
HAZARD MITIGATION PLAN

2021-2026

WILCOX COUNTY, GEORGIA

AND THE CITIES OF ABBEVILLE, PINEVIEW, PITTS, AND ROCHELLE

This Plan produced for the Wilcox County Board of Commissioners
by the Heart of Georgia Altamaha Regional Commission
through funding provided by the Federal Emergency Management Agency
and the Georgia Emergency Management Agency

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Chapter 1: Introduction to the Planning Process

Summary of Changes

Table 1.1 provides a brief description of each section in this chapter and a summary of changes that have been made to the Wilcox County Hazard Mitigation Plan.

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

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

SECTION I. PURPOSE AND NEED, AUTHORITY AND STATEMENT OF PROBLEM

Purpose, Need of Plan, and Statement of Problem

The purpose of this document is to update the 2015 Wilcox County Multi-Jurisdictional Hazard Mitigation Plan, to provide an overview of the hazards that may impact Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelleand to outline the community’s plans to mitigate the potential loss of life and damages to property along with the affect on economy that could occur with these events.

The information that is contained within this document is intended to provide the framework for hazard mitigation goals and objectives that are to be implemented by the local governments within Wilcox County. The intent of achieving the set goals and objectives is to reduce the risk and damage associated with the identified hazards. The implementation of this plan is designed to better prepare Wilcox County for hazards that threaten the safety of all of its residents. Hazard Mitigation is a means to address and proactively reduce the potential damage that may be caused by natural or man-made disasters.

This document will serve as a reference for elected officials and agency representatives who are responsible for making the critical decisions necessary to ensure the protection of the citizens of Wilcox County. The updated Hazard Mitigation plan is to be utilized as a current guide for Wilcox County and its’ municipalities in order to implement future hazard policies, programs, and projects that adhere to the goals of the plan. In addition to the creation of preemptive measures designed to reduce the damage of a disaster, by meeting the mandated requirements the county enables itself to qualify for federal post-disaster assistance.

This Plan is a direct result of research and a planning and public involvement process undertaken by the local government officials and citizens of Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelleafter they formed the Wilcox County Hazard Mitigation Plan Update Committee (hereafter known as the HMPUC). With this plan, Wilcox County is continuing its commitment to protecting the health, life, property, and overall well-being of its citizens. The HMPUC examined which natural disasters posed the greatest threat within the county and then outlined the potential steps that can be implemented in order to minimize devastation possibilities. The individuals involved in the preparation of this plan feel that this plan accurately reflects the potential hazards faced by the county and proposes preemptive measures that address these areas.

By identifying risks and areas of vulnerability the county will be able to make further preparations to minimize the impact of the hazards. The Cities of Abbeville, Pineview, Pitts, and Rochelleare the only incorporated cities located in Wilcox County.

Authority

Authority for the development of this Plan was given by the Wilcox County Commission as a result of their execution of the Grantee-Subgrantee Agreement for the Wilcox County Pre-Disaster Mitigation Plan Update Project (PDM); and by the Cities of Lyons, Santa Claus, annd Vidalia located within Wilcox County, through their participation in the planning project.

The Hazard Mitigation Plan Update will meet the requirements of the Disaster Mitigation Act of 2000 Public Law 106-390, October 30, 2000, as stipulated in the Interim Final Rule 44 CFR 201.4 Standard State Plan criteria, published on February 26, 2002. Meeting these regulations will allow Wilcox County to maintain eligibility and qualify for all federally declared disaster assistance, including certain types of Public Assistance and hazard mitigation grants available through the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288, as amended). These forms of assistance will further the county's ability to provide for the safety and well-being of its citizens. Meeting these regulations will allow Wilcox County to maintain eligibility and qualify for all federally declared disaster assistance, including certain types of Public Assistance and hazard mitigation grants available through the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288, as amended).

Disaster Mitigation Act of 2000 (DMA 2000)

In the past, federal legislation has provided funding for disaster relief, recovery, and some hazard mitigation planning. DMA 2000 is the latest legislation to improve the planning aspect of that process. The Act reinforces the importance of mitigation planning and emphasizes planning for disasters before they occur. The Act establishes a pre-disaster hazard mitigation program and designates new requirements for the national post-disaster Hazard Mitigation Grant Program (HMGP). Section 322 of the Act 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 disaster.

State and 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, the Federal Emergency Management Agency (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. The Rule identifies criteria for detailed Hazard, Risk, and Vulnerability (HRV) assessments. Failure to meet the new criteria will make state and local governments ineligible for Stafford Assistance, and thus forfeit some types of emergency assistance. The following section describes the existing state planning initiatives and mitigation programs.

Georgia Planning Act

The Georgia General Assembly adopted the Georgia Planning Act in 1989 as a means to encourage better management of growth in previously developed and developing areas of the State while encouraging smart development in less prosperous areas. Although supporting development, the legislature still strives for the conservation and protection of natural and historic resources, protection and promotion of quality of life through proper land use planning, and protection of community facilities. The cornerstone of the coordinated planning program is the preparation of a long-range comprehensive plan by each local government.

This plan is intended to highlight community goals and objectives as well as determine how the government proposes to achieve those goals and objectives. With the passage of the Georgia Planning Act of 1989, all of Georgia's 159 counties and 535 municipalities were designated "Qualified Local

Governments”. Each of these local governments must maintain their status in order to remain eligible for a range of state and federal assistance programs. Continuing efforts strive for integrating the local hazard mitigation planning with the local comprehensive planning process.

Erosion and Sedimentation Control OCGA 12-7-1

The Georgia Erosion and Sedimentation Act requires that each county or municipality adopt a comprehensive ordinance establishing procedures governing land-disturbing activities based on the minimum requirements established by the act. The Erosion and Sedimentation Act is administered by the Environmental Protection Division (EPD) of the Georgia Department of Natural Resources (DNR) and local governments. Permits are required for specified land-disturbing activities, including the construction or modification of manufacturing facilities, construction activities, some activities related to transportation facilities, activities on marsh hammocks and others.

River Corridor Protection OCGA 12-2-1

The statute informally known as the Mountain and Corridor Protection Act authorizes DNR to develop minimum standards for the protection of river corridors (and mountains, watersheds and wetlands) that can be adopted by local governments. The EPD administers the act. All rivers in Georgia with an average annual flow of 400 cubic feet per second are covered by the act, except those within the jurisdiction of the Coastal Marshlands Protection Act. Some of the major provisions of the act include: requirements for a 100-foot vegetative buffer on both sides of rivers, consistency with the Georgia Erosion and Sedimentation Act, and local governments’ identification of river corridors in land-use plans developed under their respective comprehensive planning acts.

Watershed and Flood Prevention Act, PL 83-566, August 4, 1954 (16 U.S.C. 1001-1008)

This act authorized the establishment of programs to aid in protecting the lives and property threatened by natural disasters related to watersheds (such as flooding and erosion). Prior to fiscal year 1996, separate programs addressed small watershed planning activities and cooperative river basin surveys and investigations. After the 1996 appropriations act, the activities specified under the Watershed and Flood Prevention Act were combined into the single program known as the Emergency Watershed Protection (EWP) program. The purpose of the EWP program is to assist federal, state and local agencies and tribal governments to protect watersheds from damage caused by erosion, floodwater and sediment as well as to conserve and develop water and land resources. Resource concerns addressed by the program include water quality, water conservation, wetland protection and restoration, water storage capacity, agricultural drought problems, rural development, municipal and industrial water needs, upstream flood damages, and water needs for wildlife and forest-based industries. Methods of planning and surveying addressed by the program include specific watershed plans, river basin surveys, flood hazard analyses and floodplain management assistance. The purpose of the plans and surveys is to identify solutions that use land treatment and nonstructural measures to resolve resource problems.

Federal Hazard Mitigation Programs

Because the Georgia Emergency Management Agency (GEMA) administers federal hazard mitigation programs for Georgia, GEMA’s planning process is inherently integrated into these federal programs, specifically the Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation Program (PDM), the National Local Program (NFIP), the Community Rating System (CRS), Flood Mitigation Assistance Program (FMA), the Map Modernization Project, Repetitive Flood Claims Program (RFC) and Severe Repetitive Loss

Program (SRL). The Hazard Mitigation Grant Program (HMGP), authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, provides grants to states and local governments to implement long-term hazard mitigation measures after a major disaster declaration in order to reduce the loss of life and property due to hazard events and to enable the implementation of mitigation measures during the immediate recovery period.

Repetitive Flood Claims (RFC) Program

This grant program was authorized by the Bunning-Bereuter- Blumenauer Flood Insurance Reform Act of 2004 (P.L. 108–264), which amended the National Flood Insurance Act (NFIA) of 1968 (42 U.S.C. 4001, et al). The RFC program provides funds to assist states and communities in reducing flood damages to insured properties that have had one or more claims to the National Flood Insurance (NFIP) Fund. RFC grants are to be awarded on a competitive basis and without reference to state allocations, quotas, or other formula-based allocation of funds. Georgia utilized project grants in the first two years of this program’s existence to permanently mitigate NFIP insured structures through property acquisition.

In order to initiate an outreach program to neighboring communities, governments, local and regional agencies, and to agencies authorized to regulate development, business, and the public, two Public Hearing Notices were published in the legal organ of the local newspaper. In addition, e-mail lists of stakeholders were kept updated and those listed were informed of meetings through e-mails, letters, and/or telephone calls. Surrounding county EMA Directors were notified of the plan update via formal letters and invited to participate in the process.

Planning Division staff from the Heart of Georgia Altamaha Regional Commission, which represents seventeen counties in the region (including Wilcox County), attended the Wilcox County meetings. The Heart of Georgia Altamaha Regional Commission participated in all aspects of the planning process and provided a regional perspective in the formation of the Wilcox County Multi-Jurisdictional Hazard Mitigation Plan.

Through the above efforts, the Wilcox County Multi-Jurisdictional Hazard Mitigation Plan will be updated, including a comprehensive range of Mitigation Goals, Objectives, and Action Steps which will assist the local governments in emphasizing a more direct approach to Hazard Mitigation. The long-term goal is to reduce potential natural disaster losses to life, property, and the economy through Hazard Mitigation efforts.

SECTION II. LOCAL METHODOLOGY, PLAN UPDATE PROCESS AND PARTICIPANTS

Overview

This Hazard Mitigation Plan Update encompasses the jurisdictions of Wilcox County and the Cities of Lyons, Santa Claus, and Vidalia, located in Southeast Georgia. Each of these jurisdictions also participated in the previous Hazard Mitigation Plan update. The Wilcox County Board of Commissioners contracted with the Heart of Georgia Altamaha Regional Commission to provide consultation, meeting facilitation, data collection, technical assistance, and plan development services. Following the formation of a steering committee, a year-long planning effort was undertaken, the final product of which was a Plan Update containing updated Mitigation Goals, Objectives, and Action Steps to reduce or eliminate the potential for loss of life and damage to property and the economy caused by natural disasters (see Chapter 4).

The 2020 Wilcox County Hazard Mitigation Plan Update process began with the development of a planning committee (Wilcox County HMPUC), which would provide input and guidance throughout the initiative. This committee consisted of representatives from both the county, the Cities of Abbeville, Pineview, Pitts, and Rochelleas well as other local and regional agencies. In order to ensure participation and meet federal requirements, an invitee list was compiled of local and regional individuals and organizations that were essential to the success of the plan. These individuals were invited to attend and participate in the planning process. Members of the Wilcox County HMPUC were contacted by telephone or by letter/e-mail concerning their participation on the Committee.

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

A formal invitation was extended via United States Postal Service to EMA offices in the neighboring communities of: Pulaski, Dooly, Turner, Crisp, Dodge, Telfair, and Ben Hill Counties requesting their attendance at the Kick-Off Committee meeting for a plan review and comments. (An example of this letter can be found in Appendix E, Subfolder V).

The publication of a Public Notice in the legal organ is considered the legal method of notifying the public and inviting them to meetings. The public was invited to attend and comment during two public hearings. The “kick-off” public hearing was advertised in the local newspaper (meeting advertisements and sign-in sheets are provided in Appendix E). A second and final public hearing was held on November 5, 2020, and was advertised in the local newspaper (see Appendix E). Citizens, including staff and members of the HMPUC, were present (see Appendix E).

Open discussion was permitted at all public meetings for suggestions and/or comments regarding the plan update.

During general question and answer periods, comments (if any) were noted by the Heart of Georgia Altamaha Regional Commission staff and incorporated into the plan as appropriate. Opportunities for submitting public comments or input were made available by phone, email and written letter. There were no substantive comments other than those complimentary of the planning process itself. Therefore, there was no need to consider or add public comments. Furthermore, the public will be able to provide comments during the plan adoption process.

The Wilcox County HMPUC was comprised of individuals, representatives from Wilcox County, the Cities of Abbeville, Pineview, Pitts, and Rochelle and included representatives from appropriately concerned departments (as shown in following chart), who attended meetings and/or conducted research:

| Name | Jurisdiction | Organization | Title |
|----------------------|---------------------|--|--|
| Paula Bell | Wilcox County | Wilcox County Board of Commissioners | County Manager |
| Charlie Coleman | State of GA | Wilcox State Prison | Engineer |
| Scott White | State of GA | Wilcox State Prison | Maintenance Forman |
| Lisa M. Willis | Pitts | Pitts Volunteer Fire Department | Training Coordinator |
| Beth Smith | Abbeville | City of Abbeville | City Clerk |
| Nathan Gibbs | Wilcox County | Wilcox County Board of Education | Director of Curriculum CTAE, Testing and School Safety |
| Michael Pomirko | Wilcox County | Wilcox County Recreation Department | Recreation Director |
| Alecia McKinley | Pitts | City of Pitts | Council Member |
| Wayne McGuinty | Rochelle | City of Rochelle | Mayor, Fire Chief |
| Doug Powell | Regional | Middle Georgia EMC | Manager of Purchasing |
| Tammy R. Huggins | State of GA | Georgia Dept. of Transportation | Permits Inspection Engineer |
| Roger Minshew | State of GA | Georgia Dept. of Transportation | AAPN |
| Cindy Keene | Wilcox County | Wilcox County Health Department | Nurse Manager |
| Julie Childers | Wilcox County | Wilcox County Board of Education | Superintendent |
| Mandy Aultman | Wilcox County | Wilcox County Sheriff's Office | Jail Administrator |
| Rebecca Powell | State of GA | Department of Family and Children Services | County Director |
| Larry Brown | Wilcox County | Wilcox County EMA | EMA Director |
| John Marchant | State of GA | Wilcox State Prison | Fire Chief |
| Matthew Hall | Wilcox County | Wilcox County Board of Education | Community Engagement |
| Michael T. Estes | Abbeville | City of Abbeville | Mayor |
| Charles Futch | Wilcox County | Wilcox County EMS | EMS Director |
| Angela Bloodworth | Pineview | City of Pineview | City Clerk |
| Sherry Bloodworth | Wilcox/Business | Shady Pines Estate Personal Care Home | Administrator |
| Darlene Dunson | Wilcox/Business | Shady Pines Estate Personal Care Home | Supervisor |
| Wilton King | Pitts | City of Pitts | City Clerk |
| Betsy Stewart Tawton | Wilcox/Business | Crossview Care Center | Administrator |
| Carson Brooks | Wilcox/Business | Northside Villa Personal Care Home | Owner |
| Donnie Dykes | Wilcox/Business | Crossview Care Center | Maintenance Director |
| Adam Powell | Wilcox County | Wilcox County Road Department | Road Department Superintendent |
| Josh Ludwick | Wilcox County | Wilcox County EMS | EMT |

Sign-in sheets were collected at each formal and informal meeting to document individual participation. Meeting sign-in sheets may be found in Appendix E.

The Committee held the following meetings:

- Kick-off Public Hearing – July 9, 2019
- First Formal Meeting – August 8, 2019
- Second Formal Meeting – September 12, 2019
- Third Formal Meeting – October 24, 2019
- Fourth Formal Meeting – December 5, 2019
- Final Public Hearing – November 5, 2020

The plan update process consisted of holding meetings to review the data that was collected and utilized in the 2015 plan, including hazard event data, goals and objectives as well as other community profile data. The entire document was available at each municipality's office for public review. Each chapter was reviewed chronologically with updated hazard, risk, and vulnerability data, as well as previous accomplishments of mitigation strategy efforts. Formal meetings of the Plan Update Committee were held over a one-year span.

The local governments worked outside of meetings to conduct the research necessary to determine what objectives had been reached and to verify the accuracy of the hazard data. The governments also gave a brief update at their respective meetings to their council members and to the public who attended those meetings as to what stage the plan was at during the process, and it also gave the council members and the attendees an opportunity to comment on the process. The Plan Update Process began with an initial public hearing on July 9, 2019.

The public was also invited to participate in the draft review process following initial submission to GEMA and prior to submission to FEMA on November 5, 2020. Both public meetings were advertised in the local newspaper. Copies of the draft were available at the final public hearing as well as the office of the Heart of Georgia Altamaha Regional Commission.

SECTION III. PLAN REVIEW, ANALYSIS AND REVISION

The contracted planner with the Heart of Georgia Altamaha Regional Commission had primary responsibility for collecting updated information and presenting data to the committee. The HMPUC was responsible for identifying natural hazard events and completing a profile, vulnerability assessment, potential loss estimation (see Chapter 2, Appendix A, and Appendix D), and updating the Georgia Mitigation Information System (GMIS) Critical Facilities Inventory (see Appendix A). They were also responsible for reviewing and updating the Mitigation Goals, Objectives, and Action Steps (see Chapter 3), among other responsibilities.

Sections of the approved 2015 plan were provided to committee members as each respective issue was discussed throughout the update process. As mentioned within, the prior Hazard Mitigation Plan was used as a basis for the plan update. The Hazard Mitigation Plan Update Committee (HMPUC) reviewed all chapters and sections of the prior plan and updated them as appropriate, using national, state, and local sources.

The HMPUC also reviewed all of the following relevant local planning documents and other materials, all of which were incorporated into the current plan update through analysis by the HMPUC and further analysis by Heart of Georgia Regional Commission staff.

- The Community Wildfire Protection Plan (see Appendix C)
- The current joint comprehensive plan for the County and Cities, which includes the five-year Community Work Program (see Appendix B)
- The Local Emergency Operations Plan
- The current State of Georgia Hazard Mitigation Strategy (see Appendix C)
- The local Service Delivery Strategy
- Flood Insurance Study (see Appendix C)
- Data from the National Climatic Data Center (NCDC) (see Appendix C)
- 2019 Census Estimates (see Appendix C)
- 2019 Georgia Department of Labor – Labor Profile for Wilcox County (see Appendix C)
- 2017 USDA Census of Agriculture (see Appendix C)
- 2020 Hazard Risk Analysis – Wilcox County (see Appendix C)
- 2019 Georgia Safe Dams- Dam Inventory (see Appendix C)

The Heart of Georgia Regional Commission staff used goals, strategies, projects, and other information from the above resources to help to develop the goals, priorities, and action steps that are listed in this current plan. After organizing resources, an update of the risk assessment was performed. New forms, worksheets, and data (included in the Appendix) were also completed. Afterward, the Mitigation Goals, Objectives, and Action Steps were reviewed to determine if they were to remain the same or be added to, modified, or removed.

For the plan update, the Hazard Mitigation Plan Update Committee (HMPUC) used the prior Hazard Mitigation Plan as a basis, reviewing all chapters and sections and updating them as appropriate using national, state, and local data sources. The HMPUC reviewed the individual parts of the prior plan (with an emphasis on the hazards, goals, objectives, and action steps), and updated these elements through open discussion in which updates were noted by the Heart of Georgia Altamaha Regional Commission staff, who then used notes from the meetings to create the new Hazard Mitigation Plan document. The Wildfire section was updated using the Georgia Forestry Commission’s “Community Wildfire Protection Plan” (see Appendix C). The CWPP was consulted to ensure consistency between the CWPP and HMP, and all action items from the CWPP that were still relevant were included as action steps in the HMP.

Land use descriptions, information about zoning, and information about community services were updated using the current joint Comprehensive Plan for the County and Cities. Other documents used were the local Emergency Operations Plan, the previous Hazard Mitigation Plan, the State of Georgia Hazard Mitigation Plan, the Wilcox County Flood Insurance Study, and information from the National Climatic Data Center (NCDC). The State Hazard mitigation plan was consulted to ensure the HMP would be consistent with this plan, and data from the NCDC were used to create the Hazard Frequency Table and associated information regarding each hazard, which can be found in Chapter 2. The County and Cities do not have a Flood Mitigation Assistance Plan.

All chapters of this Plan have been updated to reflect the new material last plan approval (2015). See the tables at the beginnings of the chapters for further information regarding which items were updated and modified.

SECTION IV. ORGANIZATION OF THE PLAN

The Hazard Mitigation Plan Update is organized to incorporate the requirements listed in the Interim Final Rule 44 CFR 201.6 Local Mitigation Plans criteria in several chapters.

Chapter 1 (current chapter) includes an overview of the plan update document, an overview of the various state and federal authorizing authorities, the goals of the plan, and information detailing the planning process in order to be in complete compliance with Interim Final Rule 44 CFR 201.6(c)(1).

Chapter 2 outlines the history of natural hazards in terms of events and losses, identifies current hazards, assesses each jurisdiction's risks and vulnerabilities, and analyzes the potential losses to the county and included jurisdictions, as stipulated by Interim Final Rule 44 CFR 201.6(c)(2).

Chapter 3 outlines the community's hazard mitigation goals and objectives, mitigation actions and activities, and sources of mitigation project funding from all levels, as stipulated by Interim Final Rule 44 CFR 201.6(c)(3).

Chapter 4 outlines the process of plan integration and maintenance, including how the plan will be incorporated into other planning mechanisms, strategies for monitoring the implementation of mitigation efforts, the methods and schedule of updates, and reviewing progress of achieving the goals outlined in Chapter Four, as well as a description of approaches used to encourage public involvement as stipulated by Interim Final Rule 44 CFR 201.6(c) (4).

Appendices provide reference material used for the update process.

This Plan focuses on eleven hazards chosen by the HMPUC that may affect and cause damage to Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle. Chapter 2 and Appendix A are each subdivided into Sections 1 through 10; these sections reflect the 1 man-made and 9 natural hazards hazard that were chosen. The hazards are as follows (in order of priority):

1. Thunderstorms/Windstorms
2. Tornado
3. Hurricane/Tropical Storm
4. Flooding
5. Severe Winter Weather
6. Wildfire
7. Hailstorm
8. Drought
9. Excessive Heat
10. Hazardous Materials

Other hazards, such as Avalanche, Coastal Erosion, Coastal Storm, Earthquake, Expansive Soils, SLOSH (Sea, Lake and Overland Surges from Hurricanes), Tsunami, and Volcano, were examined and determined not to be of sufficient significance in the community to warrant their inclusion in the present Hazard Mitigation Planning effort, based on past history and available data.

This Plan also contains a HAZUS report (see Appendix C), a comprehensive range of Mitigation Goals, Objectives, and Action Steps (Chapter 3), and information on implementation, monitoring, and plan update and maintenance (see Chapter 4), as well as other FEMA-required items and materials (included in various Chapters, Sections and Appendices).

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

The Wilcox County Multi-Jurisdictional Hazard Mitigation Plan Hazard Mitigation Plan exists in one volume appended with various papers and documents, as well as a PDF document that is available on the Heart of Georgia Altamaha website. The planning efforts of Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle are intended to be an ongoing process and the Plan is to be amended as appropriate.

This Plan was prepared for:
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Copies of the Plan are on file and may be examined at the County and City government offices, the County Emergency Management Agency, the Heart of Georgia Altamaha Regional Commission office (as well as the HOGARC website, www.hogarc.org), and the Georgia Emergency Management and Homeland Security Agency (GEMHSA).

SECTION V. LOCAL HAZARD, RISK AND VULNERABILITY (HRV) SUMMARY

The HMPUC determined that the hazards established in the previous plan were still the most significant threats to the community, but determined that the hazards of hazardous materials release, hurricane/tropical storm, and excessive heat should be added as new hazards as these hazards also present significant threats to the community. The HMPUC also determined to combine the hazards of tropical storm and hurricane into one hazard, as these hazards are both tropical cyclone events. The hazard order of priority has changed from the previous plan update to incorporate new hazards and to accommodate combined hazards. A Hazard, Risk, and Vulnerability (HRV) Assessment has been formulated through a variety of information obtained during the planning process. Information has been obtained from online databases, published sources, and personal accounts regarding hazards, their history in the community, and when and where they were active. This summary is provided in Chapter 2.

The Wilcox County local risk assessment was accomplished by compiling data on the hazards that could affect the county and its residents, profiling these past hazard events, and then assessing the community's vulnerability to these hazards. The Wilcox County Hazard Mitigation Plan Update Committee accomplished the risk assessment by conducting the following steps:

- (1) Hazard Identification
- (2) Hazard Event Profiling
- (3) Vulnerability Assessment
- (4) Potential Loss Estimates

(1) Hazard Identification: Maps and historical data sources were studied and reviewed in order to identify the geographic extent, intensity, and probability of occurrence for various hazard events. GEMA Worksheet 1 (Identify the Hazard) was used in this process. A copy of this worksheet is provided in Appendix D.

The Wilcox County Hazard Mitigation Plan Update addresses the following hazards considered by committee members to pose the most threat to the residents, property, and economy of Wilcox County:

| | |
|--------------------------|---------------------|
| Thunderstorm/Windstorm | Hailstorm |
| Tornado | Drought |
| Hurricane/Tropical Storm | Excessive Heat |
| Flooding | Hazardous Materials |
| Winter Storm | |
| Wildfire | |

A comprehensive history of events for each hazard for Wilcox County is provided in Appendix A and described in Chapter 2.

(2) Hazard Event Profiling: Past hazard event data were collected through an extensive process that utilized input from Wilcox County Hazard Mitigation Plan Update Committee members, research on past disaster declarations in the County, information provided from the National Climatic Data Center and the National Weather Service, a review of current Flood Insurance Rate Maps (FIRM) and internet and newspaper data searches. This source data was used to complete a Hazard Frequency Table for committee analysis purposes. A copy of the Hazard Frequency Table is provided in Appendix D.

The committee analyzed the causes and characteristics of each hazard, how the hazard had affected Wilcox County in the past, and what part of Wilcox County’s population and infrastructure had historically been vulnerable to each specific hazard. GEMA Worksheet #2 (Profiling Past Hazards) was used to complete this process. A profile of each hazard discussed in this plan is provided in Chapter 2. A copy of Worksheet 2 is provided in Appendix D.

Additionally, to help assess the risk associated with each hazard a worksheet developed from the “FEMA Mitigation Plan Review Reference Manual” was used. The worksheet asked committee members to rate each hazard based upon several characteristics: Historical Occurrence, Probability, Vulnerability, Maximum Threat, Severity of Impact, and Speed of Onset. These ratings provided a detailed assessment and a prioritization of each hazard. A copy of this worksheet can be found in Appendix D.

In regard to hazard probability, an informal measurement scale was developed based on historical occurrence data to gauge the probability of future occurrences. The scale can be seen below.

| Occurrence Probability in Years | Likelihood of Future Occurrence |
|--|--|
| 1-10 | “Highly Likely” |
| 10-25 | “Likely” |
| 25-50 | “Unlikely” |
| 50 or greater | “Highly Unlikely” |

Vulnerability Assessment: The asset inventory component of the HRV assessment data included the development of a database that provides county infrastructure and critical facilities data as well as estimated structure dollar values for loss estimates. This critical facilities database was developed by the Heart of Georgia Altamaha Regional Commission, in conjunction with the Emergency Management Agency office and the tax assessor’s office. Information collected includes structure location, value, contact information and facility type. This database was also presented to the update committee for revisions and additions to further ensure its accuracy.

A critical facility, for the purposes of this plan, is defined as a facility in either the public or private sector that provides essential products and services to the general public, is otherwise necessary to preserve the welfare and quality of life in the County, or fulfills important public safety, emergency response and/or disaster recovery functions.

The critical facilities identified by the committee in the County include governmental services facilities; water and wastewater treatment plants and lift stations; electric and communication utilities; hazardous waste sites; schools; public safety facilities; healthcare facilities; and essential roadways and bridges.

A community's vulnerability can be described in terms of the assets located within the extent of a hazard event and the potential losses if such an event occurs. Therefore, the vulnerability assessment was accomplished by comparing each previously identified hazard with the inventory of affected critical facilities and population exposed to each hazard. GEMA Worksheet 3a, provided in Appendix D, III outlines this step of the HRV assessment.

Assessing vulnerability, for the purposes of this plan, also included a review of the Wilcox County Joint Comprehensive Plan to assess general land use patterns and development trends. This review can be found in Appendix B.

(4) Potential Loss Estimates: Using the best available data and mathematical modeling, estimated damages, and financial losses likely to be sustained in a geographic area during a hazard event were calculated. Describing vulnerability in terms of dollar losses provides the county with a common framework in which to measure the effects of hazards on critical facilities. The number and type of structures in the County have been determined for potential loss estimations. The source of the information was the County Tax Assessor's Office. Additional information can be found in Appendix D.

The Wilcox County Hazard Mitigation Plan Update Committee used the results of the Hazard, Risk and Vulnerability Assessment, as well as the reported accomplishments to identify and prioritize appropriate further mitigation goals, objectives, and related actions. The Planning Committee identified mitigation strategies over the course of two formal meetings. After ensuring that all interested persons had been given ample opportunity to contribute to strategy development, mitigation action steps were next given priority status by committee members.

To evaluate priorities, committee members used as a guide a planning tool prepared by FEMA known as STAPLEE (Social, Technical, Administrative, Political, Legal, Economic, and Environmental) criteria. Each mitigation strategy step was evaluated using STAPLEE criteria as the guiding principle to identify those steps best for Wilcox County. Each mitigation strategy step is assigned a priority ranking through the classifications of "high," "medium," or "low." Priority classifications are defined as "high" denoting a priority of utmost importance and/or immediacy, "medium" denoting a priority of less importance and/or immediacy, and "low" denoting a priority of least importance and/or immediacy. Past occurrences of disasters and historical trend data aided committee members in assigning priorities.

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

SECTION VI. MULTI-JURISDICTIONAL SPECIAL CONSIDERATIONS

The municipalities of Abbeville, Pineview, Pitts, and Rochelle, as well as representatives of the unincorporated portions of Wilcox County and state and regional entities were active participants in the planning process. Primarily, the goals and action steps apply to all jurisdictions, however, there are a few mitigation goals identified in this plan update which may apply to certain jurisdictions. These steps are identified in the appropriate sections. The Wilcox County Emergency Management Agency (EMA) Director will coordinate with city officials in order to execute any and all multi-jurisdictional steps. The EMA Director does not have the authority to implement items within the municipality, however, the committee has chosen to coordinate communication efforts to implement and document progress towards goals with the EMA Director.

SECTION VII. ADOPTION, IMPLEMENTATION, MONITORING AND EVALUATION

Upon final approval by GEMA and FEMA Region IV, the Wilcox County Board of Commissioners and municipalities formally adopted the Wilcox County Hazard Mitigation Plan. Documentation of both of these adoption decisions is included in Appendix E.

Wilcox County currently utilizes comprehensive land use planning and building codes to guide and control development in the county. The Wilcox County Hazard Mitigation Plan will be presented to the Committees and persons responsible for updating Comprehensive Plans and Capitol Improvement plans, for their use in incorporating the Hazard Mitigation goals and objectives. In addition, the Commission and City Councils will ensure that the local authorities responsible for the Local Emergency Operations Plan (LEOP) and other multi-jurisdictional plans utilize guidance from the Hazard Mitigation Plan. Through public invitation at the County Commission meeting held in March of each year, the County Commissioners will evaluate and update the Plan to ensure mitigation action steps are being established and that existing programs are utilizing the guidance provided by the Hazard Mitigation Plan. The EMA Director will then forward any changes to Georgia Emergency Management Agency's Hazard Mitigation Officer. Committee members will be responsible for evaluating the progress of the mitigation strategies in the Plan.

The committee will review each goal, objective, and action step to determine relevance to changing situations in the county and municipalities, as well as changes in state and federal policy, and to ensure that the plan is addressing current and expected conditions as needed. The committee will also review the risk assessment portion of the Plan to determine if this information should be updated or modified. The Plan Review Committee will prepare a report for the County Commission and Municipal Authorities. Through public invitation at the County Commission meeting held in January of each year, the County Commissioners will evaluate and update the Plan to ensure mitigation action steps are being established and that existing programs are utilizing the guidance provided by the Hazard Mitigation Plan. The EMA Director will then forward any changes to Georgia Emergency Management Agency's Hazard Mitigation Officer.

The parties responsible for the various implementation actions will provide a project status report and will include which implementation processes worked well, any difficulties encountered, how coordination efforts were proceeding, and which strategies should be revised.

Wilcox County is dedicated to involving the public directly in the continual reshaping and updating of the Hazard Mitigation Plan. The Plan Review Committee is responsible for the biennial review and update of the Plan. Although they will represent the public to some extent, the public will also be able to directly comment on and provide feedback about the Plan.

Copies of the Plan will be available at the Wilcox County EMA office, the City Halls, and the County Commissioner’s Office. The existence and location of these copies will be publicized in the local newspaper. All comments and questions will be directed to the local Emergency Management Agency Director for follow-up. The publicly declared County Commission meeting to evaluate and update the Plan will provide the public an additional forum for which they can express concerns, opinions, or ideas about the Plan.

After all plan development meetings were concluded, the draft plan was submitted to GEMA for review and then all local governments for their review and approval. The draft plan was then submitted to FEMA for their review and approval. After obtaining local government approval and applying any recommended changes, a second and final public hearing was held on [insert date here] in order to provide a further opportunity for public comment and review. After this final public hearing, resolutions adopting the plan update were passed by the local governments on [insert date here once the plan is adopted]. Copies of the public hearing advertisements and resolutions are available in Appendix E.

The comprehensive range of Mitigation Goals, Objectives, and Action Steps (see Chapter 3), which contains items related to all local governments, will be implemented as soon as possible and/or as funds become available to do so. All sections of the Plan will be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals Objectives and Action Steps will be reported to the public through appropriate means (TV, website, social media, local newspapers, City Council meetings, County Commission meetings, etc.).

SECTION VIII. COMMUNITY DATA

History and Government

Wilcox County was created by the state legislature on December 22, 1857. It is made up of land formerly belonging to Pulaski, Dooly, and Irwin counties. The county was named after General Mark Wilcox, state legislator and one of the founders of the Georgia Supreme Court. Due to the combination of centrally located railroads and a strong agriculture economy the county thrived throughout the late 19th and early 20th centuries.

The county government includes six county commissioners and a county administrator. The population of the county in 2019 Census estimates was 8,635. It is part of the Cordele Judicial Circuit. The county includes four municipalities Abbeville, Pineview, Pitts, and Rochelle.

The county seat, Abbeville, is located near the county's eastern border and has a population of 2,684 according to 2019 Census estimates. The city is named after Abbeville, South Carolina, where many of the county's early inhabitants moved from. The city's government includes the mayor and a six-member council.

The city of Pineview, located in the northern part of the county, has a population of 489 according to 2019 Census estimates. The city's government includes a mayor and five council members.

The city of Pitts is located in the southwestern part of the county and has a population of 293 according to 2019 Census estimates. The city was named after one its' original founders, Ashley J. Pitts, who ran the general store. Soon after the city was established it became the center of the railroad in Wilcox County. The government consists of a mayor and five council members.

Located in the center of the county, Rochelle has a population of 1,103 according to 2019 Census estimates. It was named after the French city of La Rochelle. The city's government includes a mayor and a five-member council.

Economy

Wilcox County is described as having persistent poverty, currently measured at 30.8% of its population according to 2014-2018 Census estimates, compared to an overall Georgia poverty rate of 17%. Agriculture and timber remain the economic mainstays of Wilcox County. It is the second largest watermelon producer in Georgia. Other crops include peanuts and cotton. Wilcox County's development followed that of the railroads. While trains were a primary form of transportation, the county continued to thrive, but Wilcox County's fortunes followed those of the local railways as highways superseded rail transportation. The county's population, which had risen until the 1920s, began to decline, and communities that were established to serve train lines lost business to those in nearby counties served by the major highways.

The county's current large employers include Dollar General, the Georgia Department of Corrections, Glen Eagle Healthcare & Rehab, Global Abbeville, LLC, Harold Martin Trucking, LLC, McIntyre Golf Development, Inc., Olam Americas, Inc., Shady Pines Estate, LLC, Snipes Finer Foods and Wilcox County State Bank according to the Georgia Department of Labor 2019 Labor Profile. (Appendix C)

As with initial development in the county, Wilcox County's location, scenic natural beauty, its active fields and forests, and overall rural quality of life offer potential for future growth and progress. The county remains a top agricultural county, ranking at or near the top 20 in many row and vegetable crops and forestry. Among row crops and produce, Wilcox County's 27,906 acres of cotton represent \$18.1 million of agriculture income, ranking 12th in Georgia. Wilcox ranks 3rd in watermelon production and fourth in cabbage and cantaloupe production in the state. Abbeville's Ocmulgee Wild Hog Festival is a widely-known celebration of outdoor amenities, and an example of local civic pride and cooperation, having been given organization and a foundation of success through a local civic club and community involvement. The county's strong family values, many faith-based organizations and dedicated community caring are evident in many endeavors. The same leadership and involvement which brought tourism to the county's healing spring waters and the Georgia Normal College and Business Institute to Abbeville to address educational deficiencies in the early 20th century remain evident today.

The community school system’s motto is “I Believe in You,” and it has developed an innovative program, the Patriot Academy for School Success (PASS), to improve academic performance and otherwise meet the needs of local students in achieving standards, despite local funding problems. Continuing cooperation, preparation for growth, promoting and accentuating assets can attract additional visitors, residents, and retirees to share in the bucolic, special quality of life available in Wilcox County. The growth of the inland port being created in nearby Cordele, the planned widening of U.S. 280, the further enhancement and support to local agriculture, increasing access and attention to abundant local natural resources of breathtaking beauty and soul-soothing pastoral vistas offer many avenues to facilitate desired, compatible growth and get more people to recognize the allure of the community’s everlasting beauty.

(Sources: Wilcox County CWPP, Wilcox County Comprehensive Plan, GDOL Labor Profile, 2019)

Chapter 2: Natural Hazard, Risk Vulnerability (HRV)

Summary of changes

During the plan update process, the HMPUC reviewed the hazards that may affect the community, and their priority. The HMPUC determined that the hazards established in the previous plan were still the most significant threats to the community, but determined that the hazards of hazardous materials release, hurricane/tropical storm, and excessive heat should be added as new hazards as these hazards also present significant threats to the community. The HMPUC also determined to combine the hazards of tropical storm and hurricane into one hazard, as these hazards are both tropical cyclone events. The hazard order of priority has changed from the previous plan update to incorporate new hazards and to accommodate combined hazards. This updated plan includes the same natural hazards identified in the previous plan, with exception to modifications mentioned above. Table 2.1 provides a brief description of each section in this chapter and a summary of changes that have been made.

| Chapter 2 Section | Updates to Section |
|-------------------------------|---|
| I. Thunderstorm/ Windstorm | Updated data and information; edited for clarity; reprioritized |
| II. Tornado | Updated data and information; edited for clarity; reprioritized |
| III. Tropical Storm/Hurricane | New Hazard Added |
| IV. Flooding | Updated data and information; edited for clarity; reprioritized |
| V. Severe Winter Weather | Updated data and information; edited for clarity; reprioritized |
| VI. Wildfire | Combined hazards and data; updated data and information; edited for clarity |
| VII. Hailstorm | Updated data and information; edited for clarity; reprioritized |
| VIII. Drought | Updated data and information; edited for clarity; reprioritized |
| IX. Excessive Heat | New Hazard Added |
| X. Hazardous Materials | New Hazard Added |

Table 2.1: Overview of updates to Chapter 2

Flood and wildfire are the only hazards for which the level of risk varies geographically within the county; the remaining hazards constitute an equal threat to all geographic areas of the community. For more information, including hazard maps, see Appendix A.

Other hazards, such as Avalanche, Coastal Erosion, Coastal Storm, Earthquake, Expansive Soils, Land Slide, SLOSH (Sea, Lake and Overland Surges from Hurricanes), Tsunami, and Volcano, were examined and determined not to be of sufficient significance in the community to warrant their inclusion in the present Hazard Mitigation Planning effort, based on past history and available data.

SECTION I. THUNDERSTORMS/WINDSTORMS

A. Identification of Hazard

For the purpose of analysis, the two hazards of thunderstorms and windstorms have been consolidated. A thunderstorm is formed as a result of a combination of warm air rising, moisture, and a force capable from a combination of moisture, rapidly rising warm air, and a force capable of lifting air such as a warm and cold front, a sea breeze or a mountain. All thunderstorms contain lightning. Thunderstorms may occur alone, in clusters or in lines.

Thus, it is possible for several thunderstorms to affect one location in the course of a few hours. Some of the most severe weather occurs when a single thunderstorm affects one location for an extended time. Thunderstorm winds are generally short in duration involving straight-line winds and/or gusts in excess of 50 mph. Thunderstorm winds tend to affect areas of the county with significant tree stands, as well as areas with exposed property and infrastructure, and above ground utilities. Thunderstorm winds can cause power outages, transportation and economic disruptions, significant property damage and pose a high risk for injuries and loss of life. Lightning is particularly dangerous to people, since although the bolt normally travels directly from cloud to the ground, it can also occur at angles away from the storm, and at a great distance.

Thunderstorms are defined by NOAA as rain showers during which thunder is heard. The following are some of the most common thunderstorm types:

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

- **Single-cell thunderstorms**, often called “popcorn” convection, are small, brief, weak storms that grow and die within an hour or so. They are typically driven by heating on a summer afternoon. Single-cell storms may produce brief heavy rain and lightning.
- A **multi-cell storm** is a common type of thunderstorm in which new updrafts form along the leading edge of rain-cooled air (the gust front). Individual cells usually last 30 to 60 minutes, while the system as a whole may last for many hours. Multicell storms may produce hail, strong winds, brief tornadoes, and/or flooding.
- A **squall line** is a group of storms arranged in a line, often accompanied by “squalls” of high wind and heavy rain. Squall lines tend to pass quickly and are less prone to produce tornadoes than are supercells. They can be hundreds of miles long but are typically only 10 or 20 miles wide.
- A **supercell** is a long-lived (greater than 1 hour) and highly organized storm feeding off an updraft (a rising current of air) that is tilted and rotating. This rotating updraft - as large as 10 miles in diameter and up to 50,000 feet tall - can be present as much as 20 to 60 minutes before a tornado forms. Scientists call this rotation a mesocyclone when it is detected by Doppler radar. The tornado is a very small extension of this larger rotation. Most large and violent tornadoes come from supercells.

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

Wind is categorized, according to its strength and severity, using the Beaufort Wind Scale, developed in 1805 by Sir Francis Beaufort of the U.K. Royal Navy. The Beaufort Wind Scale is shown in the table below. (Source: <http://www.spc.noaa.gov/faq/tornado/beaufort.html>)

According to the 2019-2024 Georgia Hazard Mitigation Strategy, the National Centers for Environmental Information NCEI divides wind events into several types. For the purpose of this risk assessment, applicable wind events include High Wind, Strong Wind, Thunderstorm Wind. The following definitions come from the NCEI Storm Data Preparation document:

High Wind: Sustained non-convective winds of 35 knots (40 mph) or greater lasting for one hour or longer, or winds (sustained or gusts) of 50 knots (58 mph) for any duration (or otherwise locally/regionally defined), on a widespread or localized basis.

Strong Wind: Non-convective winds gusting less than 50 knots (58 mph), or sustained winds less than 35 knots (40 mph) resulting in a fatality, injury, or damage.

Thunderstorm Wind: Winds, arising from convection (occurring within 30 minutes of lightning being observed or detected), with speeds of at least 50 knots (58 mph), or winds of any speed (non-severe thunderstorm winds below 50 knots) producing a fatality, injury, or damage.

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. The Vaisala U.S. National Lightning Detection Network, from 2008 to 2017, recorded 3-20 lightning flashes per square mile per year throughout the State of Georgia and 3-4 lightning flashes per square mile for Wilcox County from 2009-2018. (Source:https://www.weather.gov/images/safety/NLDN_CGFlash08-17-miles.png) In Georgia, lightning strikes peak in July, with June and August experiencing the next highest numbers of strikes.

B. Hazard Profile

Location

NOAA (The National Oceanic and Atmospheric Administration) reports that thunderstorms are most likely in the spring and summer months and during the afternoon and evening hours, but they can occur year-round and at all hours. Along across the southeastern states, most thunderstorms occur during the afternoon. Since Thunderstorms/Windstorms are non-spatial entities they have the potential to occur anywhere within Wilcox County. Therefore, all parts of the county could be potentially subject to this hazard and there is no specific area that would necessarily be more likely to have one.

Extent

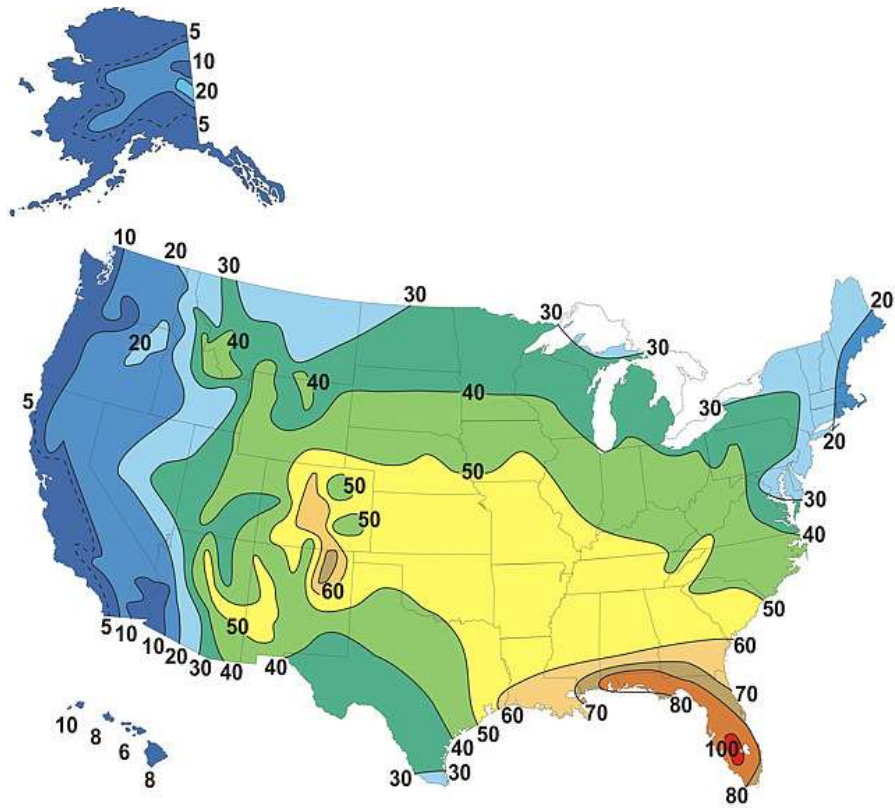
Thunderstorm winds as recorded in the NCDC database range from 0 to 60 knots. NOAA defines a "severe thunderstorm" as one that has winds in excess of 50 knots and/or hail of .75.

In addition, the Beaufort wind scale designates categories based on wind speed and appearance. The scale can be viewed below. This is most often used as the measurement of extent for a Thunderstorm/Windstorm. Reported thunderstorms/windstorms in Wilcox County have had wind speeds ranging from 32 to 87 knots. Wind speeds in Wilcox County have been recorded for Wilcox County consistently since 2003. Reported thunderstorms in Wilcox County have had wind speeds ranging from

32 knots or category “7” force winds to 87 knots, or category “12” force winds according to NCDC data and categorizations provided in the Beaufort Wind Scale. (NCDC, Appendix C)

Beaufort Wind Scale

| Force | Wind (Knots) | Wind (Mph) | World Meteorological Organization (WMO) Classification | Appearance of Wind Effects | |
|-------|--------------|-------------|--|--|--|
| | | | | On the Water | On Land |
| 0 | Less than 1 | Less than 1 | Calm | Sea surface smooth and mirror-like | Calm, smoke rises vertically |
| 1 | 1-3 | 1-3 | Light Air | Scaly ripples, no foam crests | Smoke drift indicates wind direction, still wind vanes |
| 2 | 4-6 | 4-7 | Light Breeze | Small wavelets, crests glassy, no breaking | Wind felt on face, leaves rustle, vanes begin to move |
| 3 | 7-10 | 8-12 | Gentle Breeze | Large wavelets, crests begin to break, scattered whitecaps | Leaves and small twigs constantly moving, light flags extended |
| 4 | 11-16 | 13-18 | Moderate Breeze | Small waves 1-4 ft. becoming longer, numerous whitecaps | Dust, leaves, and loose paper lifted, small tree branches move |
| 5 | 17-21 | 19-24 | Fresh Breeze | Moderate waves 4-8 ft taking longer form, many whitecaps, some spray | Small trees in leaf begin to sway |
| 6 | 22-27 | 25-31 | Strong Breeze | Larger waves 8-13 ft, whitecaps common, more spray | Larger tree branches moving, whistling in wires |
| 7 | 28-33 | 32-38 | Near Gale | Sea heaps up, waves 13-19 ft, white foam streaks off breakers | Whole trees moving, resistance felt walking against wind |
| 8 | 34-40 | 39-46 | Gale | Moderately high (18-25 ft) waves of greater length, edges of crests begin to break into spindrift, foam blown in streaks | Twigs breaking off trees, generally impedes progress |
| 9 | 41-47 | 47-54 | Strong Gale | High waves (23-32 ft), sea begins to roll, dense streaks of foam, spray may reduce visibility | Slight structural damage occurs, slate blows off roofs |
| 10 | 48-55 | 55-63 | Storm | Very high waves (29-41 ft) with overhanging crests, sea white with densely blown foam, heavy rolling, lowered visibility | Seldom experienced on land, trees broken or uprooted, "considerable structural damage" |
| 11 | 56-63 | 64-72 | Violent Storm | Exceptionally high (37-52 ft) waves, foam patches cover sea, visibility more reduced | Very rarely experienced; accompanied by widespread damage. |
| 12 | 64+ | 73+ | Hurricane | Air filled with foam, waves over 45 ft, sea completely white with driving spray, visibility greatly reduced | Devastation. |



Source: https://www.weather.gov/jetstream/tstorms_intro

The figure above shows the average number of thunderstorm days each year throughout the U.S. Wilcox County experiences an average of 60 thunderstorm events annually. The United States Wind Zones Map below shows that Wilcox County is in Wind Zone III.

It is in this part of the country, warm, moist air from the Gulf of Mexico and Atlantic Ocean (which we will see later are necessary ingredients for thunderstorm development) is most readily available to fuel thunderstorm development.

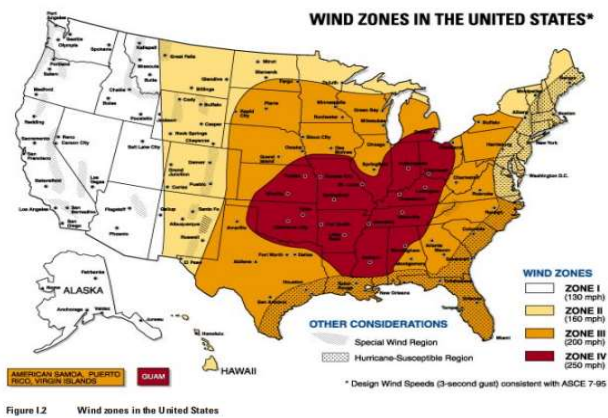
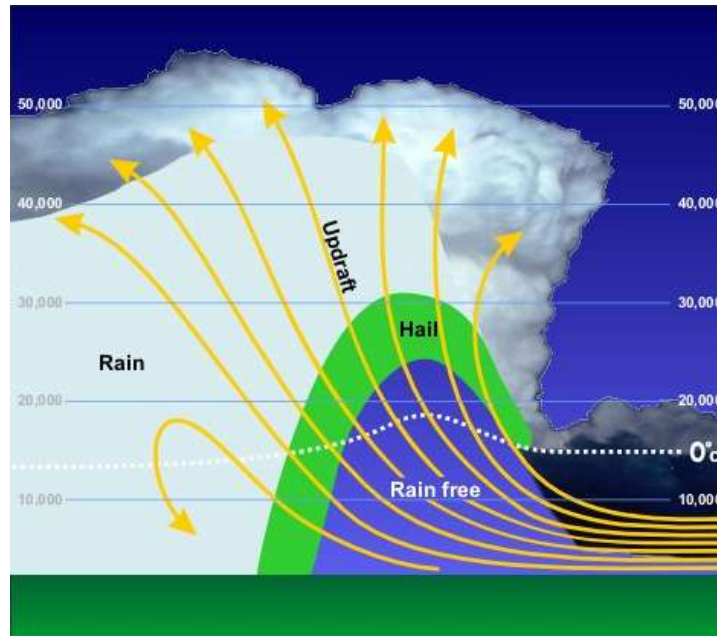


Figure 12 Wind zones in the United States



History

The occurrence of thunderstorms/windstorms in Wilcox County in the past years has posed a serious threat to the citizens of Wilcox County. As pointed out in the NCDC data in Appendix C, a compilation of thunderstorms/windstorms, high winds, strong winds, and lightning strikes were recorded 68 times in the last 61 years (1958-2020) and 10 times from 2015-March 2020. Of these events, NCDC data records 61 incidents of thunderstorms/windstorms, 3 incidents of lightning strikes, 3 incidences of “high wind” and 1 incident of “strong wind” occurring from 1958-March 2020 (these incidents were all recorded from 2000 to 2004). In some cases, multiple events occurred on the same day. This number, of course, does not include all of the thunderstorms/windstorms, high winds, strong winds, and lightning strikes during this time period due to the great degree of difficulty in reporting every event that occurs.

