WAYNE COUNTY HAZARD MITIGATION PLAN UPDATE 2021 - 2026

Wayne County Emergency Management Agency

Lux Mitigation and Planning Corp.

Wayne County, Georgia Hazard Mitigation Plan Update

2021 - 2026



Prepared for the Wayne County Board of Commissioners

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Wayne County's Hazard Mitigation Plan Update 2021

This document was funded in part by the Hazard Mitigation Planning Grant awarded to the Wayne County Emergency Management Agency by the Georgia Emergency Management Agency (GEMA) to fulfill the requirements of the Federal Disaster Mitigation Act of 2000 (DMA 2000). Wayne County's Hazard Mitigation Plan 2017 was updated by the Wayne County Hazard Mitigation Plan Update Committee and was prepared by Lux Mitigation and Planning Corp. For additional information, please contact Wayne County Emergency Management Agency.

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Resolution – Wayne County

RESOLUTION – WAYNE COUNTY, GEORGIA

WAYNE COUNTY HAZARD MITIGATION PLAN 2021-2026

WHEREAS, Wayne County and its municipalities recognize that it is threatened by several different types of natural and man-made hazards that can result in loss of life, property loss, economic hardship and threats to public health and safety; and

WHEREAS, the Federal Emergency Management Agency (FEMA) has required that every county and municipality have a pre-disaster mitigation plan in place, and requires the adoption of such plans in order to receive funding from the Hazard Mitigation Grant Program; and

WHEREAS, a Hazard Mitigation Plan is a community's plan for evaluating hazards, identifying resources and capabilities, selecting appropriate actions, and developing and implementing the preferred mitigation actions to eliminate or reduce future damage in order to protect the health, safety and welfare of the residents in the community; and

WHEREAS, the Wayne County 2021 Hazard Mitigation Plan has been prepared in accordance with FEMA requirements at 44 CFR 201.6; and

WHEREAS, the Plan will be updated every five years;

NOW, THEREFORE, BE IT RESOLVED, by the Board of Commissioners of Wayne County, Georgia, that:

1) Wayne County, Georgia, has adopted the Wayne County 2021 Hazard Mitigation Plan; and

2) It is intended that the Plan be a working document and is the first of many steps toward improving rational, long-range mitigation planning and budgeting for Wayne County and its municipalities.

PASSED, APPROVED AND ADOPTED by the Board of Commissioners of Wayne

County, Georgia, in regular session this _____ day of ______, 20____.

Chairperson

County Clerk

Resolution – Wayne County Municipalities

Requirement §201.6(c)(5)

RESOLUTION - CITY OF JESUP, GEORGIA

WAYNE COUNTY HAZARD MITIGATION PLAN 2021-2026

WHEREAS, Wayne County and its municipalities recognize that it is threatened by several different types of natural and man-made hazards that can result in loss of life, property loss, economic hardship and threats to public health and safety; and

WHEREAS, the Federal Emergency Management Agency (FEMA) has required that every county and municipality have a pre-disaster mitigation plan in place, and requires the adoption of such plans in order to receive funding from the Hazard Mitigation Grant Program; and

WHEREAS, a Hazard Mitigation Plan is a community's plan for evaluating hazards, identifying resources and capabilities, selecting appropriate actions, and developing and implementing the preferred mitigation actions to eliminate or reduce future damage in order to protect the health, safety and welfare of the residents in the community; and

WHEREAS, the Wayne County 2021 Hazard Mitigation Plan has been prepared in accordance with FEMA requirements at 44 CFR 201.6; and

WHEREAS, the Plan will be updated every five years;

NOW, THEREFORE, BE IT RESOLVED, by the Mayor and City Council of Jesup, Georgia, that:

1) The City of Jesup, Georgia, has adopted the Wayne County 2021 Hazard Mitigation Plan; and

2) It is intended that the Plan be a working document and is the first of many steps toward improving rational, long-range mitigation planning and budgeting for Wayne County and its municipalities.

PASSED, APPROVED AND ADOPTED by the Mayor and Council of the City of

Jesup, Georgia, in regular session this ____ day of _____, 20___.

Mayor

City Clerk

RESOLUTION - CITY OF ODUM, GEORGIA

WAYNE COUNTY HAZARD MITIGATION PLAN 2021-2026

WHEREAS, Wayne County and its municipalities recognize that it is threatened by several different types of natural and man-made hazards that can result in loss of life, property loss, economic hardship and threats to public health and safety; and

WHEREAS, the Federal Emergency Management Agency (FEMA) has required that every county and municipality have a pre-disaster mitigation plan in place, and requires the adoption of such plans in order to receive funding from the Hazard Mitigation Grant Program; and

WHEREAS, a Hazard Mitigation Plan is a community's plan for evaluating hazards, identifying resources and capabilities, selecting appropriate actions, and developing and implementing the preferred mitigation actions to eliminate or reduce future damage in order to protect the health, safety and welfare of the residents in the community; and

WHEREAS, the Wayne County 2021 Hazard Mitigation Plan has been prepared in accordance with FEMA requirements at 44 CFR 201.6; and

WHEREAS, the Plan will be updated every five years;

NOW, THEREFORE, BE IT RESOLVED, by the Mayor and City Council of Odum, Georgia, that:

1) The City of Odum, Georgia, has adopted the Wayne County 2021 Hazard Mitigation Plan; and

2) It is intended that the Plan be a working document and is the first of many steps toward improving rational, long-range mitigation planning and budgeting for Wayne County and its municipalities.

PASSED, APPROVED AND ADOPTED by the Mayor and Council of the City of

Odum, Georgia, in regular session this ____ day of _____, 20___.

Mayor

City Clerk

RESOLUTION – CITY OF SCREVEN, GEORGIA

WAYNE COUNTY HAZARD MITIGATION PLAN 2021-2026

WHEREAS, Wayne County and its municipalities recognize that it is threatened by several different types of natural and man-made hazards that can result in loss of life, property loss, economic hardship and threats to public health and safety; and

WHEREAS, the Federal Emergency Management Agency (FEMA) has required that every county and municipality have a pre-disaster mitigation plan in place, and requires the adoption of such plans in order to receive funding from the Hazard Mitigation Grant Program; and

WHEREAS, a Hazard Mitigation Plan is a community's plan for evaluating hazards, identifying resources and capabilities, selecting appropriate actions, and developing and implementing the preferred mitigation actions to eliminate or reduce future damage in order to protect the health, safety and welfare of the residents in the community; and

WHEREAS, the Wayne County 2021 Hazard Mitigation Plan has been prepared in accordance with FEMA requirements at 44 CFR 201.6; and

WHEREAS, the Plan will be updated every five years;

NOW, THEREFORE, BE IT RESOLVED, by the Mayor and City Council of Screven, Georgia, that:

1) The City of Screven, Georgia, has adopted the Wayne County 2021 Hazard Mitigation Plan; and

2) It is intended that the Plan be a working document and is the first of many steps toward improving rational, long-range mitigation planning and budgeting for Wayne County and its municipalities.

PASSED, APPROVED AND ADOPTED by the Mayor and Council of the City of

Screven, Georgia, in regular session this ____ day of _____, 20___.

Mayor

City Clerk

Preface

Mitigation Vision for the Future

Emergency Managers succeed or fail based on how well they follow the following fundamental principles of emergency management, mitigation, preparedness, response and recovery. Purposefully, our emergency management forefathers put the word mitigation first as a "means" to prevent or minimize the effects of disasters.

Mitigation is commonly defined as sustained actions taken to reduce or eliminate long-term risk to people and property from hazards and their effects. Hazard mitigation focuses attention and resources on community policies and actions that will produce successive benefits over time. A mitigation plan states the aspirations and specific courses of action that a community intends to follow to reduce vulnerability and exposure to future hazard events. These plans are formulated through a systematic process centered on the participation of citizens, businesses, public officials, and other community stakeholders.

Mitigation forms, or should form, the very foundation of every emergency management agency. To reduce, minimize, or eliminate hazards in their communities, emergency management agencies adopt and implement mitigation practices. The Federal DMA 2000 sets the benchmark and outlines the criteria for communities with the vision to implement hazard mitigation practices in their communities.

Wayne County and its municipalities realize the benefits achieved by the development and implementation of mitigation plans and strategies in their community. Wayne County's elected officials, public safety organizations, planners, and many others have proven that by working together towards the development and implementation of this plan, they can reduce the loss of life and property in their communities.

The jurisdictions covered by this plan include the following:

Wayne County City of Jesup City of Odum City of Screven **Table of Contents**

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Chapter One

Introduction

Summary of Updates for Chapter One

The following table provides a description of each section of this chapter and a summary of the changes that have been made to the Wayne County Hazard Mitigation Plan 2017.

Chapter 1 Section	Updates	
Introduction	Identification of Mitigation Goals	
Authority	Verbiage updated	
Funding	Verbiage updated	
Scope	Verbiage updated	
Purpose	Verbiage updated	
Consistency with Federal Guidelines	Verbiage updated	
Plan Review	 Verbiage updated Updated mitigation meeting dates for 2021 planning process 	
Hazard Mitigation Plan Update Committee	 Updated committee list to match the 2021 planning participants Updated to meet Federal guidelines 	
Public Participation	• Updated to match the 2021 planning process	
Multi-Jurisdictional Considerations	Updated with requirement descriptions	
Incorporation of Existing Plans, Studies, and Resources	• Updated with new plan, study, and resource incorporations	

Introduction

The Wayne County Hazard Mitigation Plan Update is the first phase of a multihazard mitigation strategy for the entire community. This Plan encourages cooperation among various organizations and crosses political sub-divisions. As written, this Plan fulfills the requirements of the Federal DMA 2000. DMA 2000 provides federal assistance to state and local emergency management agencies and other disaster response organizations to reduce damage from disasters. The Act is administered by GEMA and FEMA.

It is important that state and local government, public-private partnerships, and community citizens can see the results of these mitigation efforts; therefore, the goals and strategies need to be achievable. Wayne County's Hazard Mitigation Plan Update Committee adopted the following goals during plan development:

- GOAL 1 Maximize the use of all resources by promoting intergovernmental coordination and partnerships in the public and private sectors
- GOAL 2 Harden communities against the impacts of disasters through the development of new mitigation strategies and strict enforcement of current regulations that have proven effective
- GOAL 3 Reduce and, where possible, eliminate repetitive damage, loss of life and property from disasters
- GOAL 4 Bring greater awareness throughout the community about potential hazards and the need for community preparedness

This plan complies with all requirements and scope of work as described in Wayne County's Hazard Mitigation Grant application.

Authority

In the past, federal legislation has provided funding for disaster relief, recovery, and some hazard mitigation planning. The DMA 2000 is the latest legislation to improve the planning aspect of that process; it reinforces the importance of mitigation planning and emphasizes planning for disasters before they occur. The DMA 2000 establishes a pre-disaster hazard mitigation program and designates new requirements for the national post-disaster Hazard Mitigation Grant Program (HMGP). Section 322 identifies the new requirements for planning activities and increases the amount of HMGP funds available to states that have developed a comprehensive mitigation plan prior to the disaster.

State and local communities must have an approved mitigation plan in place prior to receiving post-disaster HMGP funds. Local mitigation plans must demonstrate that their proposed mitigation measures are based on a sound planning process that accounts for the risk to and the capabilities of the individual communities. To implement the new DMA 2000 requirements, FEMA prepared an Interim Final Rule, published in the Federal Register on February 26, 2002 at 44 CFR Parts 201 and 206, which establishes planning and funding criteria for states and local communities.

Developed in accordance with current state and federal rules and regulations governing local hazard mitigation plans, Wayne County's Updated Hazard Mitigation Plan will be brought forth to each participating jurisdiction in Wayne County to be formally adopted. The Plan shall be routinely monitored and revised to maintain compliance with the following provisions, rules, and legislation:

Section 322, Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as enacted by Section 104 of the Disaster Mitigation Act of 2000 (P.L. 106-390); and

FEMA's Interim Final Rule published in the Federal Register on February 26, 2002, at 44 CFR Part 201.

Funding

Wayne County was awarded a \$36,000 Hazard Mitigation Planning Grant by FEMA through GEMA for the update of Wayne County's 2015 Hazard Mitigation Plan with \$8,000 set aside for the HAZUS Report. FEMA contributed 75% and GEMA contributed 10% of the total cost of the Plan Update. The Hazard Mitigation Planning Grant required a 15% match by Wayne County. This match was fulfilled entirely (100%) by In-Kind contributions – time spent by county and municipal employees, local stakeholders, representatives from organizations, and citizen volunteers updating the Plan was provided instead of cash from the County's budget.

Scope

The scope of the Wayne County Hazard Mitigation Plan Update encompasses all areas of Wayne County, including municipalities. The Plan identifies all natural and technological hazards that could threaten life and property in Wayne County. The scope of this Plan includes both short and long-term mitigation strategies with implementation and possible sources of project funding.

The Hazard Mitigation Plan Update is organized to incorporate the requirements of Interim Final Rule 44 CFR 201.4.

Chapter One includes an overview of the Hazard Mitigation Plan Update, the overall goals of the plan, and details of the planning process as required by Interim Final Rule 44 CFR 201.4(c)(1).

Chapter Two of the Plan details the Wayne County profile, including the demographics, municipalities, and history of the county.

Chapter Three identifies the risk assessment process, past natural hazard events with associated losses, and current natural hazard risks. Potential losses are also analyzed as required by Interim Final Rule 44 CFFR 201.4(c)(2). Additionally, Chapter Three identifies and analyzes potential technological hazards faced by Wayne County.

Chapter Four identifies Wayne County's hazard mitigation goals and objectives, mitigation strategies and actions, and sources of potential funding for mitigation projects as required by Interim Final Rule 44 CFR 201.4(c)(3).

Chapter Five identifies the maintenance and implementation strategies for the Plan. The process for evaluation of the Hazard Mitigation Plan implementation progress is also detailed as required by Interim Final Rule 44 CFR 201.4(c)(4) and (5).

Purpose

The purpose of the Wayne County Hazard Mitigation Plan Update is to:

- Protect life, promote safety and preserve property by reducing the potential for future damages and economic losses that result from natural and technological hazards;
- Make communities in Wayne County safer places to live, work, and play;
- Qualify for grant funding in both the pre-disaster and post-disaster environments;
- Speed the recovery and redevelopment process following future disaster events;
- Demonstrate a firm local commitment to hazard mitigation principles; and
- Comply with state and federal legislative requirements for local multijurisdictional hazard mitigation plans.

Consistency with Federal and State Mitigation Policies

The Plan is intended to enhance and complement state and federal recommendations for the mitigation of natural and technological hazards in the following ways:

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

FEMA publishes several guidance documents for local governments on mitigating natural disasters. The updated Wayne County Hazard Mitigation Plan recognizes, adopts, incorporates, and endorses the following principles:

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

The private sector is often an overlooked segment of the community during disasters. It is vital that this sector of a community is included in mitigation efforts that are consistent with state and federal recommendations, such as the following:

• Develop mitigation incentives with insurance agencies and lending institutions;

- Encourage the creation of a business continuity plan for the continuance of commerce during and following a disaster; and,
- Partner with local businesses to educate customers about potential hazards in the community and possible mitigation ideas.

Individual citizens must be made aware of the hazards they may encounter. Additionally, they must be educated on how to protect themselves from the hazards they face. They must be shown that 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 updated Wayne County Hazard Mitigation Plan supports the following FEMA recommendations regarding individual citizens:

- Become educated on the hazards that may impact your community;
- Become part of the process by supporting and encouraging mitigation programs that reduce vulnerability to disasters; and,
- An individual's responsibility is to safeguard his/her family, as well as themselves, prior to a disaster event.

Plan Review

Requirement §201.6(c)(1)

The contractor, Lux Mitigation and Planning, had the primary responsibility for collecting updated information and presenting pertinent data to the Plan Update Committee. An online, Dropbox folder was created for Wayne County's Plan Update. The approved 2017 Hazard Mitigation Plan was uploaded to the Dropbox folder, and the link to the folder was emailed to all members of the Hazard Mitigation Plan Update Committee. Each chapter of the 2017 Plan was reviewed. Hazard vulnerability and risk assessment data was updated, as was critical infrastructure information.

Special attention and consideration were given to the review and edit of mitigation strategies listed in the 2017 Plan. The Plan Update Committee examined each strategy and determined whether the strategy had been completed, needed to be modified, was in progress, or no longer applied. The Committee was highly encouraged to create new mitigation strategies to meet the current needs of the county and municipalities. Mitigation strategies from other Georgia counties were reviewed to help with the creation of new strategies. When the Committee agreed a new mitigation action would be beneficial, it was tailored to Wayne County's needs and was included in the 2021 Plan. The contractor sent the Committee, including sporadically attending participants, regular emails which contained a Dropbox link to the most updated version of the Plan and encouraged the Committee to thoroughly critique each version.

Wayne County's Hazard Mitigation Plan Update Meeting Dates:

Wednesday, March 3, 2021	Kick-Off Meeting (Public Meeting #1)
Wednesday, April 14, 2021 Morning Session	(Public Meeting #2) 10:00 – 11:30 am Hazard Identification and Prioritization; Update Critical Facilities Information

Catered Lunch Served 11:30 am to 12:00 pm

Afternoon Session	12:00 – 1:00 pm
	Community Risk Assessment Analysis; Review
	and Edit 2017 Hazard Mitigation Strategies

Tuesday, June 8, 2021 Morning Session

10:00 – 11:30 am Finish up review and Edit 2017 Hazard Mitigation Strategies; Identify New Mitigation Strategies

Catered Lunch Served 11:30 am to 12:00 pm

Afternoon Session12:00 – 1:00 pmReview and Discuss 2021 Hazard MitigationPlan – Draft; Update Plan Distribution List;Discuss Available Hazard Mitigation Grants

The public is welcome and encouraged to attend all Hazard Mitigation Plan Update meetings.

Each section of Wayne County's 2017 Hazard Mitigation Plan has been revised in some manner. Therefore, a summary of those changes will be listed in the first section of each chapter. Significant additions/modifications to this Plan include the following:

- Addition of Winter Storms to Natural Hazards
- Addition of Earthquakes to Natural Hazards
- Incorporation of Technological Hazards into the Hazard Mitigation Plan
- Addition of Dam Failure to Technological Hazards
- Addition of Hazardous Materials Incident to Technological Hazards
- Addition of Infrastructure Failure to Technological Hazards
- Addition of Terrorism to Technological Hazards
- Addition of Emergent Infectious Diseases to Technological Hazards
- Addition of Transportation Incident to Technological Hazards
- Addition of Radiological Incident to Technological Hazards

Hazard Mitigation Plan Update Participants

Requirement §201.6(b)(2)

The following participants contributed to the update of Wayne County's 2017 Hazard Mitigation Plan: (*in alphabetical order*)

Elton Aspinwall *Engineer* Wayne County Road Department

James G. Cote Deputy Director - Wayne County Emergency Management Agency Information Technology Administrator - Wayne County Sheriff's Office

Sharon Courson

Deputy Director Wayne County Emergency Management Agency

James Cutbirth Manager of Health and Safety Rayonier Advanced Materials

Julian "Jay" C. Fulton, Jr. Coroner Wayne County

Mike Hargrove

Chief Deputy Wayne County Sheriff's Office

Richard Johnson *Director* Wayne County Emergency Services

Angie Jones Director of Quality, Risk Management, and Disaster Preparedness Wayne Memorial Hospital

Dell Keith *Executive Director* Wayne County Industrial Development Authority Sean P. Kelly Superintendent Wayne County Schools

David Knopf Advanced Emergency Medical Technician Wayne County Emergency Medical Services

Perry L. Morgan *Acting Chief; Captain of Investigation* City of Jesup Police Department

Cheyenne Mosley Assistant City Clerk City of Odum

Robert "Chuck" F. Moseley Sheriff Wayne County Sheriff's Office

Donald "Donnie" Ray *Director* Wayne County Emergency Management Agency

Tammi Roberson *Evidence Technician* Wayne County Sheriff's Office

Pamela Shuman Director of Pre-K and Student Services Wayne County Board of Education

Donald Sloan *Chief* City of Screven Police Department

Shawn Stanley Safety Administrator Federal Correctional Institution – Jesup

Chad Swanson *Dean for Academic Affairs* Coastal Pines Technical College Alan D. Volskay

Local Manager for Wayne, Long, Tattnall Counties Georgia Power Company

Todd Wise Emergency Management Assistant Wayne County Sheriff's Office

The Plan Update Committee relied on their consultant to guide them through the update process. During meetings, the participants had productive discussions, expanded their professional networks, asked thoughtful questions, made important decisions, and provided critical input during key stages in the update process. Efforts were made to involve all county and municipal departments, as well as community organizations and local businesses, that may have a role in the implementation of mitigation actions and/or policies. These efforts included sending invitations via email to attend the Kick-off Meeting, sending reminder emails before each upcoming meeting, emailing pertinent information throughout the process, and requesting the review and critique of each chapter in the updated Plan.

