands.*

Stakeholders– *Individuals, groups, organizations, businesses or others who have an interest in wildland fire protection and may wish to review and/or contribute to the CWPP content.*

Wildfire or Wildland Fire – *An unplanned and uncontrolled fire spreading through vegetative fuels.*

Wildland/Urban Interface - *The presence of structures in locations in which the authority having jurisdiction (AHJ) determines that topographical features, vegetation, fuel types, local weather conditions and prevailing winds result in the potential for ignition of the structures within the area from flames and firebrands from a wildland fire (NFPA 1144, 2008).*

## **XI. SOURCES OF INFORMATION**

### **Publications/Brochures/Websites:**

- FIREWISE materials can be ordered at [www.firewise.org](http://www.firewise.org)
- Georgia Forestry Commission [www.georgiafirewise.org](http://www.georgiafirewise.org)
- Examples of successful wildfire mitigation programs can be viewed at the website for National Database of State and Local wildfire Hazard Mitigation Programs sponsored by the U.S. Forest Service and the Southern Group of State Foresters [www.wildfireprograms.com](http://www.wildfireprograms.com)
- Information about a variety of interface issues (including wildfire) can be found at the USFS website for Interface South: [www.interfacesouth.org](http://www.interfacesouth.org)
- Information on codes and standards for emergency services including wildfire can be found at [www.nfpa.org](http://www.nfpa.org)
- Information on FEMA Assistance to Firefighters Grants (AFG) can be found at [www.firegrantsupport.com](http://www.firegrantsupport.com)
- Information on National Fire Plan grants can be found at <http://www.federalgrantswire.com/national-fire-plan--rural-fire-assistance.html>
- Southern Wildfire Risk Assessment website SouthWRAP [www.SouthernWildfireRisk.com](http://www.SouthernWildfireRisk.com)
- Fire Adapted Communities [www.fireadapted.org](http://www.fireadapted.org)
- Ready, Set, Go [www.wildlandfirersg.org](http://www.wildlandfirersg.org)
- National Wildfire Preparedness Day [www.wildfireprepdoy.org](http://www.wildfireprepdoy.org)

### **Appended Documents:**

Jenkins County Southern Wildfire Risk Assessment Summary Report (SWRA)

Jenkins County Wildfire assessment scoresheets

All files that make up this plan are available in an electronic format from the Georgia Forestry Commission.

GEORGIA FORESTRY  
COMMISSION



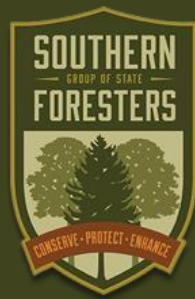
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**5645 Riggins Mill Rd.**  
**Dry Branch, GA 31020**

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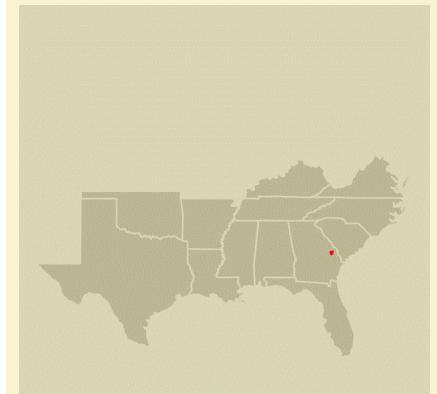
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# SOUTHERN WILDFIRE RISK ASSESSMENT SUMMARY REPORT



***Jenkins County***





Report was generated using  
[www.southernwildfirerisk.com](http://www.southernwildfirerisk.com)

Report version: 4.0

Report generated: 8/30/2024



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## **Disclaimer**

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Users should also note that property boundaries included in any product do not represent an on-the-ground survey suitable for legal, engineering, or surveying purposes. They represent only the approximate relative locations.

# Introduction

Welcome to the Southern Wildfire Risk Assessment Summary Report.

This tool allows users of the Professional Viewer application of the Southern Wildfire Risk Assessment (SWRA) web Portal (SouthWRAP) to define a specific project area and summarize wildfire related information for this area. A detailed risk summary report is generated using a set of predefined map products developed by the Southern Wildfire Risk Assessment project which have been summarized explicitly for the user defined project area. The report is generated in MS WORD format.

The report has been designed so that information from the report can easily be copied and pasted into other specific plans, reports, or documents depending on user needs. Examples include, but are not limited to, Community Wildfire Protection Plans, Local Fire Plans, Fuels Mitigation Plans, Hazard Mitigation Plans, Homeowner Association Risk Assessments, and Forest Management or Stewardship Plans. Formats and standards for these types of reports vary from state to state across the South, and accordingly SouthWRAP provides the SWRA information in a generic risk report format to facilitate use in any type of external document. The SouthWRAP Risk Summary Report also stands alone as a viable depiction of current wildfire risk conditions for the user defined project area.

SouthWRAP provides a consistent, comparable set of scientific results to be used as a foundation for wildfire mitigation and prevention planning in the South.

Results of the assessment can be used to help prioritize areas in the state where mitigation treatments, community interaction and education, or tactical analyses might be necessary to reduce risk from wildfires.



The SouthWRAP products included in this report are designed to provide the information needed to support the following key priorities:

- Identify areas that are most prone to wildfire
- Identify areas that may require additional tactical planning, specifically related to mitigation projects and Community Wildfire Protection Planning
- Provide the information necessary to justify resource, budget and funding requests
- Allow agencies to work together to better define priorities and improve emergency response, particularly across jurisdictional boundaries
- Define wildland communities and identify the risk to those communities
- Increase communication and outreach with local residents and the public to create awareness and address community priorities and needs
- Plan for response and suppression resource needs
- Plan and prioritize hazardous fuel treatment programs

To learn more about the SWRA project or to create a custom summary report, go to [www.southernwildfirerisk.com](http://www.southernwildfirerisk.com).

## Products

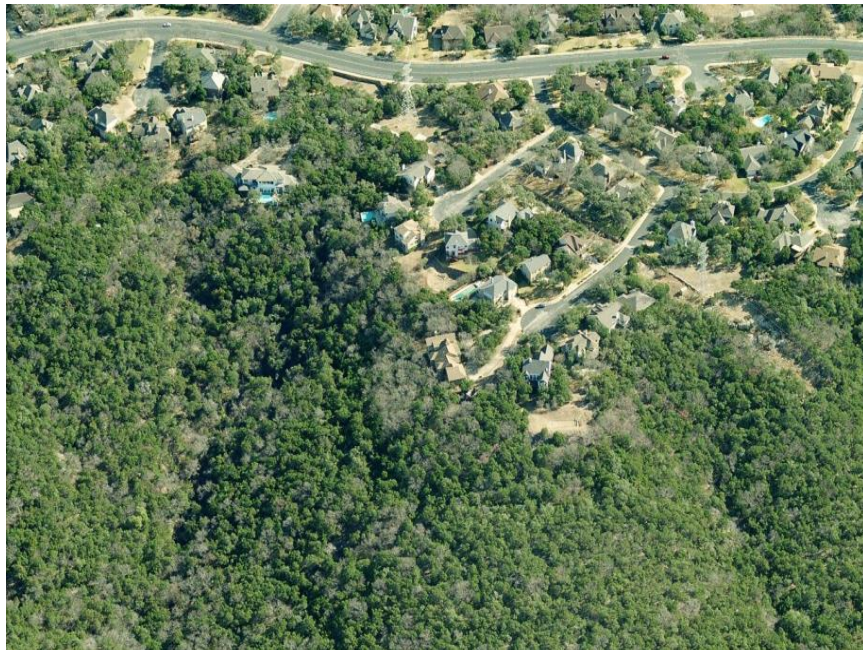
Each product in this report is accompanied by a general description, table, chart and/or map. A list of available SouthWRAP products in this report is provided in the following table.

SouthWRAP Product	Description
<b>Wildland Urban Interface (WUI)</b>	Depicts where humans and their structures meet or intermix with wildland fuel
<b>WUI Risk Index</b>	Represents a rating of the potential impact of a wildfire on people and their homes
<b>Community Protection Zones</b>	Represents those areas designated as primary and secondary priorities for community protection planning
<b>Burn Probability</b>	Probability of an area burning given current landscape conditions, percentile weather, historical ignition patterns and historical fire prevention and suppression efforts
<b>Characteristic Rate of Spread</b>	Represents the speed with which a fire moves in a horizontal direction across the landscape
<b>Characteristic Flame Length</b>	Represents the distance between the tip and base of the flame
<b>Characteristic Fire Intensity Scale</b>	Quantifies the potential fire intensity for an area by orders of magnitude
<b>Fire Type - Extreme</b>	Represents the potential fire type (surface or canopy) under extreme percentile weather conditions
<b>Surface Fuels</b>	Contains the parameters needed to compute surface fire behavior characteristics
<b>Dozer Operability Rating</b>	Level of difficulty to operate a dozer in an area based on limitations associated with slope and vegetation type

# Wildland Urban Interface

## Description

The South is one of the fastest growing regions in the nation, with an estimated population growth of 1.5 million people per year. The South also consistently has the highest number of wildfires per year. Population growth is pushing housing developments further into natural and forested areas where most of these wildfires occur. This situation puts many lives and communities at risk each year.



In particular, the expansion of residential development from urban centers out into rural landscapes, increases the potential for wildland fire threat to public safety and the potential for damage to forest resources and dependent industries. This increase in population across the region will impact counties and communities that are located within the Wildland Urban Interface (WUI).

The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire.

For the **Jenkins County** project area, it is estimated that **7,969** people or **95.2 % percent** of the total project area population (**8,368**) live within the WUI.



**The Wildland Urban Interface (WUI) layer reflects housing density depicting where humans and their structures meet or intermix with wildland fuels.**



WUI housing density is categorized based on the standard Federal Register and U.S. Forest Service SILVIS data set categories, long considered a de facto standard for depicting WUI. However, in the SWRA WUI data the number of housing density categories is extended to provide a better gradation of housing distribution to meet specific requirements for fire protection planning activities. While units of the actual data set are in *houses per sq. km.*, the data is presented as the *number of houses per acre* to aid with interpretation and use by fire planners in the South.

In the past, conventional wildland urban interface data sets, such as USFS SILVIS, have been used to reflect these concerns. However, USFS SILVIS and other existing data sources do not provide the level of detail for defining population living in the wildland as needed by Southern state WUI specialists and local fire protection agencies.

The new SWRA WUI 2012 dataset is derived using advanced modeling techniques based on the SWRA Where People Live (housing density) dataset and 2012 LandScan population count data available from the Department of Homeland Security, HSIP Freedom Data Set. WUI is simply a subset of the Where People Live dataset. The primary difference between the WPL and WUI is that populated areas surrounded by sufficient non-burnable areas (i.e. interior urban areas) are removed from the Where People Live data set, as these areas are not expected to be directly impacted by a wildfire. Simply put, the SWRA WUI is the SWRA WPL data with the urban core areas removed.

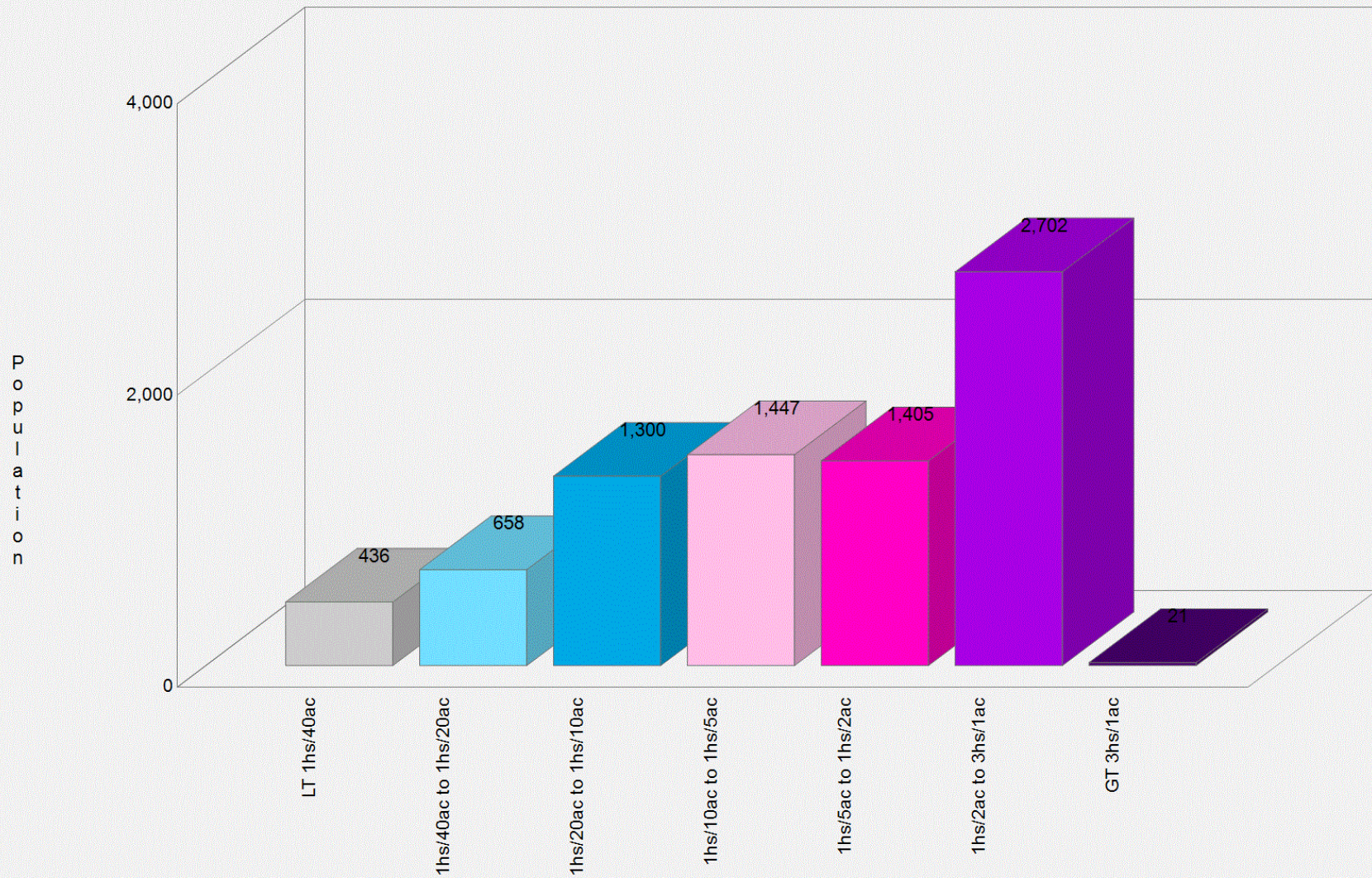
Data is modeled at a 30-meter cell resolution, which is consistent with other SWRA layers. The following table shows the total population for each WUI area within the project area.

**WUI – Population and Acres**

	Housing Density	WUI Population	Percent of WUI Population	WUI Acres	Percent of WUI Acres
	LT 1hs/40ac	436	5.5 %	26,006	45.3 %
	1hs/40ac to 1hs/20ac	658	8.3 %	12,846	22.4 %
	1hs/20ac to 1hs/10ac	1,300	16.3 %	10,205	17.8 %
	1hs/10ac to 1hs/5ac	1,447	18.2 %	5,012	8.7 %
	1hs/5ac to 1hs/2ac	1,405	17.6 %	2,201	3.8 %
	1hs/2ac to 3hs/1ac	2,702	33.9 %	1,179	2.1 %
	GT 3hs/1ac	21	0.3 %	2	0.0 %
	<b>Total</b>	<b>7,969</b>	<b>100.0 %</b>	<b>57,451</b>	<b>100.0 %</b>

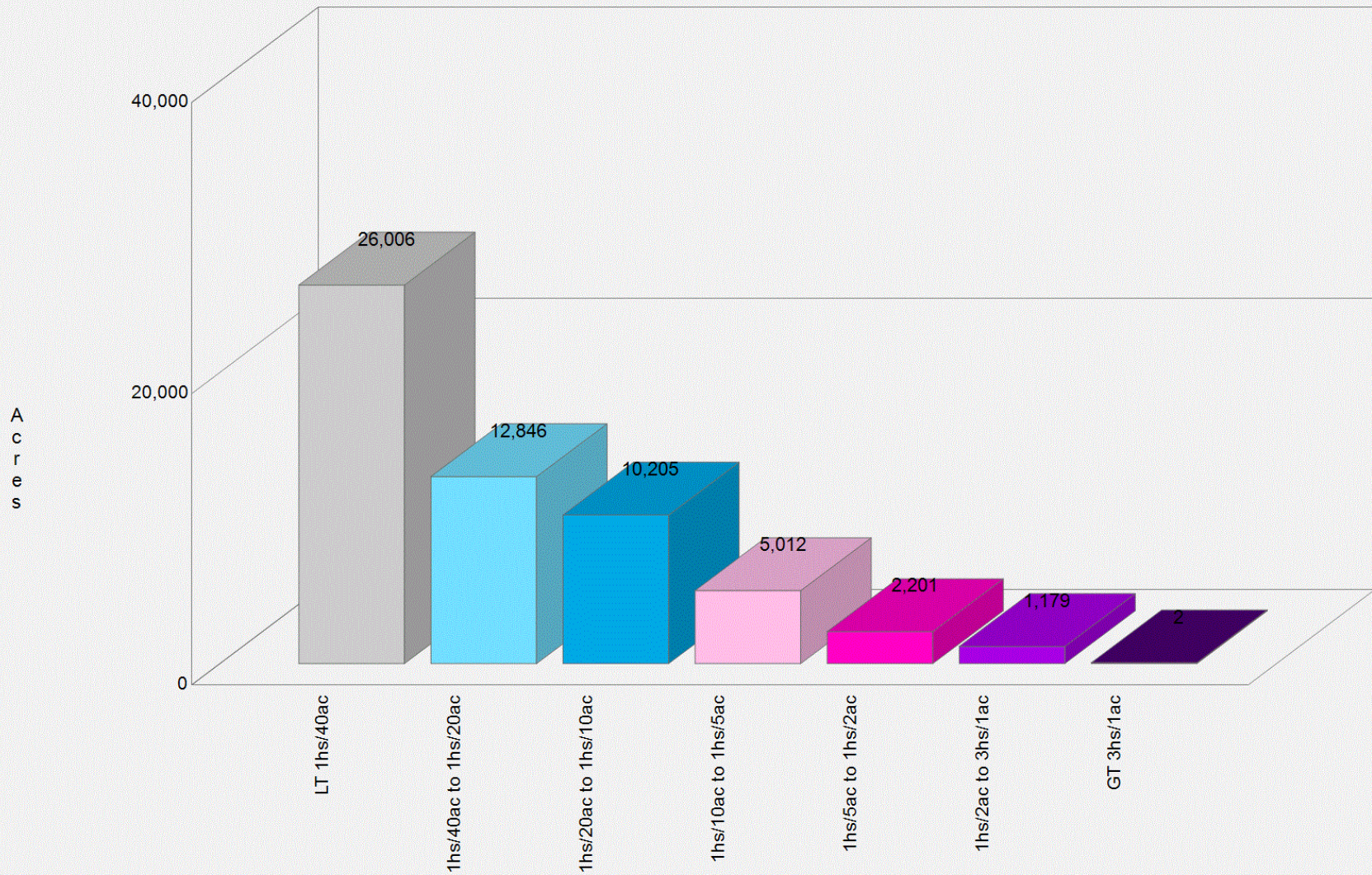


### Jenkins County Wildland Urban Interface

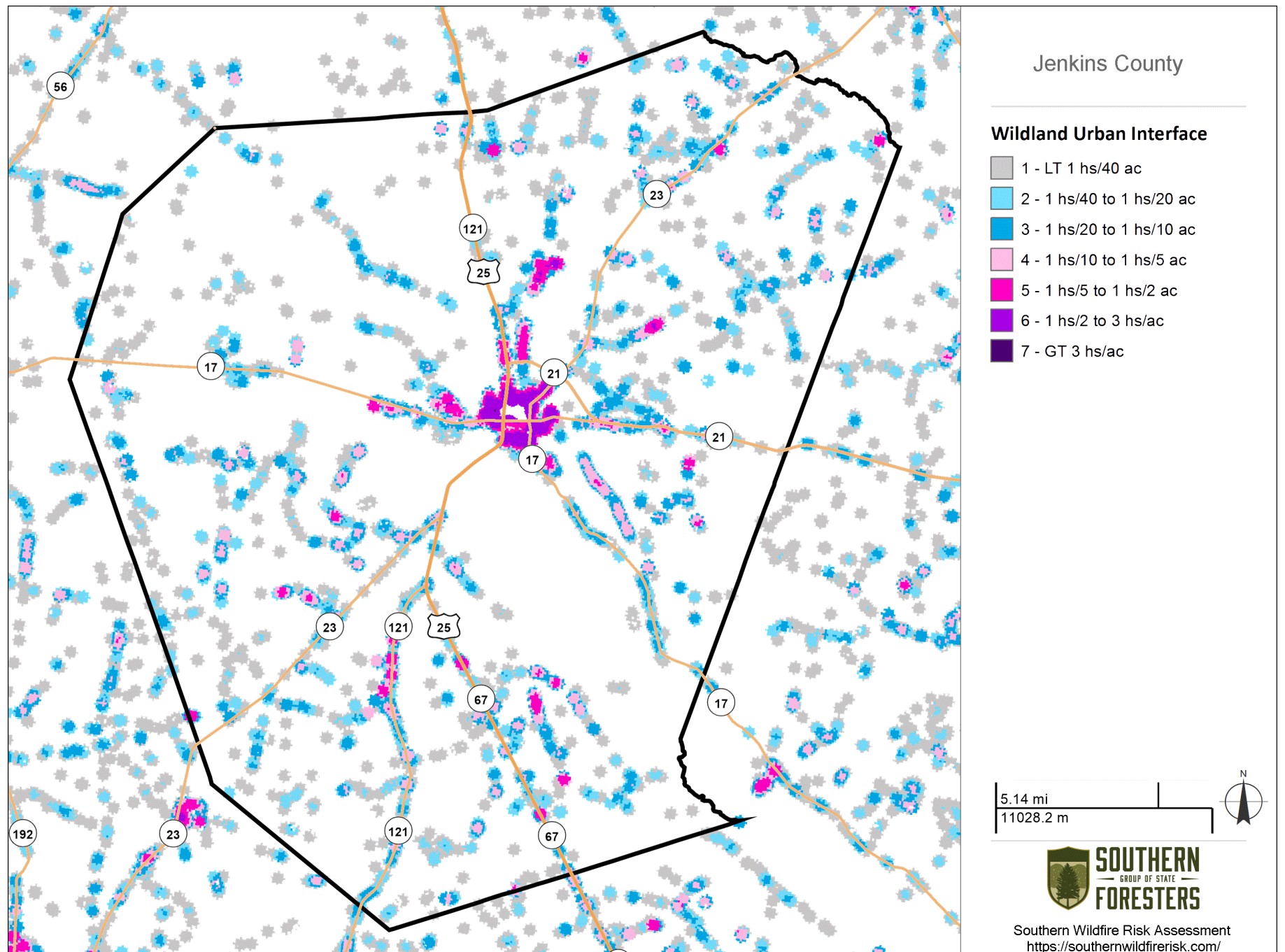




### Jenkins County Wildland Urban Interface







# WUI Risk Index

## Description

**The Wildland Urban Interface (WUI) Risk Index layer is a rating of the potential impact of a wildfire on people and their homes.** The key input, WUI, reflects housing density (houses per acre) consistent with Federal Register National standards. The location of people living in the Wildland Urban Interface and rural areas is key information for defining potential wildfire impacts to people and homes.

The WUI Risk Rating is derived using a Response Function modeling approach. Response functions are a method of assigning a net change in the value to a *resource* or *asset* based on susceptibility to fire at different intensity levels, such as flame length. The range of values is from -1 to -9, with -1 representing the least negative impact and -9 representing the most negative impact. For example, areas with high housing density and high flame lengths are rated -9 while areas with low housing density and low flame lengths are rated -1.

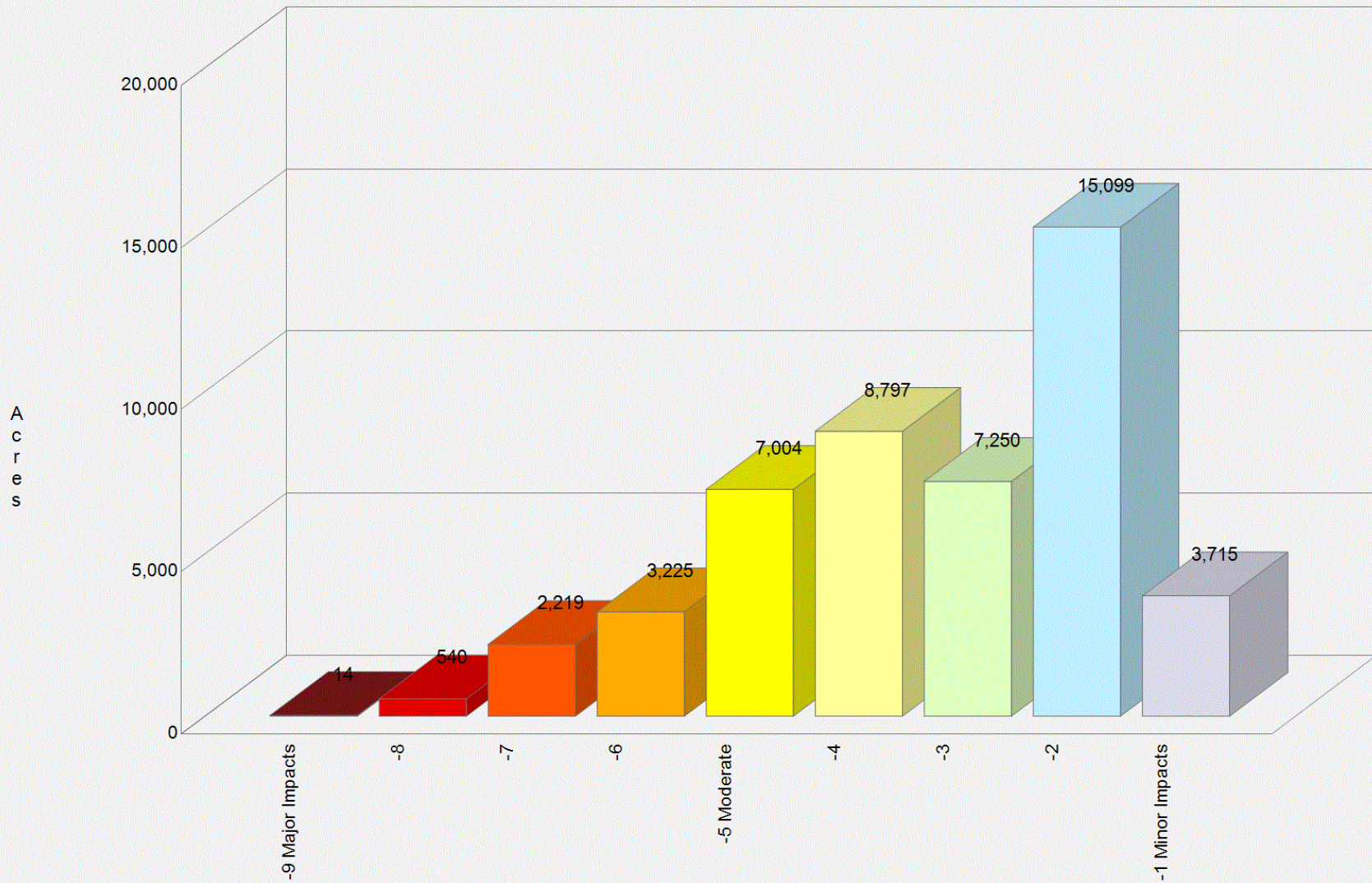
To calculate the WUI Risk Rating, the WUI housing density data was combined with Flame Length data and response functions were defined to represent potential impacts. The response functions were defined by a team of experts based on values defined by the SWRA Update Project technical team. By combining flame length with the WUI housing density data, you can determine where the greatest potential impact to homes and people is likely to occur.