NCDC data portrays the high probability of occurrence that this hazard presents. The severity of the storms can obviously vary with many causing little or no damage at all, which helps explain why many go unreported or underreported. None the less, these events (including thunderstorm, high wind, strong wind and lightning) have a total reported property damage amount of \$1,326,400 in historic record (1958-2020) and \$121,000 since the previous plan update (2014-2020). During the above-mentioned storms, wind speeds ranged from 32 to 87 knots, which resulted in blown-down powerlines, wide-spread structural damages, and fallen trees blocking roadways. These figures and details illustrate the serious threat posed by Thunderstorms/Windstorms to the citizens and property of Wilcox County. No deaths, or crop damage has been recorded as resulting from thunderstorms/windstorms in Wilcox County, however, 4 injuries have been reported with 2 occurring since the last plan update. (NCDC: Appendix C)

On July 20, 2000, the Ben Hill Herald-Leader (regional newspaper) reported that a lightning strike accompanied by a thunderstorm in Rochelle started a fire at a logging operation on Pineview Road which destroyed a fuel trailer with two tanks, an equipment trailer, and a log truck. The Ben Hill Herald Leader (regional newspaper) reported that thunderstorms winds (occurring on the same date) were estimated at

50 mph, knocked down numerous trees and power lines around the county, particularly in the Rochelle, Pitts, and Cedar Creek areas. On County Road 24, a large oak tree was blown down knocking several power lines down along with it. The downed power lines sparked several grass fires. The local cooperative observer for the NWS in Abbeville indicated that an awning was blown off the front porch of a mobile home as well. The lightning strike caused \$150,000 in property damages and the thunderstorm caused \$20,000 in property damages on July 20. No injuries, deaths, or crop damages were recorded as a result of this event. (NCDC: Appendix C)

On September 6, 2004, a “high wind” event occurred in Wilcox County causing \$100,000 in property damage. This event, associated with Tropical Storm Frances, produced wind speeds of 35 knots. No injuries, deaths, or crop damages were recorded as a result of this event. (NCDC: Appendix C)

Three years later, on December 15, 2007, a thunderstorm occurred producing the highest wind speeds in recorded history at 87 knots, causing \$75,000 in property damage. A storm survey conducted by the National Weather Service Peachtree City Georgia forecast office concluded that the same supercell which spawned the tornado west of Owensboro (an unincorporated community in Wilcox County) continued to cause damage across eastern Wilcox County in the form of damaging winds. Wind gusts were estimated from 75 to 100 mph from four miles northeast of Owensboro to three miles south of Abbeville. At the intersection of Bramblewood and Perry Roads, four miles northeast of Owensboro, wind gusts estimated near 100 mph flipped over a manufactured home and uprooted numerous large trees. Then further east, four miles south of Abbeville, wind gusts estimated at 70 mph ripped a tin roof off a house and blew a truck off a road and into a ditch. No injuries, deaths, or crop damages were recorded as a result of this event. (NCDC: Appendix C)

On October 9, 2008, near Rochelle and resulted in a total of \$250,000 in property damage. Fifty-four knot thunderstorm winds resulted in damage to several chicken houses. The roof was blown off nine chicken homes and five others were left slightly leaning. No injuries, crop damage or death resulted from this event. (NCDC: Appendix C)

On August 2, 2012, Wilcox County recorded a Thunderstorm event with \$40,000 in damages. Wind speeds reached fifty knots during this event. Law enforcement reported several trees down in Rochelle including one large oak tree falling on a mobile home. Fortunately, there were no reported injuries or deaths with either major thunderstorm event.

Since the last plan update, 10 thunderstorm events have been recorded in NCDC data (Appendix C). Two of the most recent notable events occurred on May 11, 2019, and September 9, 2019. A thunderstorm event occurring on May 11, 2019, produced wind speeds of 50 knots, resulted in 2 injuries and \$50,000 in property damage. During this event, a portion of a rood to the Abbeville supermarket was blown off during a thunderstorm, landing in the parking lot and resulting in minor damage to 3 vehicles. Two people sustained minor injuries, mainly cuts from glass. No deaths or crop damages were recorded as a result of this event. (NCDC: Appendix C)

The most recently recorded thunderstorm event occurred on September 9, 2019, producing windspeeds of 50 knots and resulted in \$10,000 in property damage. On September 9, 2019, the Wilcox County 911 center reported trees blown down in Abbeville along Highway 215 near Sibbie Road and a logging truck

toppled by winds on Mistletoe Road near American Legion Road. No injuries, deaths, or crop damages were recorded as a result of this event. (NCCDC: Appendix C)

Emergency response teams were utilized during the events along with the county’s road department to assist in cleanup. With as much of an impact as thunderstorms and windstorms have had in the past, it is reasonable to expect this trend to continue. In the future, measures suggested in this plan need to be enacted to limit the amount of impact a Thunderstorm/Windstorm can have on Wilcox County. As a result of thunderstorms/windstorms, power outages occur, trees fall down, fire may be initiated by lightning, ponding of water, hydroplaning of vehicles, damage to roofs of buildings, and at its extreme a thunderstorm/windstorm can cause a loss of life. Currently, Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle do not have any building codes that pertain to wind speeds.

Probability

As stated above, since 2015 there have been 10 recorded occurrences of thunderstorm/windstorms in Wilcox County. From 1958-March 2020, 68 thunderstorms/windstorms, high winds, strong winds, and lightning strikes have been recorded. The Historic Recurrence Interval is 0.91 years with a 109.68% Historic Frequency Chance per year. Although older data has a greater propensity to reflect incomplete recordings, record frequencies have been calculated for the past 10, 20-, and 50-year increments. The past 10-year Record Frequency Per Year is 1.8, the past 20-year frequency is 2.1, and the past 50-year frequency is 1.36 (see the Hazard Frequency Table in Appendix D). Although the most complete available data were used for this analysis, the possibility remains that other events may have occurred in the community that went unreported or underreported. The probability is “Highly Likely” that Wilcox County will continue to experience severe thunderstorm/windstorms multiple times a year.

| Occurrence Probability in Years | Likelihood of Future Occurrence |
|--|--|
| 1-10 | “Highly Likely” |
| 10-25 | “Likely” |
| 25-50 | “Unlikely” |
| 50 or greater | “Highly Unlikely” |

C. Inventory of Assets and Potential Losses

The total percentage of the number of structures that are exposed to the non-spatial threat of Thunderstorm in Wilcox County is 100% as noted on Worksheet 3A (Appendix D, III). In Worksheet 3A: Inventory of Assets (appearing in Appendix A and D, III), we estimate that all of Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle are equally vulnerable to this hazard. Because data broken down by jurisdiction is not consistently available, it was not possible to break down these worksheets by jurisdiction; therefore, they refer to the entire county, including the Cities of Abbeville, Pineview, Pitts, and Rochelle in this plan. In Wilcox County, there are 4,223 residential structures, 396 commercial structures, 13 industrial structures, 3,341 agricultural structures, 198 religious/non-profit structures, 96 government structures, 16 educational structures, and 29 utility structures.

All of these structures are equally exposed to a Thunderstorm and Windstorms. To address specific critical facilities and infrastructure, each facility was examined on an individual basis, entered into the GMIS

database, and located on a Wilcox County Critical Facilities Map, which is located in Appendix A: 1. The GMIS Wind Hazard Report assigned a wind hazard scores to each of the 102 critical facilities with 99 facilities receiving a score of “2” and 3 facilities receiving a score of “0.” All of the critical facilities are at risk to the threat of a Thunderstorm and Windstorm.

The total built structures, including critical facilities, of Wilcox County have an estimated replacement value of \$241,368,409. The total value of all residential structures in Wilcox County is \$90,899,998. The value of commercial structures in Wilcox County is \$14,634,920. Industrial facilities in Wilcox County have a value of \$9,495,775. The value of agricultural structures in Wilcox County is \$50,084,350. Religious/non-profit structures in Wilcox County are valued at \$6,174,485. Government facilities in Wilcox County are valued at \$6,087,393. Educational facilities in Wilcox County are valued at \$32,311,193. Finally, the value of utility structures in Wilcox County is \$31,680,295. At this time there are no known future buildings, infrastructure, or critical facilities to be located in the county requiring special mitigation strategies. Additionally, all 8,635 residents of Wilcox County and 1,104 employees working in Wilcox County could be affected by a thunderstorm/windstorm.

D. Development Trends

There are no specific trends concerning thunderstorms/windstorms in the comprehensive plan. In the future, any number of structures (commercial, industrial, public/institutional, residential), critical facilities, and infrastructure will be vulnerable to thunderstorms/windstorms because they are a non-spatial hazard.

There exists a need for updated, coordinated, countywide land use planning/subdivision/manufactured housing regulations/increased code enforcement/nuisance ordinances/growth management and implementation. Wilcox County has rudimentary land use regulations, road acceptance/subdivision ordinances, a manufactured home ordinance, and others to address specific issues or nuisances. Abbeville and Rochelle have zoning ordinances and building code enforcement in place and since the last plan update, the City of Pitts adopted a Manufactured Housing Ordinance and the City of Pineview adopted an “Unsafe Buildings and Premises.” Enforcement of these ordinances by city code enforcement will assist in providing oversight that ensures the safety of individuals, businesses, and encourage community-wide priority for structural integrity. Code enforcement in the county is related to solid waste although future plans are for increased inspections and enforcement. These ordinances need updating through coordination and joint collaboration/code enforcement to initiate a more comprehensive approach. (Comprehensive Plan, Appendix B)

While technically only the larger municipalities, Abbeville and Rochelle, are required, because of their zoning ordinance, to have a Land Use element in their comprehensive plan under the Georgia Department of Community Affairs’ planning standards, all local governments in the county have chosen to participate and include the element in the joint comprehensive plan. Existing land use maps visually convey to all concerned the current landscape and correlation of extant development. Future land use maps illustrate to all concerned the community’s vision and desires for additional growth and development. Such depictions also lend credence and supporting background information important to understanding and illustrating official local government policy in designating lands unsuitable for solid waste handling facilities in local solid waste management plans. Land use maps do provide official display of community

desires and goals for compatible future growth and development. The community's land use maps are, however, a general policy guide and framework, not necessarily a rigid or unchangeable picture of future growth and development. Not all growth or developments can be foreseen, and other events could necessitate a change in community vision or desires. The depicted pattern of desired future growth and development displayed on future land use maps is a current statement and reflection of community expectations and desires. It provides a context, framework and background for the public and private sector to utilize to plan, evaluate, shape, guide, and influence proposed developments and other decisions affecting the use of the land and community growth and development. The plan provides a context for forethought, examination of impacts and consequences, and mitigation of land use decisions on the community's growth and development. Land Use Maps for Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle can be reviewed in Appendix B.

E. Multi-Jurisdictional Concerns

In the incorporated and unincorporated areas of Wilcox County, the threat of natural non-spatial occurrences including thunderstorms/windstorms is equally applicable. All areas of the county are susceptible to non-spatial threats. The county is located in Wind Zone III as noted on the United States Wind Map previously mentioned.

The potential for damage is greater within the municipalities than it is in the unincorporated portions of the county, due to the larger amount of development and population density. The impact may be more severe in places with higher population density due to more people being in danger, more people needing to evacuate, more debris generated from damaged buildings, and other impacts associated with higher population density. Additionally, the majority of the county's critical facilities are located within the municipal boundaries. To address specific critical facilities and infrastructure, each facility was examined on an individual basis, entered into the GMIS database, and located the Wilcox County Critical Facilities Map located in Appendix A:1. A Wilcox County Land Use Map and a Wilcox County Wind Track Map are also located in Appendix A:1 for county assessment.

F. Hazard Summary

Overall, thunderstorm winds do pose a great threat to Wilcox County, specifically in terms of property damage. Though severe storms do not occur frequently, each one could inflict a great amount of damage and do so anywhere in the county. Since the creation of the 2015 Hazard Mitigation Plan, very little has changed in regard to the vulnerability of the county to thunderstorms. The committee reviewed previous thunderstorm mitigation action steps proposed in the approved 2015 plan and determined no significant mitigation actions were completed since the plan adoption. It was further determined by the committee that no significant developments have taken place which would positively or negatively impact potential exposure to a thunderstorm. However, through a concerted effort between the local municipalities and the Pre-Disaster Mitigation Planning Committee, measures will be taken to help reduce the impact of a thunderstorm upon the residents and property of Wilcox County. These storms have continued to destroy large amounts of property and natural resources throughout the county and its' municipalities. However, through a concerted effort between the local municipalities and the Pre-Disaster Mitigation Planning Committee, measures will be taken to help reduce the impact of a thunderstorm upon the residents and property of Wilcox County.

SECTION II. TORNADO

A. Identification of Hazard

A tornado is a violently rotating column of air extending from a thunderstorm to the ground. The most violent tornados are capable of tremendous destruction with wind speeds of 250 mph or more. Damage paths can be in excess of 1 mile wide and 50 miles long. Because wind is invisible, it is hard to see a tornado unless it forms a condensation funnel made up of water droplets, dust and debris. Tornadoes are the most violent of all atmospheric storms.

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

B. Hazard Profile

Location

Since Tornadoes are non-spatial entities, they have the potential to occur anywhere within Wilcox County. Therefore, all parts of the county could be subject to a Tornado and there is no specific area that would necessarily be more likely to have one. Tornadoes may occur at any time of year, although the peak “tornado season” for the Southern Plains is during May into early June. Tornadoes can occur due to inclement weather conditions, as a result of a passing front, or as part of thunderstorm or hurricane/tropical storm events.

Tornadoes can occur at any time of the day or night, but according to NOAA (<http://www.nssl.noaa.gov/education/svrwx101/tornadoes/>), most tornadoes occur between 4:00 and 9:00 p.m. The path and severity of a tornado cannot be determined in advance. The best defense is to heed tornado warnings and seek appropriate shelter when a tornado has been sighted in the area or when conditions conducive to a tornado are present. Historic data has been examined from various sources, including the National Climatic Data Center, as well as from local history and personal accounts, in order to determine the frequency of events. For further information, see the HAZUS Report and the NCDL storm data in Appendix C.

Extent

The potential damage to structures resulting from tornadoes can range from minor damage to incredible damage. They also can cause a great deal of damage to agriculture and natural resources.

T. Theodore Fujita pioneered the concept of organized, detailed tornado damage surveys, with field examination and refining techniques until his death in 1998. These methods of assessing tornado ratings

developed into an assessment scale called the Fujita Tornado Damage Scale (also referred to as the FPP or F Scale) that in addition to incorporating Fujita’s techniques, incorporated Allen Pearson’s path width and length ratings on a 0-5 scale. (Edwards, LaDue, Ferree, Scharfenberg, Maier, and Coulbourne, 2013: 642) The F scale was officially adopted by the National Weather Service in the late 1970s. The F Scale was later replaced by the adoption of the Enhanced Fujita Scale (EF Scale) in 2007 by all practicing wind damage surveyors in the United States in effort to improve the accuracy and precision of damage surveys by providing more guidance than was available through the original Fujita or F Scale. (Edwards, Ladue, Ferree, Scharfenberg, Maier, & Coulbourne, 2013: 642)

“The F scale assigned levels of destruction to “well built” homes and empirically related those levels to subdivisions of the Beaufort and Mach scales for wind speed estimation. It was officially adopted by the NWS in the late 1970s. In some later cases, Fujita also applied ratings up to F5 based on nonstructural factors: for example, to corn stubble in the Plainfield, Illinois, tornado of 28 August 1990 (Fujita 1993) and the geometry of cycloidal field marks from the Goessel, Kansas, tornado of 13 March 1990 (Fujita 1992). F Scale descriptions of the effects of winds at increasing F levels also included movement of automobiles, an effect not yet addressed by the EF scale.” (Edwards, Ladue, Ferree, Scharfenberg, Maier, & Coulbourne, 2013: 642)

Fujita Tornado Damage Scale
Developed in 1971 by T. Theodore Fujita of the University of Chicago
(No longer used in the U.S.)

| SCALE | WIND ESTIMATE *** (MPH) | TYPICAL DAMAGE |
|-----------|-------------------------|---|
| F0 | < 73 | Light damage. Some damage to chimneys; branches broken off trees; shallow-rooted trees pushed over; sign boards damaged. |
| F1 | 73-112 | Moderate damage. Peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos blown off roads. |
| F2 | 113-157 | Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars overturned; large trees snapped or uprooted; light-object missiles generated; cars lifted off ground. |
| F3 | 158-206 | Severe damage. Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off the ground and thrown. |
| F4 | 207-260 | Devastating damage. Well-constructed houses leveled; structures with weak foundations blown away some distance; cars thrown and large missiles generated. |
| F5 | 261-318 | Incredible damage. Strong frame houses leveled off foundations and swept away; automobile-sized missiles fly through the air in excess of 100 meters (109 yds); trees debarked; incredible phenomena will occur. |

(Source: NOAA: <https://www.spc.noaa.gov/faq/tornado/f-scale.html>)

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

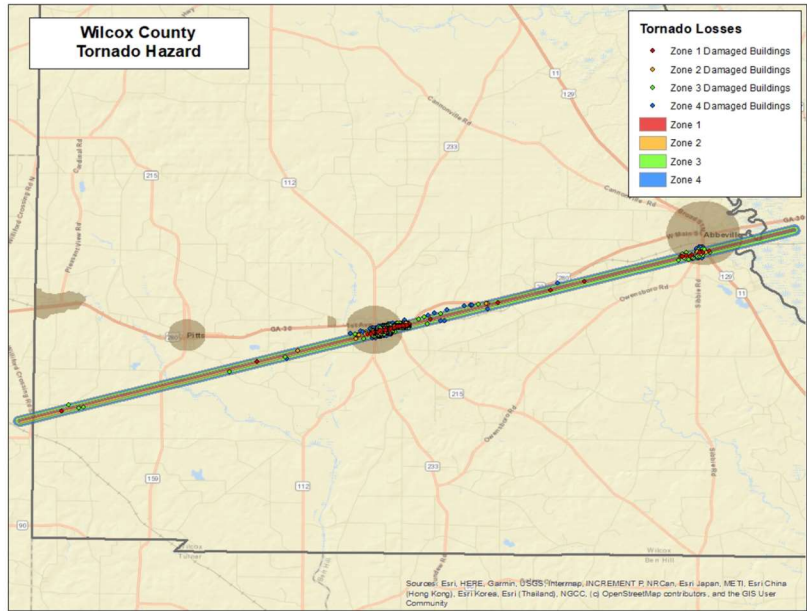
| Enhanced Fujita Scale | | |
|-----------------------|-----------------------------|---|
| Category | Wind Speed | Potential Damage |
| EF0 | 105–137 km/h 65–85 mph | Light damage. Peels surface off roofs; some damage to chimneys; branches broken off trees; shallow-rooted trees pushed over; mobile homes pushed off foundations or overturned; sign boards damaged. |
| EF1 | 138–179 km/h 86–110 mph | Moderate damage. Roofs torn off frame houses; windows and glass doors broken; moving autos blown off roads; mobile homes demolished; boxcars overturned. |
| EF2 | 180–217 km/h 111–135 mph | Considerable damage. Roofs torn off well-constructed houses; foundations of frame homes shifted; large trees snapped or uprooted; light-object missiles generated; cars lifted off ground. |
| EF3 | 218–266 km/h 136–165 mph | Severe damage. Some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off the ground and thrown; structures with weak foundations blown away some distance. |
| EF4 | 267–324 km/h 166–200 mph | Devastating damage. Well-constructed houses and whole frame houses completely leveled; structures with weak foundations blown away some distance; trees debarked; cars thrown and small missiles generated. |
| EF5 | >324 km/h >200 mph | Incredible damage. Strong frame houses leveled off foundations and swept away; with strongest winds, brick houses completely wiped off foundations; automobile-sized missiles fly through the air in excess of 100 m (109 yd); cars thrown and large missiles generated; incredible phenomena will occur. |

The 2020 Wilcox County Hazard Risk Analyses (Appendix C) generated a tornado scenario to assess the possible impacts of an EF3 tornado occurring along the most developed areas in Wilcox County between the Cities of Rochelle and Abbeville. An EF3 tornado was modeled to illustrate the potential impacts of tornadoes of this magnitude in the county. The analysis used a hypothetical path based upon an EF3 tornado event running along the predominant direction of historical tornadoes (southeast to northwest). The selected widths were modeled after a re-creation of the Fujita-Scale guidelines based on conceptual wind speeds, path widths, and path lengths. There is no guarantee that every tornado will fit exactly into one of these categories. The following table depicts a possible tornado with path widths and expected damage. (2020 Wilcox County Hazard Risk Analyses, Appendix C)

EF3 Tornado Zones and Damage Curves (Below)

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

Modeled EF3 Tornado Damage Buffers (Below)



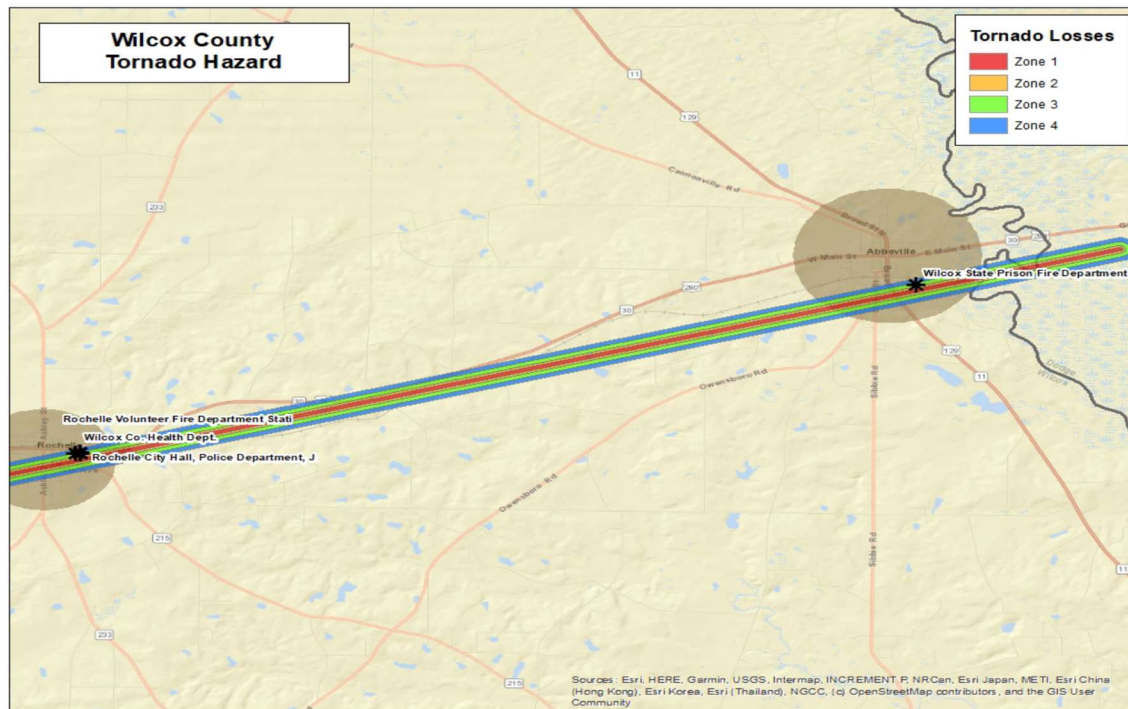
The analysis estimated that approximately 349 buildings could be damaged, with estimated building losses of approximately \$14.8 million. The building losses are an estimate of building replacement costs multiplied by the percentages of damage. The overlay was performed against parcels provided by Wilcox County that were joined with Assessor records showing estimated property replacement costs. The Assessor records often do not distinguish parcels by occupancy class if the parcels are not taxable and thus the number of buildings and replacement costs may be underestimated. The chart to follow depicts estimated building losses by occupancy type.

Estimated Building Losses by Occupancy Type

| Occupancy Classification | Buildings Damaged | Building Losses |
|--------------------------|-------------------|----------------------|
| Commerical | 20 | \$ 254,389 |
| Governmental | 3 | \$ 130,532 |
| Religious | 4 | \$ 407,907 |
| Residential | 322 | \$ 14,027,251 |
| Total | 349 | \$ 14,820,078 |

There were 4 essential facilities located in the tornado path according to the modeling, these 4 facilities would suffer moderate to major damage should such a tornado strike occur. The facilities are as follows: the Rochelle Volunteer Fire Department, the Wilcox County Health Department, the Rochelle City Hall, and the Wilcox State Prison Fire Department. The map below depicts modeled essential facility damage in Wilcox County in an EF3 tornado scenario.

Modeled Essential Facility Damage in Wilcox County



The most severe categories of Tornado recorded in Wilcox County were two F2 tornadoes which occurred in 1971 and 1989 and one EF2 tornado which occurred in 2017. From 1950 to March of 2020, 10 tornado events have occurred in Wilcox County with two events occurring on the same day. Since the last plan update, two tornado events have occurred (01/22/2017 and 05/23/2017). (NCDC Data, Appendix A:2)

History

In Wilcox County the occurrence of tornadoes in the past has posed a moderate threat to the community. As stated above, in the past seventy years (1950- March 2020), tornadoes were recorded a total of 10 times, including two times since the last plan update (2015-2020). All recorded tornado events in Wilcox County have resulted in \$ 1,682,500 in property damage, nine injuries, \$500,000 in crop damage, and one death. The two tornado events occurring since the last plan update have caused \$800,000 in property damage and resulted in no (reported) injury, death, or crop damage. (NCDC Data, Appendix A:2)

The only tornado event in Wilcox County that caused death according to NCDC data occurred on November 8, 1989. This event was categorized as a F2 tornado and resulted in one death, eight injuries, and \$250,000 in property damage. No other details were recorded in NCDC data, news sources, or in local reporting regarding further details about damages, injuries, or death in this event. (NCDC Data, Appendix A:2)

Two tornadoes occurred in Wilcox County on April 10, 2009. During these events, multiple structures and crops sustained damage as a result of these storms. A survey conducted by the National Weather Service Forecast Office in Peachtree City confirmed that the first EF1 tornado, initially touched down in far northeast Sumter County, continued across far southern Dooly County, before ending just inside Wilcox

County, approximately five miles north of Seville. The tornado tracked a little over one mile within Wilcox County with a maximum path width of 250 yards and maximum winds estimated at 110 mph. Within Wilcox County, only around 100 downed trees were noted along the path of the tornado. This tornado event caused property damages of \$25,000 with no reports of injury, death, or property damage. (NCDC Data, Appendix A:2)

The second tornado recorded on April 10, 2009, in Wilcox County was also an EF1 tornado. Data gathered from the Wilcox County Emergency Management Director and from a damage survey conducted by the National Weather Service Forecast Office in Peachtree City, Georgia concluded that the EF1 tornado that began in the Cobb community of far southeast Sumter County and tracked east-southeast across Crisp County, continued into far southwest and south central Wilcox County before lifting. The total path length of the tornado was around 33 miles. Damage was sporadic along the path of the tornado. The tornado tracked approximately 12 miles within Wilcox County and remained as a weaker EF0 tornado with a maximum path width of 100 yards and maximum winds of 80 mph. Within Wilcox County, most of the damage was concentrated in the Owensboro area, with just isolated tree damage from Hatley, along the Crisp/Wilcox County line to the west side of Owensboro. One home at the intersection of County Roads 60 and 61, just southwest of Owensboro, suffered considerable damage. A mobile home was destroyed just east of the intersection of Georgia Highways 233 and 238. Finally, considerable damage was noted to a pecan orchard east of County Road 63 or about one mile east-southeast of Owensboro, near the point where the tornado lifted. This tornado event resulted in \$200,000 in property damage, \$500,000 in crop damage with no report of death or injury. Wilcox County incurred a total of \$225,000 in property damages and \$500,000 in property damages as a result of the two tornados that occurred on April 10, 2020. (NCDC Data, Appendix A:2)

Since the last plan update two tornado events have occurred. On January 22, 2017, a National Weather Service survey team found that a large, EF2 tornado moved across Dougherty and Turner Counties moved into Wilcox County crossing County Line Road just west of Shady Lane. Damage was seen off Double Run Road and County Road 41 where a small farm building was completely destroyed. Windows were broken at two residences and several small trees were uprooted. Just northeast, significant damage occurred along Crawford Dairy Road between July Road and Loblolly Road. A metal structure was significantly damaged with the several anchored metal trusses completely pulled off the concrete foundation, resulting in a total collapse of the building. Additional farm outbuildings and barns around the property were severely damaged, and hundreds of pines were snapped or uprooted. Farther along Crawford Dairy Road, just before SR 233, several large, wooden, electrical transmission towers were snapped (near the base) or leaning. The width of the tornado around this location is estimated to be at least one-half mile. Along American Legion Road, between Bayberry Lane and Elderberry Lane, a large semi-trailer was flattened and moved across a road. The southeast corner of a metal structure was completely destroyed with deep concrete footings ripped out of the ground. Numerous large trees were snapped as well around this location and a small home nearby sustained minor roof and siding damage. Further northeast along Willingham Road, trees were snapped or uprooted. As the tornado went over Mount Olive Road, just south of Highway 280, several manufactured homes were completely destroyed with debris moved 50 to 100 yards away from the original foundations. Based on this damage, the tornado is believed to have briefly strengthened to around 135 MPH. A large house just up the hill from this location sustained minor roof damage. The tornado crossed Highway 280 leveling numerous trees and destroying several small wooden sheds and barns. From this point on, the tornado weakened considerably, with only some trees

snapped or uprooted along Kingfisher Road, just west of Abbeville where the damage ended. This event caused \$300,000 in property damage with no reports of injury, death, or crop damage. (NCDC Data, Appendix A:2) WGXA, a regional news station in Macon, Georgia reported that this tornado event “totally demolished” three homes belonging to a family on Mount Olive Road in Abbeville. Unfortunately, this family had no homeowner’s insurance at the time of the tornado. (Source: <https://wgxa.tv/news/local/wilcox-co-family-loses-everything-in-tornado>)



Above Photos: “Wilcox Co. Family Loses Everything in Tornado,” January 23, 2017

Source: Maggie McGlamry, Fox24 News/ABC16, WGXA, Macon, Georgia
<https://wgxa.tv/news/local/wilcox-co-family-loses-everything-in-tornado>

The most recent tornado event since the last plan update occurred on May 23, 2017. A National Weather Service survey team found that an EF1 tornado with maximum wind speeds of 100 MPH and a maximum path width of 50 yards began in a pecan orchard south of Bowen Road and east of Worley Road where it quickly intensified with wind speeds of 100 mph. At least 100 pecan trees were snapped and shredded along a narrow, 30-yard-wide, path with no damage on either side. The tornado traveled east-northeast and weakened slightly snapping several more trees. A 400 ft. section of a large chicken house was

destroyed west of Highway 159 and a few more trees were blown down before the tornado lifted just east of the intersection of Bowen Road and Highway 159. This event resulted in \$500,000 in property damage with no reports of injuries, death, or crop damage. (NCDC Data, Appendix A:2)

Probability

As stated above, NCDC records 10 tornado events for Wilcox County from 1950-March 2020. (NCDC Data, Appendix A:2) The current chance per year that a tornado will occur is 15.38%, as noted in the Hazard Frequency Table (Appendix D, II). Additionally, the annual frequency for the last ten and twenty years are 0.2 and 0.3, respectively. Finally, keeping in mind that the older the data the more incomplete, we can see that the annual frequency for the last fifty years is 0.16, with a historical recurrence interval of 6.5 years. Although tornados may not occur on a yearly basis, it is still “Highly Likely” that there will be an occurrence in the next one five to ten years.

| Occurrence Probability in Years | Likelihood of Future Occurrence |
|---------------------------------|---------------------------------|
| 1-10 | “Highly Likely” |
| 10-25 | “Likely” |
| 25-50 | “Unlikely” |
| 50 or greater | “Highly Unlikely” |
| | |

C. Inventory of Assets and Potential Losses

Since tornadoes are a non-spatial hazard, they have the potential to damage 100% of the structures in the county as noted on Worksheet 3A (Appendix D, III). In Worksheet 3A: Inventory of Assets (appearing in Appendix A:4 and D: III), we estimate that all of Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle are equally vulnerable to this hazard. Because data broken down by jurisdiction is not consistently available, it was not possible to break down these worksheets by jurisdiction; therefore, the worksheets refer to the entire county, including the five municipalities located within Wilcox County, in this plan.

Estimating the potential losses caused by a tornado is largely dependent upon where it touches down within the county. A tornado that stays within the unincorporated portions of Wilcox County, which constitutes the majority of the county, will cause far less property damage than one that occurs in downtown Rochelle, Pitts, Abbeville, or Pineview. If a tornado that occurs within a residential area or touches down at an industrial site, the potential property damage and loss of life will be significant. At this time, there are no known future buildings, infrastructure or critical facilities to be built requiring special mitigation strategies.

In Wilcox County, there are 4,223 residential structures, 396 commercial structures, 13 industrial structures, 3,341 agricultural structures, 198 religious/non-profit structures, 96 government structures, 16 educational structures, and 29 utility structures. All of these structures are equally exposed to tornadoes. To address specific critical facilities and infrastructure, each facility was examined on an individual basis, entered into the GMIS database, and located on a Wilcox County Critical Facilities Map, which is located in Appendix A: 2. The GMIS Wind Hazard Report assigned a wind hazard scores to each of the 102 critical facilities with 99 facilities receiving a score of “2” and 3 facilities receiving a score of “0.” All of the critical facilities are at risk to the threat of a tornado.

The total built structures, including critical facilities, of Wilcox County have an estimated replacement value of \$241,368,409. The total value of all residential structures in Wilcox County is \$90,899,998. The value of commercial structures in Wilcox County is \$14,634,920. Industrial facilities in Wilcox County have a value of \$9,495,775. The value of agricultural structures in Wilcox County is \$50,084,350. Religious/non-profit structures in Wilcox County are valued at \$6,174,485. Government facilities in Wilcox County are valued at \$6,087,393. Educational facilities in Wilcox County are valued at \$32,311,193. Finally, the value of utility structures in Wilcox County is \$31,680,295. At this time there are no known future buildings, infrastructure, or critical facilities to be located in the county requiring special mitigation strategies. Additionally, all 8,635 residents of Wilcox County and 1,104 employees working in Wilcox County could be affected by a tornado.

D. Development Trends

A review of the comprehensive plan illustrates that the county currently has no land use or development trends specifically related to tornados. There is little commercial, residential and industrial development in Wilcox County. Between 2010 and 2019 (Census population estimates, Appendix C), Wilcox County experienced a decrease in population from 9,255 to 8,635 or a decrease of 6.7%. According to the Governor’s Office of Planning and Budget, Wilcox County is projected to have a population of 8,778 in 2025 (1.7% increase from 2019 estimates), a population of 8,824 in 2030 (0.52% increase from 2025 projections), and a population of 8,869 (0.5% increase from 2025 projections). For the sixteen-year period (2019-2030), Wilcox County is projected to increase in population by 2.7%. Future land use maps cannot address the threat of natural non-spatial occurrences such as tornados. Therefore, there is no way to tell whether new development is in a hazard prone area since all areas are equally vulnerable. In the future, each citizen and any number of structures (commercial, industrial, public/institutional, residential), critical facilities, and infrastructure, in any part of the county, could potentially be damaged by a tornado.

There exists a need for updated, coordinated, countywide land use planning/subdivision/manufactured housing regulations/increased code enforcement/nuisance ordinances/growth management and implementation. Wilcox County has rudimentary land use regulations, road acceptance/subdivision ordinances, a manufactured home ordinance, and others to address specific issues or nuisances. Abbeville and Rochelle have zoning ordinances and building code enforcement in place and since the last plan update, the City of Pitts adopted a Manufactured Housing Ordinance and the City of Pineview adopted an “Unsafe Buildings and Premises.” Enforcement of these ordinances by city code enforcement will assist in providing oversight that ensures the safety of individuals, businesses, and encourage community-wide priority for structural integrity. Code enforcement in the county is related to solid waste although future plans are for increased inspections and enforcement. These ordinances need updating through coordination and joint collaboration/code enforcement to initiate a more comprehensive approach. (Comprehensive Plan, Appendix B)

While technically only the larger municipalities, Abbeville and Rochelle, are required, because of their zoning ordinance, to have a Land Use element in their comprehensive plan under the Georgia Department of Community Affairs’ planning standards, all local governments in the county have chosen to participate and include the element in the joint comprehensive plan. Existing land use maps visually convey to all concerned the current landscape and correlation of extant development. Future land use maps illustrate

to all concerned the community's vision and desires for additional growth and development. Such depictions also lend credence and supporting background information important to understanding and illustrating official local government policy in designating lands unsuitable for solid waste handling facilities in local solid waste management plans. Land use maps do provide official display of community desires and goals for compatible future growth and development. The community's land use maps are, however, a general policy guide and framework, not necessarily a rigid or unchangeable picture of future growth and development. Not all growth or developments can be foreseen, and other events could necessitate a change in community vision or desires. The depicted pattern of desired future growth and development displayed on future land use maps is a current statement and reflection of community expectations and desires. It provides a context, framework and background for the public and private sector to utilize to plan, evaluate, shape, guide, and influence proposed developments and other decisions affecting the use of the land and community growth and development. The plan provides a context for forethought, examination of impacts and consequences, and mitigation of land use decisions on the community's growth and development. Land Use Maps for Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle can be reviewed in Appendix B.

E. Multi-Jurisdictional Concerns

Estimating the potential losses caused by a tornado is largely dependent upon where it touches down within the county. In the incorporated and unincorporated areas of Wilcox County, the threat of natural non-spatial occurrences including tornados is equally applicable. All areas of the county are susceptible to non-spatial threats. However, the amount of damage caused by a tornado occurring within one of the municipalities would most likely be greater than if one occurred in the unincorporated area, due to the differences in amount of development and population density. If a tornado that occurs within a residential area or touches down at an industrial site, the potential property damage and loss of life will be significant.

In the incorporated and unincorporated areas of Wilcox County (including Abbeville, Pineview, Pitts, and Rochelle), the threat of natural non-spatial occurrences including tornados is equally applicable. All areas of the county are susceptible to non-spatial threats. However, the amount of damage caused by a tornado occurring within the city limits would most likely be greater than one that occurs in the unincorporated area, due to the differences in amount of development and population density.

In the circumstance that an EF3 tornado occurs in similar strength, width, and path as modeled in the 2020 Wilcox County Hazard Risk Analyses Report (Appendix C), Wilcox County could potentially incur damages of \$254,389 to commercial structures, \$130,532 to governmental structures (including 4 essential facilities), \$407,907 to religious structures, and \$14,027,251 to residential structures. In this scenario, approximately 349 buildings/structures and \$14.8 million dollars in structural damages would result.

Estimated Building Losses by Occupancy Type/ EF3 Tornado Projection

| Occupancy Classification | Buildings Damaged | Building Losses |
|--------------------------|-------------------|----------------------|
| Commerical | 20 | \$ 254,389 |
| Governmental | 3 | \$ 130,532 |
| Religious | 4 | \$ 407,907 |
| Residential | 322 | \$ 14,027,251 |
| Total | 349 | \$ 14,820,078 |

(2020 Wilcox County Hazard Risk Analyses Report, Appendix C)

Since the last plan update, Wilcox County applied for FEMA grant funding to purchase generators and for a community safe room. The City of Pitts applied for FEMA grant funding to purchase generators for City Hall, the City Gym, and for two wells located within the city. The City of Pitts also applied for FEMA grant funding to construct a community center; however, the City of Pitts was not awarded this funding. The City of Abbeville has applied for FEMA grant funding to purchase one tornado siren, and six generators to power City Hall, two pumping stations, and two wells within the city. At this time, FEMA grant funding has not been awarded to Wilcox County, the City of Pitts, or the City of Abbeville for these projects. No other developments or projects have been achieved to increase or decrease vulnerability to tornadoes in Wilcox County or the Cities of Abbeville, Pineview, Pitts, and Rochelle.

F. Hazard Summary

Through examination of the hazard occurrence data and historical trends the committee has determined that tornados remain a threat to the county. Even though the frequency of occurrences is small, the impact from one tornado has the potential to destroy numerous properties and cause harm to residents. Emergency response teams including the sheriff’s department, police, fire and rescue, EMS, and EMA have been utilized during these events along with the county road department. In the future, measures suggested in this plan need to be enacted to limit the amount of impact a tornado can have on Wilcox County. The committee reviewed previous Tornado mitigation action steps proposed in the approved 2015 plan and made the changes where needed. Continuing to address these issues will be an ongoing task for both county and city officials.

SECTION III. TROPICAL STORM/ HURRICANE

A. Identification of Hazard

By definition, a tropical storm is a tropical cyclone in which the maximum one-minute sustained surface wind ranges from 39 to 73 mph (34 to 63 knots) inclusive. Tropical storms and hurricanes are powerful systems with the ability to travel far from the initial strike zone. Once inland, they can continue to bring powerful winds and heavy rains. Wilcox County is located in Wind Zone III, which is the 200-mph wind zone (see map found in Appendix A:6). Currently, the county and its municipalities do not have any building codes that pertain to wind speeds.

A hurricane is a category of tropical storm of wind speeds greater than 74 or more miles per hour. Hurricanes develop over warm waters and are caused by the atmospheric instability created by the collision of warm air with cooler air originating in the tropical regions of the Atlantic Ocean or Caribbean Sea. They then travel north, northwest, or northeast from its point of origin, and they usually involve heavy rains. Hurricanes are characterized by a large spiral of wind around a calmer center called the eye of the storm, which has the potential to be 20-30 miles wide. When a hurricane hits land, it may cause devastating rains, winds, and flooding. The hurricane season for the Atlantic coast lasts from June to November but could occur outside of periods. Though each may not be considered significant, on average, five hurricanes strike the United States every year. Because hurricanes are large moving storm systems, they can affect entire states or entire coastlines.

According to the 2019-2024 Georgia Hazard Mitigation Strategy, hurricanes can cause catastrophic damage to coastlines and areas several hundred miles inland. Hurricanes can produce winds exceeding 155 miles per hour as well as tornadoes and microbursts. Additionally, hurricanes 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 hurricanes traveling into mountainous regions tend to produce especially heavy rain. Excessive rain can trigger landslides or mud slides. Flash flooding can occur due to intense rainfall (<http://www.ready.gov/hurricanes>).

According to the National Hurricane Center, the term hurricane is used for Northern Hemisphere tropical cyclones east of the International Dateline to the Greenwich Meridian. The term typhoon is used for Pacific tropical cyclones north of the Equator west of the International Dateline. Hurricanes in the Atlantic Ocean, Gulf of Mexico, and Caribbean form between June and November with the peak of hurricane season occurring in the middle of September. (Wilcox Hazard Risk Analyses, Appendix C)

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). (The Georgia Hazard Mitigation Strategy 2019-2024)

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 (presented in Figure 2.10: Saffir-Simpson Hurricane Scale). Winds in a hurricane range from 74 to 95 mph for a Category 1 hurricane to greater than 156 mph for a Category 5 hurricane. Hurricane

Camille (1969) and Hurricane Allen (1980) epitomize the destructive potential of hurricanes as both had sustained winds of 190 mph and gusts well over 200 mph. (The Georgia Hazard Mitigation Strategy 2019-2024)

B. Hazard Profile

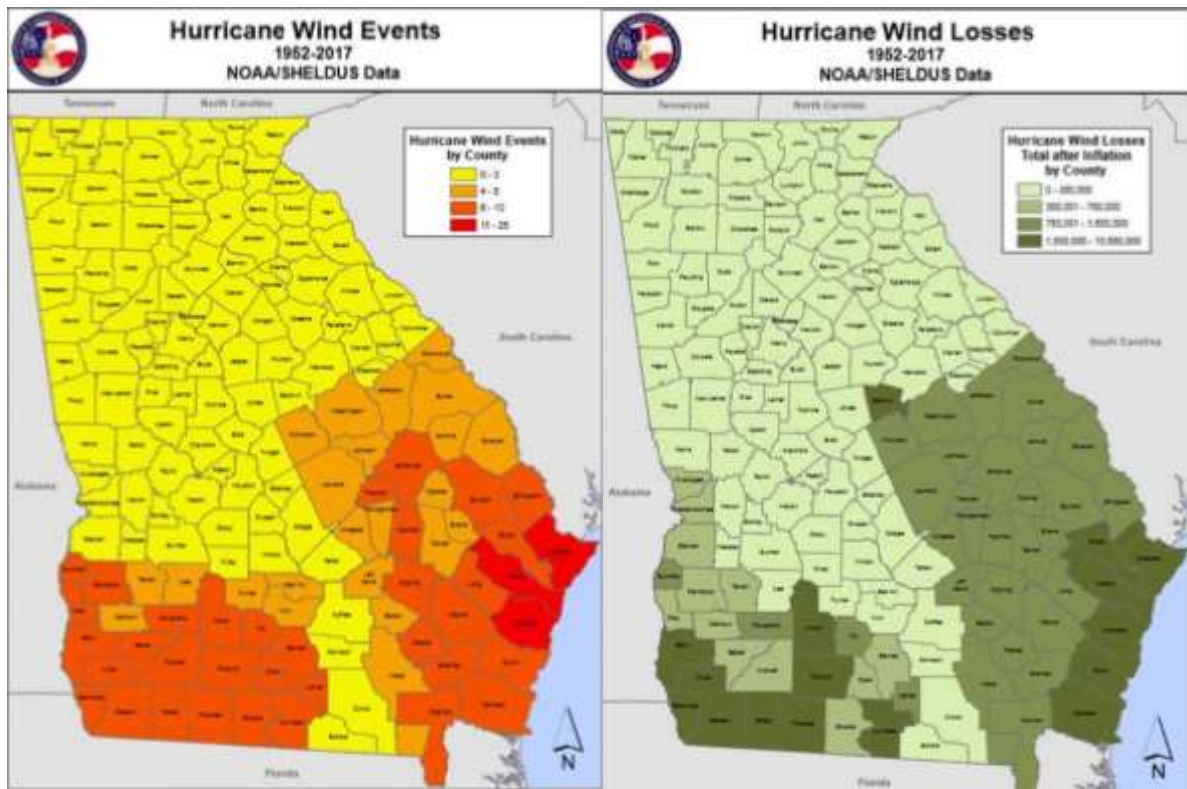
Location

Hurricanes in the Atlantic Ocean, Gulf of Mexico, and Caribbean form between June and November with the peak of hurricane season occurring in the middle of September. The Continental United States Hurricane Strikes 1950-2018 map below illustrates how many hurricanes have impacted the Atlantic and Gulf coasts of the United States in a period of 68 years.



According to the 2019 Georgia Hazard Mitigation Strategy, although all of Georgia's counties can be affected by tropical cyclonic activity, two regions stand apart when analyzed using SHELDUS data. Counties in Southwest Georgia are more adversely affected by tropical cyclones that enter from the Gulf of Mexico than by tropical cyclones from the Atlantic Ocean. Wilcox County is located between the Southwest and Coastal Georgia regions that experience the most tropical cyclonic activity.

Since Tropical Storms are non-spatial entities, they have the potential to occur anywhere within Wilcox County. Therefore, all parts of the county could be potentially subject to Tropical Storms and there is no specific area that would necessarily be more likely to have one.



| | |
|---|---|
| Left: Hurricane Wind Events in Georgia, 1952-2017; From: 2019 Georgia Hazard Mitigation Strategy | Right: Hurricane Wind Losses Georgia, 1952-2017; From: 2019 Georgia Hazard Mitigation Strategy |
|---|---|

Extent

There is no measurement of extent specific to a tropical storm. The extent of a hurricane can range from very mild damage to extreme devastation. The National Weather Service measures the extent of a hurricane using the Saffir-Simpson Hurricane Wind Scale (see below). The Saffir-Simpson Hurricane Wind Scale is a 1 to 5 rating based on a hurricane's sustained wind speed. This scale also estimates potential property damage. A tropical storm falls within its own category and is directly below a Category 1 Hurricane in terms of sustained winds and damage capability. Hurricanes reaching Category 3 and higher are considered major hurricanes because of their potential for significant loss of life and damage. However, Category 1 and 2 storms still have the potential to cause a large amount of damage to property and infrastructure. Although it is very possible that not all damage caused by tropical storms and hurricanes have been recorded, NCDC data documents that from 2002 to March 2020, hurricanes and tropical storms have caused a recorded total of \$105,000 in property damage in Wilcox County.

Saffir-Simpson Hurricane Wind Scale

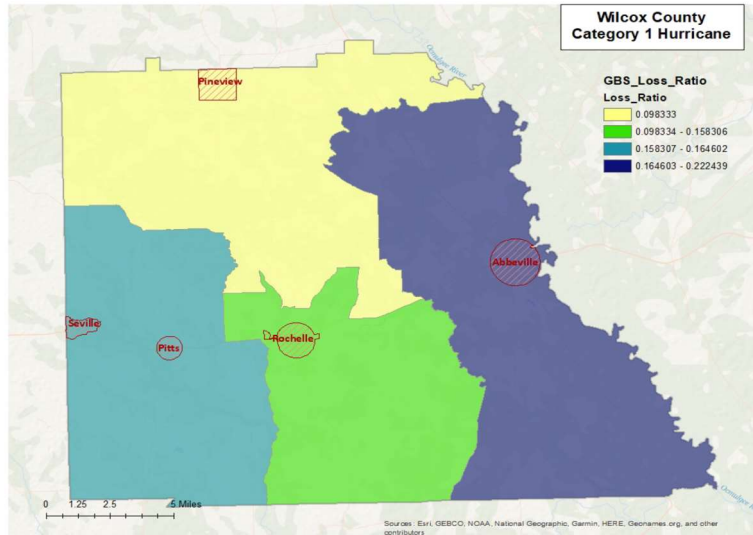
| Category | Sustained Winds | Types of Damage Due to Hurricane Winds. |
|------------------|---|---|
| 1 | 74-95 mph 64-82 kt 119-153 km/h | Very dangerous winds will produce some damage: Well-constructed frame homes could have damage to roof, shingles, vinyl siding and gutters. Large branches of trees will snap, and shallowly rooted trees may be toppled. Extensive damage to power lines and poles likely will result in power outages that could last a few to several days. |
| 2 | 96-110 mph 83-95 kt 154-177 km/h | Extremely dangerous winds will cause extensive damage: Well-constructed frame homes could sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outages that could last from several days to weeks. |
| 3 (major) | 111-129 mph 96-112 kt 178-208 km/h | Devastating damage will occur: Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to weeks after the storm passes. |
| 4 (major) | 130-156 mph 113-136 kt 209-251 km/h | Catastrophic damage will occur: Well-built framed homes can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Most trees will be snapped or uprooted, and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to possibly months. Most of the area will be uninhabitable for weeks or months. |
| 5 (major) | 157 mph or higher 137 kt or higher 252 km/h or higher | Catastrophic damage will occur: A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months. |

The National Oceanic and Atmospheric Administration’s National Hurricane Center created the HURDAT database, which contains all of the tracks of tropical systems from the mid-1800s until 2006. This database was used to document the number of tropical systems that have affected Wilcox County by creating a 20-mile buffer around the county to include storms that did not make direct landfall in Wilcox County but impacted the county.