All neighboring counties – Appling, Brantley, Glynn, Long, McIntosh, Pierce, and Tattnall – were asked to peer review the 2021 Mitigation Plan draft. The Plan was sent to each County EMA office. Wayne County had significant support and contribution to the Hazard Mitigation Plan Update process from surrounding jurisdictions. Additionally, the EMA Directors from surrounding counties were asked to attend Plan Update Committee meetings in hopes they would share mitigation ideas from their own counties.

Public Participation

Requirement §201.6(b)(1) State Requirement Element F2

Public awareness is a key component of any community's overall mitigation strategy. As citizens become more involved in decisions that affect their safety, they may develop a greater respect for the natural hazards present in their community, and thus, may take the steps necessary to reduce potential impacts of those hazards.

The following local organizations and businesses participated in the update of Wayne County's 2017 Mitigation Plan:

The Plan Update Committee took it upon themselves to ensure the processes undertaken for the development, implementation, and maintenance of the 2021 Hazard Mitigation Plan adequately considered public needs and viewpoints.

A list of public outreach initiatives can be found below:

- Email reminders were sent to all Plan Update Committee members, as well as other stakeholders, prior to every meeting. Recipients were encouraged to share the meeting invitation with anyone they thought would be an asset to the Plan Update process or anyone who may want to learn more about what a Hazard Mitigation Plan is.
- A Public Meeting was held on March 3, 2021 in conjunction with the regularly scheduled meeting of the Wayne County Hazard Mitigation Planning Committee. This meeting was advertised through multiple means, including on the Wayne County Emergency Management Facebook Page. No members of the general public attended the meeting and no feedback from the public was provided.
- A Public Meeting was held on April 14, 2021 in conjunction with the regularly scheduled meeting of the Wayne County Hazard Mitigation Planning Committee. This meeting was advertised through multiple means, including on the Wayne County Emergency Management Facebook page. No members of the general public attended the meeting and no feedback from the public was provided.

Documentation of Public Meeting Notice

Wayne County Emergency Management Facebook Page (March 3, 2021 Meeting Notice)



Wayne County Emergency Management Facebook Page (April 14, 2021 Meeting Notice)



Multi-Jurisdictional Considerations

FEMA does not require cities and towns to adopt a local Hazard Mitigation Plan. However, the Federal DMA 2000 requires that all municipalities, wishing to be eligible to receive Hazard Mitigation Grants through FEMA, must adopt a local multi-hazard mitigation plan and must update that plan every five years. Wayne County's most recent Hazard Mitigation Plan was approved by FEMA in 2017. The 2021 Mitigation Plan is the third five-year update. This FEMA-approved 2021 Hazard Mitigation Plan makes Wayne County, City of Jesup, City of Odum, and City of Screven eligible for FEMA's Hazard Mitigation Grant Program, Flood Assistance Mitigation Grants, and Pre-Disaster Mitigation Grants.

As set forth by Georgia House Bill 489, the Emergency Management Agency is the implementing agency for projects pertaining to hazard mitigation. Wayne County is dedicated to work in the best interests of the County, as well as, its municipalities. A few mitigation strategies in Wayne County's 2021 Mitigation Plan apply to a specific municipality. Unless noted otherwise, mitigation strategies apply equally to all jurisdictions. During the creation and update of this Plan, Wayne County Emergency Management Agency solicited and received participation from the following Wayne County municipalities: Jesup, Odum, and Screven.

Distribution of Buildings on Wayne County

Source: 2021 Wayne County HAZUS Report

Incorporation of Existing Plans, Studies, and Resources

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

Existing Plans

2017 Wayne County Pre-Disaster Hazard Mitigation Plan 2019 State of Georgia Hazard Mitigation Plan 2014 State of Georgia Hazard Mitigation Plan Wayne County Local Emergency Operations Plan Georgia Forestry Commission's Wayne Co. Community Wildfire Protection Plan Wayne County Joint Comprehensive Plan Wayne County Growth Management Plan

Studies

2021 Hazard Risk Analyses (HAZUS Report)
2017 United States Department of Agriculture Ag Census
2010 United States Census and 2016/2017 Census Estimates
2009 Wayne County Flood Insurance Study
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.

Resources

2014 City of Boston Natural Hazard Mitigation Plan Update 2010 Camden County Joint Hazard Mitigation Plan Update 2010 Northern Virginia Hazard Mitigation Plan Update National Climactic Data Center National Weather Service Wayne County Tax Assessor's Data Wayne County Website Georgia Mitigation Information System Database Colorado State University (Hurricane mapping) United States Geological Survey FEMA Flood Insurance Rate Maps National Flood Insurance Program United States Coast Guard National Response Center Data Georgia Department of Transportation Georgia Safe Dams Program Southern Group of State Foresters Wildfire Risk Assessment

Existing Planning Mechanism	Reviewed?	Incorporation into
	Y es/ino	Baseline for the 2021 Plan
2017 Wayne County Hazard Mitigation Plan	Yes	updated mitigation strategies; updated hazards; updated Wayne County information
2019 State of Georgia Hazard Mitigation Plan	Yes	Hazard descriptions; potential hazards; mapping mechanisms; potential mitigation strategies that could be adopted on a local level
Wayne County Local Emergency Operations Plan (LEOP)	Yes	Identification of current resources; identification of current capabilities
Georgia Forestry's Wayne County Community Wildfire Protection Plan (CWPP)	Yes	Mitigation strategies for wildfire and drought; historical data
2017 USDA Agriculture Census	Yes	Agricultural data regarding potential losses for drought and wildfire
2010 United State Census	Yes	To update Wayne County's profile information
2009 Wayne County Flood Insurance Study	Yes	Identify potential flood prone areas; prioritization of flood- related mitigation strategies
Wayne County Comprehensive Plan	Yes	To identify future development trends; identify mitigation strategies to curb trends in a direction that considers the hazards of the area
Wayne County Growth Management Plan	Yes	To identify future development trends; identify mitigation strategies to curb trends in a direction that considers the area's hazards
Wayne County Flood Mitigation Assistance Plan	No	No such plan exists
2021 Wayne County HAZUS Report	Yes	Hazard Analysis

Application of Existing Plans and Studies

Chapter Two

Wayne County Profile

Summary of Updates for Chapter Two

The following table provides a description of each section of this chapter and a summary of the changes that have been made to the Wayne County Hazard Mitigation Plan 2017.

Chapter 2 Section	Updates		
Past Hazards	 This information involved a review of the hazards listed in the previous plan. Information was updated for the last 50 years 		
History	• Expanded and updated from previous plan		
Past Events	 Identification of major hazard events in Wayne County for the last 50 years Focus on Federal Declarations and events since the last Hazard Mitigation Plan Update 		
Demographics	• Updated data to the 2019 Census estimate information		
Economy	• Updated data and information		
Government	Updated verbiage		
Municipalities	 New Section – Not a standalone section in 2017 Plan 		
Transportation	• Updated data and information		
Climate	• Updated data and information		
Utilities	• Updated data and information		
NFIP Compliance	 New Section – Not a standalone section in 2017 Plan 		



Past Hazards

Wayne County, Georgia, has faced many natural hazards in its long history. Severe thunderstorms have been the most prevalent of these hazards. In the last 50 years, Wayne County has been subjected to 250 documented severe thunderstorm events. These events include torrential rainfall, hail, thunderstorm-force winds, and lightning.

Tornadoes, which can sometimes spawn from severe thunderstorms, have also occurred, although with much less frequency. In Wayne County, there have been 13 documented tornadoes in the last 50 years.

Because of heavy rainfall, either within Wayne County or upstream, flooding has also occurred. In the National Climactic Data Center (NCDC) databases of the National Weather Service, there is documentation of 9 flooding events for Wayne County.

Winter storms and heavy snowfall have affected Wayne County over the last 50 years. Because these natural events are barely an annual occurrence, the preplanning and preparedness component of emergency management is not as robust as northern or western states that routinely see this type of weather. The NCDC recorded 2 winter storms or heavy snow events for Wayne County with two of these events occurring in the last five years.

Wayne County has been impacted by other less severe or less frequent hazards in the past. These hazards include, but are not limited to, the following: drought, excessive heat, tropical cyclones, earthquakes, and wildfires.

Wayne County has had 14 Presidential Disaster Declarations (FEMA-declared major disasters) – three of which have occurred since the adoption of the 2017 Hazard Mitigation Plan (one for Hurricane Michael in 2018, one for Hurricane Dorian in 2019 and two for COVID-19 in 2020).

History

Wayne County is Georgia's 28th county. In 1802, in the Treaty of Fort Wilkinson, the Creek Indians ceded land to Georgia. A portion of this land was used to create Wayne County in 1803. The county was named for General "Mad" Anthony Wayne who was a Pennsylvania commander during the Revolutionary War. Until 1850, the county bragged that it had no jails and had no need for one. In 1874, Jesup became the county seat. The current courthouse was built in 1903 and is on the National Register of Historic Places.

According to the 2010 U.S. census, Wayne County's population was 30,099, an increase from the 2000 population of 26,565.

Wayne County has relied heavily on forest products for its economic foundation. Early settlers floated logs down the Altamaha River to the Georgia Coast for processing. As railroads were built in the area the movement of timber went from the river to rail. A majority of timber is shipped out of the county to processing centers. Timber that is not sent out of the county winds up at local pulpwood processing mills.

Wayne County is known for its many outdoor recreation opportunities. The Altamaha River runs through the county which provides ample opportunities for water sports, fishing, and camping. Lake Lindsay Grace is another outdoor recreation destination. Wayne County is home to five Wildlife Management Areas: Little Satilla WMA, Penholoway Swamp WMA, Rayonier Corrido Lands WMA, Rogers WMA, and Sansavilla WMA. These wildlife management areas provide many outdoor recreation opportunities including boating, geocaching, hunting, fishing, and wildlife viewing.

There are four sites in Wayne County on the National Register of Historic Places. Three are located in the City of Jesup and one in the City of Odum.



Notable Past Events

- 2020, COVID-19 Pandemic (Federal Declaration x2)
- 2020, Tornado (EF1)
- 2019, Hurricane Dorian (Federal Declaration)
- 2019, Tornado (EF0)
- 2018, Hurricane Michael (Federal Declaration)
- 2018, Tornado (EF0)
- 2017, Hurricane Irma (Federal Declaration x2)
- 2016 Hurricane Matthew (Federal Declaration x2)
- 2013, Flash Flood Event
- 2012, Thunderstorm Wind Event
- 2009, Severe Storms, Flooding, Tornadoes, Straight-Line Winds (Federal Declaration)
- 2009, Tornado (EF1)
- 2008, Tornado (EF1)
- 2005, Tornado (F2)
- 2004, Tropical Storm Frances (Federal Declaration)
- 2003, Tornado (F0)
- 2002, Tornado (F0)
- 2002, Tornado (F0)
- 2000, Tornado (F0)
- 1999, Tornado (F0)
- 1998, Severe Storms and Flooding (Federal Declaration)
- 1995, Tornado (F1)
- 1993, Severe Snowfall, Winter Storm (Federal Declaration)
- 1980, Tornado (F0)
- 1977, Drought (Federal Declaration)

Federal Disaster Declarations





Source: Federal Emergency Management Agency (FEMA)



Source: 2019 State of Georgia Hazard Mitigation Strategy and Enhanced Plan

Demographics

County

	2000 Census	2010 Census	2019 Census Estimates
Population	26,565	30,099	29,927
White	76.7%	74.9%	76.3%
African American	20.3%	19.9%	20.2%
Hispanic/Latino	3.8%	5.7%	6.5%
Asian	0.4%	0.5%	0.8%
American Indian	0.2%	0.4%	0.6%
Two or More Races	1.0%	2.0%	2.1%
Median Age	35.5	37.6	38.9
Median Household Income	\$33,370	\$37,082	\$45,483
Persons in Poverty	18.6%	23.9%	18.4%
Homeowners	65.9%	69.8%	63.5%

Municipalities

	2000 Census	2010 Census	2019 Census Estimates
Jesup	9,279	10,214	9.841
Odum	414	504	503
Screven	702	766	771
Economy

Wayne County's economy is primarily agricultural with some light industry. Wayne County's cost of living is 22.3% below the national average. The unemployment rate in Wayne County is 5.5%, which is slightly below the State average of 5.6% and the National average of 6.3%. Wayne County has a median household income of \$45,483, which is slightly below the national average of \$68,703.

The ten largest private employers in Wayne County are:

Company	Product/Service
Absorption Corp	Manufacturing
Boykin Erectors, Inc.	Steel Fabrication
EAM Corporation	Manufacturing
Great Southern Wood Preserving	Wood Preservation
Harborview Jesup, LLC	Health Services
Harris ACE Hardware	Hardware Store
Rayonier Performance Fibers, LLC	Cellulose Manufacturing
Ssm Industries, Inc.	Mechanical Contractor
Universal Electric Co, Inc.	Electrical Contractor
WalMart	Retail/Department Store

The above list is in alphabetical order, not in order of company size. This data is according to the Georgia Department of Labor, 2019.

Government

The form of government specified in the County Charter is known as Commission-Administrator form of government, which provides for an elected body of Commissioners, one from each of five geographic districts and an administrator who is appointed by the commissioners. The commissioners are elected in fouryear terms. The County Manager is to oversee the day-to-day management of the County. Although each County Commissioner is elected as a representative from their respective districts, they represent the interests of the entire county and all its citizens.

The main duties of the Board of Commissioners is to pass local laws, known as ordinances, that regulate a variety of things that promote the health, safety and welfare of the citizens covered by them; to pass a balanced budget each year that funds its own operations as well as to allocate funds to the four Constitutional Officers, other elected officials, the courts and a variety of programs put in place by the State but funded locally; to ensure that necessary services are funded and provided; to set the millage rate for the County government and many other secondary duties.

The Board of Commissioners sets the County millage rate each year to fund a portion of the County budget. They also receive the millage rate that is set by the Board of Education and an assessment by the State which is submitted to the Georgia Department of Revenue each year.

The Board receives, deliberates and passes local ordinances each year and amends many others to reflect the changing times. Both require that a public hearing be held, and these are normally held during the regular Commission meetings. They also pass several resolutions and proclamations throughout the year. Generally, with some exceptions, the Board can pass any local law and ordinance they feel is needed for the County so long as it does not violate the laws of the State or Federal government or the Constitutional rights of any individual. These are researched thoroughly by legal staff before ever being brought to a hearing.

The Board of Commissioners provide many services that citizens expect through the revenues that are raised annually. These include Fire and Ambulance protection; E-911 dispatch services; Zoning and Planning; Inspections; Code Enforcement; Animal Control; Public Library; Public Works; and agencies that service all of these such as Building Maintenance, Vehicle Maintenance, and Emergency Management Services. The budget also funds state mandated services such as Law Enforcement and Detention; Superior, Probate, Magistrate and Juvenile courts; Tax Assessment and Tax Collection services; Elections management; District Attorney (shared with other counties) and some smaller funding for local agencies under the State of Georgia.

Transportation

Wayne County's transportation system consists primarily of state highways and county-maintained roads. US Highways 25, 84, 301, and 341, as well as Georgia State highways 23, 27, 38, 169, and 203 are major transportation routes that carry the majority of passenger and commercial traffic in and out of Wayne County. Congestion in these transportation corridors create traffic problems, primarily as a result of population growth. There are no interstate or mass transit systems servicing Wayne County.

Freight rail lines operated by the Norfolk Southern and CSX traverse Wayne County.

The Jesup-Wayne County Airport has one paved 5,500-foot runway that services charter and private aircraft. There are no commercial flights into or out of Jesup-Wayne Airport.

Climate

Wayne County, like much of Georgia, enjoys a temperate climate with four welldefined seasons: warm to hot summers; brisk fall temperatures; relatively brief, cool winters; and a warm spring season. As a result, there exists a long growing season in Georgia, perfect for ornamental and economic-boosting agricultural plants.

Month	Average Georgia	Average Wayne				
	Temperature	County Temperature				
January	46	50				
February	49	53				
March	56	60				
April	63	67				
Мау	70	73				
June	77	80				
July	80	81				
August	79	81				
September	74	76				
October	64	67				
November	56	57				
December	48	54				

AVERARE MONTHLY TEMPERATURES IN GEORGIA (FAHRENHEIT)

Utilities

Wayne County's utility needs are met by a variety of public and private entities. Electrical power in Wayne County is provided by the Coastal EMC, Okefenoke EMC, Satilla EMC, and Georgia Power.



Source: Planters EMC

NFIP Compliance

JURISDICTION	PARTICIPATING?	PARTICIPATION DATE
WAYNE COUNTY	Yes	9/30/88
JESUP	Yes	2/4/88
Odum	Yes	4/5/11
SCREVEN	Yes	3/28/14

Municipalities



The City of Jesup's history is very closely tied to that of the railroad. After the Civil War, Mr. Willis Clary came to what was then simply known as Station Number 6 on the Atlantic and Gulf Railroad. Using his own money, Mr. Clary had the town surveyed and eventually became the first mayor. The city was formally established in 1870. It is unclear where the name of the town came from, but several theories persist.

Through the early 1900s, the City of Jesup remained a small hamlet. Businesses grew up along the streets that ran parallel to the railway. In the 1930s, Mayor Solomon Cohen saw that there was a need for jobs for the citizens that were not affiliated with the railway. At his persuasion, the Sea Island Cotton Company located a shirt factory in Jesup. During WWII, many women from the town traveled to Brunswick to work building Liberty ships. The City of Jesup also was the site of an Italian prisoner of war camp during WWII. Many of the men in the camp were used as laborers at the McCann Lumber Mill due to the shortage of manpower.

Jesup is currently home to many unique industries and specialized hazards. This includes the hypochlorite stored at the City of Jesup water department for water treatment. Jesup is also home to Rayonier Advanced Materials (a world leading producer of cellulosic fiber products), EAM (manufacturer of innovative, high-quality absorbent core solutions), Healthy Pet (natural plant fiber pet bedding and litter), Great Southern Wood (pressure treated lumber), and Sierra International Machinery (fabrication of recycling equipment).

Jesup is also home to many unique points of interest and tourist attractions. These include the downtown Jesup area (home to over 100 businesses), The Jesup Drive In theatre, the Historic Strand Cinema, the Jaycee Landing on the Altamaha River, the Jesup Historic Train Depot, the McMillan Creek Greenway, and the Railfan platform.

The City of Jesup is governed by a Commission/Mayor/City Manager form of government. The City Manager serves as the administrative and fiscal head of the

city's government. The Commission is comprised of six Commissioners who are elected on a non-partisan basis and serve four-year, staggered terms. The Commissioners are elected from six council districts. The Mayor is elected citywide and also serves a four-year term. Together, the Commission and Mayor are the policy making and legislative authority for the city. The City Manager is appointed by the Commission and Mayor.