Fire intensity data is modeled to incorporate penetration into urban fringe areas so that outputs better reflect real world conditions for fire spread and impact in fringe urban interface areas. With this enhancement, houses in urban areas adjacent to wildland fuels are incorporated into the WUI risk modeling. All areas in the South have the WUI Risk Index calculated consistently, which allows for comparison and ordination of areas across the entire region. Data is modeled at a 30-meter cell resolution, which is consistent with other SWRA layers.

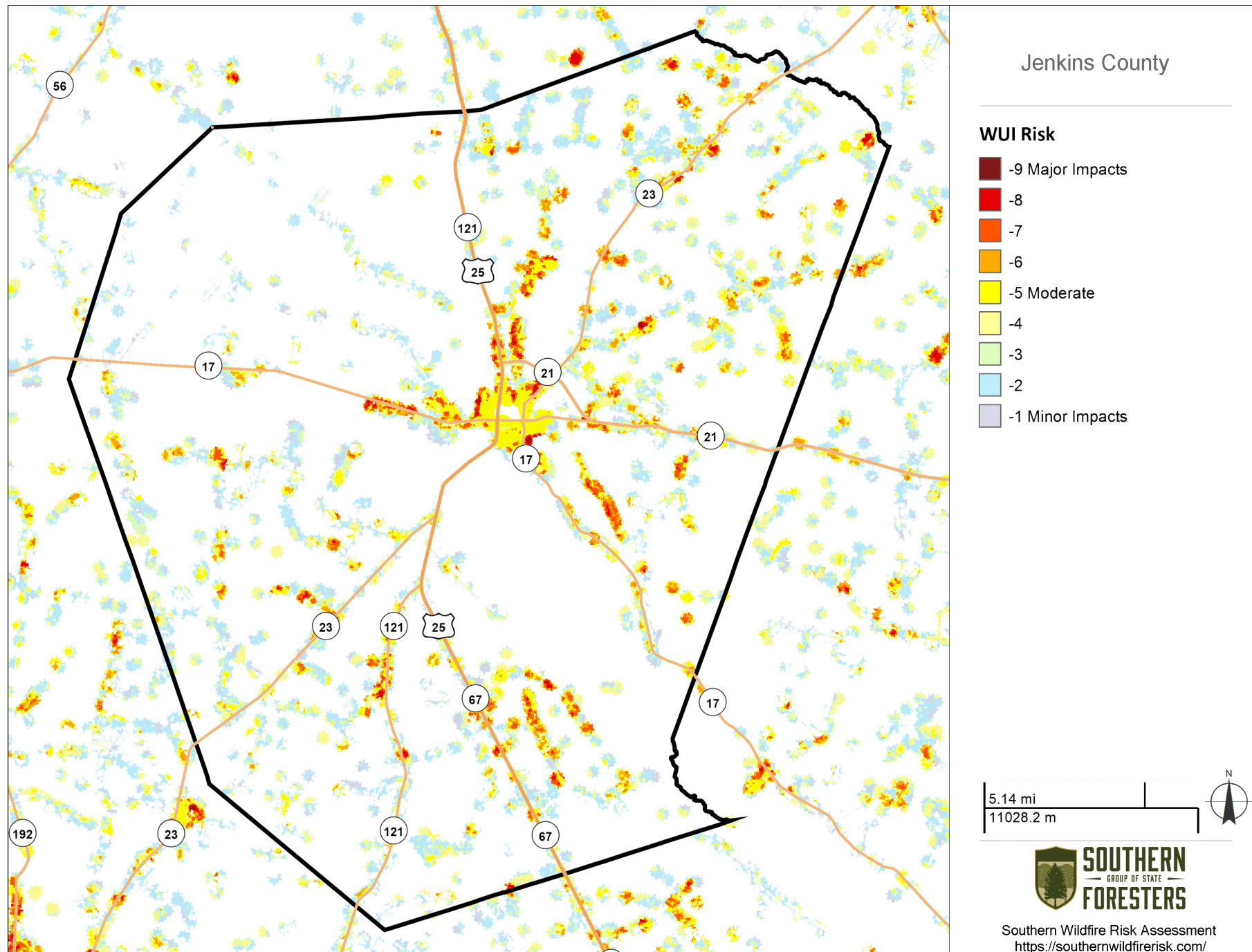
	Class	Acres	Percent
	-9 Major Impacts	14	0.0 %
	-8	540	1.1 %
	-7	2,219	4.6 %
	-6	3,225	6.7 %
	-5 Moderate	7,004	14.6 %
	-4	8,797	18.4 %
	-3	7,250	15.1 %
	-2	15,099	31.5 %
	-1 Minor Impacts	3,715	7.8 %
	<b>Total</b>	<b>47,863</b>	<b>100.0 %</b>



Jenkins County  
WUI Response Index







# Community Protection Zones

## Description

**Community Protection Zones (CPZ) represent those areas considered highest priority for mitigation planning activities.** CPZs are based on an analysis of the Where People Live housing density data and surrounding fire behavior potential. Rate of Spread data is used to determine the areas of concern around populated areas that are within a 2-hour fire spread distance. This is referred to as the Secondary CPZ.

General consensus among fire planners is that for fuel mitigation treatments to be effective in reducing wildfire hazard, they must be conducted within a close distance of a community. In the South, the WUI housing density has been used to reflect populated areas in place of community boundaries (Primary CPZ). This ensures that CPZs reflect where people are living in the wildland, not jurisdictional boundaries.

Secondary CPZs represent a variable width buffer around populated areas that are within a 2-hour fire spread distance. Accordingly, CPZs will extend farther in areas where rates of spread are greater and less in areas where minimal rate of spread potential exists. Secondary CPZ boundaries inherently incorporate fire behavior conditions.

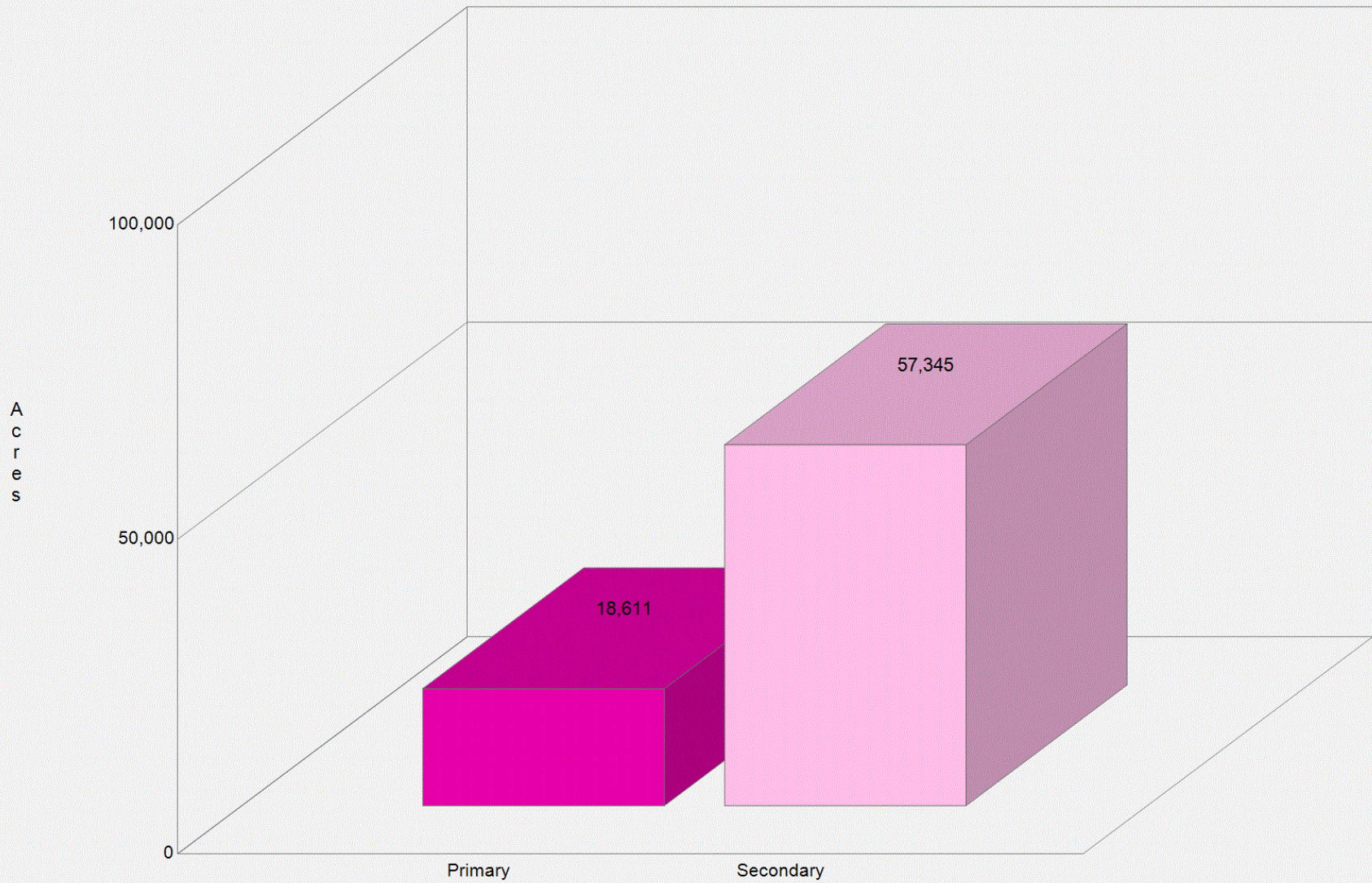
Primary CPZs reflect areas with a predefined housing density, such as greater than 1 house per 20 acres. Secondary CPZs are the areas around Primary CPZs within a 2 hour fire spread distance.

All areas in the South have the CPZs calculated consistently, which allows for comparison and ordination of areas across the entire region. Data is modeled at a 30-meter cell resolution, which is consistent with other SWRA layers.

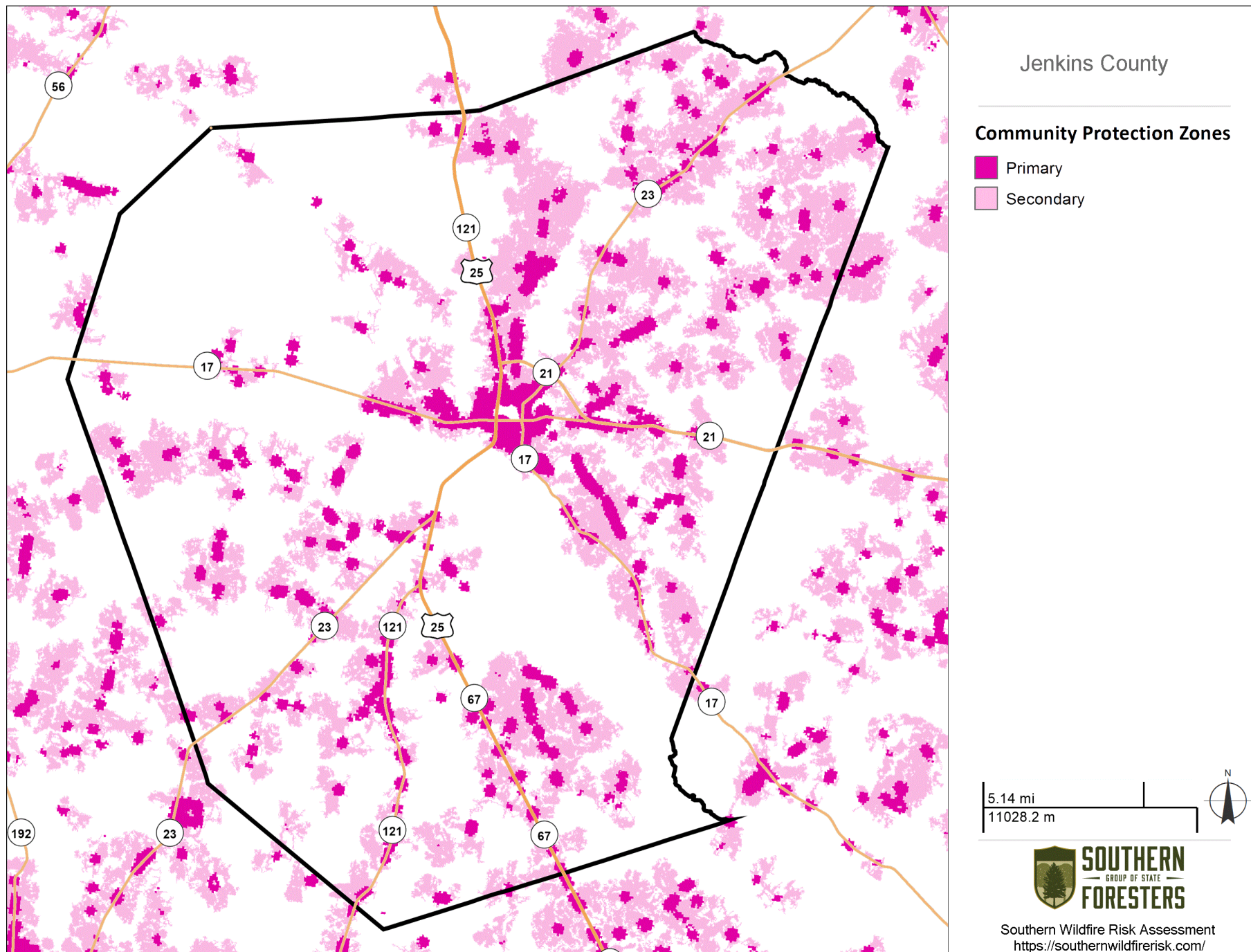
	Class	Acres	Percent
	Primary	18,611	24.5 %
	Secondary	57,345	75.5 %
	<b>Total</b>	<b>75,956</b>	<b>100.0 %</b>



**Jenkins County  
Community Protection Zones**









# Burn Probability

## Description

**The Burn Probability (BP) layer depicts the probability of an area burning given current landscape conditions, percentile weather, historical ignition patterns and historical fire prevention and suppression efforts.**

Describe in more detail, it is the tendency of any given pixel to burn, given the static landscape conditions depicted by the LANDFIRE Refresh 2008 dataset (as resampled by FPA), contemporary weather and ignition patterns, as well as contemporary fire management policies (entailing considerable fire prevention and suppression efforts).

The BP data does not, and is not intended to, depict fire-return intervals of any vintage, nor do they indicate likely fire footprints or routes of travel. Nothing about the expected shape or size of any actual fire incident can be interpreted from the burn probabilities. Instead, the BP data, in conjunction with the Fire Program Analysts FIL layers, are intended to support an actuarial approach to quantitative wildfire risk analysis (e.g., see Thompson et al. 2011).

Values in the Burn Probability (BP) data layer indicate, for each pixel, the number of times that cell was burned by an FSim-modeled fire, divided by the total number of annual weather scenarios simulated. Burn probability raster data was generated using the large fire simulator - FSim - developed for use in the Fire Program Analysis (FPA) project. FSim uses historical weather data and current landcover data for discrete geographical areas (Fire Planning Units - FPU) and simulates fires in these FPU. Using these simulated fires, an overall burn probability and marginal burn probabilities at four fire intensities (flame lengths) are returned by FSim for each 270m pixel in the FPU.

The fire growth simulations, when run repeatedly with different ignition locations and weather streams, generate burn probabilities and fire behavior distributions at each landscape location (i.e., cell or pixel). Results are objectively evaluated through comparison with historical fire patterns and statistics, including the mean annual burn probability and fire size distribution, for each FPU. This evaluation is part of the FSim calibration process for each FPU, whereby simulation inputs are adjusted until the slopes of the historical and modeled fire size distributions are similar and the modeled average burn probability falls within an acceptable range of the historical reference value (i.e., the 95% confidence interval for the mean).

Please refer to the metadata available for this dataset for a detailed description of the data processing methods, assumptions and references that pertain to the development of this data. This information is available from the USFS Missoula Fire Sciences Laboratory.

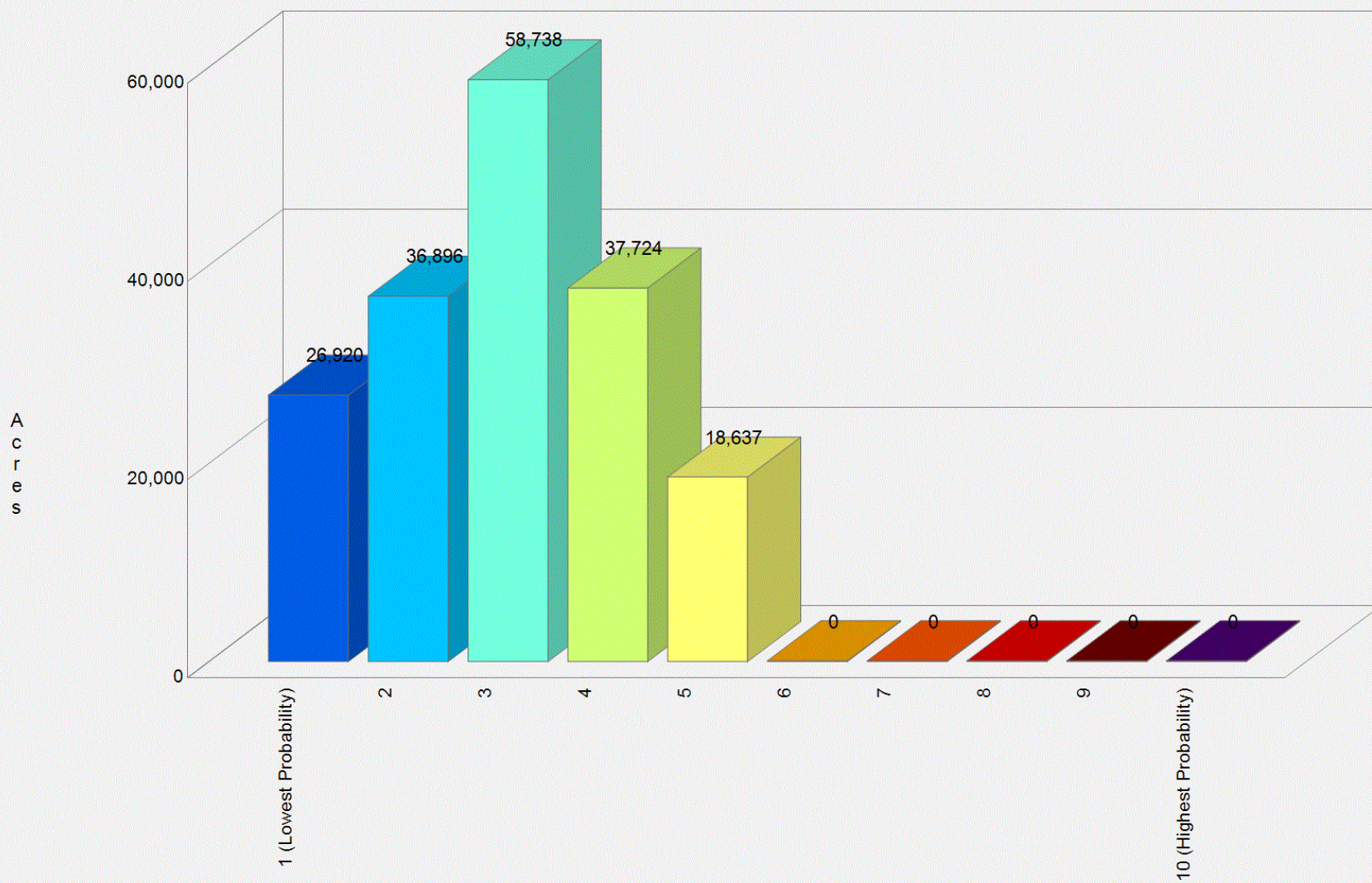
Please refer to the web site link in the report References to obtain more detailed descriptions of FPA and the related data products such as Burn Probability.

Burn Probability replaces the Wildland Fire Susceptibility Index (WFSI) layer developed in the original SWRA project completed in 2005.

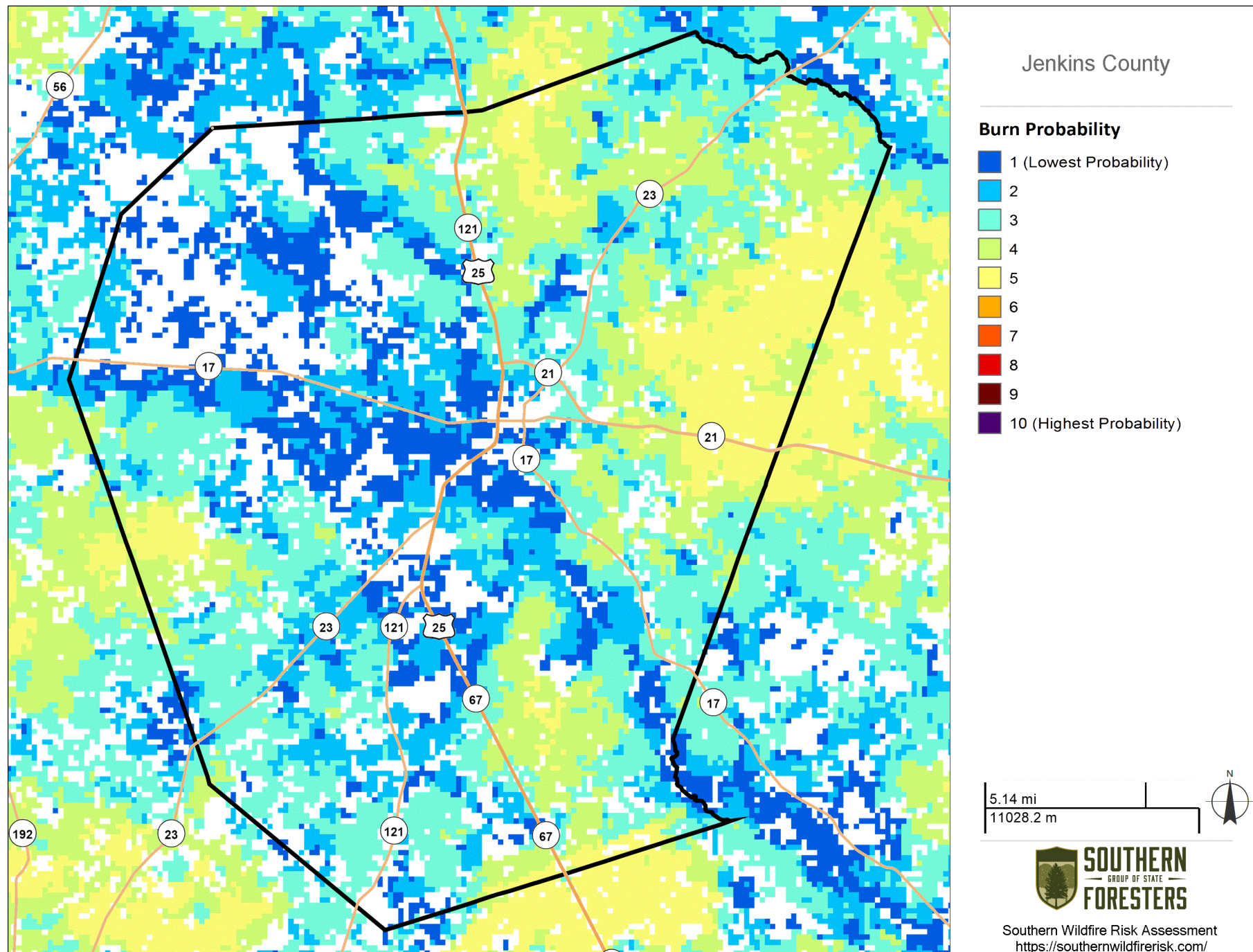
	Class	Acres	Percent
	1	26,920	15.0 %
	2	36,896	20.6 %
	3	58,738	32.8 %
	4	37,724	21.1 %
	5	18,637	10.4 %
	6	0	0.0 %
	7	0	0.0 %
	8	0	0.0 %
	9	0	0.0 %
	10	0	0.0 %
	<b>Total</b>	<b>178,915</b>	<b>100.0 %</b>



### Jenkins County Burn Probability





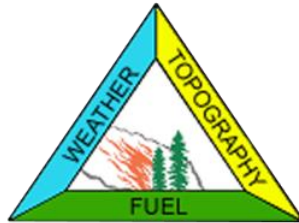


# Fire Behavior

## Description

**Fire behavior is the manner in which a fire reacts to the following environmental influences:**

1. **Fuels**
2. **Weather**
3. **Topography**



Fire behavior characteristics are attributes of wildland fire that pertain to its spread, intensity, and growth. Fire behavior characteristics utilized in the Southern Wildfire Risk Assessment (SWRA) include fire type, rate of spread, flame length and fire intensity scale. These metrics are used to determine the potential fire behavior under different weather scenarios. Areas that exhibit moderate to high fire behavior potential can be identified for mitigation treatments, especially if these areas are in close proximity to homes, business, or other assets.

### Fuels

The SWRA includes composition and characteristics for both surface fuels and canopy fuels. Significant increases in fire behavior will be captured if the fire has the potential to transition from a surface fire to a canopy fire.

Fuel datasets required to compute both surface and canopy fire potential include:

- **Surface Fuels**, generally referred to as fire behavior fuel models, provide the input parameters needed to compute surface fire behavior.
- **Canopy Cover** is the horizontal percentage of the ground surface that is covered by tree crowns. It is used to compute wind reduction factors and shading.
- **Canopy Ceiling Height/Stand Height** is the height above the ground of the highest canopy layer where the density of the crown mass within the layer is high enough to support vertical movement of a fire. A good estimate of canopy ceiling height would be the average height of the dominant and co-dominant trees in a stand. It is used for computing wind reduction to midflame height and spotting distances from torching trees (Fire Program Solutions, L.L.C, 2005).
- **Canopy Base Height** is the lowest height above the ground above which there is sufficient canopy fuel to propagate fire vertically (Scott & Reinhardt, 2001). Canopy base height is a property of a plot, stand, or group of trees, not of an individual tree. For fire modeling, canopy base height is an effective value that incorporates ladder fuel, such as tall shrubs and small trees. Canopy base height is used to determine if a surface fire will transition to a canopy fire.
- **Canopy Bulk Density** is the mass of available canopy fuel per unit canopy volume (Scott & Reinhardt, 2001). Canopy bulk density is a bulk property of a stand, plot, or group of trees, not of an individual tree. Canopy bulk density is used to predict whether an active crown fire is possible.

## **Weather**

Environmental weather parameters needed to compute fire behavior characteristics include 1-hour, 10-hour, and 100-hour timelag fuel moistures, herbaceous fuel moisture, woody fuel moisture, and the 20-foot 10 minute average wind speed. To collect this information, weather influence zones were established across the region. A weather influence zone is an area where for analysis purposes the weather on any given day is considered uniform. Within each weather influence zone, historical daily weather is gathered to compile a weather dataset from which four percentile weather categories are created. The percentile weather categories are intended to represent low, moderate, high, and extreme fire weather days. Fire behavior outputs are computed for each percentile weather category to determine fire potential under different weather scenarios.