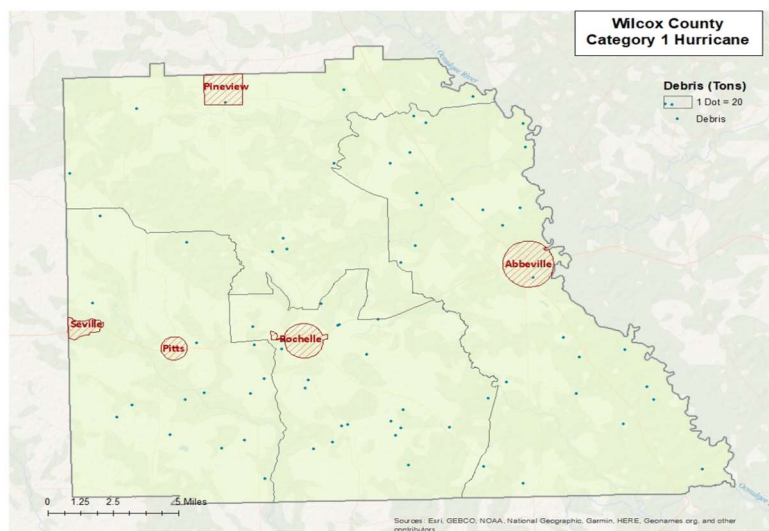
Buildings in Wilcox County are vulnerable to storm events, and the cost to rebuild may have significant consequences to the community. The 2020 Wilcox County Hazard Risk Analyses Report creates a probabilistic hurricane scenario of a Category 1 Hurricane or 100-year storm in Wilcox County. The probabilistic wind damage risk assessment modeled a Category 1 storm with maximum winds of 76 mph. The assessment found that 22 buildings are vulnerable to damage in the amount of \$875,480, economic losses totaling \$1,151,470, with a loss ratio of 0.16. In this assessment, 17 essential facilities were identified as being vulnerable to moderate or severe damage to hurricane scenario winds. It was determined that no households or people would be displaced requiring short-term shelter. The building loss ratio expresses building losses as a percentage of total building replacement cost in the county.

Building loss ratios for Wilcox County are illustrated in the Building Loss Ratio Map below. (2020 Wilcox County Hazard Risk Analyses Report, Appendix C)

Below: Building Loss Ratio – Wilcox County



Debris generated from the hurricane assessment resulted in an estimated 1,358 tons of tree debris, 38,022 tons of other tree debris, and 75 tons of brick, wood, and other debris, totaling 39,455 tons of debris generated in a 100-year hurricane scenario. The amount of hurricane wind related tree debris that is estimated to require pick up at the public’s expense is 1,358 tons. The figure below shows the distribution of all wind related debris resulting from a Category 1 hurricane. Each dot represents 20 tons of debris within the census tract in which it is located. The dots are randomly distributed within each census tract and therefore do not represent the specific location of debris sites. (2020 Wilcox County Hazard Risk Analyses Report, Appendix C)



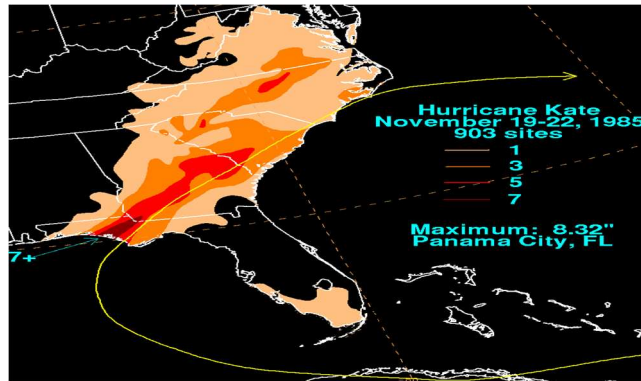
History

The threat of tropical storms in Wilcox County is minimal to moderate and the threat of hurricane-force storms in Wilcox County has been minimal in recorded history. From 1851- 2006 (according to the National Hurricane Center), Wilcox County has had 9 category “1” hurricanes, 2 category “2” hurricanes, and 24 tropical storms occur within 20 miles of its county borders. According to 1950-March 2020 NCDC data, from 2002 to March 2020, Wilcox County recorded one category “1” hurricane, and 13 tropical storms. One “hurricane” event recorded in NCDC data—Hurricane Michael was also recorded as a “tropical storm” Michael for the same date. Because NCDC records “tropical storm” force winds from Hurricane Michael as it moved over central Georgia, Hurricane Michael is considered a tropical storm event for the purposes of this analysis. One hurricane recorded in NCDC data was Hurricane Katrina on August 29, 2005, which occurred in the Gulf Coast, hundreds of miles away from Wilcox County. Because of the distance of the core of Hurricane Katrina from Georgia, rainfall problems were minor, mostly isolated reports of street flooding (NCDC, Appendix C) Combining duplicate hazard instances recorded in the National Hurricane Center logs and NCDC data, and removing data from Hurricane Katrina (as this hurricane was noted in NCDC data, but this storm was not considered hurricane strength or tropical storm strength in Georgia), hurricane and tropical storm totals were devised from the two data sources. With data from NOAA and NCDC, 12 total hurricanes and 38 total tropical storms have occurred in Wilcox County from August 1851 to March 2020. (See NCDC data and 2020 Wilcox County Hazard Risk Analyses Report, Appendix C)

In NOAA’s National Hurricane Center’s HURDAT database, six hurricane events, all categorized as “H1” level storms, occurred in Wilcox County from 1851 to 2006. (HAZUS, Appendix C) One hurricane-force storm has occurred in Wilcox County since the last plan update and 3 tropical storm events have occurred in Wilcox County since the last plan update. Since the last plan update property damage in the amount of \$105,000 was incurred from 2 tropical storm events. No crop damage, injuries, or deaths have been recorded as a result of past hurricane events in Wilcox County. (NCDC, Appendix C)

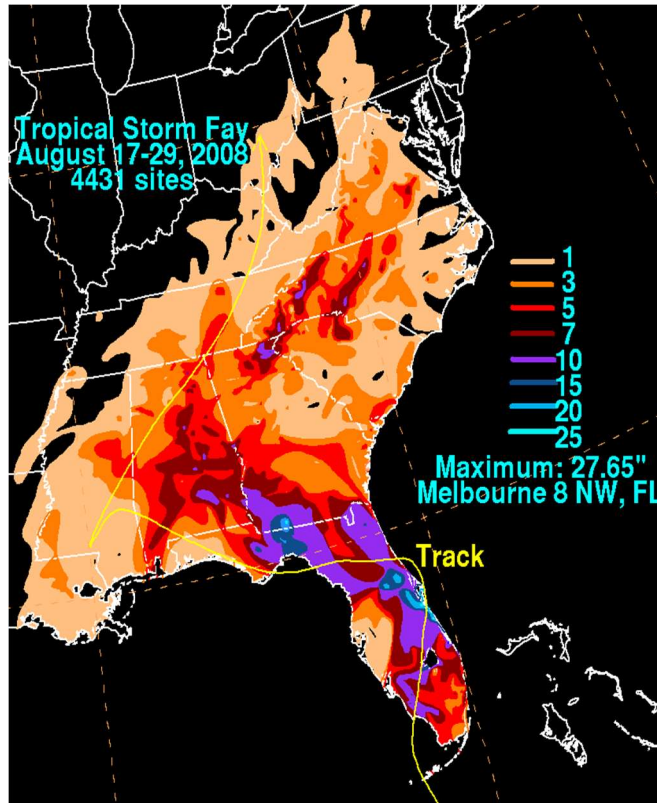
However, there have been indirect effects to the county resulting from tropical storms and hurricanes. This has included receiving large amounts of rain and wind coming from tropical storms and hurricanes along the coasts. Also, Wilcox County is on a route for evacuees from coastal Georgia and Florida to come to in the event of a tropical storm/hurricane; US Highway 280, running east to west, and US Highway 129, running north to south, are utilized as evacuation routes for the Atlantic Coast of Georgia. To be better prepared for a similar situation in the future the county has included goals and objectives that they feel will help address these issues.

Hurricane Kate, occurring in Wilcox County on November 22, 1985, is one of two hurricane-force storms to travel through Wilcox County in 50 years. Category 1 Hurricane Kate arrived in Wilcox County with wind speeds of 65kts on November 22, 1985. NOAA’s Historical Hurricane Tracks database reports that upon landfall in Florida, Hurricane Kate had reached wind speeds of 85kts and had produced a storm surge of 11 feet in Cape San Blas, Florida. According to an article by Denny Hamilton, Hurricane Kate caused the deaths of 3 people in the United States from Florida to South Carolina, spawned tornados in the State of Georgia, uprooted trees, downed powerlines, pushed cars off of highways, and shattered windows in Donalsonville, Georgia. Because of the age of this event, little to no documentation was available to attest to Hurricane Kate’s effect on Wilcox County. (<https://www.upi.com/Archives/1985/11/22/Hurricane-Kate-killed-two-people-smashed-homes-and-triggered/6597501483600/>)



(Image Directly Above: Hurricane Kate from NOAA. Retrieved from: <https://www.wpc.ncep.noaa.gov/tropical/rain/kate1985.html>)

Occurring on or about August 21, 2008, Tropical Storm Fay crossed through Wilcox County. The storm tracked west to west-northwest from the 22nd through the 25th into extreme southeast Louisiana before reaching the western end of the subtropical ridge and an approaching frontal system. Thus, Fay once again turned back toward the northeast across central Mississippi and central/northern Alabama before finally becoming absorbed into the mean flow and a frontal system located across the Tennessee Valley. The slow movement of Fay and the proximity to the forecast area allowed for Fay's impacts on the Peachtree City forecast area to last several days. Outer rain bands affected the southern parts of the forecast area as early as the 20th. Outer rain bands continued to affect the southern counties as Fay tracked slowly west through the Florida Panhandle the 21st, 22nd, and 23rd. Some of these produced gusty winds and trees were blown down in Wilcox County. No injuries, deaths, crop damage, or property damage was recorded as a result of this event in Wilcox County. (NCDC, Appendix C)

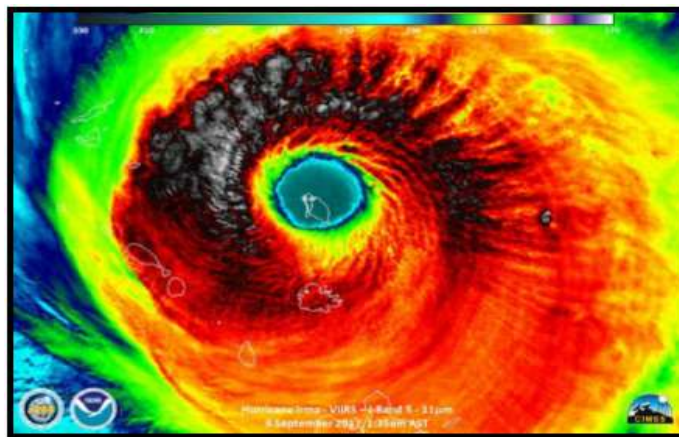
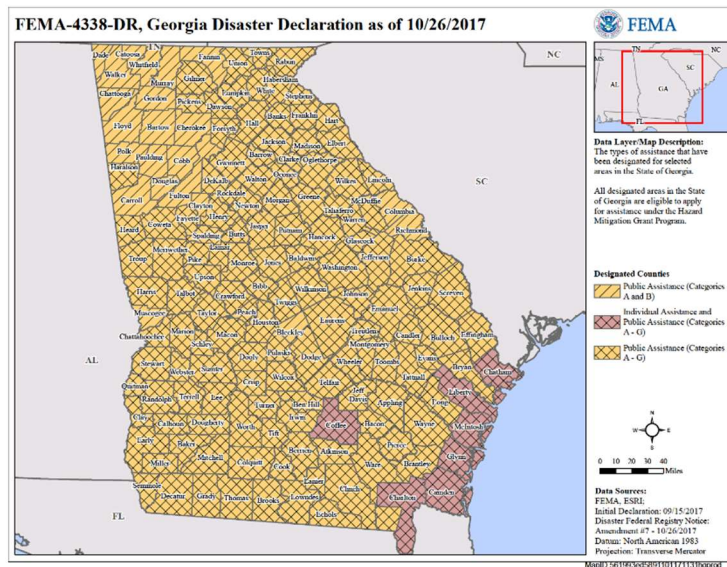


(Image Directly Above: Hurricane Fay from NOAA., Retrieved from : <https://www.wpc.ncep.noaa.gov/tropical/rain/fay2008.html>)

On September 2, 2016, Tropical Storm Hermine swept through Wilcox County. Wilcox County was among 56 Counties that were declared in a state of emergency by August 31, 2016, due to this event. (Source: <https://www.macon.com/news/local/article99210872.html>) On August 28th a tropical depression formed in the Florida Straits, drifting slowly west into the Gulf of Mexico. During the afternoon of August 31st this tropical depression developed into Tropical Storm Hermine over the central Gulf of Mexico and began turning to the northeast. By the late afternoon of September 1st Hermine reached hurricane strength as it approached the coast of the Florida Big Bend region in the northeast Gulf of Mexico. Hurricane Hermine moved onshore across northwest Florida during the evening of September 1st and swept into southern Georgia. Through the morning of September 2nd and into the afternoon, now Tropical Storm, Hermine continued to accelerate to the northeast bringing damaging, tropical storm force winds and heavy rain to portions of central Georgia. The Georgia Department of Transportation reported trees blown down across Crawford Road blocking both lanes of traffic in Wilcox County following Tropical Storm Hermine. No injuries, deaths, or crop damage was reported as a result of this event, however, this event caused \$5000 in property damage as a result of Tropical Storm Hermine in Wilcox County. (NCDC, Appendix C)

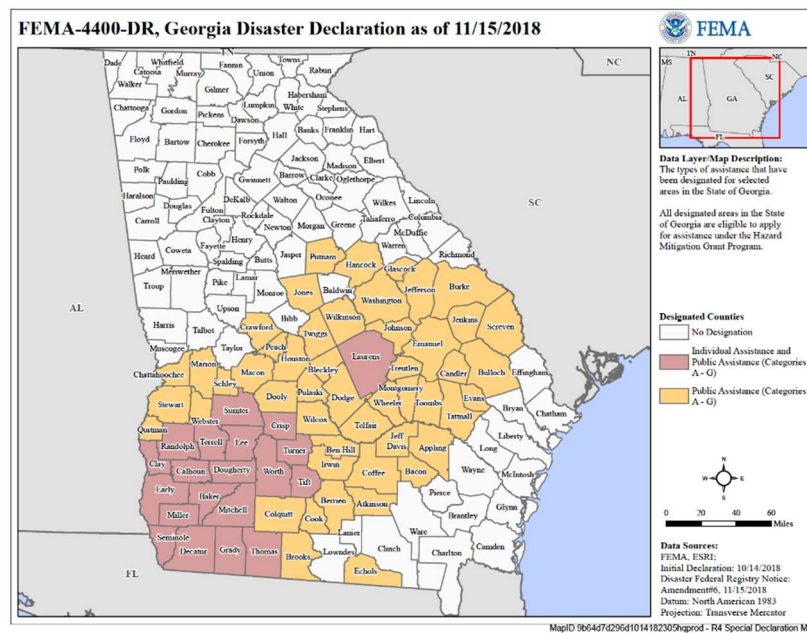
On or about September 11, 2017, Tropical Storm Irma occurred in Wilcox County. Hurricane Irma made landfall over southwest Florida as a category 4 storm during the evening of the 10th and travelled north northwest through western Florida before weakening to a category 1 hurricane as it crossed into southwest Georgia the afternoon of September 11, 2017. Tropical Storm Irma crossed southwest Georgia through the day of September 11, 2017 before weakening to a tropical depression over north Alabama

early on the morning of the 12th. Tropical storm strength winds produced widespread damage across central and north Georgia through the day of September 11, 2017, and into the early morning hours of September 12, 2017. Isolated flash flooding associated with Tropical Storm Irma was reported as well. The news media reported numerous trees and power lines blown down across the county. Many customers were without electricity for varying periods of time. No injuries, deaths or crop damage were reported, however, this event resulted in \$100,000 in property damage in Wilcox County. (NCDC, Appendix C) According to FEMA, Wilcox County was among several counties in Georgia to qualify for assistance under Georgia’s Disaster Declaration, declared on September 15, 2017 (see following FEMA Disaster Declaration Map FEMA-4338-DR).



(Picture Directly Above: Satellite Image of Hurricane Irma at its peak intensity making landfall in Barbuda on September 6, 2017; From the National Hurricane Center Tropical Cyclone Report at: https://www.nhc.noaa.gov/data/tcr/AL112017_Irma.pdf)

The most recently re tropical storm event occurring since the last plan update was Tropical Storm Michael, which occurred on or about October 10, 2018, in Wilcox County. Hurricane Michael made landfall along the Florida panhandle at Mexico beach (just southeast of Panama City) on the afternoon of October 10, 2018 as a high-end Category 4 hurricane (max winds of 155 MPH). Michael then moved rapidly inland, causing widespread wind damage along its path as it swept northeast across south and central Georgia. Hurricane Michael was the first major hurricane, category 3 or higher, to directly impact Georgia since the 1890s. In southwest Georgia, wind gusts as high as 115 mph were recorded. A National Weather Service survey consisting of an analysis of measured wind data, along with reports from Emergency Managers and various other local, state and federal officials, found that tropical storm conditions occurred in the county. There were numerous reports of trees and power lines blown down and some damage to structures. Wind speeds were estimated between 45 and 55 mph. FEMA Disaster Declaration was issued, establishing Wilcox County's eligibility for public assistance as a result of Tropical Storm Michael. A National Weather Service survey consisting of an analysis of measured wind data, along with reports from Emergency Managers and various other local, state and federal officials, found that tropical storm conditions occurred for several hours in the county before and after the period when hurricane force winds were observed. NCDC data reports no deaths, injuries or values of crop damage, property damage as a result of this event. (NCDC, Appendix C)



(Picture Directly Above: Georgia Hurricane Michael DR-4400 Map; Incident Period: October 9, 2018 to October 23, 2018; Major Disaster Declaration: October 14, 2018; Source: <https://www.fema.gov/disaster/4400>)



(Picture Directly Above: NOAA/NESDIS GOES-16 PSEUDO—Natural Color Image of Hurricane Michael on October 10, 2018; From the National Hurricane Center Tropical Cyclone Report at: https://www.nhc.noaa.gov/data/tcr/AL142018_Michael.pdf)

Probability

Based upon the frequency of historical occurrences obtained from the National Climatic Data Center and NOAA’s National Hurricane Center’s HURDAT database, the probability that a tropical storm would occur in Wilcox County is moderate. The current chance per year that a tropical storm can occur is 22.49%, as noted in the Hazard Frequency Table (Appendix D, II). Additionally, the annual frequency for the last ten and twenty years are 0.4 and 0.65, respectively. Finally, keeping in mind that the older the data the more incomplete it is, we can see that the annual frequency for the last fifty years is 0.28, with a historical recurrence interval of 4.45 years. However, due to the fact that occurrence reporting is relatively recent, it is possible that there have been other tropical storms in the last fifty years.

The probability that a hurricane-force storm would occur in Wilcox County is low. The current chance per year that a category 1 hurricane can occur is 5.92%, as noted in the Hazard Frequency Table (Appendix D, II). Additionally, the annual frequency for the last ten and twenty years are 0.0 and 0.05, respectively. Finally, keeping in mind that the older the data the more incomplete it is, we can see that the annual frequency for the last fifty years is 0.04, with a historical recurrence interval of 16.90 years. The current chance per year that a category 2 hurricane can occur is 1.18%, as noted in the Hazard Frequency Table (Appendix D, II). Additionally, the annual frequency for the last ten and twenty years are 0.0 and 0.0, respectively. Finally, keeping in mind that the older the data the more incomplete it is, we can see that the annual frequency for the last fifty years is 0.0, with a historical recurrence interval of 84.50 years.

Based on these figures the decision was made to classify the likelihood as “Highly Likely” that a tropical storm occurrence will occur in the next five to ten years, “Likely” that a category 1 hurricane can occur in the next 5 to 10 years and “Highly Unlikely” that a category 2 hurricane will occur in the next five to ten years.

| Occurrence Probability in Years | Likelihood of Future Occurrence |
|--|--|
| 1-10 | “Highly Likely” |
| 10-25 | “Likely” |
| 25-50 | “Unlikely” |
| 50 or greater | “Highly Unlikely” |

C. Inventory of Assets and Potential Losses

The total percentage of the number of structures that are exposed to the non-spatial threat of tropical storm/hurricane in Wilcox County is 100% as noted on Worksheet 3A (Appendix D, III). In Worksheet 3A: Inventory of Assets (appearing in Appendix A and D, III), we estimate that all of Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle are equally vulnerable to this hazard. Because data broken down by jurisdiction is not consistently available, it was not possible to break down these worksheets by jurisdiction; therefore, they refer to the entire county, including the three Cities of Abbeville, Pineview, Pitts, and Rochelle in this plan.

In Wilcox County, there are 4,223 residential structures, 396 commercial structures, 13 industrial structures, 3,341 agricultural structures, 198 religious/non-profit structures, 96 government structures, 16 educational structures, and 29 utility structures. All of these structures are equally exposed to tropical storms/hurricanes. To address specific critical facilities and infrastructure, each facility was examined on an individual basis, entered into the GMIS database, and located on a Wilcox County Critical Facilities Map, which is located in Appendix A: 3. The GMIS Wind Hazard Report assigned a wind hazard scores to each of the 102 critical facilities with 99 facilities receiving a score of “2” and 3 facilities receiving a score of “0.” All of these structures are equally exposed to a tropical storm/hurricane.

The total built structures, including critical facilities, of Wilcox County have an estimated replacement value of \$241,368,409. The total value of all residential structures in Wilcox County is \$90,899,998. The value of commercial structures in Wilcox County is \$14,634,920. Industrial facilities in Wilcox County have a value of \$9,495,775. The value of agricultural structures in Wilcox County is \$50,084,350. Religious/non-profit structures in Wilcox County are valued at \$6,174,485. Government facilities in Wilcox County are valued at \$6,087,393. Educational facilities in Wilcox County are valued at \$32,311,193. Finally, the value of utility structures in Wilcox County is \$31,680,295. At this time there are no known future buildings, infrastructure, or critical facilities to be located in the county requiring special mitigation strategies. Additionally, all 8,635 residents of Wilcox County and 1,104 employees working in Wilcox County could be affected by a tropical storm/hurricane.

E. Development Trends

A review of the comprehensive plan illustrates that the county currently has no land use or development trends specifically related to tropical storms/hurricanes. There is little commercial, residential and industrial development in Wilcox County. Between 2010 and 2019 (Census population estimates, Appendix C), Wilcox County experienced a decrease in population from 9,255 to 8,635 or a decrease of 6.7%. According to the Governor’s Office of Planning and Budget, Wilcox County is projected to have a population of 8,778 in 2025 (1.7% increase from 2019 estimates), a population of 8,824 in 2030 (0.52% increase from 2025 projections), and a population of 8,869 (0.5% increase from 2025 projections).

For the sixteen-year period (2019-2030), Wilcox County is projected to increase in population by 2.7%. Future land use maps cannot address the threat of natural non-spatial occurrences such as tropical storms/hurricanes. Therefore, there is no way to tell whether new development is in a hazard prone area since all areas are equally vulnerable. In the future, each citizen and any number of structures (commercial, industrial, public/institutional, residential), critical facilities, and infrastructure, in any part of the county, could potentially be damaged by a tropical storm/hurricane.

There exists a need for updated, coordinated, countywide land use planning/subdivision/manufactured housing regulations/increased code enforcement/nuisance ordinances/growth management and implementation. Wilcox County has rudimentary land use regulations, road acceptance/subdivision ordinances, a manufactured home ordinance, and others to address specific issues or nuisances. Abbeville and Rochelle have zoning ordinances and building code enforcement in place and since the last plan update, the City of Pitts adopted a Manufactured Housing Ordinance and the City of Pineview adopted an “Unsafe Buildings and Premises.” Enforcement of these ordinances by city code enforcement will assist in providing oversight that ensures the safety of individuals, businesses, and encourage community-wide priority for structural integrity. Code enforcement in the county is related to solid waste although future plans are for increased inspections and enforcement. These ordinances need updating through coordination and joint collaboration/code enforcement to initiate a more comprehensive approach. (Comprehensive Plan, Appendix B)

While technically only the larger municipalities, Abbeville and Rochelle, are required, because of their zoning ordinance, to have a Land Use element in their comprehensive plan under the Georgia Department of Community Affairs’ planning standards, all local governments in the county have chosen to participate and include the element in the joint comprehensive plan. Existing land use maps visually convey to all concerned the current landscape and correlation of extant development. Future land use maps illustrate to all concerned the community’s vision and desires for additional growth and development. Such depictions also lend credence and supporting background information important to understanding and illustrating official local government policy in designating lands unsuitable for solid waste handling facilities in local solid waste management plans. Land use maps do provide official display of community desires and goals for compatible future growth and development. The community’s land use maps are, however, a general policy guide and framework, not necessarily a rigid or unchangeable picture of future growth and development. Not all growth or developments can be foreseen, and other events could necessitate a change in community vision or desires. The depicted pattern of desired future growth and development displayed on future land use maps is a current statement and reflection of community expectations and desires. It provides a context, framework and background for the public and private sector to utilize to plan, evaluate, shape, guide, and influence proposed developments and other decisions affecting the use of the land and community growth and development. The plan provides a context for forethought, examination of impacts and consequences, and mitigation of land use decisions on the community’s growth and development. Land Use Maps for Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle can be reviewed in Appendix B.

F. Multi-Jurisdictional Concerns

Due to the non-spatial nature of a tropical storm/hurricane, any part of Wilcox County could potentially be affected by its’ occurrence. Increased enforcement and implementation of building codes related to flooding and the continuing efforts to improve drainage throughout the county will serve the community well in the event of a hurricane. However, in regard to the possible flooding caused by the heavy rains from a tropical storm/hurricane, the most structural damage is likely to occur within the city limits of Abbeville, Pineview, Pitts, and Rochelle. The unincorporated portions of the county that fall within flood zones are largely undeveloped, therefore there is less possibility of damage occurring.

In the incorporated and unincorporated areas of Wilcox County (including Abbeville, Pineview, Pitts, and Rochelle), the threat of natural non-spatial occurrences including tropical storm/hurricane is equally

applicable. All areas of the county are susceptible to non-spatial threats. However, the amount of damage caused by a tropical storm/hurricane occurring within the city limits would most likely be greater than one that occurs in the unincorporated area, due to the differences in amount of development and population density.

Since the last plan update, Wilcox County applied for FEMA grant funding to purchase generators and for a community safe room. The City of Pitts applied for FEMA grant funding to purchase generators for City Hall, the City Gym, and for two wells located within the city. The City of Pitts also applied for FEMA grant funding to construct a community center; however, the City of Pitts was not awarded this funding. The City of Abbeville has applied for FEMA grant funding to purchase one tornado siren, and six generators to power City Hall, two pumping stations, and two wells within the city. At this time, FEMA grant funding has not been awarded to Wilcox County, the City of Pitts, or the City of Abbeville for these projects. No other developments or projects have been achieved to increase or decrease vulnerability to tropical storm/hurricane in Wilcox County or the Cities of Abbeville, Pineview, Pitts, and Rochelle.

F. Hazard Summary

In the past fifty years two hurricanes and 14 tropical storm events have been recorded in Wilcox County. This largely due to the county's inland location and distance from the coast. The past recorded events have resulted in \$105,000 dollars in documented property damage with no documented deaths, injuries, or crop damage. The hazard mitigation plan update committee made the decision to include tropical storms/hurricanes in their list of hazards because of the severe direct and indirect effects that an occurrence could have. Effects of these storms include localized flooding, fallen trees, utility damage, and destruction of property. Additionally, the occurrence of a tropical storm/hurricane in a different part of the state has the potential to affect the county, due the presence of a major evacuation route U.S. 280 and U.S. 129. The measures put into place by this plan are intended to decrease or eliminate these negative effects.

All areas of the county are susceptible to non-spatial threats. In the incorporated and unincorporated areas of Wilcox County (including Abbeville, Pineview, Pitts, and Rochelle), the threat of natural non-spatial occurrences including tropical storms/hurricanes is equally applicable. Therefore, any mitigation steps take related to tropical storms/hurricanes should be applied to the entire county, including each municipality.

SECTION IV. FLOOD

A. Identification of Hazard

A flood is a natural event for rivers and streams. Excess water from rainfall or storm surge accumulates and overflows onto the banks and adjacent floodplains. Floodplains are considered lowlands, adjacent to rivers and oceans that are subject to recurring floods. Adverse impacts may include structural damages, temporary backwater effects in sewers and drainage systems, and unsanitary conditions by deposition of materials during recession.

There are generally considered to be two types of flooding, coastal and riverine. Since Wilcox County does not border an ocean coast it is only susceptible to riverine flooding. Riverine flooding occurs from inland water bodies such as streams and rivers. Riverine flooding is often classified based on rate of onset; and is typically slow to rise, overflow and recede; which often allows an adequate amount of time to evacuate the area. The likelihood of a stream or river flooding is dependent upon several factors including topography, ground saturation, the intensity and duration of rainfall, soil type, drainage, erosion and vegetation. A large amount of rainfall over a short time span can result in flash flood conditions. A small amount of rain can also result in floods in locations where the soil is saturated from a previous period or if the rain is concentrated in an area of impermeable surfaces such as large parking lots, paved roadways, etc. Topography and ground cover are contributing factors for floods in that water runoff is greater in areas with steep slopes and little or no vegetation. In recent years, floods, and the damage they cause, have remained a threat to areas of Wilcox County.

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

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

According to the National Weather Service (<http://tadd.weather.gov/>), more deaths occur each year due to flooding than from any other thunderstorm-related hazard. The Centers for Disease Control and Prevention report that over half of all flood-related drownings occur when a vehicle is driven into hazardous flood water. The next highest percentage of flood-related deaths is due to walking into or near flood waters. People underestimate the force and power of water. Many of the deaths occur in automobiles as they are swept downstream. Of these drownings, many are preventable, but too many people continue to drive around the barriers that warn the road is flooded. A mere 6 inches of fast-moving

flood water can knock over an adult. It takes just 12 inches of rushing water to carry away a small car, while 2 feet of rushing water can carry away most vehicles.

Flooding has occurred in different locations throughout Wilcox County. There are many creeks that flow throughout the county that have the potential to flood. Localized flooding has also occurred in the past within the city of Abbeville.

B. Hazard Profile

Location

The majority of flooding that occurs within the county is localized and largely caused by periods of prolonged rainfall. Flooding has occurred in different locations throughout Wilcox County. There are many creeks and streams that flow throughout the county that pose a potential threat of flooding. Many of these areas contain various agricultural, industrial and commercial resources that can suffer water damage. The maps of these areas can be found in Appendix A:4.

The majority of flooding that occurs within the county is localized and largely caused by periods of prolonged rainfall. Flooding has occurred in different locations throughout Wilcox County. There are many creeks and streams that flow throughout the county that pose a potential threat of flooding. The Ocmulgee River runs along Wilcox County's eastern border. Many of these areas contain various agricultural, industrial and commercial resources that can suffer water damage. The maps of these areas can be found in Appendix A:4. All 102 Critical Facilities in Wilcox County have a GMIS flood hazard score of "0" with exception to the U.S. Highway 280 Bridge, which has a flood hazard score of "3." (GMIS Flooding Hazard Scores, Appendix A:4)

Flash flooding and extended heavy rainfall can cause creeks and the Ocmulgee River to rise as well has create flooding in low-lying areas of the county. The areas of the county that are most vulnerable to flooding are unincorporated areas of the county as creeks are located throughout the county and the county has hundreds of miles of dirt roads that are easily washed out.

Wilcox County, the Cities of Abbeville and Pitts are members of the National Flood Insurance Program (NFIP). The Cities of Pineview and Rochelle are not members of the NFIP due to decisions made at the discretion of elected officials.

Extent

The Flood Insurance Study (FIS) revises and updates information the existence and severity of flood hazards in the geographic area of Wilcox County, including the Cities of Abbeville, Pineview, Pitts, and Rochelle, and aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. The 2010 Flood Insurance study for Wilcox County developed flood-risk data for various areas of the community in its efforts to promote sound flood plain management. The Digital Flood Insurance Rate Map (DFIRM) and FIS report were produced and provided in digital format so that it may be incorporated into a local GIS and accessed more easily by the community. (Flood Insurance Study, Appendix C)

According to FEMA, flood hazard areas identified on the Flood Insurance Rate Map are identified as a Special Flood Hazard Area (SFHA). SFHA are defined as the area that will be inundated by the flood event

having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood. SFHAs are labeled as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone VE, and Zones V1-V30. Moderate flood hazard areas, labeled Zone B or Zone X (shaded) are also shown on the FIRM, and are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood. The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are labeled Zone C or Zone X (unshaded).

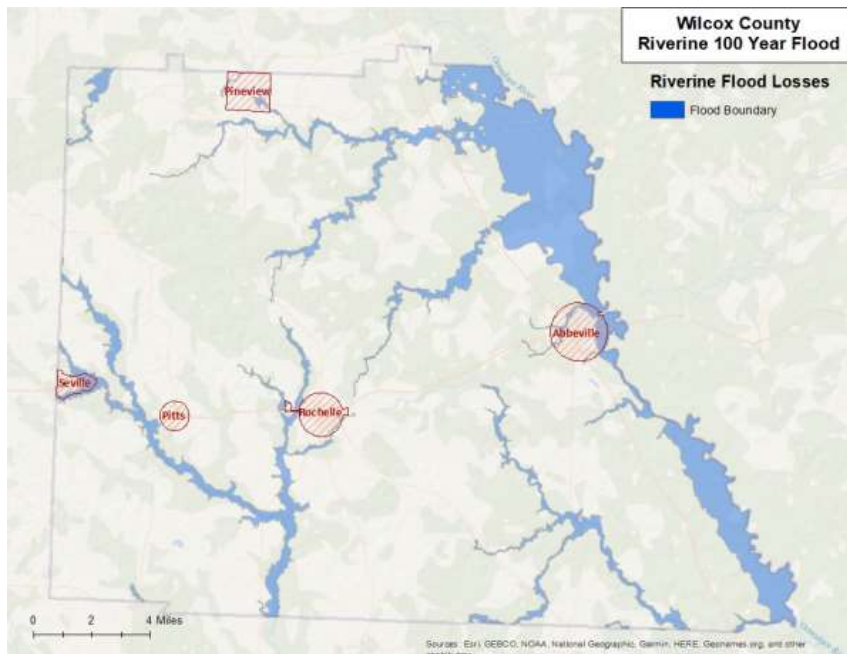
Flood Zone Designations and Descriptions

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

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

In order to provide a measurement of extent for flood events in Wilcox County HAZUS Software was used to create a flood depth grid for the county. A flood depth grid allows us to estimate the height that flood waters would reach. The flood depth grid was generated based on a 100-year flood scenario. Riverine losses were determined from the 1% flood boundaries downloaded from the FEMA Flood Map Service Center in May 2020. The flood boundaries were overlaid with the USGS 10-meter DEM using the Hazus-MH Enhanced Quick Look tool to generate riverine depth grids. The riverine flood depth grid was then imported into Hazus-MH to calculate the riverine flood loss estimates. Please note that the riverine flooding may not take into account elevated housing or raised Base Flood Elevation.

The depths ranged from a Low of approximately 0 ft. to a High of 40.48 ft. The deepest areas were found in the unincorporated portions of the county, especially along the Ocmulgee River. Though much of the Ocmulgee River basin is undeveloped, the City of Abbeville is located near the river. Within the City of Abbeville, the highest projected level is 15-20 feet and is located in an area of the city bordering the Ocmulgee. Throughout the rest of the city depth varies from less than a foot to approximately four feet. Other creeks throughout the county, including the Alapaha River, Cedar Creek, and House Creek are areas identified for potential flooding. Although a flood of this height could cause some structure and property damage the majority of the incorporated areas would most likely be unaffected. (To view the Flood Depth Grid, please see Appendix A:4)



LEFT: Wilcox County
Riverine 100-Year
Flood

(HAZUS, Appendix C)

History

The occurrence of floods in Wilcox County in the past years has posed a minimal threat to the communities. Flooding areas in Wilcox County can be seen in Appendix A:4. As pointed out in the National Climatic Data Center (NCDC) data (NCDC, Appendix C) from years 1997 to 2020, flooding events were recorded 7 times with two incidences occurring on the same day. Because the NCDC has recently been keeping up with the number of flood occurrences at the local level and NCDC information is only available through March 2020, the true number of floods that have occurred in the past fifty years is unknown.

According to NCDC data, recorded floods (flood and flash flood) have resulted in a total of \$270,000 dollars in property damage with no recorded deaths, injuries, or crop damage occurring as a result of flooding events. (NCDC, Appendix C) The only flooding event to occur since the last plan update caused property damage in the amount of \$75,000 with no recorded deaths, injuries, or crop damage. (NCDC, Appendix C) Emergency response teams including the sheriff's department, police, fire and rescue, EMS, and EMA have been utilized during these events.

A flooding event that caused the most valued damage in NCDC records occurred in the northwest portion of Wilcox County on March 27, 2005. During this event, the public reported that extensive flash flooding was ongoing, mainly in the western portion of the county. Several roads were washed out. A number of people were trapped in their homes by rising flood waters and others were trapped in their cars with water rising up to the hood level. Four to six inches of rain fell across the northwest part of the county, mainly northwest of Rochelle. Much of this information was confirmed by the county 911 Center. This event resulted in \$150,000 in property damage with no report of death, injury, or crop damage. (NCDC, Appendix C) On the same date (March 27, 2005), a "flood" event was recorded for Wilcox County. A second round of rain brought flooding and flash flooding to many of the same areas that experienced flooding during the early morning hours. While the flash flood events were primarily confined to the same areas that experienced flooding and flash flooding earlier in the morning, general flooding spread further north and east toward La Grange, Peachtree City, and Macon. Areas north to near Peachtree City and Macon experienced average rain for the day of two to four inches. NCDC data reports no property damage, crop damage, deaths, or injuries resulting from the second flooding event. No additional information was recorded related to rainfall amounts within Wilcox County, however, counties within approximately 50 miles of Wilcox County (Laurens County) reported rainfall lasting 24 hours with rain accumulation of 6 to 9 inches. (NCDC, Appendix C)

The most recent event recorded by NCDC data was a flash flooding event occurring on March 4, 2020 near the City of Pitts. Social Media initially reported a washout of SR-112 between Rebecca and Rochelle. News media and the Emergency Manager provided additional details later that a 250-foot stretch of SR-112 was washed out due to high flow through Mill Creek. Water covered the roadway by 1030 PM, and the road failed at approximately 2:30 AM on March 5, 2020. Repairs took more than two months and property damage was estimated at \$75,000. Radar estimates indicate that 5 to 6 inches of rain occurred in the area, falling on already wet soils, causing the flash flooding. (NCDC, Appendix C) Regional news station 13WMAZ in Macon reported this flooding incident required part of Highway 112 in Wilcox County to close, caused numerous dirt roads in the county to wash out and caused some people to evacuate their homes. (Source: <https://www.13wmaz.com/article/news/local/this-is-the-worst-flood-that-ive-seen-since-94-rain-washes-away-roads-in-wilcox-county/93-0883fcc6-1ecd-49d1-b956-564bae569a4d>)



Above: Highway 112 in Wilcox County March 5, 2020

Source: Wanya Reese, 13WMAZ, <https://www.13wmaz.com/article/news/local/this-is-the-worst-flood-that-ive-seen-since-94-rain-washes-away-roads-in-wilcox-county/93-0883fcc6-1ecd-49d1-b956-564bae569a4d>, March 5, 2020)



Above: Homes Evacuated on Doris Coney Lane in Wilcox County March 5, 2020

Source: Wanya Reese, 13WMAZ, <https://www.13wmaz.com/article/news/local/this-is-the-worst-flood-that-ive-seen-since-94-rain-washes-away-roads-in-wilcox-county/93-0883fcc6-1ecd-49d1-b956-564bae569a4d>, March 5, 2020)

The impact of flooding on agriculture could be tremendous considering the 2017 USDA Census of Agriculture identified that Wilcox County had a total of 287 farms, which produced \$98,642,000 in goods in Wilcox County in 2017. A disruption or damage to these products would have a severe impact.

Probability

In the past 23 years (1997-2020), NCDC data has recorded 7 occurrences of flooding. The current chance per year that a flood can occur is 30.43%, as noted in the Hazard Frequency Table (Appendix D, II). Additionally, the annual frequency for the last ten and twenty years are 0.1 and 0.2 respectively. Finally, keeping in mind that the older the data the more incomplete it is, we can see that the annual frequency for the last fifty years is 0.14, with a historical recurrence interval of 3.29 years. Although the weather occurrence data does not allow the planning committee to determine the probability of occurrence for each jurisdiction, the data suggests it is “Highly Likely” to assume that a flood or flash flood event will occur within the next ten years. Owners of structures located in the identified flood zones on the flood zone map (Appendix A:4) will be notified of the flooding potential through efforts to educate citizens addressed in chapter 3 action steps.

| Occurrence Probability in Years | Likelihood of Future Occurrence |
|---------------------------------|---------------------------------|
| 1-10 | “Highly Likely” |
| 10-25 | “Likely” |
| 25-50 | “Unlikely” |
| 50 or greater | “Highly Unlikely” |

C. Inventory of Assets and Potential Losses

Through the use of current FEMA flood maps and housing information obtained from the Wilcox County Tax Assessor’s Office, the determination was made that 1.99% (166) of all structures in the county are within flood zones, as noted on Worksheet 3A (Appendix D, III). Regarding Worksheet 3A: Inventory of Assets: because data broken down by jurisdiction is not consistently available, it was not possible to break down these worksheets by jurisdiction; therefore, they refer to the entire county, including the three Cities of Abbeville, Pineview, Pitts, and Rochelle in this plan. In Wilcox County, there are 4,223 residential structures, 396 commercial structures, 13 industrial structures, 3,341 agricultural structures, 198 religious/non-profit structures, 96 government structures, 16 educational structures, and 29 utility structures.

Of the structures in located in the flood zones; there are 156 residential (3.694%), 4 commercial (1.010%), 3 religious/nonprofit (1.515%), and 3 utility structures (10.345%). There are no known industrial, agricultural, government, or educational facilities located within flood zones. In terms of the number of people residing or working within the flood zones the estimated numbers are as follows: 319 residential (4%), and 5 commercial (1%). Less than 1% of those working in religious/nonprofit and utility structures would be directly affected by a flooding event.

Structures within flood zones is estimated to be \$6,876,549 or 2.849% of the total value of structures in the county. The value of structure within flood zones by category are: \$3,357,897 residential, \$147,827 commercial, \$93,553 religious/nonprofit, and \$3,277,272 utility.

The structure values data is based on the most recent tax assessor information; however, the county is unable to generate values per jurisdiction in Wilcox County. Also, there are no NFIP insured repetitive loss properties in the county. To address specific critical facilities and infrastructure, each facility was examined on an individual basis, entered into the GMIS database per jurisdiction, and located on a Critical Facility Map; both critical facilities and the critical facilities map are located in Appendix A:4.

D. Development Trends

There is little commercial, residential and industrial development in Wilcox County. Between 2010 and 2019 (Census population estimates, Appendix C), Wilcox County experienced a decrease in population from 9,255 to 8,635 or a decrease of 6.7%. According to the Governor’s Office of Planning and Budget, Wilcox County is projected to have a population of 8,778 in 2025 (1.7% increase from 2019 estimates), a population of 8,824 in 2030 (0.52% increase from 2025 projections), and a population of 8,869 (0.5% increase from 2025 projections). For the sixteen-year period (2019-2030), Wilcox County is projected to increase in population by 2.7%. Residential growth is likely to center around Abbeville and Rochelle along the U.S. Highway 280 corridor.

No areas of Wilcox County are expected to see significant land transition from one use to another. The county does work with regional conservation initiatives to preserve certain areas, including the Ocmulgee River Corridor and public fishing areas. The county has no basic zoning of land use regulations for the unincorporated areas. Wilcox County currently contracts with a surveyor to assess floodplain areas of unincorporated Wilcox County. This could influence the type and extent of all forms of development in those areas. This also limits the ability to protect the environmental resources in those areas, which could make them more vulnerable to damage from a flood. However, since flooding is a spatial hazard future land use maps can address the threat of flooding in areas and help reduce the exposure of new development. In contrast, the City of Rochelle has code enforcement and land use regulations. Though it is not great, there is a threat of flooding occurring in portions of the city, the regulations will help in the monitoring and prevention of future damage. Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle will utilize the maps in this plan to locate future structures out of localized flood prone areas if possible.

There exists a need for updated, coordinated, countywide land use planning/subdivision/manufactured housing regulations/increased code enforcement/nuisance ordinances/growth management and implementation. Wilcox County has rudimentary land use regulations, road acceptance/subdivision ordinances, a manufactured home ordinance, and others to address specific issues or nuisances. Abbeville and Rochelle have zoning ordinances and building code enforcement in place and since the last plan update, the City of Pitts adopted a Manufactured Housing Ordinance and the City of Pineview adopted an “Unsafe Buildings and Premises.” Enforcement of these ordinances by city code enforcement will assist in providing oversight that ensures the safety of individuals, businesses, and encourage community-wide priority for structural integrity. Code enforcement in the county is related to solid waste although future plans are for increased inspections and enforcement. These ordinances need updating through coordination and joint collaboration/code enforcement to initiate a more comprehensive approach. (Comprehensive Plan, Appendix B)

While technically only the larger municipalities, Abbeville and Rochelle, are required, because of their zoning ordinance, to have a Land Use element in their comprehensive plan under the Georgia Department

of Community Affairs' planning standards, all local governments in the county have chosen to participate and include the element in the joint comprehensive plan. Existing land use maps visually convey to all concerned the current landscape and correlation of extant development. Future land use maps illustrate to all concerned the community's vision and desires for additional growth and development. Such depictions also lend credence and supporting background information important to understanding and illustrating official local government policy in designating lands unsuitable for solid waste handling facilities in local solid waste management plans. Land use maps do provide official display of community desires and goals for compatible future growth and development. The community's land use maps are, however, a general policy guide and framework, not necessarily a rigid or unchangeable picture of future growth and development. Not all growth or developments can be foreseen, and other events could necessitate a change in community vision or desires. The depicted pattern of desired future growth and development displayed on future land use maps is a current statement and reflection of community expectations and desires. It provides a context, framework and background for the public and private sector to utilize to plan, evaluate, shape, guide, and influence proposed developments and other decisions affecting the use of the land and community growth and development. The plan provides a context for forethought, examination of impacts and consequences, and mitigation of land use decisions on the community's growth and development. Land Use Maps for Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle can be reviewed in Appendix B.

G. Multi-Jurisdictional Concerns

Although the majority of potential flood sources in Wilcox County fall within the unincorporated areas, there are several differences between jurisdictions. Portions of the City of Abbeville and Rochelle fall within a flood zone as indicated on the Flood Map in Appendix A:4. There are several areas within these city's limits and immediately outside the city limits that are considered flood zones. Additionally, in the incorporated areas there is a greater chance that a flood could cause damage to residential, commercial and infrastructure.

In the unincorporated areas of Wilcox County, more areas are prone to flooding because of the lack of drainage, additional bodies of water, and other characteristics that increase the possibility of flooding. Development in these areas is less, with very few structures found within the larger flood zones located in the eastern border of the county. Increased enforcement and implementation of building codes related to flooding and the continuing efforts to improve drainage throughout the county will serve the community well in the event of a hurricane. However, in regard to the possible flooding caused by the heavy rains, the most structural damage is likely to occur within the city limits of Abbeville, Pineview, Pitts, and Rochelle. The unincorporated portions of the county that fall within flood zones are largely undeveloped, therefore there is less possibility of damage occurring.

Wilcox County, Abbeville, Pitts, do not have any floodplain ordinances in place beyond NFIP regulations. The Cities of Rochelle and Pineview do not participate in the NFIP due to decisions made at the discretion of local officials. The current Flood Insurance Rate Map (FIRM) for the entire county, including Abbeville, Rochelle, and Pineview, was adopted on September 20, 1996. The study did not identify any significant flooding in the City of Pitts. Additionally, the Flood Insurance Study (FIS) of the incorporated and unincorporated areas of the county conducted by FEMA in 1996 remains in effect. Portions of study were consulted for the purposes of this plan.

Since the last plan update, Wilcox County applied for FEMA grant funding to purchase generators and for a community safe room. The City of Pitts applied for FEMA grant funding to purchase generators for City Hall, the City Gym, and for two wells located within the city. The City of Pitts also applied for FEMA grant funding to construct a community center; however, the City of Pitts was not awarded this funding. The City of Abbeville has applied for FEMA grant funding to purchase one tornado siren, and six generators to power City Hall, two pumping stations, and two wells within the city. At this time, FEMA grant funding has not been awarded to Wilcox County, the City of Pitts, or the City of Abbeville for these projects. The City of Abbeville has received EPD violation notices for spills related to treatment plant deficiencies, infiltration, and inflow problems since the last plan update; Abbeville is currently seeking grant funds to address water intrusion and treatment capacity in their sewer system. An action step addressing treatment plant deficiencies, infiltration, and inflow problems in the City of Abbeville has been added under the flooding section of Chapter 3 in pursuit of reducing risk from overflows at the wastewater treatment plant and lift stations in Abbeville. No other developments or projects have been achieved to increase or decrease vulnerability to flooding in Wilcox County or the Cities of Abbeville, Pineview, Pitts, and Rochelle.

For Wilcox County, the initial Flood Hazard Boundary Map was issued on September 20, 1996, the initial Flood Insurance Rate Map was identified on August 19, 2010, the Current Effective date of the Flood Insurance Rate Map is August 19, 2010, and Wilcox County joined the NFIP on April 16, 1998. For the City of Pitts, the initial Flood Insurance Rate Map was identified on September 20, 1996, the community joined the NFIP on September 16, 2019, and is considered “not in a special flood hazard area.” For the City of Abbeville, the initial Flood Hazard Boundary Map was issued on February 17, 1978, the initial Flood Insurance Rate Map was identified on September 20, 1996, the Current Effective date of the Flood Insurance Rate Map is August 19, 2010, and Abbeville joined the NFIP on May 26, 1998. The Cities of Rochelle and Pineview are not currently members of the NFIP due to decisions made at the discretion of elected officials.

F. Hazard Summary

Through examination of the updated flood related data and maps the committee has determined that the occurrence of floods remain a threat to the county, including the Cities of Abbeville and Rochelle. Though the potential for property damage is greatest within the incorporated areas of the county, these areas are not as prone to floods as the unincorporated portions of the county. After review of previous flood mitigation action steps proposed in the approved 2015 plan, the committee reported all action steps were ongoing in Wilcox County which will lessen the flooding impact for residents. Through a concerted effort between all municipalities of Wilcox County and the Pre-Disaster Mitigation Planning Committee, measures will be taken when feasible, to ensure that future development is conducted in areas where the threat of flooding is minimal. Through future land use regulations and the implementation of the actions included in this plan overall flood damage should continue to decrease.

SECTION V. SEVERE WINTER WEATHER

A. Identification of Hazard

Winter storms are non-spatial hazards that for Wilcox County bring the threat of freezing rain, extreme cold/wind chill, snow, and ice storms. A heavy accumulation of ice, especially when accompanied by high winds, devastates trees and power lines, which affect structures, and infrastructures. Direct effects to residences and commercial building can include loss of utilities, roof damage and busted water pipes. Additionally, sidewalks, streets, and highways can become extremely hazardous to pedestrians and motorists, resulting in injury or loss of life.

A heavy accumulation of ice, which is often accompanied by high winds, has the ability to devastate infrastructure and vegetation. Often, sidewalks and streets become extremely dangerous to pedestrians and motorists. Primary industries such as farming and fishing suffer losses associated with winters of extreme temperatures and precipitation. In the Southern states, this destructiveness is often amplified due to the lack of preparedness and response measures. Also, the infrastructure is not designed to withstand certain severe weather conditions such as weight build-up from snow and ice.

Severe winter weather is seasonal, with most storms occurring between January and March, with the highest probability of occurrence in February. The rate of onset and duration varies, depending on the weather system driving the storm. Georgia rarely experiences severe winter weather; however, the impacts of the storms substantiate severe winter weather's inclusion in risk assessments for most southern states. (Source: The Georgia Hazard Mitigation Strategy, 2019-2024)

B. Hazard Profile

Location

Since Winter Storms/Severe Winter Weather are non-spatial entities, they have the potential to occur anywhere within Wilcox County. Therefore, all parts of the county could potentially be subject to Winter Storms/Severe Winter Weather; there is no specific area that would necessarily be more likely to have a winter storm.