The City of Jesup provides a wide range of services to the citizens. These services include police and fire protection, solid waste collection and disposal, parks and recreation, stormwater and sewer services, water services, public housing, public transportation, code enforcement, planning and zoning, street lighting, construction and maintenance of roads, building inspections, development authority, and utility services. The City of Jesup encompasses 16.59 square miles of Wayne County.

City of Odum



The City of Odum began as a post office in 1871. At that time, the area was called Haslum for the Haslum sawmill that operated in the vicinity. The area went by several names prior to becoming known as Odum. These names include Haslum (for the sawmill), Satilla (for the nearby creek), Number Five (for the railroad station), and finally Odum (for early settler Godfrey Odum). The city was officially incorporated in 1907. Odum is home to the annual Odum Day Parade and Festival. Odum was directly impacted by a tornado in April of 2020, which destroyed 3 homes and damaged approximately 25 more within the City of Odum.

The government of Odum consists of a mayor and five aldermen who are elected by the citizens in city-wide elections to four-year terms. The city mostly provides administrative services, such as planning and zoning, to its citizens. The City of Odum also provides street maintenance, fire protection, waste collection and disposal, stormwater and sewage services, water services, and street lighting to its citizens. The City of Odum encompasses 1.9 square miles of Wayne County.

City of Screven



The City of Screven began as a station along the railway. In 1857 the line from Savannah to what was then known as Station Screven was completed. The town was named for Dr. James Proctor Screven of the Atlantic and Gulf Railroad. Originally, the City of Screven was part of Appling County but became part of Wayne County when county lines were redrawn following the Civil War. Even though the area has been occupied as a community since the 1850s, the City of Screven was officially incorporated in 1959.

During the Civil War, the Confederate Army had a training camp, Camp Harrison, in Screven during the fall of 1860. After the Civil War, Captain Christopher Columbus Grace came to Screven and erected a sawmill that led to the community's growth. In 1880, Captain Grace help found the first church in Screven, the Screven Methodist Episcopal Church. The town continued to grow along with the railroad over the next several years. Screven was once the largest town in Wayne County due to its association with the railroad. The City of Screven is known for the Screven Ghost Light. The Ghost Light is a bouncing orb of light that has been seen for over a century at the railroad crossing on Bennett Road. It is seen often after rain and after a train has passed through.

The government of Screven consists of an elected mayor and five elected city councilmembers. Councilmembers are elected by district and serve four-year, staggered terms. The city mostly provides administrative services, such as planning and zoning, to its citizens. The City of Screven also provides law enforcement, fire protection, solid waste collection and disposal, street construction and maintenance, parks and recreation, stormwater and sewage management, and street lighting to its citizens. The town encompasses 2.2 square miles of Wayne County.

Chapter Three

hazard Profiles

Summary of Updates for Chapter Three

The following table provides a description of each section of this chapter, and a summary of the changes that have been made to the Wayne County Hazard Mitigation Plan 2017.

Chapter 3 Section	Updates
Risk Assessment	 Expanded the explanation of the Risk Assessment Added an explanation of each part of the Hazard Information
Natural Hazard Thunderstorms	 Renamed from Windstorms Updated and consolidated hazard profile with new data Added hail and lightning hazards Content revised
Natural Hazard Winter Storms	• New Section – Not in 21017 Plan
Natural Hazard Flooding	 Updated and consolidated hazard profile with new data Land Use and Development trends updated to include municipal NFIP information Content revised
Natural Hazard Tornado	 Updated and consolidated hazard profile with new data Content revised
Natural Hazard Drought	 Updated and consolidated hazard profile with new data Content revised
Natural Hazard Wildfire	 Updated and consolidated hazard profile with new data Content revised
Natural Hazard Earthquake	• New Section – Not in 2017 Plan
Natural Hazard Tropical Cyclone	 Updated and consolidated hazard profile with new data Content revised

Combined Coastal Storms and Hurricanes from previous plan
• New Section – Not in 2017 Plan
• New Section – Not in 2017 Plan
• New Section – Not in 2017 Plan
• New Section – Not in 2017 Plan
• New Section – Not in 2017 Plan
• New Section – Not in 2017 Plan
• New Section – Not in 2017 Plan

Risk Assessment

Requirement §201.6(c)(2)(i and ii) Requirement §201.6(d)(3)

The Wayne County Hazard Mitigation Planning Committee conducted a comprehensive Threat and Hazard Identification and Risk Assessment (THIRA) for Wayne County and all municipalities. This assessment developed the hazard basis for this plan. The assessment includes the following components for each hazard:

- 1. *Hazard Identification*: The Wayne County Hazard Mitigation Planning Committee identified eight natural hazards and seven technological hazards for this Hazard Mitigation Plan. This is an increase one natural hazard and seven technological hazards from the previous iteration of the plan. Each hazard was identified using statistical data and records from a variety of sources. The list of hazards is based upon frequency, severity of impact, probability, potential losses, and vulnerability.
- 2. *Hazard Description*: Each hazard was described in detail. Many hazard descriptions came from the Georgia Hazard Mitigation Plan since many of the hazards that could impact the state could also potentially impact Wayne County.
- 3. *Profile of Hazards*: Each hazard was profiled as to how it could potentially impact Wayne County.
- 4. Assets Exposed to the Hazard: The plan considers critical facilities and infrastructure as part of the vulnerability assessment. This assessment determines the vulnerability of the municipalities and attempts to identify the populations most vulnerable to each hazard, although many have potential countywide impacts.
- 5. *Estimated Potential Losses*: Using critical facility and past history data, an estimation of potential losses due to a particular hazard event were determined.
- 6. *Land Use and Development Trends*: Land use trends were considered when determining the potential future impacts of each hazard. This is of importance regarding flooding and dam failure events.
- 7. *Multi-Jurisdictional Concerns*: Each jurisdiction was considered when determining the potential hazard impact.

At the second meeting of the Wayne County Hazard Mitigation Plan Update Committee, the attendees participated in a risk assessment of hazard for Wayne County. This risk assessment was based upon two primary factors: 1. How likely is a hazard to occur; 2. How prepared the committee meeting participants felt the community was for each hazard. This risk assessment relied on the committee meeting attendees to identify the hazards and then rank them by those two factors. As a result, the risk assessment could be skewed by the meeting participants, recency bias, and/or how the hazard would directly impact the organizations represented at this meeting. After additional discussion with the Wayne County Hazard Mitigation Plan Update committee at future meetings, the hazards in this chapter were the agreed upon list. Several of the hazards identified by the committee members were consolidated into expanded hazard descriptions. Those incorporations are notated in the below hazard ranking.

Hazard	Likelihood Score	Preparedness Score	Total Score
Severe Thunderstorms	44	0	44
Terrorism*	4	36	40
Hazardous Materials	10	19	29
Incident**			
Tornado	17	6	23
Radiological Incident	3	19	22
Civil Unrest*	0	12	12
Tropical Cyclone	10	1	11
Wildfire	7	1	8
Drought	8	0	8
Earthquake	1	7	8
Emergent Infectious Disease	2	6	8
Flooding	7	0	7
Winter Storm	4	2	6
Water Contamination**	0	6	6
Transportation Incident	3	2	5
Utility/Infrastructure Failure	0	1	1
Dam Failure	0	0	0

* Civil Unrest combined with Terrorism as a single hazard

** Water Contamination incorporated into Hazardous Materials Incident as a particular consequence of concern

Hazard Description

This section provides general and historical information about thunderstorms, including high wind, lightning, and hail. Other elements of thunderstorms, such as tornadoes and flooding, are addressed in their own sections.

Thunderstorms are formed when moist air near the earth's surface is forced upward through some catalyst (convection or frontal system). As the moist air rises, the air condenses to form clouds. Because condensation is a warming process, the cloud continues to expand upward. When the initial updraft is halted by the upper troposphere, both the anvil shape and a downdraft form. This system of up-drafting and down-drafting air columns is termed a "cell."

As the process of updrafts and downdrafts feeds the cell, the interior particulates of the cloud collide and combine to form rain and hail, which falls when the formations are heavy enough to push through the updraft. The collision of water and ice particles within the cloud creates a large electrical field that must discharge to reduce charge separation. This discharge is the lightning that occurs from cloud to ground or cloud to cloud in the thunderstorm cell. In the final stage of development, the updraft weakens as the downdraft-driven precipitation continues until the cell dies.



Each thunderstorm cell can extend several miles across its base and to reach 40,000 feet in altitude. Thunderstorm cells may compound and move abreast to form a squall line of cells, extending farther than any individual cell's potential.

In terms of temporal characteristics, thunderstorms exhibit no true seasonality in that occurrences happen throughout the year. Convectively, driven systems dominate the summer while frontal driven systems dominate during the other seasons. The rate of onset is rapid in that a single cell endures only 20 minutes.

(Hazard Description Continued)

However, various cells in different stages of development may form a thunderstorm that lasts up to a few hours as it moves across the surface.

In terms of magnitude, the National Weather Service defines thunderstorms in terms of severity as a severe thunderstorm that produces winds greater than 57 mph and/or hail of at least 1 inch in diameter and/or a tornado. The National Weather Service chose these measures of severity as parameters more capable of producing considerable damage. Therefore, these are measures of magnitude that may project intensity.

Lightning

Lightning occurs when the difference between the positive and negative charges of the upper layers of the cloud and the earth's surface becomes great enough to overcome the resistance of the insulating air. The current flows along the forced conductive path to the surface (in cloud to ground lightning) and reaches up to 100 million volts of electrical potential. In Georgia, lightning strikes peak in July, with June and August being second highest in occurrence.

Hail

Hail is a form of precipitation that forms during the updraft and downdraft-driven turbulence within the cloud. The hailstones are formed by layers of accumulated ice (with more layers creating larger hailstones) that can range from the size of a pea to the size of a grapefruit. Hailstones span a variety of shapes but usually take a spherical form. Hailstorms mostly endanger cars but have been known to damage aircraft and structures.

Hazard Profile

Severe thunderstorms, including high winds, hail, and lightning, are a serious threat to the residents and infrastructure of Wayne County. Severe thunderstorms are the most frequently occurring natural hazard in Wayne County. Many of these storms include high winds, lightning, and hail. Hail up to 2.5 inches was recorded in Wayne County on several occasions, most recently in 2005. Thunderstorm winds of 65 mph have been reported on many occasions in Wayne County, with the most recent occurring in 2020. While there have been dozens of documented thunderstorm events affecting Wayne County over the last 50 years, it is likely that the official number is a low estimate due to poor record keeping in decades past.

For example, only 14 thunderstorm events were recorded between 1971 and 1991, likely a vast underestimation of actual events.

Uniletana eire	Measu	irement	Updraft Speed		
nalistone size	in.	cm.	mph	km/h	
bb	< 1/4	< 0.64	< 24	< 39	
pea	1/4	0.64	24	39	
marble	1/2	1.3	35	56	
dime	7/10	1.8	38	61	
penny	3/4	1.9	40	64	
nickel	7/8	2.2	46	74	
quarter	1	2.5	49	79	
half dollar	1 1/4	3.2	54	87	
walnut	1 1/2	3.8	60	97	
golf ball	1 3/4	4.4	64	103	
hen egg	2	5.1	69	111	
tennis ball	2 1/2	6.4	77	124	
baseball	2 3/4	7.0	81	130	
tea cup	3	7.6	84	135	
grapefruit	4	10.1	98	158	
softball	4 1/2	11.4	103	166	

Most of the available information relating to severe thunderstorm events in Wayne County fails to describe damage estimates in any detail. With each thunderstorm event, there are likely unreported costs related to infrastructure costs, public safety response costs, utility repair costs, and personal home and business repair costs. Thunderstorms have occurred during all parts of the day and night and in every month in Wayne County.

The Wayne County Hazard Mitigation Plan Update Committee utilized data from the National Climatic Data Center, the National Weather Service, numerous weather-related news articles, and the Wayne County LEOP in researching severe thunderstorms and their potential impacts on the county. All information has been gathered on a countywide basis. All thunderstorm hazard data included for Wayne County is limited to countywide data and is not broken down by jurisdiction.

Natural Hazard: Thunderstorms Severe Weather Events



Source: 2019-2024 State of Georgia Hazard Mitigation Strategy and Enhanced Plan

(Hazard Profile Continued)

During the last 50 years, 164 thunderstorm events were recorded in Wayne County, with 150 of those occurring in the last 30 years. This number includes 42 hail events and only 6 lightning reports. According to these records, Wayne County has a 1.37% daily chance of a thunderstorm event based upon data from the last 30 years. Over the last 10 years, Wayne County has averaged 5.8 thunderstorm events per year (58 events). Due to improved record keeping protocols, the Wayne County Hazard Mitigation Plan Update Committee believes the data from the last ten years provides a more accurate representation of the thunderstorm threat to the county. The Wayne County Hazard Mitigation Plan Update Committee has also determined that the lightning threat is severely under-reported, as shown in the NCDC data numbers. For additional historical data, please see Appendix D.

As indicated by the below graphics, Wayne County averages between 12 and 20 flashes of cloud to ground lightning per square mile per year. That equals a 3.3% to 5.5% chance of a cloud-to-ground lightning strike on any given day. This shows a much higher indication of lightning occurrences than has been reported to the National Weather Service and the National Climatic Data Center. It is the determination of the Wayne County Hazard Mitigation Plan Update Committee that this data shows a more accurate representation of the scope of the threat that lightning poses to the citizens and infrastructure of Wayne County.





Source: 2019-2024 State of Georgia Hazard Mitigation Strategy and Enhanced Plan

Severe thunderstorm winds, which are defined as winds of at least 58 mph in conjunction with a convective event, have occurred with many thunderstorms that have affected Wayne County. These winds can exceed 100 mph and cause damage comparable to weak tornadoes. Below are two maps that identify the wind risk and the hazard wind score for the State of Georgia, including Wayne County. The Hazard Wind Score maps use the following scale:

Hazard Score	Wind Speeds
1	<90 mph gust
2	91 – 100 mph gust
3	101 – 110 mph gust
4	111 – 120 mph gust
5	>120 mph gust

Municipality	# of Thunderstorms	Annual Risk
JESUP	51	100%
ODUM	27	100%
SCREVEN	24	96%

This Table identifies the number of Thunderstorms for municipalities over the last 25 years

Assets Exposed to the Hazard

In evaluating assets that are susceptible to severe thunderstorms, the Wayne County HMPC determined that all public and private property is at threat by severe thunderstorms, including all critical facilities. This is due to the lack of spatially prejudice of severe thunderstorm events.



Source: 2019-2024 State of Georgia Hazard Mitigation Strategy and Enhanced Plan



Source: 2019-2024 State of Georgia Hazard Mitigation Strategy and Enhanced Plan

Estimated Potential Losses

Estimates of damage for the past events of the last 50 years are over \$399,000, or \$7.988 annually. However, all estimated damages reported have occurred over the last 28 years. When extrapolated over 28 years, the annual average nearly doubles to \$14,264. These numbers are thought to be a gross underestimation of actual past damages.

Land Use & Development Trends

Wayne County currently has no land use trends related to Thunderstorms.

Multi-Jurisdictional Considerations

Thunderstorm events have occurred across all areas of Wayne County. Crop damage from thunderstorm events would likely have the greatest impact in the rural areas of Wayne County. However, property damage numbers would be highest in more heavily populated areas due to greater population density. Thunderstorms have the potential to impact all areas of Wayne County.

Hazard Summary

Thunderstorm events pose one of the greatest threats of property damage, injuries, and loss of life in Wayne County. Thunderstorm events are the most frequently occurring weather event that threatens Wayne County. As a result, the Wayne County HMPC recommends that the mitigation measures identified in this plan for thunderstorms should be aggressively pursued due to the frequency of this hazard and the ability for this hazard to affect any part of Wayne County.

Thunderstorm Events Since 2017 in Wayne County

Location	County/Zone	<u>St.</u>	<u>Date</u>	<u>Time</u>	<u>T.Z.</u>	<u>Type</u>	Mag	<u>Dth</u>	lnj	<u>PrD</u>	<u>CrD</u>
Totals:								0	0	5.90K	0.00K
REDLAND	WAYNE CO.	GA	02/07/2017	22:00	EST-5	Thunderstorm Wind	45 kts. EG	0	0	2.00K	0.00K
JESUP	WAYNE CO.	GA	05/04/2017	13:28	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<u>JESUP</u>	WAYNE CO.	GA	05/04/2017	14:30	EST-5	Hail	1.25 in.	0	0	0.00K	0.00K
JESUP WAYNE CO ARPT	WAYNE CO.	GA	05/04/2017	14:30	EST-5	Hail	1.00 in.	0	0	0.00K	0.00K
<u>JESUP</u>	WAYNE CO.	GA	05/04/2017	14:30	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<u>ODUM</u>	WAYNE CO.	GA	07/19/2017	20:10	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
MC KINNON	WAYNE CO.	GA	03/20/2018	14:00	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
<u>SCREVAN</u>	WAYNE CO.	GA	03/20/2018	14:00	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
<u>JESUP</u>	WAYNE CO.	GA	04/15/2018	12:00	EST-5	Thunderstorm Wind	45 kts. EG	0	0	0.20K	0.00K
REDLAND	WAYNE CO.	GA	06/02/2018	13:45	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<u>SCREVAN</u>	WAYNE CO.	GA	07/21/2018	11:09	EST-5	Thunderstorm Wind	45 kts. EG	0	0	0.50K	0.00K
MADRAY SPGS	WAYNE CO.	GA	03/03/2019	18:16	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
MT PLEASANT	WAYNE CO.	GA	04/08/2019	17:05	EST-5	Thunderstorm Wind	45 kts. EG	0	0	1.00K	0.00K
<u>SCREVAN</u>	WAYNE CO.	GA	04/19/2019	10:43	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<u>JESUP</u>	WAYNE CO.	GA	04/19/2019	10:47	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
JESUP	WAYNE CO.	GA	04/19/2019	10:50	EST-5	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
JESUP	WAYNE CO.	GA	04/19/2019	10:52	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
MADRAY SPGS	WAYNE CO.	GA	06/04/2019	14:30	EST-5	Hail	1.75 in.	0	0	0.00K	0.00K

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SCREVAN	WAYNE CO.	GA	06/20/2019	19:15	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
MT PLEASANT	WAYNE CO.	GA	03/04/2020	11:40	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
DOCTORTOWN	WAYNE CO.	GA	04/13/2020	06:40	EST-5	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
DOCTORTOWN	WAYNE CO.	GA	04/13/2020	06:40	EST-5	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
SCREVAN	WAYNE CO.	GA	06/19/2020	20:30	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
KVILLE	WAYNE CO.	GA	06/19/2020	20:40	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SCREVAN	WAYNE CO.	GA	06/19/2020	20:59	EST-5	Hail	1.00 in.	0	0	0.00K	0.00K
MADRAY SPGS	WAYNE CO.	GA	06/27/2020	20:06	EST-5	Thunderstorm Wind	52 kts. MG	0	0	0.00K	0.00K
MADRAY SPGS	WAYNE CO.	GA	08/18/2020	17:40	EST-5	Lightning		0	0	0.20K	0.00K
DRAWDY	WAYNE CO.	GA	08/18/2020	17:55	EST-5	Thunderstorm Wind	45 kts. EG	0	0	1.00K	0.00K
GARDI	WAYNE CO.	GA	09/01/2020	19:10	EST-5	Lightning		0	0	1.00K	0.00K
JESUP	WAYNE CO.	GA	12/24/2020	17:45	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K

Hazard Description

Severe winter storms bring the threat of ice and snow. There are many types of frozen precipitation that could create a severe winter weather event. Freezing rain consists of super cooled falling liquid precipitation freezing on contact with the surface when temperatures are below freezing. This results in an ice glazing on exposed surfaces including buildings, roads, and power lines. Sleet is easily discernable from freezing rain in that the precipitation freezes before hitting the surface. Often this sleet bounces when hitting a surface and does not adhere to the surface. However, sleet can compound into enough depths to pose some threat to motorists and pedestrians.