The four percentile weather categories include:

- Low Weather Percentile (0 – 15%)
- Moderate Weather Percentile (16 – 90%)
- High Weather Percentile (91 – 97%)
- Extreme Weather Percentile (98 – 100%)

## **Topography**

Topography datasets required to compute fire behavior characteristics are elevation, slope and aspect.

### **FIRE BEHAVIOR CHARACTERISTICS**

Fire behavior characteristics provided in this report include:

- **Characteristic Rate of Spread**
- **Characteristic Flame Length**
- **Characteristic Fire Intensity Scale**
- **Fire Type - Extreme**



# Characteristic Rate of Spread

## Description

**Characteristic Rate of Spread is the typical or representative rate of spread of a potential fire based on a weighted average of four percentile weather categories.** Rate of spread is the speed with which a fire moves in a horizontal direction across the landscape, usually expressed in chains per hour (ch/hr) or feet per minute (ft/min). For purposes of the Southern Wildfire Risk Assessment, this measurement represents the maximum rate of spread of the fire front. Rate of Spread is the metric used to derive the Community Protection Zones.

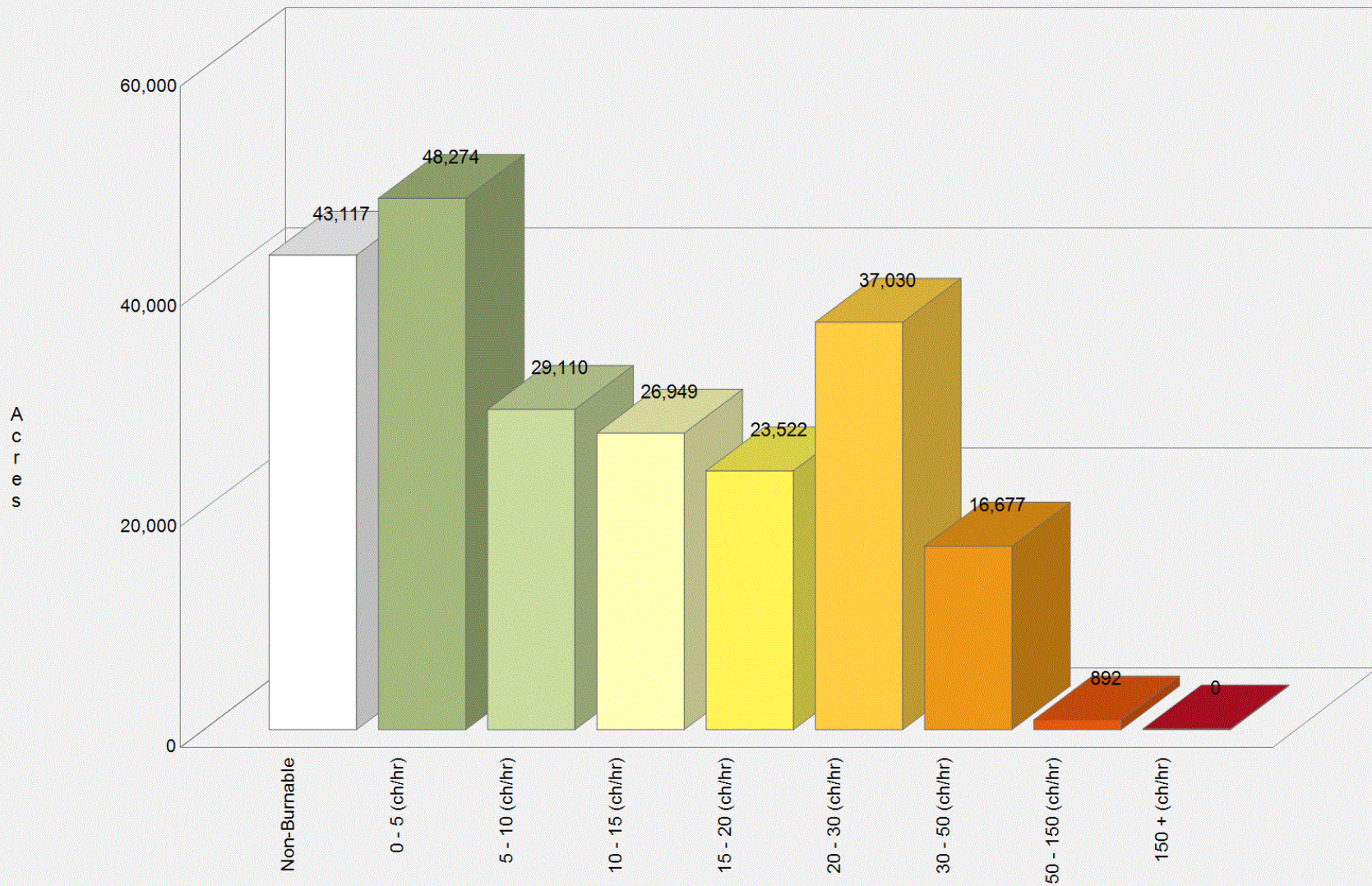
Rate of spread is a fire behavior output, which is influenced by three environmental factors - fuels, weather, and topography. Weather is by far the most dynamic variable as it changes frequently. To account for this variability, four percentile weather categories were created from historical weather observations to represent low, moderate, high, and extreme weather days for each weather influence zone in the South. A weather influence zone is an area where, for analysis purposes, the weather on any given day is considered uniform.

For all Southern states, except Florida and Texas, this dataset was derived from updated fuels and canopy data as part of the 2010 SWRA Update Project recently completed in May 2014. For Texas, the 2010 Texas risk update data is portrayed. For Florida, the 2010 Florida risk assessment update data is shown.

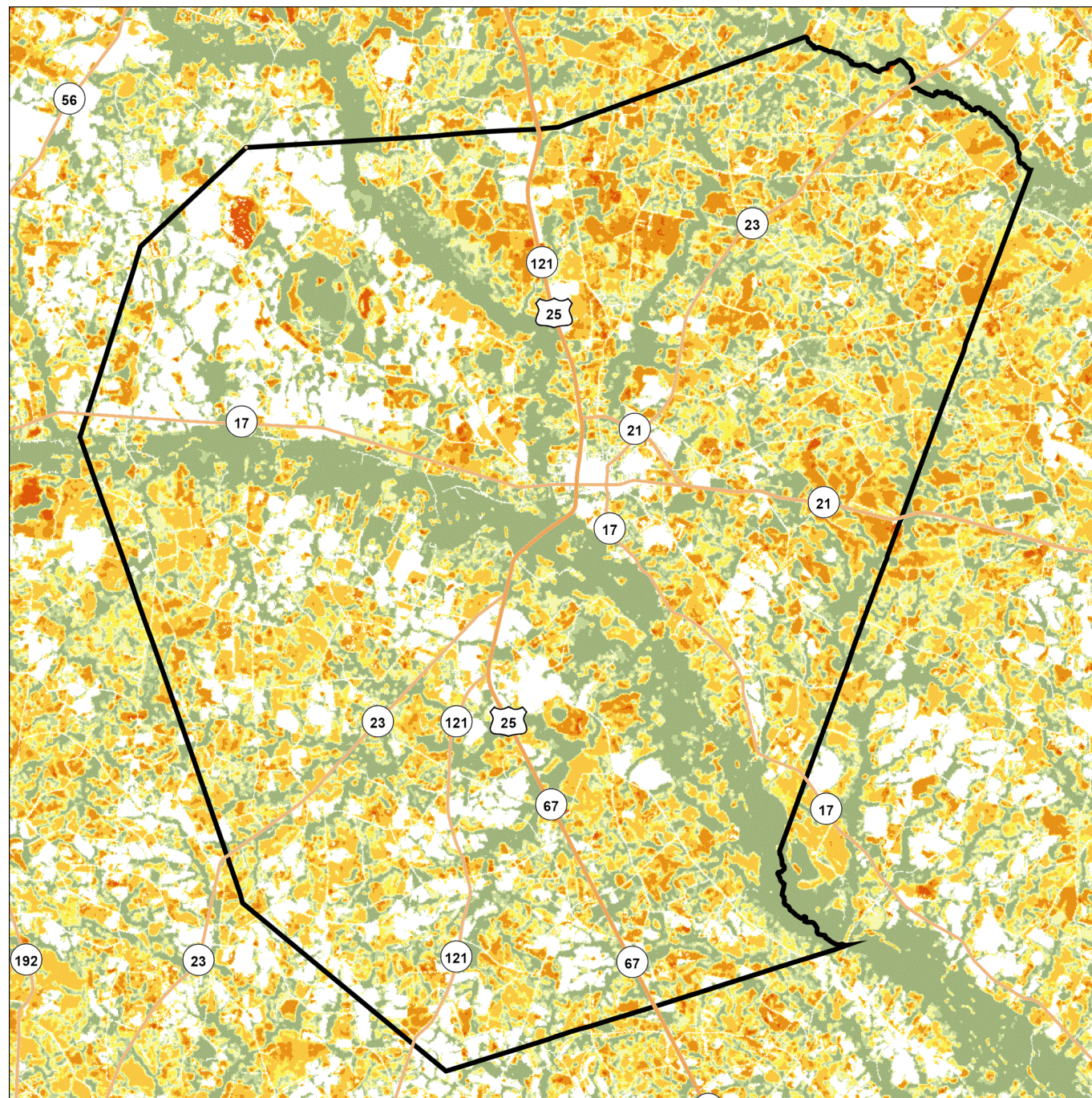
	Rate of Spread	Acres	Percent
	Non-Burnable	43,117	19.1 %
	0 - 5 (ch/hr)	48,274	21.4 %
	5 - 10 (ch/hr)	29,110	12.9 %
	10 - 15 (ch/hr)	26,949	11.9 %
	15 - 20 (ch/hr)	23,522	10.4 %
	20 - 30 (ch/hr)	37,030	16.4 %
	30 - 50 (ch/hr)	16,677	7.4 %
	50 - 150 (ch/hr)	892	0.4 %
	150 + (ch/hr)	0	0.0 %
	<b>Total</b>	<b>225,571</b>	<b>100.0 %</b>



### Jenkins County Characteristic Rate of Spread

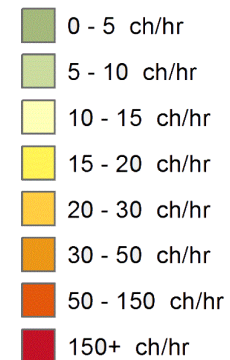






## Jenkins County

### Rate Of Spread



5.14 mi  
11028.2 m



Southern Wildfire Risk Assessment  
<https://southernwildfirerisk.com/>



# Characteristic Flame Length

## Description

**Characteristic Flame Length is the typical or representative flame length of a potential fire based on a weighted average of four percentile weather categories.** Flame Length is defined as the distance between the flame tip and the midpoint of the flame depth at the base of the flame, which is generally the ground surface. It is an indicator of fire intensity and is often used to estimate how much heat the fire is generating. Flame length is typically measured in feet (ft). Flame length is the measure of fire intensity used to generate the response index outputs for the SWRA.

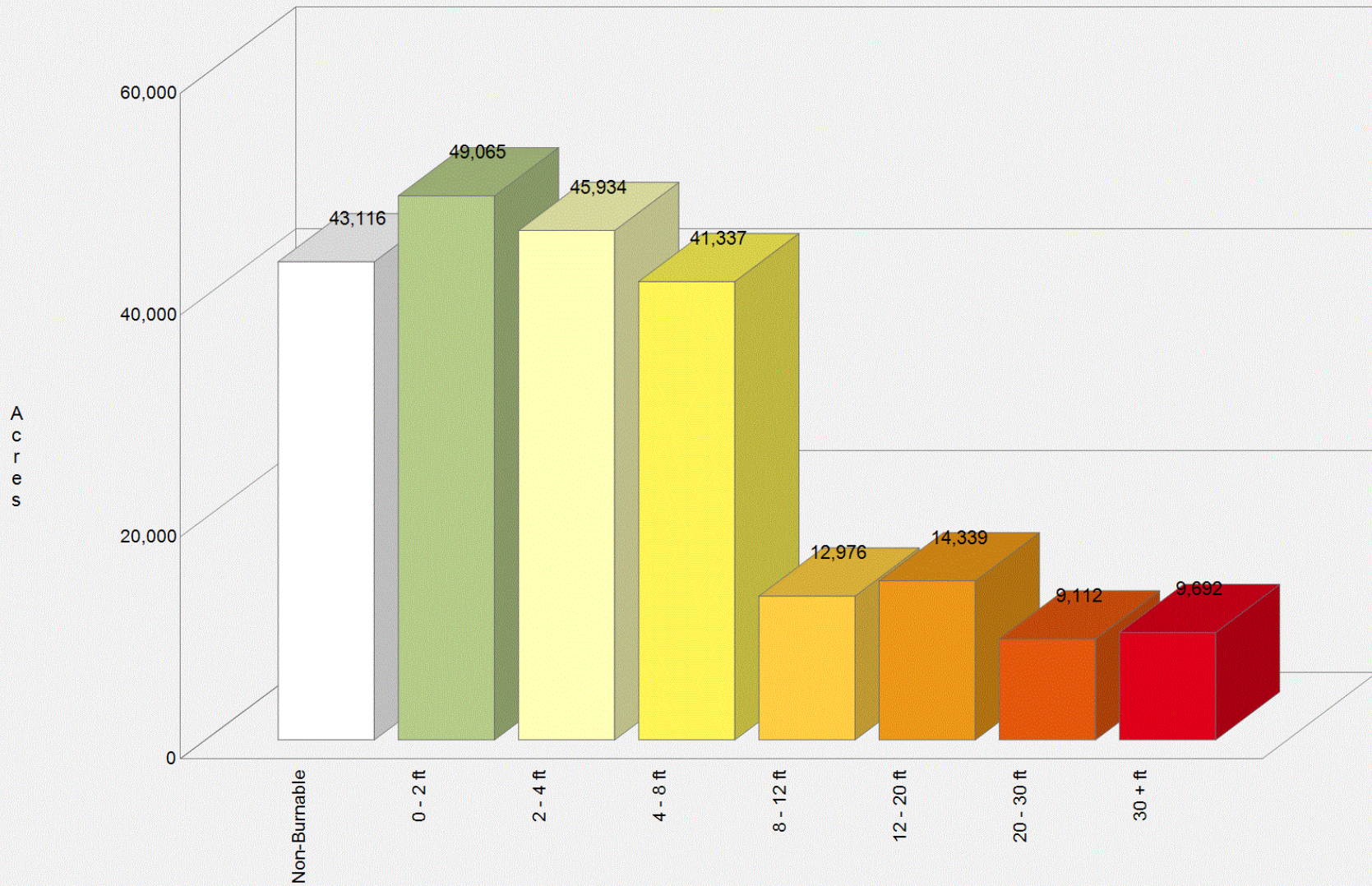
Flame length is a fire behavior output, which is influenced by three environmental factors - fuels, weather, and topography. Weather is by far the most dynamic variable as it changes frequently. To account for this variability, four percentile weather categories were created from historical weather observations to represent low, moderate, high, and extreme weather days for each weather influence zone in the South. A weather influence zone is an area where, for analysis purposes, the weather on any given day is considered uniform.

For all Southern states, except Florida and Texas, this dataset was derived from updated fuels and canopy data as part of the 2010 SWRA Update Project recently completed in May 2014. For Texas, the 2010 Texas risk update data is portrayed. For Florida, the 2010 Florida risk assessment update data is shown.

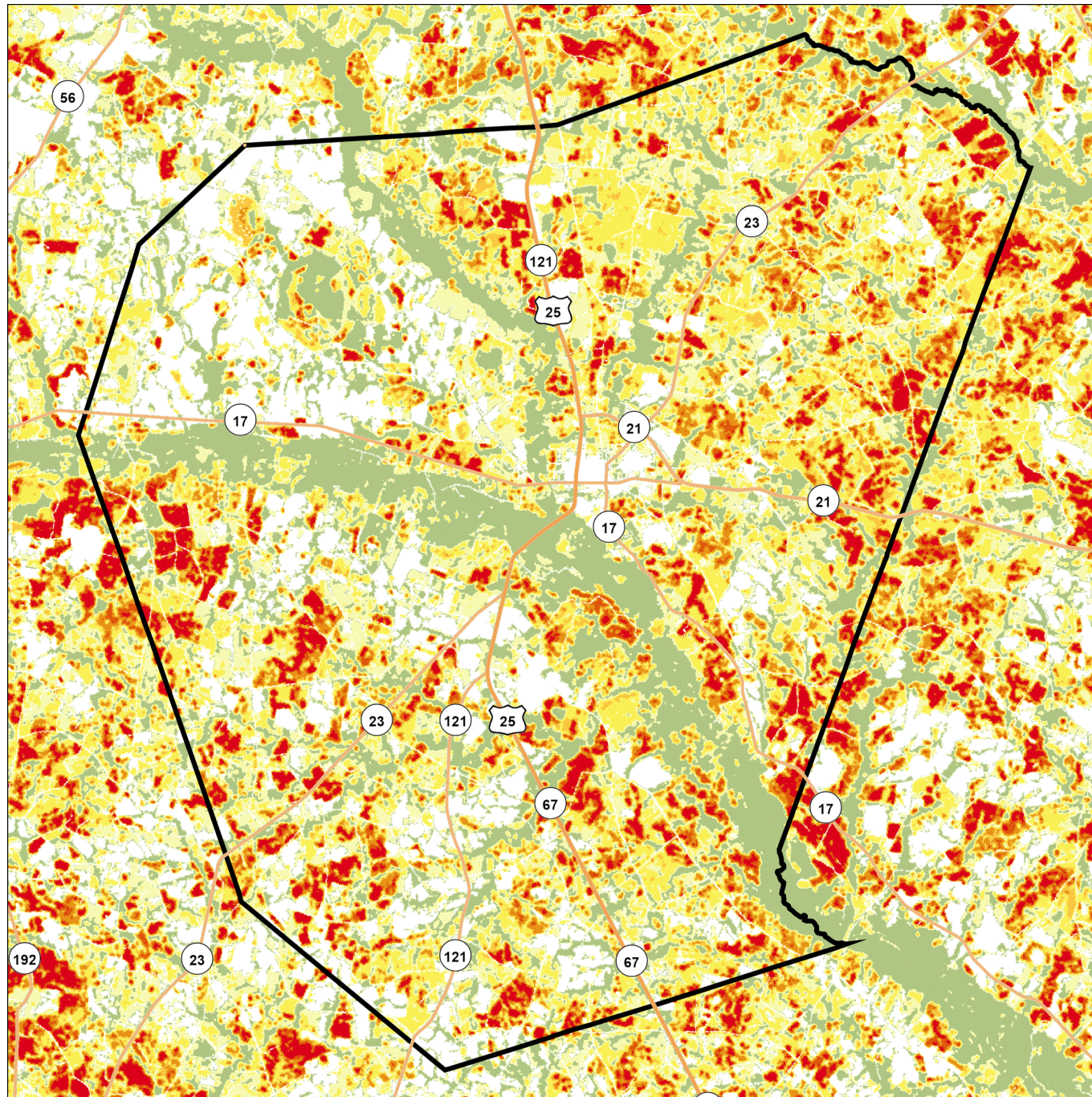
Flame Length		Acres	Percent
	Non-Burnable	43,116	19.1 %
	0 - 2 ft	49,065	21.8 %
	2 - 4 ft	45,934	20.4 %
	4 - 8 ft	41,337	18.3 %
	8 - 12 ft	12,976	5.8 %
	12 - 20 ft	14,339	6.4 %
	20 - 30 ft	9,112	4.0 %
	30 + ft	9,692	4.3 %
Total		225,571	100.0 %



### Jenkins County Characteristic Flame Length

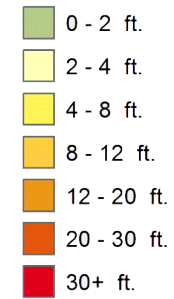






## Jenkins County

### Flame Length



5.14 mi  
11028.2 m



Southern Wildfire Risk Assessment  
<https://southernwildfirerisk.com/>



# Characteristic Fire Intensity Scale

## Description

**Characteristic Fire Intensity Scale (FIS) specifically identifies areas where significant fuel hazards and associated dangerous fire behavior potential exist based on a weighted average of four percentile weather categories.** Similar to the Richter scale for earthquakes, FIS provides a standard scale to measure potential wildfire intensity. FIS consist of 5 classes where the order of magnitude between classes is ten-fold. The minimum class, Class 1, represents very low wildfire intensities and the maximum class, Class 5, represents very high wildfire intensities. Refer to descriptions below.

- **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.

For all Southern states, except Texas, this dataset was derived from updated fuels and canopy data as part of the 2010 SWRA Update Project recently completed in May 2014. For Texas, the 2010 Texas risk update data is portrayed.

To aid in viewing on the map, FIS is presented in 1/2 class increments. Please consult the SouthWRAP User Manual for a more detailed description of the FIS class descriptions.

Since all areas in the South have fire intensity scale calculated consistently, it allows for comparison and ordination of areas across the entire region.

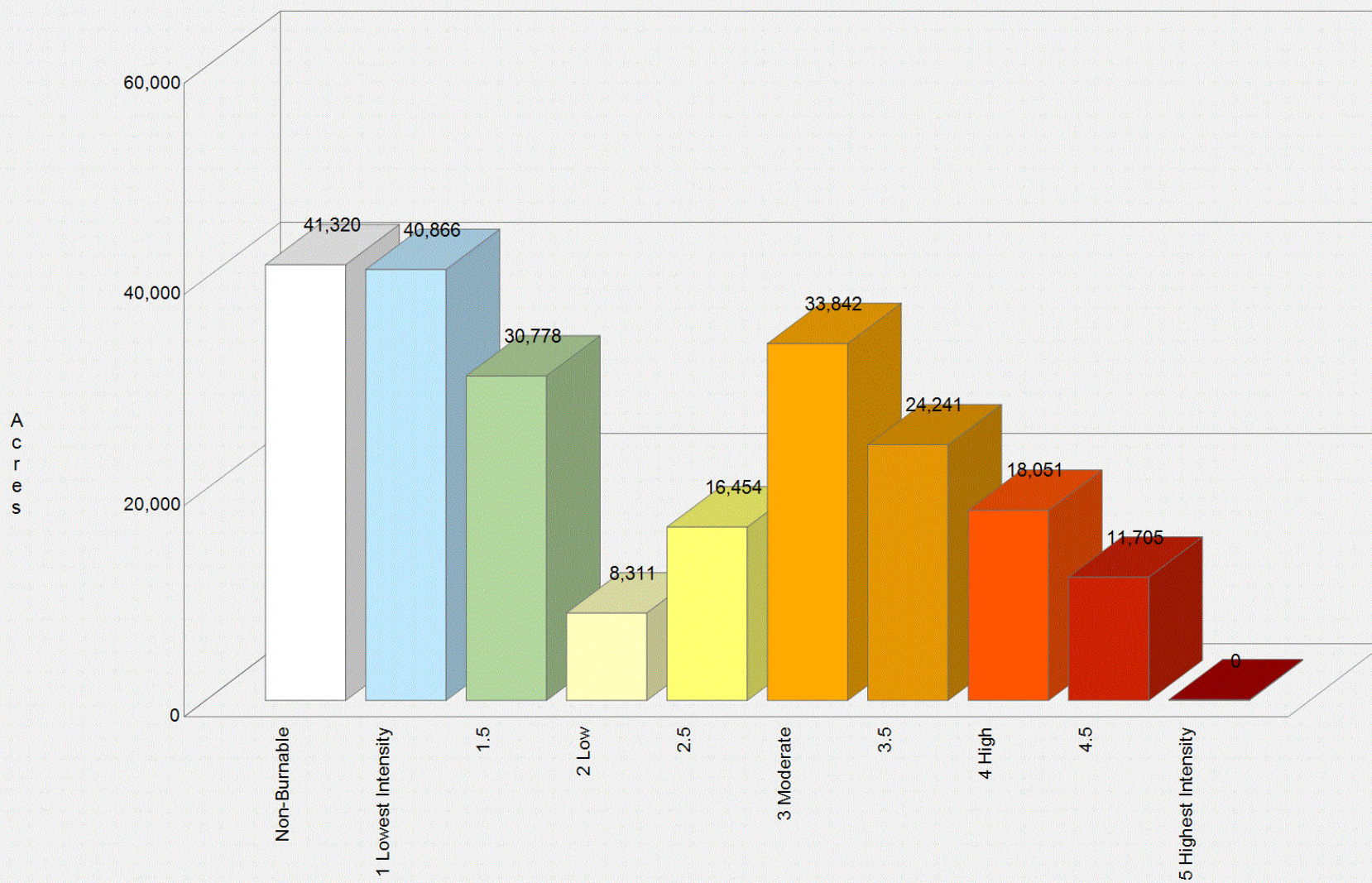
Fire intensity scale is a fire behavior output, which is influenced by three environmental factors - fuels, weather, and topography. Weather is by far the most dynamic variable as it changes frequently. To account for this variability, four percentile weather categories were created from historical weather observations to represent low, moderate, high, and extreme weather days for each weather influence zone in the South. A weather influence zone is an area where, for analysis purposes, the weather on any given day is considered uniform.

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.

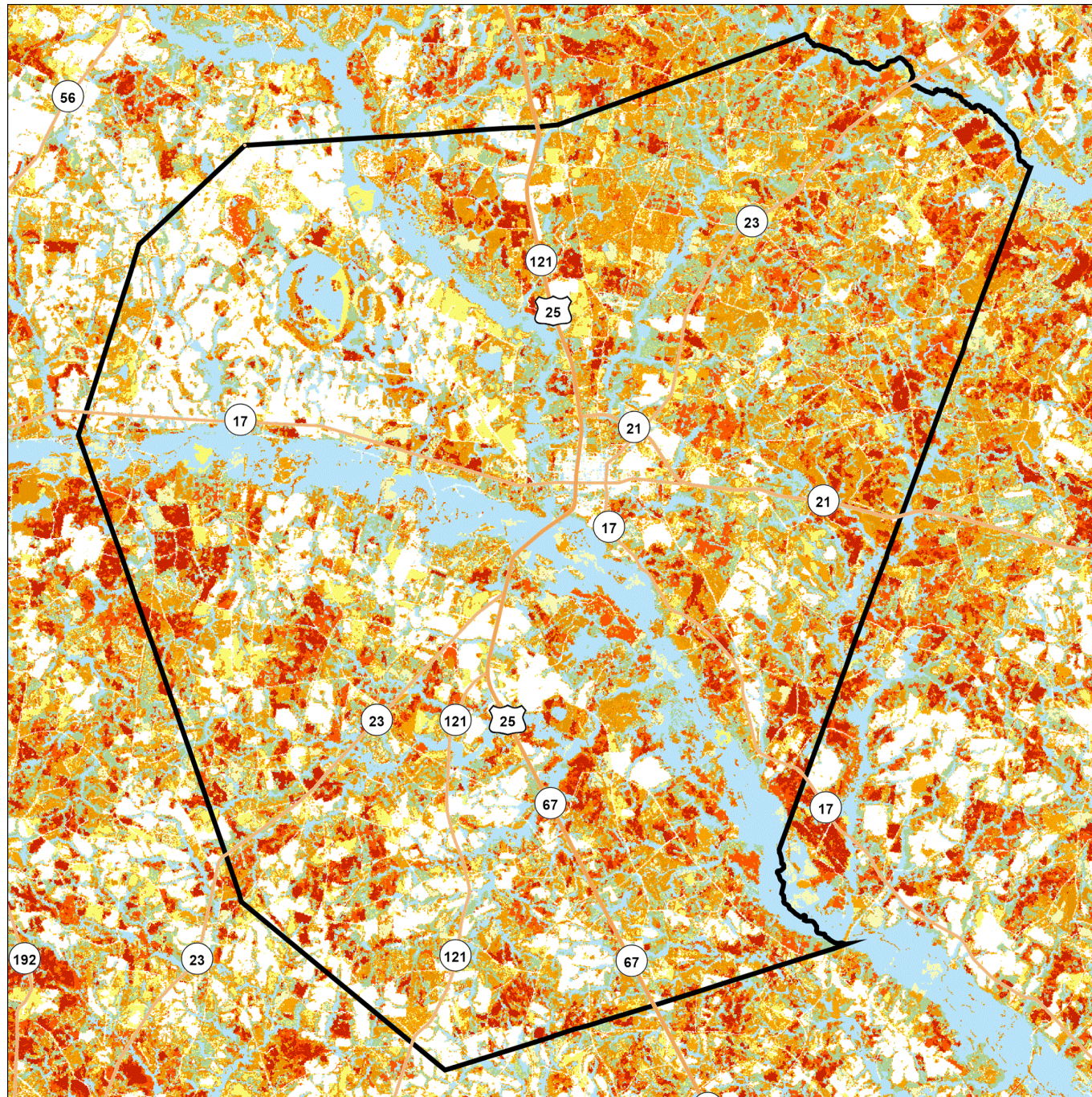
Class		Acres	Percent
	Non-Burnable	41,320	18.3 %
1	Lowest Intensity	40,866	18.1 %
1.5		30,778	13.6 %
2	Low	8,311	3.7 %
2.5		16,454	7.3 %
3	Moderate	33,842	15.0 %
3.5		24,241	10.7 %
4	High	18,051	8.0 %
4.5		11,705	5.2 %
5	Highest Intensity	0	0.0 %
Total		225,568	100.0 %



### Jenkins County Characteristic Fire Intensity Scale







## Jenkins County

### Fire Intensity Scale

- 1 - Lowest Intensity
- 1.5
- 2 - Low
- 2.5
- 3 - Moderate
- 3.5
- 4 - High
- 4.5
- 5 - Highest Intensity

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# Fire Type – Extreme

## Description

There are two primary fire types – surface fire and canopy fire. Canopy fire can be further subdivided into passive canopy fire and active canopy fire. A short description of each of these is provided below.

