



**Bulloch County  
Board of  
Commissioners  
Regular Meeting**

**08.04.2015  
Estimated Time: 1 Hour & 30 Minutes  
North Main Annex Community Room  
Statesboro, Georgia  
5:30 PM**

Meeting Function:	<b>Board of Commissioners</b>	Type of Meeting:	<b>Regular Meeting</b>
Meeting Chair:	<b>Chairman, Garret Nevil (Presiding)</b>	Recorder:	<b>Clerk of the Board, Olympia Gaines</b>
Parliamentarian:	<b>County Attorney, Jeff Akins</b>	Ex-Officio:	<b>Tom Couch, County Manager; Andy Welch, Assistant County Manager; Whitney Richland, Chief Financial Officer, John Scott, Tax Assessor, James Deal, Tax Commissioner, Chief Deputy Jared Akins, Cindy Steinmann Management Analyst, Ted Wynn Public Safety Director</b>

ITEM	RESOURCE PERSON/FACILITATOR	TIME	REFER
Call to Order; Welcome Media and Visitors	Chairman Nevil	5:30 PM	
Invocation and Pledge of Allegiance	Commissioner Gibson	5:32 PM	
Roll Call	Clerk	5:34 PM	
Approval of General Business Agenda	Chairman	5:35 PM	
Public Hearing		5:37 PM	
Proposed Property Tax Increase	Tax Assessor/Tax Commissioner/Administration		
Public Comments	Audience	5:57 PM	
Public Comments from John Smith (Disc Golf)			
Public Comments from Judy Womack (Monument)			
Public Comments from Michael Mull			
Public Comments from Lisa Leege (Curbside Recycling)			
Presentation			
Up with People Organization	Patsy Salazar/Chelsea Glosser		
Consent Agenda	Chairman Nevil	6:20 PM	
Approve Minutes of the Minutes of the Special Called held on June 30, 2015 and the Regular Meeting held on July 21, 2015	Clerk of the Board		Tab A
Approve a resolution for the adoption of the recently Approved Hazard Mitigation Plan	Public Safety/Emergency Management		Tab B
Old Business		6:25 PM	
Discussion and/or Action Regarding the Confederate Monument at the Courthouse	Board of Commissioners		Tab C
New Business			
Discussion and/or Action : To approve the 2015 Millage Rates	County Manager	6:30 PM	Tab D

Commission and Staff Comments	Chairman, et al.	6:50 PM
Executive Session (Personnel)	County Manager	7:00 PM
Adjourn	Chairman	7:05 PM
<b>Additional Information:</b> None		
Background information in Board packets.		

June 30, 2015  
Statesboro, GA

### Special Called Meeting

The Board of Commissioners met for a called meeting at 5:30 p.m. in the Community Room of the North Main Annex. Chairman Nevil called the meeting to order and welcomed staff. Commissioner Thompson gave the invocation and Pledge of Allegiance

Mrs. Olympia Gaines, Clerk of the Board, performed the roll call of the commissioners and staff. The following commissioners were present: Chairman Nevil, Vice-Chairman Thompson, Commissioner Simmons, Commissioner Mosley, Commissioner Gibson, and Commissioner Ethridge. The following staff were present: County Manager Tom Couch, Assistant County Manager Andy Welch, Chief Financial Officer Whitney Richland, Management Analyst Cindy Steinmann, Statesboro-Bulloch Parks and Recreation Director Mike Rollins, Warden Chris Hill, Shop Superintendent Jesse Durrence, and Tax Assessor John Scott.

With no items of Old or Unfinished Business, Chairman Nevil stated the first item of New Business was the discussion and/or action to dispense with the reading and approve a resolution to adopt the FY2016 General Appropriations Budget. Chairman Nevil called on Mr. Couch to begin discussion on this matter. Mr. Couch stated the budget represents a potential gross spending of \$74 million, but the net amount will be around \$60 million. The General Fund is still set at \$36,581,857 with a recommended tax increase of 1.9 mills. He stated the actual mill increase will be determined at the time the tax digest is submitted in mid- July. Chairman Nevil called for comments concerning this matter. After some discussion, Commissioner Thompson offered a motion to dispense with the reading and approve a resolution to adopt the FY 2016 General Appropriations Budget (See Exhibit #2015-084). Commissioner Gibson seconded the motion and it carried unanimously with Commissioner Ethridge, Commissioner Mosley, Commissioner Thompson, and Commissioner Gibson all voting in favor of the motion.