A heavy accumulation of ice, which is often accompanied by high winds, can devastate infrastructure and vegetation. Destructiveness in the southern states is often amplified due to the lack of preparedness and response measures. Also, the infrastructure was not designed to withstand certain severe weather conditions such as weight build-up from snow and ice. Often, sidewalks and streets become extremely dangerous to pedestrians and motorists. Primary industries, such as farming and fishing, suffer losses through winter seasons that produce extreme temperatures and precipitation.

Within Georgia, the impacts of winter storms are often contained within the northern part of the State. However, events like the 1993 "storm of the century" illustrated the vast impacts that one storm can have on the entire state. The winter storms with the greatest impacts on Georgia are the result of coastal storms coming up from the Gulf of Mexico, including the winter storms in 1973 and 1993. The 1973 storm produced snowfalls of up to 19 inches in parts of Central Georgia including the City of Thomaston in Upson County. Also, a major ice storm occurred in 2014, bringing up to 1 inch of ice to the eastern portion of the State near Augusta.

Severe winter weather exhibits seasonal qualities in that most occur within the months of January to March, with the highest probability of occurrence in February. The rate of onset and duration varies from storm to storm, depending on the weather system driving the storm. Severe winter weather rarely frequents the State of Georgia. However, the impacts of the storms substantiate severe winter weather's inclusion in the risk assessment.

Hazard Profile

While winter storms are not as frequent of an occurrence in Wayne County as they are in areas in the Northern US, they still have the potential to wreak havoc on the community when they do occur. Winter storms in Wayne County typically cause drastic damage to infrastructure, such as roads, power lines, and bridges.

They also can cause damage to private property, businesses, and trees throughout the county. The large number of trees in Wayne County can also become a hazard when the tree limbs become weighed down with snow and ice and begin to break and fall to the ground, potentially damaging private property, public property, or injuring people and animals.



Source: 2019-2024 State of Georgia Hazard Mitigation Strategy and Enhanced Plan

(Hazard Profile Continued)

During the past twenty-five years, documentation exists for 2 winter storm events in Wayne County. No consolidated data can be located prior to this timeframe. On average, Wayne County has averaged a winter storm every 12.5 years. Due to improved record keeping techniques, the HMPC believes that looking at the record for the last 20-year period provides a more accurate representation of the threat of winter storms for Wayne County. All winter storm data has been gathered on a countywide basis. For additional historical data, please see Appendix D. All winter storm hazard data included for Wayne County is limited to countywide data and is not broken down by jurisdiction.

Individual events of Winter Weather can be drastically different depending on many factors, including the duration of the event, the type of precipitation involved, and the depth of the precipitation. Winter Storm events can be a light dusting of snow, ¹/₄ inch of ice, or over a foot of snow. Other factors, such as wind, can influence the strength of these events. During the 1973 snow event, parts of Wayne County reported up to 5 inches of snow and all areas received at least 2 inches of snow.



Source: 2014 State of Georgia Hazard Mitigation Strategy (most up-to-date version)

Ice event are another type of winter storm that has impacted Wayne County in the past. These types of winter storms can be particularly crippling due to the increased threat of tree falls related to the weight of accumulated ice and subsequent utility infrastructure failure.



Source: 2019-2024 State of Georgia Hazard Mitigation Strategy and Enhanced Plan

Assets Exposed to the Hazard

Since winter storms are indiscriminate regarding location, the Wayne County HMPC determined that all public and private property, including all critical infrastructure, are susceptible to impacts from winter storms.

Estimated Potential Losses

The National Centers for Environmental Information (formerly the National Climactic Data Center) does not have any estimated damages from past winter weather events in Wayne County. The two winter weather events reported in Wayne County include a light snow accumulation event in 2010 and a freezing rain/ice event with only slight accumulation in 2014. As a result of the lack of data, potential loss projections are difficult for this type of hazard in Wayne County.

Land Use & Development Trends

Wayne County currently has no land use trends related to Winter Storms.

Multi-Jurisdictional Considerations

All portions of Wayne County could potentially be impacted by a winter storm, including freezing rain, sleet, and snow. Therefore, all mitigation actions identified regarding winter storms should be pursued on a countywide basis and including all municipalities.

Hazard Summary

Winter storms, which can include freezing rain, sleet, or snow, typically afford communities some advance warning, which is different from many other severe weather phenomena. The National Weather Service issues winter storm watches, advisories, and warnings as much as a day before the storm's impacts begin. Unfortunately, communities in the Southern United States are not equipped to handle winter storms due to their relative infrequent nature. Oftentimes, communities can face severe impact from these storms. The Wayne County HMPC recognizes the potential threats winter storms could have on the community and have identified specific mitigation actions as a result.

There have been no winter storm events in Wayne County since the adoption of the 2017 Wayne County Hazard Mitigation Plan.

Requirement §201.6(c)(2)(ii) Requirement §201.6(c)(3)(ii)

Hazard Description

Flooding is a temporary overflow of water on normally dry lands adjacent to the source of water, such as a river, stream, or lake. The causes of flooding include mass sources of precipitation, such as tropical cyclones, frontal systems, and isolated thunderstorms combined with other environmental variables, such as changes to the physical environment, topography, ground saturation, soil types, basin size, drainage patterns, and vegetative cover. Adverse impacts may include structural damages, temporary backwater effects in sewers and drainage systems, death of livestock, agricultural crop loss, loss of egress and access to critical facilities due to roads being washed-out or over-topped and unsanitary conditions by deposition of materials during recession of the floodwaters.

Floods are loosely classified as either coastal or riverine. Coastal flooding occurs when normally dry, low-lying land is flooded by sea water. Coastal flooding is usually associated with tropical cyclones in Georgia. Riverine flooding occurs from inland water bodies such as streams and rivers. Riverine flooding is often classified based on rate of onset. The first is slow to build, peak, and recede, often allowing enough time for evacuations. The other type of riverine flood is referred to as a "flash" flood, which rapidly peaks and recedes, thus giving insufficient time for evacuations. Flash floods are typically considered the most dangerous of these types.

On a broad scale, flooding can occur around any body of water or low-lying surface given enough precipitation or snowmelt. The spatial extent of the flooding event depends on the amount of water overflow but can usually be mapped because of existing floodplains (areas already prone to flooding).

Flooding in Georgia is highly dependent on precipitation amounts and is highly variable. Certain seasons are more prone to flooding to a greater likelihood of excessive precipitation. Typically, the wet seasons are during the winter, early spring, and midsummer. Late spring and fall are usually drier seasons.

Hazard Profile

The Wayne County HMPC researched flooding information for the last fifty years. The main sources of information used by the Wayne County HMPC came from the National Climatic Data Center, the Wayne County Emergency Operations Plan, and news media sources. It was determined that flooding has caused

(Hazard Profile Continued)

significant damage on many occasions over the last 20 years. One significant flooding event that affected Wayne County occurred in 2013. This event caused over \$100,000 in reported damages. Most of the damages associated with this event were related to flooded roadways, including US Highway 84, and a reported 20-30 homes with up to 1 foot of water in them in downtown Jesup. NCDC notates that the cost of damages related to this event are likely grossly underestimated. While data was collected for the entire 50-year timeframe, little information was available regarding flood events over that period, possibly due to poor record keeping. All flood data was gathered on a countywide basis.

Flood events within Wayne County are typically associated with areas of special flood hazard as identified on Flood Rate Insurance Maps (FIRMs) published by FEMA. Relatively little information is available regarding flooding damage estimates. However, with each flooding event, it is likely that significant costs arose related to road repair, infrastructure repair, and public safety response operations. Most of the flood damage in Wayne County's history appears to be related to roads and culverts washing out because of flood waters. All flooding hazard data included for Wayne County is limited to countywide data and is not broken down by jurisdiction.

Wayne County has many flood gages that provide information on potential impacted areas from floodwaters. The flood gage on the Altamaha River at Doctortown provides potential impact information for how a 100-year flood event could affect Wayne County. For this gage, flood stage is reached at 12 feet. At this level, farmlands and timber lands upstream and downstream from the gage will begin to flood. At 14 feet, Moderate flood stage is reached and the parking lots at two boat ramps begin to flood and three local hunting camps begin to be inundated with floodwaters. At 16 feet, Major flood stage is reached. At this point, one residence on Clanton Ranch would be inundated with up to 2 feet of water and homes on Penholloway Road are inundated with up to 6 inches of water. This river gage has a high mark of 18.6 feet in January of 1925. For the last 50 years, the high mark is 15.55 feet, which occurred in March of 1998.

The 2013 flash flood event is a good example of the potential impacts a flood event could have on the City of Jesup. In this event, 20-30 homes in the downtown Jesup area were inundated with up to 1 foot of water. US Highway 84 was under up to 3 feet of water from this event.

The City of Odum is bordered to the southwest by Little Satilla Creek. A 100-year flood event would likely flood US Highway 341 with up to 3 feet of water and eliminate access to Odum from the west. Additionally, a few homes on Louise Lane and Priscilla Avenue would be inundated with up to 1 foot of water from a tributary of Goose Creek.

For the City of Screven, Little Satilla Creek would flood properties on Wasdin Street and Cypress Way. One home on Nine Run Road would be inundated with 2-3 feet of water in a 100-year flood event. Flooding along Little Satilla Creek, Big Satilla Creek, and the Little Satilla River would cut off access to Screven from the south by blocking US Highway 84.

There are 9 documented flood events over the last 50 years. Based on the 50-year record, it can be inferred that such an event is likely to occur every 5.6 years in Wayne County. This relates to an 18% chance of a flood event occurring in a given year. However, all identified flood events have occurred over the last 25 years. When extrapolated over 25 years, Wayne County has averaged a flood every 2.8 and has a 36% annual chance of a flood event occurring.

For additional historical data, please see Appendix D.

Assets Exposed to the Hazard

To evaluate the assets that would potentially be impacted by flooding, the Wayne County HMPC attempted to identify known structures within, or close to, the 100-year floodplain. There are approximately xx buildings identified in the flood plain.

Municipality	# of Flood Events	Annual Risk
JESUP	5	20%
ODUM	4	16%
SCREVEN	4	16%
COUNTYWIDE/ UNINCORPORATED AREA	6	24%

The above information is for the last 25 years



Source: 2019-2024 State of Georgia Hazard Mitigation Strategy and Enhanced Plan

Flood Events 1952-2017 NOAA/SHELDUS Data



Source: 2019-2024 State of Georgia Hazard Mitigation Strategy and Enhanced Plan

Estimated Potential Losses

The flooding events in Wayne County over the last 50 years have led to over \$100,000 in damages. Extrapolated over 50 years, this results in an annual average of \$2,000 per year. However, all reported damages have occurred in the last 20 years. As a result, the average over the last 15 years is \$5,000 annually. These estimations are believed to be a gross underestimation of both prior and potential damages from flood events.

Natural Hazard: Flooding



Source: 2019-2024 State of Georgia Hazard Mitigation Strategy and Enhanced Plan
Based upon the estimations from the Worksheet 3As located in Appendix E, a flood equivalent to the 1% riverine flood levels could result in estimated losses of more than \$xx million (xx buildings). However, it is possible that some areas may not experience total losses while others may be inundated with flood water who are not designated in the 1% riverine flood areas.

Land Use & Development Trends

Wayne County participates in the National Flood Insurance Program (NFIP) and follows the program's guidelines to ensure future development is carried out in the best interests of the public. The County (CID No. 130417) first entered the NFIP on September 30, 1988. According to the NFIP guidelines, the County has executed a Flood Damage Prevention Ordinance. This ordinance attempts to minimize the loss of human life and health as well as minimize public and private property losses due to flooding. The ordinance requires any potential flood damage be evaluated at the time of initial construction and that certain uses be restricted or prohibited based on this evaluation. The ordinance also requires that potential homebuyers be notified that a property is located in a flood area. In addition, all construction must adhere to the Georgia State Minimum Standard Codes and the International Building Codes. Currently, the Wayne County municipalities of Jesup, Odum, and Screven also participate in NFIP through the application of appropriate NFIP-compliant ordinances and regulations.

There are no repetitive loss residential properties identified in Wayne County.

Multi-Jurisdictional Considerations

During a large-scale flood event, many portions of Wayne 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 – particularly those areas along the Altamaha River, the Little Satilla River, Big Satilla Creek, and Little Satilla Creek and their tributaries and distributaries. All of Wayne County, including all municipalities, could potentially be impacted.

Hazard Summary

Flooding has the potential to inflict significant damage within Wayne County, particularly along the Altamaha River, the Little Satilla River, Big Satilla Creek, and Little Satilla Creek and their tributaries and distributaries. Mitigation of flood damage requires the community to be aware of flood-prone areas, including roads, bridges, and critical facilities. The Wayne County HMPC identified flooding as a hazard requiring mitigation measures and identified specific goals, objectives, and action items they deemed necessary to lessen the impact of flooding for their communities.

Wayne County and its municipalities have implemented many mitigation strategies beyond ordinances and land use regulations in an attempt to curb flooding.

There are no repetitive loss properties identified in Wayne County.

Flood Events in Wayne County since 2017

Location	County/Zone	<u>St.</u>	Date	<u>Time</u>	<u>T.Z.</u>	<u>Type</u>	Mag	Dth	Inj	<u>PrD</u>	<u>CrD</u>
Totals:								0	0	0.00K	0.00K
<u>ODUM</u>	WAYNE CO.	GA	06/11/2019	17:10	EST-5	Flood		0	0	0.00K	0.00K
MADRAY SPGS	WAYNE CO.	GA	03/05/2020	16:43	EST-5	Flood		0	0	0.00K	0.00K

Wayne County



Wayne County Hazard Mitigation Plan Update 2021

Natural Hazard: Flooding





Odum



Screven



Note: All "light blue" shaded areas indicate the extent of the 100-year (or 1% annual) flood risk All Flood Maps are from the Georgia DFIRM Flood Map Program

Altamaha River at Doctortown



Historic Crests

(1) 18.60 ft on 01/23/1925 (2) 16.30 ft on 03/13/1929 (3) 16.00 ft on 04/18/1936 (4) 15.55 ft on 03/19/1998 (5) 15.20 ft on 10/13/1929 (6) 15.00 ft on 08/25/1928 (7) 14.96 ft on 03/01/2020 (8) 14.86 ft on 03/08/2020 (9) 14.84 ft on 03/12/1966 (10) 14.80 ft on 12/12/1948 Show More Historic Crests

(P): Preliminary values subject to further review.

Recent Crests

(1) 12.24 ft on 03/02/2021 (2) 13.42 ft on 02/22/2021 (3) 13.41 ft on 05/01/2020 (4) 14.86 ft on 03/08/2020 (5) 14.96 ft on 03/01/2020 (6) 13.89 ft on 02/18/2020 (7) 12.15 ft on 12/30/2019 (8) 13.06 ft on 01/15/2019 (9) 12.15 ft on 01/01/2019 (10) 12.33 ft on 12/23/2018 Show More Recent Crests

(P): Preliminary values subject to further review.



- Future Conditions 1% Annual Chance Flood Hazard Area with Reduced Risk Due to Levee

Hazard Description

A tornado is a violently rotating column of air (seen only when containing condensation, dust, or debris) that is in contact with the surface of the ground. Exceptionally large tornadoes may not exhibit the classic "funnel" shape, but may appear as a large, turbulent cloud near the ground or a large rain shaft. Destructive because of strong winds and windborne debris, tornadoes can topple buildings, roll mobile homes, uproot vegetation, and launch objects hundreds of yards.

Most significant tornadoes (excluding some weak tornadoes and waterspouts) stem from the right rear quadrant of large thunderstorm systems where the circulation develops between 15,000 and 30,000 feet. As circulation develops, a funnel cloud, a rotating air column aloft, or tornado descends to the surface. These tornadoes are typically stronger and longer-lived. The weaker, shorter-lived tornadoes can develop along the leading edge of a singular thunderstorm. Although tornadoes can occur in most locations, most of the tornado activity in the United States in the Midwest and Southeast. Tornadoes can occur anywhere within the State of Georgia.

In terms of the continuum of area of impact for hazard events, tornadoes are fairly isolated. Typically ranging from a few hundred to one or two miles across, tornadoes affect far less area than larger meteorological events such as tropical cyclones, winter storms and severe weather events. An exact season does not exist for tornadoes. However, most occur between early spring to mid-summer (February-June). The rate of onset of tornado events is rapid. Typically, the appearance of the first signs of the tornado is the descending funnel cloud. This sign may be only minutes from the peak of the event, giving those in danger minimal sheltering time. However, meteorological warning systems attempt to afford those in danger more time to shelter. The frequency of specific tornado intensities is undetermined because no pattern seems to exist in occurrence. Finally, the duration of tornado events ranges from the few minutes of impact on a certain location to the actual tornado lasting up to a few hours.

Tornadoes are measured after the occurrence using the subjective intensity measures. The Enhanced Fujita Scale describes the damage and then gives estimates of magnitude of peak 3-second gusts in miles per hour.

EF Number	3 Second Gust (mph)	Damage
0	65–85	Light damage. Peels surface off some roofs; some damage to gutters or siding; branches broken off trees; shallow-rooted trees pushed over.
1	86–110	Moderate damage. Roofs severely stripped; mobile homes overturned or badly damaged; loss of exterior doors; windows and other glass broken.
2	111–135	Considerable damage. Roofs torn off well-constructed houses; foundations of frame homes shifted; mobile homes completely destroyed; large trees snapped or uprooted; light-object missiles generated; cars lifted off ground.
3	136–165	Severe damage. Entire stories of well-constructed houses destroyed; severe damage to large buildings such as shopping malls; trains overturned; trees debarked; heavy cars lifted off the ground and thrown; structures with weak foundations blown away some distance.
4	166–200	Devastating damage . Well-constructed houses and whole frame houses completely leveled; cars thrown, and small missiles generated.
5	More than 200	Incredible damage. Strong frame houses leveled off foundations and swept away; automobile-sized missiles fly through the air in excess of 100 m (109 yd); high-rise buildings have significant structural deformation; incredible phenomena occur.

Hazard Profile

All areas within Wayne County are vulnerable to the threat of a tornado. Due to the indiscriminate and unpredictable nature of tornadoes, there is no reliable method to determine where or when a tornado will strike. There have been 13 documented tornadoes in the last 50 years in Wayne County. It is likely that other tornadoes have occurred within this timeframe, but available records are limited in nature.

Based on the 50-year information available for Wayne County, a tornado occurs every 3.8 years. On an annual basis, Wayne County has a 26% chance of being impacted from a tornado event. When only the last twenty-five years are considered, the likelihood of a tornado affecting Wayne County increases to 44% (11 tornadoes since 1996).



Source: 2019-2024 State of Georgia Hazard Mitigation Strategy and Enhanced Plan

Individual tornado events can cause extreme damage to an area. This holds true for Wayne County, as well. The strongest tornado to ever impact Wayne County was an F2 in 2005. This storm damaged 61 homes and 10 businesses. There is not a documented damage cost associated with this storm. However, it can be assumed with the information that is available that this was the costliest tornado in the last 50 years in Wayne County. Costs would have easily exceeded \$1.5 million. For additional historical data, please see Appendix D. All tornado hazard data included for Wayne County is limited to countywide data and is not broken down by jurisdiction.

Assets Exposed to the Hazard

In evaluating assets that are susceptible to tornadoes, the Wayne County HMPC determined that all public and private property is threatened by tornadoes, including all critical facilities. This is due to the lack of spatial prejudice of tornadoes.



Source: 2019-2024 State of Georgia Hazard Mitigation Strategy and Enhanced Plan

Estimated Potential Losses

Estimates of damage for the past events of the last 50 years are only \$107,000, or \$2,140 annually. However, these estimates have been determined to be a gross underestimation of past tornado damages, as indicated by the available information regarding the 2005 tornado.

Land Use & Development Trends

Wayne County has no land use trends related to Tornadoes.