### Surface Fire

A fire that spreads through surface fuel without consuming any overlying canopy fuel. Surface fuels include grass, timber litter, shrub/brush, slash and other dead or live vegetation within about 6 feet of the ground.

### Passive Canopy Fire

A type of crown fire in which the crowns of individual trees or small groups of trees burn, but solid flaming in the canopy cannot be maintained except for short periods (Scott & Reinhardt, 2001).

### Active Canopy Fire

A crown fire in which the entire fuel complex (canopy) is involved in flame, but the crowning phase remains dependent on heat released from surface fuel for continued spread (Scott & Reinhardt, 2001).



**Fire Type – Extreme represents the potential fire type under the extreme percentile weather category.** The extreme percentile weather category represents the average weather based on the top three percent fire weather days in the analysis period. It is not intended to represent a worst case scenario weather event. Accordingly, the potential fire type is based on fuel conditions, extreme percentile weather, and topography.

Canopy fires are very dangerous, destructive and difficult to control due to their increased fire intensity. From a planning perspective, it is important to identify where these conditions are likely to occur on the landscape so that special preparedness measure can be taken if necessary. The Fire Type – Extreme layer shows the footprint of where these areas are most likely to occur. However, it is important to note that canopy fires are not restricted to these areas. Under the right conditions, it can occur in other canopied areas.

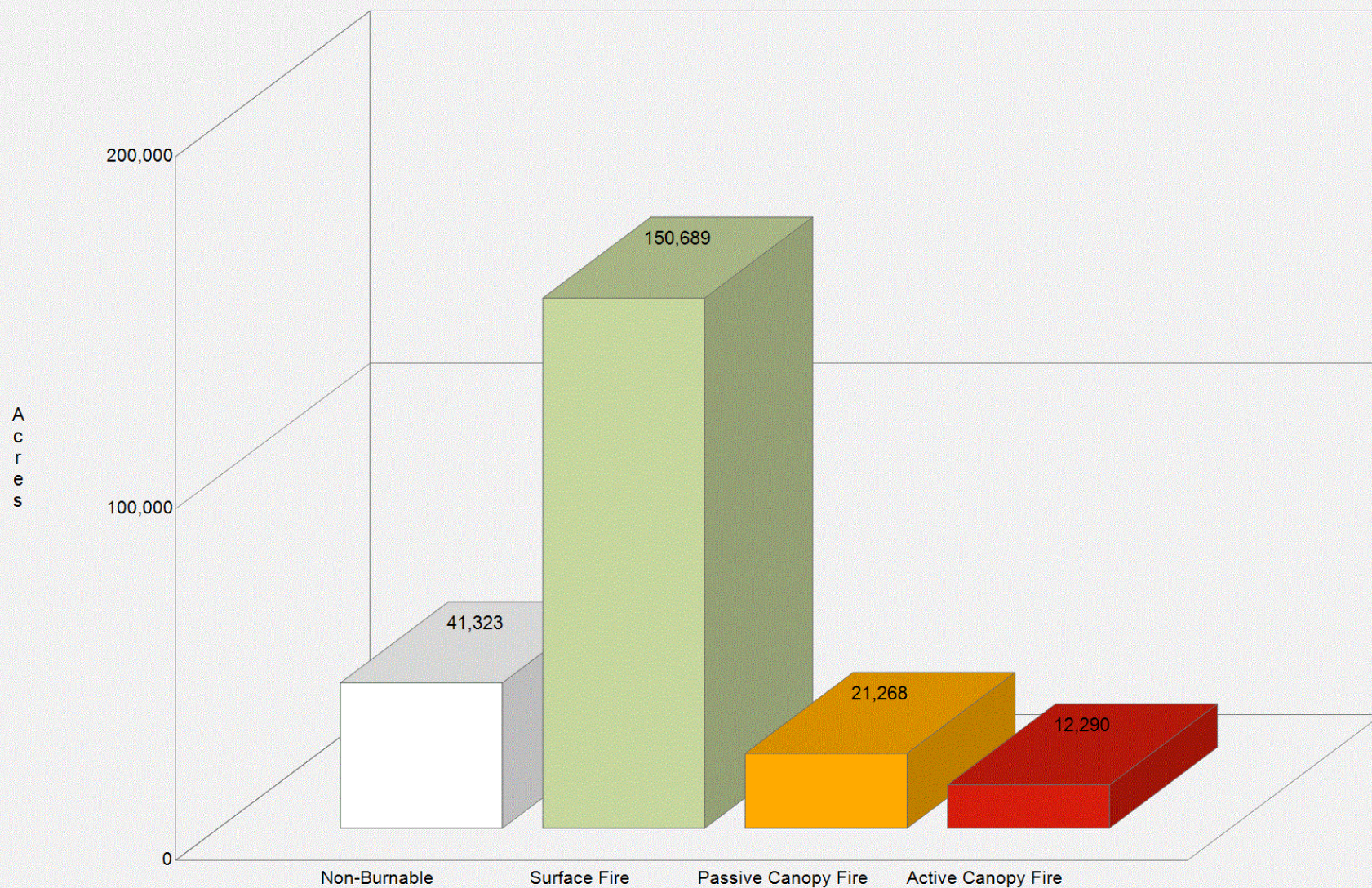
For all Southern states, except Florida and Texas, this dataset was derived from updated fuels and canopy data as part of the 2010 SWRA Update Project recently completed in May 2014. For Texas, the 2010 Texas risk update data is portrayed. For Florida, the 2010 Florida risk assessment update data is shown.

The fire type - extreme 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.

	Fire Type	Acres	Percent
	Non-Burnable	41,323	18.3 %
	Surface Fire	150,689	66.8 %
	Passive Canopy	21,268	9.4 %
	Active Canopy	12,290	5.4 %
	<b>Total</b>	<b>225,570</b>	<b>100.0 %</b>



**Jenkins County**  
**Fire Type - Extreme**

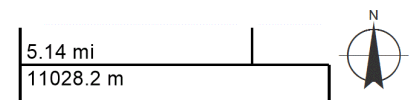






## Jenkins County

- Fire Type**  
**Extreme Weather Percentile**
- Surface Fire
  - Passive Canopy Fire
  - Active Canopy Fire



Southern Wildfire Risk Assessment  
<https://southernwildfirerisk.com/>

# Surface Fuels

## Description

**Surface fuels, or fire behavior fuel models as they are technically referred to, contain the parameters needed by the Rothermel (1972) surface fire spread model to compute surface fire behavior characteristics, such as rate of spread, flame length, fireline intensity, and other fire behavior metrics.** As the name might suggest, surface fuels only account for the surface fire potential. Canopy fire potential is computed through a separate but linked process. The Southern Wildfire Risk Assessment accounts for both surface and canopy fire potential in the fire behavior outputs.

Surface fuels are typically categorized into one of four primary fuel types based on the primary carrier of the surface fire: 1) grass, 2) shrub/brush, 3) timber litter and 4) slash. There are two standard fire behavior fuel model sets published for use. The Fire Behavior Prediction System 1982 Fuel Model Set (Anderson, 1982) contains 13 fuel models and the Fire Behavior Prediction System 2005 Fuel Model Set (Scott & Burgan 2005) contains 40 fuel models.

The SWRA Surface Fuels have been updated to use the FBPS 2005 40 fuel model set from the LANDFIRE 2010 products, supplemented with additional enhancements obtained through calibration workshops with the Southern states. Florida uses FBPS 1982 fuel models derived based on spectral classification of Landsat Thematic Mapper (TM) satellite imagery derived as part of the Florida Forest Service fuels mapping and risk assessment projects. Texas fuels represent 2010 updates conducted as part of a statewide fuels and canopy mapping effort.

For the remaining 11 Southern states, the recently completed SWRA Update project produced a new surface fuels dataset based on 2010 LANDFIRE products. A detailed fuels calibration process was undertaken that involved collaboration with Southern state fuels and fire behavior specialists supported by federal partner involvement. Workshops were held to review the LANDFIRE fuels product and calibrate the data by modifying specific fuels classes to better reflect local knowledge and input. A key component of this calibration task involved using image processing techniques to better delineate conifer areas, and in particular pine areas (plantations and natural stands). The fuels layer represents 2010 conditions.



Surface Fuel	FBPS Fuel Model Set	Description	Acres	Percent	
Grass Fuels Type Models (nearly pure grass and/or forb type)					
	GR01	2005	Grass is short, patchy, and possibly heavily grazed. Spread rate moderate; flame length low.	4,968	2.2 %
	GR02	2005	Moderately coarse continuous grass, average depth about 1 foot. Spread rate high; flame length moderate.	9,428	4.2 %
	GR03	2005	Very coarse grass, average depth about 2 feet. Spread rate high; flame length moderate.	3,586	1.6 %
	GR04	2005	Moderately coarse continuous grass, average depth about 2 feet. Spread rate very high; flame length high.	0	0.0 %
	GR05	2005	Dense, coarse grass, average depth about 1 to 2 feet. Spread rate very high; flame length high.	20,750	9.2 %
	GR06	2005	Dryland grass about 1 to 2 feet tall. Spread rate very high; flame length very high.	0	0.0 %
	GR08	2005	Heavy, coarse, continuous grass 3 to 5 feet tall. Spread rate very high; flame length very high.	134	0.1 %
	GR09	2005	Very heavy, coarse, continuous grass 5 to 8 feet tall. Spread rate extreme; flame length extreme.	0	0.0 %
Grass-Shrub Fuels Type Models (mixture of grass and shrub, up to 50 percent shrub coverage)					
	GS01	2005	Shrubs are about 1 foot high, low grass load. Spread rate moderate; flame length low.	302	0.1 %
	GS02	2005	Shrubs are 1 to 3 feet high, moderate grass load. Spread rate high; flame length moderate.	10,036	4.4 %
	GS03	2005	Moderate grass/shrub load, average grass/shrub depth less than 2 feet. Spread rate high; flame length moderate.	4,147	1.8 %
	GS04	2005	Heavy grass/shrub load, depth greater than 2 feet. Spread rate high; flame length very high.	0	0.0 %
Shrub Fuel Type Models (Shrubs cover at least 50 percent of the site, grass sparse to nonexistent)					
	SH01	2005	Low shrub fuel load, fuelbed depth about 1 foot; some grass may be present. Spread rate very low; flame length very low.	0	0.0 %
	SH02	2005	Moderate fuel load (higher than SH01), depth about 1 foot, no grass fuel present. Spread rate low; flame length low.	35	0.0 %
	SH03	2005	Moderate shrub load, possibly with pine overstory or herbaceous fuel, fuel bed depth 2 to 3 feet. Spread rate low; flame length low.	2,158	1.0 %
	SH04	2005	Low to moderate shrub and litter load, possibly with pine overstory, fuel bed depth about 3 feet. Spread rate high; flame length moderate.	0	0.0 %

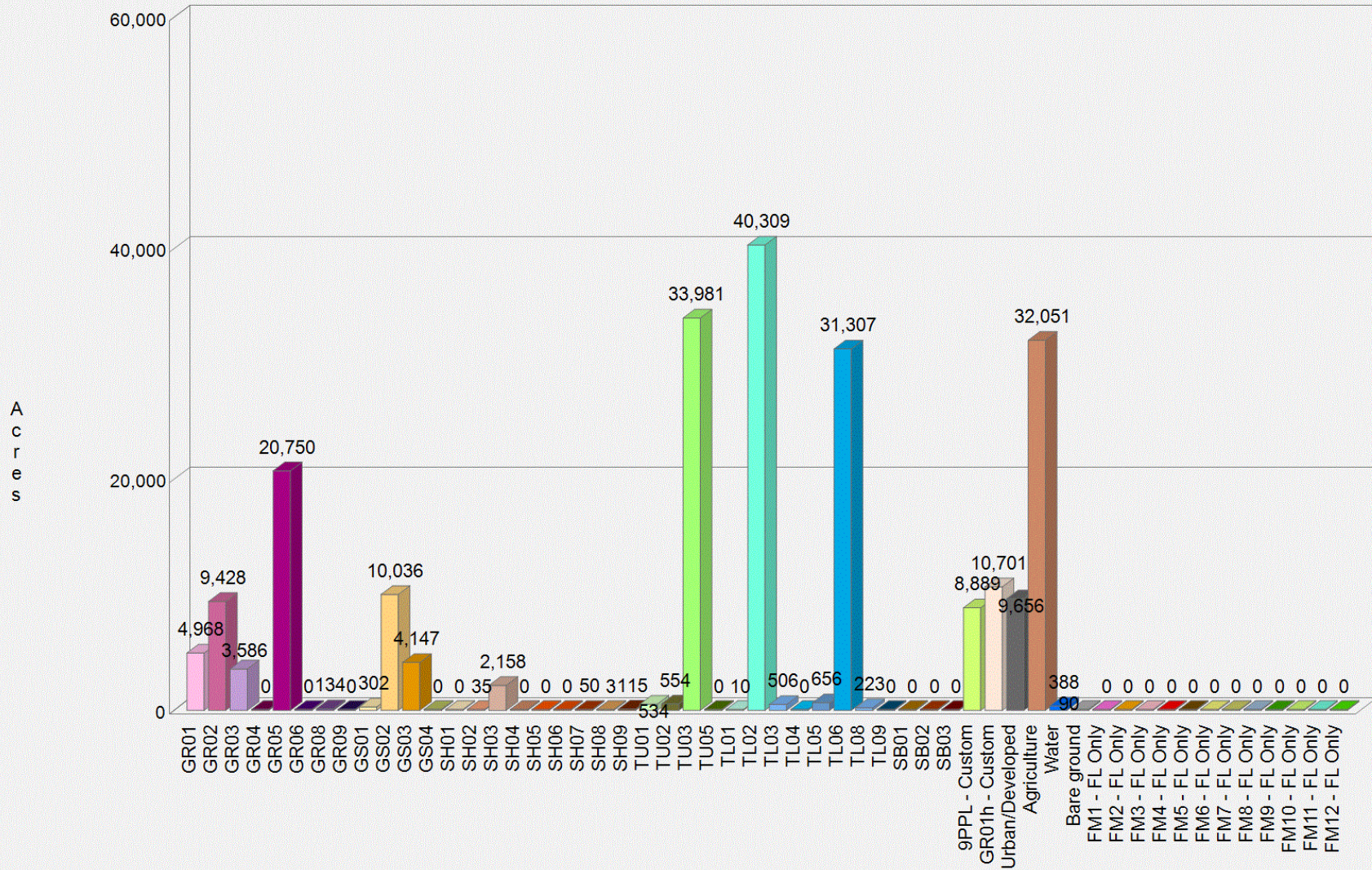
Surface Fuel	FBPS Fuel Model Set	Description	Acres	Percent
SH05	2005	Heavy shrub load, depth 4 to 6 feet. Spread rate very high; flame length very high.	0	0.0 %
SH06	2005	Dense shrubs, little or no herb fuel, depth about 2 feet. Spread rate high; flame length high.	0	0.0 %
SH07	2005	Very heavy shrub load, depth 4 to 6 feet. Spread rate lower than SH05, but flame length similar. Spread rate high; flame length very high.	50	0.0 %
SH08	2005	Dense shrubs, little or no herb fuel, depth about 3 feet. Spread rates high; flame length high.	3	0.0 %
SH09	2005	Dense, finely branched shrubs with significant fine dead fuel, about 4 to 6 feet tall; some herbaceous fuel may be present. Spread rate high, flame length very high.	115	0.1 %
<b>Timber-Understory Fuel Type Models</b> (Grass or shrubs mixed with litter from forest canopy)				
TU01	2005	Fuelbed is low load of grass and/or shrub with litter. Spread rate low; flame length low.	534	0.2 %
TU02	2005	Fuelbed is moderate litter load with shrub component. Spread rate moderate; flame length low.	554	0.2 %
TU03	2005	Fuelbed is moderate litter load with grass and shrub components. Spread rate high; flame length moderate.	33,981	15.1 %
TU05	2005	Fuelbed is high load conifer litter with shrub understory. Spread rate moderate; flame length moderate.	0	0.0 %
<b>Timber Litter Fuel Type Models</b> (dead and down woody fuel litter beneath a forest canopy)				
TL01	2005	Light to moderate load, fuels 1 to 2 inches deep. Spread rate very low; flame length very low.	10	0.0 %
TL02	2005	Low load, compact. Spread rate very low; flame length very low.	40,309	17.9 %
TL03	2005	Moderate load conifer litter. Spread rate very low; flame length low.	506	0.2 %
TL04	2005	Moderate load, includes small diameter downed logs. Spread rate low; flame length low.	0	0.0 %
TL05	2005	High load conifer litter; light slash or mortality fuel. Spread rate low; flame length low.	656	0.3 %
TL06	2005	Moderate load, less compact. Spread rate moderate; flame length low.	31,307	13.9 %
TL08	2005	Moderate load and compactness may include small amount of herbaceous load. Spread rate moderate; flame length low.	223	0.1 %

Surface Fuel	FBPS Fuel Model Set	Description	Acres	Percent
TL09	2005	Very high load broadleaf litter; heavy needle-drape in otherwise sparse shrub layer. Spread rate moderate; flame length moderate.	0	0.0 %
<b>Slash-Blowdown Fuel Type Models</b> (activity fuel/slash or debris from wind damage)				
SB01	2005	Low load activity fuel. Spread rate moderate; flame length low.	0	0.0 %
SB02	2005	Moderate load activity or low load blowdown. Spread rate moderate; flame length moderate.	0	0.0 %
SB03	2005	High load activity fuel or moderate load blowdown. Spread rate high; flame length high.	0	0.0 %
<b>Custom Fuel Type Models (all states except Florida)</b>				
9PPL	Custom	Long-needle (pine litter, plantations) with a high load	8,889	3.9 %
GR01h	Custom	Pasture and hayland	10,701	4.7 %
<b>Non-burnable Fuel Type Models</b> (insufficient wildland fuel to carry a wildland fire under any condition)				
NB01	2005	Urban or suburban development; insufficient wildland fuel to carry wildland fire. Includes roads.	9,656	4.3 %
NB03	2005	Agricultural field, maintained in nonburnable condition.	32,051	14.2 %
NB08	2005	Open water	388	0.2 %
NB09	2005	Bare ground	90	0.0 %
<b>1982 Fire Behavior Prediction System – ONLY USED FOR FLORIDA ASSESSMENT</b>				
FM 1	1982	Short grass	0	0.0 %
FM 2	1982	Timber grass and understory	0	0.0 %
FM 3	1982	Tall grass	0	0.0 %
FM 4	1982	Chaparral	0	0.0 %

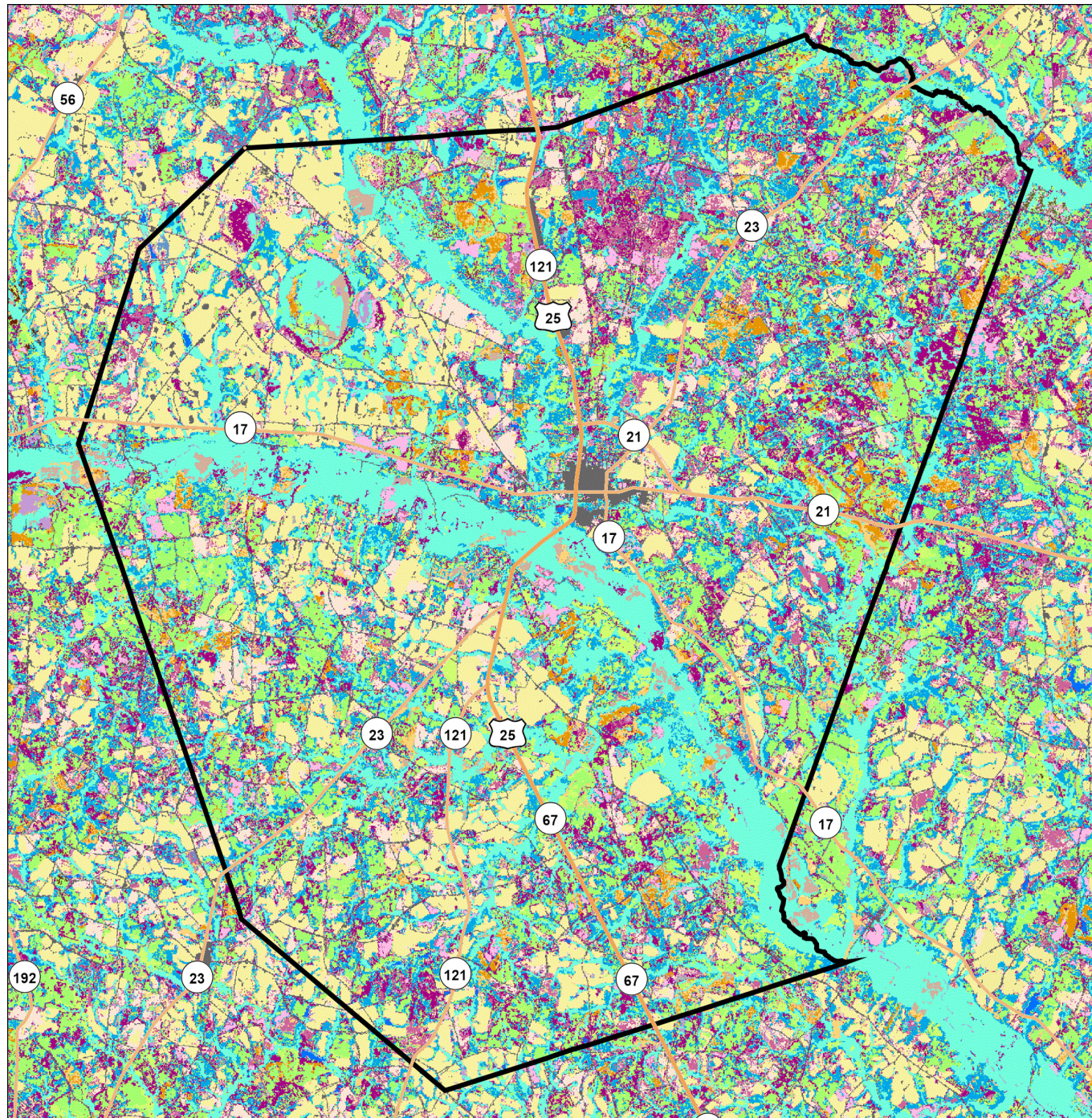
	Surface Fuel	FBPS Fuel Model Set	Description	Acres	Percent
	FM 5	1982	Brush	0	0.0 %
	FM 6	1982	Dormant brush	0	0.0 %
	FM 7	1982	Southern rough	0	0.0 %
	FM 8	1982	Compact timber litter	0	0.0 %
	FM 9	1982	Hardwood litter	0	0.0 %
	FM 10	1982	Timber (understory)	0	0.0 %
	FM 11	1982	Light logging slash	0	0.0 %
	FM 12	1982	Medium logging slash	0	0.0 %
				<b>225,567</b>	<b>100.0 %</b>



# Jenkins County Surface Fuels







## Jenkins County

### Surface Fuels

GR01	TU01	FM1
GR02	TU02	FM2
GR03	TU03	FM3
GR04	TU05	FM4
GR05	TL01	FM5
GR06	TL02	FM6
GR08	TL03	FM7
GR09	TL04	FM 8
GS01	TL05	FM9
GS02	TL06	FM10
GS03	TL08	FM11
GS04	TL09	FM 12
SH01	SB01	GR1h
SH02	SB02	9PPL
SH03	SB03	9HWD
SH04	Urban/Developed	
SH05	Agriculture	
SH06	Water	
SH07	Bare ground	
SH08		
SH09		

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# Dozer Operability Rating

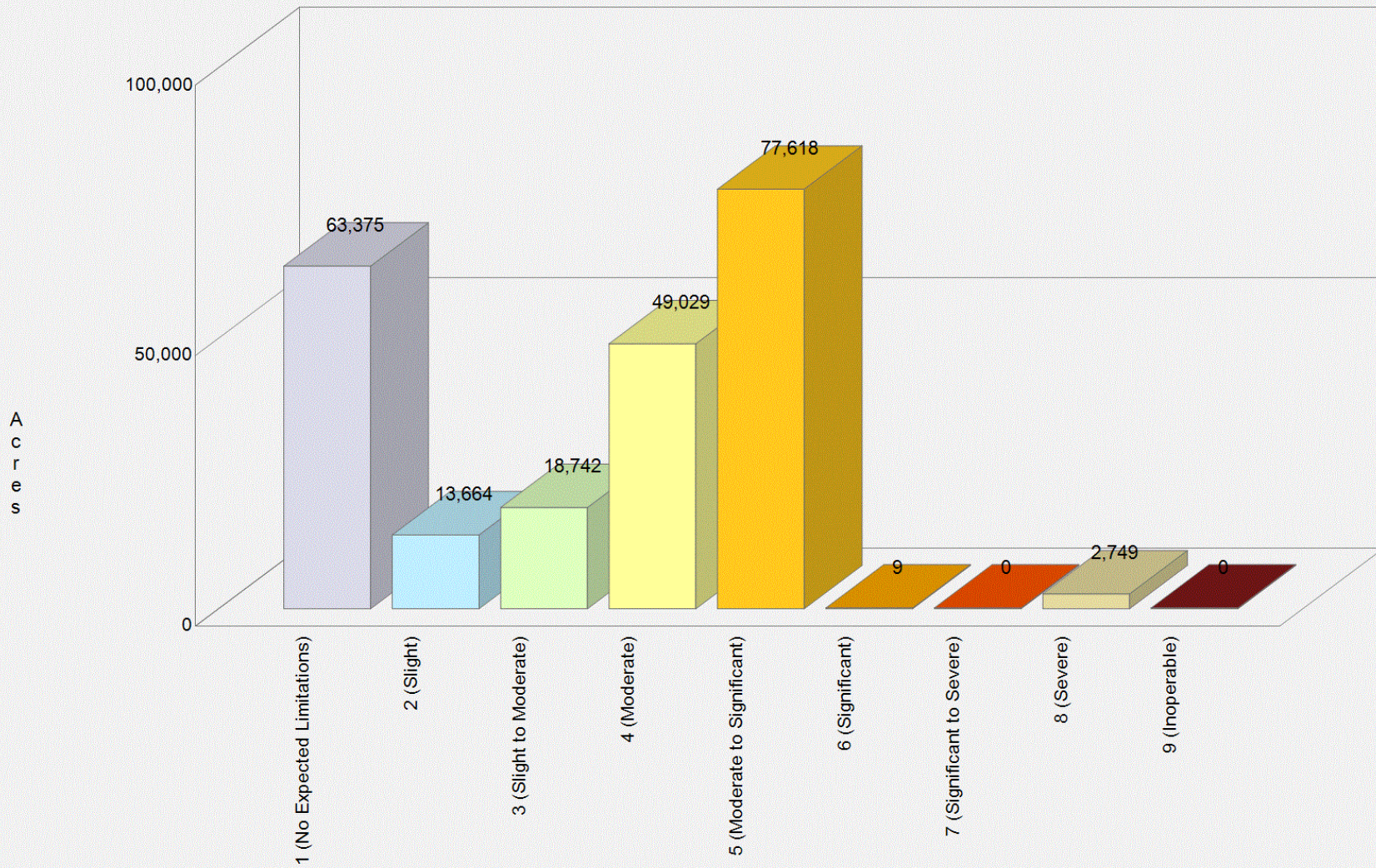
## Description

The Dozer Operability Rating (DOR) expresses how difficult it is to operate a dozer in an area based on limitations associated with slope and vegetation/fuel type. Using the fireline production rates published in the NWCG Fireline Handbook 3 (PMS 410-1) as a guide, operability values were assigned to a matrix based on 6 slope classes and 10 vegetation/fuels classes. The possible values range from 1 to 9, with 1 representing no limitations and 9 being inoperable.