Extent

The extent of winter storms/severe winter weather in Wilcox County is best measured by viewing the amount of ice, snow, and sleet accumulation, since there is rarely any actual snowfall. Past winter storms have resulted in ice accumulation of up to 1 in. and sleet measuring .25 in. to .5 in. Due to a limited amount of records, it is impossible to completely predict the potential extent of future winter storms.

Recorded severe winter weather events have included frost/freeze, extreme cold/wind chill or cold/wind chill, winter storm, heavy snow, ice storm, and winter weather. No loss of life, injury, property damage, or crop damage has been reported as a result of severe winter weather in Wilcox County. (NCDC, Appendix C)

History

The occurrence of severe winter storms in Wilcox County in the past ten years has posed a minimal threat to the citizens. According to NCDC statistics, from 1996 to 2020 there have been 19 recorded severe winter weather events with two of those events occurring in the last ten years and one occurring since the last plan update. It is important to remember that the NCDC has only recently started recording the number of severe winter weather occurrences at the local level, therefore, the true number of severe winter weather events that have occurred in the past fifty years is unknown.

A notable “heavy snow” event occurred on February 2, 2010, resulting in 2 inches of snow in Wilcox County. A full latitude trough was moving through the eastern United States. An associated area of surface low pressure was moving from the central into the eastern Gulf of Mexico. An Arctic air mass lingered across the eastern U.S. Very cold air aloft and the cold Arctic surface air mass combined with the overrunning Gulf moisture and upper dynamics to produce the most widespread snow observed across north and central Georgia in several years. All 96 counties within the Peachtree City, Georgia forecast area observed measurable snow, indeed a rarity at any time. Average snowfall across most of north and central Georgia was in the two to three-inch range. No deaths, injuries, property damage, or crop damage was reported by NCDC data. (NCDC, Appendix A:5)

An “ice storm” occurred in Wilcox County on January 10, 2011. The Wilcox County 911 Center reported up to 0.50 inch of ice accumulation from freezing rain/freezing drizzle across mainly the north half of the county with 2 inches of snow. A full latitude trough was moving through the eastern United States. An associated area of surface low pressure was moving from the central into the eastern Gulf of Mexico. An Arctic air mass lingered across the eastern U.S. Very cold air aloft and the cold Arctic surface air mass combined with the overrunning Gulf moisture and upper dynamics to produce the most widespread snow observed across north and central Georgia in several years. All 96 counties within the Peachtree City, Georgia forecast area observed measurable snow, indeed a rarity at any time. No deaths, injuries, property damage, or crop damage was reported by NCDC data. (NCDC, Appendix C)

On January 28, 2014, a “winter storm” event occurred in Wilcox County and across central Georgia. A significant winter storm impacted north and central Georgia on January 28, 2014. Snow and sleet began Tuesday evening, accumulating to widespread amounts of 1 to 3 inches of snow, up to a half inch of sleet, and up to a half inch of freezing rain. An arctic front pushed through the Southeast on January 27, 2014, leaving very cold air in its wake. Behind the front, an area of moisture pushed north out of the Gulf on the January 28, 2014, spreading precipitation across north and central Georgia. With the surface cold air in place, the precipitation began as a mix of light sleet and snow across west central Georgia during the mid-morning hours on January 28, 2014, and as the cold air continued to push south, rain across central Georgia changed over to freezing rain, ending as a sleet/snow mix by the evening of January 28, 2014. No deaths, injuries, property damage, or crop damage was reported by NCDC data. (NCDC, Appendix C)

The most recent and only winter storm/winter weather event to occur in Wilcox County since the previous plan update occurred on January 17, 2018. The Wilcox County Emergency Manager reported a light dusting of snow accumulation around Abbeville during this event. A strong surface low and cold front associated with a large and deep upper-level trough, brought light to moderate snow to much of north and central Georgia from the afternoon of the January 16, 2018, through the morning of January 17, 2018. With most of the precipitation post-frontal, temperatures were well below freezing (lower to mid-20s) as

the snow occurred. This resulted in widespread icy and snow-packed roadways across the area, especially those that were not pre-treated by GDOT or Public Works. No deaths, injuries, property damage, or crop damage was reported by NCDC data. No documentation is available to determine the specific amount of snow accumulation during this event. (NCDC, Appendix C)

Even though the frequency of winter storm occurrences is low, the impact from a severe winter storm has the potential to damage numerous properties (buildings, structures, crops, etc.) and endanger the lives of its citizens.

Probability

Since NCDC data shows Wilcox County had 19 winter weather/winter storm occurrences in the last 24 years, the frequency of occurrence per year is projected at 79.17%. Additionally, the annual frequency for the last ten and twenty years are 0.4 and 0.85, respectively. Finally, keeping in mind that the older the data the more incomplete it is, we can see that the annual frequency for the last fifty years is 0.38, with a historical recurrence interval of 1.26 years. Since we know that the full scope of historical occurrence data is incomplete, it is reasonable to project that it is “Highly Likely” a winter storm/winter weather occurrence will happen within the next 5-10 years.

| Occurrence Probability in Years | Likelihood of Future Occurrence |
|--|--|
| 1-10 | “Highly Likely” |
| 10-25 | “Likely” |
| 25-50 | “Unlikely” |
| 50 or greater | “Highly Unlikely” |

C. Inventory of Assets and Potential Losses

The total percentage of the number of structures that are exposed to the non-spatial threat of severe winter weather in Wilcox County is 100% as noted on Worksheet 3A (Appendix D, III). In Worksheet 3A: Inventory of Assets (appearing in Appendix A and D, III), we estimate that all of Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle are equally vulnerable to this hazard. Because data broken down by jurisdiction is not consistently available, it was not possible to break down these worksheets by jurisdiction; therefore, they refer to the entire county, including the three Cities of Abbeville, Pineview, Pitts, and Rochelle in this plan. The potential damage by a winter storm in Wilcox County is difficult to estimate due to several factors, most importantly the severity and duration of the storm. The characteristics of the event, such as whether it involves a large amount of ice, freezing rain or low temperatures, will influence the extent of damage caused.

In Wilcox County, there are 4,223 residential structures, 396 commercial structures, 13 industrial structures, 3,341 agricultural structures, 198 religious/non-profit structures, 96 government structures, 16 educational structures, and 29 utility structures. All of these structures are equally exposed to severe winter weather. To address specific critical facilities and infrastructure, each facility was examined on an individual basis, entered into the GMIS database, and located on a Wilcox County Critical Facilities Map, which is located in Appendix A:5. The GMIS Wind Hazard Report assigned a wind hazard scores to each of the 102 critical facilities with 99 facilities receiving a score of “2” and 3 facilities receiving a score

of “0.” All of these structures are equally exposed to severe winter weather.

The total built structures, including critical facilities, of Wilcox County have an estimated replacement value of \$241,368,409. The total value of all residential structures in Wilcox County is \$90,899,998. The value of commercial structures in Wilcox County is \$14,634,920. Industrial facilities in Wilcox County have a value of \$9,495,775. The value of agricultural structures in Wilcox County is \$50,084,350. Religious/non-profit structures in Wilcox County are valued at \$6,174,485. Government facilities in Wilcox County are valued at \$6,087,393. Educational facilities in Wilcox County are valued at \$32,311,193. Finally, the value of utility structures in Wilcox County is \$31,680,295. At this time there are no known future buildings, infrastructure, or critical facilities to be located in the county requiring special mitigation strategies. Additionally, all 8,635 residents of Wilcox County and 1,104 employees working in Wilcox County could be affected by a severe winter weather.

In addition to the potential damage to structures and crop damage as a result of a severe winter weather event could have a severe impact upon the county’s local economy and food supply. According to the 2017 USDA Census of Agriculture report (Appendix C), Wilcox County had 287 farms with 90,704 acres of farmland and crop sales totaling \$98,642,000.

D. Development Trends

A review of the comprehensive plan illustrates that the county currently has no land use or development trends specifically related to a severe winter weather event. There is little commercial, residential and industrial development in Wilcox County. Between 2010 and 2019 (Census population estimates, Appendix C), Wilcox County experienced a decrease in population from 9,255 to 8,635 or a decrease of 6.7%. According to the Governor’s Office of Planning and Budget, Wilcox County is projected to have a population of 8,778 in 2025 (1.7% increase from 2019 estimates), a population of 8,824 in 2030 (0.52% increase from 2025 projections), and a population of 8,869 (0.5% increase from 2025 projections). For the sixteen-year period (2019-2030), Wilcox County is projected to increase in population by 2.7%. Future land use maps cannot address the threat of natural non-spatial occurrences such as severe winter weather events. Therefore, there is no way to tell whether new development is in a hazard prone area since all areas are equally vulnerable. In the future, each citizen and any number of structures (commercial, industrial, public/institutional, residential), critical facilities, and infrastructure, in any part of the county, could potentially be damaged by a severe winter weather event.

There exists a need for updated, coordinated, countywide land use planning/subdivision/manufactured housing regulations/increased code enforcement/nuisance ordinances/growth management and implementation. Wilcox County has rudimentary land use regulations, road acceptance/subdivision ordinances, a manufactured home ordinance, and others to address specific issues or nuisances. Abbeville and Rochelle have zoning ordinances and building code enforcement in place and since the last plan update, the City of Pitts adopted a Manufactured Housing Ordinance and the City of Pineview adopted an “Unsafe Buildings and Premises.” Enforcement of these ordinances by city code enforcement will assist in providing oversight that ensures the safety of individuals, businesses, and encourage community-wide priority for structural integrity. Code enforcement in the county is related to solid waste although future plans are for increased inspections and enforcement. These ordinances need updating through

coordination and joint collaboration/code enforcement to initiate a more comprehensive approach. (Comprehensive Plan, Appendix B)

While technically only the larger municipalities, Abbeville and Rochelle, are required, because of their zoning ordinance, to have a Land Use element in their comprehensive plan under the Georgia Department of Community Affairs' planning standards, all local governments in the county have chosen to participate and include the element in the joint comprehensive plan. Existing land use maps visually convey to all concerned the current landscape and correlation of extant development. Future land use maps illustrate to all concerned the community's vision and desires for additional growth and development. Such depictions also lend credence and supporting background information important to understanding and illustrating official local government policy in designating lands unsuitable for solid waste handling facilities in local solid waste management plans. Land use maps do provide official display of community desires and goals for compatible future growth and development. The community's land use maps are, however, a general policy guide and framework, not necessarily a rigid or unchangeable picture of future growth and development. Not all growth or developments can be foreseen, and other events could necessitate a change in community vision or desires. The depicted pattern of desired future growth and development displayed on future land use maps is a current statement and reflection of community expectations and desires. It provides a context, framework and background for the public and private sector to utilize to plan, evaluate, shape, guide, and influence proposed developments and other decisions affecting the use of the land and community growth and development. The plan provides a context for forethought, examination of impacts and consequences, and mitigation of land use decisions on the community's growth and development. Land Use Maps for Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle can be reviewed in Appendix B.

E. Multi-Jurisdictional Concerns

In the incorporated and unincorporated areas of Wilcox County (including Abbeville, Rochelle, Pineview, and Pitts), the threat of natural non-spatial occurrences including severe winter storms is equally applicable. All areas of the county are susceptible to non-spatial threats. There is not a specific map for this hazard. Therefore, any mitigation steps taken related to winter storms should be applied to the entire county, including the Cities of Abbeville, Pineview, Pitts, and Rochelle.

Since the last plan update, Wilcox County applied for FEMA grant funding to purchase generators and for a community safe room. The City of Pitts applied for FEMA grant funding to purchase generators for City Hall, the City Gym, and for two wells located within the city. The City of Pitts also applied for FEMA grant funding to construct a community center; however, the City of Pitts was not awarded this funding. The City of Abbeville has applied for FEMA grant funding to purchase one tornado siren, and six generators to power City Hall, two pumping stations, and two wells within the city. At this time, FEMA grant funding has not been awarded to Wilcox County, the City of Pitts, or the City of Abbeville for these projects. No other developments or projects have been achieved to increase or decrease vulnerability to flooding in Wilcox County or the Cities of Abbeville, Pineview, Pitts, and Rochelle.

All areas of the county are susceptible to non-spatial threats. However, the amount of damage caused by severe winter weather occurring within the city limits would most likely be greater than one that occurs in the unincorporated area, due to the differences in amount of development and population density.

F. Hazard Summary

In the past 24 years, 19 winter weather/winter storm events have been recorded in Wilcox County. Severe winter weather in Wilcox County, though low in occurrence, can cause a significant amount of property damage and pose a threat to personal safety. Ice and freezing rain can damage infrastructure, while also making roads hazardous. They have the potential of occurring anytime during the winter months and are equally hazardous for all portions of the county. The amount of damage that they cause is dependent upon the extent and severity of the hazard. The mitigation action steps that have been included in this document are focused upon reducing the impact that a winter storm would cause to the property and residents of Wilcox County.

The committee reviewed previous winter storm mitigation action steps proposed in the approved 2015 plan and determined no significant mitigation actions were completed since the plan adoption. It was further determined by the committee that no significant developments have taken place which would positively or negatively impact potential exposure to winter weather/winter storm events. However, Wilcox County and jurisdictions within have pursued projects that would positively impact potential exposure to winter weather/winter storm events. The completion of mitigation action steps included in this document are focused on reducing the impact a winter weather/winter storm event would cause to the property owners and residents of Wilcox County.

SECTION IV. WILDFIRE

A. Identification of Hazard

A wildfire is an uncontrolled fire spreading through vegetative fuels, exposing and possibly consuming structures. Wildfires often begin unnoticed and spread quickly and are usually signaled by dense smoke that fills the area for miles. Naturally occurring and non-native species of grasses, brush and trees fuel wildfires. Historic data have been examined from various sources, including the National Climatic Data Center and Georgia Forestry Commission (see Appendix C), as well as from local history and personal accounts, in order to determine the frequency of events.

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

Low humidity, lack of recent precipitation (or drought conditions), wind speed, lightning strikes, and temperature are a combination of weather conditions that favor the kindling and spread of wildfires. A high fuel load (i.e., the accumulation of dead vegetation), in combination with the above, also provides for the kindling and spread of wildfires. A combination of available fuel, weather, and topography work together to determine when a wildfire will ignite, how quickly it will travel and the intensity of the fire. Communities with a large amount of wooded or grassy areas are at greater risk. Sixty-seven percent of Wilcox County, including some areas near the Cities, is forested. With the exception of the large block of woodlands along the Altamaha River, there are homes and communities scattered throughout the county. The risks and hazards from the wildland urban interface are fairly general and substantial throughout the county even on the edges of the two major population centers of Vidalia and Lyons.

These factors are also relevant in consideration of wildfires occurring as a result of human interaction with the environment, including campfires, cigarettes, debris burning, etc. According to NASA (<https://earthobservatory.nasa.gov/IOTD/view.php?id=89757>), an estimated 84 percent of wildfires are caused by humans. Some common ways that people start fires include discarding cigarettes, leaving campfires unattended, and losing control of prescribed burns or crop fires. Sparks from railroads and power lines, as well as arson, also routinely cause wildfires.

When a residential area, whether it be a single home or an entire subdivision, is adjacent to an area containing vegetative fuels, such as a forest or other wooded area, this is referred to as a Wildland-Urban Interface area (WUI). A wildland-urban interface is an area where structures and other human development meet or intermingles with undeveloped wildland or vegetative fuels. These are the areas at greatest risk for property damage due to Wildfire.

There are three major categories of wildland-urban interface. First, boundary wildland-urban interface is characterized by areas of development where homes, especially new subdivisions, press against public and private wildlands, such as commercial forests or public parks. Second, intermix wildland-urban interface occurs in areas where improved property and/or structures are scattered and interspersed in wildland areas. Finally, island wildland-urban interface, also known as occluded interface, is an area of wildland within predominantly urban or suburban areas.

B. Hazard Profile

Location

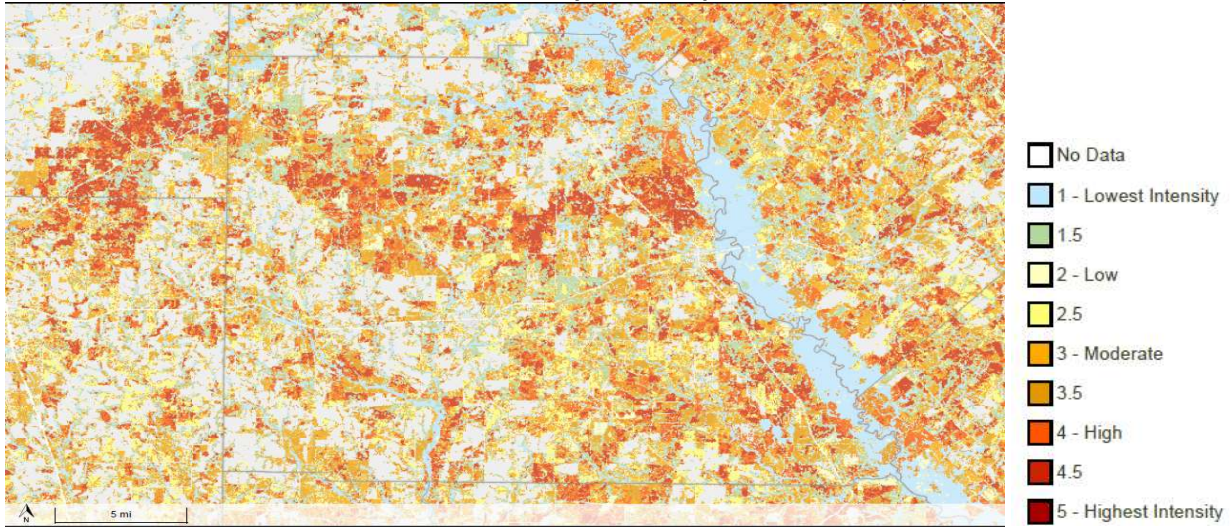
Due to the large amount of wooded and undeveloped land in Wilcox County wildfires have the potential to occur almost anywhere in the county outside of the city limits of Abbeville, Rochelle, Pitts, or Pineview. Though there is the potential for a wildfire to spread into the city limits, the highest area of concern fall in the unincorporated portions. In the unincorporated areas of Wilcox County, the fuel load is moderate or in many places heavy, especially in the north and eastern portions of the county which is heavily forested along the Ocmulgee River. These fuel load areas significantly increase the threat of wildfires. Maps depicting Burn Probability, Community Protection Zones, Wildfire Ignition Density, Wildland Urban Interface (WUI), and Wildland Urban Interface Risk Index can be found in Appendix A:6.

Extent

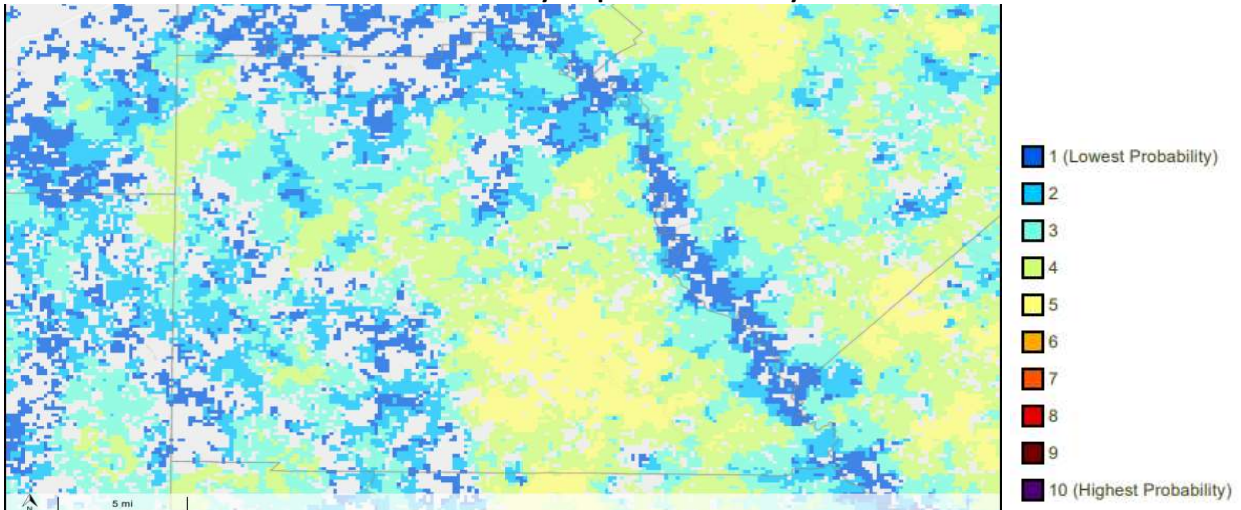
The 2016 Wilcox County Community Wildfire Protection Plan (CWPP) is the most recent wildfire plan available for Wilcox County. The 2016 Wilcox County CWPP provides the number of fires and fires per type of occurrence per year in Wilcox County for each year from 2005-2016 and the average number of fires per year over the past 60 years (1956-2016). Information is not available for the intensity of any specific, individual fire occurrence and number of fires and acreage burned is not available in specific totals for years 1956 to 2004. According to the 2016 Wilcox County CWPP, historical data over the last 60 years (1956-2016) shows that Wilcox County has averaged about 64 wildfires burning 463 acres annually. Debris burning has been the primary cause accounting for 45% of these wildfires. The secondary cause is arson accounting for 20% and the third major cause is machine use accounting for 10%. These numbers are very consistent with State averages over the same period. The 2016 fiscal year (July 2015 – June 2016) had above average rainfall resulting in record setting low wildfire occurrence across many parts of the State. Wilcox County had a near record low with only 13 wildfires during the year burning about 209 acres.

Measuring extent of wildfire occurrences in Wilcox County can be observed in County acres categorized by the Characteristic Fire Intensity Scale. (2016 Wilcox CWPP, Appendix C) This data shows areas where fires would be the most intense when available fuel and potential fire behavior are factored together. The Burn Probability data is the result of modeling different scenarios with parameters that include the available fuel, terrain, weather conditions and historical fires. This map uses the parameters to show the likelihood of an area to burn. A Burn Probability Map and Characteristic Fire Intensity Scale Map are located in Appendix A:6.

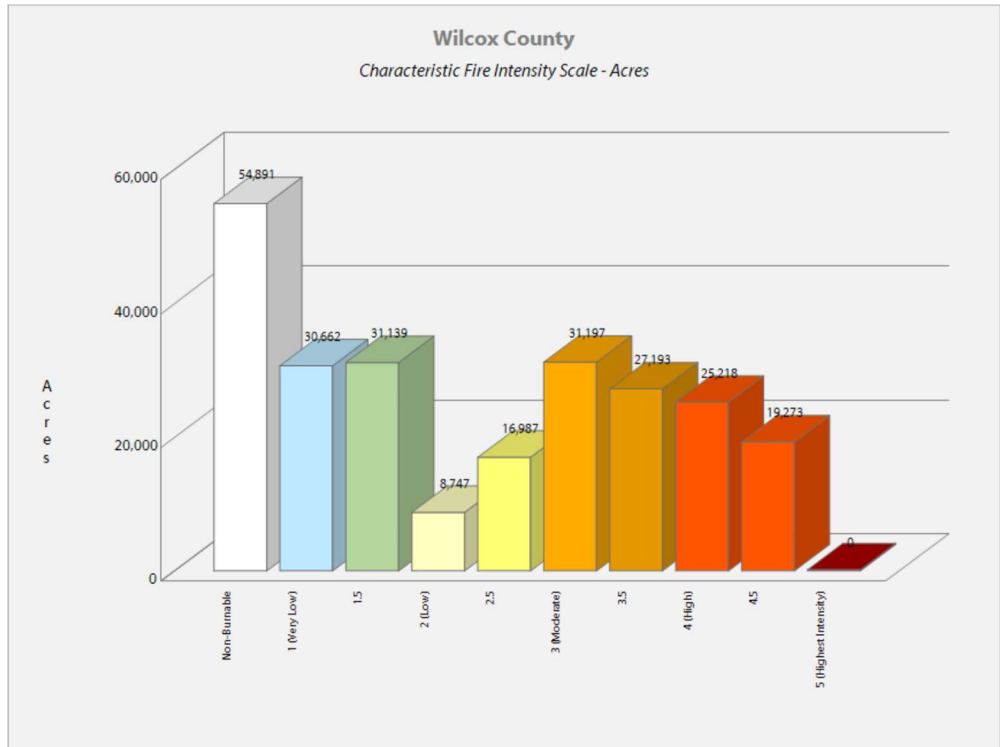
Characteristic Fire Intensity Scale Map – Wilcox County Below



Burn Probability Map - Wilcox County Below



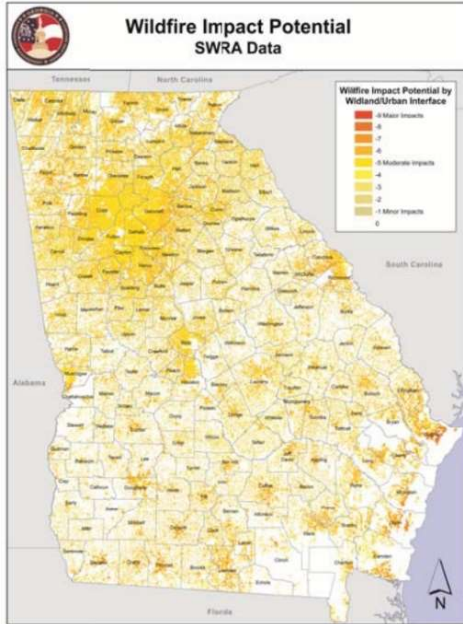
A Characteristic Fire Intensity Scale Map and a Wildfire Ignition Density Map for Wilcox County (Appendix A:6) as well as graphs included in the CWPP (Appendix C) provide a magnitude of intensity of a possible wildfire event in Wilcox County. Characteristic Fire Intensity is measured in intensity levels from 1 to 5 with level 1 representing “very low” intensity, level 2 representing “low” intensity, level 3 representing “moderate” intensity, level 4 representing “high” intensity, and level 5 representing “highest intensity.” Acreage not categorized in levels of fire intensity of 1 to 5 is categorized as “non-burnable” or less than the “very low” fire intensity of level 1. The Characteristic Fire Intensity Map and graph (to follow) identifies that most of the land acreage in Wilcox County (61,801 acres) is categorized as “very low” (1.0-1.5). Other categories of wildfire intensity in Wilcox County (in descending order of impacted acres) are: 54,891 acres are characterized “non-burnable” (0), 58,390 acres are characterized as “moderate” (3-3.5), 44,491 acres are characterized “high” wildfire intensity (4.0-4.5), 25,734 acres are characterized “low” wildfire intensity (2.0-2.5), and 0 acres are characterized as “highest” wildfire intensity (5.0). (Characteristic Fire Intensity Map, Appendix A:6, 2016 Wilcox CWPP, Appendix C)



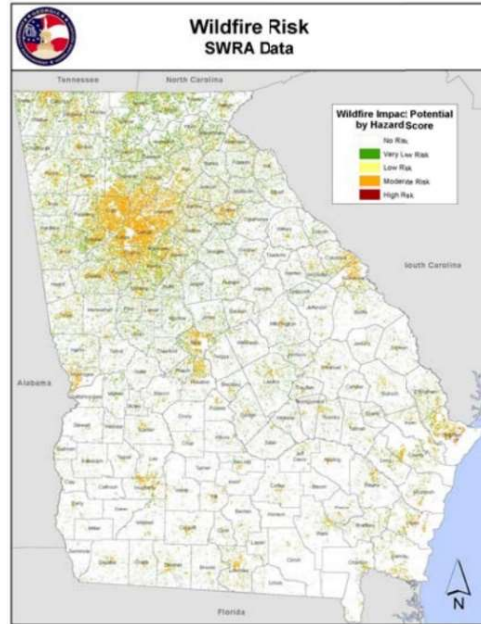
Another measurement of wildfire extent is total acres burned. This illustrates the amount of area the wildfire encompassed and provides the opportunity to compare one event to another. According to the 2016 Wilcox County CWPP, from 2005-2016 Wilcox County experienced 631 wildfire occurrences, burning an average of 200 acres from years 2005-2015.

The 2019 Georgia Hazard Mitigation Strategy Plan states that wildfires that cause the greatest loss of life and property are those located in the Wildland-Urban Interface (WUI). WUI has been defined in many ways, but from a fire management perspective, it is commonly considered an area where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels. Wildfires are dependent on a certain set of conditions, including type of vegetation, building construction, accessibility, lot size, topography, and other factors such as communities more vulnerable to wildfire damage than others. This “set of conditions” method is perhaps the best way to define wildland-urban interface areas when planning for wildfire prevention, mitigation, and protection activities.

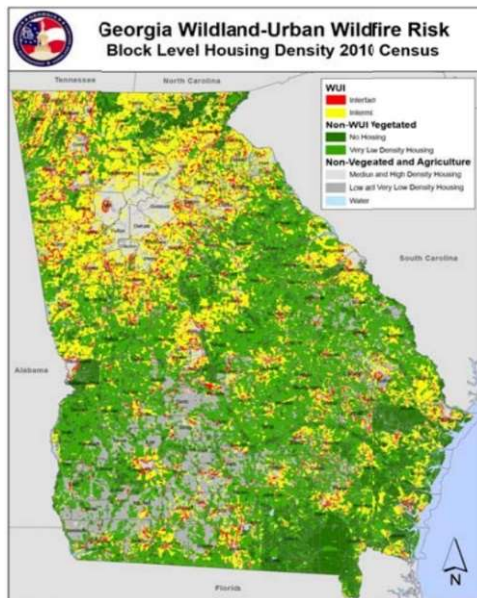
Below Left: Wildfire Impact Potential Map, Source: 2019 Georgia Hazard Mitigation Strategy Plan



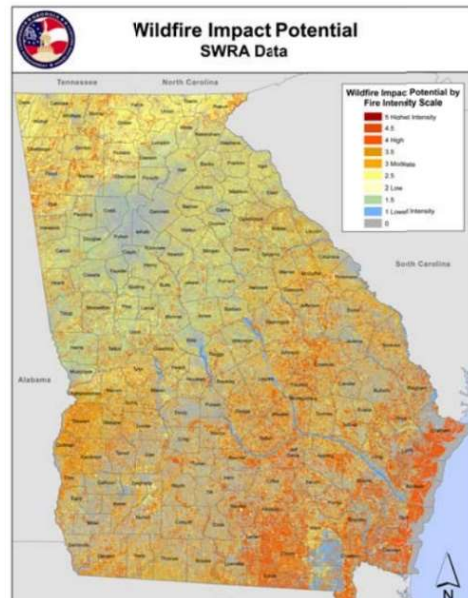
Below Right: Georgia Wildfire Risk Level Map, Source: 2019 Georgia Hazard Mitigation Strategy Plan



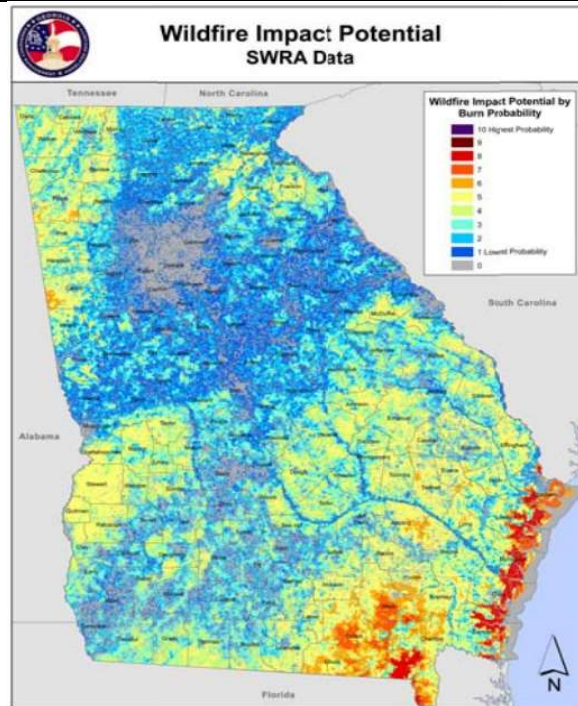
Below Left: Location of WUI Areas in Georgia Map, Source: 2019 Georgia Hazard Mitigation Strategy Plan



Below Right: Georgia Fire Intensity Scale Map, Source: 2019 Georgia Hazard Mitigation Strategy Plan



Below: Wildfire Burn Probability Map, Source: 2019 Georgia Hazard Mitigation Strategy Plan



The Wildland-Urban Interface

There are many definitions of the Wildland-Urban Interface (WUI), however from a fire management perspective it is commonly defined as an area where structures and other human development meet or intermingles with undeveloped wildland or vegetative fuels. As fire is dependent on a certain set of conditions, the National Wildfire Coordinating Group has defined the wildland-urban interface as a set of conditions that exists in or near areas of wildland fuels, regardless of ownership. This set of conditions includes type of vegetation, building construction, accessibility, lot size, topography and other factors such as weather and humidity. When these conditions are present in certain combinations, they make some communities more vulnerable to wildfire damage than others. This “set of conditions” method is perhaps the best way to define wildland-urban interface areas when planning for wildfire prevention, mitigation, and protection activities.

There are three major categories of wildland-urban interface. Depending on the set of conditions present, any of these areas may be at risk from wildfire. A wildfire risk assessment can determine the level of risk. First, boundary wildland-urban interface is characterized by areas of development where homes, especially new subdivisions, press against public and private wildlands, such as commercial forests or public parks. Second, intermix wildland-urban interface occurs in areas where improved property and/or structures are scattered and interspersed in wildland areas. Finally, island wildland-urban interface, also known as occluded interface, is an area of wildland within predominantly urban or suburban areas.

1. **“Boundary”** wildland-urban interface is characterized by areas of development where homes, especially new subdivisions, press against public and private wildlands, such as private or commercial

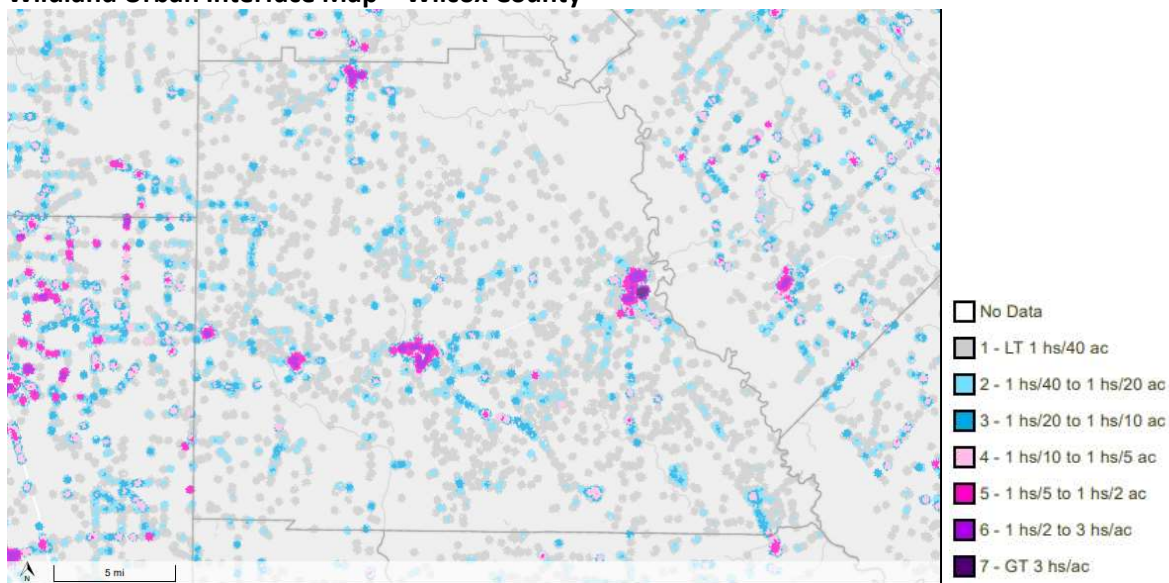
forest land or public forests or parks. This is the classic type of wildland-urban interface, with a clearly defined boundary between the suburban fringe and the rural countryside.

2. **“Intermix”** wildland-urban interface areas are places where improved property and/or structures are scattered and interspersed in wildland areas. These may be isolated rural homes or an area that is just beginning to go through the transition from rural to urban land use.

3. **“Island”** wildland-urban interface, also called occluded interface, are areas of wildland within predominately urban or suburban areas. As cities or subdivisions grow, islands of undeveloped land may remain, creating remnant forests. Sometimes these remnants exist as parks, or as land that cannot be developed due to site limitations, such as wetlands.

When a residential area, whether it be a single home or an entire subdivision, is adjacent to an area containing vegetative fuels, such as a forest or other wooded area, this is referred to as a Wildland-Urban Interface area (WUI). A wildland-urban interface is an area where structures and other human development meet or intermingles with undeveloped wildland or vegetative fuels. These are the areas at greatest risk for property damage due to Wildfire. In Wilcox County, the Cities of Rochelle, Pitts, and Pineview, are levels “5” and “6” with housing densities of one house every 2 to 5 acres; the City of Abbeville exhibits levels “5,” “6,” and “7” with housing densities of one house every 2 to 5 acres and up to 3 houses per acre in some portions. Unincorporated areas mapped in Wilcox offer varying degrees of “no data” to levels “1” and “2” with housing densities of one house every 20 to 40 acres. (Appendix A:6)

Wildland Urban Interface Map – Wilcox County



The Southern Group of State Foresters provides fire risk assessment maps through their Wildfire Risk Assessment Portal. Areas of fire susceptibility, occurrence, and level of concern in Wilcox County are depicted through the Characteristic Fire Intensity Scale Map, the Wildland Urban Interface Map, the Community Protection Zones Map, the Wildfire Ignition Density Map, and the Wildland Urban Interface Risk Index Map. The Characteristic Fire Intensity Scale specifically identifies areas where significant fuel

hazards and associated dangerous fire behavior potential exist based on weighted average of four percentile weather categories. The Wildland Urban Interface (WUI) Map reflects housing density depicting where humans and their structures meet or intermix with wildland fuels. Areas represented in the Community Protection Zones Map represent the highest priority for mitigation planning activities. The Wildfire Ignition Density Map depicts the likelihood of a wildfire igniting in an area. The Wildfire Urban Interface Risk Index Map depicts rating of potential impact of a wildfire on people and their homes. Each of the above-mentioned maps may be found in Appendix A:6. Additionally, refer to the 2016 Wilcox County Commission Community Wildfire Protection Plan in Appendix C for additional information on the location.

A Community Wildfire Risk Assessment was conducted for Wilcox County and described in the 2016 Wilcox County CWPP. Several community assessments were conducted by the Georgia Forestry Commission. Chief Ranger Michael Bloodworth and Wildfire Prevention Specialist Beryl Budd completed the standard GFC Community Wildfire Risk assessment instrument. This instrument takes into consideration accessibility, vegetation (based on fuel models), roofing assembly, building construction, and availability of fire protection resources, placement of gas and electric utilities, and additional rating factors. The following factors contributed to the wildfire hazard score for the higher risk communities and developments in Wilcox County:

- Dead end roads with inadequate turn arounds
- Narrow roads without drivable shoulders
- Long, narrow, and poorly labeled driveways
- Limited street signs and homes not clearly addressed
- Thick, highly flammable vegetation surrounding many homes
- Minimal defensible space around structures
- Homes with wooden siding and roofs with accumulations of vegetative debris
- No pressurized or non-pressurized water systems available
- Above ground utilities
- Large, adjacent areas of forest or wildlands
- Heavy fuel buildups in adjacent wildlands
- Undeveloped lots
- High occurrence of wildfires in several locations
- Distance from fire stations
- Lack of homeowner or community organizations
-

Wildfire Risk (rating scale)

Low Risk: Total Wildfire Risk Rating is 0 - 75 points:

The chances of your home surviving a wildfire are GOOD. Little is needed to improve your situation.

Moderate Risk: Total Wildfire Risk Rating is 76 - 130 points:

The chances of your home surviving a wildfire are FAIR. Some Minor improvements will make your home more fire resistant.

High Risk: Total Wildfire Risk Rating is Over 130 points:

Your home is at risk and improvements are necessary to reduce risk!

Extreme Risk: Total Wildfire Risk Rating is Over 140 points:

The areas listed in the table below were evaluated using the GFC Community Hazard Risk Assessment. The rating scale on the preceding page is used to determine score and hazard risk.

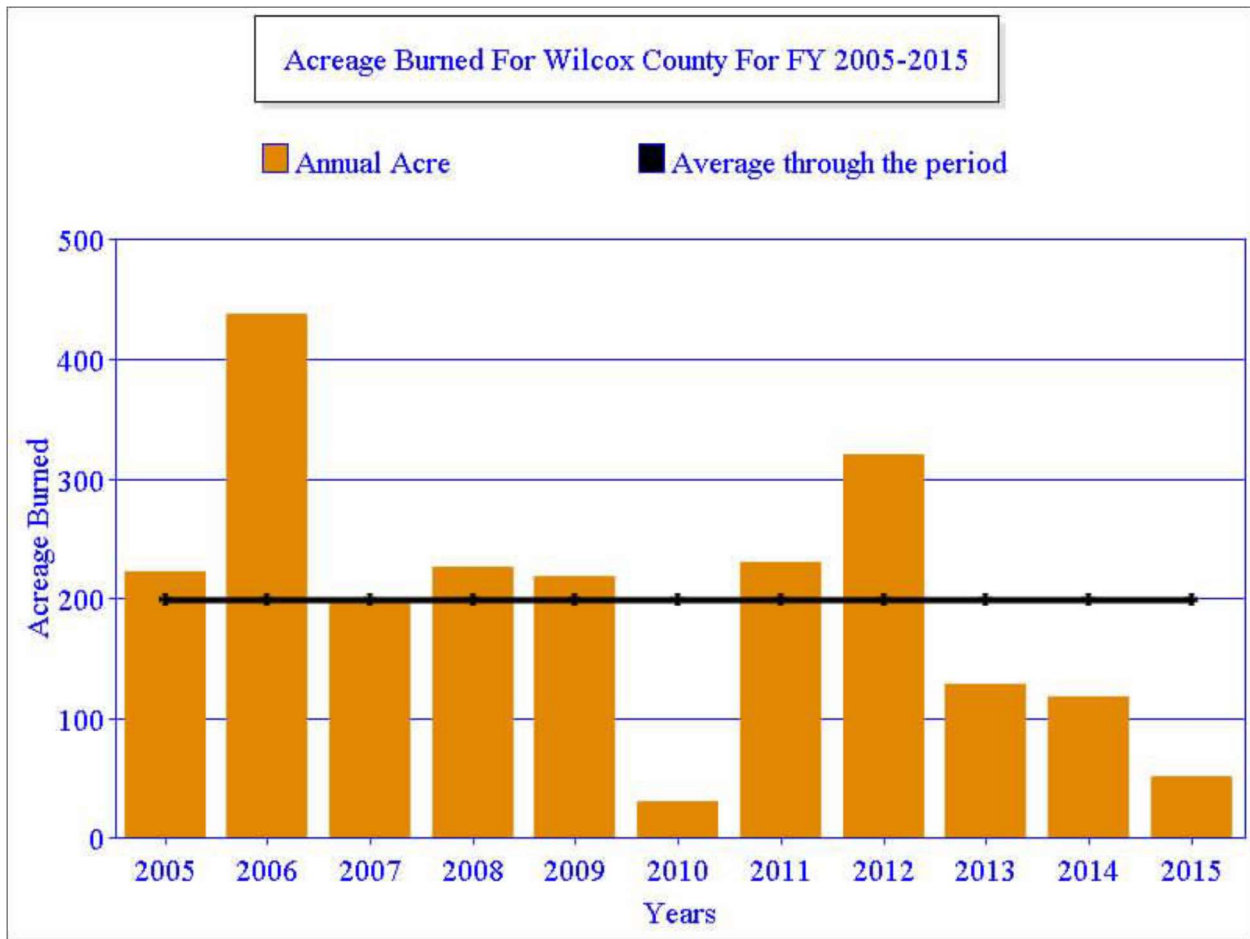
| Subdivision Development Area | # Lots | Fire Zone | Wildfire Hazard Rating |
|---|---------------|------------------|-------------------------------|
| Statham Shoals Community | 30 | Abbeville VFD | 171 Extreme |
| Seville Community | 50 | Pitts VFD | 166 Extreme |
| Bowens Mill Community | 40 | Abbeville VFD | 132 High |
| Five Points Community | 12 | Pineview VFD | 122 Moderate |
| Owensboro Community | 60 | Rochelle VFD | 109 Moderate |
| Cedar Creek Community | 12 | Cedar Creek VFD | 90 Moderate |

All communities receiving a wildfire hazard rating were located in unincorporated communities in Wilcox County.

History

As stated previously, the 2016 Wilcox County Community Wildfire Protection Plan (CWPP) is the most recent wildfire plan available for Wilcox County. The 2016 Wilcox County CWPP provides the number of fires and fires per type of occurrence per year in Wilcox County for each year from 2005-2016 and the average number of fires per year over the past 60 years (1956-2016). Information is not available for the intensity of any specific, individual fire occurrence and number of fires and acreage burned is not available in specific totals for years 1956 to 2004. According to the 2016 Wilcox County CWPP, historical data over the last 60 years (1956-2016) shows that Wilcox County has averaged about 64 wildfires burning 463 acres annually. Debris burning has been the primary cause accounting for 45% of these wildfires. The secondary cause is arson accounting for 20% and the third major cause is machine use accounting for 10%. These numbers are very consistent with State averages over the same period. The 2016 fiscal year (July 2015 – June 2016) had above average rainfall resulting in record setting low wildfire occurrence across many parts of the State. Wilcox County had a near record low with only 13 wildfires during the year burning about 209 acres.

From 2005-2016 Wilcox County experienced 631 wildfire occurrences, burning an average of 200 acres from years 2005-2015. Specific number of acres burned for years 2005-2015 is not provided in the CWPP, however, the number of acres burned in 2006 and 2012 were years that exhibited the highest number of acres burned according to the “Acreage Burned for Wilcox County for FY2005-2015” graph (included below). (2016 Wilcox CWPP, Appendix C) In 2006, acres burned surpassed 400 acres and in 2012 over 300 acres were burned as a result of wildfire occurrences. From 2005 to 2016, Wilcox County experienced 631 wildfire events with an average of 200 acres burned per year. The 2016 Wilcox County CWPP only documents wildfire occurrences in the years 2015-2016 since the last plan update. Since the last plan update, Wilcox County has experienced 40 wildfire occurrences, burning approximately 259.22 acres from the years 2015-2016., which averages to (approximately) 41 wildfire occurrences, and 154 acres burned annually. As stated previously, over the last 60 years (1956-2016), Wilcox County has averaged about 64 wildfires burning 463 acres annually. Debris burning has been the primary cause accounting for 45% of these wildfires. The secondary cause is arson accounting for 20% and the third major cause is machine use accounting for 10%. These numbers are very consistent with State averages over the same period. (2016 Wilcox CWPP, Appendix C) No personal accounts or additional local documentation was available for in reference to any specific wildfire event.



Probability

The historic frequency chance of wildfire occurrence per year is projected at 5736.36%. Additionally, the annual frequency for the last ten and twenty years are estimated at 28.6 and 31.55, respectively. Finally, keeping in mind that the older the data the more incomplete it is, we can see that the annual frequency for the last fifty years is 12.62, with a historical recurrence interval of 0.02 years. The probability of wildfire occurrence is “Highly Likely” that a wildfire event will occur again in the next 5 to 10 years. As mentioned, the data for wildfire occurrences from 1956 to 2004 is limited. Probability assessments were made on the exact number of fires recorded from 2005 to 2016. (2016 Wilcox County CWPP, Appendix C)

| Occurrence Probability in Years | Likelihood of Future Occurrence |
|---------------------------------|---------------------------------|
| 1-10 | “Highly Likely” |
| 10-25 | “Likely” |
| 25-50 | “Unlikely” |
| 50 or greater | “Highly Unlikely” |

C. Inventory of Assets and Potential Losses

Through housing formation obtained from the Wilcox County Tax Assessor, the determination was made that 48.845% (4,060) of all structures in the County are within the wildfire hazard area, as noted on Worksheet 3A (Appendix D, III). In Worksheet 3A: Inventory of Assets (appearing in Appendix A:6 and D: III), we estimate that all of Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle are equally vulnerable to this hazard. Because data broken down by jurisdiction is not consistently available, it was not possible to break down these worksheets by jurisdiction; therefore, the worksheets refer to the entire county, including the five municipalities located within Wilcox County, in this plan.

Of the structures located in the wildfire zones; there are 2,140 residential (50.675%), 68 commercial (17.172%), 1,805 agricultural (54.026%), 14 religious/non-profit (7.071%), 6 government (6.250%), and 27 utility (93.103%) There are no known education or industrial facilities within wildfire zones. In terms of the number of people residing or working within the wildfire zones, the estimated numbers are as follows: 4,376 residential, 82 commercial, 23 agricultural, 35 government, and 4 education. There are zero people located in education, utility, and industrial sectors, working in wildfire zones. (GEMA Worksheet 3A, Appendix D: III)

The total value of all structures within the wildfire zones is estimated to be \$105,947,458 or 43.895% of the total value of structures in the county. The value of structure within the wildfire hazard area by category are \$46,063,461 residential, \$2,513,067 commercial, \$27,058,441 agricultural, \$436,580 religious/non-profit, \$380,462 government, and \$29,495,447 utility. To address specific critical facilities and infrastructure, each facility was examined on an individual basis, entered into the GMIS database and located on the Wilcox County Critical Facility map in Appendix A:6.

Of Wilcox County's 102 critical facilities, seven received a hazard score of "0," 10 received a hazard score of "1," nine received a hazard score of "2," seventy-five received a hazard score of "3," and one received a hazard score of "4."

For an estimate of potential losses due to wildfire it seems also appropriate to focus upon agriculture. In the most recent 2017 Census of Agriculture, Wilcox County had a total of 287 farms, with 90,704 acres of farmland in use. (Appendix C). The total market value of products sold in 2017 was \$98,642,000.

D. Development Trends

There are several development trends that are related to wildfire occurrence and loss vulnerability. Any residential development occurring in has primarily been located in its unincorporated areas. These houses are being built within the wild land urban interface and increase the risk of a wildfire resulting in property damage or loss of life. The Georgia Forestry Commission has directly identified several communities within the county that contributed to the county being awarded a "high risk" hazard range on the "Hazard and Wildfire Risk Assessment Checklist". These communities share characteristics that make them high risk areas; narrow/dead end roads, limited street signs, thick forest and flammable vegetation surrounding homes, large distance from fire stations, wood siding homes, undeveloped lots and non-pressurized water systems. Growth in these current communities or the development of other similar communities in the county increases the risk of wildfire occurrence and property. However, since the adoption of the last

Hazard Mitigation Plan in 2015 there has been a concerted effort by the local Georgia Forestry Commission office and the county fire departments to educate citizens on wildfire issues, in order to help offset the risk posed by additional development.

Between 2010 and 2019 (Census population estimates, Appendix C), Wilcox County experienced a decrease in population from 9,255 to 8,635 or a decrease of 6.7%. According to the Governor's Office of Planning and Budget, Wilcox County is projected to have a population of 8,778 in 2025 (1.7% increase from 2019 estimates), a population of 8,824 in 2030 (0.52% increase from 2025 projections), and a population of 8,869 (0.5% increase from 2025 projections). For the sixteen-year period (2019-2030), Wilcox County is projected to increase in population by 2.7%.

There exists a need for updated, coordinated, countywide land use planning/subdivision/manufactured housing regulations/increased code enforcement/nuisance ordinances/growth management and implementation. Wilcox County has rudimentary land use regulations, road acceptance/subdivision ordinances, a manufactured home ordinance, and others to address specific issues or nuisances. Abbeville and Rochelle have zoning ordinances and building code enforcement in place and since the last plan update, the City of Pitts adopted a Manufactured Housing Ordinance and the City of Pineview adopted an "Unsafe Buildings and Premises." Enforcement of these ordinances by city code enforcement will assist in providing oversight that ensures the safety of individuals, businesses, and encourage community-wide priority for structural integrity. Code enforcement in the county is related to solid waste although future plans are for increased inspections and enforcement. These ordinances need updating through coordination and joint collaboration/code enforcement to initiate a more comprehensive approach. (Comprehensive Plan, Appendix B)

While technically only the larger municipalities, Abbeville and Rochelle, are required, because of their zoning ordinance, to have a Land Use element in their comprehensive plan under the Georgia Department of Community Affairs' planning standards, all local governments in the county have chosen to participate and include the element in the joint comprehensive plan. Existing land use maps visually convey to all concerned the current landscape and correlation of extant development. Future land use maps illustrate to all concerned the community's vision and desires for additional growth and development. Such depictions also lend credence and supporting background information important to understanding and illustrating official local government policy in designating lands unsuitable for solid waste handling facilities in local solid waste management plans. Land use maps do provide official display of community desires and goals for compatible future growth and development. The community's land use maps are, however, a general policy guide and framework, not necessarily a rigid or unchangeable picture of future growth and development. Not all growth or developments can be foreseen, and other events could necessitate a change in community vision or desires. The depicted pattern of desired future growth and development displayed on future land use maps is a current statement and reflection of community expectations and desires. It provides a context, framework and background for the public and private sector to utilize to plan, evaluate, shape, guide, and influence proposed developments and other decisions affecting the use of the land and community growth and development. The plan provides a context for forethought, examination of impacts and consequences, and mitigation of land use decisions on the community's growth and development. Land Use Maps for Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle can be reviewed in Appendix B.