Multi-Jurisdictional Considerations

All portions of Wayne County could potentially be impacted by a tornado due to the indiscriminate nature of tornadic events. Therefore, all mitigation actions identified regarding tornadoes should be pursued on a countywide basis and included all municipalities.



Source: 2019-2024 State of Georgia Hazard Mitigation Strategy and Enhanced Plan

Hazard Summary

Wayne County remains at risk to potential damage from tornadoes, especially considering the average of one tornado every 3.8 years over the last 50 years. Should a tornado strike in densely populated areas of the county, significant damage or loss of life could occur. Due to the destructive power of tornadoes, it is essential that the mitigation measures identified in this plan regarding tornado activity receive full consideration.

Tornadoes in Wayne County since 2017

Location	County/Zone	<u>St.</u>	<u>Date</u>	<u>Time</u>	<u>T.Z.</u>	<u>Type</u>	<u>Mag</u>	<u>Dth</u>	Inj	<u>PrD</u>	<u>CrD</u>
Totals:								0	8	0.00K	0.00K
<u>SCREVAN</u>	WAYNE CO.	GA	05/24/2018	17:15	EST-5	Tornado	EF0	0	0	0.00K	0.00K
<u>JESUP</u>	WAYNE CO.	GA	03/03/2019	17:22	EST-5	Tornado	EF0	0	0	0.00K	0.00K
<u>ODUM</u>	WAYNE CO.	GA	04/13/2020	06:25	EST-5	Tornado	EF1	0	8	0.00K	0.00K

Hazard Description

Drought is a normal, recurrent feature of climate consisting of a deficiency of precipitation over an extended period (usually a season or more). This deficiency results in a water shortage for some social or environmental sector. Drought should be judged relative to some long-term average condition of balance between precipitation and evapotranspiration in a particular area that is considered "normal." Drought should not be viewed as only a natural hazard because the demand people place on water supply affects perceptions of drought conditions. From limited water supplies in urban areas to insufficient water for farmland, the impacts of drought are vast.

Droughts occur in virtually every climatic zone and on every continent. Because the impacts of drought conditions are largely dependent on the human activity in the area, the spatial extent of droughts can span a few counties to an entire country.

Temporal characteristics of droughts are drastically different from other hazards due to the possibility of extremely lengthy durations as well as a sluggish rate of onset. Drought conditions may endure for years or even decades. This factor implicates drought as having a high potential to cause devastation on a given area. The duration characteristic of droughts is so important that droughts are classified in terms of length of impact. Droughts lasting 1 to 3 months are considered short term, while droughts lasting 4 to 6 months are considered intermediate and droughts lasting longer than 6 months are long term. With the slow rate of onset, most populations have some inkling that drought conditions are increasingly present. However, barring drastic response measures, most only have to adapt to the changing environment.

Seasonality has no general impact on droughts in terms of calendar seasons. However, "wet" and "dry" seasons obviously determine the severity of drought conditions. In other words, areas are less susceptible to drought conditions if the area is experiencing a wet season. The frequency of droughts is undetermined, because the hazard spans such a long period of time. However, climatologists track periods of high and low moisture content similarly to the tracking of cooling and warming periods.

Hazard Profile

The Wayne County HMPC reviewed data for the last 50 years regarding drought conditions. Historically, agricultural losses have accounted for the vast amount of losses related to drought conditions.

(Hazard Profile Continued)

Due to poor record keeping and the unpredictable nature of drought conditions, reliability of historical data for the last 50 years is low. Wayne County has been impacted by 14 drought events in the last 25 years, according to data from the United States Drought Monitor. This amounts to a 56% chance of a drought for a given year over the last 25 years. The economic impact of these droughts, including crop damage, is not available. All drought hazard data included for Wayne County is limited to countywide data and is not broken down by jurisdiction.

There has been one recent examples of "exceptional" drought events affecting Wayne County. This event occurred in 2012. This event reached the D4 (Exceptional Drought) designation, according to data from the United States Drought Monitor. Below is the map of this event.



Source: USDA Drought Monitor – University of Nebraska-Lincoln

Events of this extent can cause water shortages for residential and corporate needs, as well as affecting the ability for firefighting operations to be properly effective. Drought conditions of this extent can have devastating effects on the local agricultural industries, which has occurred in previous D4 level droughts.



Assets Exposed to the Hazard

While drought conditions do not typically pose a direct threat to structures, secondary hazards from drought such as increased wildfire threat, does pose a significant threat to all public and private property in Wayne County, including all critical facilities. Water resources could also become scarce during a drought, a condition that would potentially affect all Wayne County residences and critical facilities.

Estimated Potential Losses

No damage to structures or critical facilities is expected as a direct result of drought conditions. However, crop damage and subsequent losses can be expected to occur because of drought conditions. The degree of losses would depend on the duration of the drought, severity of the drought, temperatures during the drought, season in which the drought occurs, and the specific needs of the involved crops. Water system shortages and need for supply assistance for those systems could also lead to economic losses associated with the drought.

According to the 2017 Agriculture Census data, Wayne County's market value of products sold was \$27,457,000. \$13,295,000 of that total represented crop sales, accounting for 48.4% of the total. Livestock sales accounted for 51.6%, or \$14,162,000, of the total value.

Natural Hazard: Drought U.S. Drought Monitor June 1, 2021 (Released Thursday, Jun. 3, 2021) Georgia Valid 8 a.m. EDT Drought Conditions (Percent Area) None D0-D4 D1-D4 D2-D 03-D4 D4 Current 93.23 6.77 0.00 0.00 0.00 0.00 Last Week 05-25-2021 97.86 2.14 0.00 0.00 0.00 0.00 3 Month s Ago 99.43 0.57 0.00 0.00 0.00 0.00 Start of Calendar Year 65.78 34.22 0.00 0.00 0.00 0.00 Start of Water Year 09-29-2020 0.00 97.20 0.00 0.00 0.00 2.80 One Year Ago 06-02-2020 97.58 2.42 0.00 0.00 0.00 0.00 Intensity: None D2 Severe Drought D0 Abnormally Dry D3 Extreme Drought D1 Moderate Drought D4 Exceptional Drought The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx Author: Brian Fuchs National Drought Mitigation Center USDA droughtmonitor.unl.edu

Source: United States Drought Monitor (University of Nebraska-Lincoln)



Source: National Integrated Drought Information System

Land Use & Development Trends

As growth occurs, drought can become a larger threat for Wayne County due to the increased reliance on water infrastructure and wells countywide. This increased pull on these resources in Wayne County could quicken or deepen the impacts of a drought for residential, commercial, and industrial areas.

Multi-Jurisdictional Considerations

All portions of Wayne County could potentially be impacted by a drought, but agricultural areas of the county are potentially more at risk. Therefore, all mitigation actions identified regarding drought should be pursued on a countywide basis and include all municipalities.

Hazard Summary

Drought conditions can cause significant economic stress on the agriculture and forestry interests of Wayne County. The potential negative secondary impacts of drought are numerous. They include increased wildfire threat, decreased water supplies for residential and industrial needs, stream-water quality, and water recreation facilities. The Wayne County HMPC recognizes the potential threats drought conditions could have on the community and have identified specific mitigation actions as a result.

Hazard Description

A wildfire is an uncontained fire that spreads through the environment. Wildfires can consume large areas, including infrastructure, property, and resources. When massive fires, or conflagrations, develop near populated areas, evacuations could possibly ensue. Not only do the flames impact the environment, but the massive volumes of smoke spread by certain atmospheric conditions also impact the health of nearby populations.

Wildfires result from the interaction of three crucial elements: fuel, ignition (heat), and oxygen. Natural and manmade forces cause the three crucial elements to coincide in a manner that produces wildfire events. Typically, fuel consists of natural vegetation. However, as the urban and suburban footprint expands, wildfires may utilize other means of fuel, such as buildings. In terms of ignition or source of heat, the primary source is lightning. However, humans are more responsible for wildfires than lightning. Manmade sources vary from the unintentional, such as fireworks, campfires, or machinery, to intentional arson. With these two elements provided, the wildfires may spread as long as oxygen is present.

Weather is the most variable factor affecting wildfire behavior. Strong winds propel wildfires quickly across most landscapes unless firebreaks are present. Shifting winds create erratic wildfires, which can complicate fire management efforts. Dry conditions provide faster-burning fuels, either making the area more vulnerable to wildfire or increasing the mobility of preexisting wildfires.

Wildfires are notorious for spawning secondary hazards, such as flash flooding and landslides, long after the original fire is extinguished. Both flash flooding and landslides result from fire consuming the natural vegetation that provides precipitation interception and infiltration as well as slope stability.

All of Georgia is prone to wildfire due to the presence of wildland fuels associated with wildfires. Land cover associated with wildland fuels includes coniferous, deciduous, and mixed forest; shrubland; grassland and herbaceous; transitional; and woody and emergency herbaceous wetlands. The spatial extent of wildfire events greatly depends on both the factors driving the fire as well as the efforts of fire management and containment operations.

(Hazard Description Continued)

In terms of seasonality, wildfires can occur during any season of the year. However, drier seasons, which vary within the State of Georgia, are more vulnerable to severe wildfires because of weather patterns and the abundant quick-burning fuels. In terms of rate of onset and duration, wildfires vary depending on the available fuels and weather patterns. Some wildfires can engulf an area in a matter of minutes from the first signs whereas others may be slower burning and moving. The frequency of wildfires is not typically measured because of the high probability of human ignition being statistically unpredictable. Magnitude and intensity are typically only measured by size of the wildfire and locations of burning.

Three classes of fires include understory, crown, and ground fires. Naturally induced wildfires burn at relatively low intensities, consuming grasses, woody shrubs, and dead trees. These understory fires often play an important role in plant reproduction and wildlife habitat renewal and self-extinguish due to low fuel loads or precipitation. Crown fires, which consist of fires consuming entire living trees, are low probability but high consequence events due to the creation of embers that can be spread by the wind. Crown fires typically match perceptions of wildfires. In areas with high concentrations of organic materials in the soil, ground fires may burn, sometimes persisting undetected for long periods until the surface is ignited.

Hazard Profile

Wildfires pose a serious threat to Wayne County. This is a result of the high amount of forestland and vegetation available to fuel potential wildfires. Today, 78% of Wayne County remains forested. Also, there is an increasing amount of wildlandurban interface (WUI) in Wayne County, which is defined as areas where structures and other human development meets undeveloped wildland properties. 95.2% of Wayne County's population lives within the WUI. All wildfire hazard data included for Wayne County is limited to countywide data and is not broken down by jurisdiction.

Over the last 50 years, Wayne County has averaged 100 wildfires per year and these fires have burned an average of 567 acres per year according to the Georgia Forestry Commission. 62% of these fires have occurred between January and May. Wayne County averaged 67 wildfires from 2007 to 2017 that consumed an average total of 521 acres annually. Over the last 50 years, Wayne County has a 27% daily chance of a wildfire. However, this has decreased to an 18.4% chance over the last 10 years.

Georgia Wildfire Ignition Density



Source: Southern Group of State Foresters Wildfire Risk Assessment Portal

Assets Exposed to the Hazard

All public and private property located within the Wildland-Urban Interface, including critical infrastructures, are susceptible to impacts from wildfires. Due to the large area of wildland area in Wayne County and the large amount of WIU, all public and private property, including critical infrastructures, could be directly or indirectly impacted by the threat of wildfire.

Jurisdiction	Percentage of Population in WUI
Wayne County	95.2%
Jesup	87.1%
Odum	100%
Screven	99.2%

Estimated Potential Losses

Little information is available regarding damages, in terms of dollars, for wildfire losses in Wayne County. According to the 2017 Ag Census by the USDA, Wayne County has just over \$13 million in annual crop sales. These areas would potentially be impacted by a wildfire event. Additionally, the large amount of timber lands in Wayne County (78% of Wayne County remains forested) increases the economic impact a wildfire could have on the community.

Land Use & Development Trends

With the continued increase in population, Wildland-Urban Interface (WUI) is increasing in Wayne County. The WUI creates areas where fire can easily move from wildland areas into developed areas and threaten structures and human life. The expansion of the WUI in Wayne County complicated wildland fire management operations and planning initiatives. This development trend is expected to continue in the future.

Multi-Jurisdictional Considerations

All portions of Wayne County, including all municipalities, could potentially be impacted by a wildfire due to the large amount of Wildland-Urban Interface, but the less developed areas of the county are more vulnerable. Therefore, all mitigation actions identified regarding wildfires should be pursued on a countywide basis and include all municipalities.

Hazard Summary

Wildfire is a significant threat to Wayne County due to the increased amount of Wildland-Urban Interface. The increasing amount of area where structures and other human development meets undeveloped, wildland property is where 95.2% of Wayne County's population lives. The mitigation measures identified in this plan should be aggressively pursued based on the high frequency of this hazard and the ability for wildfires to inflict devastation anywhere in Wayne County.







Jesup Burn Probability

Jesup Fire Intensity Scale







Odum Fire Intensity Scale

Screven WUI Risk





Screven Fire Intensity Scale



All maps in this section are from the Southern Group of State Foresters Wildfire Risk Assessment Portal

Hazard Description

Earthquakes are generally defined as the sudden motion or trembling of the Earth's surface caused by an abrupt release of slowly accumulated strain. This release typically manifests on the surface as ground shaking, surface faulting, tectonic uplifting and subsidence, or ground failures, and tsunamis. In the United States, earthquake activity east of the Rocky Mountains is relatively low compared to the Western states because it is away from active plate boundaries and the plate interior strain rates are known to be very low.

The physical property of earthquakes that causes most of the damage within the United States is ground shaking. The vibrations from the seismic waves that propagate outward from the epicenter may cause failure in structures not adequately designed to withstand earthquakes. Because the seismic waves have different frequencies of vibration, the waves disseminate differently through sub-surface materials. For example, high frequency compression and shear waves arrive first, whereas lower frequency Rayleigh and love waves arrive later. Not only are the speeds varied between seismic waves, but also the types of movement. The surface vibration may be horizontal, vertical, or a combination of the two, which causes a wider array or structures to collapse.

Another manifestation of earthquakes is surface faulting. This phenomenon is defined as the offset or tearing of the earth's surface by a differential movement across a fault. Structures built across active faults tend to sustain damage regularly. There are no active faults within or near Georgia. Distinct inactive faults are known within the state north or the Columbus to Macon to Augusta fall line and running generally northeast-southwest.

The third earthquake phenomenon that causes damage is tectonic uplift and subsidence. Tectonic uplift can cause shallowing of the harbors and waterways while tectonic subsidence can cause permanent or intermittent inundation. Due to the association of tectonic uplift and subsidence with active faults, Georgia is not at risk to these phenomena.

The fourth earthquake damage-causing phenomena are earthquake-induced ground failures, including liquefaction and landslides. During an earthquake, the areas that are rich in sand and silt have groundwater within 30 feet of the surface temporarily behave as viscous fluids during strong ground shaking. Structures built on these materials can settle, topple, or collapse as the ground "liquefies" beneath it. Landslides can also form when earthquake shaking or seismic activity dislodges rock and debris on steep slopes, triggering rock falls, avalanches, and slides.

(Hazard Description Continued)

Also, unstable, or nearly unstable, slopes consisting of clay soils may lose shear strength when disturbed by ground shaking and fail, resulting in a landslide. Georgia is at very low risk of seismic induced liquefaction or landslides.

The last of the earthquake-induced phenomena are tsunamis, which are large, gravity-driven waves triggered by the sudden displacement of a large volume of water. The waves produced travel in all directions from the origin at speeds of up to 600 miles per hour. In deep water, tsunamis normally have small wave heights. However, as the waves reach shallower water near land, the wave speed diminishes, and the amplitude drastically increases. Upon impact with a shoreline, the waves can inundate land rapidly, engulfing everything in its path. Successive wave crests follow, typically arriving minutes to hours later, frequently with later arrivals being more dominant. Frequently, the first tsunami waves are downward, causing dramatic exposure of the beach. Because of this, people are often killed trying to collect newly exposed seashells when the positive waves then arrive.

Although large tsunamis are rare in the eastern coast of the US, the possibility of such events occurring anywhere along the Atlantic and Gulf coast exists.



Two-percent probability of exceedance in 50 years map of 0.2 second spectral response acceleration Source: 2019-2024 State of Georgia Hazard Mitigation Strategy and Enhanced Plan

Hazard Profile

Wayne County is not one of the 37 Georgia counties with the highest earthquake risk, according to GEMA and Georgia Tech School of Earth and Atmospheric Sciences. In reviewing data of the last 50 years, no earthquakes have originated from within Wayne County. No earthquakes have originated within 50 miles of Jesup, GA in the last 50 years. The closest earthquake to Wayne County was a 3.7 that occurred near Vidalia, GA in 1976. Wayne County has an 4% chance of an earthquake occurring within 100 km of Jesup, GA in any given year. Historically, the 1886 Charleston, SC earthquake, estimated to be between 6.6 and 7.3 on the modern Richter Scale, likely caused impacts to Wayne County. Although no historical records exist exhibiting any damages, Wayne County was estimated to be in a level VI area of the Modified Mercalli Intensity scale for this event. This would indicate strong shaking felt by everyone inside and outside at the time of the event and characterized by broken windows, movement of heavy furniture, and slight to moderate damage for poorly built buildings. Even with this low number of occurrences, it was determined that if earthquakes occur within or close to the jurisdiction of Wayne County, significant damage could occur. Therefore, the Wayne County HMPC has determined the threat of earthquakes to be higher than the statistics would indicate. All earthquake hazard data included for Wayne County is limited to countywide data and is not broken down by jurisdiction.

Instrumental Intensity	Acceleration (%g)	Velocity (cm/s)	Perceived Shaking	Potential Damage	
1	< 0.17	< 0.1	Not Felt	None	
IHII	0.17 - 1.4	0.1 - 1.1	Weak	None	
IV	1.4 - 3.9	1.1 - 3.4	Light	None	
V	3.9 - 9.2	3.4 - 8.1	Moderate	Very light	
VI	9.2 - 18	8.1 - 16	Strong	Light	
VII	18 - 34	16 - 31	Very Strong	Moderate	
VIII	34 - 65	31 - 60	Severe	Moderate to Heavy	
IX	65 - 124	60 - 116	Violent	Heavy	
X+	> 124	> 116	Extreme	Very Heavy	

Assets Exposed to the Hazard

The Wayne County HMPC determined that all critical facilities and all public and private property within Wayne County are susceptible to the impacts of an earthquake due to the lower building codes with regards to earthquakes when compared to other parts of the country. This includes all municipalities.

Earthquakes within 100 km of Jesup, GA – last 50 years



Source: United States Geological Survey (USGS) Earthquake Hazards Program

Estimated Potential Losses

Little information is available regarding damages, in terms of dollars, for earthquake losses in Wayne County.

Land Use and Development Trends

Wayne County currently has no land use trends related to Earthquakes.

Multi-Jurisdictional Considerations

All of Wayne County, including all municipalities, potentially could be threatened by earthquakes. As such, all earthquake mitigation actions should be pursued on a countywide basis and include all municipalities.



Source: 2019-2024 State of Georgia Hazard Mitigation Strategy and Enhanced Plan

Hazard Summary

Even with the infrequency of earthquake impacts in Wayne County, the potential losses and impacts associated with the event would severely damage the infrastructure and economic viability of the County and all municipalities. The mitigation measures identified in this plan should be pursued based on the high impact potential of this hazard and the ability for earthquakes to inflict widespread devastation anywhere in Wayne County.

Natural Hazard: Tropical Cyclone

Hazard Description

The National Weather Service describes tropical cyclones systems in the Atlantic Basin, including the Gulf of Mexico and Caribbean Sea, into four types based on strength.

Tropical Disturbance: A discrete tropical weather system of apparently organized thunderstorms – generally 100 to 300 nautical miles in diameter – originating in the tropics or subtropics, and maintaining its identity for 24 hours or more.