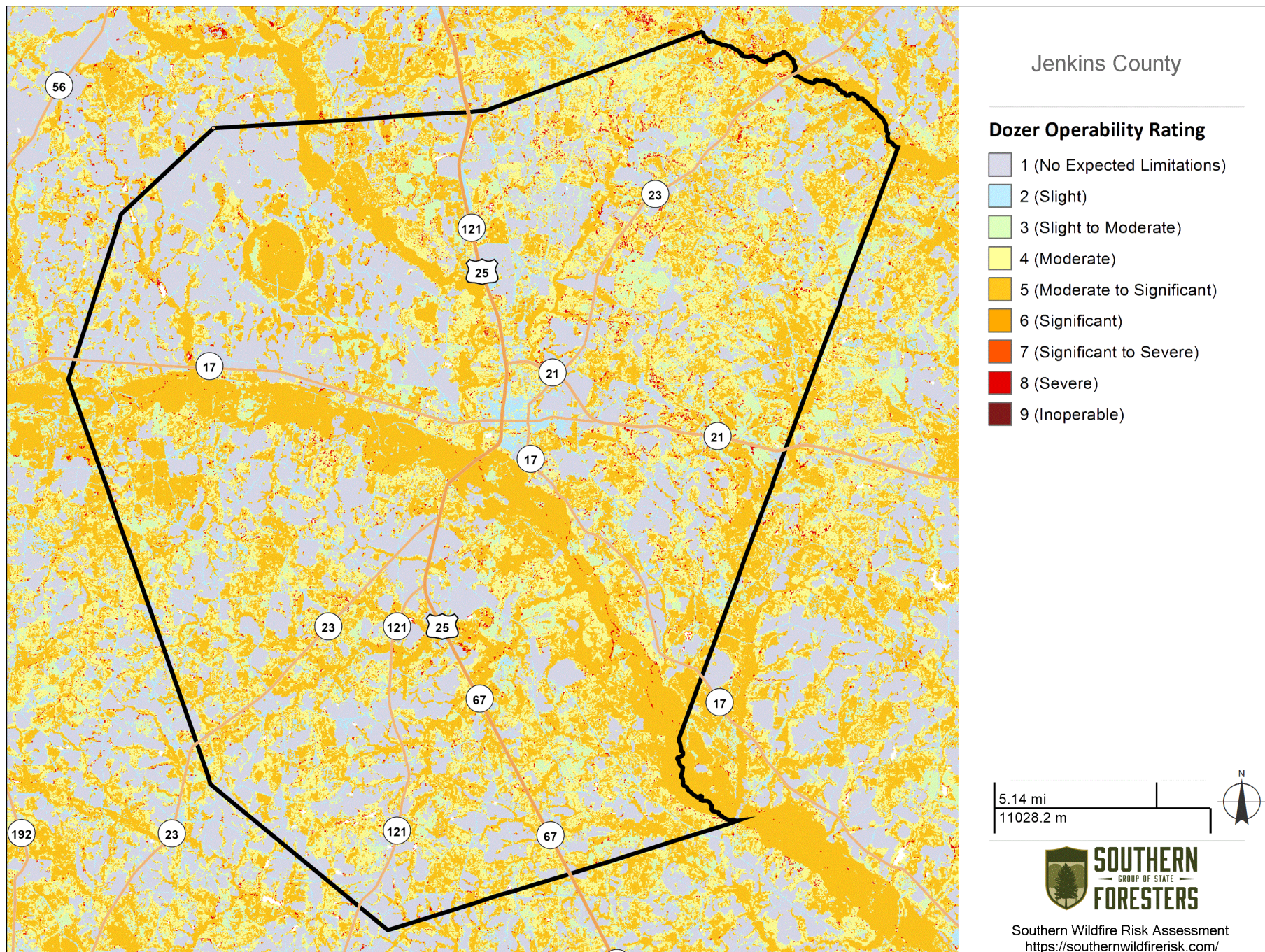
	Class	Acres	Percent
	1 (No Expected Limitations)	63,375	28.1 %
	2 (Slight)	13,664	6.1 %
	3 (Slight to Moderate)	18,742	8.3 %
	4 (Moderate)	49,029	21.8 %
	5 (Moderate to Significant)	77,618	34.5 %
	6 (Significant)	9	0.0 %
	7 (Significant to Severe)	0	0.0 %
	8 (Severe)	2,749	1.2 %
	9 (Inoperable)	0	0.0 %
	<b>Total</b>	<b>225,186</b>	<b>100.0 %</b>



### Jenkins County Dozer Operability Rating









# References

Anderson, H. E. (1982). Aids to determining fuel models for estimating fire behavior. USDA For. Serv. Gen. Tech. Rep. INT-122.

Dobson, J. E., E. A. Bright, P. R. Coleman, and B.L. Bhaduri. "LandScan: a global population database for estimating populations at risk. "Remotely Sensed Cities Ed. V. Mesev, London: Taylor & Francis. 2003. 267-281.

Fire Program Analysis (FPA) System and US Forest Service Missoula Fire Sciences Laboratory, 20140307, Burn Probabilities for the Conterminous US (270-m GRID) from Calibrated FSim Runs for the 2014 FPA Submissions [bp\_20140307];, Fire Program Analysis (FPA) System, National Interagency Fire Center, Boise, ID.

National Wildfire Coordinating Group (NWCG). (2008). Glossary of Wildland Fire Terminology. Publication Management System document PMS-205.

Radeloff, V.C., R.B. Hammer, S.I Stewart, J.S. Fried, S.S. Holcomb, and J.F. McKeefry. 2005. The Wildland Urban Interface in the United States. *Ecological Applications* 15: 799-805

Scott, J. H., & Burgan, R. E. (2005). Standard Fire Behavior Fuel Models: A Comprehensive Set for Use with Rothermel's Surface Fire Spread Model. Ft. Collins, CO, Rocky Mountain Research Station: USDA Forest Service, Gen. Tech. Rpt. RMRS-GTR-153.

Scott, J. H., & Reinhardt, E. D. (2001). Assessing the Crown Fire Potential by Linking Models of Surface and Crown Fire Behavior. Ft. Collins, CO, Rocky Mountain Research Station: USDA Forest Service, Research Paper RMRS-RP-29.

Scott, Joe. November 2006. Off the Richter: Magnitude and Intensity Scales for Wildland Fire. A non-published white paper prepared for the AFE Fire Congress, November 2006, San Diego, CA.

Thompson, M. P., D. E. Calkin, M. A. Finney, A. A. Ager, and J. W. Gilbertson-Day. 2011. Integrated National-Scale Assessment of Wildfire Risk to Human and Ecological Values. *Stochastic Environmental Research and Risk Assessment* 25:761-780.

More information about the Fire Program Analysis project is available from <http://www.forestsandrangelands.gov/WFIT/applications/FPA/index.shtml>

More information about the Oak Ridge National Laboratory LandScan data is available from [http://web.ornl.gov/sci/landscan/landscan\\_documentation.shtml](http://web.ornl.gov/sci/landscan/landscan_documentation.shtml)

More information about the U.S. Forest Service SILVIS data is available from [http://silvis.forest.wisc.edu/maps/wui\\_main](http://silvis.forest.wisc.edu/maps/wui_main)



## SOUTHERN GROUP OF STATE FORESTERS WILDFIRE RISK ASSESSMENT PORTAL



# TIMBER IMPACT ASSESSMENT

## Georgia Ice Storm, February 11-13, 2014

By: James Johnson, Chip Bates & Gary White, Georgia Forestry Commission  
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### BACKGROUND

A winter storm impacted multiple southern states and more than 90 Georgia counties experienced some form of winter precipitation, beginning February 11<sup>th</sup> and lasting through the 13<sup>th</sup>. Northern tier counties recorded snowfalls of up to 13" (Rabun County), and although some timber / tree impacts occurred in this "snow zone," they were not widespread or considered severe.

During the storm, ice accumulation was measured from between a tenth of an inch and one inch (or possibly higher) in a zone from roughly north metro Atlanta to Augusta in northern Georgia, and from Macon to Sylvania in central Georgia. Because ice is much heavier than snow, widespread tree damage occurred, resulting in power disruption to nearly a million customers.

Governor Deal declared a state of emergency on Monday, February 10<sup>th</sup>, and a presidential declaration of emergency was issued as the storm hit the state. The map below depicts this zone (Figure 1).

The National Weather Service provided estimates of ice accumulations, and this information, coupled with field observation reports, helped define the area surveyed by the Georgia Forestry Commission for timber impact accounts. Small amounts of ice are known to affect trees, and higher amounts (especially exceeding three-fourths of an inch) can cause serious damage to certain timber types and age classes.

Another factor that affects tree damage is wind. Once ice accumulations peaked, a cold front moved through the state. Although wind speed varied, some areas reported winds of up to 35mph. Even minor winds during ice-loading can break or uproot trees. These occurrences were a major factor in the timber / tree damage associated with this storm, and may account for some of the variability detected.

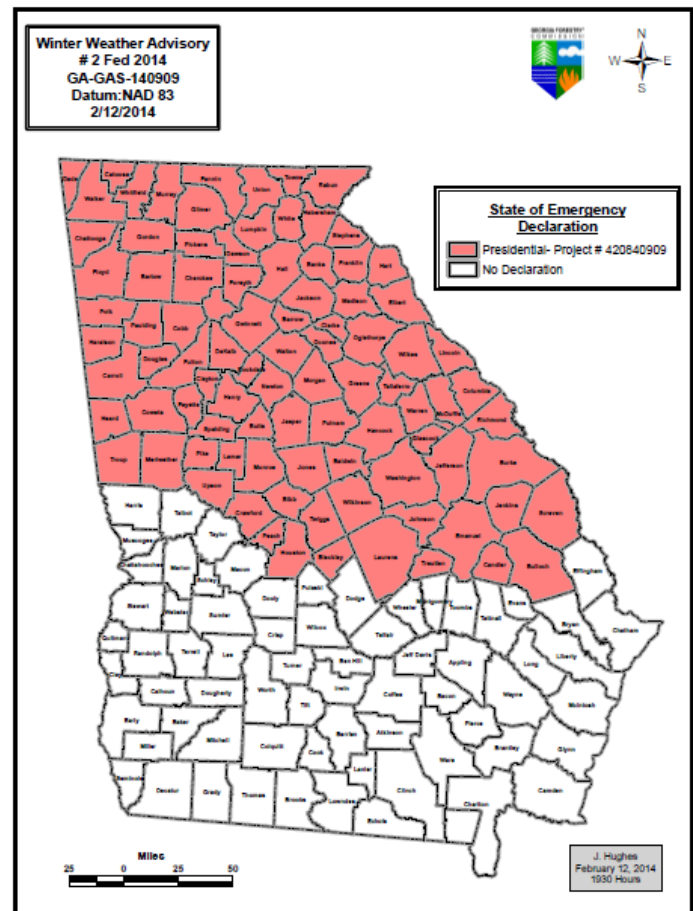


Figure 1: Counties included in the presidential declaration zone



## OBSERVATIONS

A team of Georgia Forestry Commission foresters surveyed the zone believed to have endured the greatest impacts to our forests, and developed the map below. Please note that damage was observed beyond these counties, but it tended to be less intense than those shown by the map's shaded areas. Some of the highlighted counties had tremendous variations in the amount of damage observed. In addition, timber damage evaluation surveys were separated into rough categories of damage (at the county level), isolated timber stands within counties in the two lesser categories may have severe damage, and stands in the severe counties may only have minor damage. The variability of damage to similar stands even a few miles apart was extreme, so managers should carefully evaluate timber throughout this broad region.

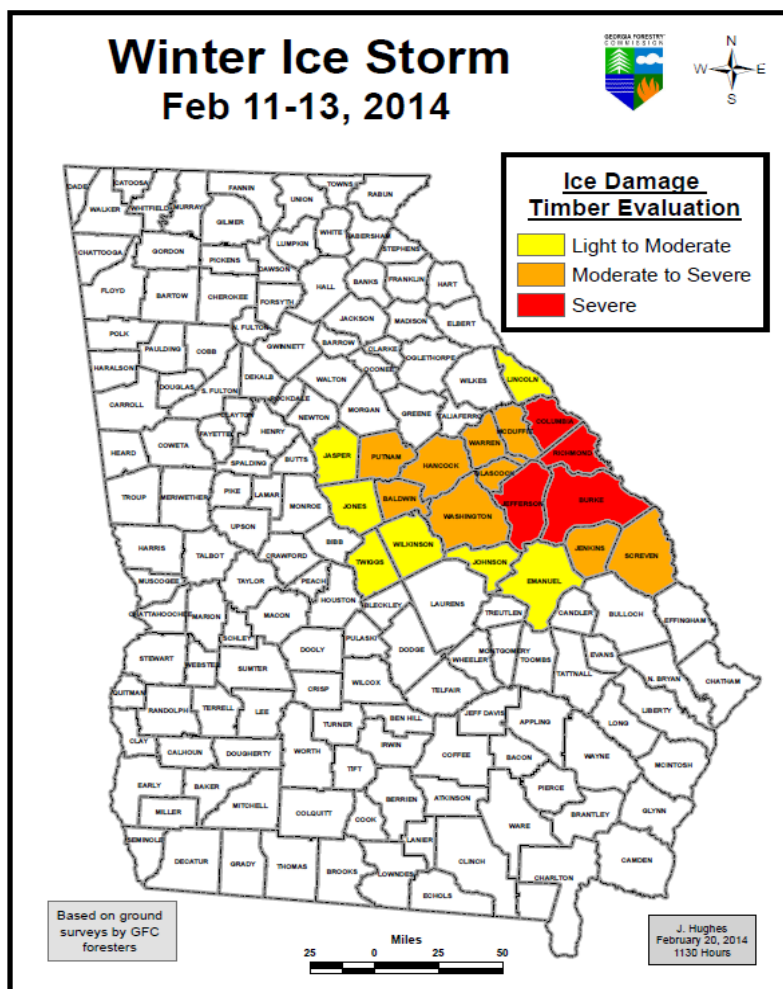


Figure 2: Counties with widespread Ice Damage

This survey examined landscape-level impacts and classifies them accordingly.

The categories of damage are based upon field observations about:

- Occurrence (frequency) of damage within a county.
- Levels of damage within two types of pine that were most frequently damaged (young pine stands, and pine stands on which a first-thinning had recently occurred.)

### Ice Damage Intensity:

**Light to moderate damage** – Only branches and limbs broken from the tree, with minor damage to the overall stand and trees bent less than 45 degrees. No salvage operation will be necessary and the stand should recover with no additional management requirements, though long term yields will likely be impacted.

**Moderate to severe damage** – Branches and limbs broken from the trees with damage to the overall stand. More than 25% of stems broken and a salvage operation should be considered to minimize losses and remove trees that likely will not survive.

**Severe damage** – More than 30% of stems broken, tops broken out across the stand, limbs stripped, and trees bent more than 45 degrees. A salvage operation must be considered and a clearcut may be the prudent management decision.

***Ice damage was not detected on most timber types but was concentrated on two types of pine: recently thinned pine stands, and younger stands less than 25 feet in height.***

**Recently thinned pine stands:** These are primarily pine plantations that were thinned for the *first time* within the past several years. Trees adjust to the amount of space and competition within a stand, and those that have been thinned for the first time are adjusting to reduced protection from neighboring trees and are growing in diameter, which strengthens the main stem. They also respond by accelerating root growth which helps anchor the tree and aids in the increased moisture uptake needed to support larger live crowns. Depending on residual stand-density after thinning, it takes trees about five years to fully respond to the increased growing space. In the meantime, they are more prone to wind (and ice) damage.

These stands were particularly hard hit, which is unfortunate for landowners who have invested 15 to 20-plus years of growth getting their trees to this size. First-thinnings typically remove lower value wood (such as pulpwood / fuel wood), with the objective of allowing the residual stand to produce higher value products (such as sawtimber, plywood, and poles). From an investment standpoint, timber growth following a first thinning maximizes profits, so salvaging an ice-damaged stand is a devastating blow to expected returns.



**Photo (left)** – Twenty-one year old loblolly stand in Burke County; suffered over 30% stem breakage.

Thinning likely occurred two years ago.



**Photo (right)** – Nineteen year old loblolly stand in Jefferson County; suffered almost 50% stem breakage.

Thinning occurred within the past year.



Numerous older pine stands that had been thinned twice (or more) were also examined. Although some had damage, most would be considered minor, with many not requiring a salvage operation. The damage in these stands tended to be uprooted trees rather than stem breakage. This type of wind throw (tree that is completely uprooted) in older stands seemed prevalent throughout the region.

Landowners and managers of storm-damaged stands are highly encouraged to read and understand the implications of ice on different types of stands. Web links which provide detailed guidance are provided on the last page of this document.

**Young pine stands:** Pine plantations (of most species) that were 25 feet and taller - and *had never been thinned* - seemed to weather this ice storm well. The ability of dense stands to provide tree-to-tree support and prevent winds from uprooting individual trees was a big factor in these stands' withstanding minimal damage. Younger (and shorter) stands, however, didn't fare as well. One of the critical factors seemed to be that the trees still had many live branches almost to ground level, which likely accumulated so much ice that breaking points were reached for limbs and main stems.

Young stands of about six feet in height also seemed to fair well. Some of these have many bent stems (with some breakage), but young trees tend to correct this problem.

Some younger loblolly stands were damaged (especially in the counties noted as "Severe" on the map on page 2), but more damage occurred on longleaf and slash pine. Longleaf stands suffered the worst damage with stem and limb breakage but no stands seen were completely leveled. The resiliency of nature can be surprising, and the fate of these stands will become evident over the next few years. When tops break out, a lateral branch will assume dominance and there will be variation in long-term stem straightness.

Careful examination will be needed to determine the amount of permanent problems this storm has inflicted on each stand. Re-evaluation after the next growing season should give managers a better perspective on what lies ahead.



**Photo (Left)** – Five year old slash pine stand in Burke County showing many bent and leaning trees, with some breakage. Note the many leaning trees with limb breakage.

**Photo (Right)** – Nine year old longleaf pine stand in Burke County showing top and limb breakage. Note the many tops broken and some limb breakage.



## EXTENT OF DAMAGE

GFC foresters evaluated the counties noted on the previous map and developed estimates of damage based upon a combination of this field work combined with a geospatial analysis of this region. These estimates do not include areas outside this zone, nor do they include hardwood, which was also impacted. Most hardwood damage consisted of limb and top breakage with most trees retaining enough live branches to support survival. Damage can be expected in the growth form of these trees and possibly in sluggish growth rates.

**For pine type timber, an estimated 70,000+ acres were impacted, valued in excess of \$65 million.** The majority of these acres (61,000+) were in the recently thinned pine category. This estimate doesn't include damage outside of the zone shown on the map (page 2), and it does not account for hardwood damage acreages or values, so it should be considered conservative. Some of the merchantable pine will likely be salvaged, which could reduce the damage estimate somewhat. However, the values used were based upon landowners intending to grow these stands for at least 30 years, with the growing objective of solid wood products (sawtimber, plywood, and poles). So even if salvage occurs, part of the "loss" is in the future growth of these higher value products.

## RECOMMENDATIONS

With the wide range of damage inflicted by this ice storm, there will likely be three distinct categories by which landowners make their evaluations:

- 1) Light damage or losses that may not warrant a salvage operation. This could include merchantable stands (trees are large enough to sell), which simply don't have enough timber damage to warrant a commercial harvest, or pre-merchantable stands where there is a good chance they will recover over time.
- 2) Stands with significant damage, mandating a salvage operation to recoup whatever value can be obtained from the stand. This might include a complete harvest for widespread damage, or a partial harvest of damaged timber to provide a commercial harvest.
- 3) Situations falling between the two scenarios above, in which a good bit of the timber is damaged but there might be enough timber to leave growing. In these cases, landowners are encouraged to use the services of a professional forester to help make the best decision for the situation. Immediately following a storm, it is difficult for landowners to accurately gauge how well a stand may recover, or to measure the amount of timber that could be allowed to remain for future growth and income.

For landowners facing a complete harvest to salvage their damaged timber, please consider reforesting the area. The Farm Service Agency has a cost share program that can assist with site preparation and planting costs called the Emergency Forest Restoration Program (EFRP). Apply at your local office.

*Special thanks to other GFC foresters who helped develop this information:  
Jeff Kastle, Chris Thompson, Chris Howell, Chris Barnes, Jeremy Hughes and Charles Bailey*

## URBAN TREE ASSESSMENTS

Georgia Forestry Commission certified arborist/foresters surveyed damage and storm-generated tree debris left to be removed from urban and rural communities. Survey results showed counties that experienced the most damage to their rural stands also suffered the most damage to their urban trees. The highest amount of damage, as one might expect, was found in Burke County.

Neighborhoods with large pine trees experienced the most loss, with the bulk of damage to branches and tree tops which were broken by the weight of ice. Additionally, "leaf on" trees, such as magnolia and cherry laurel, and old water oaks with structural issues, made up a large component of community forest tree failure. Crews observed very few trees that were completely destroyed or uprooted by the storm.

Much debris remains to be cut and stacked by homeowners and tree care companies before its removal from community rights-of-way can begin. Many trees that have lost more than 50% of their limbs, and trees that have been uprooted or split so that heartwood of the main trunk is evident, will need to be removed. Otherwise, impacted trees will require pruning, with particular attention being paid to higher risk trees with "hangers" (limbs broken, but not yet detached) and split limbs (see photo below). This will likely increase beyond initial assessments the total biomass that will eventually be collected.



Although the tree at left suffered minor ice damage, notice the branches that are broken and still hanging in the tree. These could impact the structure, the vehicle or humans. These "hangers" should be removed.

The pine tree at right lost half of the living portion of its crown and pruning is needed to remove branch stubs.



*Special thanks to GFC foresters who helped with field work: Gary White, Joe Burgess, Joan Scales, Mark McClellan, Jeremy Hughes, Keith Murphy, Chris Howell and also Mark Millirons.*

These resources can help forest landowners learn more about options and considerations for situations in which trees have been damaged by winter weather:

***TIMBERLAND WIND / ICE DAMAGE:***

How to Evaluate and Manage Storm-Damaged Forest Areas:

[http://www.fs.fed.us/r8/foresthealth/pubs/storm\\_damage/contents.html](http://www.fs.fed.us/r8/foresthealth/pubs/storm_damage/contents.html)

Evaluating wind / ice damage stands:

[http://www.forestry.uga.edu/outreach/pubs/pdf/forestry/assessing\\_tornado\\_damaged\\_forest\\_stands\\_5-30-08\\_1.pdf](http://www.forestry.uga.edu/outreach/pubs/pdf/forestry/assessing_tornado_damaged_forest_stands_5-30-08_1.pdf)

Wind Wood Utilization (this has numerous documents and links that are beneficial):

<http://www.windwoodutilization.org/salvage.asp>

***URBAN AND HAZARD TREE SAFETY:***

<http://www.gatrees.org/community-forests/management/trees-storm-safety/>

Excellent site for Storm Damage...with an Urban Forestry angle:

<http://hort.ifas.ufl.edu/treesandhurricanes/>

***TAXES:***

National Timber Tax website (Master Index has good list of subject areas):

<http://www.timbertax.org/>

***TIMBER SALES:***

General information:

<http://www.gatrees.org/forest-management/private-forest-management/timber-selling/>

Landowners are encouraged to utilize professional foresters and arborists to help with decisions about timber management or potentially hazardous trees around homes and urban environments. Seeking independent advice is a sound way to reduce hasty judgments and insure all available options are considered.



# CSRA REGIONAL PLAN 2035

## REGIONAL ASSESSMENT COMMUNITY PARTICIPATION PLAN REGIONAL AGENDA



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# **CSRA REGIONAL PLAN 2035**

## **Regional Assessment**

# Section 1: INTRODUCTION

## 1.1 Regional Plan Overview

The CSRA Regional Plan 2035 (hereinafter ‘the Plan’) is the long-range plan for the management of the region’s projected growth by local governments and the CSRA Regional Commission. The Plan’s horizon is twenty years but will be updated in ten years to address changing regional conditions. The process is divided into three distinct parts, per the *Regional Planning Requirements* established by the Georgia Department of Community Affairs (DCA):

- Regional Assessment: Identification and analysis of existing conditions using available data
- Stakeholder Involvement Program: Strategy for public participation in the development of the Regional Agenda
- Regional Agenda: Regional vision and implementation program

The resulting analysis will assess the state of the region’s socioeconomic, land use, and environmental opportunities and threats. The CSRA’s vision and goals, together with an appraisal of the region, will set the strategic direction for the regional agenda. The regional agenda establishes program priorities for implementation.

This document contains the Regional Assessment and the Stakeholder Involvement Program, which will set the stage for the development of the Regional Agenda.

## 1.2 Regional Assessment Overview

This Regional Assessment includes a thorough analysis of issues and opportunities backed by extensive data gathering and analysis. It contains a map of Projected Development Patterns and an assessment of Areas Requiring Special Attention, which includes a range of categories, such as areas where rapid development is occurring or where infill or redevelopment is desirable. Finally, it includes an assessment of the region’s development patterns in light of the state’s Quality Community Objectives.