E. Multi-Jurisdictional Concerns

There are significant differences between the incorporated and unincorporated portions of Wilcox County in regard to wildfire vulnerability. Due to large amount of undeveloped forests in the unincorporated parts of the county, the opportunity for a wildfire is very present. However, due to the wildland urban interface the municipalities and 35 developed residential communities are not entirely immune to the possibility of a fire spreading into their boundaries. In the incorporated areas of Wilcox County, the threat of wildfires is low due to moderate fuel load levels present around city limits of Abbeville. However, in the unincorporated areas, including the wildland interface, the threat of wildfires is much higher. According to the Georgia Mitigation Information System, portions of Wilcox County have Wildfire Hazard Scores ranging from 0-4. A vast majority of the unincorporated part of the county is located in zone zero. However, there are areas scattered throughout the county that have scores of one to two. The Cities of Rochelle, Abbeville, Pineview, and Pitts all have portions that have scores of 3 to 4 with scores of 1 to 2 around the perimeter of each city. Most critical facilities are located in the City of Abbeville and have wildfire hazard scores of “3.” In the unincorporated areas of Wilcox County, the fuel load is moderate to heavy with most areas having a score of 0 to 1 located along the eastern boarder at the Ocmulgee River. These fuel load areas significantly increase the threat of wildfires.

E. Hazard Summary

Due to the large amount of forest and the growing wildland interface in Wilcox County, wildfire remains a significant threat to the lives and property of its citizens. Given the quick onset and destructive nature of wildfires, the update committee feels that the mitigation strategies included in this plan for reducing the impact of wildfire are extremely critical to the protecting the county. As a result of wildfire, properties are severely damaged or lost, natural resources are destroyed, evacuations are sometimes necessary, residents may become displaced, and at its extreme a wildfire can cause a loss of life. The continued trend of new builders to construct properties in the rural portions of the county increases both the likelihood of wildfires occurring and the likelihood of property damage. However, through future land use regulations and through the future actions implemented with this plan, the threat of wildfires in the future should continue to decrease.

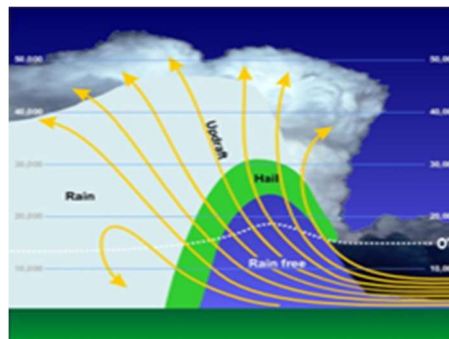
SECTION VII. HAILSTORM

A. Identification of Hazard

Hail is precipitation that is formed when updrafts in thunderstorms carry raindrops upward into extremely cold areas of the atmosphere. Hail can damage aircraft, homes and cars, and can be deadly to livestock and people.

Hailstones grow by collision with super cooled water drops. (Super cooled drops are liquid drops surrounded by air that is below freezing which is a common occurrence in thunderstorms.) There are two methods by which the hailstone grows, wet growth and dry growth, and which produce the "layered look" of hail.

In wet growth, the hailstone nucleus (a tiny piece of ice) is in a region where the air temperature is below freezing, but not super cold. Upon colliding with a super cooled drop the water does not immediately freeze around the nucleus. Instead liquid water spreads across tumbling hailstones and slowly freezes. Since the process is slow, air bubbles can escape resulting in a layer of clear ice. With dry growth, the air temperature is well below freezing and the water droplet immediately freezes as it collides with the nucleus. The air bubbles are "frozen" in place, leaving cloudy ice.



B. Hazard Profile

Location

Since Hailstorms are non-spatial entities that have the potential to occur anywhere within Wilcox County. Therefore, all parts of the county could be potentially subject to this hazard and there is no specific area that would necessarily be more likely to have one.

Extent

The extent of a hailstorm is measured by the Hailstorm Intensity Scale (TORRO), which can be viewed in the following chart. The scale ranges from H0 to H10 and includes descriptions of the size of the hail, and the extent of the damage it could potentially cause. In NCDC storm data history, hailstorms in Wilcox County have produced hail ranging in size from 2.75 inches to 0.75 inches in diameter. Using the TORRO we can see that the intensity of the hail in Wilcox County has ranged between a H2 and H8. (NCDC, Appendix A:7)

| Hailstorm Intensity Scale (TORRO) | | | | |
|-----------------------------------|----------------------|-----------------------------|---|--|
| | Intensity Category | Typical Hail Diameter (mm)* | Probable Kinetic Energy, J-m ² | Typical Damage Impacts |
| H0 | Hard Hail | 5 | 0-20 | No damage |
| H1 | Potentially Damaging | 5-15 | >20 | Slight general damage to plants, crops |
| H2 | Significant | 10-20 | >100 | Significant damage to fruit, crops, vegetation |
| H3 | Severe | 20-30 | >300 | Severe damage to fruit and crops, damage to glass and plastic structures, paint and wood scored |
| H4 | Severe | 25-40 | >500 | Widespread glass damage, vehicle bodywork damage |
| H5 | Destructive | 30-50 | >800 | Wholesale destruction of glass, damage to tiled roofs, significant risk of injuries |
| H6 | Destructive | 40-60 | | Bodywork of grounded aircraft dented, brick walls pitted |
| H7 | Destructive | 50-75 | | Severe roof damage, risk of serious injuries |
| H8 | Destructive | 60-90 | | (Severest recorded in the British Isles) Severe damage to aircraft bodywork |
| H9 | Super Hailstorms | 75-100 | | Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open |
| H10 | Super Hailstorms | >100 | | Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open |

History

The NCDC reports that from 1984 to March 2020 there have been 20 recorded hailstorms in Wilcox County with some instances occurring on the same date, totaling \$125,000 in property damage and \$10,000 in crop damage with no reports of death or injury. However, the actual number of occurrences and the amount of property damage and injuries is likely unknown. One of these hailstorms has occurred since the last plan update. The largest reported hail since the adoption of the original plan was 2.75 inches in diameter. (NCDC, Appendix A:7)

On June 4, 1999, a hailstorm event occurred county-wide in Wilcox County, producing hail 0.75 inches in diameter, which caused \$10,000 in crop damage. This hailstorm event is the only hailstorm in NCDC historical data that records a loss value for crop damage. No injuries, deaths, or property damage occurred as a result of this event. (NCDC, Appendix A:7)

A tremendous hailstorm occurred on October 9, 2008, in the Rochelle area. It began as thunderstorms developed across South Georgia during the mid-morning hours and spread northward into the southern portions of central Georgia by late morning. The storms took on the nature of isolated supercell

thunderstorms and produced large hail and damaging winds. The severe thunderstorms were short-lived and dissipated quickly after the noon hours. A deputy with the Wilcox County Sheriff's Department observed baseball-sized hail in the Rochelle area. The public observed golf ball-sized hail in the far northern part of the county in the Pineview area. Several car windshields were observed to have been damaged in the area. Damage totals from this event were \$100,000 in property damage and hail ranged in size from penny sized to 2.75 inches. No crop damage, death, or injury is reported as a result of this event. (NCDC, Appendix A:7)

The only hailstorm event since the last plan update occurred on April 9, 2019, near Abbeville. During this event, a surface low associated with a deep upper-level trough swept across north and central Georgia bringing widespread showers and thunderstorms, accompanied by heavy rain. Despite somewhat limited instability, the strong dynamics and moderate shear resulted in isolated reports of damaging thunderstorm winds and large hail. The public reported quarter size hail (1 inch in diameter) at the Dollar General in Abbeville. No property damage, crop damage, injury, or death was reported as a result of this event. (NCDC, Appendix A:7)

Probability

In the last 36 years (1984-2020) there have been 20 recorded occurrences of hailstorms in Wilcox County. The current chance per year that a hailstorm can occur is 55.56%, as noted in the Hazard Frequency Table (Appendix D, II). Additionally, the annual frequency for the last ten and twenty years are 0.2 and 0.6, respectively. Finally, keeping in mind that the older the data the more incomplete it is, we can see that the annual frequency for the last fifty years is 0.4, with a historical recurrence interval of 1.8 years. The probability that hailstorms will continue to occur every couple of years is “Highly Likely.”

| Occurrence Probability in Years | Likelihood of Future Occurrence |
|---------------------------------|---------------------------------|
| 1-10 | “Highly Likely” |
| 10-25 | “Likely” |
| 25-50 | “Unlikely” |
| 50 or greater | “Highly Unlikely” |

C. Inventory Assets and Potential Losses

The total percentage of the number of structures that are exposed to the non-spatial threat of hailstorms in Wilcox County is 100% as noted on Worksheet 3A (Appendix D, III). In Worksheet 3A: Inventory of Assets (appearing in Appendix A and D, III), we estimate that all of Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle are equally vulnerable to this hazard. Because data broken down by jurisdiction is not consistently available, it was not possible to break down these worksheets by jurisdiction; therefore, they refer to the entire county, including the Cities of Abbeville, Pineview, Pitts, and Rochelle in this plan. The potential damage by a hailstorm in Wilcox County is difficult to estimate due to several factors, most importantly the severity and duration of the storm. The characteristics of the event, such as hail size and location will determine the extent of damage caused.

In Wilcox County, there are 4,223 residential structures, 396 commercial structures, 13 industrial structures, 3,341 agricultural structures, 198 religious/non-profit structures, 96 government structures, 16 educational structures, and 29 utility structures. All of these structures are equally exposed to

hailstorms. To address specific critical facilities and infrastructure, each facility was examined on an individual basis, entered into the GMIS database, and located on a Wilcox County Critical Facilities Map, which is located in Appendix A:7 along with a Wilcox County Hail Track Map.

The total built structures, including critical facilities, of Wilcox County have an estimated replacement value of \$241,368,409. The total value of all residential structures in Wilcox County is \$90,899,998. The value of commercial structures in Wilcox County is \$14,634,920. Industrial facilities in Wilcox County have a value of \$9,495,775. The value of agricultural structures in Wilcox County is \$50,084,350. Religious/non-profit structures in Wilcox County are valued at \$6,174,485. Government facilities in Wilcox County are valued at \$6,087,393. Educational facilities in Wilcox County are valued at \$32,311,193. Finally, the value of utility structures in Wilcox County is \$31,680,295. At this time there are no known future buildings, infrastructure, or critical facilities to be located in the county requiring special mitigation strategies. Additionally, all 8,635 residents of Wilcox County and 1,104 employees working in Wilcox County could be affected by a severe hailstorm.

In addition to the potential damage to structures and crop damage as a result of a hailstorm event could have a severe impact upon the county's local economy and food supply. According to the 2017 USDA Census of Agriculture report (Appendix C), Wilcox County had 287 farms with 90,704 acres of farmland and crop sales totaling \$98,642,000. (2017 USDA Census of Agriculture, Appendix C)

D. Development Trends

A review of the comprehensive plan illustrates that the county currently has no land use or development trends specifically related to a hailstorm event. There is little commercial, residential and industrial development in Wilcox County. Between 2010 and 2019 (Census population estimates, Appendix C), Wilcox County experienced a decrease in population from 9,255 to 8,635 or a decrease of 6.7%. According to the Governor's Office of Planning and Budget, Wilcox County is projected to have a population of 8,778 in 2025 (1.7% increase from 2019 estimates), a population of 8,824 in 2030 (0.52% increase from 2025 projections), and a population of 8,869 (0.5% increase from 2025 projections). For the sixteen-year period (2019-2030), Wilcox County is projected to increase in population by 2.7%. Future land use maps cannot address the threat of natural non-spatial occurrences such as hailstorm events. Therefore, there is no way to tell whether new development is in a hazard prone area since all areas are equally vulnerable. In the future, each citizen and any number of structures (commercial, industrial, public/institutional, residential), critical facilities, and infrastructure, in any part of the county, could potentially be damaged by a hailstorm event.

There exists a need for updated, coordinated, countywide land use planning/subdivision/manufactured housing regulations/increased code enforcement/nuisance ordinances/growth management and implementation. Wilcox County has rudimentary land use regulations, road acceptance/subdivision ordinances, a manufactured home ordinance, and others to address specific issues or nuisances. Abbeville and Rochelle have zoning ordinances and building code enforcement in place and since the last plan update, the City of Pitts adopted a Manufactured Housing Ordinance and the City of Pineview adopted an "Unsafe Buildings and Premises." Enforcement of these ordinances by city code enforcement will assist in providing oversight that ensures the safety of individuals, businesses, and encourage community-wide priority for structural integrity. Code enforcement in the county is related to solid waste although future

plans are for increased inspections and enforcement. These ordinances need updating through coordination and joint collaboration/code enforcement to initiate a more comprehensive approach. (Comprehensive Plan, Appendix B)

While technically only the larger municipalities, Abbeville and Rochelle, are required, because of their zoning ordinance, to have a Land Use element in their comprehensive plan under the Georgia Department of Community Affairs' planning standards, all local governments in the county have chosen to participate and include the element in the joint comprehensive plan. Existing land use maps visually convey to all concerned the current landscape and correlation of extant development. Future land use maps illustrate to all concerned the community's vision and desires for additional growth and development. Such depictions also lend credence and supporting background information important to understanding and illustrating official local government policy in designating lands unsuitable for solid waste handling facilities in local solid waste management plans. Land use maps do provide official display of community desires and goals for compatible future growth and development. The community's land use maps are, however, a general policy guide and framework, not necessarily a rigid or unchangeable picture of future growth and development. Not all growth or developments can be foreseen, and other events could necessitate a change in community vision or desires. The depicted pattern of desired future growth and development displayed on future land use maps is a current statement and reflection of community expectations and desires. It provides a context, framework and background for the public and private sector to utilize to plan, evaluate, shape, guide, and influence proposed developments and other decisions affecting the use of the land and community growth and development. The plan provides a context for forethought, examination of impacts and consequences, and mitigation of land use decisions on the community's growth and development. Land Use Maps for Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle can be reviewed in Appendix B.

E. Multi-Jurisdictional Concerns

In the incorporated and unincorporated areas of Wilcox County (including Abbeville, Rochelle, Pineview, and Pitts), the threat of natural non-spatial occurrences including hailstorm is equally applicable. All areas of the county are susceptible to non-spatial threats. Therefore, any mitigation steps taken related to hailstorms should be applied to the entire County, including the Cities of Abbeville, Pineview, Pitts, and Rochelle.

Since the last plan update, Wilcox County applied for FEMA grant funding to purchase generators and for a community safe room. The City of Pitts applied for FEMA grant funding to purchase generators for City Hall, the City Gym, and for two wells located within the city. The City of Pitts also applied for FEMA grant funding to construct a community center; however, the City of Pitts was not awarded this funding. The City of Abbeville has applied for FEMA grant funding to purchase one tornado siren, and six generators to power City Hall, two pumping stations, and two wells within the city. At this time, FEMA grant funding has not been awarded to Wilcox County, the City of Pitts, or the City of Abbeville for these projects. No other developments or projects have been achieved to increase or decrease vulnerability to hailstorms in Wilcox County or the Cities of Abbeville, Pineview, Pitts, and Rochelle.

All areas of the county are susceptible to non-spatial threats. However, the amount of damage caused by a hailstorm occurring within the city limits would most likely be greater than one that occurs in the

unincorporated area, due to the differences in amount of development and population density. A Wilcox County Hail Track Map is also located in Appendix A:7 to convey hail track trends in Wilcox County.

F. Hazard Summary

Due to their lack of frequency, hailstorms present a minimal threat to the county; though low in occurrence, hailstorms can cause a significant amount of property damage and pose a threat to personal safety. The mitigation action steps that have been included in this plan are focused upon reducing the impact that a hailstorm would cause to the property and residents of Wilcox County. The amount of damage that hailstorms cause is dependent upon the extent and severity of the hazard. The mitigation action steps that have been included in this document are focused upon reducing the impact that a hailstorm would cause to the property and residents of Wilcox County.

SECTION VIII. DROUGHT

A. Identification of Hazard

According to the National Oceanic and Atmospheric Administration, drought is a deficiency of moisture that results in adverse impacts on people, animals, or vegetation over a sizeable area. One of the most important characteristics of drought conditions is the length of time that a drought persists. 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. Drought is also a key factor in wildfire development, establishing the dry conditions necessary to make natural fuels, such as grass, brush, trees and dead vegetation, more fire prone.

According to the 2019 Georgia Hazard Mitigation Strategy plan, drought is a normal, recurrent feature of climate consisting of a deficiency of precipitation over an extended period of time (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 the water supply affects perceptions of drought conditions. The impacts of drought are vast, including limited water supplies in urban areas and insufficient water for farmland.

B. Hazard Profile

Location

The 2019 Georgia Hazard Mitigation Strategy plan states that droughts occur in virtually every climatic zone (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 to decades and therefore have a high potential to cause devastation in a given area.

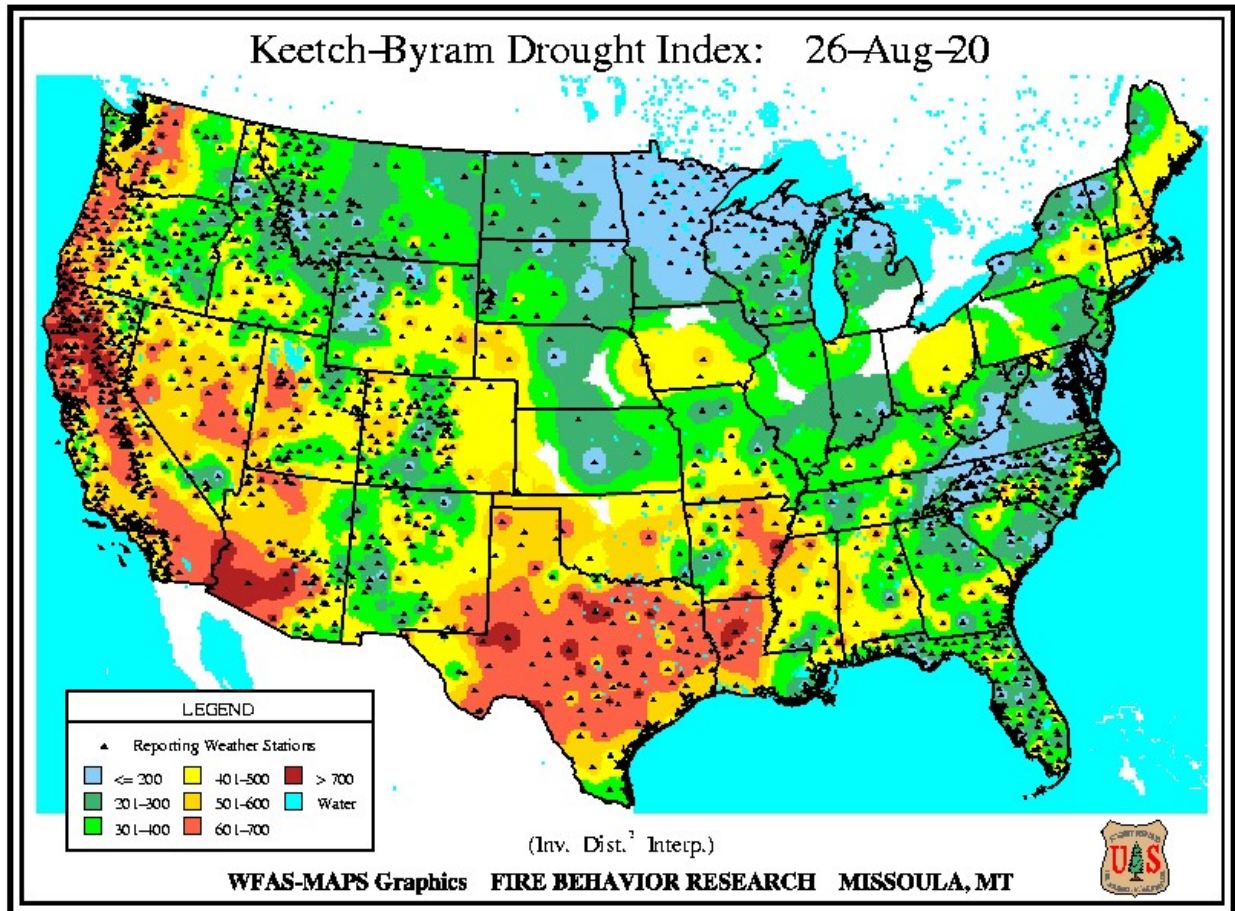
Due to the fact that Drought is a non-spatial hazard and has the potential to affect the entire county it constitutes a significant threat to the prosperity and safety of the residents of Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle. The presence of a drought affects the county in several different ways: it destroys agriculture, depletes the drinking water supply, and increases the potential of wildfires. Much of Wilcox County is made up of forest, agriculture, and woodlands which are all directly impacted by drought conditions. The adverse effects of an extended period of drought can affect all portions of the county, including within the municipalities.

Extent

The Keetch and Byram Drought Index

The Keetch and Byram drought index (KBDI) is intended to measure the risk of wildfires occurring in a drought-stricken area and in doing so provides a measurement of the extent of a drought. The KBDI

attempts to gauge the precipitation needed in order for the soil to return to full moisture capacity. The number represents the net effect of evapotranspiration (the combined amount of evaporation and transpiration) and precipitation in producing cumulative moisture deficiency in upper soil layers. Zero is the point of no moisture deficiency and 800 is the maximum drought that is possible. The higher the number the worse drought and the higher risk of wildfire. Along the scale, the index numbers provide the amount of net rainfall that is required to reduce the index to zero, or saturation conditions. The KBDI measures the region that includes Wilcox County between 200 and 800 on the KBDI drought index.

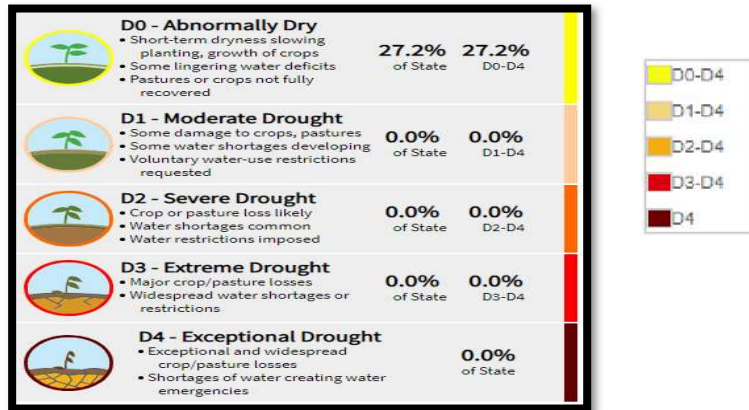


(Source: <http://www.wfas.net/index.php/keetch-byram-index-moisture--drought-49>)

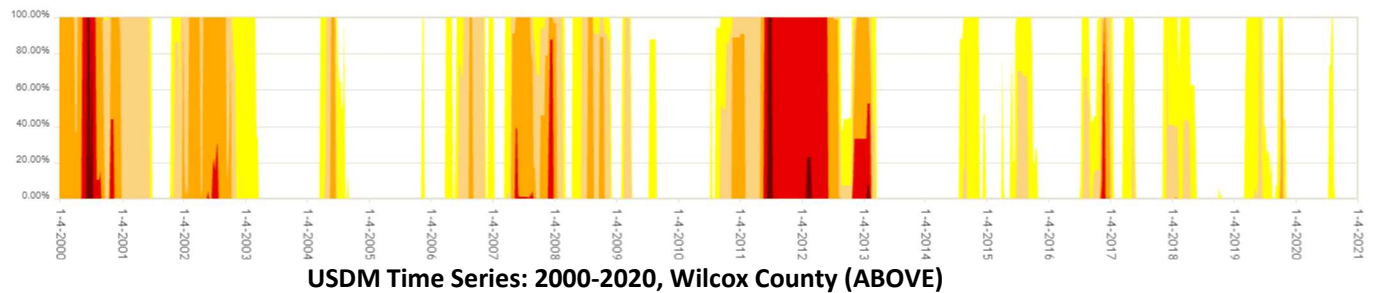
- **KBDI = 0 - 200:** Soil moisture and large class fuel moistures are high and do not contribute much to fire intensity. Typical of spring dormant season following winter precipitation.
- **KBDI = 200 - 400:** Typical of late spring, early growing season. Lower litter and duff layers are drying and beginning to contribute to fire intensity.
- **KBDI = 400 - 600:** Typical of late summer, early fall. Lower litter and duff layers actively contribute to fire intensity and will burn actively.
- **KBDI = 600 - 800:** Often associated with more severe drought with increased wildfire occurrence. Intense, deep burning fires with significant downwind spotting can be expected. Live fuels can also be expected to burn actively at these levels.

The United States Drought Monitor

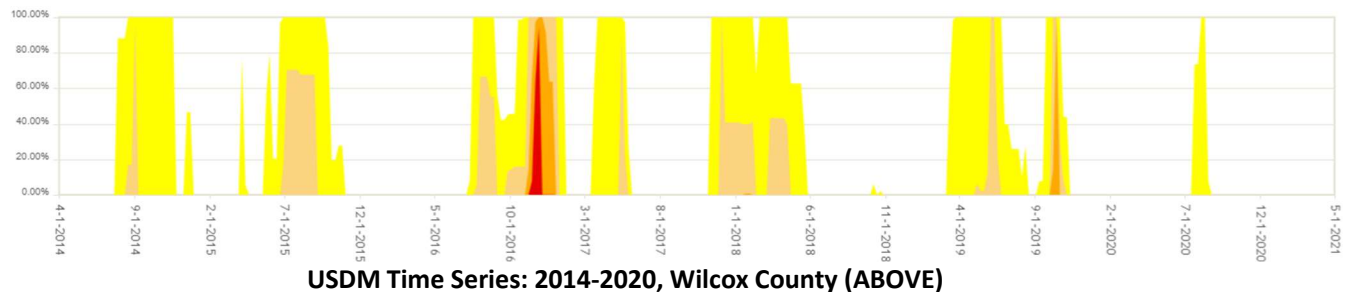
The United States Drought Monitor (USDM) assigns five classifications to measure drought categories. Each category is determined, based on range, of conditions measured in the Palmer Drought Severity Index, The Climate Prediction Center’s Soil and Moisture Model (percentiles), the United States Geological Survey’s Streamflow (percentiles), the Standardized Precipitation Index, and the Objective Drought Indicator Blends (percentiles). The classifications for level of drought measure the severity of drought conditions and are represented from *D0*, representing a minor level of damage and severity ascending to *D4*, representing maximum level of damage and severity. The classifications of measurement for severity of drought conditions according to the USDM are as follows: D0 - Abnormally Dry, D1- Moderate Drought, D2-Severe Drought, D3- Extreme Drought, and D4 -Exceptional Drought.



Wilcox County (GA) Percent Area



Wilcox County (GA) Percent Area



Source: U.S. Drought Monitor Map: National Climatic Data Center <https://gis.ncdc.noaa.gov/maps/ncei/drought/us>

History

NCDC data reports that Wilcox County has experienced 24 drought events from 1997 to March 2020 and reports that three of those events occurred since the last plan update (2015-March 2020). (NCDC, Appendix C) The United States Drought Monitor reports a total of 25 periods of drought (periods of at least a week meeting drought classification criterion for D0 to D4) occurring in Wilcox County from 2000-2020 with 11 of those periods of drought occurring in Wilcox County from 2015 to 2019. (USDAM, Appendix C) Using combined drought data/recordings for Wilcox County from USDAM data and NCDC data, it is found that Wilcox County has experienced 28 periods of drought from September 1, 1997, to August 28, 2020, with 11 periods of drought occurring since the last plan update. Combined drought data from the USDAM and NCDC can be found in Appendix A:8. Because the NCDC has only recently begun keeping up with the number of drought occurrences at the local level and no other accurate record is available, the true number of droughts that have occurred in the past fifty years is unknown but can be assumed to be significantly higher. Through the examination of recent known occurrences, we can see that drought has had a consistently negative impact on Wilcox County. No deaths, injuries, or property damage have been recorded as a result of drought events; however, drought events have caused crop damage in the amount of \$10,840,000. (NCDC, Appendix C)

On or about September 1, 1997, Wilcox County suffered \$1,670,000 in crop damage as a result of a drought event. During this event, the dry spell that existed the last 10 days of August continued through the first three weeks of September, especially over the south half of the state. Little or no rain fell in the south while one storm system produced scattered thunderstorms in the north half of the state on the 10th. University of Georgia agricultural experts estimated crop losses statewide at \$66.5 million. (NCDC, Appendix C)

In one drought event, occurring on or about June 1, 2000, extremely dry conditions continued across north and central Georgia through the month of June. These same dry conditions had persisted for most of the last 2 years. All rainfall was from spotty convective activity, with no widespread general rains occurring during the month. Yearly rainfall totals for most cooperative observer stations of the WFO Peachtree City's County Warning Area in north and central Georgia were between 10 and 15 inches below normal. The 2-year deficit exceeded 20 inches across much of the same area. The center for Climate Prediction and the U.S. Department of Agriculture classified most of central Georgia in an exceptional drought and most of north Georgia in an extreme drought state. The northern most counties were upgraded from a first stage drought to a severe drought status. Water supplies continued to dwindle in most areas. Stream flows were at or below the lowest 10th percentile of the historical distribution for June at 90 percent of Georgia's observing sites. Twenty-nine percent of Georgia's cotton crop was rated in a poor to very poor condition. University of Georgia cumulative crop damage estimates for the whole state were placed at \$689 million dollars, plus another \$50 million dollars in increased irrigation costs, for a total estimate of \$739 million in losses statewide. Of that total, over \$309 million was estimated for the counties in the Peachtree City CWA. Of those counties, Dooly County (bordering county to the west of Wilcox County) had almost \$16.5 million in losses. Wilcox experienced drought conditions meeting criteria for "Exceptional Drought" or category D4 drought for the weeks of June 13, 2000 to July 17, 2000. In Wilcox County, \$9,170,000 in crop damage was reported as a result of this event. (NCDC, Appendix C)

On or about September 1, 2011, Wilcox County declared Primary Natural Disaster Area from summer months of excessive heat and drought, which essentially began April 15, 2011, according to NCDC data.

Crop loss was deemed at the 30 percent or greater level. During this event, the worst drought conditions of “Exceptional Drought” (D4) were reached in Wilcox County from June 21, 2011 to July 12, 2011; during this time span, 100% of Wilcox County or 383.2 square miles was in a Category D4 drought. On September 8, 2011, much of Georgia was classified by the United States Department of Agriculture (USDA) as a Primary Natural Disaster Area due to an ongoing drought and excessive heat that damaged thousands of acres of crops. The drought was determined to have begun on April 15, 2011 and continued into September 2011. Much of the southern half of the states was classified to be in an Extreme Drought. Rainfall deficits by the end of August ranged from 5 to 10 inches below normal throughout many central and north Georgia counties. Ninety-one counties within the Peachtree City, Georgia CWA were classified in a severe to extreme drought situation by the end of August 2011. Dozens of counties, mainly across central and South Georgia suffered 30 percent or more crop loss during this time frame. These crops include forage crops, pasture, grain crops, cotton, peanuts, and tobacco. Wilcox County was one county within the Peachtree City, Georgia county warning area (CWA) that was included in the classification of “Extreme Drought.” NCDC data records no deaths, injury, property damage, or crop damage for this event specific to Wilcox County. (NCDC, Appendix C)

One of the most recent drought events since the last plan update occurred on or about October 8, 2019. During this event, drought conditions in Wilcox County peaked the week of October 15, 2019 to October 21, 2019 with 100% of the County or 383.2 square miles experiencing “Abnormally Dry” to “Severe Drought” (D0 to D2) drought conditions. The month of October came on the heels of a record-setting September, with warm daytime high temperatures and widening short-term rainfall deficits resulting in expanding flash drought conditions. D3 Extreme Drought conditions developed over portions of the state the first week of October, with the maximum percentage of area in D3 Extreme Drought shown in the October 15th U.S. Drought Monitor. A shift in the weather pattern mid-month brought much needed rainfall to the state, a large majority of which resulted from Post-Tropical Storm Nestor's track through the area. More seasonal temperatures combined with the active weather pattern led to improvement in drought conditions. The drought persisted into November, with continuing improvements. (USDAM, NCDC, Appendix C)

The most recent drought period in Wilcox County occurred on or about July 21, 2020 to August 24, 2020, reaching drought conditions of “Abnormally Dry” or D0 for 7.73% of the County to 73.53% of the County during this time. USDAM nor NCDC records no deaths, injury, property damage, or crop damage for this event (NCDC does not record this event) specific to Wilcox County. (USDAM, NCDC, Appendix C)

The USDAM reports that Wilcox County has experienced drought conditions meeting the criteria of one or more of the above-mentioned classifications in 2015, 2016, 2017, 2018, 2019, and 2020 since the previous plan update.

Probability

According to NCDC and USDAM data, in the past 23 years (1997-2020) there have been 28 recorded drought events in Wilcox County. The current chance per year that a drought event will occur is 121.74%, as noted in the Hazard Frequency Table (Appendix D, II). Additionally, the annual frequency for the last ten and twenty years are 1.1 and 1.25, respectively. Finally, keeping in mind that the older the data the more incomplete, we can see that the annual frequency for the last fifty years is 0.6 with a historical recurrence

interval of 0.56 years. Taking this into consideration, it is “Highly Likely” that the county will experience another period of drought in the next five to ten years.

| Occurrence Probability in Years | Likelihood of Future Occurrence |
|---------------------------------|---------------------------------|
| 1-10 | “Highly Likely” |
| 10-25 | “Likely” |
| 25-50 | “Unlikely” |
| 50 or greater | “Highly Unlikely” |

C. Inventory of Assets and Potential Losses

The Wilcox County Joint Hazard Mitigation Plan Update Committee concluded that drought, in itself, presents no direct threat to the critical facilities. However, Wildfire, as a result of drought, was considered, and the Committee determined that in this manner the hazard poses a significant threat to the county. In addition, it is important to consider that drought impacts residents, public health, and agriculture. A drought reduces the amount of available water in area and since the majority of homes and businesses draw from underground water sources, they are dependent upon its availability. Therefore, all of the residents of Wilcox County (8,635) are at risk from the impact of a drought. (See Worksheet 3A in Appendix D: III)

In Worksheet 3A: Inventory of Assets (appearing in Appendix A:8 and D: III), we estimate that all of Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle are equally vulnerable to this hazard. Because data broken down by jurisdiction is not consistently available, it was not possible to break down these worksheets by jurisdiction; therefore, the worksheets refer to the entire county, including the five municipalities located within Wilcox County, in this plan.

For an estimate of potential losses due to drought it seems most appropriate to focus upon agriculture. To see an estimate of potential losses from a wildfire, please refer to Section 6 of this chapter. In the most recent 2017 Census of Agriculture, Wilcox County had a total of 287 farms, with 90,704 acres of farmland in use. (Appendix C). The total market value of products sold in 2017 was \$98,642,000 a 6% decrease from the 2012 Census of Agriculture for Wilcox County.

D. Development Trends

There are no specific trends concerning drought in the county comprehensive plan. Future land use maps cannot address the threat of natural non-spatial occurrences including drought. Furthermore, Wilcox County has not experienced a reportable amount development over the previous five years. Future land use maps cannot address the threat of natural non-spatial occurrences including drought. Therefore, there is no way to tell whether new development is in a hazard prone area since all areas are equally vulnerable. However, the addition or growth or any new structures that is agriculturally related has the potential of being vulnerable to and affected by drought.

Between 2010 and 2019 (Census population estimates, Appendix C), Wilcox County experienced a decrease in population from 9,255 to 8,635 or a decrease of 6.7%. According to the Governor’s Office of Planning and Budget, Wilcox County is projected to have a population of 8,778 in 2025 (1.7% increase from 2019 estimates), a population of 8,824 in 2030 (0.52% increase from 2025 projections), and a

population of 8,869 (0.5% increase from 2025 projections). For the sixteen-year period (2019-2030), Wilcox County is projected to increase in population by 2.7%.

There exists a need for updated, coordinated, countywide land use planning/subdivision/manufactured housing regulations/increased code enforcement/nuisance ordinances/growth management and implementation. Wilcox County has rudimentary land use regulations, road acceptance/subdivision ordinances, a manufactured home ordinance, and others to address specific issues or nuisances. Abbeville and Rochelle have zoning ordinances and building code enforcement in place and since the last plan update, the City of Pitts adopted a Manufactured Housing Ordinance and the City of Pineview adopted an “Unsafe Buildings and Premises.” Enforcement of these ordinances by city code enforcement will assist in providing oversight that ensures the safety of individuals, businesses, and encourage community-wide priority for structural integrity. Code enforcement in the county is related to solid waste although future plans are for increased inspections and enforcement. These ordinances need updating through coordination and joint collaboration/code enforcement to initiate a more comprehensive approach. (Comprehensive Plan, Appendix B)

While technically only the larger municipalities, Abbeville and Rochelle, are required, because of their zoning ordinance, to have a Land Use element in their comprehensive plan under the Georgia Department of Community Affairs’ planning standards, all local governments in the county have chosen to participate and include the element in the joint comprehensive plan. Existing land use maps visually convey to all concerned the current landscape and correlation of extant development. Future land use maps illustrate to all concerned the community’s vision and desires for additional growth and development. Such depictions also lend credence and supporting background information important to understanding and illustrating official local government policy in designating lands unsuitable for solid waste handling facilities in local solid waste management plans. Land use maps do provide official display of community desires and goals for compatible future growth and development. The community’s land use maps are, however, a general policy guide and framework, not necessarily a rigid or unchangeable picture of future growth and development. Not all growth or developments can be foreseen, and other events could necessitate a change in community vision or desires. The depicted pattern of desired future growth and development displayed on future land use maps is a current statement and reflection of community expectations and desires. It provides a context, framework and background for the public and private sector to utilize to plan, evaluate, shape, guide, and influence proposed developments and other decisions affecting the use of the land and community growth and development. The plan provides a context for forethought, examination of impacts and consequences, and mitigation of land use decisions on the community’s growth and development. Land Use Maps for Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle can be reviewed in Appendix B.

E. Multi-Jurisdictional Concerns

All of Wilcox County could potentially be affected by drought conditions, due to its effect on the water supply and wildfire conditions. However, since most of the county farms and agriculture are located outside the city boundaries there is the greater risk for crop damage and direct economic loss in unincorporated areas. Additionally, the potential for wildfires is greater in the unincorporated parts of the county. (Appendix A:8)

F. Hazard Summary

Drought has the potential to cause great economic damage to both Wilcox County and the state as a whole. In addition to the threat to economic interests, droughts can cause increased wildfires, public health issues, and reduce the water quality/supply. The committee reviewed previous drought mitigation action steps proposed in the approved 2015 plan and determined no significant mitigation actions were completed since the plan adoption. In the future, the update committee and its partners will make a concerted effort to implement the actions included in this plan in order to lessen the impact of drought on the county's resources and residents.

SECTION IX. EXCESSIVE HEAT

A. Identification of Hazard

Excessive Heat Warning—An Excessive Heat Warning is issued within 12 hours of the onset of extremely dangerous heat conditions. The general rule of thumb for this Warning is when the maximum heat index temperature is expected to be 105° or higher for at least 2 days and nighttime air temperatures will not drop below 75°; however, these criteria vary across the country, especially for areas not used to extreme heat conditions.

Excessive Heat Watch—Heat watches are issued when conditions are favorable for an excessive heat event in the next 24 to 72 hours. A Watch is used when the risk of a heat wave has increased but its occurrence and timing is still uncertain.

Heat Advisory—A Heat Advisory is issued within 12 hours of the onset of extremely dangerous heat conditions. The general rule of thumb for this Advisory is when the maximum heat index temperature is expected to be 100° or higher for at least 2 days, and nighttime air temperatures will not drop below 75°; however, these criteria vary across the country, especially for areas that are not used to dangerous heat conditions. (Source: <https://www.weather.gov/safety/heat-ww>)

Temperatures that hover 10 degrees or more above the average high temperature for the region and last for several weeks are defined as Excessive Heat. Humid or muggy conditions, which add to the discomfort of high temperatures, occur when a "dome" of high atmospheric pressure traps hazy, damp air near the ground. Excessively dry and hot conditions can provoke dust storms and low visibility. Droughts occur when a long period passes without substantial rainfall. The American Meteorological Society's Glossary of Meteorology defines a heat wave as: "A period of abnormally and uncomfortably hot and usually humid weather. To be a heat wave such a period should last at least one day, but conventionally it lasts from several days to several weeks." (www.forbes.com, 2019) A heat wave combined with a drought is a very dangerous situation. (Droughts are addressed in Section 8 of this chapter)

The 2019- 2024 Georgia Hazard Mitigation Strategy Plan states:

"Official measures and scales of magnitude and intensity do not exist for extreme heat. The best way to determine a realistic magnitude for extreme heat would be based on temperatures and heat indices. According to the National Weather Service, the heat index is a measure of how hot it really feels when relative humidity is factored in with the actual air temperature."

B. Hazard Profile

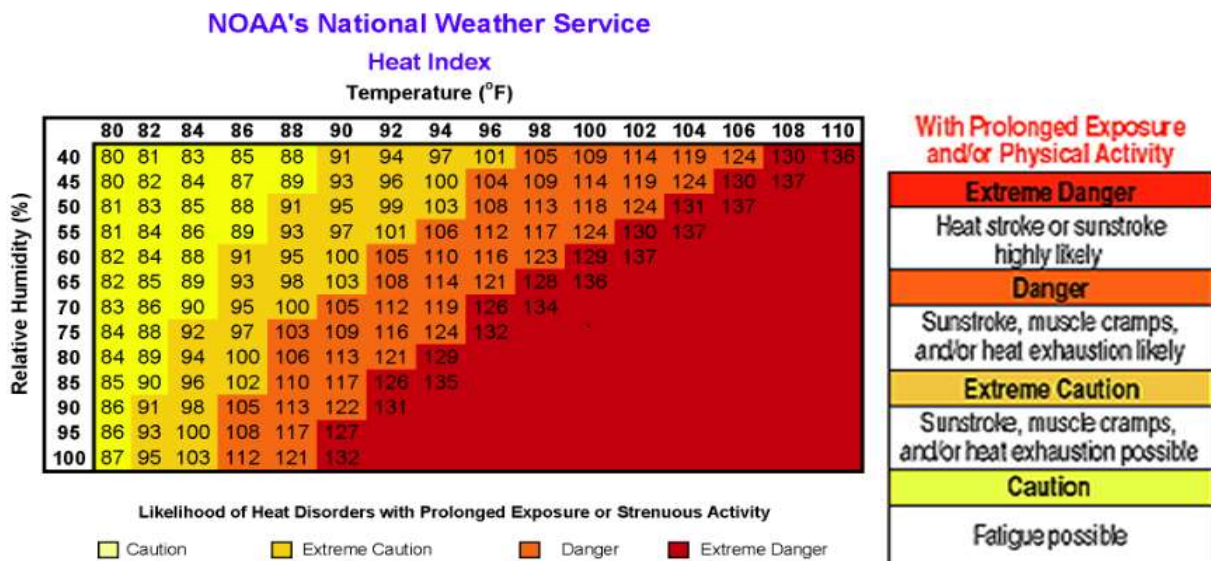
Location

Because Wilcox County is located in a region of the country with relatively high temperatures combined with high levels of humidity, it is common for high levels of humidity to exacerbate high temperatures and increase the heat index. Increased heat index increases the dangers and risk; creating a climate more apt to cause exhaustion and heat stroke with prolonged exposure to excessive heat. Excessive Heat within

the region could potentially affect the entire county equally. Therefore, all parts of the county could be potentially subject to this hazard and there is no specific area that it would be more likely to occur.

Extent

In order to measure the extent of Excessive Heat the National Weather Service, uses the Heat Index (HI), a chart that accurately measures the apparent temperature of the air as it increases with the relative humidity. The Heat Index can be used to determine what effects the temperature and humidity can have on the population. To determine the Heat Index, you need the temperature and the relative humidity. Once both values are known, the Heat Index will be the corresponding number with both values. That number provides how it really feels. It is important to know that the Heat Index (HI) values are devised for shady, light wind conditions. Exposure to full sunshine can increase HI values by up to 15 degrees. Also, strong winds, particularly with very hot, dry air can be extremely hazardous to individuals. Outside temperatures during the summer months in this region of Georgia often exceed 100 degrees, and combined with high humidity levels, have the potential to pose a “Danger” or “Extreme Danger” to the public. (The Heat Index can be found below.)



Outside temperatures during the summer months in this region of Georgia often exceed 100 degrees, and combined with high humidity levels, have the potential to pose a “Danger” or “Extreme Danger” to the public.

The National Weather Service provides a heat index chart (as seen above) to illustrate the effect of temperature combined with relative humidity on the human body. The Heat Index (image below), also known as the Apparent Temperature, is a subjective measure of what it feels like to the human body when relative humidity is factored into the actual air temperature. Relative humidity is a measure of the amount of water in the air compared with the amount of water that air can hold at the current temperature. In short, it is a measure of how close the air is to being saturated with moisture. The body cools itself through the evaporation of perspiration or sweat. However, when the relative humidity is high, the increased moisture content in the air decreases the evaporation of perspiration or sweat. Therefore, the body feels

warmer when it is humid, therefore, we use relative humidity. For example, in the heat index chart below, a hot and very humid air mass with a temperature of 94 degrees and a relative humidity of 45 percent yields an apparent temperature of 100 degrees. Holding the temperature constant and increasing the relative humidity to 60 percent yields an apparent temperature of 110 degrees.

Wilcox County does not have access to a weather station within the County and does not have access to any county temperature measurements over any time period. However, the nearest weather station that records temperatures and precipitation is located in the City of Hatley in Crisp County, Georgia, which is located about 17.64 miles from Wilcox County. The weather station is a regional station operated by the University of Georgia Weather Network. The temperature data, averages, and assessments acquired from this regional weather station is used for the purposes of providing applicable extent and history of excessive heat events for Wilcox County in this plan. As excessive heat events this section will be cited from past temperatures recorded at the Hatley weather station site referenced in UGA Weather Network reports. Information from the UGA Weather Network weather station in the City of Hatley is utilized to incorporate the most appropriate information available for conveying the history and extent of excessive heat for Wilcox County and its municipalities. (Source: www.weather.uga.edu) In addition to these resources, documentation provided by the regional National Weather Service reports heat advisories, excessive heat warnings, and excessive heat watches for Wilcox County from 2005 to 2020. (<https://mesonet.agron.iastate.edu/>) Each of the above-mentioned resources are compiled in spreadsheet documents found in Appendix C.

The University of Georgia Weather Network reports climate averages from 1938 to 2016. The average maximum temperature recorded at the Hatley weather station site is 86 degrees Fahrenheit for the month of May, 91 degrees for the month of June, 92.7 degrees for the month of July, 92.1 degrees for the month of August, and 87.4 degrees for the month of September. (Source: <http://www.georgiaweather.net>)

The Southeast Regional Climate Center reports average humidity values through the year 2015 and provides selected morning and afternoon observations for certain cities in Georgia. The closest city that the Southeast Regional Climate Center reports average humidity levels for is Macon, Georgia (located approximately 70.8 miles northwest of Wilcox County). Maximum relative humidity values usually occur during morning hours. Recorded are average humidity values for local Standard Time (LST) of morning at 7 A.M. and afternoon at 1 P.M. The average maximum humidity values for Macon (the closest documented city to Wilcox County) is 85% humidity for the month of May, 85% for the month of June, 88% for the month of July, 91% for the month of August, and 91% for the month of September. (<https://sercc.com/climateinfo/historical/avgrh.html#GA>)

Because Wilcox County is located in a region of the country with relatively high temperatures combined with high levels of humidity, it is common for high levels of humidity to exacerbate high temperatures and increase the heat index. Increased heat index increases the dangers and risk; creating a climate more apt to cause exhaustion and heat stroke with prolonged exposure to excessive heat. As stated above, the National Weather Service focuses on “Excessive Heat,” defining it as heat indices of 105 degrees or more (using a combination of temperature and humidity as a “real feel”). Because Wilcox County is most likely to experience episodes where heat indices are 105 degrees or more and “heat wave” events where higher temperatures extend for days or weeks in the months of May, June, July, August, and September, for the purposes of this plan, excessive heat events are limited to heat events in May, June, July, August and

September. Recorded heat events or above-average heat events recorded in NCDC data and NWS data for months outside of May, June, July, August, and September are excluded as there is no record of these above-average temperature/ heat events reaching heat indices of 105 degrees or more, leading to less significant impact than if the event occurred in May, June, July, August, or September.

History

The NCDC reports four documented periods of “Excessive Heat” in Wilcox County and two periods of “Heat” occurring within the months of May, June, July, August, or September. The National Weather service reports 22 periods of excessive heat. Combining NCDC and NWS excessive heat periods occurring in the months of May, June, July, August, and September for Wilcox County from the years 1999 to 2020 finds that a total of 25 excessive heat events have been recorded with 10 occurring since the last plan update. Data for this hazard has only recently been recorded, and it is possible that instances in the past 5 to 10 years have not been documented consistently with the NCDC, therefore, information in this section is compiled from NCDC documentation, temperature reports accessed from the University of Georgia Weather of Network, and historical weather advisory data accessed from the National Weather Service. Therefore, the number of occurrences is assumed to be higher. No deaths, injuries, property damage, or crop damage is recorded as a result of excessive heat events in Wilcox County. (NWS-NCDC, Appendix A:9)

One of the recorded instances of excessive heat occurred on or about July 20, 1999. High temperatures in the 90s to low 100s combined with high relative humidities to produce heat indices of 100 to 110 degrees over north and central Georgia the last 10 days or so of July. Only on July 24, 1999, was there any significant rainfall during this stretch. No deaths, injuries, property damage, or crop damage has been recorded as a result of this excessive heat event in Wilcox County. (NWS-NCDC, Appendix A:9)

On or about September 3, 2002, another excessive heat event occurred in Wilcox County. A strong ridge of high pressure aloft stagnated over the southeastern U.S. for several days during the first 11 days of September. Consequently, temperatures were unseasonably warm during the first part of September. Temperatures soared into the 90s across nearly all of north and central Georgia during this period. The hottest weather was broken into two periods, one from September 3, 2002 to September 6, 2002 and the second from September 9, 2002 through September 12, 2002. Macon reported 96 degrees on the September 10, 2002, and 97 degrees on September 11, 2002. No information is provided for specific heat indices for Wilcox County. No deaths, injuries, property damage, or crop damage has been recorded as a result of this excessive heat event in Wilcox County. ((NWS-NCDC, Appendix A:9)

On or about August 1, 2007, Wilcox County experienced another excessive heat event. August 2007 proved to be one of the hottest months on record for much of north and central Georgia as a large ridge of high pressure combined with abnormally dry conditions from several preceding months of below normal rainfall. Numerous daily record high temperatures were broken, especially during the mid-part of the month. Even some record high minimum values were recorded during this period. While most of the month was above normal, the core of the intense heat was during the period from August 7th to August 22nd. Similar situations were observed at the other reporting stations. The excessive heat combined with continued below normal rainfall to exacerbate the drought conditions across the region. In Macon, the nearest city reported (about 70.8 miles from Wilcox County) the average temperature for the month was 84.6, which was 4.6 degrees above normal, and the hottest day reaching 105 on August

10, 2007. The UGA Weather Network reports that the average maximum temperature for the nearby Hatley weather station for the month of August is 92.1 degrees. From August 6, 2007 to August 11, 2007, the nearby Hatley weather station reported temperatures between 97.5 to 101.7 degrees. The National Weather Service issued heat advisories, excessive heat warnings and excessive heat warnings from August 6, 2007 to August 23, 2007 for Wilcox County. (NWS/NCDC data, Appendix A:9) Based on the average maximum relative humidity value for the Wilcox County's region being 91% in August, temperatures meeting or exceeding 86 degrees Fahrenheit would have placed Wilcox County's heat index at 105 degrees or higher; in the range of "danger" and "extreme caution" according to the National Weather Service. Even relative humidity values of 60% (which is uncommon for Wilcox County during the month of August), temperatures of 92 degrees and above would still be in the category of "danger" or "extreme danger" according to the National Weather Service's heat index chart. Additionally, these heat conditions would meet the criteria to issue excessive heat warnings and heat advisories. No other documentation or information describing this event was available to reference. No deaths, injuries, property damage, or crop damage has been recorded as a result of this excessive heat event. (NWS-NCDC, Appendix A:9)

Two excessive heat events were recorded by NCDC and NWS data in July 2012. The first event occurred on or about July 1, 2012. The record-breaking heat wave that started across Georgia in late June continued into the beginning of July. Due to drought and excessive heat, disaster declarations were issued by the USDA for Georgia. On June 29, 2012, temperatures reached 98.5 degrees Fahrenheit at the nearby weather station in Hatley (nearest to Wilcox County, 17.64 miles) and continued to increase with temperatures of 102.1 on July 1, 2012, before decreasing to 89.5 degrees on July 2, 2012. By July 24, 2012, temperatures soared again, reaching 98.5 degrees—this was the second excessive heat event in Wilcox County for July 2012. NWS Heat advisories were issued by the National Weather Service for Wilcox County on June 30, 2012 to July 2, 2012 and again from July 25, 2012 to July 27, 2012. Considering that the average maximum temperature for the Wilcox County region in June is 92.7 degrees, in July is 92.1 degrees Fahrenheit and that the average relative humidity for the region is 85% in June and 88% in July, it is appropriate to determine that the temperatures for this month often remained in the "extreme danger" category of the National Weather Service's Heat Index chart, as any temperature above 92 degrees with a relative humidity of 85% would create a heat index of 131 or higher. No deaths, injuries, property damage, or crop damage has been recorded as a result of this excessive heat event. (UGA Appendix C; and <https://www.livescience.com/22049-more-counties-added-drought-disaster-area.html>.;NWS-NCDC, Appendix A:9)

Since the last plan update, NCDC data records no additional instances of excessive heat. However, heat advisories were issued by the National Weather Service (which are considered the most recent excessive heat events for Wilcox County) from the dates of:

- July 16 to July 19, 2015
- June 22 to June 25, 2015
- July 11 to July 30, 2015
- June 25 to June 26, 2016
- July 5 to July 10, 2016
- July 22, 2017
- June 25 to June 26, 2018
- August 7, 2018

- August 8 to August 15, 2019, and
- September 9, 2019

With NCDC recordings of excessive heat combined with National Weather Service Heat advisories and UGA Weather Station recordings, it is appropriate to determine that Wilcox County has experienced 25 excessive heat events from 1999 to 2019 and 10 excessive heat events from 2015 to August 2020. It is important to keep in mind that data for this hazard has only recently been recorded. Therefore, the number of occurrences is assumed to be much higher.