Tropical Depression: An organized system of clouds and thunderstorms with a defined circulation and maximum sustained winds of 38 mph (33 knots) or less.

Tropical Storm: An organized system of strong thunderstorms with a defined circulation and maximum sustained winds of 39 mph to 73 mph (34-63 knots).

Hurricane: An intense tropical weather system with a well-defined circulation, producing maximum sustained winds of 74 mph (64 knots) or greater. Hurricane intensity is classified into five categories using the Saffir-Simpson Hurricane scale. Winds in a hurricane range from 74-95 mph for a Category 1 hurricane to greater than 156 mph for a Category 5 hurricane.

Saffir-Simpson Scale for Hurricane Classification								
Strength Wind Speed (Kts)		Wind Speed (MPH)	Pressure (Millibars)	Pressure				
Category 1	64- 82 kts	74- 95 mph	>980 mb	28.94 "Hg				
Category 2	83- 95 kts	96-110 mph	965-979 mb	28.50-28.91 "Hg				
Category 3	96-113 kts	111-130 mph	945-964 mb	27.91-28.47 "Hg				
Category 4 114-135 kts		131-155 mph	920-944 mb	27.17-27.88 "Hg				
Category 5	>135 kts	>155 mph	27.16 "Hg					
Tropical Cyclone Classification								
Tropical De	pression	20-34kts						
Tropical Storm 35-63kts								
Hurricane	Hurricane 64+kts or 74+mph							

Natural Hazard: Tropical Cyclone

(Hazard Description Continued)

Tropical cyclones can cause catastrophic damage to coastlines and areas several hundred miles inland. Tropical cyclones can produce sustained high winds and spawn tornadoes and microbursts. Additionally, tropical cyclones can create storm surges along the coast and cause extensive damage from heavy rainfall. Floods and flying debris from the excessive winds are often the deadly and destructive results of these weather events.

Slow moving tropical cyclones traveling into mountainous regions tend to produce especially heavy rain. Excessive rain can trigger landslides or mudslides. Flash flooding can also occur due to intense rainfall.

Each of these hazards present unique characteristics and challenges; therefore, the following have been separated and analyzed as individual hazards: Tropical cyclones, Thunderstorms, Tornadoes, and Flooding. This section will focus on the direct effects of tropical cyclones.



Hazard Profile

Tropical cyclones have directly impacted Wayne County on an infrequent basis over the last 50 years. However, the possibility of a hurricane or tropical storm retaining their wind strength as far inland as Wayne County is possible. There
(Hazard Profile Continued)

have been 7 documented impacts from Topical Cyclones in Wayne County over the last 20 years. This equates to a 35% chance of a tropical cyclone impacting Wayne County in any given year. The Wayne County Hazard Mitigation Update Committee believes this percentage is more representative of the potential impact.

Five tropical cyclones – Tropical Storm Isabel in 1985, Hurricane Gordon in 1994, Tropical Storm Josephine in 1996, Hurricane Gordon in 2000, and Tropical Storm Bonnie in 2004 – have had a track that directly dissected Wayne County in the last 50 years. All tropical cyclone hazard data included for Wayne County is limited to countywide data and is not broken down by jurisdiction. In 2017, Hurricane Irma dropped 4-7 inches of rain on Wayne County and wind gusts up to 56 mph (tropical storm-strength) were reported in the county. This was similar to the impacts from Hurricane Matthew in 2016, where 5-7 inches of rain fell and 50 mph winds gusts were reported in Wayne County.



The impacts that would result from hurricane or tropical storm forces on the citizens, infrastructure, and critical facilities of Wayne County could be potentially catastrophic in nature. In addition to indirect impacts from a tropical cyclone event, Wayne County's proximity to the Georgia coast could lead to direct impacts from a tropical cyclone event. For example, Wayne County could be impacted by storm surge from any hurricane greater than a Category 1 storm. Parts of Wayne County, particularly those near the Altamaha River and Penholoway Bay, could be inundated with up to 9 feet of water.



Source: 2019-2024 Georgia Hazard Mitigation Strategy and Enhanced Plan



Source: National Storm Surge Hazard Maps (NOAA)



Source: 2019-2024 Georgia Hazard Mitigation Strategy and Enhanced Plan





Assets Exposed to the Hazard

The Wayne County HMPC determined that all critical facilities and all public and private property within Wayne County are susceptible to the direct and indirect impacts of a tropical cyclone. This includes all municipalities.

Estimated Potential Losses

Little information is available regarding damages, in terms of dollars, is available for tropical cyclone losses in Wayne County. Most losses for these events have been labeled under other impacts, such as tornadoes and flooding.

Land Use and Development Trends

Wayne County currently has no land use trends related to Tropical Cyclones.

Multi-Jurisdictional Considerations

All of Wayne County, including all municipalities, could potentially be threatened by tropical cyclones. As such, all tropical cyclone mitigation actions should be pursued on a countywide basis and include all municipalities.





Source: 2019-2024 Georgia Hazard Mitigation Strategy and Enhanced Plan



Source: 2019-2024 Georgia Hazard Mitigation Strategy and Enhanced Plan



Hazard Summary

Even with the relative infrequency of tropical cyclone impacts in Wayne County in the recent past, the potential losses and impacts associated with the event would severely damage the infrastructure and economic viability of Wayne County and all municipalities. Wayne County's proximity to the Atlantic coast increases the likelihood of a tropical cyclone impacting the area. The mitigation measures identified in this plan for tropical cyclones should be pursued based on the high impact potential of this hazard and the ability for tropical cyclones to inflict widespread devastation anywhere in Wayne County. Wayne County has had three Federally Declared Disaster related to Tropical Cyclones, most recently in 2017 (Hurricane Irma).

Technological Hazard: Hazardous Materials

Hazard Description

Hazardous materials, or hazmat, refers to any materials that may pose a real hazard to human health and/or the environment because of its quantity, concentration, and/or physical or chemical characteristics. Hazardous materials include explosives, flammables, combustibles, oxidizers, toxic materials, radioactive substances, and corrosives. Specific federal and state regulations exist regarding the transport and storage of hazardous materials.

A hazardous materials spill or release occurs when a hazardous material gets into the environment in an uncontrolled fashion. Response to a hazmat spill or release depends greatly on the type of material involved and the subsequent physical and chemical characteristics. Major sources of hazardous materials spills include transportation accidents on roadways and railways, pipeline breaches, and spills into rivers and creeks. Jurisdictions with facilities that produce, process, or store hazardous materials are at risk, as are facilities that treat or dispose of hazardous materials.

Hazard Profile

Data from the United States Coast Guard National Response Center was reviewed regarding hazardous materials spill history in Wayne County. Data is available from 1982 to 2018 and all available data was reviewed. There were 53 NRC reported hazardous materials spills or releases in Wayne County over a 25-year period. It is anticipated that many more hazardous materials incidents have occurred over the last 25 years but have not been reported. According to the NRC data, Wayne County averages 2.1 hazardous materials incidents of a reportable amount each year. This equates to a 0.6% chance of a hazardous materials spill of a reportable amount on any given day. The greatest threat for a hazardous materials spill comes from the transportation of materials through Wayne County. This is particularly true along US Highways 347 and 27 which traverse the center of Wayne County.

Hazardous materials releases can also be the result of railway or fixed facility incidents. Fixed facilities continue to be an increasing concern due to Wayne County's growing industrial footprint.

Of concern to the Wayne County Hazard Mitigation Committee is the exposure of water sources to potential hazardous materials incidents. A hazardous materials incident at or near drinking water sources could have devastating effects on a large population in Wayne County.

Technological Hazard: Hazardous Materials

Assets Exposed to Hazard

The environment is particularly vulnerable to the threat posed by hazardous materials. Waterways are at a high risk for contamination from hazardous materials. Water contamination is of concern to the Wayne County HMPC. Public and private property located near fixed hazardous materials facilities are also a greater risk than the general population of Wayne County. Water contamination from a hazardous materials release is of particular concern to the Wayne County Hazard Mitigation Planning Committee.

Estimated Potential Losses

Estimation of potential losses is difficult regarding hazardous materials due to the vast array of potential types of hazardous materials that could be involved in the incident and unknown costs regarding environmental damages. No recorded information was found regarding the losses associated with hazardous materials incidents in Wayne County. However, a hazardous materials release, whether in transport or at a fixed facility, would incur significant costs regarding emergency response, potential road closures, evacuations, watershed protection measures, expended man-hours, and cleanup materials, equipment, and personnel.

Land Use and Development Trends

Wayne County currently has no land use trends related to Hazardous Materials.

Multi-Jurisdictional Considerations

All of Wayne County, including all municipalities, are vulnerable to both fixed facility and transportation-related hazardous materials releases. However, areas along US Highways 25, 84, 301, and 341, including the Cities of Odum, Jesup, and Screven, are of particular concern.

Hazard Summary

Hazardous materials incidents pose a significant threat to the citizens, infrastructure, and critical facilities of Wayne County. Unknown quantities of hazardous materials are transported daily through Wayne County and all municipalities. These materials are often transported via highways. Water contamination because of a hazardous materials spill is of significant concern to the Wayne County HMPC. As a result of the threat posed by hazardous materials, the Wayne County HMPC has identified mitigation actions directly related to this threat.

Technological Hazard: **Dam Failure**

Hazard Description

Georgia law defines a dam as any artificial barrier, which impounds or diverts water, is 25 feet or more in height from the natural bed of a stream or has an impounding capacity at maximum water storage evaluation of 100 acre-feet or more. Dams are generally constructed to provide a ready supply of water for drinking, irrigation, recreation, and other purposes. Dams can be constructed from earth, rock, masonry, concrete or any combination of these materials.

Dam failure is a term used to describe a significant breach of a dam and the subsequent loss of contained water. Dam failure can cause significant damages downstream to structures, roads, utilities, and crops. Dam failure can also put human and animal lives at risk. National statistics indicate that one-third of all dam failures in the United States are caused by overtopping due to inadequate spillway design, debris blocking spillways, or settlement of the dam crest. Another third of all US dam failures are the result of foundation defects, including settlement and slope instability.

Hazard Profile

There are no category I and 15 category II dams located within Wayne County. Category I dams are those that would pose a possible threat to human life if a failure were to occur. All category I dams must be inspected annually according to Georgia's Safe Dams Act.

The threat of a dam failure in Wayne County could potentially lead to downstream flooding. This downstream flooding would have many of the same hazards as a flood event, but with the onset of such an event being much quicker than in a typical flood event.

Assets Exposed to Hazard

To evaluate the assets that would potentially be impacted by a dam failure, the Wayne County HMPC attempted to identify known structures within, or close to, the 100-year floodplain. All municipalities could be exposed to the hazards of other dams or face secondary hazards from the dams.

Estimated Potential Losses

Loss estimations are not applicable since it is not known which dam will fail and how significant of failure will occur.

Technological Hazard: Dam Failure



Source: 2019-2024 State of Georgia Hazard Mitigation Strategy and Enhanced Plan

Technological Hazard: Dam Failure

Land Use and Development Trends

Wayne County participates in the National Flood Insurance Program (NFIP) and follows the program's guidelines to ensure future development is carried out in the best interests of the public. The County (CID No. 130417) first entered the NFIP on July 5, 1983. According to the NFIP guidelines, the County has executed a Flood Damage Prevention Ordinance. This ordinance attempts to minimize the loss of human life and health as well as minimize public and private property losses due to flooding. The ordinance requires any potential flood damage be evaluated at the time of initial construction and that certain uses be restricted or prohibited based on this evaluation. The ordinance also requires that potential homebuyers be notified that a property is located in a flood area. In addition, all construction must adhere to the Georgia State Minimum Standard Codes and the International Building Codes. Currently, all Wayne County municipalities also participate in NFIP through the application of appropriate NFIP-compliant ordinances and regulations.

Multi-Jurisdictional Considerations

During a dam failure event, many portions of Wayne 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 and downstream from dams.

Hazard Summary

Dam failure poses a threat to Wayne County and its citizens, infrastructure, and critical facilities. A dam failure could prove catastrophic for areas downstream of the dam, particularly if the failure were to occur at any of the Category II dams located in Wayne County. As a result, mitigation efforts for dam failure should be focused in this potentially affected area.

Technological Hazard: Transportation Incident

Hazard Description

There are many secondary hazards that could be associated with transportation incidents. Injuries or deaths can occur as a result of the impact of a transportation accident, by a hazardous materials release because of a transportation incident, or by other related transportations hazards. Transportation can occur via roadways, highways, interstates, railways, air, or navigable waterways. Each transportation type poses their own unique hazard issues and consequences.

Roadway hazards are most likely to be caused by a motor vehicle accident involving one or more cars, trucks, vans, or transport vehicles. These incidents can have injuries because of the impact of the MVA or a hazardous materials release into the local environment, including waterways. Railway incidents pose many of the same dangers as motor vehicle accidents. However, the threat of a hazardous materials release is greatly increased when railway transportation incidents are considered.

Air accidents can include commercial airplanes, private airplanes, hot air balloons, helicopters, or other forms of air travel. Each of these incidents can cause a significant threat to human life as well as posing a hazardous material threat due to the cargo being transported or the fuel being used. Navigable waterway incidents can create formidable incidents for response organizations. Because of the waterway, technical expertise is needed to carry out rescue operations, especially in swift-moving waterways. Also, any incident in a waterway is likely to have environmental impacts.

Hazard Profile

Transportation incidents are of a significant concern in Wayne County. Passing through Wayne County are US Highways 25, 84, 301, and 341, and Georgia Highways 23, 27, 38, 169, and 203. Additionally, Wayne County is home to the Jesup-Wayne County Airport, which has one 5,500-foot runway.

Railways owned and operated by Norfolk Southern and CSX Transportation dissect Wayne County. The Norfolk Southern line connects Brunswick to Macon and the CSX line is one of the major lines that runs from Savannah to the Waycross junction. Jesup is also a stop along the Amtrak railway and is situated on the line that runs from Savannah to Jacksonville.

Assets Exposed to Hazard

All assets and critical facilities located along or near any transportation route could potentially be impacted by a transportation incident. Areas within Wayne County that are not located along or near a transportation route could still face residual impacts.

Technological Hazard: Transportation Incident

Estimated Potential Losses

Estimated potential losses cannot be anticipated with this event due to the vast number of differing scenarios regarding transportation incidents.

Land Use and Development Trends

Wayne County currently has no land use trends related to Transportation Incidents beyond an increase in overall population in the region which, in turn, increases the likelihood and potential impact of a transportation incident.

Multi-Jurisdictional Considerations

Wayne County as well as all municipalities could potentially be impacted by a transportation incident. However, areas along the US Highway 25, 84, and 341 corridors are at the greatest risk. This includes the Cities of Jesup, Odum, and Screven.

Hazard Summary

The Wayne County HMPC has determined that transportation incidents pose a high risk to their jurisdictions due to the unpredictable nature and likelihood of the incident. As a result, the Wayne County HMPC has developed mitigation strategies and actions with transportation incidents in mind.

Technological Hazard: Terrorism

Hazard Description

The Federal Bureau of Investigation (FBI) defines terrorism as violent acts or acts dangerous to human life that violate federal or state law, appear to be intended to intimidate or coerce a civilian population, affect the conduct of a government by mass destruction, assassination or kidnapping, and is calculated to influence or affect the conduct of a government by intimidation or retaliate against government conduct. Terrorism is usually referenced as being premeditated and politically motivated.

Terrorist acts are, by their very nature, designed and carried out with the intention of inflicting mass casualties and extensive property damage. When an act of terrorism is carried out in a jurisdiction, it will likely be necessary to implement multiple aspects of the emergency management system and summon additional resources from local, state, and federal partners.

Terrorism is generally divided into two types: domestic terrorism and international terrorism. Domestic terrorism is defined as terroristic acts focused on facilities and populations without foreign direction. International terrorism involves activities that are foreign-based and/or sponsored by organizations outside of the United States.

Terrorists often use threats to create fear among the public, to convince citizens that government is powerless to prevent terrorism and to get immediate publicity for their causes. Weapons of Mass Destruction (WMDs), including incendiary, explosive, chemical, biological, radiological, and nuclear agents, have the capability to cause death or serious bodily injury to a significant number of people, thus posing the threat of a catastrophic incident. Terrorism can also include arson, agro-terrorism, armed attack, intentional hazardous materials release, water or food contamination, and attacks on infrastructure and electronic information systems.

Hazard Profile

Terrorism targets have historically been facilities that make a large economic or social impact on the targeted government or jurisdiction. In Wayne County, all critical facilities could be potential targets. Terrorism includes a multitude of potential approaches, including agro-terrorism, which is terrorism targeted toward agriculture. Due to the high economic impact (over \$20 million in annual agriculture-related sales) of agriculture in Wayne County, agro-terrorism could be of particular concern. Additionally, a terrorist contamination of the water sources is of concern.

Technological Hazard: Terrorism

Within Wayne County, there are many areas that could be viewed as potential targets for terrorism due to their economic impact on the area. This includes tourist-friendly areas, such as the historic district of the City of Jesup.

While active shooter and civil unrest situations are not always classified as terrorism, for this plan, the Wayne County HMPC has chosen to classify them as such. Active shooter situations can occur in any location, including businesses, schools, government buildings, and public spaces. Schools are seen as particularly vulnerable to these types of situations due to the high publicity of recent active shooter events. While active shooter events and other acts of terrorism occur worldwide, they have low probability for Wayne County but would have devastating impacts if they were to occur. Civil Unrest situations can also occur in any location, although more densely populated centralized areas, such as the City of Jesup, would likely be at a greater risk than less populated areas of Wayne County.

Assets Exposed to the Hazard

Due to the unpredictable nature of terrorism, all public and private structures are threatened by the terrorism hazard. This includes all critical facilities.

Estimated Potential Losses

Losses due to terrorism are difficult to estimate due to the unpredictable nature of terrorism. The type of terrorist act carried out, location of the act, and the impact of the act would all affect the potential losses. Please see the critical facilities information for estimated potential losses for each critical facility.

Land Use and Development Trends

Wayne County currently has no land use trends related to Terrorism.

Multi-Jurisdictional Considerations

All of Wayne County, including all municipalities, are vulnerable to potential acts of terrorism. However, critical facilities and their surrounding areas are considered to be at the greatest risk.

Hazard Summary

Terrorism, while a low-probability hazard, would have devastating effects on Wayne County and all municipalities. These impacts would be immediate and longlasting and could be potentially economically crippling to Wayne County and surrounding communities.

Technological Hazard: Infrastructure Failure

Hazard Description

Infrastructures are particularly vulnerable to both natural and technological hazards. These include electrical utilities, water utilities, gas pipelines, fuel supplies, and other infrastructures that supply vital supplies and services to the community. While an infrastructure failure would most likely be a secondary hazard of one of the other hazards identified in this plan, an infrastructure failure could be a solo incident itself.

A lack of connection with outside sources could lead to public panic, poor emergency response capabilities, and other domino hazards. These events pose a significant threat to many jurisdictions.

Hazard Profile

In case of any failure of a utility infrastructure, general difficulties would be exacerbated for both emergency responders and for the public. The reliance on wireless communications, particularly for the public safety sector, increases the vulnerability of Wayne County's emergency response agencies to a utility failure. Natural gas pipelines traverse the far western section of Wayne County. Additionally, natural gas pipelines and gas transmission pipelines cross the central and eastern areas of Wayne County. Both types of pipeline could cause a significant hazardous materials incident if breached or could cause significant gas and natural gas outages across the region if supply were interrupted for an extended period.

Additionally, a communications failure is of particular concern to the Wayne County Hazard Mitigation Planning Committee. This would include both wireless communications amongst the public as well as emergency wireless communications amongst public safety agencies.

Assets Exposed to Hazard

All assets and critical facilities within Wayne County could potentially be impacted by an infrastructure failure.

Estimated Potential Losses

Estimated potential losses cannot be anticipated with this event due to the vast number of differing scenarios regarding utility failure.