## 1.3 Stakeholder Involvement Program

This program outlines the process for participation by stakeholders in the creation of the Regional Agenda. It identifies stakeholders, outlines participation techniques and includes a schedule for the completion of the Regional Agenda.

## 1.4 Regional Agenda

The Regional Agenda is the culmination of the planning process. It will include a vision of the CSRA’s future, along with an implementation program for how to get there.

## 1.5 How to Use This Plan

The CSRA Regional Plan is intended to serve as a reference and implementation point for potential users. A number of companion planning documents should be used in conjunction with the Regional Plan. These include:

- CSRA Comprehensive Economic Development Strategy
- Augusta Area Diversification Initiative
- Fort Gordon Joint Land Use Study
- CSRA Regionally Important Resources Plan
- County and City Comprehensive Plans

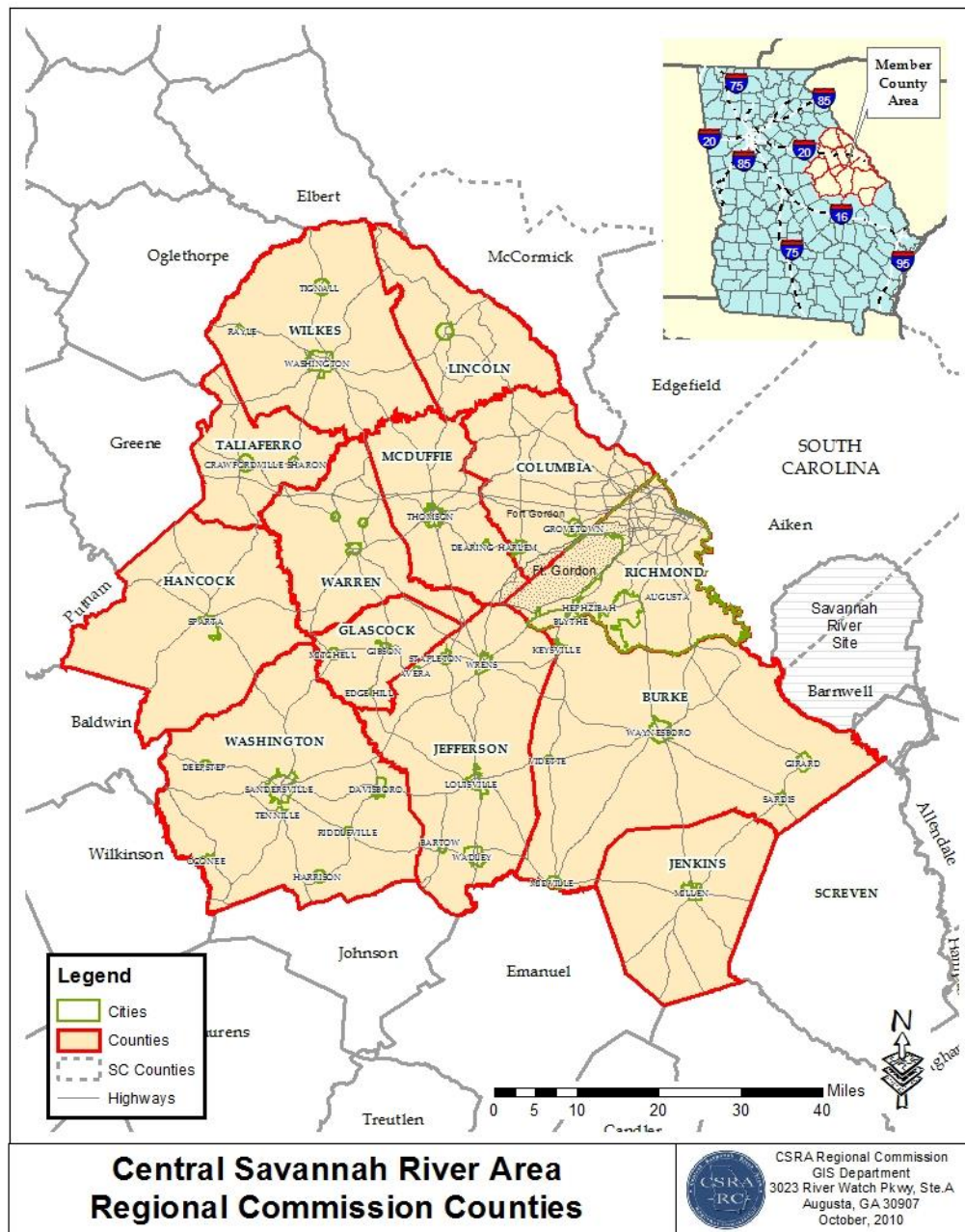


- Statewide Plans

## 1.6 The Central Savannah River Area

The Central Savannah River Area (CSRA) encompasses an area nearly 6,500 square miles — the largest political region in the state. Located in the east-central Georgia, along the Savannah River, the CSRA includes 13 counties: Burke, Columbia, Glascock, Hancock, Jefferson, Jenkins, Lincoln, McDuffie, Richmond, Taliaferro, Warren, Washington, and Wilkes (Figure 1). The largest city in the CSRA is Augusta – the economic core of the region.

**Figure 1: CSRA Location Map**



## 1.6 About the CSRA Regional Commission

The CSRA Regional Commission (CSRA RC) serves thirteen counties and 41 municipalities in east-central Georgia, providing services in the areas of planning and land-use development, grant writing and administration, economic development, historic preservation, and geographic information systems development and implementation to member jurisdictions.

Additionally, the CSRA RC serves as the state-designated Area Agency on Aging (AAA) for the region. In this capacity, the CSRA RC works with local providers to ensure that services for the elderly are provided and monitored. By utilizing pass-through funds from state and federal sources, the Commission's AAA serves as a gateway for programs and resources aimed at helping senior citizens improve the quality of their lives during their retirement years.

The CSRA RC is also the parent company of the CSRA Business Lending. CSRA Business Lending makes loans to small and start-up businesses for the purposes of creating jobs and economic development opportunities within its service area.

## **Section 2: POTENTIAL REGIONAL ISSUES AND OPPORTUNITIES**

## 2. Potential Issues and Opportunities

This section provides an objective, professional analysis (not based on public or stakeholder input) of the region. This section, presented in divisions relating to classical planning analysis areas such as housing and transportation, presents a preliminary catalog of potential focal points to be examined during the development of Plan.

The Georgia Department of Community Affairs (DCA) publishes a list of typical issues and opportunities as part of the *State Planning Goals and Objectives*. This list, in addition to an evaluation for the region's consistency with the DCA's *Quality Community Objectives*, was used as the starting point for developing the Potential Issues and Opportunities list (please refer to the Appendix of this document for an assessment of the region based on these objectives). Further issues and opportunities were identified as part of a thorough analysis of regional datasets and regional development patterns. The issues and opportunities compiled in this Regional Assessment are preliminary in nature; they will be reexamined and a final list will be assembled as part of the Regional Agenda planning process.

### 2.1 Population

The population growth illustrated in historical trends is expected to continue over the twenty-year period. However, this growth is not uniform across the CSRA.

- By 2035, the 13-county region's population is projected at 575,304, an increase of approximately 26.5 percent over the 2010 population and 67.4 percent from 1980. This increase will have implications for housing, jobs, transportation, land use, environmental resources, and infrastructure.
- While the urbanized area (Augusta-Richmond and Columbia Counties) has enjoyed population growth, the rural areas continue to lag. Eight of eleven rural counties lost population since the last census. What little population growth is occurring in rural areas is further away from incorporated municipalities, where infrastructure is already established. Should this trend continue, county governments will have to pay more to extend and maintain public services in these areas.
- Household incomes continue to lag the state average. Most concerning, nearly a third of CSRA households are at income levels near or below the poverty line.
- The CSRA is aging rapidly. The proportion of residents 45 years and older has increased 10 percent since 1990, while the proportion of residents under 29 years declined by 8 percent. Needs associated with an aging population (affordable housing, transportation, and medical services) are anticipated to increase over the next twenty years.

Detailed data on population can be found on pages 21 through 25.

## 2.2 Housing

**State Planning Housing Goal:** *To ensure that all residents of the state have access to adequate and affordable housing.*

The CSRA's housing stock is both a strength and weakness for residents.

- The region's housing stock contains a good balance of owner and rental units (55 percent and 30 percent respectively).
- Housing stocks are plentiful in the urbanized area but inadequate in rural counties. Although the official vacancy rate stands at 15 percent, over a third of vacant units are unavailable for purchase or rent. Another 17.2 percent of the region's housing is valued at less than \$50,000, an indicator of poor housing conditions.
- Median (\$99,937) and average (\$127,997) housing values are among the lowest in the state and nation. Low housing costs are a major reason for the CSRA's low cost of living, and a major strength for new residents and business attraction.
- While affordable housing values are a benefit for the region, sprawl threatens county budgets by requiring public services further away from established municipalities. Sprawl also makes it more likely that transportation costs will increase for residents as they have to commute farther to work.

Detailed data on housing can be found on pages 25 through 27.

## 2.3 Economic Development

**State Planning Economic Development Goal:** *To achieve a growing and balanced economy, consistent with the prudent management of the state's resources, that equitably benefits all segments of the population.*

The CSRA region's economy is diverse, and communities typically make concerted efforts to attract new business. However, coordinated economic development planning and promotion could be strengthened, both on a region-wide scale and between proximately-located communities.

- The CSRA RC serves as the region's Economic Development District in coordination with the U.S. Economic Development Administration (EDA), and encourages cooperation between local government officials, community-based organizations, and the private sector. Per EDA requirements, the CSRA RC developed a Comprehensive Economic Development Strategy (CEDS) in 2011.
- The CSRA's job base has shifted significantly in the last two decades. The service sector now accounts for 60 percent of all CSRA jobs, an increase of 20 percent since 1990. The goods-producing sector has declined from 35 percent in 1990 to less than 15 percent of employment today.

- The region's jobs balance is heavily slanted towards the urbanized area. Augusta-Richmond and Columbia Counties account for 78 percent of the CSRA's 233,147 jobs. The urbanized area also accounted for over 90 percent of job growth since 1990. Seven of 11 rural CSRA counties have fewer jobs today than they did in 1990. This corresponds to trends in population, which saw eight of those counties lose residents since 2000.
- Unemployment levels in the CSRA's rural counties have been chronic during the last decade. All rural counties have unemployment rates above the state average (9.7 percent). Three counties (Hancock, Jenkins, and Warren) have unemployment rates of 17 percent or higher. All rural counties meet the criteria of Economically Distressed Areas, according to the federal Public Works and Economic Development Act. The rapid increase in rural unemployment was caused by the closure of major manufacturing employers, which had sustained local economies.
- The CSRA lags behind the state in educational performance, raising concerns about workforce readiness in the new service economy. CSRA scores on the Scholastic Aptitude Test, Georgia High School Graduations Tests, and End-of-Course Assessments all fall below the state average.

Detailed data on economic development can be found on pages 27 through 50.

## 2.4 Land Use

**State Planning Land Use and Transportation Goal:** *To ensure the coordination of land use planning and transportation planning throughout the state in support of efficient growth and development patterns that will promote sustainable economic development, protection of natural and cultural resources and provision of adequate and affordable housing.*

The CSRA is a primarily rural region, with an urban core in the Augusta-Richmond County and Columbia County area. Approximately 88 percent of the region's land area is rural.

- The vast majority of the region's housing and commercial growth has occurred in the urbanized area. This corresponds to population trends, which saw the two urban counties gain 35,509 residents since 2000, while the 11 rural counties saw a net gain of only 433 people. Even that figure masks population decline in much of the area. In fact, eight counties - Hancock, Jefferson, Jenkins, Lincoln, Taliaferro, Warren, Washington and Wilkes - combined to lose 2,550 residents since 2000.
- The growth effect that has occurred in the last three decades (development away from established municipalities) resulted in sprawl beyond cities and city centers.
- While cities and downtown areas still have the largest densities, this is quickly eroding as residents locate into unincorporated areas. Revitalization efforts are critical in stemming city population decline.
- If the trend of growth in unincorporated areas continues, this will result in the region's county governments incurring additional costs of providing public infrastructure (such as water & sewer lines, parks, libraries, etc.) further away from established population centers.



Detailed data on land use can be found on pages 50 through 52.

## 2.5 Transportation and Community Facilities

**State Planning Community Facilities and Services Goal:** *To ensure the provision of community facilities and services throughout the state to support efficient growth and development patterns that will protect and enhance the quality of life of Georgia's residents.*

The region's physical infrastructure is extensive and diverse, featuring state and federal highways, hospitals, facilities to manage solid waste and wastewater, and other resources. Most community facilities are locally operated and maintained.

- The CSRA has a small network of interstates and four-lane U.S. highways that provide east-west and north-south access to regional and national markets. Interstates 20 and 520, as well as U.S. 1 and U.S. 25 link the CSRA's major cities to each other as well as to the state's major cities, such as Atlanta, Macon, and Savannah (Figure 25). However, the highway system does not fully meet needs throughout the region. Combined, the interstates and U.S. 1 and U.S. 25 serve only portions of the CSRA, leaving large areas in the northern and southern part of the region without adequate highway infrastructure.
- While the transportation system serves automobiles relatively well, it is less friendly to other users. Many streets are designed only with vehicle traffic in mind, making them unsafe or unpleasant for pedestrians and cyclists. Moreover, development patterns in many cases continue to separate uses and rely on arterial roads to make connections. These two factors limit mobility for many residents and contribute to inactivity and growing obesity levels for children and adults in the region.
- The region's two primary rail freight carriers: Norfolk Southern and CSX Rail Service carry among the lowest volumes of rail freight in the state. Only Augusta-Richmond and Warren Counties have direct connections to major rail freight hubs in Atlanta and Macon.
- Augusta Regional Airport provides regularly-scheduled commercial flights. The airport currently has 21 daily departures and 22 daily arrivals to three major hubs (Atlanta, Charlotte and Dallas) from three carriers (Delta, U.S. Air and American). In calendar year 2010, the annual passenger volume at the Augusta airport was 246,587, compared to 198,489 (24.2 percent increase) in 2009. Between 2005 and 2010, Augusta Regional's growth rate was 57.9 percent, making it one of the fastest growing small commercial services airports in the nation. Air freight information is unavailable.
- Fixed-route public transit in the CSRA is limited to Augusta-Richmond County. Augusta Public Transit operates nine routes from Monday through Saturday, with daily ridership averaging approximately 3,000. The rest of the CSRA is served with demand-response service.
- Most areas of the CSRA outside of the urbanized parts of Columbia and Augusta-Richmond Counties lag in both choice and quality of broadband service. Most of these areas are not served by any land broadband service provider, making slower satellite internet service the only option. The CSRA RC considers broadband the region's top infrastructure priority and has been aggressively pursuing state and federal funding to remedy this deficiency by extending broadband infrastructure to areas of the region that currently lack it.

- Local community facilities such as parks, water and sewage services, public water, libraries, and medical facilities, are mostly located within incorporated municipalities. Access to some public facilities, however, remains a concern as rural county populations are widely dispersed.

Detailed data on transportation and community facilities can be found on pages 52 through 58.

## 2.6 Natural and Environmental Resources

***State Planning Natural and Cultural Resources Goal:*** To conserve and protect the environmental, natural and cultural resources of Georgia's communities, regions and the state.

The CSRA contains a wealth of natural and environmental resources that provide the region with numerous social, economic, and environmental benefits. However, these same resources are in need of protection if they are to continue providing these benefits.

- Timber resources account for 2.3 million acres in the CSRA, and are a major driver of the region's forest products industry.
- Kaolin, a type of clay, is the major mineral extracted in the region, providing substantial employment in Jefferson and Washington counties. This sector is under pressure from South American kaolin, which is now being exported around the world.
- Farmland accounts for 22.1 percent of the CSRA's land mass, and sustains approximately 5 percent of the region's employment. The number of farms in the region today is less than half the number of farms in operation in 1982, highlighting a trend towards large, industrial-scale farming.
- The CSRA contains a number of protected watershed areas in Lincoln, Wilkes, McDuffie, Warren, Burke, and Augusta-Richmond counties. The region's watersheds will need to be monitored to ensure future development does not render them vulnerable.
- The region's river basins and major lakes ensure adequate water supplies. However, continued growth of the urbanized area and out-of-region impacts over the next twenty years will place pressure on these supplies, as well as pollution threats from growth.
- The CSRA has a rich history and counts no less than 184 properties and districts listed in the National Register of Historic Places, including National Historic Landmarks, State Historic Parks and Sites. Most of these resources, however, lack preservation plans.

Detailed data on natural and environmental resources can be found on page 58 through 73.

## 2.7 Intergovernmental Coordination

***State Planning Intergovernmental Coordination Goal:*** To ensure the coordination of local planning efforts with other local service providers and authorities, with neighboring communities and with state and regional plans and programs.

The CSRA RC, founded in 1962, offers member governments avenues to coordinate planning, economic development, workforce development, and aging services. Other instances of intergovernmental coordination takes place between municipalities within a given county, between counties, from region to region, and with state and federal government agencies.

- The CSRA RC Area Agency on Aging provides consolidated services for seniors (including transportation) for the CSRA.
- The CSRA RC serves as the Economic Development District for the region.
- The CSRA RC serves as the coordinating mechanism for CSRA Unified Development Council (UDC). The UDC is a project-oriented volunteer organization comprised of economic, industrial, and regional development organizations, as well as service and educational institutions representing the entire CSRA. The UDC serves as the marketing arm for the CSRA.
- The CSRA RC serves as the coordinating mechanism for CSRA Unified Development Authority (UDA). The UDA promotes the economic development of the CSRA and encourages cooperation among economic development organizations within the member counties.
- The CSRA RC reviews and comments on applications for federal and state grant, loan, and permit assistance submitted by local governments and other applicants within the region. This is known as the Georgia Intergovernmental Consultation Process (Executive Order 12372), and is intended to offer comment on a proposed project's consistency with local and regional comprehensive plans.
- The CSRA RC develops and maintains the CSRA Regionally Important Resources Plan and the CSRA Comprehensive Economic Development Strategy.

**APPENDIX D**

**WORKSHEETS  
USED IN  
PLANNING PROCESS**

**GEMA Worksheet #3a****Inventory of Assets****Jurisdiction: Jenkins County All Jurisdictions****Hazard: Dam Failure, Drought, Wildfire, Tornadoes, Tropical Storms, Thunderstorm Winds, Lightning, Hail, Winter Storm****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.**

Type of Structure/Parcel (Occupancy Class))	Number of Structures/Parcels			Value of Structures/Parcels			Number of People		
	# in Community or 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	15,538	15,538	100%	\$252,013,168	\$252,013,168	100.00%	8,693	8,693	100%
Commercial	997	997	100%	\$82,677,413	\$82,677,413	100.00%	8,693	8,693	100%
Industrial	153	153	100%	\$125,742,105	\$125,742,105	100.00%	799	799	100%
Agricultural/Forestry	7,386	7,386	100%	\$365,319,698	\$365,319,698	100.00%	164	164	100%
Religious/Non-profit	302	302	100%	\$15,559,695	\$15,559,695	100.00%	8,693	8,340	100%
Government	344	344	100%	\$32,021,638	\$32,021,638	100.00%	190	190	100%
Education	22	22	100%	\$128,220,000	\$128,220,000	100.00%	1,648	1,648	100%
Utilities	28	28	100%	\$76,725,130	\$76,725,130	100.00%	27	27	100%
<b>Total</b>	<b>24,770</b>	<b>24,770</b>	<b>100%</b>	<b>\$978,278,845</b>	<b>\$978,278,845</b>	<b>100.00%</b>	<b>8,693</b>	<b>8,693</b>	<b>100%</b>

Note: Occupancy Class numbers are provided by the tax assessor's office which includes all structures/properties zoned residential, commercial, industrial, etc.

Note: Number of People for residential is based on county/city census data. It is assumed that everyone who lives in the county, shops, goes to church, etc. Industrial and Government populations are pulled from GA Department of Labor Data. Education Populations are pulled from the Board of Education.

Note: To sum the number of people column would more than quadruple the population which would provide a completely distorted and inaccurate population count.

**Task B. Determine whether (and where) you want to collect additional inventory data.**

	<b>Y</b>	<b>N</b>
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?	Y	
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

**GEMA Worksheet #3a****Inventory of Assets****Jurisdiction: Jenkins County All Jurisdictions****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.**

Flood	Number of Structures/Parcels			Value of Structures/Parcels			Number of People		
Type of Structure/Parcel (Occupancy Class))	# in Community or 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	15,538	102	1%	\$252,013,168	\$15,150,876	6%	8,693	76	1%
Commercial	997	8	1%	\$82,677,413	\$663,410	1%	8,693	0	0%
Industrial	153	0	0%	\$125,742,105	\$0	0%	799	0	0%
Agricultural/Forestry	7,386	159	2%	\$365,319,698	\$7,864,315	2%	164	59	7%
Religious/Non-profit	302	2	1%	\$15,559,695	\$103,044	1%	8,693	0	0%
Government	344	6	2%	\$32,021,638	\$558,517	2%	190	0	0%
Education	22	0	0%	\$128,220,000	\$0	0%	1,648	0	0%
Utilities	28	4	14%	\$76,725,130	\$10,960,733	14%	27	0	0%
Total	24,770	281	1%	\$978,278,845	\$35,300,895	4%	8,693	135	

Note: Occupancy Class numbers are provided by the tax assessor's office which includes all structures/properties zoned residential, commercial, industrial, etc. Number in Hazard area is found by laying parcel data over flood hazard maps.

Note: Number of People for residential is based on county/city census data. It is assumed that everyone who lives in the county, shops, goes to church, etc. Industrial and Government populations are pulled from GA Department of Labor Data. Education Populations are pulled from the Board of Education.

Note: To sum the number of people column would more than quadruple the population which would provide a completely distorted and inaccurate population count.

**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?	Y	
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



**GEMA Worksheet #3a****Inventory of Assets****Jurisdiction: Millen****Hazard: Dam Failure, Drought, Wildfire, Tornadoes, Tropical Storms, Thunderstorm Winds, Lightning, Hail, Winter Storm****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.**

All Hazards	Number of Structures/Parcels			Value of Structures/Parcels			Number of People		
Type of Structure/Parcel (Occupancy Class)	# in Community or 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	4,265	4,265	100%	\$88,138,615	\$88,138,615	100%	2,966	2,966	100%
Commercial	775	775	100%	\$35,850,238	\$35,850,238	100%	2,966	2,966	100%
Industrial	41	41	100%	\$7,554,090	\$7,554,090	100%	252	252	100%
Agricultural/	43	43	100%	\$1,171,368	\$1,171,368	100%	8	8	100%
Religious/Non-profit	125	125	100%	\$7,543,570	\$7,543,570	100%	2,966	2,966	100%
Government	258	258	100%	\$26,537,903	\$26,537,903	100%	180	180	100%
Education	21	21	100%	\$28,145,600	\$28,145,600	100%	1,648	1,648	100%
Utilities	10	10	100%	\$6,173,853	\$6,173,853	100%	23	23	100%
Total	5,538	5,538	100%	\$201,115,235	\$201,115,235	100%	2,966	100%	100%

Note: Occupancy Class numbers are provided by the tax assessor's office which includes all structures/properties zoned residential, commercial, industrial, etc.

Note: Number of People for residential is based on county/city census data. It is assumed that everyone who lives in the county, shops, goes to church, etc. Industrial and Government populations are pulled from GA Department of Labor Data. Education Populations are pulled from the Board of Education.

Note: To sum the number of people column would more than quadruple the population which would provide a completely distorted and inaccurate population count.

**Task B. Determine whether (and where) you want to collect additional inventory data.**

	<b>Y</b>	<b>N</b>
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?	Y	
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

## GEMA Worksheet #3a

## Inventory of Assets

**Jurisdiction: Millen**

**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.**

Flood	Number of Structures/Parcels			Value of Structures/Parcels			Number of People		
Type of Structure/Parcel (Occupancy Class)	# in Community or 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	4,265	67	2%	\$88,138,615	\$10,057,046	11%	2,966	138	4%
Commercial	775	8	1%	\$35,850,238	\$663,410	2%	2,966	8	0%
Industrial	41	0	0%	\$7,554,090	\$0	0%	252	0	0%
Agricultural	43	1	2%	\$1,171,368	\$27,241	2%	8	4	50%
Religious/Non-profit	125	2	2%	\$7,543,570	\$103,044	3%	2,966	85	3%
Government	258	6	2%	\$26,537,903	\$558,517	5%	180	15	8%
Education	21	0	0%	\$28,145,600	\$0	0%	1,648	0	0%
Utilities	10	3	30%	\$6,173,853	1,852,156	30%	23	0	0%
Total	5,538	87	2%	\$201,115,235	13,261,414	7%	2,966	250	8%

Note: Occupancy Class numbers are provided by the tax assessor's office which includes all structures/properties zoned residential, commercial, industrial, etc. Number in Hazard area is found by laying parcel data over flood hazard maps.

Note: Number of People for residential is based on county/city census data. It is assumed that everyone who lives in the county, shops, goes to church, etc. Industrial and Government populations are pulled from GA Department of Labor Data. Education Populations are pulled from the Board of Education.

Note: To sum the number of people column would more than quadruple the population which would provide a completely distorted and inaccurate population count.

**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?	Y	
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

**GEMA Worksheet #3a****Inventory of Assets****Jurisdiction: Unincorporated Jenkins County****Hazard: Dam Failure, Drought, Wildfire, Tornadoes, Tropical Storms, Thunderstorm Winds, Lightning, Hail, Winter Storm****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.**

All Hazards	Number of Structures/Parcels			Value of Structures/Parcels			Number of People		
Type of Structure/Parcel (Occupancy Class))	# in Community or 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	11,273	11,273	100.00%	\$163,874,553	\$163,874,553	100.00%	5,727	5,727	100%
Commercial	222	222	100.00%	\$46,827,175	\$46,827,175	100.00%	5,727	5,727	100%
Industrial	112	112	100.00%	\$118,188,015	\$118,188,015	100.00%	5,727	547	10%
Agricultural/Forestry	7,343	7,343	100.00%	\$364,148,330	\$364,148,330	100.00%	5,727	158	3%
Religious/Non-profit	177	177	100.00%	\$8,016,125	\$8,016,125	100.00%	5,727	5,727	100%
Government	86	86	100.00%	\$5,483,735	\$5,483,735	100.00%	5,727	10	0%
Education	1	1	100.00%	\$74,400	\$74,400	100.00%	5,727	0	0%
Utilities	18	18	100.00%	\$70,551,278	\$70,551,278	100.00%	5,727	4	0%
Total	19,232	19,232	100.00%	\$777,163,610	\$777,163,610	100.00%	5,727	5,727	100%

Note: Occupancy Class numbers are provided by the tax assessor's office which includes all structures/properties zoned residential, commercial, industrial, etc.

Note: Number of People for residential is based on county/city census data. It is assumed that everyone who lives in the county, shops, goes to church, etc. Industrial and Government populations are pulled from GA Department of Labor Data. Education Populations are pulled from the Board of Education.

Note: To sum the number of people column would more than quadruple the population which would provide a completely distorted and inaccurate population count.