A future occurrence of excessive heat could cause crops to be damaged or lost, restrictions on water use, the drying up of wells, and a generally negative affect on the county’s well-being, in some cases excessive heat can even result in a loss of life. In the future, the measures put forth in this plan need to be enacted to limit the amount of impact excessive heat can have on Wilcox County and the municipalities included.

For an estimate of potential losses due to excessive heat it seems also appropriate to focus upon agriculture. In the most recent 2017 Census of Agriculture, Wilcox County had a total of 287 farms, with 90,704 acres of farmland in use. (Appendix C). The total market value of products sold in 2017 was \$98,642,000 a 6% decrease from the 2012 Census of Agriculture for Wilcox County.

Probability

As stated above, in the last twenty-one years (July 1999- August 2020) there have been 25 official recorded occurrences “excessive heat.” The current chance per year that an excessive heat event will occur is 119.05%, as noted in the Hazard Frequency Table (Appendix D, II). Additionally, the annual frequency for the last ten and twenty years are 1.8 and 1.15, respectively. Finally, keeping in mind that the older the data the more incomplete, we can see that the annual frequency for the last fifty years is 0.5 with a historical recurrence interval of 0.84 years. Taking this into consideration, it is “Highly Likely” that the county will experience another period of excessive heat in the next five to ten years.

| Occurrence Probability in Years | Likelihood of Future Occurrence |
|--|--|
| 1-10 | “Highly Likely” |
| 10-25 | “Likely” |
| 25-50 | “Unlikely” |
| 50 or greater | “Highly Unlikely” |

C. Inventory of Assets and Potential Losses

The Wilcox County Joint Hazard Mitigation Plan Update Committee concluded that Excessive Heat presents no direct threat to structures or critical facilities. However, wildfire and drought, which can result from conditions of excessive heat were considered.

Additionally, as a result of Excessive Heat, crops are damaged or loss, water use is restricted, wells become dry, nature is affected by a minimal water supply, and at its extreme, excessive Heat can cause a loss of life. Although the entire population of Wilcox County (8,635) is at risk to the effects of excessive heat (see Worksheet 3A in Appendix A:9), the elderly and very low income populations are most likely to not have

air conditioning and be more vulnerable to excessive heat and high humidity. According to 2019 population estimates from the U.S. Census, 1,572 persons (18.2%) in Wilcox County were aged 65 or older. According to 2014-2018 Census estimates and 2,660 individuals (30.8%) were living below the poverty line. (Appendix C)

D. Development Trends

There are no specific trends concerning Excessive Heat in the county comprehensive plan. Future land use maps cannot address the threat of natural non-spatial occurrences such as excessive heat.

Between 2010 and 2019 (Census population estimates, Appendix C), Wilcox County experienced a decrease in population from 9,255 to 8,635 or a decrease of 6.7%. According to the Governor's Office of Planning and Budget, Wilcox County is projected to have a population of 8,778 in 2025 (1.7% increase from 2019 estimates), a population of 8,824 in 2030 (0.52% increase from 2025 projections), and a population of 8,869 (0.5% increase from 2025 projections). For the sixteen-year period (2019-2030), Wilcox County is projected to increase in population by 2.7%.

There exists a need for updated, coordinated, countywide land use planning/subdivision/manufactured housing regulations/increased code enforcement/nuisance ordinances/growth management and implementation. Wilcox County has rudimentary land use regulations, road acceptance/subdivision ordinances, a manufactured home ordinance, and others to address specific issues or nuisances. Abbeville and Rochelle have zoning ordinances and building code enforcement in place and since the last plan update, the City of Pitts adopted a Manufactured Housing Ordinance and the City of Pineview adopted an "Unsafe Buildings and Premises." Enforcement of these ordinances by city code enforcement will assist in providing oversight that ensures the safety of individuals, businesses, and encourage community-wide priority for structural integrity. Code enforcement in the county is related to solid waste although future plans are for increased inspections and enforcement. These ordinances need updating through coordination and joint collaboration/code enforcement to initiate a more comprehensive approach. (Comprehensive Plan, Appendix B)

While technically only the larger municipalities, Abbeville and Rochelle, are required, because of their zoning ordinance, to have a Land Use element in their comprehensive plan under the Georgia Department of Community Affairs' planning standards, all local governments in the county have chosen to participate and include the element in the joint comprehensive plan. Existing land use maps visually convey to all concerned the current landscape and correlation of extant development. Future land use maps illustrate to all concerned the community's vision and desires for additional growth and development. Such depictions also lend credence and supporting background information important to understanding and illustrating official local government policy in designating lands unsuitable for solid waste handling facilities in local solid waste management plans. Land use maps do provide official display of community desires and goals for compatible future growth and development. The community's land use maps are, however, a general policy guide and framework, not necessarily a rigid or unchangeable picture of future growth and development. Not all growth or developments can be foreseen, and other events could necessitate a change in community vision or desires. The depicted pattern of desired future growth and development displayed on future land use maps is a current statement and reflection of community expectations and desires. It provides a context, framework and background for the public and private sector to utilize to plan, evaluate, shape, guide, and influence proposed developments and other decisions

affecting the use of the land and community growth and development. The plan provides a context for forethought, examination of impacts and consequences, and mitigation of land use decisions on the community's growth and development. Land Use Maps for Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle can be reviewed in Appendix B.

E. Multi-Jurisdictional Concerns

All of Wilcox County could potentially be affected by excessive heat conditions, due to its effect on the water supply and its propensity to lead to drought and wildfire conditions. However, since most of the county farms and agriculture are located outside the city boundaries there is the greater risk for crop damage and direct economic loss in unincorporated areas. Vulnerable populations are more likely to be affected by excessive heat conditions in incorporated areas due to characteristics of population density throughout the County. There is not a specific impact map for this hazard. Please see Appendix A:9 to examine the Wilcox County Land Use Map and the Wilcox County Critical Facilities Map. (Appendix A:9)

Since the last plan update, Wilcox County applied for FEMA grant funding to purchase generators and for a community safe room. The City of Pitts applied for FEMA grant funding to purchase generators for City Hall, the City Gym, and for two wells located within the city. The City of Pitts also applied for FEMA grant funding to construct a community center; however, the City of Pitts was not awarded this funding. The City of Abbeville has applied for FEMA grant funding to purchase one tornado siren, and six generators to power City Hall, two pumping stations, and two wells within the city. At this time, FEMA grant funding has not been awarded to Wilcox County, the City of Pitts, or the City of Abbeville for these projects. No other developments or projects have been achieved to increase or decrease vulnerability to excessive heat in Wilcox County or the Cities of Abbeville, Pineview, Pitts, and Rochelle.

F. Hazard Summary

The multiple recorded occurrences of excessive heat demonstrate potential threat this hazard poses to the county. Each occurrence has the potential to affect the county's economy, natural resources and population. Additionally, when an event coincides with a drought it will greatly increase the likelihood of wildfires. The potential devastation of these three hazards when occurring in conjunction illustrates the need for mitigation activities designed to lessen the impact of occurrences.

SECTION X. HAZARDOUS MATERIALS RELEASE

A. Identification of Hazard

FEMA's ready.gov provides a description of hazardous materials: "Hazardous materials come in the form of explosives, flammable and combustible substances, poisons and radioactive materials. Hazards can occur during production, storage, transportation, use or disposal. Communities may be at risk if a chemical is used unsafely or released in harmful amounts into the environment in said community.". These substances are most often released as a result of transportation accidents or because of chemical accidents in plants. (Source: <https://www.ready.gov/hazardous-materials-incidents>)

Additional definitions from various government agencies are outlined by the Institute of Hazardous Materials in the following paragraphs. "A hazardous material is any item or agent (biological, chemical, radiological, and/or physical), which has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors. Hazardous materials professionals are responsible for and properly qualified to manage such materials. This includes managing and/or advising other managers on hazardous materials at any point in their life cycle, from process planning and development of new products; through manufacture, distribution and use; and to disposal, cleanup and remediation.

Hazardous materials are defined and regulated in the United States primarily by laws and regulations administered by the U.S. Environmental Protection Agency (EPA), the U.S. Occupational Safety and Health Administration (OSHA), the U.S. Department of Transportation (DOT), and the U.S. Nuclear Regulatory Commission (NRC). Each has its own definition of a "hazardous material."

OSHA's definition includes any substance or chemical which is a "health hazard" or "physical hazard," including: chemicals which are carcinogens, toxic agents, irritants, corrosives, sensitizers; agents which act on the hematopoietic system; agents which damage the lungs, skin, eyes, or mucous membranes; chemicals which are combustible, explosive, flammable, oxidizers, pyrophorics, unstable-reactive or water-reactive; and chemicals which in the course of normal handling, use, or storage may produce or release dusts, gases, fumes, vapors, mists or smoke which may have any of the previously mentioned characteristics. (Full definitions can be found at 29 Code of Federal Regulations (CFR) 1910.1200.)

EPA incorporates the OSHA definition and adds any item or chemical which can cause harm to people, plants, or animals when released by spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment. (40 CFR 355 contains a list of over 350 hazardous and extremely hazardous substances.)

DOT defines a hazardous material as any item or chemical which, when being transported or moved in commerce, is a risk to public safety or the environment, and is regulated as such under its Pipeline and Hazardous Materials Safety Administration regulations (49 CFR 100-199), which includes the Hazardous Materials Regulations (49 CFR 171-180). In addition, hazardous materials in transport are regulated by the International Maritime Dangerous Goods Code; Dangerous Goods Regulations of the International Air

Transport Association; Technical Instructions of the International Civil Aviation Organization; and U.S. Air Force Joint Manual, Preparing Hazardous Materials for Military Air Shipments.” (Source: <https://www.ihmm.org/about-ihmm/what-are-hazardous-materials>)

These products are also shipped daily on the nation's highways, railroads, waterways, and pipelines. Chemical manufacturers are one source of hazardous materials, but there are many others, including service stations, hospitals, and hazardous materials waste sites. Varying quantities of hazardous materials are manufactured, used or stored at an estimated 4.5 million facilities in the United States--from major industrial plants to local dry-cleaning establishments or gardening supply stores.

Hazardous materials come in the form of explosives, flammable and combustible substances, poisons and radioactive materials. These substances are most often released as a result of transportation accidents or because of chemical accidents in plants.

The act of crop dusting may create what the U.S. Environmental Protection Agency refers to as “pesticide spray drift.” Pesticide spray drift is the movement of pesticide dust or droplets through the air at the time of application or soon after, to any site other than the area intended. Pesticide droplets are produced by spray nozzles used in application equipment for spraying pesticides on crops, forests, turf and home gardens. Some other pesticides are formulated as very fine dry particles (commonly referred to as dust formulations). Pesticide drift of sprays and dusts can affect people’s health and the environment, and possibly damage nearby crops. Pesticide drift can also pose health risks when sprays and dusts are carried by the wind and deposited on nearby homes, schools, playgrounds, farm workers in adjacent fields, wildlife, plants, and streams and other water bodies. (Source: <https://www.epa.gov/reducing-pesticide-drift/introduction-pesticide-drift#effects>)

B. Hazard Profile

Location

The threat of a hazardous materials incident can be anywhere in Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle. In Wilcox County the most probable threats could be from agricultural chemical exposure, accidents on highways, railways, leaking underground storage tanks, and at local industries.

Wilcox County is located on two water aquifers: the Floridian/Jacksonian Aquifer System and the Miocene-Pliocene-to-Recent Aquifer. Shallow wells (Surficial Aquifer) extend below the sandy clay strata into coarse to fine sands, but the capacity and quality are generally poor. Small diameter wells (150 to 250 feet deep) supply adequate water for domestic use, while wells drilled for public, industrial, and irrigation use generally range from 400 to 700 feet deep and yield 300 to 1,000 gallons per minute. The Miocene-Pliocene-to-Recent Aquifer System also supplies water; however, the Floridian /Jacksonian Aquifer System supplies most of the water used in Wilcox County. Both aquifers are part of the Floridian Aquifer System. The county also has a number of natural springs sites, including Brown’s Lake, Poor Robin, Wolvins, Oswichee, and others, which historically provided water for consumption, medicinal, and recreation purposes. Said to possibly be the largest aquifer in the world (it covers one-third of Georgia, most of Florida, and parts of Alabama and South Carolina), the Floridian Aquifer also provides approximately 50 percent of Georgia’s groundwater.

The release of hazardous materials into the ground in Wilcox County could compromise ground water for every person and animal within the Wilcox County and the municipalities located within depending on the circumstances of hazardous materials release event.

Hazardous Materials release along pathways of shipping and travel is a concern for each city in Wilcox County. Wilcox County is located in South Central Georgia; 154.9 miles southeast of Atlanta, 78.7 miles southeast of Macon, 146.6 miles from Brunswick, 163.1 miles from Savannah and 17.8 miles east of the Cordele Inland Port. U.S. Highway 280 passes east to west through the City of Abbeville; U.S. Highway 129 passes north to south through the Cities of Abbeville, Rochelle, and Pitts; Georgia State Route 215 passes east to west through the Cities of Rochelle and Pitts; Georgia State Route 233 passes northwest to southeast through the City of Rochelle; Georgia State Route 159 passes north to south through the City of Pitts; and Georgia State Route 121 passes east to west through the Cities of Pineview and Rochelle. Wilcox County is also located about 69.8 miles southeast of Interstate 75 and about 89.4 miles southwest of Interstate 16. Railway owned by the Georgia Department of Transportation runs through Wilcox County from East to West through the Cities of Abbeville and Rochelle. The Heart of Georgia Railroad runs west to northeast through the City of Vidalia. U.S. Highway 1 accompanies traffic travelling to and from areas located along the Coastal inland of Georgia and more densely populated areas in Coastal Florida (such as Jacksonville, Florida).

Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle are more at risk for hazardous materials release events occurring along travel and shipping paths due to their proximity to shipping pathways, fueling stations, and population concentration. Current large industries requiring shipping include agriculture, including the most prominent crops of cotton, watermelons, cabbage, and cantaloupe, which is grown and shipped from locations across the country. The county's current large employers include Dollar General, Georgia Department of Corrections, Glen Eagle Healthcare and Rehab, Global Abbeville, LLC, Harold Martin Trucking, LLC, McIntyre Golf Development, Inc., Olam Americas, Inc., Shady Pines Estate, LLC, Snipes Finer Foods, and Wilcox County State Bank. (GDOL, Appendix C)

The entire population residing and working in Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle remain vulnerable to adverse effects derived from farm-related hazardous material. Due to broad range of common use, transport, and the fact that Wilcox County is predominately an agricultural county that utilizes hazardous materials for crop support, Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle are at risk for exposure to hazardous materials. One specific hazardous material, farm-related chemicals, which may be hazardous to farmworkers, their families, as well as the rest of the county's population is a concern for Wilcox County and the municipalities within.

In the most recent 2017 Census of Agriculture, Wilcox County had a total of 287 farms, with 90,704 acres of farmland in use. (Census of Agriculture, Appendix C). The total market value of products sold in 2017 was \$98,642,000 a 6% decrease from the 2012 Census of Agriculture for Wilcox County. Additionally, 69.09% percent of the land area of Wilcox County is forested, as noted in the Wilcox County's (most recent) 2016 Community Wildfire Protection Plan. (Appendix C) Wilcox County is largely an agricultural county; the sale of crops is significant to economic conditions in Wilcox County and the municipalities within. Chemicals such as pesticides and fertilizers are used to ensure crop yield. Often, these chemicals are applied to crops through the use of crop dusters, or planes designed to apply chemicals to crops by

flying over and depositing chemicals directly on crops as the plane flies over the area. In short, a disruption or damage to these products would have a severe impact.

The Wilcox County Local Emergency Operations Plan (LEOP) identifies that Emergency Support Functions in Wilcox County involve coordination with volunteer fire departments in City of Abbeville, Rochelle, Pitts, and Pineview and the Wilcox County Volunteer Fire Department. The Georgia Department of Environmental Protection provides guidance in regard to reporting, regulation, and oversight. Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle cooperate with volunteer fire departments within the County, the Georgia Emergency Management Agency, the Georgia Forestry Commission, the Federal Emergency Management Agency, OSHA, Georgia and U.S. EPD, and U.S. and Georgia Departments of Transportation to ensure an hazardous materials release event is handled and resolved properly, in accordance with state and federal regulations.

Extent

The Toxics Release Inventory (TRI) is a publicly available database from the federal Environmental Protection Agency (EPA) that contains information on toxic chemical releases and other waste management activities reported annually by certain covered industry groups as well as federal facilities. This inventory was established under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and expanded by the Pollution Prevention Act of 1990. Each year, facilities that meet certain activity thresholds must report their releases and other waste management activities for listed toxic chemicals to EPA and to their state or tribal entity. A facility must report if it meets the following three criteria:

- The facility falls within one of the following industrial categories: manufacturing; metal mining; coal mining; electric generating facilities that combust coal and/or oil; chemical wholesale distributors; petroleum terminals and bulk storage facilities; RCRA Subtitle C treatment, storage, and disposal (TSD) facilities; and solvent recovery services;
- Has 10 or more full-time employee equivalents; and
- Manufactures or processes more than 25,000 pounds or otherwise uses more than 10,000 pounds of any listed chemical during the calendar year. Persistent, bioaccumulative and toxic (PBT) chemicals are subject to different thresholds of 10 pounds, 100 pounds or 0.1 grams depending on the chemical.

The 2019-2024 Georgia Hazard Risk Strategy did not include Hazardous Materials as a specific hazard, although this hazard was considered for addition in its plan. Hazardous materials were mentioned in eligibility criteria for HMGP, FMA and PDM programs ("localized flood control projects, which are designed specifically to protect critical facilities (defined as hazardous materials facilities, emergency operation centers, power facilities, water facilities, sewer and wastewater treatment facilities, communications facilities, emergency medical care facilities, fire protection, and emergency facilities) and that do not constitute a section of a larger flood control system."

The Georgia Department of Natural Resources' 2019 Hazardous Site Inventory (HSI) is a list of sites in Georgia where there has been a known or suspected release of a regulated substance above a reportable quantity, and which have yet to show they meet state clean-up standards found in the Rules for Hazardous Site Response or in the Voluntary Remediation Program Act. The HSI is compiled and published by the

Georgia Environmental Protection Division (EPD). At least once each year, EPD will publish the HSI and send one copy to the clerk of the superior court of each county in Georgia. The clerk is required to keep the most current copy of the HSI where the deed records of the county are kept so that anyone may have ready access to it.

When a release of a regulated substance is discovered in soil or groundwater, the property owner must determine if the Rules for Hazardous Site Response require notification to EPD about the release. If so, the property owner must submit a notification, and EPD determines if a release above a reportable quantity has occurred. EPD does this by using the Reportable Quantities Screening Method (RQSM). RQSM assigns numerical values to such factors as the toxicity, quantity, and physical state of the regulated substance released, how close the site is to nearby residents and drinking water wells, the degree to which the release is contained, the accessibility of the site, whether or not the release has resulted in exposure to nearby residents, and the presence of on-site sensitive environments. RQSM uses a mathematical equation to combine the numerical values for these factors into a single score for soil or groundwater. If this score is above a certain number for either soil or groundwater, a release exceeding a reportable quantity has occurred and the site is placed on the HSI. EPD may also place a site on the HSI if the site otherwise poses a threat to human health or the environment. A complete description of how EPD uses RQSM can be found in the document "Guidance Manual for the Reportable Quantities Screening Method" on EPD's web page at <http://epd.georgia.gov/sites/epd.georgia.gov/files/RQSMManual.pdf>.

The categories of sites evaluated by the HSI are those where the property owner has filed a release notification with EPD. Notifications are evaluated using RQSM to determine if a release exceeding a reportable quantity exists at the site. If EPD determined that a reportable quantity exists, the site was placed on the HSI. If EPD had not decided to list a site as of June 25th the site will not be listed in that year's edition of the HSI. The discovery and listing of new sites on future editions of the HSI will be an ongoing process. Prior to the first publication of the HSI in 1994, EPD evaluated a second category of sites, those listed on the March 2, 1994 version of what is known as Wastelan. Wastelan is a report that the United States Environmental Protection Agency (USEPA) uses to summarize information contained in its main superfund database which is known as CERCLIS. The Wastelan report is a list of all sites discovered in Georgia that USEPA has been or will be investigating under the federal superfund program. If USEPA's investigation shows that a site on Wastelan is a high priority for cleanup under the federal superfund program, USEPA puts it on the National Priorities List (NPL). Sites that do not make it onto the NPL will not be cleaned up by USEPA under the federal superfund program unless they pose an imminent danger to human health and the environment; sites that pose an imminent danger may be cleaned up by USEPA through an emergency action. Only a small number of sites that appear on Wastelan will ever be placed on the NPL. This means that USEPA has determined that they do not pose enough of a threat to be considered a priority for cleanup using resources under the federal superfund program. The HSI also identifies properties that are part of another site already listed on the HSI. A property can be sublisted as part of a site when EPD determines that a release discovered on that property is associated with the site that has already been listed on the HSI.

The HSI is published at least once a year each July. EPD updates the HSI as needed to add or remove sites or to provide new information about sites as it becomes available. The listing of a site on the HSI, a change in the site's various designations on the HSI, or its removal can occur at any time throughout the year; the

effective dates are not limited to the date of publication of the HSI. An electronic version is available on EPD's website at <http://epd.georgia.gov/hazardous-site-inventory>.

Sites listed on the HSI are required to meet the state's clean-up standards for hazardous sites. The clean-up standards establish levels for regulated substances that are protective of human health and the environment under specific conditions. The sites listed on the HSI are separated into five classes, which are described as follows:

CLASS I. Sites that have resulted in known human exposure to regulated substances, that have sources of continuing releases, or that are causing serious environmental problems are designated on the HSI as Class I sites. These sites will be EPD's highest priority for corrective action. Persons responsible for these sites are required to perform corrective action and put a notice in the deed to their property. If a responsible party fails to perform corrective action as required, EPD may use the state hazardous waste trust fund to clean up the site and then recover the cost of the cleanup from the responsible party later.

CLASS II. For many sites listed on the HSI, further evaluation of the site must be done before EPD can decide whether corrective action is needed. These are known as Class II sites. Persons responsible for Class II sites are given an opportunity to voluntarily investigate and clean up their site and report their findings to EPD. The site is either removed from the HSI or reclassified as Class I, III, or IV based on whether it meets clean-up standards. While classified as Class II, sites are not designated as needing corrective action, so property owners do not immediately have to place notices on deeds and other property records. If a responsible party at a Class II site fails to do the required investigation, the site priority can be upgraded to Class I.

CLASS III. Sites designated on the HSI as Class III sites are those that do not meet residential clean-up standards but do meet alternative clean-up standards. These sites are designated as needing corrective action and the property owners are required to make the same deed notices as apply to Class I sites. These sites may require continued monitoring to make sure they continue to meet the appropriate standards. They will also require further corrective action before they can be used for residential purposes. Class III sites that meet the non-residential standards (Types 3 and 4) will be removed from the HSI once the property owner has filed a deed notice. Land use at sites that meet only the Type 5 standards is restricted, and the responsible party must provide long term monitoring and maintenance of the site. Restrictions are typically described in an environmental covenant and a listing of ECs is available at <http://epd.georgia.gov/uniformenvironmental-covenants>.

CLASS IV. These are sites where corrective action is already being conducted or has been completed under other federal or state authority. These sites are presumed to be in compliance with the Type 5 clean-up standards. They are designated as needing corrective action, remain on the HSI, and the property owner is required to file deed notices. If it is ever determined that the corrective action at a Class IV site does not protect human health or the environment, then the site may be redesignated from Class IV to Class I. If it can be certified that the site meets one of the other clean-up standards, it can be reclassified and may be removed from the HSI.

CLASS V. These are sites that have a known release that requires corrective action and are not in compliance with any of the risk reduction standards of Rule 391-3-19-.07, but corrective action is being performed in compliance with a corrective action plan approved by the Director, which will bring the site into compliance with the risk reduction standards.

EPD may remove a site from the HSI if the applicable clean-up standards are met. Sites may also be removed from the HSI if EPD determines that a release exceeding a reportable quantity had not occurred at the time of the site's listing on the HSI.

The extent of a hazardous material release will depend on whether it is from a mobile or fixed site and the size of impact. The range of intensity will vary greatly depending on the circumstances. These factors and conditions include the material, toxicity, duration of the release and environmental conditions such as the wind and precipitation. Equipment is available that can be used to mitigate hazardous forest fuels in areas where burning and prescribed fire may not be practical. Prescribed burning of woodlands is the best management practice to reduce hazardous fuel buildup. The Georgia Forestry Commission can assist with developing a prescribed burning plan, installation of firebreaks, and also can provide equipment standby and burning assistance when personnel are available. (2016 Wilcox County CWPP, Appendix C)

Hazardous material or toxic releases can have a significant negative impact. Such events can cause multiple deaths, completely shut down facilities for 30 days or more, and cause more than 50 percent of affected properties to be destroyed or suffer major damage. In a hazardous materials incident, solid, liquid and/or gaseous contaminants may be released from fixed or mobile containers. Weather conditions will directly affect how the hazard develops. The micro-meteorological effects of the buildings and terrain can influence the travel of agents. Shielding in the form of sheltering-in-place can protect people from harmful effects. Non-compliance with fire and building codes, as well as failure to maintain existing fire and containment features can substantially increase the damage from a hazardous materials release. The duration of a hazardous materials incident can range from hours to days. Warning time is minimal to none.

The 1997 University of Georgia "Reducing Spray Drift" publication offers a guidance for pesticide spray drift and suggests that humidity levels may affect the potential for chemicals to travel by air. Low relative humidity and/or high temperature conditions cause faster evaporation of spray droplets and thus, a higher potential for drift. During evaporation, the droplets become smaller. As a rule of thumb, if the relative humidity is above 70%, the conditions are ideal for spraying. However, a relative humidity below 50% is critical enough to warrant special attention. (Source: <https://www.epa.gov/reducing-pesticide-drift/introduction-pesticide-drift#effects>) The most recent information available for historic humidity levels in Georgia are found from the Southeast Regional Climate Center, however, humidity calculations have been only updated through 2015 and only assess humidity levels for major cities within the State of Georgia rather than smaller counties or cities. Considering this, the closest recorded city to Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle is Savannah, Georgia (located approximately 89.9 miles east of Vidalia). Maximum relative humidity values usually occur during morning hours. The average maximum humidity values for Savannah, Georgia during morning hours is 84% humidity for the month of May, 86% for the month of June, 87% for the month of July, 90% for the month of August, and 90% for the month of September. (<https://sercc.com/climateinfo/historical/avgrh.html#GA>)

Based on this information, Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle would be at a heightened risk for exposure to pesticide spray drift if crop dusting is conducted after 1:00 PM and before 7:00 AM. (Information on past crop-dusting schedules is unavailable.) There are no reports of death, injury, property damage, or crop damage occurring as a result of pesticide spray drift. (Source: <https://sercc.com/climateinfo/historical/avgrh.html>)

History

No facilities or chemical releases are documented for in Wilcox County are in the United States Environmental Protection Agency's 2018 Toxics Release Inventory. (<https://www.epa.gov/trinationalanalysis>) The Georgia Hazardous Site Inventory identifies no hazardous sites in Wilcox County or the incorporated Cities within. Toxic Release Inventory identifies 19 facilities that are regulated by the United States EPA and the Georgia EPA. Four facilities reported minor to significant enforcement and compliance violations (reported on a quarterly basis) within the last 50 years. Of these 19 facilities, 5 were located in Abbeville, 5 were located in Pineview, 8 were located in Rochelle, and 1 located in Pitts. Four of the 19 facilities, including the Water Pollution Control Plant in the City of Abbeville, the Southeast and Northwest Water Pollution Plant in the City of Rochelle, and the Crossview Care Center Water Pollution Control Plant in the City of Pineview have had minor violations resulting in formal enforcement actions within the last 3 years. All four facilities have current violations, except the Crossview Care Center WPCP in Pineview, receiving formal enforcement actions from 2015-2020 (one informal enforcement action is reported for the Crossview Care Center WPCP). (US EPD and GA EPD, Appendix A:10)

Two significant violations and six minor violations (of the Clean Water Act) for the Southeast WPCP in Rochelle have occurred during eight quarters of thirteen quarterly reporting periods from April 1, 2017 to August 28, 2020 involving non-compliance in levels of chlorine, coliform, dissolved oxygen, conduit flow, and non-compliance involving improper operation and maintenance. The two significant violations occurred from April 1 to September 30, 2017 and involved increased levels of chlorine and coliform which surpassed the monthly average limit designed by the Clean Water Act. These significant violations have been resolved since October 1, 2017. The current open violation for this facility relates to improper biological oxygen demand, improper conduit flow, and improper amounts of dissolved oxygen. For the Northwest WPCP in Rochelle, two significant violations and six minor violations (of the Clean Water Act) for the Southeast WPCP in Rochelle have occurred during eight quarters of thirteen quarterly reporting periods from April 1, 2017 to August 28, 2020 involving non-compliance in levels of chlorine, coliform, dissolved oxygen, conduit flow, pH levels, and non-compliance involving proper conducting of analysis and improper operation and maintenance. From November 15, 2018 to November 16, 2018 and on the dates January 10, 24, and 27, 2019, violations included unauthorized discharge. These significant violations have been resolved since October 1, 2017. The current open violation for this facility relates to improper biological oxygen demand, improper conduit flow, and improper amounts of dissolved oxygen. The City of Rochelle has been issued a notice of these violations and the City of Rochelle places priority on seeing resolution to these issues. (US EPD and GA EPD, Appendix A:10)

One significant violation and four minor violations (of the Clean Water Act) for the Abbeville WPCP have occurred during five quarters of thirteen quarterly reporting periods from April 1, 2017 to August 28, 2020 involving non-compliance in levels of dissolved oxygen, nitrogen/ammonia totals, conduit flow, biological oxygen demand and improper operation and maintenance. The current open violation for this facility relates to improper conduit flow, improper amounts of dissolved oxygen, and nitrogen/ammonia levels. The City of Abbeville has been issued a notice of these violations and the City of Abbeville places priority on seeing resolution to these issues. (US EPD and GA EPD, Appendix A:10)

The Crossview Care Center WPCP in Pineview has had two minor violations (of the Clean Water Act) for occurring during two quarters of thirteen quarterly reporting periods from April 1, 2017 to August 28,

2020 involving non-compliance in levels of biological oxygen demand and late or missing discharge monitoring reports. Informal enforcement actions have been issued for these violations. The current open violation for this facility relates to improper levels of biological oxygen demand. The City of Pineview has been issued a notice of these violations and the City of Pineview places priority on seeing resolution to these issues. No minor or significant violations have been reported by the Toxic Release Inventory for the City of Pitts or Wilcox County unincorporated areas. No injury, death, property damage, or crop damage has been reported as a result of the above violations. As stated above, the Toxic Release Inventory records no production-related or on-site/off-site disposal or other releases for Wilcox County. (TRI Factsheet, Appendix A:10 US EPD and GA EPD, Appendix A:10)

The Georgia EPD reports 93 third-party EPD complaints for Wilcox County and jurisdictions located near Wilcox County (in which the said event could affect Wilcox County) received by the EPD since January 1, 1998. All reported environmental occurrences have occurred in or near Wilcox County have been reported from October 25, 2001 to August 27, 2019 and are all currently resolved issues. Complaints/events have occurred in each jurisdiction of Wilcox County over this period of time. (US EPD and GA EPD, Appendix A:10)

On February 11, 2014 a railroad incident spilled fuel at U.S. Highway 280 and Cemetery Road in Rochelle, Georgia. Rochelle Voluntary Fire Dept. responded and called the county to bring soil to absorb fuel. On February 15, 2014 soil remained piled near the intersection of Highway 280 and Cemetery Road; fuel began to seep out and caused a slick area on the intersection. There was not any evidence of a petroleum spill at the location. After the Georgia EPA representative with Larry brown, Wilcox County EMA Director, Mr. Brown said that a hydraulic hose had busted on the train engine right where the railroad tracks cross over cemetery road and five gallons of hydraulic fluid sprayed out. Mr. Brown also said that it was raining when he arrived and he did not see any puddling or accumulation of hydraulic fluid on the tracks but he asked the Wilcox County Public Works Department to put sand over the roadway as a precaution so the roadway would not be slippery for traffic. Dusty Carnes with Heart of GA Railroad confirmed Mr. Brown's statement and estimated the spill to be less than ten gallons. The Georgia EPD representative advised Mr. Carnes that spills over twenty-five gallons need to be reported to EPD and I gave him appropriate contact information. The Georgia EPD representative called the complainant on February 13, 2014 to advise him that there was no observable evidence of a petroleum spill remaining at the site; the complainant asserted that the sand that was spread across the roadway was used as an absorbent and should have been removed for proper disposal. The Georgia EPD representative advised the complainant that EPD could not require any form of remediation at the site since the sand did not look or smell like it was contaminated with hydraulic fluid. The Georgia EPD representative did share he complainant's concern with Larry Brown, EMA Director, and Mr. Brown said that he would contact the complainant to assist in alleviating his concerns, and that he would consider sweeping up the sand in the area if the complainant was insistent about it. The Georgia EPD representative advised Mr. Brown that the sand needed to be placed in a dumpster if removed so that it will be transported to a lined landfill to prevent further public concern and Mr. Brown agreed. This issue was resolved on February 21, 2014. (US EPD and GA EPD, Appendix A:10)

The most recent EPD complaint to occur in the jurisdiction of Rochelle which involved a chemical or biological release occurred on June 10, 2019 (closed on June 30, 2020). This event involved a dumping ground, owned by Southern Refuse Company and the Wilcox County government (located on East County

Farm Road) to allow piled up, unlined, dumping of household garbage as well as oil leakage from on-site vehicles seep fluid into unprotected ground. A full compliance inspection and follow-up investigations were initiated conducted and a notice of violation was issued to Southern Refuse. On June 23, 2020 a consent order was executed for the complaint to be tracked via the Order. (US EPD and GA EPD, Appendix A:10)

In the City of Pitts, a complaint was filed on Pitts' resident, Arthur Amerson on June 30, 2016 (closed on April 18, 2017) for creating a "junk yard" within the city limits of Pitts, which contained waste oil from salvage vehicles. An investigation was initiated by the Georgia EPD office and a violation notice was issued to Mr. Amerson. In a follow-up investigation conducted by the Georgia EPD, Mr. Amerson had cleaned up the identified waste and the complaint was closed by the Georgia EPD on April 18, 2017. (US EPD and GA EPD, Appendix A:10)

A complaint filed in an unincorporated area in Wilcox County (outside of Abbeville) since the last plan update occurred on July 14, 2015 and asserted that B&S Dairy's storm water management program is inadequate and was adversely contributing to affecting water quality in nearby, privately owned recreational ponds. An official investigation was initiated by the Georgia EPD, finding that the potential for discharge of storm water mixed with pollutants did exist, though no evidence was available to support claims of discharge. A Notice of Violation letter was issued to Mr. Schaapman (the owner of B&S Dairy) for failure to have wastes storage and disposal systems in operation that have been designed and constructed in accordance with the Natural Resources Conservation Service guidance prior to beginning operation. Conditions at B&S Dairy were improved to Natural Resources Conservation Service standards and this issue was resolved on February 28, 2017. (US EPD and GA EPD, Appendix A:10)

The most recent complaint filed on the Georgia EPD Complaint Tracking System located in the jurisdiction of Pineview occurred on March 25, 2013. This concern involved the assertion that the Pineview Peanuts and Grain Company was washing chemicals into a nearby ditch way/drainage area in Pineview Georgia. The Georgia EPD representative met with the owner of the Pineview Peanuts and Grain Company on March 27, 2013 at the company site. The owner advised the business washes off peanut trailers used to haul peanuts during the harvesting season, which primarily consists of dirt and loose peanut hulls. Wastewaters are not captured and are allowed to flow into a nearby ditch way that transports waters off-site and ultimately into the City's storm water canals. No washing activities were conducted during the visit and it appeared that washing activities took place only following peanut harvesting season in/around late November through December. The business does sell commercial grade fertilizers and herbicides on-site, but all products were pre-packaged or bagged and the business was not involved with the application of those products using business equipment (sprayers, spreader trucks, etc.). The Georgia EPD representative provided technical assistance to the owner on how to prevent a source discharge occurring from the site, asked the owner to modify his power washing operation to prevent such waters from discharging directly into the City's ditch way and reminded the owner that any wastewaters generated from washing out fertilizer and herbicide tanks and equipment from business or personal farming equipment on-site should be captured and disposed of properly, which could include the land application of such waters at an agronomic rate provided by the local UGA Cooperative Extension Service. The Georgia EPD representative contacted the complainant and advised him of investigation findings and complaint resolution. This complaint was resolved on March 28, 2013. (US EPD and GA EPD, Appendix A:10)

Probability

The threat of a hazardous materials incident can be anywhere in Wilcox County and the Cities of Abbeville, Rochelle, Pitts and Pineview but in Wilcox County most probable threats could be from agricultural chemical exposure, accidents on highways, railways, leaking underground storage tanks, and at local industries. The risk of hazardous spills during transport exists and may increase in areas with industrial development and transportation ways. Due to the wide-spread presence of agricultural business in Wilcox County, hazardous materials release from agricultural chemicals could occur anywhere in the county and its municipalities. Although the Georgia EPD reports 93 third-party complaints, these complaints have not resulted in any confirmed toxic or radiological releases. The Toxic Release Inventory reports 23 minor to major violations from four facilities in Wilcox County from 2017 to 2020. The planning committee decided that the probability of future occurrences is likely to occur again. The current chance per year that a hazardous materials release can occur is 766.67%, as noted in the Hazard Frequency Table (Appendix D, II). Additionally, the annual frequency for the last 10 and 20 years are 2.3 and 1.15, respectively. Finally, keeping in mind that data is limited, we can see that the annual frequency for the last 50 years is 0.46, with a historical recurrence interval of 0.13 years. The probability that hazardous materials release will continue to occur every couple of years is “Highly Likely.”

| Occurrence Probability in Years | Likelihood of Future Occurrence |
|--|--|
| 1-10 | “Highly Likely” |
| 10-25 | “Likely” |
| 25-50 | “Unlikely” |
| 50 or greater | “Highly Unlikely” |

C. Inventory of Assets and Potential Losses

The Wilcox County Joint Hazard Mitigation Plan Update Committee concluded that hazardous materials release in itself presents no direct threat to existing structures. However, wildfire, as a result of hazardous materials release, was considered, and the Committee determined that in this manner the hazard poses a significant threat to the county.

In addition, it is important to consider that hazardous materials release impacts residents, public health, and agriculture. A hazardous materials release may compromise, therefore reduce, the amount of available water for public use. Since the majority of homes and businesses draw from underground water sources, businesses and residents are dependent upon its availability. Additionally, hazardous materials release could result in structural condemnation and loss of use. All 8,635 residents of Wilcox County and 1,104 employees working in Wilcox County could be affected by a hazardous materials release. (See Worksheet 3A in Appendix A:10) In Worksheet 3A: Inventory of Assets (appearing in Appendix A and D: III), we estimate that all of Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle are equally vulnerable to this hazard. Because data broken down by jurisdiction are not consistently available, it was not possible to break down these worksheets by jurisdiction; therefore, they refer to the entire county, including the five cities in this plan.

Of Wilcox County’s 102 critical facilities, seven received a wildfire hazard score of “0,” 10 received a score of “1,” nine received a score of “2,” seventy-five received a score of “3,” and one received a hazard score of “4.”

In Wilcox County, there are 4,223 residential structures, 396 commercial structures, 13 industrial structures, 3,341 agricultural structures, 198 religious/non-profit structures, 96 government structures, 16 educational structures, and 29 utility structures. All of these structures are equally exposed to indirect hazardous materials release in the case the release results in wildfire. Ignited chemicals that cause damage to structures would largely be dependent on the location of the hazardous materials at the time, and this could occur on any travel throughway in the County. To address specific critical facilities and infrastructure, each facility was examined on an individual basis, entered into the GMIS database, and located on a Wilcox County Critical Facilities Map, which is located in Appendix A:10 along with a Wilcox County Land Use Map.

The total built structures, including critical facilities, of Wilcox County have an estimated replacement value of \$241,368,409. The total value of all residential structures in Wilcox County is \$90,899,998. The value of commercial structures in Wilcox County is \$14,634,920. Industrial facilities in Wilcox County have a value of \$9,495,775. The value of agricultural structures in Wilcox County is \$50,084,350. Religious/non-profit structures in Wilcox County are valued at \$6,174,485. Government facilities in Wilcox County are valued at \$6,087,393. Educational facilities in Wilcox County are valued at \$32,311,193. Finally, the value of utility structures in Wilcox County is \$31,680,295. At this time there are no known future buildings, infrastructure, or critical facilities to be located in the county requiring special mitigation strategies. Additionally, all 8,635 residents of Wilcox County and 1,104 employees working in Wilcox County could be affected by a hazardous materials release.

Crop damage as a result of a hazardous materials release event could have a severe impact upon the county's local economy and food supply. According to the 2017 USDA Census of Agriculture report (Appendix C), Wilcox County had 287 farms with 90,704 acres of farmland and crop sales totaling \$98,642,000. (2017 USDA Census of Agriculture, Appendix C)

D. Development Trends

There is little commercial, residential and industrial development in Wilcox County. Between 2010 and 2019 (Census population estimates, Appendix C), Wilcox County experienced a decrease in population from 9,255 to 8,635 or a decrease of 6.7%. According to the Governor's Office of Planning and Budget, Wilcox County is projected to have a population of 8,778 in 2025 (1.7% increase from 2019 estimates), a population of 8,824 in 2030 (0.52% increase from 2025 projections), and a population of 8,869 (0.5% increase from 2025 projections). For the sixteen-year period (2019-2030), Wilcox County is projected to increase in population by 2.7%. Future land use maps cannot address the threat of natural non-spatial occurrences such as hazardous materials release events. Therefore, there is no way to tell whether new development is in a hazard prone area since all areas are equally vulnerable. In the future, each citizen and any number of structures (commercial, industrial, public/institutional, residential), critical facilities, and infrastructure, in any part of the county, could potentially be damaged by a hazardous materials release event. The largest concerns during a hazardous materials release event for Wilcox County would result from compromised natural resources in the incorporated and unincorporated parts of the county.

A review of the comprehensive plan illustrates that the county currently has no land use or development trends specifically related to a hazardous materials release event. There exists a need for updated, coordinated, countywide land use planning/subdivision/manufactured housing regulations/increased

code enforcement/nuisance ordinances/growth management and implementation. Wilcox County has rudimentary land use regulations, road acceptance/subdivision ordinances, a manufactured home ordinance, and others to address specific issues or nuisances. Abbeville and Rochelle have zoning ordinances and building code enforcement in place and since the last plan update, the City of Pitts adopted a Manufactured Housing Ordinance and the City of Pineview adopted an “Unsafe Buildings and Premises.” Enforcement of these ordinances by city code enforcement will assist in providing oversight that ensures the safety of individuals, businesses, and encourage community-wide priority for structural integrity. Code enforcement in the county is related to solid waste although future plans are for increased inspections and enforcement. These ordinances need updating through coordination and joint collaboration/code enforcement to initiate a more comprehensive approach. (Comprehensive Plan, Appendix B)

While technically only the larger municipalities, Abbeville and Rochelle, are required, because of their zoning ordinance, to have a Land Use element in their comprehensive plan under the Georgia Department of Community Affairs’ planning standards, all local governments in the county have chosen to participate and include the element in the joint comprehensive plan. Existing land use maps visually convey to all concerned the current landscape and correlation of extant development. Future land use maps illustrate to all concerned the community’s vision and desires for additional growth and development. Such depictions also lend credence and supporting background information important to understanding and illustrating official local government policy in designating lands unsuitable for solid waste handling facilities in local solid waste management plans. Land use maps do provide official display of community desires and goals for compatible future growth and development. The community’s land use maps are, however, a general policy guide and framework, not necessarily a rigid or unchangeable picture of future growth and development. Not all growth or developments can be foreseen, and other events could necessitate a change in community vision or desires. The depicted pattern of desired future growth and development displayed on future land use maps is a current statement and reflection of community expectations and desires. It provides a context, framework and background for the public and private sector to utilize to plan, evaluate, shape, guide, and influence proposed developments and other decisions affecting the use of the land and community growth and development. The plan provides a context for forethought, examination of impacts and consequences, and mitigation of land use decisions on the community’s growth and development. Land Use Maps for Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle can be reviewed in Appendix B.

The 2016 Wilcox County Community Wildfire Protection Plan lists “Plan and prioritize hazardous fuel treatment programs” as a collaborative goal of Wilcox County and the Georgia Forestry Commission in accordance with FEMA Mitigation Policy MRR-2-08-01. The action plan designed for reducing the propensity of wildfire as a result of hazardous materials release (in Wilcox County and the Cities of Abbeville, Rochelle, Pineview, and Pitts) includes:

- reducing hazardous fuels by encouraging prescribed burning for private landowners and industrial timberlands particularly adjacent to residential areas
- seeking grants for WUI mitigation, encouraging railroads and utilities to better maintain their right-of-way.
- eliminating brush and grass through herbicide and mowing; maintaining roads, trails, etc. as fire lines and create new fire lines.

- maintain firebreaks along right-of-way adjacent to residential areas, and
- clean hazardous or flammable debris from adjacent properties (2016 Wilcox County CWPP, Appendix C)

E. Multi-Jurisdictional Concerns

The local governments of Wilcox County, including Wilcox County, the City of Abbeville, the City of Pineview, the City of Pitts, and the City of Rochelle, have long been in compliance with the Environmental Planning Criteria, having adopted and implementing, consistent “Environmental Conservation, On-Site Sewage Management, and Permit” Ordinances in 2001. However, additional enforcement efforts are needed regarding the model ordinance based on Georgia DNR’s Part V Environmental Planning Criteria for significant wetlands, groundwater recharge areas, and protected river corridor. The 2018 Wilcox County Multi-Jurisdictional Comprehensive Plan outlines objectives to maintain viable agriculture/forestry uses, protect/conservate natural resources, to enhance intergovernmental coordination and government/efficiencies, and upgrade local infrastructure all help implement, and maintain consistency with, the regional water plan. (The vision of the regional water plan is to “to wisely manage, develop and protect the region’s water resources...to enhance quality of life..., protect natural systems..., and support the basin’s economy”) There is need to manage this growth with appropriate land use ordinances, which support agricultural uses in Wilcox County and the municipalities within. The Wilcox County Local Emergency Operations Plan prescribes guidance for addressing hazardous materials release in Wilcox County and all jurisdictions within. The development and enforcement of ordinances related to hazardous materials release is an area that the plan update committee focused upon in the creation of the Goals, Objectives, and Actions section.

In the incorporated and unincorporated areas of Wilcox County (including Abbeville, Rochelle, Pineview, and Pitts), the threat of natural non-spatial occurrences including hazardous materials release is equally applicable. All areas of the county are susceptible to non-spatial threats. Therefore, any mitigation steps taken related to hazardous materials release should be applied to the entire County, including the Cities of Abbeville, Pineview, Pitts, and Rochelle. It is impossible to prevent public exposure to the broad range of forms and channels of which hazardous materials may be released.

Wilcox County and the Cities of Abbeville, Pineview, Pitts, and Rochelle have a variety of needs that would assist in serving the community in mitigation activities as listed in the 2018 Wilcox County Multi-Jurisdictional Comprehensive Plan located in Appendix B. Needs mentioned in the 2018 Wilcox County Multi-Jurisdictional Comprehensive Plan are addressed in goals and objectives, located in Chapter 3 of this plan, in accordance with the consideration and review of the Wilcox County Hazard Mitigation Plan Update Committee.

Since the last plan update, Wilcox County applied for FEMA grant funding to purchase generators and for a community safe room. The City of Pitts applied for FEMA grant funding to purchase generators for City Hall, the City Gym, and for two wells located within the city. The City of Pitts also applied for FEMA grant funding to construct a community center; however, the City of Pitts was not awarded this funding. The City of Abbeville has applied for FEMA grant funding to purchase one tornado siren, and six generators to power City Hall, two pumping stations, and two wells within the city. At this time, FEMA grant funding has not been awarded to Wilcox County, the City of Pitts, or the City of Abbeville for these projects. No other developments or projects have been achieved to increase or decrease vulnerability to a hazardous materials release in Wilcox County or the Cities of Abbeville, Pineview, Pitts, and Rochelle.

G. Hazard Summary

Through examination of highways, thoroughfares and potential sites the committee has determined that the occurrence of a hazardous materials incident is a threat to the county, including the Cities of Abbeville, Rochelle, Pineview, and Pitts. Though the potential for property damage and injury is greatest within the incorporated areas of the county (due to more development within in the incorporated areas relative to unincorporated areas), incidents are likely to have harmful effects in any location. A hazardous materials incident can happen any time throughout the year. The amount of damage that they cause is dependent upon the extent and severity of the hazard. The mitigation action steps that have been included in this document are focused upon reducing the impact that a hazardous materials release would cause to the property and residents of Wilcox County.