Chairman Nevil stated the next item of New Business was the discussion and/or action to approve a resolution establishing annual fees for the Rural Fire District. Chairman Nevil called on Mr. Couch to initiate discussion on this matter. Mr. Couch stated the resolution would represent the same fees from the previous years. Without further discussion, Commissioner Ethridge offered a motion to approve a resolution establishing annual fees for the Rural Fire District (See Exhibit #2015-085). Commissioner Gibson seconded the motion and it carried

unanimously with Commissioner Thompson, Commissioner Gibson, Commissioner Mosley, and Commissioner Ethridge all voting in favor of the motion.

Chairman Nevil called for general comments or statements from the commissioners and staff. The commissioners thanked everyone for their attendance, and thanked staff for all their hard work and efforts with the budget process. Commissioner Thompson asked Mr. Rollins about the crowds at Splash in the Boro. Mr. Rollins stated the impact is about the same as the previous year. Commissioner Gibson mentioned the 50<sup>th</sup> Anniversary of the Vietnam War and the Board honoring the veterans with a proclamation to be presented at the next meeting on July 7, 2015. Mr. Couch issued some guidance with purchasing as the County moves forward with the close out of FY2015.

Hearing no further comments from the commissioners or staff, Chairman Nevil asked for a motion to adjourn. Commissioner Ethridge offered a motion to adjourn the meeting. Commissioner Mosley seconded the motion, and it carried unanimously with Commissioner Gibson, Commissioner Thompson, Commissioner Mosley and Commissioner Ethridge voting in favor of the motion.

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J. Garrett Nevil, Chairman

Attest: \_\_\_\_\_

Olympia Gaines, Clerk of the Board

July 21, 2015  
Statesboro GA

### Regular Meeting

The Board of Commissioners met at 8:30am in the Community Room of the North Main Annex. Chairman Nevil welcomed guests and called the meeting to order. County Manager Tom Couch gave the invocation and Pledge of Allegiance.

Mrs. Olympia Gaines, Clerk of the Board, performed the roll call of the commissioners and staff. The following commissioners were present: Chairman Nevil, Commissioner Thompson, Commissioner Ethridge, and Commissioner Mosley. Commissioner Rushing, Commissioner Gibson, and Commissioner Simmons were absent. The following staff was present: County Manager Tom Couch, County Attorney Jeff Akins, Assistant County Manager Andy Welch, Chief Financial Officer Whitney Richland, Chief Accountant Kristie King, Management Analyst Cindy Steinmann, Solid Waste Director Fred White, Statesboro Bulloch Parks and Recreation Director Mike Rollins, Transportation Director Dink Butler, County Engineer Kirk Tatum, Public Safety Director Ted Wynn, Chief Christopher Ivey, Statesboro-Bulloch Airport Director Kathy Boykin, and Chief Deputy Jared Akins

Chairman Nevil asked for changes or modifications of the General Agenda. Mr. Couch asked to modify the agenda by adding item #3 (approval of Tentative Allocation from GDOT for land and easement acquisition) for discussion and/or action under New Business. Without further discussion, Commissioner Ethridge offered a motion to approve the General Agenda with the modification requested by Mr. Couch. Commissioner Mosley seconded the motion and it carried unanimously with Commissioner Thompson, Commissioner Mosley and Commissioner Ethridge all voting in favor of the motion.

Chairman Nevil stated the next item on the agenda was public comments from Mr. John Smith. Commissioner Thompson informed the Board that Mr. Smith would like to postpone comments until a later date.