**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?	Y	
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

**GEMA Worksheet #3a****Inventory of Assets****Jurisdiction: Unincorporated Jenkins 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.**

Flood	Number of Structures/Parcels			Value of Structures/Parcels			Number of People		
Type of Structure/Parcel (Occupancy Class))	# in Community or 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	11,273	35	0.3%	\$163,874,553	\$5,093,830	3%	5,727	76	1%
Commercial	222	0	0%	\$46,827,175	\$0	0%	5,727	0	0%
Industrial	112	0	0%	\$118,188,015	\$0	0%	547	0	0%
Agricultural/Forestry	7,343	158	2%	\$364,148,330	\$7,837,074	2%	158	59	37%
Religious/Non-profit	177	0	0%	\$8,016,125	\$0	0%	5,727	0	0%
Government	86	0	0%	\$5,483,735	\$0	0%	10	0	0%
Education	1	0	0%	\$74,400	\$0	0%	0	0	0%
Utilities	18	1	6%	\$70,551,278	\$9,108,577	13%	4	0	0%
Total	19,232	194	1%	\$777,163,610	\$22,039,481	3%	5,727	135	2%

Note: Occupancy Class numbers are provided by the tax assessor's office which includes all structures/properties zoned residential, commercial, industrial, etc. Number in Hazard area is found by laying parcel data over flood hazard maps.

Note: Number of People for residential is based on county/city census data. It is assumed that everyone who lives in the county, shops, goes to church, etc. Industrial and Government populations are pulled from GA Department of Labor Data. Education Populations are pulled from the Board of Education.

Note: To sum the number of people column would more than quadruple the population which would provide a completely distorted and inaccurate population count.

**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?	Y	
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

**JENKINS COUNTY-WIDE INCLUDES ALL JURISDICTIONS  
HAZARD FREQUENCY TABLE**

Hazard	Number of Events in Historic Record	Number of Years in Historic Record	Number of Events in Past 10 Years	Number of Events in Past 20 Years	Number of Events in Past 50 Years	Historic Recurrence Interval (years)	Historic Frequency % chance/year	20 year Historic Frequency % chance/year	Past 10 Year Record Frequency Per Year	Past 20 Year Record Frequency Per Year	Past 50 Year Record Frequency Per Year
Hurricane Surge - Cat 1						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 2						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 3						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 4						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 5						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Wind						#DIV/0!	#DIV/0!	0.00	0	0	0
Floods	14	95	0	3	12	6.79	14.74	15.00	0	0.15	0.24
Wildfire	3681	67	247	583	2554	0.02	5494.03	2915.00	24.7	29.15	51.08
Earthquake						#DIV/0!	#DIV/0!	0.00	0	0	0
Tornado	15	74	0	4	13	4.93	20.27	20.00	0	0.2	0.26
Thunderstorm Wind	117	50	14	34	117	0.43	234.00	170.00	1.4	1.7	2.34
Hail	23	74	4	17	23	3.22	31.08	85.00	0.4	0.85	0.46
Drought	32	69	6	31	32	2.16	46.38	155.00	0.6	1.55	0.64
Extreme Heat						#DIV/0!	#DIV/0!	0.00	0	0	0
Snow & Ice	33	74	3	6	18	2.24	44.59	30.00	0.3	0.3	0.36
Lightning	82	67	1	27	49	0.82	122.39	135.00	0.1	1.35	0.98
Dam Failure	2	95	0	0	1	47.50	2.11	0.00	0	0	0.02
Tropical Storm	20	74	7	9	14	3.70	27.03	45.00	0.7	0.45	0.28
HazMat Release (fixed)						#DIV/0!	#DIV/0!	0.00	0	0	0
HazMat Release (trans)						#DIV/0!	#DIV/0!	0.00	0	0	0
Radiological Release						#DIV/0!	#DIV/0!	0.00	0	0	0

**NOTE:** The historic frequency of a hazard event over a given period of time determines the historic recurrence interval.

For example: If there have been 20 HazMat Releases in the County in the past 5 years, statistically you could expect that there will be 4 releases a year.

Realize that from a statistical standpoint, there are several variables to consider. 1) Accurate hazard history data and collection are crucial to an accurate recurrence interval and frequency. 2) Data collection and accuracy has been much better in the past 10-20 years (NCDC weather records). 3) It is important to include all significant recorded hazard events which will include periodic updates to this table.

By updating and reviewing this table over time, it may be possible to see if certain types of hazard events are increasing in the past 10-20 years.

**MILLEN  
HAZARD FREQUENCY TABLE**

Hazard	Number of Events in Historic Record	Number of Years in Historic Record	Number of Events in Past 10 Years	Number of Events in Past 20 Years	Number of Events in Past 50 Years	Historic Recurrence Interval (years)	Historic Frequency % chance /year	20 year Historic Frequency % chance/ year	Past 10 Year Record Frequency Per Year	Past 20 Year Record Frequency Per Year	Past 50 Year Record Frequency Per Year
Hurricane Surge - Cat 1						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 2						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 3						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 4						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 5						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Wind						#DIV/0!	#DIV/0!	0.00	0	0	0
Floods	14	95	0	3	11	6.79	14.74	15.00	0	0.15	0.22
Wildfire						#DIV/0!	#DIV/0!	0.00	0	0	0
Earthquake						#DIV/0!	#DIV/0!	0.00	0	0	0
Tornado	1	74	0	1	1	74.00	1.35	5.00	0	0.05	0.02
Thunderstorm Wind	57	50	14	33	57	0.88	114.00	165.00	1.4	1.65	1.14
Hail	14	74	0	7	9	0.00	18.92	35.00	0.7	0.35	0.18
Drought	32	69	6	31	32	2.16	46.38	155.00	0.6	1.55	0.64
Extreme Heat			7	7	14	#DIV/0!	#DIV/0!	35.00	0.7	0.35	0.28
Snow & Ice	33	123	3	6	18	3.73	26.83	30.00	0.3	0.3	0.36
Lightning	82	67	1	27	49	0.82	122.39	135.00	0.1	1.35	0.98
Landslide						#DIV/0!	#DIV/0!	0.00	0	0	0
Dam Failure						#DIV/0!	#DIV/0!	0.00	0	0	0
Tropical Storm	20	74	7	9	14	3.70	27.03	45.00	0.7	0.45	0.28
HazMat Release (fixed)						#DIV/0!	#DIV/0!	0.00	0	0	0
HazMat Release (trans)						#DIV/0!	#DIV/0!	0.00	0	0	0
Radiological Release						#DIV/0!	#DIV/0!	0.00	0	0	0

**NOTE:** The historic frequency of a hazard event over a given period of time determines the historic recurrence interval.

For example: If there have been 20 HazMat Releases in the County in the past 5 years, statistically you could expect that there will be 4 releases a year.

Realize that from a statistical standpoint, there are several variables to consider. 1) Accurate hazard history data and collection are crucial to an accurate recurrence interval and frequency. 2) Data collection and accuracy has been much better in the past 10-20 years (NCDC weather records). 3) It is important to include all significant recorded hazard events which will include periodic updates to this table.

By updating and reviewing this table over time, it may be possible to see if certain types of hazard events are increasing in the past 10-20 years.



**JENKINS COUNTY UNINCORPORATED AREAS  
HAZARD FREQUENCY TABLE**

Hazard	Number of Events in Historic Record	Number of Years in Historic Record	Number of Events in Past 10 Years	Number of Events in Past 20 Years	Number of Events in Past 50 Years	Historic Recurrence Interval (years)	Historic Frequency % chance /year	20 year Historic Frequency % chance/ year	Past 10 Year Record Frequency Per Year	Past 20 Year Record Frequency Per Year	Past 50 Year Record Frequency Per Year
Hurricane Surge - Cat 1						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 2						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 3						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 4						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 5						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Wind						#DIV/0!	#DIV/0!	0.00	0	0	0
Floods	14	95	0	3	11	6.79	14.74	15.00	0	0.15	0.22
Wildfire	3681	67	247	583	2554	#NAME?	5494.03	2915.00	24.7	29.15	51.08
Earthquake						#DIV/0!	#DIV/0!	0.00	0	0	0
Tornado	15	74	0	4	13	4.93	20.27	20.00	0	0.2	0.26
Thunderstorm Wind	66	50	16	52	66	0.76	132.00	260.00	1.6	2.6	1.32
Hail	9	74	0	7	9	0.00	#DIV/0!	35.00	0.7	0.35	0.18
Drought	32	69	6	31	32	2.16	46.38	155.00	0.6	1.55	0.64
Extreme Heat						#DIV/0!	#DIV/0!	0.00	0	0	0
Snow & Ice	33	123	3	6	18	3.73	26.83	30.00	0.3	0.3	0.36
Lightning	82	67	1	27	49	0.82	122.39	135.00	0.1	1.35	0.98
Landslide						#DIV/0!	#DIV/0!	0.00	0	0	0
Dam Failure	2	95	0	0	1	47.50	2.11	0.00	0	0	0.02
Tropical Storm	20	74	7	9	14	3.70	27.03	45.00	0.7	0.45	0.28
HazMat Release (fixed)						#DIV/0!	#DIV/0!	0.00	0	0	0
HazMat Release (trans)						#DIV/0!	#DIV/0!	0.00	0	0	0
Radiological Release						#DIV/0!	#DIV/0!	0.00	0	0	0

**NOTE:** The historic frequency of a hazard event over a given period of time determines the historic recurrence interval.

For example: If there have been 20 HazMat Releases in the County in the past 5 years, statistically you could expect that there will be 4 releases a year.

Realize that from a statistical standpoint, there are several variables to consider. 1) Accurate hazard history data and collection are crucial to an accurate recurrence interval and frequency. 2) Data collection and accuracy has been much better in the past 10-20 years (NCDC weather records). 3) It is important to include all significant recorded hazard events which will include periodic updates to this table.

By updating and reviewing this table over time, it may be possible to see if certain types of hazard events are increasing in the past 10-20 years.

Date:

What kinds of natural hazards can affect you?

**Task A. List the hazards that may occur.**

1. Research newspapers and other historical records
2. Review existing plans and reports.
3. Talk to the experts in your community, state, or region.
4. Gather information on Internet Websites.
5. Next to the hazard list below, put a check mark in the Task A boxes beside all hazards that may occur in your community or state.

**Task B. Focus on the most prevalent hazard in your community or state.**

1. Go to hazard Websites.
2. Locate your community or state on the Wesbite map.
3. Determine whether you are in a high-risk area. Get more localized information if necessary.
4. Next to the hazard list below, put a check mark in the Task B boxes beside all hazards that post a significant threat.

**Task  
A****Task  
B**

Use this space to record information you find for each of the hazards you will be researching. Attach additional pages as necessary.

Avalanche	___	___
Costal Erosion	___	___
Costal Storm	___	___
Dam Failure	<u>X</u>	<u>X</u>
Drought	<u>X</u>	<u>X</u>
Earthquake	<u>X</u>	—
Expansive Soils	___	___
Extreme Heat	<u>X</u>	—
Flood	<u>X</u>	<u>X</u>
Hailstorm	<u>X</u>	<u>X</u>
Hurricane	___	___
Land Slide	___	___
Severe Winter Storm	<u>X</u>	<u>X</u>
Tornado	<u>X</u>	<u>X</u>
Tsunami	___	___
Volcano	___	___
Wildfire	<u>X</u>	<u>X</u>
Windstorm	<u>X</u>	<u>X</u>
Hazard Material	___	___
Radiological	___	___
Other _____	___	___
Other _____	___	___
Other _____	___	___

<b>Hazard or Event Description</b> (Type of hazard, date of event, number of injuries, cost and types of damage, etc.)	<b>Source of Information</b>	<b>Map Available for this Hazard?</b>	<b>Scale of Map</b>
See each section of plan and Appendix A for complete list	See Sources on page 98 of plan	Maps for all hazards are behind Appendix A	

Note: **Bolded** hazards are addressed in this How-to Guide.

[illegible]

STAPLEE Criteria	S	T	A			P			L			E															
	(Social)	(Technical)	(Administrative)			(Political)			(Legal)			(Economic)				(Environmental)											
Considerations → for Alternative Actions ↓	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance / Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land / Water	Effect on Endangered Species	Effect on HAZMAT / Waste Sites	Consistent with Community Environmental Goals	Consistent With Federal Laws	Alternative actions	Comments		
	Equip all county and city recreation parks with adequate early severe weather warning and lightning detection devices.																										
	Inspects public buildings and critical facilities and retrofit to reinforce windows, doors, and roofs as needed																										
	Enforce building codes for all new buildings and critical facilities.																										
	Install lightning rods in high value critical facilities.																										
	Review current Emergency Response Plan and update when needed.																										
	Review current evacuation plans paying particular attention to vulnerable populations and update as needed.																										
	Develop a public awareness program about the installation of lightning grounding systems on critical infrastructure, residential and business properties.						-									+											
	Install generators on critical facilities where needed.	+	+		+	+		-	+	+	+	+				+	-		+	+		+	+				
	Seek funding to ensure all current and future emergency shelters have back-up generators.	+	+		+	+		-	+	+	+	+				+	-		+								
Educate the public on shelter locations and evacuation routes.																											
Develop public education and awareness programs regarding severe weather events to include home safety measures, purchase of weather radio and personal safety measures before, during and after an event.																											
Implement a winter storm education program to include winterization of home and/or business and what to do before, during and after.						-																					
Create a data base to record hazard event information.						-																					

Alternative actions

Comments

STAPLEE Criteria	S	T	A			P	L	E			E															
	(Social)	(Technical)	(Administrative)	(Political)		(Legal)	(Economic)			(Environmental)																
Considerations → for Alternative Actions ↓	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance / Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land / Water	Effect on Endangered Species	Effect on HAZMAT / Waste Sites	Consistent with Community Environmental Goals	Consistent With Federal Laws	Alternative actions	Comments	
	Conduct dam breach analysis to identify assets and population at risk in the event of a failure.						-																			
	Draft ordinance prohibiting development in dam breach zone.																									
	Inventory existing road equipment and purchase needed equipment to maintain roads before, during and after a hazard event.																									
	Develop coordinated management strategies for deticing, snow plowing, and clearing roads of fallen trees and debris.	+	+		+	+	-	-	+	+	+	+				+	-		+							
	Promote the construction of safe rooms in shelter areas and in public buildings.																									
	Update 911 equipment as needed.	+	+		+	+		-	+	+	+	+				+	-	+				+	+			
	Request that all new education facilities be designed to serve as public shelters for emergency purposes.																									NO education facilities will be used as emergency shelters. To avoid children missing school when evacuees come from other areas.
	Promote and participate in the following American Red Cross Programs																									
	• Disaster Resistant Neighborhoods Program																									
• Business and Industry Preparedness Seminar																										
• Community Disaster Education Preparedness presentations																										
Continue update of EMA website and Facebook page with information pertaining to Emergency Preparedness/ Weather Events and Education	+	+							+	+	+	+			+									Could use twitter but would not reach as many people	This is an affect way to distribute information	
Implement GIS technology on fire and emergency management vehicles so data can be readily available in the field so more accurate, timely assessments for future																										
Pollination and landscaping activities																										
Seek fund for new communications radios and equipment.			+	+			-	+	+						+	-	+	+								

## GEMA Worksheet #2

## Profile Hazard Events Step 2

County:

Date:

How Bad Can It Get?

Task A. Obtain or create a base map.

GEMA will be providing you with a base map, USGS topos and DOQQ as part of our deliverables to local government for the planning process. Additionally, we will be providing you with detailed hazard layer coverages. These data layers originate from state or nationwide coverage or datasets. Therefore, it is important for local government to assess what you already have at the local level. It is important for you at the local level to have an idea of what existing maps you have available for the planning process. Some important things to think about:

- 1) What maps do we already have in the county that would be relevant to the planning process?
- 2) Have other local plans used maps or mapping technology where there is specific data that is also needed in my local plan?
- 3) What digital maps do we have?
- 4) Do we have any Geographic Information System (GIS) data, map themes or layers or databases here at the local level (or regional) that we can use?
- 5) If we do have any GIS data, where is it located at, and who is our local expert?
- 6) Are there any ongoing GIS or mapping initiatives at the local level in other planning or mapping efforts? If so, what are they, and what are the timetables for completion?
- 7) Are there mapping needs that have been identified at the local level in the past? If so, what are they and when were they identified?
- 8) Of the existing maps, GIS data and other digital mapping information, what confidence do we have at the local level that it is accurate data?

***Please answer the above questions on a separate sheet of paper and attach to this worksheet.***

It is important to realize that those counties that already have GIS and digital mapping, (ie: parcel level data, GPS fire hydrants, etc) higher levels of spatial accuracy and detail will exist for some data layers at the local level. However, for this planning process, that level of detail will not be needed on all layers in the overall mapping and analysis.

You can use existing maps from:

- Road Maps
- USGS topographic maps or Digital Orthophoto Quarter Quads (DOQQ)
- Topographic and/or planimetric maps from other agencies
- Aerial topographic and/or planimetric maps
- Field Surveys
- GIS software
- CADD software
- Digitized paper map

Title of Map	Scale	Date



**Facility Name**

**Location**

Longitude

Latitude

Location

Method:

- ☐ Geocode
- ☐ GPS
- ☐ GPS-closed
- ☐ GPS - dnr
- ☐ Manual add

Address 1:

Address 2:  
(PO BOX)

City:

Zip:

Jurisdiction:

Daytime

Occupancy:

Night

Occupancy:

**Building Value**

Number of  
Stories:

Functional  
Use Value:

Year

Constructed:

Displacement  
Cost Per Day:

Area Sq Ft:

Contents  
Value:

Bldg Value:

Contents  
Value Year:

Valuation

Year:

Contents  
Description:

Building Valuation Type:

☐ 0 = Unknown

☐ 1 = Market Value

☐ 2 = Assessed Value

☐ 3 = Replacement Value

☐ 99 = Other

\*Mark any or all that apply. See back of page for details.

- ☐ Essential Facility
- ☐ Transportation Facility
- ☐ Lifeline System
- ☐ High Potential Loss
- ☐ HazMat Facility
- ☐ Important Facility
- ☐ Vulnerable Population
- ☐ Economic Asset
- ☐ Special Consideration
- ☐ Historical Consideration
- ☐ Other Facility
- Other Details:

See back of page  
for codes.

Building Type Code:

Occupancy Code:

\*Choose Only One Facility Type

**Facility Type:**

- ☐ Pre-kindergarten
- ☐ Kindergarten
- ☐ Primary School
- ☐ Elementary School
- ☐ Middle School
- ☐ Middle/High School
- ☐ High School, Public
- ☐ Private School
- ☐ Other School
- ☐ Alternative Division
- ☐ Alternative School
- ☐ Private Two-Year College
- ☐ Public Two-Year College
- ☐ Private Four-Year College
- ☐ Public Four-Year College
- ☐ Private University
- ☐ Public University
- ☐ Public Vocational Technical School
- ☐ Psychoeducational
- ☐ Adult Edu. Center
- ☐ Airport
- ☐ City Hall
- ☐ City Jail
- ☐ County Correctional Institution
- ☐ County Jail
- ☐ Courthouse
- ☐ Federal Penitentiary
- ☐ Fire Station
- ☐ Wastewater Treatment Plant
- ☐ Water System
- ☐ C and D Construction and Demolition Landfill
- ☐ L (Dry Trash) Landfill
- ☐ MSWL (Municipal Solid Waste Landfill)
- ☐ SL (Sanitary Waste) Landfill
- ☐ Recycling Center
- ☐ Transfer Station
- ☐ Hospital, Admissions Entrance
- ☐ Hospital, Emergency Entrance
- ☐ Library
- ☐ Marshals Office
- ☐ Police Station
- ☐ Sheriffs Office
- ☐ Emergency Services
- ☐ State Prison
- ☐ Other

**Building Type Code:**

- ☐ C1 = Concrete Moment Frame
- ☐ C2 = Concrete Shear Walls
- ☐ C3 = Concrete Frame with Unreinforced Masonry Infill Walls
- ☐ MH = Manufactured Housings
- ☐ O = Other Building Type
- ☐ P1 = Precast Concrete Tilt-Up Walls
- ☐ P2 = Precast Concrete Frames with Cast-in-Place Concrete Shear Walls
- ☐ RM1 = Reinforced Masonry Bearing Walls with Wood or Metal Deck Diaphragms
- ☐ RM2 = Reinforced Masonry Bearing Walls with Precast Concrete Diaphragms
- ☐ S1 = Steel Moment Frame
- ☐ S2 = Steel Braced Frame
- ☐ S3 = Steel Light Frame
- ☐ S4 = Steel Frame with Cast-in-Place Concrete Shear Walls
- ☐ S5 = Steel Frame with Unreinforced Masonry Infill Walls
- ☐ URM = Unreinforced Masonry Bearing Walls
- ☐ UNK = Unknown Building Type

**Occupancy Code:**

- ☐ AGR1 = Agriculture Facilities and Offices
- ☐ COM1 = Retail Trade
- ☐ COM2 = Wholesale Trade
- ☐ COM3 = Personal and Repair Services
- ☐ COM4 = Professional/Technical Services
- ☐ COM5 = Banks
- ☐ COM6 = Hospital
- ☐ COM7 = Medical Office and Clinic
- ☐ COM8 = Entertainment, Recreation
- ☐ COM9 = Theaters
- ☐ COM10 = Parking Garages
- ☐ EDU1 = Grade Schools and Admin. Offices
- ☐ EDU2 = Colleges and Universities
- ☐ GOV1 = Government - General Services
- ☐ GOV2 = Government - Emergency Response
- ☐ UNK = Unknown
- ☐ IND1 = Heavy Industrial
- ☐ IND2 = Light Industrial
- ☐ IND3 = Food/Drugs/Chemicals
- ☐ IND4 = Metals/Minerals Processing
- ☐ IND5 = High Technology
- ☐ IND6 = Construction Facilities and Offices
- ☐ REL1 = Churches and Non-Profit Organizations
- ☐ RES1 = Single Family Dwellings
- ☐ RES2 = Manufactured Housing
- ☐ RES3A = Duplex
- ☐ RES3B = 3 to 4 Units
- ☐ RES3C = 5 to 9 Units
- ☐ RES3D = 10 to 19 Units
- ☐ RES3E = 20 to 49 Units
- ☐ RES3F = > 50 Units
- ☐ RES4 = Temporary Lodging
- ☐ RES5 = Institutional Dormitories
- ☐ RES6 = Nursing Homes

**Definitions:****Essential Facility**

An essential facility is a critical facility that is essential to the health and welfare of the population. The potential consequences of losing functions or services from this type of facility are higher than any other type of structures. Interruption or loss of function from these types of facilities would jeopardize human life and public safety. Essential facilities include: hospitals and other medical facilities, police and fire stations, emergency operations centers, evacuation shelters and schools, and other structures that house first responder equipment or personnel.

**Transportation Systems**

Transportation infrastructure or facilities. Examples include: Airways: airports, heliports, Highways: bridges, tunnels, roadbeds, overpasses, transfer stations. Railways: tracks, tunnels, bridges, rail yards, depots, switching stations. Waterways: canals, locks, ports, ferries, dry-docks, piers.

**Lifeline System**

Corridors of flow for equipment, supplies and services. Transportation systems can also be Lifeline Systems. The best physical example of a lifeline would be a bridge and right-of-way that could include utilities and communication. Examples include: potable water, wastewater, oil, natural gas, electric power, and communication.

**High Potential Loss Facility**

Facilities that would have a high human loss associated with their damage or failure. Examples include: nuclear power plants, dams and military installations.

**Hazardous Materials Facility**

Facilities that produce or house industrial/hazardous materials, such as corrosives, explosives, flammable materials, radioactive materials, and toxins. Check to see if your county has a Local Emergency Planning Committee (LEPC) and an existing Hazardous Material listing.

**Important Facility**

These types of facilities are vital for overall day to day community functions, and ensure full recovery in the wake of a hazard or disaster event. Examples include: government buildings and functions, major employers in the area, bank and financial institutions, non-nuclear power generators, certain commercial establishments such as grocery stores, hardware stores and gas stations, technical schools, colleges, and universities.

**Vulnerable Population**

Is there a vulnerable human population that occupies the structure that would need special assistance, medical care or other actions before, during or after a hazard event or disaster? Examples include: elderly people, jail populations, people with mental, physical or mobility problems, and non-English speaking populations.

**Economic Assets**

Larger economic assets that are vital to the prosperity of the community. Examples include major employers and financial centers in your community or area that impact the local or regional economy if significantly disrupted.

**Special Considerations**

High-density areas (residential or commercial development), if damaged or impacted in a hazard event or disaster, could result in high death tolls or injury rates. Examples include: larger factories or industries, large vertical apartment or housing complexes.

**Historic Considerations**

Historic, cultural or natural resources, including structures and areas that are identified and protected under state or federal law. Examples include: state parks, federal parks, museums and historic districts.

**Other Facilities**

Any other significant locally identified facility that does not fit into another category of those listed above.

**Comments:**

**EXHIBIT “H”**

Date: \_\_\_\_\_

# XYZ County PDM Progress Payment Request

**Instructions:** All requests for progress payments must be supported by documentation supporting actual expenditures. Itemize each expenditure below to the fullest detail possible, including a reference to specific sites or elements of work. Attach documentation that supports this progress payment request, such as copies of bills of sale, invoices, receipts, and canceled checks evidencing payment. Do not send originals. As project administrative costs are calculated on a sliding scale, do not include this in your request for payment. Attach a continuation sheet if necessary.

AGREEMENT NUMBER\_\_\_\_\_

FEMA Project Number\_\_\_\_\_

SUBGRANTEE NAME: XYZ County

(FIPs code) ID. Number: \_\_\_\_\_

Site Reference or Element of Work	Approved Amount	Previous Payment	Current Request	Description of Documentation Attached in Support of this Payment Request
	(from continuation sheet attached) <b>SUBTOTAL</b>			
	<b>TOTAL</b>			
	<b>Less Subgrantee Share (25% ) or 15% if State match is applicable)</b>			
	<b>Less State Share if applicable (10%)</b>			
	<b>NET AMOUNT REQUESTED</b>			

Under penalty of perjury, I certify that to the best of my knowledge and belief the data above are correct and that all outlays were made in accordance with the grant conditions or other agreement, comply with procurement regulations contained within the 44 CFR, Part 13, and that payment is due and has not been previously requested. I am familiar with Section 317 of Public Law 93-288, as amended by the Robert T. Stafford Disaster Relief and Emergency Assistance Act. I understand that any part of this payment request that is not supported by cost documents and/or expended within the scope of the approved project will be refunded to the State of Georgia within 30 days of receiving the deobligation notice.

Signature of Subgrantee's Authorized Representative (and printed name)

Georgia Emergency Management Agency  
Labor Expense Summary

1. APPLICANT		2. Disaster Number		3. Period Covering		Page		Of		
4. Purpose/Work Performed				5. Program						
STAFF		DATES AND HOURS WORKED						COSTS		
	DATE							TOTAL HOURS	HOURLY RATE	TOTAL COSTS
NAME	TITLE	Hours						0	\$ -	\$ -
NAME	TITLE	Hours						0	\$ -	\$ -
NAME	TITLE	Hours						0		\$ -
NAME	TITLE	Hours						0		\$ -
NAME	TITLE	Hours						0	\$ -	\$ -
NAME	TITLE	Hours						0	\$ -	\$ -
NAME	TITLE	Hours						0	\$ -	\$ -
NAME	TITLE	Hours						0	\$ -	\$ -
NAME	TITLE	Hours						0	\$ -	\$ -
NAME	TITLE	Hours						0	\$ -	\$ -
Total Cost for Labor Time										\$ -
I CERTIFY THAT THE ABOVE INFORMATION WAS OBTAINED FROM PAYROLL RECORDS, INVOICES OR OTHER DOCUMENTS THAT ARE AVAILABLE FOR AUDIT.										
I CERTIFY THAT THE ABOVE COSTS ARE NOT BEING USED FOR LOCAL MATCH FOR ANOTHER FEDERAL GRANT.										
Signature		TITLE							DATE	

# JENKINS COUNTY HAZARD MITIGATION PLAN UPDATE

## Documentation of Labor Match

NAME (Please Print): \_\_\_\_\_

ORGANIZATION: \_\_\_\_\_

DATE(S): \_\_\_\_\_

EVENT: Hazard Mitigation Plan Update

HOURLY SALARY: \_\_\_\_\_

BENEFITS PER HOUR: \_\_\_\_\_

HOURS CONTRIBUTED (Include travel time): \_\_\_\_\_

TOTAL LABOR MATCH: \_\_\_\_\_

(Hourly Salary + Benefits Per Hour) X Hours Contributed = Total Labor Match

SIGNATURE: \_\_\_\_\_

(FORM IS NOT VALID WITHOUT SIGNATURE)

***"I authorize GEMA/HS to use the value identified for federal costs sharing matching purposes and do not otherwise believe that I am currently paid with federal funds or that my salary is being used to satisfy any other federal costs sharing obligation."***

For use by Committee Members (e.g. EMA Director, County Engineer ...)