Technological Hazard: Infrastructure Failure

Land Use and Development Trends

Wayne County currently has no land use trends related to infrastructure failures beyond continued population growth and an ever-increasing industrial footprint.

Multi-Jurisdictional Considerations

All areas of Wayne County could potentially be impacted by an infrastructure failure.

Hazard Summary

The Wayne County HMPC has determined that utility failures pose a high risk to their jurisdictions due to the unpredictable nature of the incident. As a result, the Wayne County HMPC has developed mitigation strategies and actions with infrastructure failures in mind.

Technological Hazard: Radiological Incident

Hazard Description

A radiological incident is an hazardous event that involves the release of potentially dangerous radioactive materials that could affect human life, property, and the environment. Typically, a radiological release is in the form of a plume, or cloud, and could negatively impact the health and safety of persons and property downwind from the release site.

Accidental radiological release can occur anywhere radioactive materials are transported, used, or stored. Industries that transport and store radioactive materials are closely regulated by multiple state and federal agencies, including the Department of Energy, Environmental Protection Agency, and Environmental Protection Division of the Department of Natural Resources. As a result, the processes in place at these facilities and in the radioactive materials transportation industry decreases the likelihood of an event. However, such events must still be planned for and mitigated against in case such an event happens at a nuclear power plant, hospital or other radioactive material using industrial facility or as a result of a transportation accident on a highway, railroad, or navigable waterway or port.

Hazard Profile

Wayne County has no nuclear power facilities within its jurisdiction. However, parts of western and northern Wayne County lies within 25 miles of Plant Hatch, a nuclear power facility operated by the Southern Company on the Altamaha River near Baxley, Georgia. This facility poses the greatest risk of a radiological incident for Wayne County. Radiological disaster occur infrequently, therefore there are few records that could accurately determine the potential impacts of such an event. The three greatest examples of catastrophic nuclear disaster have been Three Mile Island, Pennsylvania in 1979, Chernobyl, Ukraine (then, USSR) in 1986, and Fukushima Daiichi, Japan in 2011. No known radiological incidents have occurred in Wayne County, Georgia.

Assets Exposed to the Hazard

All public and private assets within Wayne County could potentially be exposed to a radiological incident. However, due to the proximity of Wayne County to Plant Hatch, the areas north and west of Odum are considered to be the most at risk from a radiological incident.

Technological Hazard: Radiological Incident

Estimated Potential Losses

The estimated potential losses due to a radiological incident are unknown at this time due to a lack of prior events in which to compare. Potential losses could potentially be catastrophic if such an event were to occur.

Land Use and Development Trends

There are no land use or development trends related to radiological incidents in Wayne County.

Multi-Jurisdictional Considerations

All areas and municipalities within Wayne County are susceptible to a radiological incident. However, due to their proximity to Plant Hatch areas in Northwest Wayne County are the most susceptible.

Hazard Summary

Radiological accidents pose a significant threat to Wayne County due to the devastating potential impacts for such an event, even with the very low likelihood of an event. Radiation exposure could potentially impact people, crops, water supplies, and the potential economic growth of the impacted area. Most radiological incidents that have occurred nationwide could have been avoided by the proper implementation and following of rules and regulations, implementation of proper training regarding the handling of materials, and proper conduct by persons associated with the transport, use, and storage of radioactive materials.

Action items associated with radiological incidents should be pursued due to the devastating effects an incident could have on the people, plants, animals, and economy of Wayne County.

Hazard Description

Microorganisms, such as bacteria, viruses, parasites, fungi, or prions, surround us within the environment. They can even be found within our own bodies. Most microorganisms are completely harmless, and many are actually beneficial. However, some of these organisms are pathogenic, meaning they cause or can cause disease. Infectious diseases are caused by these pathogenic organisms and are communicable – meaning they can be spread from person to person either directly or indirectly. Direct transmission of the disease occurs through actual physical contact with an infected person or their bodily fluids. Indirect transmission of a disease occurs when an infected person contaminates a surface by sneezing, coughing, etc., and a non-infected person comes into contact with that infected surface. Another means of indirect transmission includes vectors, such as mosquitos, flies, mites, ticks, fleas, rodents, or dogs, which may carry the pathogenic microorganism and transmit it to people via a bite. Infectious diseases can also impact animal populations, particularly livestock and other farm animals. Even though these diseases may not directly affect humans, the economic impact of these diseases can be just as harmful, if not more so, to the community.

Infectious diseases can occur as primary events or they may occur as a cascading result of another disaster, such as a tornado, flood, or winter weather. Infectious diseases can vary greatly in severity and magnitude. According to the World Health Organization, infectious diseases account for three of the ten leading causes of death worldwide – HIV/AIDS, lower respiratory infections, and diarrheal disease. These three events, combined with tuberculosis and malaria, account for 20% of deaths globally.

In Western countries, the impact of infectious diseases has diminished greatly over the last 75 years due to improved sanitation, personal hygiene, vaccinations, and the use of antibiotics. In the United States, only two infectious diseases – seasonal influenza and pneumonia – rank in the top ten leading causes of death. Annually, there are 1,500 deaths in the United States from seasonal influenza and another 52,000 from pneumonia. Children and older adults are the greatest at risk for both. Emergent infectious diseases are those that are appearing in a population for the first time. Re-emergent infectious diseases are those that may have previously existed in a population, but levels had dropped to the point where it was no longer considered a public health problem until levels once again began increasing.

During the last 25 years, emergent and re-emergent infectious diseases have been on the rise. The below table outlines some of the contributing factors to this rise:

Contributing Factors to Increasing Occurrence of Emergent Diseases
Agent-Related Factors
Evolution of pathogenic infectious agents
Development of resistance to drugs
Resistance of disease carriers to pesticides
Host-Related Factors
• Human demographic changes (humans inhabiting new areas)
Human behavior (sexual practices and drug use)
Human susceptibility to infection
Environment-Related Factors
Economic development and land use patterns
International travel and commerce
Deterioration of surveillance systems

Due to a lack of ready-made vaccines for these diseases and a lack of immunity in the population, emergent and re-emergent infectious diseases are much more likely to escalate to pandemic levels rapidly.

CDC-Identified Emergent and Re-En	nergent Infectious Diseases
Drug-resistant Infections	Mad Cow/Variant Creutzfeldt-Jakob Diseases
Campylobacteriosis	Chagas Disease
Cholera	Cryptococcosis
Cryptosporidiosis (Crypto)	Cyclosporiasis
Cysticercosis	Dengue Fever
Diphtheria	Ebola Hemorrhagic Fever
Group B Streptococcal Infection	Hantavirus Pulmonary Syndrome
Hepatitis C	Hendra Virus Infection
Histoplasmosis	HIV/AIDS
Influenza	Lassa Fever
Legionnaires' Disease and Pontiac Fever	Leptospirosis
Listeriosis	Lyme Disease
Malaria	Marburg Hemorrhagic Fever
Measles	Meningitis
Monkeypox	MRSA
Nipah Virus Infection	Norovirus Infection
Pertussis	Plague
Polio	Rabies
Rift Valley Fever	Rotavirus Infection
Salmonellosis	SARS
Shigellosis	Smallpox
Sleeping Sickness (Trypanosomiasis)	Tuberculosis
Tularemia	Valley Fever (Coccidioidomycosis)
VISA/VRSA	Staphylococcus Aureus
West Nile Virus Infection	Yellow Fever

Hazard Profile

Emergent Infectious diseases are of significant concern to the Wayne County HMPC, particularly those that would have an impact on the human population or animal population of Wayne County. Wayne County would likely see significant economic impacts from an outbreak involving animal populations, such as an Avian Flu, due to the large economic base agriculture provides (over \$120 million in annual sales). The lack of current vaccines and preparatory activities for these diseases has created a situation where the potential impact to Wayne County of a pandemic or epidemic could be catastrophic. The most recent pandemic scare in the Central Georgia area was the 2009-2010 H1N1 Swine Flu. There were 1286 cases of H1N1 in Georgia in 2009-2010 and 33 deaths. Most registered cases occurred with people between the ages of 5 and 29. This equates to a mortality rate of just over 2.5% - which is slightly lower than the 3% rate of the 1918-1919 Spanish Flu Pandemic. The 2019-2021 COVID-19 Pandemic, which was caused by SARS-CoV2, spready worldwide in a matter of weeks. As of May 12, 2021, there were over 173 million cases reported worldwide with over 3.7 million deaths. In Wayne County, there were 2,783 confirmed cases and 80 deaths.



Over the last 25 years, emergent infectious disease outbreaks have occurred in other parts of the country. These include:

- 1993 Cryptosporidium Outbreak (Milwaukee, Wisconsin 403,000 people ill and 100 deaths)
- 2010 Whooping Cough Outbreak (California 9,500 people ill and 10 infant deaths)
- 2015 H5N2 Avian Flu Outbreak (Midwest over 25 million chickens and turkeys destroyed as a precautionary measure at 83 locations)

Assets Exposed to the Hazard

Due to the unpredictable nature of emergent infectious diseases, all public and private structures are threatened by the hazard. This includes all critical facilities.

Estimated Potential Losses

Losses due to emergent infectious diseases are difficult to estimate due to the unpredictable nature of the hazard. The type of emergent infectious disease, location of the outbreak, and the impact of the outbreak would all affect the potential losses. Please see the critical facilities information for estimated potential losses for each critical facility.

Land Use and Development Trends

Wayne County currently has no land use trends directly related to emergent infectious diseases.

Multi-Jurisdictional Considerations

All of Wayne County, including all municipalities, are vulnerable to emergent infectious diseases. However, livestock and other farm animals are considered to be the greatest at risk, along with areas that have a large, concentrated human population, such as schools.

Hazard Summary

An emergent infectious disease would have devastating effects on Wayne County and all municipalities. These impacts would be immediate and long-lasting and could be potentially economically crippling. Because of these considerations, the Wayne County HMPC has developed mitigation actions with emergent infectious diseases in mind.

Chapter Four

hazard mitigation strategies

Summary of Updates to Chapter Four

The following table provides a description of each section of this chapter, and a summary of the changes that have been made to the Wayne County Hazard Mitigation Plan 2017.

Chapter 4 Section	Updates
Goals and Objectives	• Updated goals to match the needs of Wayne County and all municipalities
Identification and Analysis of Mitigation Techniques	 Content Revised Reviewed mitigation strategies identified in the 2017 plan and made updates Identified mitigation strategies that were completed Identified mitigation strategies to be

Goals and Objectives

Requirement §201.6(c)(3) Requirement §201.6(c)(3)(i)

It is important that State and local government, public-private partnerships, and the average citizen can see the results of these mitigation efforts, therefore, the goals and strategies need to be achievable. The mitigation goals and objectives form the basis for the development of specific mitigation actions. County and municipal officials should consider the listed goals before making community policies, public investment programs, economic development programs, or community development decisions for their communities. The goals of Wayne County have changed slightly in the last five years (since 2017) due to specific threat events, such as Hurricane Irma in 2017. Because of the recentness of the impacts of these hazards and the devastation that occurred, these types of events have taken a greater priority, particularly in the increased priority of mitigation strategies related to these hazards.

Each jurisdiction covered by the Wayne County Hazard Mitigation plan update – Wayne County and the Municipalities of Jesup, Odum, and Screven – has limited ability to fully implement the mitigation actions described in this plan. These jurisdictions are severely hampered by their small population and tax base when attempting to raise enough revenue to pursue many of these actions. All jurisdictions lack the needed financial strength and staffing to implement all the actions described in this plan. Many of the actions will be pursued through grant programs and by partnering with public and private organizations who can supplement the needed resources to accomplish the goals outlined in this plan. For actions where grant funding or partnerships are not available, Wayne County or municipality revenue streams may be supplemented through Special Purpose Local Option Sales Tax (SPLOST) funds, which are voted on by the electorate.

- GOAL 1 Maximize the use of all resources by promoting intergovernmental coordination and partnerships in the public and private sectors
- GOAL 2 Harden communities against the impacts of disasters through the development of new mitigation strategies and strict enforcement of current regulations that have proven effective
- GOAL 3 Reduce and, where possible, eliminate repetitive damage, loss of life and property from disasters
- GOAL 4 Bring greater awareness throughout the community about potential hazards and the need for community preparedness

These objectives state a more specific outcome that Wayne County strives to accomplish over the next five years. Action steps are the specific steps necessary to achieve these objectives. Objectives are not listed in order of importance.

- OBJECTIVE 1Reduce damage to property and loss of life through the
utilization of preventative activitiesOBJECTIVE 2Minimize the damage to property and loss of life through
property protection measures
- OBJECTIVE 3 Minimize the damage to property and loss of life through natural resource protection activities
- OBJECTIVE 4 Reduce damage to property and loss of life through the utilization of structural mitigation projects
- OBJECTIVE 5 Increase the ability of Wayne County, its municipalities, and its citizens to respond to natural and manmade hazards through emergency service measures
- OBJECTIVE 6 Increase public education and awareness of natural hazards
- OBJECTIVE 7 Minimize the impacts on local citizens, industry, and infrastructure of a dam breach
- OBJECTIVE 8 Implement additional protective measures and capabilities in response to manmade incidents
- OBJECTIVE 9 Increase public awareness of local manmade hazards and proper response to those hazards

Identification and Analysis of Mitigation Techniques

Requirement §201.6(c)(3)(iv) Requirement §201.6(c)(3)(iii)

In updating Wayne County's mitigation strategy, a wide range of activities were considered to help achieve the mitigation goals and objectives. This includes the following activities as by the Emergency Management Accreditation Program (EMAP):

- 1) The use of applicable building construction standards;
- 2) Hazard avoidance through appropriate land-use practices;
- 3) Relocation, retrofitting, or removal of structures at risk;
- 4) Removal or elimination of the hazard;
- 5) Reduction or limitation of the amount or size of the hazard;
- 6) Segregation of the hazard from that which is to be protected;
- 7) Modification of the basic characteristics of the hazard;
- 8) Control of the rate of release of the hazard;

9) Provision of protective systems or equipment for both cyber and/or physical risks;

10) Establishment of hazard warning and communication procedures; and

11) Redundancy or duplication of essential personnel, critical systems, equipment, and information materials.

Part of the prioritization includes a general assessment according to the STAPLEE criteria, which stands for Social, Technical, Administrative, Political, Legal, Economic and Environmental. This process led to three designated priorities: High, Medium, and Low. Most items that require grant funding must undergo a full Benefit Cost Analysis to determine the action's actual cost effectiveness prior to funding. This process will be completed as part of the grant opportunity application process.

Strategy Priority	Priority Description	Strategies within this priority
LOW	Low priority strategies are those strategies that will have less direct impact on mitigating Wayne County's hazards, are in the early stages of strategy development, or score poorly on a preliminary cost-benefit analysis	
MEDIUM	Medium priority strategies are those strategies that will have a direct impact on mitigation Wayne County's hazards, but will not have as large of an anticipated impact as High Priority strategies or may be focused on hazards that are not as potentially impactful or prevalent for Wayne County. These strategies may be in the earlier stages of development or score mediocre on a preliminary cost-benefit analysis	
HIGH	High priority strategies are those strategies that would have a direct, large impact on mitigation Wayne County's hazards. These strategies are oftentimes well-established needs of Wayne County and/or all municipalities and have score high on a preliminary cost-benefit analysis	

The lead agency listed in the Mitigation Strategy charts will be responsible for the jurisdictional administration and implementation of the mitigation strategy prioritization. Prioritization was determined based on many factors. These include the likelihood of the event, the potential impact of the event, the current readiness posture of Wayne County for the event, the all-hazard impact of the mitigation strategy, and a cost-benefit analysis for the mitigation action. For example, mitigation actions that address high-likelihood, high-impact events with a low cost would rate higher than low-likelihood, high-impact events with a high cost.

The following Mitigation Charts meet: Requirement §201.6(c)(3)(ii) Requirement §201.6(d)(3)

Strategy #	Mitigation Action	Lead and Supporting Agency, Department, Organization Jurisdiction	Flood	Winter Weather	Thunderstorm	Tornado	Tropical Cyclone	Drought	Wildfire	Earthquake	Funding Source	Estimated Cost	Completion Timeframe	Progress/ Status	Priority	Previous Strategy #
OBJ	OBJECTIVE 1: Reduce damage to property and loss of life through the utilization of preventative activities															
		Wayne County Planning and Zoning														1.1.9 and al 1.1.9
	Continue to support	Wayne County									Local			Ter els sos		opic
1.a	Management program	municipalities	x				X				budgets	Staff time	12 months	continue	Medium	FIC Tr
OB	OBJECTIVE 2: Minimize the damage to property and loss of life through property protection measures															
2.a	Purchase and install emergency generator for AirEvac station	AirEvac and EMA Wayne County and all municipalities			X	x	X			X	Public and private grants and/or local budgets	\$50,000	36 months	NEW	Medium	NEW
2.b	Purchase and install generators for all critical facilities	EMA Wayne County and all municipalities		X	X	X	X			X	Public and private grants and/or local budgets	\$5 million	60+ months	NEW	High	NEW

Strategy #	Mitigation Action	Lead and Supporting Agency, Department, Organization Jurisdiction	Flood	Winter Weather	Thunderstorm	Tornado	Tropical Cyclone	Drought	Wildfire	Earthquake	Funding Source	Estimated Cost	Completion Timeframe	Progress/ Status	Priority	Previous Strategy #
2.c	Install backup generators at all Assisted Living Facilities	Assisted Living Facility owners/operators Wayne County and all municipalities		x	x	x	X			X	Public and private grants and/or private funds	\$35,000 each	60+ months	NEW	Medium	NEW
2.d	Install backup generators at dialysis Center	Dialysis center owner/operators <i>Wayne County</i> <i>and all</i> <i>municipalities</i>		X	X	X	X			X	Public and private grants and/or local or private funds	\$50.000	48 months	NEW	Medium	NEW
2.e	Purchase and install backup generator at Jesup Fire Department	EMA and Jesup Fire Department Wayne County and City of Jesup		X	x	X	X			X	Public and private grants and/or local budgets	\$35,000	30 months	NEW	High	NEW
2.f	Purchase and install backup generator at EMS	EMA and EMS Wayne County and all municipalities	0.07	X	X tv.ar	X	X	lifo t	hron	X	Public and private grants and/ or local budgets	\$50,000	30 months	NEW	High	NEW

Strategy #	Mitigation Action	Lead and Supporting Agency, Department, Organization Jurisdiction	Flood	Winter Weather	Thunderstorm	Tornado	Tropical Cyclone	Drought	Wildfire	Earthquake	Funding Source	Estimated Cost	Completion Timeframe	Progress/ Status	Priority	Previous Strategy #
3.a	Investigate methods for sediment reduction at repetitive loss areas	Engineering Wayne County and all municipalities	X				X				Local funds	Staff time	36 months	None; Other projects have taken priority	Medium	Flood 1.1.8 and Tropical 1.1.8
OB.	JECTIVE 4: Reduce	damage to proj	perty	and	loss	of li	fe th	roug	gh th	e uti	lization of s	tructural m	itigation proj	ects		
4.a	Increase drainage or absorption capacities with detention and retention basins, relief drains, spillways, drain widening/ dredging or routing, beaver dams, logjam and debris removal, extra culverts, bridge modification, dike setbacks, flood gates and pumps, or channel redirection	Road Department and the street departments and water/sewer departments of Odum, Jesup, and Screven Wayne County and all municipalities	X				x				Public and private grants and/or local budgets	\$20 million	60 months	Continuous project; areas of Wayne Feed and Seed recently mitigated (Cherry Street)	High	Flood 1.1.1 and Tropical 1.1.1