Chapter 3: Natural Hazard Mitigation Goals and Objectives

| Chapter 3 Section | Updates to Section |
|--|---|
| I. Introduction to Mitigation Strategy | Priorities Altered, Capability Assessment updated. |
| II. Thunderstorms/Windstorms | Goal text revised, two hazards combined; content reprioritized based on Committee decision. Revision of objectives, tasks, and actions steps to meet recommendations of committee |
| III. Tornado | Goal text revised, two hazards combined; content reprioritized based on Committee decision. Revision of objectives, tasks, and actions steps to meet recommendations of committee |
| IV. Tropical Storm/Hurricane | New Hazard |
| V. Flooding | Goal text revised, two hazards combined; content reprioritized based on Committee decision. Revision of objectives, tasks, and actions steps to meet recommendations of committee |
| VI. Severe Winter Weather | Goal text revised, two hazards combined; content reprioritized based on Committee decision. Revision of objectives, tasks, and actions steps to meet recommendations of committee |
| VII. Wildfire | Goal text revised, two hazards combined; content reprioritized based on Committee decision. Revision of objectives, tasks, and actions steps to meet recommendations of committee |
| VIII. Hailstorm | Goal text revised, two hazards combined; content reprioritized based on Committee decision. Revision of objectives, tasks, and actions steps to meet recommendations of committee |
| IX. Drought | Goal text revised, two hazards combined; content reprioritized based on Committee decision. Revision of objectives, tasks, and actions steps to meet recommendations of committee |
| X. Excessive Heat | New Hazard |
| XI. Hazardous Materials | New Hazard |

I. INTRODUCTION TO MITIGATION STRATEGY

A. Priority Changes

Goals and objective statements have been updated from the 2015 plan to reflect the progress that Wilcox County has made, as well as to reflect any new developments related to mitigation actions. The county has taken steps to implement many of the previously identified mitigation strategies, achieving successes

in several of the objective areas. The update committee believed that the majority of the action steps remain relevant from the previously approved plan but decided for plan modification in hazard priority/hazard addition/hazard deletion as follows: the three new hazards of Tropical Storm/Hurricane, Excessive Heat, and Hazardous Materials were introduced. The Wilcox County Hazard Mitigation Plan Update Committee believed that these hazards should be addressed for Wilcox County.

Overall, there have not been any major developments that have altered the prioritization of objectives or goals. However, in reviewing each of the action steps the committee made decisions to change the assigned priority level of certain actions based upon a variety of factors. Changes in priority levels have been noted next to each action. A more detailed description of the process used to determine prioritization can be found in Section C below.

B. Capability Assessment

The Wilcox County Emergency Management Agency (EMA) Director will coordinate with the appropriate city agency personnel in order to execute any and all multi-jurisdictional steps. The EMA Director will function as the coordinator of the Hazard Mitigation action plan implementation efforts. The director will work with the appropriate county and municipality officials, boards and committees on the various aspects of the plan.

Wilcox County currently utilizes comprehensive land use planning and building codes to guide and control development in the city and county. The current land use regulations and building codes will provide the basis for additions and revisions that are related to hazard mitigation. In addition, the city and county have designated officials responsible for development and building code-related issues, including the creation of additional regulations.

The City of Abbeville, Rochelle, Pitts, and Pineview Volunteer Fire Departments and Wilcox County volunteer fire department provide an excellent resource for achieving many of the outlined hazard mitigation actions. Coordination between the departments will provide a unified approach to mitigation initiatives. Members of all departments are continuously obtaining additional training and certifications in order to increase the overall safety of the county. These departments are also regularly applying for and receiving grants to increase their capabilities and effectiveness.

County officials regularly coordinate and cooperate with the efforts of the local offices of both the Georgia Forestry Commission and the UGA Cooperative Extension Agency. Both of these organizations provide excellent partners for implementing many of the Hazard Mitigation Actions related to drought and wildfire. The Wilcox County Hazard Mitigation Plan will be presented to the committees and persons responsible for updating Comprehensive Plans and Capitol Improvement plans, for their use in incorporating the Hazard Mitigation goals and objectives. A copy will also be given to Wilcox County Community Wildfire Protection Plan Committee, who works with the Georgia Forestry Commission to update the Community Wildfire Protection Plan. This provides an additional resource for Wildfire mitigation actions. Resources and personnel that are already in place will be utilized for these efforts.

Other officials and organizations to be involved in the implementation of the mitigation actions include Wilcox County Emergency Management Agency, City of Abbeville, Pineview and Rochelle police departments, City of Abbeville public works, the Wilcox County Sheriff's department, Wilcox County Road

Department, Wilcox County Health Department, the City Councils of Abbeville, Rochelle, Pitts, and Pineview, and the Wilcox County Commission.

C. Community Mitigation Goals

In order to develop the mitigation goals the Update Committee analyzed the updated risk assessment data and reviewed the implementation status of the 2015 goals. From this they were able to determine the relevancy and importance of each goal. After open discussion and deliberation, a decision was made to maintain the goals included in the original plan. Additionally, no new goals were added.

The goals are listed below. The order in which they placed reflect the overall perceived threat that each hazard poses to Wilcox County, as decided by the update committee.

Goal 1: Reduce damage caused by severe storms and high winds that result from thunderstorms/windstorms in Wilcox County.

Goal 2: Reduce damage caused by severe storms and high winds that result from tornadoes in Wilcox County.

Goal 3: Reduce damage caused by high winds/flooding that result from tropical storms and hurricanes in Wilcox County.

Goal 4: Reduce flood damage in Wilcox County.

Goal 5: Reduce damage resulting from ice, sleet, and snow during severe winter storms in Wilcox County.

Goal 6: Prevent damage caused by wildfire in Wilcox County.

Goal 7: Reduce damage caused by ice during hailstorms in Wilcox County.

Goal 8: Reduce the economic impact of drought in Wilcox County.

Goal 9: Minimize the impact of extreme temperatures on the citizens of Wilcox County.

Goal 10: Reduce damage caused by hazardous materials release incidents in Wilcox County.

D. Identification & Analysis of Range of Mitigation Options

Structural and Non-Structural Mitigation

The committee identified structural and non-structural mitigation measures to ensure that the community addresses issues related to each hazard. Structural goals include retrofitting critical facilities, adopting/enforcing building codes, notifying new builders if they are in a floodplain, adding additional storm drainage in throughout each municipality, constructing irrigation ponds and developing/acquiring a community safe shelter. The non-structural measures include acquiring additional firefighting equipment, increasing citizen preparedness, and regular training of emergency response members.

Existing Policies, Regulations, Ordinances, and Land Use

The committee made the recommendation to continue seeking the inclusion of more thorough policies to address appropriate hazards. Existing FEMA Firm maps have been recently updated. This will be addressed in the mitigation action plan for Floods. The County and the Cities of Abbeville, and Pitts are members of the National Flood Insurance Program, the Cities of Rochelle and Pineview are not (this decision made at the discretion of officials in those cities.) Wilcox County also has an Environmental

Conservation ordinance which prevents development along the Ocmulgee River Corridor, a protected natural resource. The County and Cities will continue to adopt and implement policies, regulations and ordinances related to hazard mitigation.

The land use policies, regulations and building ordinances were reviewed. There exists a need for updated, coordinated, countywide land use planning/subdivision/manufactured housing regulations/increased code enforcement/nuisance ordinances/growth management and implementation. Wilcox County has rudimentary land use regulations, road acceptance/subdivision ordinances, a manufactured home ordinance, and others to address specific issues or nuisances. Abbeville and Rochelle have zoning ordinances and building code enforcement in place and since the last plan update, the City of Pitts adopted a Manufactured Housing Ordinance and the City of Pineview adopted an “Unsafe Buildings and Premises.” Enforcement of these ordinances by city code enforcement will assist in providing oversight that ensures the safety of individuals, businesses, and encourage community-wide priority for structural integrity. Code enforcement in the county is related to solid waste although future plans are for increased inspections and enforcement. These ordinances need updating through coordination and joint collaboration/code enforcement to initiate a more comprehensive approach. (Comprehensive Plan, Appendix B)

While technically only the larger municipalities, Abbeville and Rochelle, are required, because of their zoning ordinance, to have a Land Use element in their comprehensive plan under the Georgia Department of Community Affairs’ planning standards, all local governments in the county have chosen to participate and include the element in the joint comprehensive plan. (Comprehensive Plan, Appendix B)

Community Values, Historic & Special Considerations

The mitigation strategies pose no threat to historical properties or any facility that requires special consideration. Community values are reflected in the proposed measures, as reflected in concerns expressed in the Wilcox County-Abbeville, Rochelle, Pitts, and Pineview Joint Comprehensive Plan. In order to help ensure that the values and priorities of the county’s citizens were included the planning committee sought the input of representatives from a variety of groups and organizations. The strategies will preserve the rural/agrarian culture and community values of Wilcox County, protecting the hometown feel of each jurisdiction while increasing each municipality’s preparedness for this type of event. (STAPLEE, Appendix D: III)

Prioritization of Actions

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

To evaluate action step priorities, committee members used the STAPLEE (Social, Technical, Administrative, Political, Legal, Economic, and Environmental) criteria provided by FEMA as a guide. Each mitigation strategy step was evaluated using STAPLEE criteria to identify those steps most relevant to Wilcox County and the jurisdictions within (Appendix D, III). Benefit cost analysis was discussed informally within Wilcox County’s formal committee meetings to determine an estimate of cost for each action step and financial benefit for implementation. Committee members chose to assign priority rankings to action

steps through the qualitative method of “relative rating,” as described in FEMA’s Mitigation Planning for Local and Tribal Communities Course (IS-318, Module 4, Lesson 3).

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

In prioritizing the implementing of the action steps identified in this plan, those hazards deemed to pose the greatest threat will be given the primary consideration. Based on the qualitative and quantitative considerations of hazard frequency, the possible scale of hazard damage, past occurrence, and level of urgency for community need, steps were ranked as high priority, medium priority, or low priority. In prioritizing the implementation feasibility of the action steps and projects, local governments will take into consideration the additional factors of cost and time. Those activities requiring smaller amounts of money and staff time to implement will be given highest implementation priority. Those steps requiring additional funding for equipment or staff time beyond the normal budgets of the communities will be incorporated into the budget process when possible and be given medium or low priority levels based on the scope and feasibility of each specific project.

Priority rankings were noted within each action step as: “H” representing high priority, “M” representing medium priority, and “L” representing low priority. Past occurrences of disasters and local expertise aided committee members in assigning priorities. The ranking of each step is listed under the appropriate section for that strategy.

II. Thunderstorms/Windstorms

Goal 1: Reduce damage caused by severe storms and high winds that result from thunderstorms/windstorms in Wilcox County.

Objective 1.1: Protect life, health and property of residents from high winds from windstorms/thunderstorms.

Action 1.1 - Increase public awareness of emergency topics by publishing articles in the local newspaper, holding town hall meetings, and providing bulletins to local churches and the schools (i.e., Emergency Public Audible Warning System, NOAA Weather Radio Systems, Local Emergency Shelters, individual safe rooms, National Weather Service Operations, Local Emergency Plans, social media and the Local Emergency Management Agency. Etc.) Wilcox County and its municipalities – **H**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2022 |
| Cost | \$5,000.00 (Staff Time/Materials, News Articles, Town Hall Meetings) |
| Funding Source(s) | General Fund/GEMA |
| Status | Ongoing |

Action 1.2 – Seek funding to purchase and/or rent debris removal equipment. -**M**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director, Volunteer Fire Departments/ Chiefs |
| Timeline | 2020-2023 |
| Cost | \$250,000.00 (Staff Time/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA/CDBG |
| Status | Ongoing |

Action 1.3- Educate citizens on the dangers posed by power outages and downed/damaged powerlines – **H**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director, Georgia Power, Middle GA EMC, Volunteer Fire Departments/ Chiefs |
| Timeline | 2020-2022 |
| Cost | \$2,000.00 (Staff Time/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | Ongoing |

Action 1.4- Seek funding to attain equipment for emergency vehicles– **H**

| | |
|----------------------|-------------------------------------|
| Responsible Org.(s) | Wilcox County (BOC) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2023-2024 |
| Cost | \$450,000.00 (Staff Time/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA/USDA/SPLOST |
| Status | Ongoing |

Action 1.5 Seek funding to purchase generators, related wiring hardware, and provide for retrofitting/installment costs associated with generator install in critical facilities. (i.e., schools & other public buildings, nursing home, backups in all cities, Water stations, Wastewater Lift Stations, etc.) – **H**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2023-2024 |
| Cost | \$2,000,000 (Staff Time/Materials) |
| Funding Source(s) | General Fund/GEMA/ FEMA |
| Status | New |

Action 1.6 Seek funding to purchase and install a radio tower. --**H**

| | |
|----------------------|---|
| Responsible Org.(s) | Wilcox County (BOC) |
| Coordinating Org.(s) | Wilcox County-EMA Director |
| Timeline | 2021-2026 |
| Cost | \$10,000,000 (Staff Time and Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA/ USDA/ DCA/ HUD/CDBG-MIT/DNR |
| Status | New |

Future Building and Infrastructure

The update committee discussed development trends and the impact that thunderstorm/windstorm occurrence could have upon future structures. The mitigation steps included above are intended to apply to both new and existing structures. Specifically, new builders will be encouraged to remove hazardous trees on their property. All new buildings and infrastructure will be required to comply, where applicable.

Existing Buildings and Infrastructure

The mitigation steps included above are intended to apply to both new and existing structures. Existing buildings and infrastructure will be included in recommendations to retrofit to withstand wind and storm conditions. Additionally, current property owners will be encouraged to remove hazardous trees as needed.

Special Multi-Jurisdictional Strategy and Considerations

Due to the fact that this is a non-spatial hazard, the threat is present in both the incorporated and un-incorporated parts of Wilcox County. The occurrence of this event is unpredictable; therefore, all considerations and strategies apply equally to the county, Abbeville, Rochelle, Pitts, and Pineview.

Since the last plan update, Wilcox County applied for FEMA grant funding to purchase generators and for a community safe room. The City of Pitts applied for FEMA grant funding to purchase generators for City Hall, the City Gym, and for two wells located within the City. The City of Pitts also applied for FEMA grant funding to construct a community center; however, the City of Pitts was not awarded this funding. The City of Abbeville has applied for FEMA grant funding to purchase one tornado siren, and six generators to power City Hall, two pumping stations, and two wells within the City. At this time, FEMA grant funding has not been awarded to Wilcox County, the City of Pitts, or the City of Abbeville for these projects. No other developments or projects have been achieved to increase or decrease vulnerability to a thunderstorm/windstorm in Wilcox County or the Cities of Abbeville, Pineview, Pitts, and Rochelle.

Completed and deleted action steps from previous plan.

Completed: None

Deleted: None

Unchanged/Changed action steps from previous plan update:

All of the action steps changed in number to reflect the change in priority order of the hazards that have changed since the last plan update, i.e., action steps 4.1 to 4.4 from the previous plan are now 1.1 to 1.4. The Wilcox County Hazard Mitigation Update Committee reviewed the STAPLEE criteria for this hazard and feels that these action steps remain pertinent for preparing the community for possible disaster situations. Each action step is viewed as an ongoing effort with progress being made toward these action steps as funding becomes available.

Modifications involved additions in verbiage, updated timelines, , a row for action step status was added, revisions in cost of action, and additions in coordinating organizations. Modifications are as follows:

Action Step 1.1 (formerly 4.1) – “social media” was added to list of public outreach methods in description.

Action Step 1.2 (formerly 4.2) – Action verbiage was changed from “Encourage the removal of potential hazardous and/or dangerous trees” to “Seek funding to purchase and/or rent debris removal equipment. Timeline updated; cost updated to reflect appropriate purchase prices of debris removal equipment; Funding sources were updated, adding FEMA and CDBG as possible funding sources. Volunteer Fire Departments were added as coordinating organizations.

Action Step 1.3 (formerly 4.3) – Action verbiage was changed from “Educate citizens on the dangers posed by power outages” to “Educate citizens on the dangers posed by power outages and downed/damaged powerlines.” Timeline updated; Georgia Power, Middle GA EMC, Volunteer Fire Departments/ Chiefs were added as coordinating organizations.

Action Step 1.4 (formerly 4.4) – Timeline updated; cost updated to reflect appropriate purchase prices of emergency vehicles; Funding sources were updated, adding USDA and SPLOST as possible funding sources.

New Action Steps:

Action 1.5 Seek funding to purchase generators, related wiring hardware, and provide for retrofitting/installment costs associated with generator install in critical facilities. (i.e., schools & other public buildings, nursing home, backups in all cities, Water stations, Wastewater Lift Stations, etc.) – **H**

Action 1.6 Seek funding to purchase and install a radio tower. --**H**

No other actions were considered to be added other than new Action Steps 1.5 and 1.6.

III. Tornadoes

Goal 2: Reduce damage caused by severe storms and high winds that result from tornadoes in Wilcox County.

Objective 2.1: Protect life, health and property of residents from force of tornadoes.

Action 2.1 Seek funding to purchase generators, related wiring hardware, and provide for retrofitting/installment costs associated with generator install in critical facilities. (i.e., schools & other public buildings, nursing home, backups in all cities, Water stations, Wastewater Lift Stations, etc.) – H

– H

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2023-2024 |
| Cost | \$2,000,000 (Staff Time/Materials) |
| Funding Source(s) | General Fund/GEMA/ FEMA |
| Status | Ongoing |

Action 2.2 Seek funding to expand and maintain an Emergency Public Address System (Warning System) and tornado sirens. - H

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2025 |
| Cost | \$250,000 (Staff Time/Materials) |
| Funding Source(s) | General Fund/GEMA/ FEMA |
| Status | Ongoing |

Action 2.3 - Increase public awareness of emergency topics by publishing articles in the local newspaper, holding town hall meetings, and providing bulletins to local churches and the schools (i.e., Emergency Public Audible Warning System, NOAA Weather Radio Systems, Local Emergency Shelters, individual safe rooms, National Weather Service Operations, Local Emergency Plans, social media, Festivals, and the Local Emergency Management Agency. Etc.) Wilcox County and its municipalities – H

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2022 |
| Cost | \$5,000.00 (Staff Time/Materials, News Articles, Town Hall Meetings) |
| Funding Source(s) | General Fund/GEMA |
| Status | Ongoing |

Action 2.4 Update all Emergency Response Plans –L

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2022 |
| Cost | \$5,000 (Staff Time/Materials) |
| Funding Source(s) | General Fund |
| Status | Ongoing |

Action 2.5 Encourage citizens to use individual safe rooms and to develop an emergency plan and survival kit. - H

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2023 |
| Cost | \$2,000(Staff Time/Materials/News Articles/Town Hall Meetings) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | Ongoing |

Action 2.6 – Seek funding to purchase and/or rent debris removal equipment. -M

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2023 |
| Cost | \$250,000.00 (Staff Time/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA/CDBG |
| Status | New |

Action 2.7- Educate citizens on the dangers posed by power outages and downed/damaged powerlines – H

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director, Georgia Power, Middle GA EMC, and City and County Volunteer Fire Departments |
| Timeline | 2020-2022 |
| Cost | \$2,000.00 (Staff Time/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | New |

Action 2.8- Seek funding to attain equipment for emergency vehicles– H

| | |
|----------------------|-------------------------------------|
| Responsible Org.(s) | Wilcox County (BOC) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2023-2024 |
| Cost | \$450,000.00 (Staff Time/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA/USDA/SPLOST |
| Status | New |

Action 2.9- Seek funding to acquire and maintain equipment at community shelters– H

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2022 |
| Cost | \$100,000(Staff Time/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | Ongoing |

Action 2.10- Encourage mobile homeowners to use proper tie-downs as required by state regulations– H

| | |
|----------------------|--------------------------------|
| Responsible Org.(s) | Wilcox County (BOC) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2022 |
| Cost | \$2,000 (Staff Time/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | Ongoing |

Action 2.11 Seek potential location and funding sources for community safe room and or storm shelters for severe weather events --H

| | |
|----------------------|------------------------------------|
| Responsible Org.(s) | Wilcox County (BOC) |
| Coordinating Org.(s) | Wilcox County-EMA Director |
| Timeline | 2020-2023 |
| Cost | \$2,000 (Staff Time and Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | New |

Action 2.12 Seek funding to purchase and install a radio tower. --H

| | |
|----------------------|---|
| Responsible Org.(s) | Wilcox County (BOC) |
| Coordinating Org.(s) | Wilcox County-EMA Director |
| Timeline | 2021-2026 |
| Cost | \$10,000,000 (Staff Time and Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA/ USDA/ DCA/ HUD/CDBG-MIT/DNR |
| Status | New |

Future Building and Infrastructure

The update committee discussed development trends and the impact that a tornado occurrence could have upon structures. The mitigation steps included above are intended to apply to both new and existing structures. All new buildings and infrastructure will be required to comply to new codes and ordinances, where applicable. New builders will be encouraged to remove hazardous trees on their property. New buildings may be impacted through the public awareness initiative to select roofing material that is high wind resistant could improve the quality of future buildings. Encouraging mobile homeowners to use proper tie-downs will assist in lessening the impact of tornadoes on mobile homes.

Existing Buildings and Infrastructure

The mitigation steps included above are intended to apply to both new and existing structures. Existing buildings and infrastructure will be subject to any changes in building, fire and safety codes. Existing buildings may be impacted through the public awareness initiative to select roofing material that is high wind resistant. This could improve the quality of existing buildings. Additionally, retrofitting existing government buildings will make them more resistant to high winds. The existing building designated as shelters will be maintained and improved upon when needed.

Encouraging mobile homeowners to use proper tie-downs will assist in lessening the impact of tornadoes on mobile homes.

Special Multi-Jurisdictional Strategy and Considerations

All structures and facilities within Wilcox County could be damaged by a tornado. Abbeville, Rochelle, Pitts, Pineview and the unincorporated portions of the county are equally at risk to damage from a tornado. The update committee stressed the need for cooperation and inter-coordination between the City and County in mitigation and response efforts.

Since the last plan update, Wilcox County applied for FEMA grant funding to purchase generators and for a community safe room. The City of Pitts applied for FEMA grant funding to purchase generators for City Hall, the City Gym, and for two wells located within the city. The City of Pitts also applied for FEMA grant funding to construct a community center; however, the City of Pitts was not awarded this funding. The City of Abbeville has applied for FEMA grant funding to purchase one tornado siren, and six generators to power City Hall, two pumping stations, and two wells within the city. At this time, FEMA grant funding has not been awarded to Wilcox County, the City of Pitts, or the City of Abbeville for these projects. No other developments or projects have been achieved to increase or decrease vulnerability to a tornado in Wilcox County or the Cities of Abbeville, Pineview, Pitts, and Rochelle.

Completed and deleted action steps from previous plan

Completed: None. No action steps have been completed. All steps are considered ongoing efforts or new efforts.

Deleted: None

Unchanged/Changed Action Steps from Previous Plan Update

The Wilcox County Hazard Mitigation Update Committee reviewed the STAPLEE criteria for this hazard and feels that these action steps remain pertinent for preparing the community for possible disaster situations. However, minor modifications were made to each existing action step. Each action step is viewed as an ongoing effort with progress being made toward these action steps as funding becomes available.

Modifications involved additions in verbiage, updated timelines (number of years to years expected to accomplish the action step), a row for action step status was added, revisions in cost of action, and additions in coordinating organizations and combining multiple action steps from the previous plan into one action step for conciseness and simplicity. Modifications are as follows:

Former Action steps 2.1 to 2.4 from the previous plan update were combined into one action step—Action step 2.1 in this plan update. The USDA was added as a coordinating organization and the cost was increased to reflect the appropriate cost for the staff time and materials needed to complete this action step for all jurisdictions involved.

Former Action Steps Combined to Current Action Step 2.1:

Action 2.1** Acquire funding to allow proper wiring of generator at the Civic Center/Red Cross Emergency Shelter in Pitts- **H

Action 2.2** Acquire funding to retrofit the Wilcox Agra center for generator installation- **H

Action 2.3** Acquire funding for a generator to run fuel pumps and well at the Wilcox Agra center **H

Action 2.4** Seek funding for generators and retrofitting to house them for repeater towers, water systems, and at all community shelters – **H

Current Action Step 2.1:

Action 2.1** Seek funding to purchase generators, related wiring hardware, and provide for retrofitting/installment costs associated with generator install in critical facilities. (i.e., schools & other public buildings, nursing home, backups in all cities, Water stations, Wastewater Lift Stations, etc.) – **H

Former Action Steps 2.5 and 2.12 were combined to create action step 2.2 to include the verbiage “maintain” and “tornado sirens,” the Cities of Pitts, Abbeville, Rochelle, and Pineview were added as Responsible organizations, and the cost was increased from \$50,000 (from former action step 2.5) and \$10,000 (from former action step 2.12) to \$250,000 to reflect appropriate cost for the staff time and materials needed to complete this action step for all jurisdictions involved.

Former Action Step:

Action 2.5 Seek funding to expand an Emergency Public Address System (Warning System) –H

Current Action Step:

Action 2.2 Seek funding to expand and maintain an Emergency Public Address System (Warning System) and tornado sirens. - H

Former Action Step 2.6 was modified to current action step 2.3 to include the verbiage “social media” and “festivals;” the cost was increased from \$2,000 to \$5,000 to accommodate all jurisdictions involved in the pursuit of this action step; the number of the action step was changed to “2.6” to “2.3.”

Former Action Step:

Action 2.6 Increase public awareness of emergency topics by publishing articles in the local newspaper, holding town hall meetings, and providing bulletins to local churches and the schools (i.e., Emergency Public Audible Warning System, NOAA Weather Radio Systems, Local Emergency Shelters, individual safe rooms, National Weather Service Operations, Local Emergency Plans, and the Local Emergency Management Agency. Etc.) in Wilcox County and its municipalities- H

Current Action Step:

Action 2.3 - Increase public awareness of emergency topics by publishing articles in the local newspaper, holding town hall meetings, and providing bulletins to local churches and the schools (i.e., Emergency Public Audible Warning System, NOAA Weather Radio Systems, Local Emergency Shelters, individual safe rooms, National Weather Service Operations, Local Emergency Plans, social media, Festivals, and the Local Emergency Management Agency. Etc.) Wilcox County and its municipalities – H

Former Action Step 2.7 was modified to current action step 2.4 (the number of the action step was changed to “2.7” to “2.4”) and the cost of this action step was increased from \$2,000 in staff time to \$5,000 in staff time and materials to reflect the appropriate cost to complete this action step for all jurisdictions involved.

Former Action Steps 2.8 and 2.9 were combined to create current action step 2.5 (the number of the action step was changed from “2.7” and “2.8” to “2.5”) and the cost of this action step was designated at \$2,000 for staff time and materials to reflect the appropriate cost to complete this action step for all jurisdictions involved and General Fund/FEMA/GEMA was added as funding sources.

Former Action Steps:

Action 2.8 Encourage use of individual safe rooms – H

Action 2.9 Encourage citizens to develop and have an emergency plan and survival kit – H

Current Action Step 2.5:

Action 2.5 Encourage citizens to use individual safe rooms and to develop an emergency plan and survival kit. - H

Former Action Step 2.10 was modified to current action step 2.9 (the number of the action step was changed to “2.10” to “2.9”), the Cities of Pitts, Abbeville, Rochelle, and Pineview were added as Responsible organizations, and the cost of this action step was increased from \$20,000 in staff time and materials to \$100,000 in staff time and materials to reflect the appropriate cost to complete this action step for all jurisdictions involved.

Former Action Step 2.11 was modified to current action step 2.10 (the number of the action step was changed to “2.11” to “2.10”), General Fund/FEMA/GEMA was added as funding sources, and the cost of this action step was increased from \$0.00 to \$2,000 in staff time and materials to reflect the appropriate cost to complete this action step for all jurisdictions involved.

New Action Steps

Action steps 2.6, 2.7, and 2.8 were added by the committee as appropriate actions to be pursued, as these actions are appropriate to the hazard of tornado; educating citizens in the interest of public safety and providing/maintaining equipment to jurisdictions for road clearing and post hazard recovery efforts is necessary in the event of a tornado. Current action step 2.11 was added in a recent plan amendment of the previous plan.

New Action Steps:

Action 2.6 – *Seek funding to purchase and/or rent debris removal equipment. -M*

Action 2.7- *Educate citizens on the dangers posed by power outages and downed/damaged powerlines – H*

Action 2.8- *Seek funding to attain equipment for emergency vehicles– H*

Action 2.11 *Seek potential location and funding sources for community safe room and or storm shelters for severe weather events --H*

Action 2.12 *Seek funding to purchase and install a radio tower. --H*

No other actions were considered to be added other than new Action Steps 2.6, 2.7, and 2.8, 2.11, and 2.12.

IV. Tropical Storms/Hurricanes

Goal 3: Reduce damage caused by high winds/flooding that result from tropical storms and hurricanes in Wilcox County.

Objective 3.1 Protect life, health and property of residents from high winds from tropical storms/hurricanes.

Action 3.1 Seek funding to purchase generators, related wiring hardware, and provide for retrofitting/installment costs associated with generator install in critical facilities. (i.e., schools & other public buildings, nursing home, backups in all cities, Water stations, Wastewater Lift Stations, etc.) – **H**

– **H**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2023-2024 |
| Cost | \$2,000,000 (Staff Time/Materials) |
| Funding Source(s) | General Fund/GEMA/ FEMA |
| Status | New |

Action 3.2 Seek funding to expand and maintain an Emergency Public Address System (Warning System) and tornado sirens. - **H**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2025 |
| Cost | \$250,000 (Staff Time/Materials) |
| Funding Source(s) | General Fund/GEMA/ FEMA |
| Status | New |

Action 3.3 - Increase public awareness of emergency topics by publishing articles in the local newspaper, holding town hall meetings, and providing bulletins to local churches and the schools (i.e., Emergency Public Audible Warning System, NOAA Weather Radio Systems, Local Emergency Shelters, individual safe rooms, National Weather Service Operations, Local Emergency Plans, social media and the Local Emergency Management Agency. Etc.) Wilcox County and its municipalities – **H**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2022 |
| Cost | \$5,000.00 (Staff Time/Materials, News Articles, Town Hall Meetings) |
| Funding Source(s) | General Fund/GEMA |
| Status | New |

Action 3.4 Update all Emergency Response Plans –L

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2022 |
| Cost | \$5,000 (Staff Time/Materials) |
| Funding Source(s) | General Fund/GEMA/ FEMA |
| Status | New |

Action 3.5 Encourage citizens to use individual safe rooms and to develop an emergency plan and survival kit. - H

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2022 |
| Cost | \$2,000 (Staff Time/ News Articles/Materials/Town Hall Meetings) |
| Funding Source(s) | General Fund/GEMA/ FEMA |
| Status | New |

Action 3.6 – Seek funding to purchase and/or rent debris removal equipment. -M

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2023 |
| Cost | \$250,000.00 (Staff Time/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA/CDBG |
| Status | New |

Action 3.7- Educate citizens on the dangers posed by power outages and downed/damaged powerlines – H

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director, Georgia Power, Middle GA EMC, and City and County Volunteer Fire Departments |
| Timeline | 2020-2022 |
| Cost | \$2,000.00 (Staff Time/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | New |

Action 3.8- Seek funding to attain equipment for emergency vehicles– H

| | |
|----------------------|-------------------------------------|
| Responsible Org.(s) | Wilcox County (BOC) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2023-2024 |
| Cost | \$450,000.00 (Staff Time/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA/USDA/SPLOST |
| Status | New |

Action 3.9- Seek funding to acquire and maintain equipment at community shelters– **H**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2022 |
| Cost | \$100,000(Staff Time/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | New |

Action 3.10- Encourage mobile homeowners to use proper tie-downs as required by state regulations– **H**

| | |
|----------------------|--------------------------------|
| Responsible Org.(s) | Wilcox County (BOC) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2022 |
| Cost | \$2,000 (Staff Time/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | New |

Action 3.11 Seek funding to purchase and install a radio tower. --**H**

| | |
|----------------------|---|
| Responsible Org.(s) | Wilcox County (BOC) |
| Coordinating Org.(s) | Wilcox County-EMA Director |
| Timeline | 2021-2026 |
| Cost | \$10,000,000 (Staff Time and Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA/ USDA/ DCA/ HUD/CDBG-MIT/DNR |
| Status | New |

Future Building and Infrastructure

The update committee discussed development trends and the impact that a tropical storm/hurricane occurrence could have upon structures. The mitigation steps included above are intended to apply to both new and existing structures. All new buildings and infrastructure will be required to comply to new codes and ordinances, where applicable. New builders will be encouraged to remove hazardous trees on their property. New buildings may be impacted through the public awareness initiative to select roofing material that is high wind resistant could improve the quality of future buildings. Encouraging mobile homeowners to use proper tie-downs will assist in lessening the impact of tropical Storm/hurricane on mobile homes.

Existing Buildings and Infrastructure

The mitigation steps included above are intended to apply to both new and existing structures. Existing buildings and infrastructure will be subject to any changes in building, fire and safety codes. Existing buildings may be impacted through the public awareness initiative to select roofing material that is high wind resistant. This could improve the quality of existing buildings. Additionally, retrofitting existing government buildings will make them more resistant to high winds. The existing building designated as shelters will be maintained and improved upon when needed. Encouraging mobile homeowners to use proper tie-downs will assist in lessening the impact of a tropical storm/hurricane on mobile homes.

Special Multi-Jurisdictional Strategy and Considerations

All structures and facilities within Wilcox County could be damaged by a tropical storm/hurricane event. Abbeville, Rochelle, Pitts, Pineview and the unincorporated portions of the county are equally at risk to damage from a tropical storm/hurricane. The update committee stressed the need for cooperation and inter-coordination between the City and County in mitigation and response efforts.

Since the last plan update, Wilcox County applied for FEMA grant funding to purchase generators and for a community safe room. The City of Pitts applied for FEMA grant funding to purchase generators for City Hall, the City Gym, and for two wells located within the city. The City of Pitts also applied for FEMA grant funding to construct a community center; however, the City of Pitts was not awarded this funding. The City of Abbeville has applied for FEMA grant funding to purchase one tornado siren, and six generators to power City Hall, two pumping stations, and two wells within the city. At this time, FEMA grant funding has not been awarded to Wilcox County, the City of Pitts, or the City of Abbeville for these projects. No other developments or projects have been achieved to increase or decrease vulnerability to tropical storms/hurricanes in Wilcox County or the Cities of Abbeville, Pineview, Pitts, and Rochelle.

Completed and deleted action steps from previous plan

Completed:

No action steps have been completed; all steps are considered new efforts, as tropical storm/hurricane is a newly-added hazard in this plan update.

Deleted: None – New Hazard

Unchanged/Changed Action Steps from Previous Plan Update

Changed Action Steps

New hazard – All action steps are new in this section.

Unchanged Action Steps

New hazard – All action steps are new in this section.

New Action Steps

New hazard – All action steps are new in this section.

No other actions were considered to be added.

V. Flooding

Goal 4: Reduce flood damage in Wilcox County.

Objective 4.1: Minimize losses to existing and future structures, especially critical facilities, due to flooding.

Action 4.1: Assess and repair storm water run-off, watershed plans and effectiveness of present drainage ditching, culverts, storm water and sanitation network (Abbeville, Pineview, Pitts, Rochelle & Wilcox County) –H

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director, Georgia Department of Transportation |
| Timeline | 2020-2025 |
| Cost | \$200,000 (Staff Time/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA/TSPLOST/Discretionary Public Funds |
| Status | Ongoing |

Action 4.2: Support the updating local FEMA Firm Maps in Wilcox County and its municipalities -H

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director, FEMA |
| Timeline | 2020-2025 |
| Cost | \$2,000 (Staff Time) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | Ongoing |

Action 4.3: Develop, revise, and enforce floodplain zoning and building regulations – H

| | |
|----------------------|---|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director, Georgia DNR |
| Timeline | 2023-2025 |
| Cost | \$20,000 (Staff Time/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | Ongoing |

Action 4.4: Adopt necessary ordinances for participation in NFIP - H

| | |
|----------------------|--|
| Responsible Org.(s) | Pineview (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County (BOC), Wilcox County – EMA Director, Georgia DNR |
| Timeline | 2021-2022 |
| Cost | \$500.00 (Staff Time/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | Ongoing |

Action 4.5: Educate citizens on existing County and FEMA regulations and ordinances - H

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County (BOC), Wilcox County – EMA Director |
| Timeline | 2021-2022 |
| Cost | \$2,000.00 (Staff Time/ News Articles/Town Hall Meetings, Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | Ongoing |

Action 4.6: Notify residents that reside in a flood plain. - H

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County (BOC), Wilcox County – EMA Director, Georgia DNR, Local Insurance and Banking Agents |
| Timeline | 2021-2022 |
| Cost | \$1,000.00 (Staff Time/ Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA/Georgia DNR |
| Status | Ongoing |

Action 4.7: Seek funding to add additional storm drainage where practical - H

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) and the Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County (BOC), Wilcox County – EMA Director |
| Timeline | 2021-2022 |
| Cost | \$100,000.00 (Staff Time/ Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA/CDBG |
| Status | Ongoing |

Action 4.8: Seek funding for a study to be conducted regarding storm water runoff and its effects on the wastewater system in Abbeville - H

| | |
|----------------------|---|
| Responsible Org.(s) | City of Abbeville (Mayor/Council) |
| Coordinating Org.(s) | City of Abbeville (Mayor/Council), Wilcox County – EMA Director |
| Timeline | 2021-2022 |
| Cost | \$50,000.00 (Staff Time/ Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | Ongoing |

Action 4.9: Acquire/train a building inspector knowledgeable in floodplain management - H

| | |
|----------------------|---|
| Responsible Org.(s) | Wilcox County (BOC) |
| Coordinating Org.(s) | Wilcox County (BOC), Wilcox County – EMA Director |
| Timeline | 2021-2022 |
| Cost | \$60,000.00 (Staff Time/ Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | Ongoing |

Action 4.10: Seek funding to attain equipment for emergency vehicles - **H**

| | |
|----------------------|---|
| Responsible Org.(s) | Wilcox County (BOC), Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County (BOC), Wilcox County – EMA Director |
| Timeline | 2023-2024 |
| Cost | \$100,000.00 (Staff Time/ Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | Ongoing |

Action 4.11: Seek funding to address water intrusion and treatment capacity in City wastewater treatment facility - **H**

| | |
|----------------------|---|
| Responsible Org.(s) | City of Abbeville (Mayor/Council) |
| Coordinating Org.(s) | City of Abbeville (Mayor/Council/Public Works), Wilcox County – EMA Director, Wilcox County (BOC) |
| Timeline | 2023-2026 |
| Cost | \$1,500,000 (Staff Time/Labor/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA/CDBG-MIT/USDA |
| Status | New |

Future Building and Infrastructure

The update committee discussed development trends and the impact that a flooding occurrence could have upon future structures. The mitigation steps included above are intended to apply to both new and existing structures. Specifically, developing, revising, and enforcing floodplain zoning and building regulations as well as acquiring funding to add additional drainage where practical will improve impacts of flooding in the County and Cities. All new buildings and infrastructure will be required to comply, where applicable.

Existing Buildings and Infrastructure

The mitigation steps included above are intended to apply to both new and existing structures. Existing buildings and infrastructure will be included in recommendations to retrofit to withstand wind and storm conditions.

Special Multi-Jurisdictional Strategy and Considerations

Existing buildings and infrastructure located in or adjacent to floodplains will be impacted by changes to floodplain management, storm water run-off and drainage improvements. These measures are designed to improve conditions and prevent relief from flooding issues. Property owners located in a floodplain area will be notified. All existing buildings and infrastructure will be required to comply with any flood related building codes or ordinances, where applicable. In the unincorporated areas Wilcox County, more areas are prone to flooding because of the lack of drainage, bodies of water, and other measures that increase the possibility of flooding.

The majority of flooding that occurs within the county is localized and largely caused by periods of prolonged rainfall. Flooding has occurred in different locations throughout Wilcox County. There are many creeks and streams that flow throughout the county that pose a potential threat of flooding. The Ocmulgee River runs along Wilcox County's eastern border. Many of these areas contain various agricultural, industrial and commercial resources that can suffer water damage. Flash flooding and extended heavy rainfall can cause creeks and the Ocmulgee River to rise as well as create flooding in low-lying areas of the county. The areas of the county that are most vulnerable to flooding are unincorporated areas of the county as creeks are located throughout the county and the county has hundreds of miles of dirt roads that are easily washed out.

Wilcox County, the Cities of Abbeville and Pitts are members of the National Flood Insurance Program (NFIP). The Cities of Pineview and Rochelle are not members of the NFIP due to decisions made at the discretion of elected officials.

Since the last plan update, Wilcox County applied for FEMA grant funding to purchase generators and for a community safe room. The City of Pitts applied for FEMA grant funding to purchase generators for City Hall, the City Gym, and for two wells located within the City. The City of Pitts also applied for FEMA grant funding to construct a community center; however, the City of Pitts was not awarded this funding. The City of Abbeville has applied for FEMA grant funding to purchase one tornado siren, and six generators to power City Hall, two pumping stations, and two wells within the City. At this time, FEMA grant funding has not been awarded to Wilcox County, the City of Pitts, or the City of Abbeville for these projects. The City of Abbeville has received EPD violation notices for spills related to treatment plant deficiencies, infiltration, and inflow problems since the last plan update; Abbeville is currently seeking grant funds to address water intrusion and treatment capacity in their sewer system. An action step addressing treatment plant deficiencies, infiltration, and inflow problems in the City of Abbeville has been added in this section in pursuit of reducing risk from overflows at the wastewater treatment plant and lift stations in Abbeville. No other developments or projects have been achieved to increase or decrease vulnerability to a flooding in Wilcox County or the Cities of Abbeville, Pineview, Pitts, and Rochelle.

Completed and deleted action steps from previous plan

Completed:

No action steps have been completed; all steps are considered ongoing efforts.

Deleted: None

Unchanged/Changed Action Steps from Previous Plan Update

All of the action steps changed in number to reflect the change in priority order of the hazards that have changed since the last plan update, i.e., action steps 1.1 to 1.11 from the previous plan are now 4.1 to 4.10 (former action steps 1.3 and 1.4 were combined to create current action step 4.3). The Wilcox County Hazard Mitigation Update Committee reviewed the STAPLEE criteria for this hazard and feels that these action steps remain pertinent for preparing the community for possible disaster situations. Each action step is viewed as an ongoing effort with progress being made toward these action steps as funding becomes available.

Modifications involved additions in verbiage, updated timelines (number of years to years expected to accomplish the action step), a row for action step status was added, revisions in cost of action, and additions in coordinating organizations and combining multiple action steps from the previous plan into one action step for conciseness and simplicity. Modifications are as follows:

Changed Action Steps

Former Action Step 1.1 was modified to current action step 4.1 to include the verbiage “and repair,” FEMA/GEMA/TSPLOST/ Discretionary Public Funds was added to Funding Sources, and the cost was increased from \$10,000 to \$200,000 to reflect appropriate cost for the staff time and materials needed to complete this action step for all jurisdictions involved.

Former Action Step

Action 1.2 Support the updating local FEMA Firm Maps in Wilcox County and its municipalities -H

Current Action Step

Action 4.2: Support the updating local FEMA Firm Maps in Wilcox County and its municipalities -H

Former Action Step 1.2 was modified to current action step 4.2 to include General Fund as a Funding Source, and the cost was increased from \$0.00 to \$2,000 to reflect appropriate cost for the staff time and materials needed to complete this action step for all jurisdictions involved.

Former Action Step

Action 1.1: Assess storm water run-off, watershed plans and effectiveness of present drainage ditching, culverts, storm water and sanitation network (Abbeville, Pineview, Pitts, Rochelle & County) –H

Current Action Step

Action 4.1: Assess and repair storm water run-off, watershed plans and effectiveness of present drainage ditching, culverts, storm water and sanitation network (Abbeville, Pineview, Pitts, Rochelle & Wilcox County) –H

Former Action Step 1.3 and 1.4 was combined and modified to create current action step 4.3 to include the verbiage “enforce,” the timeline was increased from 3-4 years to 3-5 years (2020-2025), the cost was increased from \$5,000.00 to \$20,000 to reflect appropriate cost for the staff time and materials needed to complete this action step for all jurisdictions involved.

Former Action Step

Action 1.3 Develop and/or revise floodplain, zoning and building regulations – H

Action 1.4 Enforce existing floodplain, zoning, and building regulations (NFIP Regulations and Standards) – H

Current Action Step

Action 4.3: Develop, revise, and enforce floodplain zoning and building regulations – H

Former Action Step 1.5 was modified to current action step 4.4; the cost was increased from \$0.00 to \$500.00 to reflect appropriate cost needed to complete this action step for all jurisdictions involved (staff time and materials was added to cost section), general fund was added as a funding source.

Former Action Step

Action 1.5 Adopt necessary ordinances for participation in NFIP- H

Current Action Step

Action 4.4: Adopt necessary ordinances for participation in NFIP - H

Former Action Step 1.6 was modified to current action step 4.5; Wilcox County EMA Director was added as a coordinating organization.

Former Action Step

Action 1.6 Educate citizens on existing County and FEMA regulations and ordinances – H

Current Action Step

Action 4.5: Educate citizens on existing County and FEMA regulations and ordinances - H

Former Action Step 1.7 was modified to current action step 4.6; the cost was increased from \$0.00 to \$1,000.00 to reflect appropriate cost needed to complete this action step for all jurisdictions involved (staff time and materials was added to cost section), general fund, DNR (Department of Natural Resources) were added as funding sources and local insurance /banking agents/ DNR were added as coordinating organizations.

Former Action Step

Action 1.7 Notify residents that reside in a flood plain – H

Current Action Step

Action 4.6: Notify residents that reside in a flood plain. - H

Former Action Step 1.8 was modified to current action step 4.7; the verbiage “(hwy 280/Rochelle; Mt. Pleasant Rd/Pineview, Hwy. 112 South, High Rock Road, Brady Road)” was deleted as it was regarded as unnecessary information to be included in the action step.

Former Action Step

Action 1.8 Seek funding to add additional storm drainage where practical (hwy 280/Rochelle; Mt. Pleasant Rd/Pineview, Hwy. 112 South, High Rock Road, Brady Road) – H

Current Action Step

Action 4.7: Seek funding to add additional storm drainage where practical - H

Former Action Step 1.9 was modified to current action step 4.8 and verbiage was modified.

Former Action Step

Action 1.9 Study storm water runoff & its effects on the wastewater system in Abbeville- **H**

Current Action Step

Action 4.8: Seek funding for a study to be conducted regarding storm water runoff and its effects on the wastewater system in Abbeville - **H**

Former Action Step 1.10 was modified to current action step 4.9; the verbiage “have” was replaced with “acquire/train.”

Former Action Step

Action 1.10 Have a building inspector knowledgeable on flood plain management. – **H**

Current Action Step

Action 4.9: Acquire/train a building inspector knowledgeable in floodplain management - **H**

Former Action Step 1.11 was modified to current action step 4.10; the Cities of Abbeville, Pitts, Pineview, and Rochelle were added as responsible organizations; Wilcox County (BOC) was added as a coordinating organization, and the cost was increased from \$10,000 to \$100,000 to reflect appropriate cost for the staff time and materials needed to complete this action step for all jurisdictions involved.

Former Action Step

Action 1.11 Seek funding to attain equipment for emergency vehicles– **H**

Current Action Step

Action 4.10: Seek funding to attain equipment for emergency vehicles - **H**

Unchanged Action Steps

None- All action steps have been modified/updated in some way.

New Action Steps

Action 4.11: Seek funding to address water intrusion and treatment capacity in City wastewater treatment facility - **H**

No other actions were considered to be added.

VI. Severe Winter Weather

Goal 5: Reduce damage resulting from ice, sleet, and snow during severe winter storms in Wilcox County.

Objective 5.1: Protect life, health and property of residents from high winds from severe winter storms.

Action 5.1 - Increase public awareness of emergency topics by publishing articles in the local newspaper, holding town hall meetings, and providing bulletins to local churches and the schools (i.e., Emergency Public Audible Warning System, NOAA Weather Radio Systems, Local Emergency Shelters, individual safe rooms, National Weather Service Operations, Local Emergency Plans, social media, and the Local Emergency Management Agency. Etc.) Wilcox County and its municipalities – **H**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2022 |
| Cost | \$5,000.00 (Staff Time/Materials, News Articles, Town Hall Meetings) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | Ongoing |

Action 5.2 Encourage citizens to use individual safe rooms and to develop an emergency plan and survival kit. - **H**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2022 |
| Cost | \$2,000 (Staff Time/ News Articles/Materials/Town Hall Meetings) |
| Funding Source(s) | General Fund/GEMA/ FEMA |
| Status | Ongoing |

Action 5.3: Seek funding to attain equipment for emergency vehicles - **H**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County (BOC), Wilcox County – EMA Director |
| Timeline | 2023-2024 |
| Cost | \$100,000.00 (Staff Time/ Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | Ongoing |

Action 5.4 – Seek funding to purchase and/or rent debris removal equipment. -**H**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2023 |
| Cost | \$250,000.00 (Staff Time/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA/CDBG |
| Status | Ongoing |

Action 5.5 – Seek funding to provide cross-training and certification for protective agencies and emergency personnel. -- **H**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council), Wilcox County Volunteer Fire Departments/ Chiefs |
| Coordinating Org.(s) | Wilcox County – EMA Director, Wilcox County Volunteer Fire Departments/ Chiefs, Sheriff’s Department, Police Departments |
| Timeline | 2020-2023 |
| Cost | \$20,000.00 (Staff Time/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | New |

Action 5.6 Seek funding to purchase generators, related wiring hardware, and provide for retrofitting/installment costs associated with generator install in critical facilities. (i.e., schools & other public buildings, nursing home, backups in all cities, Water stations, Wastewater Lift Stations, etc.) – **H**

– **H**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2023-2024 |
| Cost | \$2,000,000 (Staff Time/Materials) |
| Funding Source(s) | General Fund/GEMA/ FEMA |
| Status | New |

Action 5.7 Seek funding to expand and maintain an Emergency Public Address System (Warning System) and tornado sirens. - **H**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2025 |
| Cost | \$250,000 (Staff Time/Materials) |
| Funding Source(s) | General Fund/GEMA/ FEMA |
| Status | New |

Action 5.8 Update all Emergency Response Plans –**L**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2022 |
| Cost | \$5,000 (Staff Time/Materials) |
| Funding Source(s) | General Fund/GEMA/ FEMA |
| Status | New |

Action 5.9- Educate citizens on the dangers posed by power outages and downed/damaged powerlines – H

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director, Georgia Power, Middle GA EMC, and City and County Volunteer Fire Departments |
| Timeline | 2020-2022 |
| Cost | \$2,000.00 (Staff Time/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | New |

Action 5.10- Seek funding to acquire and maintain equipment at community shelters– H

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2022 |
| Cost | \$100,000(Staff Time/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | New |

Action 5.11 Seek funding to purchase and install a radio tower. --H

| | |
|----------------------|---|
| Responsible Org.(s) | Wilcox County (BOC) |
| Coordinating Org.(s) | Wilcox County-EMA Director |
| Timeline | 2021-2026 |
| Cost | \$10,000,000 (Staff Time and Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA/ USDA/ DCA/ HUD/CDBG-MIT/DNR |
| Status | New |

Future Building and Infrastructure

The update committee discussed development trends and the impact that Winter Storm occurrence could have upon future structures. The mitigation steps included above are intended to apply to both new and existing structures.

Existing Buildings and Infrastructure

All existing buildings and infrastructure will be required to comply with any building codes or ordinances, where applicable.

Special Multi-Jurisdictional Strategy and Considerations

Winter Storms have the potential to equally affect the entire county and each municipality, including the Abbeville, Rochelle, Pitts, and Pineview. The occurrence of this event is unpredictable; therefore, all considerations and strategies apply equally to each jurisdiction.

Since the last plan update, Wilcox County applied for FEMA grant funding to purchase generators and for a community safe room. The City of Pitts applied for FEMA grant funding to purchase generators for City Hall, the City Gym, and for two wells located within the city. The City of Pitts also applied for FEMA grant funding to construct a community center; however, the City of Pitts was not awarded this funding. The City of Abbeville has applied for FEMA grant funding to purchase one tornado siren, and six generators to power City Hall, two pumping stations, and two wells within the city. At this time, FEMA grant funding has not been awarded to Wilcox County, the City of Pitts, or the City of Abbeville for these projects. No other developments or projects have been achieved to increase or

decrease vulnerability to a Severe Winter Weather event in Wilcox County or the Cities of Abbeville, Pineview, Pitts, and Rochelle.

Completed and deleted action steps from previous plan

Completed: No action steps have been completed. All steps are considered ongoing or new efforts.

Deleted:

None

Unchanged/Changed Action Steps from Previous Plan Update

All of the action steps changed in number to reflect the change in priority order of the hazards that have changed since the last plan update, i.e., action steps 3.1 to 3.4 from the previous plan are now 5.1 to 5.4. The Wilcox County Hazard Mitigation Update Committee reviewed the STAPLEE criteria for this hazard and feels that these action steps remain pertinent for preparing the community for possible disaster situations. Action Steps 5.5 to 5.10 are new action steps that have been added in this section. Each action step is viewed as an ongoing effort with progress being made toward these action steps as funding becomes available.