# **APPENDIX E**

## **COPIES OF REQUIRED PLANNING DOUCMENTATIONS**



Kick Off Meeting

July 10, 2024

Jenkins County Board of  
Commissioners Office

## Jenkins County Hazard Mitigation Plan Update - Kickoff Meeting

Amy Thorne <athorne@csrarc.ga.gov>

Tue 6/18/2024 11:50 AM

To:jbrantlet@cityofmillenga.gov <jbrantlet@cityofmillenga.gov>;cboulineau@cityofmillenga.gov <cboulineau@cityofmillenga.gov>; dherrington@cityofmillenga.gov <dherrington@cityofmillenga.gov>;jthomas@cityofmillenga.gov <jthomas@cityofmillenga.gov>;jcda@bellsouth.net <jcda@bellsouth.net>;Rick Lane <rlane@GFC.STATE.GA.US>;sarai@jenkinscountyga.gov <sarai@jenkinscountyga.gov>;jasonoglesby@jenkinscountyga.gov <jasonoglesby@jenkinscountyga.gov>;robertoglesby@jenkinscountyga.gov <robertoglesby@jenkinscountyga.gov>;lee\_wilson@bellsouth.net <lee\_wilson@bellsouth.net>;Kane.hadden@corecivic.com <Kane.hadden@corecivic.com>;tfries@jchs.com <tfries@jchs.com>;jhearn@jchs.com <jhearn@jchs.com>;clarissa.young@dph.ga.gov <clarissa.young@dph.ga.gov>;apoythress@jcmcgga.com <apoythress@jcmcgga.com>; henryyoung@jenkinscountyga.gov <henryyoung@jenkinscountyga.gov>;Joanna.greenway@dhs.ga.gov <Joanna.greenway@dhs.ga.gov>; wendellclark@jenkinscountyga.gov <wendellclark@jenkinscountyga.gov>;horaceweathersby30442@yahoo.com <horaceweathersby30442@yahoo.com> Cc:Michaela Schiesser <michaela.schiesser@gema.ga.gov>;Grady Saxon <gradysaxon@jenkinscountyga.gov>;Nicee Long <nlong@csrarc.ga.gov>

Hello,

If you are receiving this email, you are on the committee to update Jenkins County's 5-year Pre-Disaster Mitigation Plan. We are holding a public kickoff meeting on Wednesday **July 10, 2024 @ 1:00 p.m.** at the Jenkins County Board of Commissioners - Building 833 E. Winthrop Ave. Millen, GA. Upon completion of the update, the county along with the city of Millen will adopt the plan by resolution. Please ensure someone attends this meeting from your agency. Contact Grady Saxon, County Administrator / EMA Director at 478-982-2563 if you have questions.

Someone from every jurisdiction must attend. If we do not satisfy the required labor hour amount, the County will have to pay the \$1,600 out of their General Fund. **Be sure to fill out the labor match form attached to this email and return it to receive that credit.**

I'll be sending calendar invitations shortly. Please forward this message to anyone you think needs to attend.

Thanks,

Amy Thorne, MPA

Regional Planner

Community Development

CSRA Regional Commission

3626 Walton Way Ext, Suite 1

Augusta, GA 30909

tel. 706-210-2000 | fax 706-210-2006

*Thirteen Counties, One Region*



## Jenkins County Hazard Mitigation Plan Update - Kickoff Meeting (Surrounding Counties)

Amy Thorne <athorne@csrarc.ga.gov>

Tue 6/18/2024 12:02 PM

To: Andy Leanza <aleanza@columbiacountyga.gov>; Blake Thompson <wilkescountyems@lycos.com>; Casey Broom <cbroom@lincolncountyga.com>; David Foot (davidfoottcema@yahoo.com) <davidfoottcema@yahoo.com>; jaburke930@comcast.net <jaburke930@comcast.net>; Jim Anderson <janderson@jeffersoncountyga.gov>; Mario Chapple <mariochapple@yahoo.com>; Mike Lyons <mike.lyons@gapac.com>; ssewell@thomson-mcduffie.net <ssewell@thomson-mcduffie.net>; warrenoes@classicsouth.net <warrenoes@classicsouth.net>; jccomm@bellsouth.net <jccomm@bellsouth.net>; Adam BRETT <abrett@jeffersoncountyga.gov>; adhcitywadley@att.net <adhcitywadley@att.net>; Arty Thrift <athrift@cityofwrens.com>; Avera <averacityof@bellsouth.net>; Bartow <townbartow@hotmail.com>; Brent Weir <blythesmayor@gmail.com>; C. Brett Cook <bcook@harlemga.org>; City of Camak <cityofcamak@bellsouth.net>; Candice Bryant <cityhall3063@nu-z.net>  
Cc: Grady Saxon <gradysaxon@jenkinscountyga.gov>

Hello,

Jenkins County has received a grant from FEMA to update its Pre-Disaster Mitigation Plan (PDM). The plan is required to be updated every five years. One of the plan's requirements is to invite neighboring communities to provide input into the planning process. The Jenkins County PDM Committee would like to extend an invitation to your agency to participate.

The County is holding a public meeting on Wednesday, **July 10, 2024, at 1:00 p.m.** at the Jenkins County Board of Commissioners Building at 833 E. Winthrop Ave. Millen, GA.

Contact Grady Saxon County Administrator / EMA Director at 478 982 2563 if you have questions.

Thanks,

Amy Thorne, MPA

Regional Planner

Community Development

CSRA Regional Commission

3626 Walton Way Ext, Suite 1

Augusta, GA 30909

tel. 706-210-2000 | fax 706-210-2006

*Thirteen Counties, One Region*





The CSRA RC provides assistance to local governments and is home to the Area Agency on Aging and CSRA Business Lending.

Page · Government organization

3626 Walton Way Ext. Suite 1, Augusta, GA, United States, Georgia

(706) 210-2000

info@csrarc.ga.gov

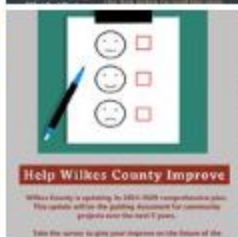
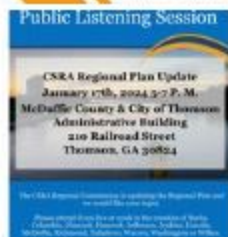
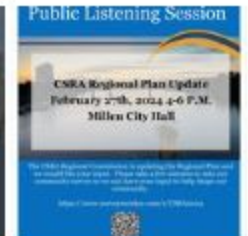
csrarc.ga.gov

Open now

Not yet rated (2 Reviews)

## Photos

See all photos



# PUBLIC MEETING

## HAZARD MITIGATION PLAN UPDATE

July 10, 2024  
@1p.m.

Jenkins Co. Board of  
Commissioners Office

833 E. Winthrop Ave., Millen, GA

Jenkins County is updating its FEMA-approved Pre-Disaster Hazard Mitigation Plan. You're invited to learn about the plan and give your input regarding local natural hazards.

More info: (478) 982-2563

Persons with special needs relating to handicapped accessibility or foreign language shall contact the Grady Saxon at (478) 982-2563 before 07/09/24.

Amy Thorne

Like

Comment

Share



Comment as Amy Thorne



# Ossoff asks for investigation of undelivered Fulton County court mail

DAVE WILLIAMS  
Bureau Chief  
Capital Beat News Service

U.S. Sen. Jon Ossoff, D-Ga., last week called for an investigation into the discovery this month of more than 1,000 official pieces of court correspondence dating back as far as 2021 that were not delivered.

Fulton County Clerk of Courts and Magistrate Courts Ché Alexander received the undelivered mail in a huge batch marked "return to sender" during the week of June 3 and notified Ossoff, who has been pressuring the U.S. Postal Service for months over

delayed mail deliveries across Georgia.

"I want to emphasize the real human impact when Georgians don't receive correspondence from the court," Ossoff said during a news conference. "This impacts their liberty. This impacts their property. This impacts the official functioning of the courtroom."

"This impacts the judges' docket. This can impact potentially overcrowding in the jail, disrupting the normal course of business for the court."

Ossoff first raised the issue of delays in mail delivery in Georgia during a Senate committee hearing in April.

Postmaster General Louis DeJoy told the committee the delays were the result of problems encountered during the rollout last January of a restructuring plan aimed at making the postal service economically self-sufficient. The plan was first implemented at the regional mail processing center in Palmetto and at a second center in Richmond, Va.

To deal with the issue, DeJoy ordered a pause in the restructuring plan nationwide until at least the beginning of next year. To address the mail processing delays at the Palmetto facility, he brought in more than 100 employees from other processing centers and revised transportation schedules between Palmetto and other mail processing centers.

Ossoff is asking the Postal Service's Office of Inspection

General to investigate the failure to deliver the Fulton County court correspondence and get back to him with answers.

"This and everything Georgians have been dealing with for the last six months demonstrate the urgent need for much more intense, much more robust, and much more sustained oversight of the U.S. Postal Service and its management," Ossoff said Tuesday.

DeJoy reported last week in a letter to Ossoff that 64.5% of first-class mail the Palmetto facility handled between May 18 and May 24 was delivered on time, up from a mid-March low of just 35.8%. In addition, 82.9% of first-class mail during that period was delivered within one day of on time, DeJoy wrote.

## JCSO incident report

**June 21** — Deputy responded to a walk-in at the Sheriff's Office regarding a custody dispute.

**June 21** — Deputy arrested Joseph Daniel Verno during a traffic stop on Hwy. 25 North. Suspect was charged with speeding and reckless driving.

**June 21** — Deputy was dispatched to the Sheriff's Office in reference to a property dispute.

**June 22** — Amanda Nichole was arrested during a traffic stop on Hwy. 25 South. Suspect was charged with driving while license suspended/revoked and speeding.

**June 23** — Terris Lavell was arrested during a traffic stop on Hwy. 25 South. Suspect was charged with possession of marijuana—less than an ounce, speeding, and reckless driving.

## JENKINS COUNTY JAIL BOOKING LOG

**Martelia Komieha Butler** — driving without license on person, speeding (19-23 miles over) in a 55 zone; 06/21; JCSO

**Larry Dean Cooper** — parole violation; 06/21; JCSO

**Skyler Michael Helverson** — electronically furnishing obscene materials to minors, computer/electronic pornography, enticing a child for indecent purposes; 06/19; MPD

**Shenice Thompson** — murder-two counts, aggravated assault-two counts, hindering apprehension, making false statements, murder malice-2 counts, possession of firearm/knife during attempt to commit felony-2 counts, and tampering with evidence-felony; 06/17; JCSO

**Ashton Kohl Barber** — speeding (19-23 miles over) in a 65 zone, possession and use of drug related objects, no proof of insurance, marijuana possession less than 1 oz.; 06/21; JCSO

**Austin Chase Blackstone** — investigative hold — 06/17; JCSO

**Christopher Flournoy** — financial transaction card fraud, forgery in the first degree; 06/18; JCSO

**Shawn Anthony Hancock** — no drivers license, no proof of insurance, failure to register vehicle/no tag, seat belt violation; 06/21; JCSO

**Deondray Jarvis Johnson** — speeding (24-29 miles over) in a 55 zone, driving without a valid license; 06/23; JCSO

**Amanda Nichole Mace** — driving while license suspended, speeding (15-18 miles over) in a 65 zone; 06/22; JCSO

**Terris Lavell Murray** — speeding (30-34 miles over) in a 65 zone, reckless driving, child restraint law child seat safety belt, possession of marijuana less than 1 oz.; 06/23; JCSO

**Tommy Jesus Rodriguez** — theft by taking; 06/21; JCSO

**Jean Carlos Sobrado Cruz** — speeding (15-18 miles over) in a 65 zone, driving while license suspended; 06/21; JCSO

**Joseph Daniel Verno** — reckless driving, speeding (35 and over) in a 65 zone; 06/21; JCSO

## Grant

Continued from front

vide equal access to basic necessities. Award recipients are selected annually from across the railroad's 22-state network.

"With a history spanning more than 200 years across thousands of communities, Norfolk Southern is proud to be a part of the towns, cities, and

states we serve," said Kristin Wong, Director Corporate Giving at Norfolk Southern. "Norfolk Southern employees live, work, and play in every community across our network, and we are committed to seeing those communities thrive."

**COME AND GET IT!!!** *Southern Cookin'* **BUFFET**

**Sunday - Friday**  
**11:00 am - 2:00 pm**

*Cotton*

535 Cotton Ave.  
Millen, Georgia 30442 (478) 982-3432

## LOOKING BACK

{this week in Jenkins County history}

COMPILED BY TARA SASSER

### 10 YEARS AGO — JULY 2, 2014

Georgia Certificate of Merit award winners at Jenkins County High School were Austin Wagner, Tyler Wagner, Henry Sherrod, and Will Collier.

Veronica Cowart, President of the Jenkins County Retired Educators, presented Sarah Beth Cates with the Retired Educators Scholarship of \$500. Mark Brannen received the Jim Hite Memorial Scholarship, presented by Joyce Hodges-Hite, Secretary. Funds were matched by Roy Chalker, owner of The Millen News.

Georgia Southern University announced the President's and Dean's List students. William Wilson, Jessica Head, Gabrielle Collins, David Hodges, Jessica Hodges, Hanna Lindsey, Sara Burke, Don Gay IV, Jena Branch, Whitley Clark and Krysten Pail, all from Jenkins County.

### 25 YEARS AGO — JUNE 30, 1999

The Georgia Games torch came through Millen as it traveled from Valdosta to Augusta where it lit the ceremonial games torch at the opening ceremonies. The torch was carried by a crew of cyclists and runners who were accompanied for the last mile by runners of Jenkins County.

Six Flags coloring contest winners were presented by The Millen News - Haley Lyn Johnson, 11 years old;

Kristin India McLamb, 5 years old; and Jake Williams, 6 years old.

Jenkins County 4-H'ers participating in the summer tennis classes with this year's theme of "Love, Set, Match" were Melissa Carroll, Lula Brown, Chris Gregory, Eddie Solsberry, and Tiffany Wilson

### 50 YEARS AGO — JULY 4, 1974

R. H. Reeves III returned to private practice. Reeves received his B.A. and Doctor of Jurisprudence degrees from Emory University and served a year in the U.S. Navy prior to returning home.

The new Jenkins County Hospital was in the making for several months, leaving citizens confused as to what was taking so long. The Millen News investigated and was amazed at how far the actual progress had come. While the exterior was completed, the interior was in the process of being finished with the installation of state-of-the-art equipment. The hospital administrator said that the staff had to be trained on all of the new technology. The contract price for completion of the hospital was \$854,000.

## MAGNOLIA SPRINGS CALENDAR OF EVENTS

Saturday, July 6

**Camp Lawton Guided Tour — 9-9:45 a.m.** Explore the grounds of what was once the largest prison in the world. Admission to the History Center is included. Gather on the Camp Lawton History Center front porch. \$5 plus \$5 parking.

**Gopher Tortoise Salad — 11-11:30 a.m.** Join us by the Nature Center to meet our gopher tortoise and prepare salads for her to enjoy this coming week. Learn how to plan a healthy gopher tortoise salad with the right amount of greens, vegetables, and fruits. Registration is required in advance. Free with donations of food for the salads. \$5 parking.

**Archery — 3:30-4:30 p.m.** Learn archery from a certified instructor with all equipment provided. This is a great opportunity for experienced archers to improve their skills. Meet at the archery range. \$10 plus \$5 parking.

## WHAT'S NEXT?

(your guide to events in Jenkins County)

• • • • •  
(The deadline for submitting items for inclusion in the "What's Next" column is 12 p.m. Fridays.)

### JCDA to meet July 1

The Jenkins County Development Authority will meet 10 a.m. Monday, July 1, at the City of Millen Municipal Building.

### Sign-up for Fair-on-the-Square Beauty Pageant

Sign-up for the Miss Fair-on-the-Square Beauty pageant is currently underway. For more information, contact the Jenkins County Chamber of Commerce office at 478-982-5595.

### Patriotic celebration set for July 3

The annual Patriotic celebration is set for July 3 at the Jenkins County Recreation Department. Mark your calendars!

### History being made at Jenkins County Airport July 6

History is being made in Jenkins County on July 6 by Leo and Rozena Patterson as the first blacks to own an airplane in Jenkins County. Complimentary flights will be given on July 6 from 9-11 a.m. at the Jenkins County Airport, weather permitting. Refreshments supplied.

### CRAVIN meeting July 8 at BOE office

Get involved with your Neighborhood Watch group! Join the Community Rally Against Violence In our Neighborhoods (C.R.A.V.I.N.) group! Tell a friend and bring a friend to the next meeting on Monday, July 8, at 6 p.m. at the Jenkins County Board of Education office.

## PUBLIC HEARING NOTICE

The Jenkins County Board of Commissioners will hold a PUBLIC HEARING regarding the proposed Solid Waste Management Plan on Tuesday, July 9, 2024 at 3:00 P.M. in the Commissioners' Meeting Room at the James L. Henry Administrative Building. A copy of the proposed plan is available for review at the Commissioners' Office.

### Public Meeting Jenkins County Pre-Disaster Hazard Mitigation Plan Update

Jenkins County and the City of Millen will hold a joint Jenkins County will begin its five-year update of their FEMA approved Pre-Disaster Hazard Mitigation Plan. As part of the planning process, Jenkins County is holding a public kick-off meeting on July 10, 2024 at 1:00 p.m. in Jenkins County Board of Commissioners Building 833 E. Winthrop Ave. Millen, GA. Civic organizations, local businesses, and citizens of Jenkins County and Millen are encouraged to attend. The purpose of the meeting will be to outline the planning process and gather public input. Please contact Jenkins County EMA Grady Saxon at 478-982-2563 if you have any questions.

Jenkins County is committed to providing all persons with equal access to its services, programs, activities, education and employment regardless of race, color, national origin, religion, sex, familial status, disability or age. Persons with special needs relating to handicapped accessibility or foreign language shall contact Grady Saxon, County Administrator at 478-982-2563 prior to July 10, 2024. This person can be located at Jenkins County Board of Commissioners, 833 E. Winthrop Ave. Millen, GA between the hours of 8:30 am - 4:30 pm, Monday through Friday, except holidays. Persons with hearing disabilities can contact the Georgia Relay Service at (TDD) 1-800-255-0056 or (Voice) 1-800-255-0135.

### Statement Of Non-Discrimination

The Technical College System of Georgia and its constituent Technical Colleges do not discriminate on the basis of race, color, creed, national or ethnic origin, sex, religion, disability, age, political affiliation or belief, genetic information, disabled veteran, veteran of the Vietnam Era, spouse of a military member, or citizenship status (except in those special circumstances permitted or mandated by law). This non-discrimination policy encompasses the operation of all technical college-administered programs, programs financed by the federal government including any Workforce Innovation and Opportunity Act (WIOA) Title I financed programs, educational programs, and activities, including admissions, scholarships and loans, student life, and athletics. It also encompasses the recruitment and employment of personnel and contracting for goods and services.

The Technical College System and Technical Colleges shall promote the realization of equal opportunity through a positive continuing program of specific practices designed to ensure the full realization of equal opportunity. The following person has been designated to handle inquiries regarding the non-discrimination policies:

ADA/Section 504 — Equity — Title IX (Students) — OCR Compliance Officer  
Helen Thomas, Director of Student Support Services  
Vidalia Campus, 3001 E. First Street, Vidalia, Office 165  
912-538-3126, hthomas@southeasterntech.edu

Title VI — Title IX (Employees) — EEOC Officer  
Melanie Walker, Director of Human Resources  
Vidalia Campus, 3001 E. First Street, Vidalia, Office 138B  
912-538-3230, mwalker@southeasterntech.edu



# JENKINS COUNTY PDM KICKOFF MEETING

Wednesday, JULY 10 @ 1:00 P.M.

NAME	ORGANIZATION	EMAIL
Amy Thorne	CSRA RC	athorne@csrarc.ga.gov
Aprile Young	CSRA RC	ayoung@csrarc.ga.gov
Charles Dixon	CSRA RC	cdixon@csrarc.ga.gov
Jennifer Bowen	Core Civic - Jenkins CC	Jennifer.bowen@corecivic.com
Shane Neasbitt	Jenkins County BOE	sneasbitt@jchs.com
John Paul Hearn	Jenkins Co BOE	jhearn@jchs.com
Henry Young	Jenkins Co. EMS	JenkinsCovtHems@gmail.com
Michaela Schiesser	GENA Haz Mit Planner	michaela.schiesser@gema.ga.gov
Rick Lane	Georgia Forestry	rlane@gfc.state.ga.us
Dennis Small	City of Millen	gas@cityofmillen.ga.gov
Jason Oglesby	County	jasonoglesby@jenkinscountyga.gov



**JENKINS COUNTY PDM KICKOFF MEETING**  
**WEDNESDAY, JULY 10 @ 1:00 P.M.**

NAME	ORGANIZATION	EMAIL
Clay Boulinan	City of Miller	Clay Boulinan a G Mail. Com
Grady Saxen	Jenkins County	gradysaxen@jenkinscountygga.gov
Joanna Greenway	DFCS	joanna.greenway@dhs.ga.gov
Clarissa Young	Jenkins Co Health Dept	clarissa.young@dph.ga.gov <del>clarissa.young@jphhs</del>
DWAYNE HERRINGTON	CITY OF MILLER	dherrington@cityofmillerga.gov
Robert Dylaby	Jenkins County	robertdylaby@jenkinscountygga.gov
Kenya Adams	Jenkins Co. Rec	Shakenya.adams@jenkinscountygga.gov
GIWEN WATSON	JENKINS COUNTY MERCHANTS ASSOC	Jenkins county merchant@gmail.com
Emmanuel Watson	JENKINS COUNTY MERCHANTS ASSO C	emmanuelwatson54@gmail.com

# 2024 Hazard Mitigation Plan Kickoff Meeting

Jenkins County – Millen

July 10 @ 1:00 p.m.

# Agenda

- Plan Overview
- Role of the Planning Team
- Critical Facilities
- Timeframe
- Next Steps
- In-kind Contribution Forms

# What is the Hazard Mitigation Plan?

- Every 5 years
- Funding from GEMA & FEMA
- What's in the plan?
  - Planning Process
  - Hazards
  - Mitigation Strategies
  - Maintenance



# Role of the Planning Team

- Mitigation accomplishments
- Update and prioritize mitigation actions
- Develop new goals
- Provide feedback on draft work
- Provide local expertise to increase plan effectiveness

# Hazards

- Flood



- Dam Failure



- Drought



- Wildfire



- Tornadoes



- Tropical Storms



- Severe Weather



- Winter Weather





# Critical Facilities

Please see handout

# Timeframe

- Last update was in 2019
- Must be updated every 5 years
- **Deadline** for GEMA submission: **10/29/2024**

# Next Steps

- We should have at least three meetings.
- In-kind labor match
- Committee members and a representative from each meeting should attend
- Encourage the public to attend

# Questions?

**\*Amy Thorne**

706 993 8601

[athorne@csrarc.ga.gov](mailto:athorne@csrarc.ga.gov)

**Michael Kimball**

706-210-2006

[mkimball@csrarc.ga.gov](mailto:mkimball@csrarc.ga.gov)

\* Amy Thorne will no longer be with the CSRA RC as of July 26, 2024

Final meeting  
public review  
notice, emails and  
sign in sheet after  
FEMA approval  
before adoption  
and public review  
period to be  
determined

Resolution # \_\_\_\_\_

Whereas Jenkins County has experienced damage from Wildfire, Thunderstorm Winds, Tornados, Tropical Storms, Lightning, Hail, Flood, Drought, Dam Failure and Winter Storms, on many occasions in the past, resulting in property loss, loss of life, economic hardship and threats to public health and safety;

Whereas a Jenkins County Joint Pre-Disaster Mitigation Plan has been developed after approximately one year of research and work by the Jenkins County Joint Pre-Disaster Mitigation Planning Committee and the people of the community;

Whereas the Plan recommends mitigation goals, objectives and action steps that will protect the people and property affected by natural hazards facing Jenkins County;

Whereas two public meetings were held to review the Plan as required by law;

Now therefore be it resolved by \_\_\_\_\_ of the \_\_\_\_\_ that

1. The Jenkins County Joint Pre-Disaster Mitigation Plan is hereby adopted as the official Plan of Jenkins County;
2. The respective officials identified in the strategy of the Plan are hereby directed to implement the recommended actions assigned to them in the Plan. These officials will report as directed in this Plan on their activities;
3. The Jenkins County Joint Pre-Disaster Mitigation Planning Committee will provide progress reports (as directed in the Plan) on the status of the implementation of the Plan to the Jenkins County Board of Commissioners.

**PASSED by the Jenkins County Board of Commissioners, this \_\_\_\_\_ day of \_\_\_\_\_**

\_\_\_\_\_  
**Commission Chairman**

**ATTESTED and FILED in my office this \_\_\_\_\_ day of \_\_\_\_\_**

\_\_\_\_\_  
**County Clerk**

SEAL



Resolution # \_\_\_\_\_

Whereas the City of Millen has experienced damage from Wildfire, Thunderstorm Winds, Tornados, Tropical Storms, Lightning, Hail, Flood, Drought, Dam Failure and Winter Storms, on many occasions in the past, resulting in property loss, loss of life, economic hardship and threats to public health and safety; on many occasions in the past, resulting in property loss, loss of life, economic hardship and threats to public health and safety;

Whereas a Jenkins County Joint Pre-Disaster Mitigation Plan has been developed after approximately one year of research and work by the Jenkins County Joint Pre-Disaster Mitigation Planning Committee and the people of the community;

Whereas the Plan recommends mitigation goals, objectives and action steps that will protect the people and property affected by natural hazards facing the City of Millen;

Whereas two public meetings were held to review the Plan as required by law;

Now therefore be it resolved by \_\_\_\_\_ of the \_\_\_\_\_ that

4. The Jenkins County Joint Pre-Disaster Mitigation Plan is hereby adopted as the official Plan of the City of Millen;
5. The respective officials identified in the strategy of the Plan are hereby directed to implement the recommended actions assigned to them in the Plan. These officials will report as directed in this Plan on their activities;
6. The Jenkins County Joint Pre-Disaster Mitigation Planning Committee will provide progress reports (as directed in the Plan) on the status of the implementation of the Plan to the Mayor and City Council of Millen.

**PASSED by the Mayor and City Council of Millen, this \_\_\_\_\_ day of \_\_\_\_\_**

\_\_\_\_\_  
**Mayor**

**ATTESTED and FILED in my office this \_\_\_\_\_ day of \_\_\_\_\_**

\_\_\_\_\_  
**City Clerk**

SEAL