Strategy #	Mitigation Action	Lead and Supporting Agency, Department, Organization Jurisdiction	Flood	Winter Weather	Thunderstorm	Tornado	Tropical Cyclone	Drought	Wildfire	Earthquake	Funding Source	Estimated Cost	Completion Timeframe	Progress/ Status	Priority	Previous Strategy #
4.b	Seek funding to pave additional direct and connector roads	Road Department and municipal street departments <i>Wayne County</i> <i>and all</i> <i>municipalities</i>	X	X	x		X		x		Public and private grants and/or local budgets	\$15 million	60+ months	Continuous project; LC Carter and James Johnson Roads completed; Fourth Street and Sunset partially completed	High	Flood 1.1.4 and Tropical 1.1.4
4.c OB.	Add additional storm draining in problematic areas JECTIVE 5: Increas	City of Jesup Road Department and Engineering Wayne County and City of Jesup se the ability of V	X Wayı	ne Co	X	y, its	X mur	nicip	alitio	es, ai	Public and private grants and/or local budgets nd its citizer	\$3 million 1s to respon	60 months d to natural a	Continuous project; areas have been improved (Pine Bloom area), but more is needed and manmade ha	High azards thro	dan Flood 1.1.7 and Tropical 1.1.7
eme	ergency service meas	sures														

Strategy #	Mitigation Action	Lead and Supporting Agency, Department, Organization Jurisdiction	Flood	Winter Weather	Thunderstorm	Tornado	Tropical Cyclone	Drought	Wildfire	Earthquake	Funding Source	Estimated Cost	Completion Timeframe	Progress/ Status	Priority	Previous Strategy #
5.0	Develop Continuity of Operations/Continuity of Government Plans for Wayne County, Jesup, Odum, and Screven	EMA, Board of Commissioners, and councils of Jesup, Odum, and Screven Wayne County and all municipalities	v	v	v	v	v	v	v	v	Public and private grants and/or local budgets	\$25,000	36 months	NEW	High	NEW
5.a	Follow recommendations of the Wayne County Community Wildfire Protection Plan	Georgia Forestry Commission Wayne County and all municipalities				Λ	Δ	Λ	X		Local and state budgets	Staff time	30 months	In place; Continue	High	Drought 1.1.3
5.c	Increase aerial patrols for fires during periods	Georgia Forestry Commission Wayne County and all municipalities	·			<u> </u>		x	X		State budgets	Staff time	18 months	In place; Continue	Medium	Drought 1.1.5
Strategy #	Mitigation Action	Lead and Supporting Agency, Department, Organization Jurisdiction	Flood	Winter Weather	Thunderstorm	Tornado	Tropical Cyclone	Drought	Wildfire	Earthquake	Funding Source	Estimated Cost	Completion Timeframe	Progress/ Status	Priority	Previous Strategy #
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		Wayne County Fire									Public and					
	fire tankers (8	Wayne County									private grants					*
5.d	additional tankers needed)	and all municipalities							x		and/or local budgets	\$2 million	60+ months	NEW	Medium	NEV
5.e	Expand fire department buildings to accommodate new tankers in 5.d	Wayne County Fire Wayne County and all municipalities							X		Public and private grants and/or local budgets	\$1 million	60+ months	NEW	Medium	NEW
5.f	Develop a drought emergency Plan	EMA Wayne County and all municipalities						X			Local budgets	Staff time	30 months	None; Other projects have taken priority	Medium	Drought 1.1.1
5 g	Identify a regional EMA/EOC location for the region	EMA Wayne County and all municipalities	x	x	x	X	x	X	X	X	Public and private grants and/or local or state budgets	\$500.000	48 months	NEW	Medium	NEW

Strategy #	Mitigation Action	Lead and Supporting Agency, Department, Organization Jurisdiction	Flood	Winter Weather	Thunderstorm	Tornado	Tropical Cyclone	Drought	Wildfire	Earthquake	Funding Source	Estimated Cost	Completion Timeframe	Progress/ Status	Priority	Previous Strategy #
5.h	Participate in the Better Back Roads Training Program	Road Department and municipal street departments Wayne County and all municipalities	X	X	x		X		X	X	Local budgets	Staff time	30 months	Participation under research	High	Flood 1.1.5 and Tropical 1.1.5
5.i	Purchase sandbagging supplies	EMA Wayne County and all municipalities	X		X		X	1			Public and private grants and/or local budgets	\$15,000	24 months	NEW	Medium	NEW
5 ;	Purchase mobile	EMA, Road Department, and law enforcement agencies Wayne County and all municipalities	v	v	v	v	v		v	v	Public and private grants and/or local budgets	\$100.000	24 months	NEW	High	NEW

Strategy #	Mitigation Action	Lead and Supporting Agency, Department, Organization Jurisdiction	Flood	Winter Weather	Thunderstorm	Tornado	Tropical Cyclone	Drought	Wildfire	Earthquake	Funding Source	Estimated Cost	Completion Timeframe	Progress/ Status	Priority	Previous Strategy #
5.k	Purchase additional debris cleanup equipment	Road Department and municipal street departments Wayne County and all municipalities		x	x	x	x			x	Public and private grants and/or local budgets	\$750.000	60 months	NEW	High	NEW
5.1	Purchase solar- powered traffic lights to mitigate potential outages	Road Department, Georgia DOT, and municipal street departments <i>Wayne County</i> <i>and all</i> <i>municipalities</i>		X	X	X	X			X	Public and private grants and/or local or state budgets	\$50,000	60 months	NEW	Low	NEW

											r	-			-	
Strategy #	Mitigation Action	Lead and Supporting Agency, Department, Organization Jurisdiction	Flood	Winter Weather	Thunderstorm	Tornado	Tropical Cyclone	Drought	Wildfire	Earthquake	Funding Source	Estimated Cost	Completion Timeframe	Progress/ Status	Priority	Previous Strategy #
6.a	Develop a drought communication plan to facilitate timely communication of relevant information to officials, decision makers, emergency managers, and the general public	EMA Wayne County and all municipalities						X			Public and private grants and/or local budgets	\$10,000	36 months	Early warning system instituted	Medium	Drought 1.1.2 (mod)
6.b	Continue to educate the public on the need for getting burn permits	Georgia Forestry Commission Wayne County and all municipalities							X		State budgets	Staff time	12 months	In place; Continue	Medium	Drought 1.1.4
6.0	Continue to implement a media campaign to educate the public on wildfire dangers during periods of drought	Georgia Forestry Commission and EMA Wayne County and all municipalities						x	x		State budgets	Staff time	24 months	In place; Continue	Medium	Drought 1.1.6

Strategy #	Mitigation Action IECTIVE 7: Min	Lead and Supporting Agency, Department, Organization	Dam Failure	e B Incident	Terrorism	Transportation	And Failure	Emer. Disease	Funding Source	Estimated Cost of a dam brea	Completion Timeframe	Progress/ Status	Priority	Previous Strategy #
					20115,	inau	, and					1		
7 . a														
OB.	JECTIVE 8: Imp	lement additiona	l prot	ective r	neas	ures a	nd capa	biliti	ies in respo	nse to manma	de incidents			
8.a	Purchase HazMat and radiological response equipment	EMA and Fire Departments Wayne County and all municipalities		X	X	X	X	X	Public and private grants and/or local budgets	\$250,000	36 months	NEW	Medium	NEW
8.b	Train personnel for HazMat response to HazMat Operations level	EMA and all emergency response agencies Wayne County and all municipalities		X	X	X	X	X	Public and private grants and/or local budgets	\$7,500	30 months	NEW	High	NEW

Strategy #	Mitigation Action	Lead and Supporting Agency, Department, Organization	Dam Failure	HazMat/Rad Incident	Terrorism	Transportation	Infrastructure Failure	Emer. Disease	Funding Source	Estimated Cost	Completion Timeframe	Progress/ Status	Priority	Previous Strategy #
8.c	Purchase medical- grade tents for patient overflow needs	Wayne Memorial Hospital and EMA Wayne County and all municipalities		X	X			X	Public and private grants and/or local budgets	\$250,000	48 months	NEW	High	NEW
OB.	JECTIVE 9: Inci	rease public awar	eness	of loca	l mai	nmade	e hazard	ls an	d proper re	sponse to thos	e hazards			
9.a														

Completed Mitigation Strategies

Previous Strategy #	Strategy Description	Status
Flood 1.1.2 and	Investigate methods to make access roads to Martha Ross Smith Elementary School	COMPLETED in 2017
Tropical 1.1.2	more flood resilient	
Flood 1.1.6 and	Assess stormwater run-off, watershed plans, and effectiveness of present drainage	COMPLETE; Assessment
Tropical 1.1.6	ditching, culverts, stormwater, and sanitation network	completed in the last 5 years

Deleted Mitigation Strategies

Previous	Strategy Description	Reason
Strategy #		
Flood 1.1.4 and	Enforce environmental conservation ordinance protecting Wayne	No longer needed
Tropical 1.1.4	County community's significant natural resources including the	
	Altamaha's and Little Satilla's protectice river corridors	
Drought 1.1.7	Seek funds to repair existing (dry hydrant) ponds	Dry hydrants are no longer utilized as fire department
		tankers are equipped with the ability to draft off the
		surface of ponds/lakes

Chapter Five

Maintenance and implementation

Summary of Updates for Chapter Five

The following table provides a description of each section of this chapter, and a summary of the changes that have been made to the Wayne County Hazard Mitigation Plan 2017.

Chapter 5 Section	Updates
Maintenance	Separated from Plan UpdateContent Revised
Plan Distribution	• New Section – Not in 2017 Plan
Implementation	Content Revised
Evaluation	Content Revised
Peer Review	• New Section – Not in 2017 Plan
Plan Update	Separated from MaintenanceContent Revised
Conclusion	Content Revised

Maintenance

Requirement §201.6(c)(4)(iii)

To adhere to best practices, state and federal guidelines, and lessons learned, the Wayne County Hazard Mitigation Plan Update Committee has developed a method to ensure the regular review and update of the Plan occurs. Plan maintenance protocols identified during the 2017 Wayne County Hazard Mitigation Plan was followed, to the best abilities of Wayne County. This most importantly included an increased attempt for public participation and inclusion in the planning process. The Wayne County Hazard Mitigation Plan Update Committee will reconvene annually in February to monitor and evaluate the progress of the mitigation strategies in the Plan. Wayne County's Emergency Management Director, Donnie Ray, will be responsible for implementing this meeting. The Committee will discuss the following questions annually:

- Do the goals address current and expected hazards and conditions?
- Are the goals and objectives still relevant to the County?
- Has the nature or magnitude of risks changed?
- Does the risk assessment portion of the Plan need to be updated or modified?
- Are the goals and objectives meeting changes in state and federal policy?
- Are the current resources appropriate for implementing the Plan?

- Are there local implementation problems, such as technical, political, legal, or coordination issues with other agencies?

- Did the jurisdictions, agencies, and other partners participate in the plan implementation process as proposed?

The responsible parties for various mitigation strategies will provide a report during this annual meeting regarding the following:

- How well did the implementation processes work?
- Were any difficulties encountered during implementation?
- How successful was the coordination of efforts?
- Are there any suggestions for revision of any strategies?

Wayne County's Emergency Management Director will send the minutes from this annual meeting to Wayne County Board of Commissioners and the municipalities of Jesup, Odum, and Screven for review.

If there are any updates or modifications to the Wayne County Hazard Mitigation Plan, the Emergency Management Director will forward the changes to the Georgia Emergency Management Agency's Hazard Mitigation Officer. All annual reviews of the Wayne County Hazard Mitigation Plan will be open to the public. These meetings will be advertised both in the local newspapers, but also on signage in the publicly used facility hosting the meeting.

Maintenance Log

Revision Date	Revised Section	Reason for Revision	Revised By
2019- 2020	Five Year Hazard Mitigation Plan Update	FEMA Requirement	Wayne County Hazard Mitigation Planning Committee with assistance from Lux Mitigation and Planning

Plan Distribution

This Plan will be distributed, but not limited, to the following departments and organizations within Wayne County:

Wayne County Board of Commissioners Wayne County Fire Department Wayne County Emergency Management Agency Wayne County Sheriff's Office Wayne County Public Works Wayne County Public Works Wayne County Code Enforcement Wayne County Board of Education City of Jesup City of Odum City of Screven

A printed copy of the approved Plan will be available for viewing at the Wayne County Commissioner's Office located at 341 East Walnut Street in Jesup, GA. A printed copy of the approved Plan will also be available for viewing at the Three Rivers Regional Library located at 759 Sunset Blvd in Jesup. The existence and location of these copies will be publicized in the County's local newspaper, The Jesup Press Sentinel.

All comments, questions, concerns, and opinions about the Plan will be directed to Director Donnie Ray of the Wayne County Emergency Management Agency for follow-up.

Implementation

Requirement §201.6(c)(4)(ii)

Each jurisdiction participating in the Wayne County Hazard Mitigation Plan is responsible for implementing specific mitigation actions as prescribed in this plan. In the Mitigation Strategies section, every proposed strategy is assigned to a specific local department or agency to assign responsibility and accountability and increase the likelihood of subsequent implementation.

In addition to the designation of a local lead department or agency, some strategies have secondary or assisting department or agencies listed as well. This allows for a sharing of responsibility and coordination of effort for some of the identified strategies that cross lines of departmental responsibility. The completion date has been assigned to assess whether identified mitigation strategies are being implemented in a timely fashion.

Wayne County and all municipalities will seek outside funding sources to implement mitigation projects in both the pre-disaster and post-disaster environments. When applicable, potential funding sources have been identified and targeted for the proposed actions listed in the mitigation strategies. It will be the responsibility of each participating jurisdiction to determine additional implementation procedures beyond those listed within the Wayne County Hazard Mitigation Plan.

This plan, as a joint effort between Wayne County and the Municipalities of Jesup, Odum, and Screven will serve as a comprehensive mitigation plan. The mitigation strategies, hazard identification, and other information identified in this plan will be integrated into all comprehensive Wayne County plans, as well as all municipality plans in the future. Incorporation of these strategies will occur, as necessary, throughout this planning cycle covered by this Hazard Mitigation Plan Update. Aspects of this plan will be integrated into the Wayne County Comprehensive Plan during the next planning cycle.

Identified hazards and mitigation strategies of the 2017 Wayne County Hazard Mitigation plan were integrated into the Local Emergency Operations Plan, multiple County and City SOPs and SOGs, and future planning and zoning plans. Wayne County will integrate mitigation strategies identified in this plan into the Wayne County Comprehensive Plan, Community Wildfire Protection Plan, Continuity of Operations Plan, and other future plans. Strategies identified in the previous plan were applied to grant applications, building and zoning requirements, and development planning considerations for Wayne County and all municipalities. Many of these strategies will be applied using previously identified policies and ordinances, including the NFIP compliance ordinances and water-use ordinances, which have now been applied countywide. All jurisdictions have the authority to

adopt locally binding ordinances and policies to enhance the mitigation strategies in their jurisdiction.

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

Regulatory Tools/Plans	Regulatory Type: Ordinance, Resolution, Codes, Plans, Etc.	Local Authority	State Prohibited	Higher Authority
Building Codes	County/Municipal Code	Yes	No	No
Capital Improvements Plan		Yes	No	No
Comprehensive Plan	Wayne County Comprehensive Plan	Yes	No	No
Economic Development Plan	Wayne County Comprehensive Plan	Yes	No	Yes
Emergency Management Accreditation Program		No	No	Yes
Emergency Response Plan	Wayne County Local Emergency Operations Plan (LEOP)	Yes	No	Yes
Flood Management Plan		Yes	No	No
Historic Preservation		Yes	No	No
National Flood Insurance Program Participation		Yes	No	Yes
Continuity of Government/ Operations Plan		No	No	No

Post-Disaster Ordinance		Yes	No	No
Zoning Ordinances	County and Municipal Codes	Yes	No	No

Opportunities to integrate the requirements of this Plan into other local planning mechanisms shall continue to be identified. Although it is recognized that there are many possible benefits to integrating components of this Plan into other local planning mechanisms, the development and maintenance of this stand-alone Hazard Mitigation Plan is deemed by the Wayne County Hazard Mitigation Planning Committee to be the most effective and appropriate method to implement local hazard mitigation actions at this time.

Evaluation

Requirement §201.6(c)(4)(i)

Periodic revisions and updates of the Wayne County Hazard Mitigation Plan may be required to ensure that the goals of this plan are kept current with federal, state, and local regulations. These revisions should also consider any potential changes in the hazard vulnerability and mitigation priorities of Wayne County.

The Wayne County Hazard Mitigation Plan Update Committee will meet annually to review the Wayne County Hazard Mitigation Plan. During this annual review, mitigation strategies will be reviewed to evaluate the progress that has occurred for each identified mitigation strategy. The Wayne County Hazard Mitigation Plan Update Committee will also meet following any disaster event to review the identified mitigation strategies for that hazard and determine if timelines should be adjusted or additional mitigation strategies should be identified and added to the plan. These steps will ensure that the Wayne County Hazard Mitigation Plan is continuously updated to allow for changes in hazard vulnerabilities and identified mitigation strategies.

The Wayne County Hazard Mitigation Plan Update Committee will complete all evaluations of the Wayne County Hazard Mitigation Plan.

Peer Review

State Requirement Element F1

To maintain standards of quality, improve performance, and provide credibility to the Wayne County Hazard Mitigation Plan Update, representatives of local emergency management agencies bordering Wayne County conducted a peer review of the Plan. The peer review of this Plan constitutes a form of selfregulation, accountability, and new insights offered by qualified professionals in neighboring communities, which face many of the same natural and man-made hazards.

Wayne County Hazard Mitigation Plan Update was peer reviewed by:

Michelle Lee Director Brantley County Emergency Management Agency

Edward Brewer Director Long County Emergency Management Agency

Ty Poppell Director McIntosh County Emergency Management Agency

Santo Niño Director Pierce County Office of Homeland Security

Date

Date

Date

Date

Plan Update

Requirement §201.6(c)(4)(i)

The Federal Disaster Mitigation Act of 2000 requires that the Hazard Mitigation Plan be updated at least once every five years. The Wayne County Emergency Management Agency is the department responsible with ensuring this requirement is met. The Wayne County Hazard Mitigation Plan Update Committee will be involved in this future process and will aid the Wayne County Emergency Management Agency in ensuring that all jurisdictions provide input into the planning process. The public will be invited to participate in the planning process through public hearings to be held whenever major updates to this plan are needed and during annual review meetings. This plan will expire in the fourth quarter of 2026; therefore, the approval and adoption of the next plan update must be completed before that time.

In the second quarter of 2025, Wayne County plans to begin the Hazard Mitigation Plan Update process for the fourth time. This planning process will include bimonthly meetings to accomplish the identified goals of the Wayne County Hazard Mitigation Plan Update. This process will be headed up by the Wayne County Emergency Management Agency. The Wayne County Hazard Mitigation Planning Committee will follow a similar process as was undertaken during this planning cycle to complete all FEMA and GEMA requirements for the Hazard Mitigation Plan Update. This process will be completed by the third quarter of 2026 to meet all identified planning deadlines.

Conclusion

As a result of the hazard mitigation planning process, Wayne County, and all municipalities therein, as well as additional participating organizations have obtained a great deal of information and knowledge regarding Wayne County's disaster history, natural and technological hazards, vulnerabilities, and potential strategies to lessen the impacts of the identified hazards.

One consistent theme identified by the Wayne County Hazard Mitigation Planning Committee was the inability to consistently identify geographic locations that were more vulnerable to most hazards due to the widespread potential effects and random impact areas each hazard could have. This was exceedingly true for most natural hazards. Recognizing this challenge, the Wayne County Hazard Mitigation Plan Update Committee determined it was best to identify many mitigation goals, objectives, and strategies that were both general and specific in nature. These strategies allow the Wayne County Hazard Mitigation Plan Update Committee to adopt strategies that will have the greatest positive effect on the greatest amount of the population.

The Wayne County Hazard Mitigation Planning Committee adopted strategies in all six of the major mitigation categories: Prevention, Property Protection, Natural Resource Protection, Structural Projects, Emergency Services, and Public Education and Awareness. Structural Projects and Emergency Services comprised the greatest number (%) of the mitigation strategies identified by Wayne County.