Modifications involved additions in verbiage, updated timelines (number of years to years expected to accomplish the action step), a row for action step status was added, revisions in cost of action, and additions in coordinating organizations and combining multiple action steps from the previous plan into one action step for conciseness and simplicity. Modifications are as follows:

Former Action Step 3.1 was modified to current action step 5.1 to include the verbiage “social media” and “festivals;” the cost was increased from \$2,000 to \$5,000 to accommodate all jurisdictions involved in the pursuit of this action step.

Former Action Step

☑ Action 3.1 Increase public awareness of emergency topics by publishing articles in the local newspaper, holding town hall meetings, and providing bulletins to local churches and the schools (i.e., Emergency Public Audible Warning System, NOAA Weather Radio Systems, Local Emergency Shelters, individual safe rooms, National Weather Service Operations, Local Emergency Plans, and the Local Emergency Management Agency. Etc.) Wilcox County and its municipalities – H

Current Action Step

Action 5.1 - Increase public awareness of emergency topics by publishing articles in the local newspaper, holding town hall meetings, and providing bulletins to local churches and the schools (i.e., Emergency Public Audible Warning System, NOAA Weather Radio Systems, Local Emergency Shelters, individual safe rooms, National Weather Service Operations, Local Emergency Plans, social media, and the Local Emergency Management Agency. Etc.) Wilcox County and its municipalities – H

Former Action Step 3.2 was modified (renumbered according to new priority) to current action step 5.2;

Former Action Step

Action 3.2 Encourage citizens to develop and have an emergency plan and survival kit in Wilcox County and its municipalities – H

Current Action Step

Action 5.2 Encourage citizens to use individual safe rooms and to develop an emergency plan and survival kit. - H

Former Action Step 3.3 was modified (renumbered according to new priority) to current action step 5.3; the Cities of Abbeville, Rochelle, Pitts, and Pineview were added as responsible organizations; the cost was increased from \$10,000 to \$100,000 to reflect the cost requirements of all jurisdictions in pursuit of this action step.

Former Action Step

Action 3.3 Seek funding to attain equipment for emergency vehicles– H

Current Action Step

Action 5.3: Seek funding to attain equipment for emergency vehicles - H

Former Action Step 3.4 was modified (renumbered according to new priority) to current action step 5.4; the verbiage was modified to add “and/or rent;” the Cities of Abbeville, Rochelle, Pitts, and Pineview were added as responsible organizations; the cost was increased from \$20,000 to \$250,000 to reflect the cost requirements of all jurisdictions in pursuit of this action step.

Former Action Step

Action 3.4 Maintain and purchase new equipment for the purpose of debris removal- H

Current Action Step

Action 5.4 – Seek funding to purchase and/or rent debris removal equipment. -H

Unchanged Action Steps

None- All action steps have been modified/updated in some way.

New Action Steps

Action steps 5.5 to 5.11 are all new to this section, added at the consideration and recommendation of the planning committee.

No other actions were considered to be added.

VII. Wildfire

Goal 6: Prevent damage caused by wildfire in Wilcox County.

Objective 6.1: Prevent destruction of forests and structures and protect the health of residents from threat of wildfire.

Action 6.1: Improve access to airborne fire protection – L

| | |
|----------------------|---|
| Responsible Org.(s) | Wilcox County (BOC) |
| Coordinating Org.(s) | Wilcox County – EMA Director, Georgia Forestry Commission, Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Timeline | 2020-2025 |
| Cost | \$2,000(Staff Time/Materials) |
| Funding Source(s) | General Fund/GEMA/ FEMA |
| Status | Ongoing |

Action 6.2: Seek state and federal grants to acquire better fire equipment and equipment for emergency vehicles – H

| | |
|----------------------|---|
| Responsible Org.(s) | Wilcox County (BOC), Volunteer Fire Departments (Chiefs) |
| Coordinating Org.(s) | Wilcox County – EMA Director, Georgia Forestry Commission, Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Timeline | 2020-2025 |
| Cost | \$800,000 (Staff Time/Materials) |
| Funding Source(s) | General Fund/GEMA/ FEMA/ Georgia Forestry Commission/USDA |
| Status | Ongoing |

Action 6.3: Seek funding to improve wildland fire training and purchase wildland fire gear at the local fire department level – L

| | |
|----------------------|---|
| Responsible Org.(s) | Wilcox County (BOC), Volunteer Fire Departments (Chiefs) |
| Coordinating Org.(s) | Wilcox County – EMA Director, Georgia Forestry Commission, Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Timeline | 2020-2025 |
| Cost | \$10,000 (Staff Time/Materials) |
| Funding Source(s) | General Fund/GEMA/ FEMA/ Georgia Forestry Commission/USDA |
| Status | Ongoing |

Action 6.4 - Increase public awareness of emergency topics by publishing articles in the local newspaper, holding town hall meetings, and providing bulletins to local churches and the schools (i.e., Emergency Public Audible Warning System, NOAA Weather Radio Systems, Local Emergency Shelters, individual safe rooms, National Weather Service Operations, Local Emergency Plans, Social Media, festivals, and the Local Emergency Management Agency. Etc.) Wilcox County and its municipalities – **H**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2022 |
| Cost | \$5,000.00 (Staff Time/Materials, News Articles, Town Hall Meetings) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | Ongoing |

Action 6.5 – Support Georgia Forestry public outreach effort – **M**

| | |
|----------------------|---|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council), Georgia Forestry Commission |
| Coordinating Org.(s) | Wilcox County – EMA Director – Volunteer Fire Departments/Chiefs |
| Timeline | 2023-2025 |
| Cost | \$500.00 (Staff Time/Materials) |
| Funding Source(s) | General Fund |
| Status | Ongoing |

Action 6.6 – Establish tire disposal ordinance – **M**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director – Volunteer Fire Departments/Chiefs, Georgia EPD |
| Timeline | 2020-2023. |
| Cost | \$10,000.00 (Staff Time/Materials) |
| Funding Source(s) | General Fund |
| Status | New |

Action 6.7– Support an inert dumping site and seek funds from EPD to add a disposal method for tires – **H**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) |
| Coordinating Org.(s) | Wilcox County – EMA Director, Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council), Volunteer Fire Departments/Chiefs, Georgia EPD |
| Timeline | 2020-2022 |
| Cost | \$50,000.00 (Staff Time/Materials) |
| Funding Source(s) | General Fund/ FEMA, GEMA, Georgia EPD |
| Status | Ongoing |

Action 6.8 Develop building, fire, and safety codes – H

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director, Wilcox County (BOC), Volunteer Fire Departments/Chiefs |
| Timeline | 2020-2022 |
| Cost | \$2,000.00 (Staff Time/Materials) |
| Funding Source(s) | General Fund |
| Status | Ongoing |

Action 6.9 Educate citizens on the importance of obtaining burn permits from the Georgia Forestry Commission – H

| | |
|----------------------|---|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council), Georgia Forestry Commission |
| Coordinating Org.(s) | Wilcox County – EMA Director, Volunteer Fire Departments/Chiefs |
| Timeline | 2020-2025 |
| Cost | \$5,000.00 (Staff Time/ News Articles/Town Hall Meetings) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | Ongoing |

Action 6.10 Investigate methods to provide landowners an incentive to prescribe burn timberland thereby minimizing heavy fuel loads --L

| | |
|----------------------|---|
| Responsible Org.(s) | Wilcox County (BOC), Georgia Forestry Commission |
| Coordinating Org.(s) | Wilcox County – EMA Director, Volunteer Fire Departments/Chiefs |
| Timeline | 2020-2025 |
| Cost | \$2,000.00 (Staff Time/ Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | Ongoing |

Action 6.11 Encourage landowners to create more fire breaks - L

| | |
|----------------------|---|
| Responsible Org.(s) | Wilcox County (BOC) |
| Coordinating Org.(s) | Wilcox County – EMA Director, Volunteer Fire Departments/Chiefs |
| Timeline | 2020-2025 |
| Cost | \$500.00 (Staff Time/ Materials) |
| Funding Source(s) | General Fund |
| Status | Ongoing |

Action 6.12 Create new fire departments in areas that are not adequately covered -- M

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director, Volunteer Fire Departments/Chiefs |
| Timeline | 2023-2024 |
| Cost | \$500,000.00 (Staff Time/ Materials) |
| Funding Source(s) | General Fund/USDA/FEMA/GEMA |
| Status | Ongoing |

Action 6.13 Designate water resources that are available for fire protection. - L

| | |
|----------------------|---|
| Responsible Org.(s) | Wilcox County (BOC) |
| Coordinating Org.(s) | Wilcox County – EMA Director, Volunteer Fire Departments/Chiefs |
| Timeline | 2020-2022 |
| Cost | \$2,000.00 (Staff Time/ Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | Ongoing |

Future Building and Infrastructure

The update committee discussed development trends and the impact that wildfire occurrence could have upon future structures. The mitigation steps included above are intended to apply to both new and existing structures. All new buildings and infrastructure will be required to comply to new building codes and ordinances, where applicable. The construction of new buildings and development was specifically examined in regard to developing and implementing building, fire and safety codes, as well as addressing growing urban interface issues.

Existing Buildings and Infrastructure

The mitigation steps included above are intended to apply to both new and existing structures. Existing buildings and infrastructure will be subject to any changes in building, fire and safety codes.

Special Multi-Jurisdictional Strategy and Considerations

In the incorporated areas of Wilcox County, the threat of wildfires is low to moderate due to the relatively low fuel load that is present within the Abbeville, Rochelle, Pitts, and Pineview City limits. However, in the unincorporated areas of Wilcox County, the threat of wildfires is much higher due to the moderate to high fuel loads that exist in the more rural locations. These fuel load areas significantly increase the threat of wildfires, especially during drought conditions when all of the existing vegetation is drier. While the unincorporated areas are at greater risk, wind direction and fuel loads can quickly push a fire toward either of the municipalities. As such, the mitigation measures should be applied across each jurisdiction within Wilcox County. The update committee stressed the need for cooperation and inter-coordination between the Cities and County, as well as with local Georgia Forestry Commission efforts. Detailed jurisdictional information and mitigation efforts are addressed in the Wilcox County Community Wildfire Protection Plan, which was consulted by the update committee in the development of the Hazard Mitigation Plan.

Since the last plan update, Wilcox County applied for FEMA grant funding to purchase generators and for a community safe room. The City of Pitts applied for FEMA grant funding to purchase generators for City Hall, the City Gym, and for two wells located within the city. The City of Pitts also applied for FEMA grant funding to construct a community center; however, the City of Pitts was not awarded this funding. The City of Abbeville has applied for FEMA grant funding to purchase one tornado siren, and six generators to power City Hall, two pumping stations, and two wells within the city. At this time, FEMA grant funding has not been awarded to Wilcox County, the City of Pitts, or the City of Abbeville for these projects. No other developments or projects have been achieved to increase or decrease vulnerability to a Wildfire event in Wilcox County or the Cities of Abbeville, Pineview, Pitts, and Rochelle.

Completed and deleted action steps from previous plan

Completed: No action steps have been completed. All steps are considered ongoing efforts with the exception of action step 6.6, which is a new action step.

Deleted: None

Unchanged/Changed Action Steps from Previous Plan Update

All of the action steps changed in number to reflect the change in priority order of the hazards that have changed since the last plan update, i.e., action steps 5.1 to 5.19 from the previous plan are now represented in action steps 6.1 to 6.13. The Wilcox County Hazard Mitigation Update Committee reviewed the STAPLEE criteria for this hazard

and feels that these action steps remain pertinent for preparing the community for possible disaster situations. Action Step 6.6 is a new action step added to this section since the last plan update. Each action step is viewed as an ongoing effort with progress being made toward these action steps as funding becomes available. Objectives were combined into one objective instead of the three objectives from the previous plan as the planning committee considered these objectives to be redundant.

Modifications involved additions in verbiage, updated timelines (number of years to years expected to accomplish the action step), a row for action step status was added, combined action steps, revisions in cost of action, and additions in coordinating organizations and combining multiple action steps from the previous plan into one action step for conciseness and simplicity. Modifications are as follows:

Former Action Step 5.1 was modified (renumbered according to new priority) to current action step 6.1; the Georgia Forestry Commission and the Cities of Abbeville, Rochelle, Pitts, and Pineview were added as coordinating organizations.

Former Action Step

Action 5.1 Improve access to airborne fire protection – L

Current Action Step

Action 6.1: Improve access to airborne fire protection – L

Former Action Step 5.2 was modified (renumbered according to new priority) to current action step 6.2 Cities of Abbeville, Rochelle, Pitts, and Pineview were added as coordinating organizations; the timeline was extended to 2020-2025 instead of the previous “1-2 years;” and the Georgia Forestry Commission and USDA were added as funding sources. Action steps 5.15 and 5.19 were combined into new action step 6.2 as the committee considered the former action step to be redundant.

Former Action Step

Action 5.2 Seek state and federal grants to acquire better fire equipment – H

Action 5.15 Acquire funding for better equipment – H

5.19 Seek funding to attain equipment for emergency vehicles– H

Current Action Step

Action 6.2: Seek state and federal grants to acquire better fire equipment and equipment for emergency vehicles – H

Former Action Step 5.3 was modified (renumbered according to new priority) to current action step 6.3 Cities of Abbeville, Rochelle, Pitts, and Pineview were added as coordinating organizations; Volunteer Fire Departments (Chiefs) were added as responsible organizations; the cost was increased from \$5,000 to \$10,000 to reflect the cost requirements of all jurisdictions in pursuit of this action step; and the Georgia Forestry Commission and USDA were added as funding sources. Action step 5.14 was combined into new action step 6.3 as the committee considered the former action step to be redundant.

Former Action Step

Action 5.3 Improve wildland training at the local fire department level – L

Action 5.14 Seek grants to train firefighters on wildfire tactics and attain necessary equipment – H

Current Action Step

Action 6.3: Seek funding to improve wildland fire training and purchase wildland fire gear at the local fire department level – L

Former Action Step 5.4 was modified (renumbered according to new priority) to current action step 6.4; action steps 5.13, 5.16, and 5.17 were combined into action step 6.4 as the committee regarded these steps as redundant.

Former Action Step

Action 5.4 *Improve public awareness of wildfire techniques such as putting out small fires with garden hose and the importance of fire buffers around the home by publishing articles in the local newspaper, holding town hall meetings, radio announcements and providing bulletins to local churches and schools – H*

Action 5.13 *Increase public awareness of wildfire dangers around the home and community, such as lighted matches, cigarettes, trash, and the process for obtaining burn permits by publishing articles in the local newspaper, holding town hall meetings, radio announcements and providing bulletins to local churches and schools – H*

Action 5.16 *Increase public awareness of wildfire dangers by publishing articles in the local newspaper, holding town hall meetings, radio announcements and providing bulletins to local churches and schools – H*

Action 5.17 *Increase public awareness of wildland fire interface issues – H*

Current Action Step

Action 6.4 - *Increase public awareness of emergency topics by publishing articles in the local newspaper, holding town hall meetings, and providing bulletins to local churches and the schools (i.e., Emergency Public Audible Warning System, NOAA Weather Radio Systems, Local Emergency Shelters, individual safe rooms, National Weather Service Operations, Local Emergency Plans, social media, festivals, and the Local Emergency Management Agency. Etc.) Wilcox County and its municipalities – H*

Former Action Step 5.5 was modified (renumbered according to new priority) to current action step 6.5 Cities of Abbeville, Rochelle, Pitts, and Pineview were added as responsible organizations; Volunteer Fire Departments (Chiefs) were added as responsible organizations; the cost was increased from \$0.00 to \$500.00 to reflect the cost requirements of all jurisdictions in pursuit of this action step;

Former Action Step

Action 5.5 *Support Georgia Forestry Public Outreach efforts – M*

Current Action Step

Action 6.5 – *Support Georgia Forestry public outreach effort – M*

Former Action Step 5.6 was modified (renumbered according to new priority) to current action step 6.7 Cities of Abbeville, Rochelle, Pitts, and Pineview, Volunteer Fire Departments (Chiefs), and the Georgia EPD were added as coordinating organizations.

Former Action Step

Action 5.6 *Support an inert dumping site and seek funds from EPD to add a disposal method for tires – H*

Current Action Step

Action 6.7– *Support an inert dumping site and seek funds from EPD to add a disposal method for tires – H*

Former Action Step 5.7 was modified (renumbered according to new priority) to current action step 6.8; Volunteer Fire Departments (Chiefs) and Wilcox County –EMA Director were added as a coordinating organization.

Former Action Step

Action 5.7 *Develop building, fire and safety codes – H*

Current Action Step

Action 6.8 *Develop building, fire, and safety codes – H*

Former Action Step 5.8 was modified (renumbered according to new priority) to current action step 6.9; The Georgia Forestry Commission was added as a responsible organization; the Wilcox County –EMA Director was added as a coordinating organization.

Former Action Step

Action 5.8 *Educate citizens on the importance of obtaining burn permits from the Georgia Forestry Commission – H*

Current Action Step

Action 6.9 *Educate citizens on the importance of obtaining burn permits from the Georgia Forestry Commission – H*

Former Action Step 5.9 was modified (renumbered according to new priority) to current action step 6.10; the Georgia Forestry Commission was added as a responsible organization; the Wilcox County – EMA Director was added as a coordinating organization; the cost was increased from \$0.00 to \$500.00 to reflect the cost requirements of all jurisdictions in pursuit of this action step;

Former Action Step

Action 5.9 Investigate methods to provide landowners an incentive to prescribe burn timberland thereby minimizing heavy fuel loads – L

Current Action Step

Action 6.10 Investigate methods to provide landowners an incentive to prescribe burn timberland thereby minimizing heavy fuel loads --L

Former Action Step 5.10 was modified (renumbered according to new priority) to current action step 6.11; the Wilcox County – EMA Director was added as a coordinating organization; the cost was increased from \$0.00 to \$500.00 to reflect the cost requirements of all jurisdictions in pursuit of this action step;

Former Action Step

Action 5.10 Encourage landowners to create more fire breaks –L

Current Action Step

Action 6.11 Encourage landowners to create more fire breaks – L

Former Action Step 5.11 was modified (renumbered according to new priority) to current action step 6.13; the timeline was modified to 2020-2022 from “5 years” from the previous action step.

Former Action Step

Action 5.11 Designate water resources that are available for fire protection –L

Current Action Step

Action 6.13 Designate water resources that are available for fire protection. - L

Former Action Step 5.18 was modified (renumbered according to new priority) to current action step 6.12; Cities of Abbeville, Rochelle, Pitts, and Pineview were added as responsible organizations; the Wilcox County – EMA Director was added as a coordinating organization; the cost was increased from \$50,000 to \$500,000 to reflect the cost requirements of all jurisdictions in pursuit of this action step; the USDA was added as a funding source.

Former Action Step

Action 5.18 Create new fire departments in areas that are not adequately covered – M

Current Action Step

Action 6.12 Create new fire departments in areas that are not adequately covered -- M

Former Action Step 5.18 was modified (renumbered according to new priority) to current action step 6.12; Cities of Abbeville, Rochelle, Pitts, and Pineview were added as responsible organizations; the Wilcox County – EMA Director was added as a coordinating organization; the cost was increased from \$50,000 to \$500,000 to reflect the cost requirements of all jurisdictions in pursuit of this action step; the USDA was added as a funding source.

Former Action Step

Action 5.18 Create new fire departments in areas that are not adequately covered – M

Current Action Step

Action 6.12 Create new fire departments in areas that are not adequately covered -- M

Unchanged Action Steps

None- All action steps have been modified/updated in some way.

New Action Steps

Action step 6.6 is new to this section, added at the consideration and recommendation of the planning committee.

Action 6.6 – Establish tire disposal ordinance – M

No other actions were considered to be added.

VIII. Hailstorm

Goal 7: Reduce damage caused by ice during hailstorms in Wilcox County.

Objective 7.1: Reduce damage caused by ice during hailstorms in Wilcox.

Action 7.1- Increase public awareness of emergency topics by publishing articles in the local newspaper, holding town hall meetings, and providing bulletins to local churches and the schools (i.e., Emergency Public Audible Warning System, NOAA Weather Radio Systems, Local Emergency Shelters, individual safe rooms, National Weather Service Operations, Local Emergency Plans, social media, festivals, and the Local Emergency Management Agency. Etc.) Wilcox County and its municipalities – **H**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2022 |
| Cost | \$5,000.00 (Staff Time/Materials, News Articles, Town Hall Meetings) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | Ongoing |

Action 7.2 Seek funding to retrofit buildings to reinforce windows, roofs and doors - **L**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2020-2022 |
| Cost | \$500,000.00 (Staff Time/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | Ongoing |

Action 7.3 Seek funding to purchase generators, related wiring hardware, and provide for retrofitting/installment costs associated with generator install in critical facilities. (i.e., schools & other public buildings, nursing home, backups in all cities, Water stations, Wastewater Lift Stations, etc.) – **H**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director |
| Timeline | 2023-2024 |
| Cost | \$2,000,000 (Staff Time/Materials) |
| Funding Source(s) | General Fund/GEMA/ FEMA |
| Status | New |

Future Building and Infrastructure

The update committee discussed development trends and the impact that Hailstorm occurrence could have upon future structures. The mitigation steps included above are intended to apply to both new and existing structures.

Existing Buildings and Infrastructure

All existing buildings and infrastructure will be required to comply with future building codes or ordinances, where applicable.

Special Multi-Jurisdictional Strategy and Considerations

Hailstorms have the potential to equally affect the entire county, including the Cities of Abbeville, Rochelle, Pitts, and Pineview. The occurrence of this event is unpredictable; therefore, all considerations and strategies apply equally to each jurisdiction.

Since the last plan update, Wilcox County applied for FEMA grant funding to purchase generators and for a community safe room. The City of Pitts applied for FEMA grant funding to purchase generators for City Hall, the City Gym, and for two wells located within the City. The City of Pitts also applied for FEMA grant funding to construct a community center; however, the City of Pitts was not awarded this funding. The City of Abbeville has applied for FEMA grant funding to purchase one tornado siren, and six generators to power City Hall, two pumping stations, and two wells within the City. At this time, FEMA grant funding has not been awarded to Wilcox County, the City of Pitts, or the City of Abbeville for these projects. No other developments or projects have been achieved to increase or decrease vulnerability to a hailstorm event in Wilcox County or the Cities of Abbeville, Pineview, Pitts, and Rochelle.

Completed and deleted action steps from previous plan

Completed: No action steps have been completed. All steps are considered ongoing efforts with the exception of action step 7.3, which is a new action step.

Deleted: None

Unchanged/Changed Action Steps from Previous Plan Update

The Wilcox County Hazard Mitigation Update Committee reviewed the STAPLEE criteria for this hazard and feels that these action steps remain pertinent for preparing the community for possible disaster situations. Action Step 7.3 is a new action step added to this section since the last plan update and former action steps 7.1 and 7.2 were combined into updated action step 7.1. Each action step is viewed as an ongoing effort with progress being made toward these action steps as funding becomes available.

Modifications involved additions in verbiage, updated timelines (number of years to years expected to accomplish the action step), a row for action step status was added, revisions in cost of action, and additions in coordinating organizations and combining multiple action steps from the previous plan into one action step for conciseness and simplicity. Modifications are as follows:

Former Action Steps 7.1 and 7.2 were combined and modified to current action step 7.1; the verbiage was altered to make the action step more widely encompassing of public education in regard to emergency topics; the cost was increased from \$2,000 from each previous action step to \$5,000 in the modified action step to reflect the cost requirements of all jurisdictions in pursuit of this action step.

Former Action Step

Action 7.1 *Improve public awareness of damage caused by hailstorms to property, crops, animals, vehicles, and structures. - H*

Action 7.2 *Improve Public Awareness of potential driving hazards caused by hailstorms. -H*

Current Action Step

Action 7.1- *Increase public awareness of emergency topics by publishing articles in the local newspaper, holding town hall meetings, and providing bulletins to local churches and the schools (i.e., Emergency Public Audible Warning System, NOAA Weather Radio Systems, Local Emergency Shelters, individual safe rooms, National Weather Service Operations, Local Emergency Plans, Social Media, festivals, and the Local Emergency Management Agency. Etc.) Wilcox County and its municipalities – H*

Former Action Step 7.3 was modified to current action step 7.2; the verbiage “and to purchase generators” was deleted as a new action step addressed this issue; the cost was increased from \$50,000 from the previous action step \$500,000 in the modified action step to reflect the cost requirements of all jurisdictions in pursuit of this action step.

Former Action Step

Action 7.3 *Seek funding to retrofit buildings to reinforce windows, roofs and doors, and to purchase generators. L*

Current Action Step

Action 7.2 *Seek funding to retrofit buildings to reinforce windows, roofs and doors - L*

Unchanged Action Steps

None- All action steps have been modified/updated in some way.

New Action Steps

Action step 7.3 is new to this section, added at the consideration and recommendation of the planning committee.

Action 7.3 *Seek funding to purchase generators, related wiring hardware, and provide for retrofitting/installment costs associated with generator install in critical facilities. (i.e., schools & other public buildings, nursing home, backups in all cities, Water stations, Wastewater Lift Stations, etc.) – H*

No other actions were considered to be added.

XI. Drought

Goal 8: Reduce the economic impact of drought in Wilcox County.

Objective 8.1: Minimize economic impact of drought.

Action 8.1 Promote more efficient use of surface irrigation – H

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director; Wilcox County Extension Office, Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Timeline | 2020-2022 |
| Cost | \$2,000.00 (Staff Time/News Articles/Town Hall Meeting) |
| Funding Source(s) | General Fund/USDA |
| Status | Ongoing |

Action 8.2 Identify farm ponds and coordinate agreements with farm pond owners for irrigation purposes in Wilcox County – H

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director; Wilcox County Extension Office, Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Timeline | 2020-2022 |
| Cost | \$10,000.00 (Staff Time/News Articles/Town Hall Meeting) |
| Funding Source(s) | General Fund/USDA |
| Status | Ongoing |

Action 8.3 Support the cooperative City, County, and local business emergency planning group for pre and post disaster planning – H

| | |
|----------------------|---|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council), the UGA Cooperative Extension Office |
| Coordinating Org.(s) | Wilcox County – EMA Director; Wilcox County Extension Office, Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) the UGA Cooperative Extension Office -- Director |
| Timeline | 2020-2025 |
| Cost | \$2,000.00 (Staff Time/News Articles/Town Hall Meeting) |
| Funding Source(s) | General Fund |
| Status | Ongoing |

Action 8.4 Implement a support system through FSA, NRCS, and USDA – H

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director; Wilcox County Extension Office |
| Timeline | 2020-2022 |
| Cost | \$500 (Staff Time/News Articles/Town Hall Meeting) |
| Funding Source(s) | General Fund |
| Status | Ongoing |

Future Building and Infrastructure

New buildings and infrastructure will not be impacted by these proposed measures.

Existing Buildings and Infrastructure

Existing buildings and infrastructure will not be impacted by these proposed measures.

Special Multi-Jurisdictional Strategy and Considerations

Drought has the potential to affect the entire county, including the Cities of Abbeville, Rochelle, Pitts, and Pineview. The agricultural damage and reduction in drinking water will impact both the incorporated and unincorporated portions of the county. However, the committee’s greatest concern is potential for the threat of wildfire resulting from extreme drought. As addressed earlier in the action plan for wildfire occurrence, though the potential for a wildfire is greater in the unincorporated portions of the county it could easily spread to the city limits. Detailed jurisdictional information and mitigation efforts are addressed in the Community Wildfire Protection Plan, which was consulted by the update committee in the development of the Hazard Mitigation Plan.

Since the last plan update, Wilcox County applied for FEMA grant funding to purchase generators and for a community safe room. The City of Pitts applied for FEMA grant funding to purchase generators for City Hall, the City Gym, and for two wells located within the city. The City of Pitts also applied for FEMA grant funding to construct a community center; however, the City of Pitts was not awarded this funding. The City of Abbeville has applied for FEMA grant funding to purchase one tornado siren, and six generators to power City Hall, two pumping stations, and two wells within the city. At this time, FEMA grant funding has not been awarded to Wilcox County, the City of Pitts, or the City of Abbeville for these projects. No other developments or projects have been achieved to increase or decrease vulnerability to a drought event in Wilcox County or the Cities of Abbeville, Pineview, Pitts, and Rochelle.

Completed and deleted action steps from previous plan

Completed: No action steps have been completed. All steps are considered ongoing efforts.

Deleted: None

Unchanged/Changed Action Steps from Previous Plan Update

All of the action steps changed in number to reflect the change in priority order of the hazards that have changed since the last plan update, i.e., action steps 6.1 to 6.4 from the previous plan are now represented in action steps 8.1 to 8.4. The Wilcox County Hazard Mitigation Update Committee reviewed the STAPLEE criteria for this hazard and feels that these action steps remain pertinent for preparing the community for possible disaster situations. Each action step is viewed as an ongoing effort with progress being made toward these action steps as funding becomes available.

Modifications involved additions in verbiage, updated timelines (number of years to years expected to accomplish the action step), a row for action step status was added, revisions in cost of action, and additions in coordinating organizations/responsible organizations. Modifications are as follows:

Former Action Step 6.1 was modified to current action step 8.1 (renumbered according to new priority); the Wilcox County EMA Director and the Cities of Abbeville, Rochelle, Pitts, and Pineview were added as coordinating organizations; the Cities of Abbeville, Rochelle, Pitts, and Pineview were added as responsible organizations.

Former Action Step

Action 6.1 Promote more efficient use of surface irrigation – H

Current Action Step

Action 8.1 Promote more efficient use of surface irrigation – H

Former Action Step 6.2 was modified to current action step 8.2 (renumbered according to new priority); the verbiage “Construct” was modified to “Identify farm ponds and coordinate agreements with farm pond owners” to address possible legal complications that would be associated with “constructing” farm ponds; the Wilcox County EMA Director and the Cities of Abbeville, Rochelle, Pitts, and Pineview were added as coordinating organizations; the Cities of Abbeville, Rochelle, Pitts, and Pineview were added as responsible organizations; the cost was increased from \$2,000 to \$10,000 to reflect the cost requirements of all jurisdictions in pursuit of this action step; the USDA was deleted as a funding source.

Former Action Step

Action 6.2 Construct more farm ponds for irrigation throughout Wilcox County – H

Current Action Step

Action 8.2 Identify farm ponds and coordinate agreements with farm pond owners for irrigation purposes in Wilcox County – H

Former Action Step 6.3 was modified to current action step 8.3 (renumbered according to new priority); the Wilcox County EMA Director and the Cities of Abbeville, Rochelle, Pitts, and Pineview were added as coordinating organizations; the cost was increased from \$0.00 to \$2,000 to reflect the cost requirements of all jurisdictions in pursuit of this action step; general fund was designated as a funding source.

Former Action Step

Action 6.3 Support the cooperative City, County, and Local Business Emergency Planning Group for pre and post disaster planning – H

Current Action Step

Action 8.3 Support the cooperative City, County, and local business emergency planning group for pre and post disaster planning – H

Former Action Step 6.4 was modified to current action step 8.4 (renumbered according to new priority); the Wilcox County EMA Director and the Cities of Abbeville, Rochelle, Pitts, and Pineview were added as coordinating organizations; the Cities of Abbeville, Rochelle, Pitts, and Pineview were added as responsible organizations; the cost was increased from \$0.00 to \$500 to reflect the cost requirements of all jurisdictions in pursuit of this action step; general fund was designated as a funding source.

Former Action Step

Action 6.4 Implement a support system through FSA, NRCS, and USDA – H

Current Action Step

Action 8.4 Implement a support system through FSA, NRCS, and USDA – H

Unchanged Action Steps

None- All action steps have been modified/updated in some way.

New Action Steps

None

No other actions were considered to be added.

X. Excessive Heat

Goal 9: Minimize the impact of extreme temperatures on the citizens of Wilcox County.

Objective 9.1: Ensure the citizens of Wilcox County are warned of conditions of Extreme Heat.

Action 9.1- Increase public awareness of emergency topics by publishing articles in the local newspaper, holding town hall meetings, and providing bulletins to local churches and the schools (i.e., Emergency Public Audible Warning System, NOAA Weather Radio Systems, Local Emergency Shelters, individual safe rooms, National Weather Service Operations, Local Emergency Plans, social media, festivals, and the Local Emergency Management Agency. Etc.) Wilcox County and its municipalities – **H**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director, Volunteer Fire Departments/Chief |
| Timeline | 2020-2022 |
| Cost | \$5,000.00 (Staff Time/Materials, News Articles, Town Hall Meetings) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | New |

Action 9.2 Compile contact list of Senior and Disabled Citizens in the County that would be at risk during periods of extreme heat. (At Risk Individuals without Air Conditioning, Power Loss etc.) -**H**

| | |
|----------------------|---|
| Responsible Org.(s) | Wilcox County (BOC), Cities of Abbeville (Mayor/Council), Pineview, (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council), Nursing Homes, Senior Citizen Homes, Community Service Center, Concerted Services Inc., Wilcox County Health Department |
| Coordinating Org.(s) | Wilcox County – EMA Director, Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Timeline | 2020-2022 |
| Cost | \$2,000(Staff Time/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | New |

Action 9.3 Continue to coordinate with churches, schools and municipalities to designate air conditioned buildings (Gyms, Recreation Building, Churches etc.) and establish a list of available facilities and resources that could be utilized for residents without Air Conditioning or in times of power loss -**H**

| | |
|----------------------|---|
| Responsible Org.(s) | Wilcox County (BOC), Nursing Homes, Senior Citizen Homes, Community Service Center, Wilcox County Schools, Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County-EMA Director, Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Timeline | 2020-2022 |
| Cost | \$2,000 (Staff Time/Materials) |
| Funding Source(s) | General Fund/FEMA/GEMA |
| Status | New |

Future Building and Infrastructure

New buildings and infrastructure will not be impacted by these proposed measures.

Existing Buildings and Infrastructure

Existing buildings and infrastructure will not be impacted by these proposed measures.

Special Multi-Jurisdictional Strategy and Considerations

Extreme Heat has the potential to affect the entire county. The agricultural damage and risk to human life will impact both the incorporated and unincorporated portions of the county.

Since the last plan update, Wilcox County applied for FEMA grant funding to purchase generators and for a community safe room. The City of Pitts applied for FEMA grant funding to purchase generators for City Hall, the City Gym, and for two wells located within the city. The City of Pitts also applied for FEMA grant funding to construct a community center; however, the City of Pitts was not awarded this funding. The City of Abbeville has applied for FEMA grant funding to purchase one tornado siren, and six generators to power City Hall, two pumping stations, and two wells within the city. At this time, FEMA grant funding has not been awarded to Wilcox County, the City of Pitts, or the City of Abbeville for these projects. No other developments or projects have been achieved to increase or decrease vulnerability to an excessive heat event in Wilcox County or the Cities of Abbeville, Pineview, Pitts, and Rochelle.

Completed and deleted action steps from previous plan**Completed:**

No action steps have been completed; all steps are considered new efforts, as excessive heat is a newly-added hazard in this plan update.

Deleted: None – New Hazard

Unchanged/Changed Action Steps from Previous Plan Update**Changed Action Steps**

New hazard – All action steps are new in this section.

Unchanged Action Steps

New hazard – All action steps are new in this section.

New Action Steps

New hazard – All action steps are new in this section.

No other actions were considered to be added.

XI. Hazardous Materials Release

Goal 10: Reduce damage caused by hazardous materials release incidents in Wilcox County.

Objective 10.1: Protect life, health and property of residents from damages caused by hazardous materials incidents.

Action 10.1 Continue to assist regional Hazmat team in times of disaster - **H**

| | |
|----------------------|---|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Toombs County EMA Director, Lyons Fire Department, Vidalia Fire Department, Volunteer Fire Departments/Chiefs, Toombs County (Co. Adm.), City of Lyons (Manager), City of Vidalia (Manager), City of Santa Claus (Mayor) Douglas Hazardous Materials Team |
| Timeline | 2020-2025 |
| Cost | \$2,000 (staff time/materials) |
| Funding Source(s) | General Fund |
| Status | New |

Action 10.2 Seek funding for equipment and continuing training for assistance to the regional Hazmat team - **H**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council)) Regional Hazardous Materials Team |
| Coordinating Org.(s) | Wilcox County – EMA Director, Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council), Volunteer Fire Departments/Chief |
| Timeline | 2020-2025 |
| Cost | \$250,000.00 (Staff time/materials) |
| Funding Source(s) | General Fund/FEMA/ GEMA/ EPD |
| Status | New |

Action 10.3 Seek funding for equipment and continuing training for Volunteer Fire Departments and Public Safety Agencies in Wilcox County– **H**

| | |
|----------------------|--|
| Responsible Org.(s) | Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council) |
| Coordinating Org.(s) | Wilcox County – EMA Director, Wilcox County (BOC) Cities of Abbeville (Mayor/Council), Pineview (Mayor/Council), Pitts (Mayor/Council), and Rochelle (Mayor/Council), Volunteer Fire Departments/Chief |
| Timeline | 2020-2025 |
| Cost | \$250,000.00 |
| Funding Source(s) | General Fund/FEMA/GEMA/ EPD |
| Status | New |

Future Building and Infrastructure

New buildings and infrastructure will not be impacted by these proposed measures.

Existing Buildings and Infrastructure

Existing buildings and infrastructure will not be impacted by these proposed measures.

Special Multi-Jurisdictional Strategy and Considerations

The occurrence of hazardous materials incidents has the potential to affect the entire county. An accident resulting in this disaster could impact both the cities and the unincorporated portions of the county. Therefore, the cities and county will coordinate together to address mitigation actions related to hazardous materials incidents.

Since the last plan update, Wilcox County applied for FEMA grant funding to purchase generators and for a community safe room. The City of Pitts applied for FEMA grant funding to purchase generators for City Hall, the City Gym, and for two wells located within the city. The City of Pitts also applied for FEMA grant funding to construct a community center; however, the City of Pitts was not awarded this funding. The City of Abbeville has applied for FEMA grant funding to purchase one tornado siren, and six generators to power City Hall, two pumping stations, and two wells within the city. At this time, FEMA grant funding has not been awarded to Wilcox County, the City of Pitts, or the City of Abbeville for these projects. No other developments or projects have been achieved to increase or decrease vulnerability to a hazardous materials release in Wilcox County or the Cities of Abbeville, Pineview, Pitts, and Rochelle.

Completed and deleted action steps from previous plan**Completed:**

No action steps have been completed; all steps are considered new efforts, as hazardous materials release is a newly-added hazard in this plan update.

Deleted: None – New Hazard

Unchanged/Changed Action Steps from Previous Plan Update**Changed Action Steps**

New hazard – All action steps are new in this section.

Unchanged Action Steps

New hazard – All action steps are new in this section.

New Action Steps

New hazard – All action steps are new in this section.

No other actions were considered to be added.

Chapter 4: Plan Implementation

| Chapter Four | Updates to Section |
|---|---|
| I. Integration into Local Planning Mechanisms | Section Revised and reduced |
| II. Monitoring, Evaluation, Updating | Section Revised and reduced. Additional description of Monitoring, Evaluation and Updating process. |
| III. Conclusion | Section Revised and Reduced |
| IV. References | Section Revised |

I. Integration into Local Planning Mechanisms

A. Incorporation into Future Local Planning Mechanisms

This plan will be presented to the county commissioners and city councils to ensure its inclusion in their planning documents, as well as any other ordinances, capital improvement projects etc., that they may undertake in regard to hazard mitigation. The Wilcox County EMA Director will serve as a facilitator to help incorporate appropriate portions of the plan into other documents.

The plan will also be presented to the committee(s) responsible for updating the comprehensive plan. The Wilcox County Comprehensive Plan was previously updated in 2018. The comprehensive plan provides an excellent tool for guiding the growth of Wilcox County and its municipalities. The continued incorporation of portions of the Hazard Mitigation Plan into the comprehensive planning process will ensure the inclusion of importation mitigation issues. Though the entire Hazard Mitigation plan will be made available to the comprehensive plan committee, the “Risk Assessment and “Mitigation Strategy” will specifically be focused upon. These two sections are the most directly tied to future development, since they highlight key risks and strategies that will need to be considered by the committee.

Some key areas of overlap between the two plans include the need for additional zoning regulations and building codes, increasing public safety, street/drainage improvements, and future residential development in the unincorporated portions of the county. These issues among others will be addressed in the comprehensive plans’ “Community Issues and Opportunities Section” and “Implementation Program” section. An evaluation and assessment of mitigation actions will also be included the Comprehensive Plan and the Short-Term Work Program upon their revision.

In addition, the County Commission and Municipal Authorities will ensure that the local authorities responsible for the Local Emergency Operations Plan (LEOP) and other plans, including the development of goals established in the local comprehensive plan, utilizing them as they relate to the Pre-disaster Mitigation Plan. A copy will also be given to the Georgia Forestry Commission and reviewed during their Community Wildfire Protection Plan update process.

B. Previous Plan Incorporation into Local Planning Mechanisms

The previous 2015 Wilcox County Hazard Mitigation Plan was regularly incorporated into other planning mechanisms in the five years since it's' adoption. The plan has made available to key individuals and groups involved in the development of these other planning documents. The Wilcox County-Abbeville, Rochelle, Pitts, and Pineview Comprehensive Plan was updated in 2018. Many of the mitigation strategies from the original Hazard Mitigation Plan were incorporated into the comprehensive plan update. These included building code improvements, seeking additional equipment and training for emergency response personnel, and adding additional fire stations in the county.

The development of the Local Emergency Operations Plan has also included portions of the original Hazard Mitigation plan. The data and maps included in the Hazard mitigation plan have provided additional tools in the development of other documents. Incorporation efforts have also included the City Councils and Wilcox County Commission using the plan as a guide in related capital improvement plans and general decision making in regard to hazard mitigation activities.

II. Monitoring, Evaluation, Updating

A. Previous Plan Monitoring, Evaluation, Updating

The previous Wilcox County Hazard Mitigation Plan included a detailed process for monitoring, evaluating and updating the plan in a five-year period. This plan was largely dependent upon the coordination of the overall process by the county EMA Director. The implementation process was envisioned as being directed and initiated by the EMA office, with appropriate organizations and entities being responsible for specific mitigation actions. Each city delegated responsibility for implementation of actions to the appropriate city department or employee. For example, the city Fire Chief and his staff were tasked with seeking funding for additional fire equipment. Similarly, county departments and staff were given duties based upon the mitigation actions that were applicable. For actions that involved city and county cooperation, the EMA director was the primary coordinator. The EMA director was also in charge of monitoring progress and obtaining updates from the other city and county departments involved in implementation.

The previous plan also outlined an evaluation strategy of holding a hazard mitigation review committee meeting in January of every odd numbered year. It was envisioned that at these meetings that representatives from all of the implementation departments and agencies would reconvene to discuss progress, obstacles and changes. This would also be an opportunity to make any needed changes to the mitigation action plan and to develop solutions to any problems. A report was to be developed from this meeting and presented at a county commissioner's meeting and a city council meeting of each city, which would allow the opportunity for public comment. Unfortunately, these formal evaluation meetings did not occur. This could be attributed to several causes, including changes in key city and county leadership positions. Instead, evaluation was less structured and more pragmatic, with city and county employees reporting progress to their respective elected officials. Additionally, the EMA director kept informed on progress and changes made through discussion with stakeholders.

A strategy for updating the previous plan was also outlined. This included incorporating into the plan the changes discussed at the meetings held in January of each odd numbered year. However, formal changes made to the plan did not occur until the Heart of Georgia Altamaha Regional Commission was contracted to facilitate the mandatory five-year update process. This process was described in more detail in Chapter One, Sections II-III.

Due to issues with the feasibility and effectiveness of the previous Monitoring, Evaluation and Update strategy the decision was made to make several important adjustments. These changes include altering the timeline for the review committee meeting that was originally scheduled for January of every odd numbered year. The review committee will now reconvene in January of each year. The update committee felt that by meeting annually enable to more efficiently update and evaluate the progress being made with the mitigation actions. This meeting will be advertised to the public in advance and a report will be made to Abbeville, Rochelle, Pitts, and Pineview city councils and the Wilcox County Board of Commissioners. Any changes made to the Hazard Mitigation Plan at the committee meetings will be incorporated into the next mandatory five-year update. A more detailed description of the Monitoring, Evaluations, and Update strategy can be found in sections B, C and D.

B. Monitoring Strategy

I. METHOD:

The primary method used to monitor the implementation of the update will be to observe the progress made towards achieving specific mitigation actions. City employees and officials directly involved in implementing the actions will be responsible for providing updates to the County EMA Director. Likewise, county employees and officials will report to the EMA Director about progress made. By monitoring the status of the mitigation action plan as it is being implemented, the EMA Director will be able to remain informed and involved.

II. RESPONSIBILITY

The Wilcox County Emergency Management Agency Director is the primary individual responsible for the monitoring of the plan. It is his/her responsibility to coordinate with the city and county departments' responsibility for implementing the different portions of the plan. Through regular discussions and personal involvement, the EMA director will be able to properly monitor the progress. The EMA Director will also actively seek public comment and involvement.

For the City of Rochelle, responsibility falls upon the city manager to monitor progress for municipally implemented portions of the plan and to provide updates to the EMA director. Mayors or a designated official of each Abbeville, Pitts, and Pineview will monitor progress for portions of the plan to provide updates to the EMA director. Furthermore, all department heads, as well as any officials, that are involved in the implementation process, will have the responsibility to help monitor and provide updates to the EMA Director.

III. TIMEFRAME

The monitoring process will be ongoing throughout the five years that the plan is valid. The annual meeting of the update committee will convene in January of each year. This meeting will provide an additional opportunity for the EMA director to stay up to date on progress being made.

C. Evaluation Strategy

I. METHOD:

In order to properly evaluate the plan and implementation of its' action strategy two major factors will be considered. The first being whether or not the mitigation action has actually been implemented, taking into consideration that some actions are ongoing. Secondly, whether or not the action appears to be successful in helping to reach the overall objective it is intended to. This will include utilizing a checklist to

determine what mitigation actions have been undertaken or accomplished, the completion date (if applicable), the cost associated with each completed action, and whether actions are deemed successful.

II. RESPONSIBILITY

The Hazard Mitigation Plan review committee will hold the primary duty of evaluating the success of the plan. The committee will be able to properly evaluate the plan through their involvement in its' implementation. The EMA Director and designated city officials will be tasked with presenting a summary of the evaluation at the county commission and city council meetings, respectively. Additionally, public input will also be sought for the evaluation of strategies. The public provides an excellent source for measuring the successfulness of mitigation actions.

III. TIMEFRAME

The formal evaluation of the mitigation action plan will occur at the committee meeting each January. At this time the Mitigation strategy should be reviewed with status reports given by the members of the committee upon whether each action has been implemented and whether or not it has been successful. The checklist used for this evaluation will then be developed into a summary to be presented for the County Commission and City Council once the plan has been evaluated. This summary will be given at the February commission and council meetings. Both the county commission and city council meetings are publicly advertised, providing an opportunity for public comment on the plan evaluation and any changes made.

D. Updating

I. METHOD

Due to the requirements set forth in the Disaster Mitigation Act of 2000, Wilcox County is required to formally update and revise the plan every five years. The EMA Director, as well as any organization or individual contracted to help facilitate the update process, will reconvene the review committee on a monthly basis prior to the expiration date of the current plan. The EMA Director will ensure that the committee consists of representatives from the appropriate organizations and if needed invite new members. Efforts will also be made to again obtain the involvement of the public in the update process.

In the update process the committee will review the mitigation goals, objectives and action items to determine their relevance to changing situations in the county, as well as changes in State or Federal policy, and to ensure they are addressing current and expected conditions. The committee will also review the risk assessment portion of the plan to determine if this information should be updated or modified, given any new available data. The list of critical facilities for the county should also be reexamined for accuracy and modified as needed.

Through the use of the monitoring and evaluation strategies outlined in sections II B and II C, the committee should already have an up to date record of the implementation and success of the plan. This record will greatly aid the review committee in their preparation of the 2025 Hazard Mitigation Plan. The plan update will be submitted to Georgia Emergency Management Agency and the Federal Emergency Management Agency for their review and approval. Updates of the plan will be presented to the Wilcox County Commission and the Abbeville, Rochelle, Pitts, and Pineview City Councils for approval.

II. RESPONSIBILITY

The Wilcox County Emergency Management Agency Director is responsible for the ensuring that the Pre-Disaster Hazard Mitigation Plan is updated. He/she will coordinate the process and reconvene the review committee. If an individual or organization is contracted to aide in the update process then they will share in the responsibility for the update process with the EMA Director. All city and county employees/officials are responsible for aiding in the update process as determined by the EMA Director.

III. TIMEFRAME

In order to update the plan in the five-year period the EMA director will reconvene the review committee at least one year in advance of the plan expiration date. They will meet on a monthly basis, or as decided by the committee, and continue until the update of the plan has been completed. These meetings will be in addition to the annual January meeting.

No later than the conclusion of the five-year period following initial approval of the plan, the EMA Director shall submit a revised Hazard Mitigation Plan to the Georgia Emergency Management Agency and the Federal Emergency Management Agency for their review and coordination.

E. Public Involvement

Wilcox County is dedicated to involving the public directly in the continual monitoring, evaluating and updating of the Hazard Mitigation Plan. In order to help ensure public participation during the monitoring and evaluation process the annual meeting will be announced at a city council and county commissioner meeting prior to the date. Additionally, the EMA Director and designated city officials will make reports to the county commission and city councils after each annual meeting. This will give the public an opportunity to comment and ask questions about the ongoing implementation of the mitigation actions. Moreover, many of the mitigation actions taken by the city or the county will be discussed at their monthly meetings, such as capital projects, grant awards etc.

Public involvement will also be sought during the five-year update process. Public notice of at least two of the update meetings will be published in the local newspaper. Although the Plan Review Committee will represent the public to some extent, the public will be invited to participate with the plan review committee to directly comment on and provide feedback about the Plan. In addition, regular reports will be made at Abbeville, Rochelle, Pitts and Pineview City Council and Wilcox County Commissioners Meetings. All city and county officials, as well as any employees, will be encouraged to notify citizens of meetings and any changes being made.

An updated copy of the plan will be available at the Wilcox County EMA office, Abbeville, Rochelle, Pitts, and Pineview City Halls and the County Commissioners' Office. The existence and location of these copies will be publicized in the local newspaper. All comments and questions will be directed to the local EMA office for follow-up.

III. Conclusion

Because of the time and effort put into the hazard mitigation update process, Wilcox County officials and employees have obtained a great deal of information and knowledge regarding the County’s disaster history, the presence of natural hazards, the likelihood of each of these hazards occurring within the county, and the potential impacts and challenges these hazards present to the community.

The mission of the Wilcox County Hazard Mitigation Update Committee is: To make the citizens, businesses, communities and local governments of Wilcox County less vulnerable to the effects of natural hazards through the effective study of hazard mitigation, hazard risk assessments, wise flood plain management, and a coordinated approach to mitigation policy through federal, state, regional, and local planning activities.

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

IV. References

PUBLICATIONS/DOCUMENTS

- FEMA Pre-Disaster Mitigation How-to Guides #1, 2, 3, 4, 5, 6, 7, 8, 9 (FEMA)
- GEMA Supplements to FEMA Pre-Disaster Mitigation How-to Guides (GEMA)
- 2019-2024 Georgia Hazard Mitigation Strategy
- 1950-2020 NCDC Storm History Data
- 2000-2020 USDM Data – Wilcox County
- 2005-2020 NWS- Iowa Environmental Mesonet-Warnings and Advisories – Wilcox County
- 2010 FEMA Flood Insurance Study- Wilcox County
- 2015-2019 UGA Weather Network - Temperature History - Wilcox
- 2017 USDA Wilcox County Census of Agriculture
- 2018 Wilcox County Multijurisdictional Comprehensive Plan
- 2018-2063 Population Projections - Wilcox County – Governor’s Office of Planning and Budget
- 2018-2019 US Census Estimates – Wilcox County
- 2016 Wilcox County Community Wildfire Protection Plan
- 2019 Labor Profile - Wilcox County - GDOL
- 2020 Wilcox Hazard Risk Analyses Riverine
- Wilcox County Local Emergency Operations Plan

WEB SITES

- | | |
|--|--|
| www.census.gov | www.dol.georgia.gov |
| www.nssl.noaa.gov | www.nssl.noaa.gov |
| www.spc.noaa.gov | www.ncdc.noaa.gov |
| www.weather.gov | www.tornadohistoryproject.com |
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www.geo.usace.army.mil
www.wfas.net

www.epa.gov
www.epd.georgia.gov
<http://droughtmonitor.unl.edu>

OTHER

American Red Cross
Wilcox County Tax Assessor
Forest Inventory and Analysis
Georgia Department of Natural Resources
Georgia Forestry Commission
United States Department of Agriculture
United States Geological Survey