Chairman Nevil stated the next item on the agenda was public comments from Mr. Michael Mull. Mr. Mull reiterated his concerns in opposition to the removal of the Confederate statue from the courthouse lawn because he believes it serves as a landmark and a testament of the fortitude of Bulloch County residents following the aftermath of the War Between the States.

Mrs. Judy Womack expressed feelings of opposition to having the statue relocated. Ms. Womack stated according to the Bylaws of the Georgia Division of the United Daughters of the Confederacy, when a Chapter disbands or becomes defunct such as the Statesboro Chapter UDC, all assets including their monuments and markers become the property of the Georgia Division United Daughters of the Confederacy. Mr. Michael Sorrell and Mr. Jimmy Hayes also expressed feelings of opposition to the removal of the Confederate statue from the courthouse lawn.

Mr. Frances Johnson asked that the Board take action on the recommendation to form a committee to review this matter. Mrs. Pearl Brown expressed her concerns that the statue symbolizes the inequality in education and employment practices in Bulloch County and stated that she is in favor of the removal and relocation of the statue. Ms. Jessica Orbis recommend that the Board look at other solutions such as establishing a committee to look at this issue. Mr. James Woodall reiterated his support for the removal of the Confederate statue and the establishment of a committee to come up with solutions for this issue and similar issues. Mrs. Adrienne McCollar expressed feelings of why the Confederate statue should be removed, discussed some confusion with the law concerning the statue and asked the Board to take action on establishing a committee to handle the issue with the statue.

Chairman Nevil thanked everyone for their comments. He stated the next item on the agenda was to approve the Consent Agenda as follows: (1) to approve the minutes of the Regular Meeting and Executive Session held on July 7, 2015; (2) to approve the reappointment of Maurice Hill, Phillip Tremble and Jared Akins to the Alcohol and Drug Council; (3) to approve the appointments of Diane Prosser Allen and Beth Mathews and the reappointment of Ceil Hardin to the Regional Library Board; (4) to approve an alcohol beverage license for package retail beer and wine sales to Ashleigh Handy for J& D Grocery located at 8090 Nevils Groveland Road (See Exhibit #2015-091); (5) to approve Mutual Aid Agreement between Pembroke Fire Department and Bulloch County Fire Department (See Exhibit #2015-092); ( 6) to approve the Amended and Restated Plan Document and Summary Plan Description for the Employee Health Care Plan (See Exhibit #2015-093). Without further discussion, Commissioner Thompson offered a motion to approve the Consent Agenda as presented. Commissioner Mosley seconded the motion and it carried unanimously with Commissioner Thompson, Commissioner Mosley and Commissioner Ethridge all voting in favor of the motion.

Chairman Nevil stated the first item under New Business was for discussion and/or action to approve an alcohol beverage license for package retail beer and wines sales to Om Food Mart (Vinod Jetwani and Cassandra Wiggins) located at 10941 Hwy 301 South. Chairman Nevil called on Mrs. Gaines to initiate discussion on the matter. Mrs. Gaines reminded the Board that the store's previous owner was denied a license and the store now has a new owner. Without further discussion, Commissioner Mosley offered a motion to approve an alcohol beverage license for package retail beer and wine sales to Om Food Mart (Vinod Jetwani and Cassandra Wiggins) located at 10941 Hwy 301 South (See Exhibit #2015-094). Commissioner Ethridge seconded the motion and it carried unanimously with Commissioner Thompson, Commissioner Mosley, and Commissioner Ethridge all voting in favor of the motion.

Chairman Nevil stated the next item under New Business was for discussion and /or action to approve Solid Waste operational matters. Chairman Nevil called on Mr. Couch to initiate discussion on the matter. Mr. Couch stated Mr. Fred White would make a brief presentation on operational matters to include changing operational days and hours at convenience centers, discontinuing the acceptance of bulk waste and scrap tires, and some fee proposals in efforts to lower operating costs. Mr. White stated they currently have 170 cardboard baskets which have been given out free of charge to businesses and serviced by the department three times per week. Mr. White stated they also have 75 wire containers that were also given out. He is proposing to collect a fee of \$10 per month for the wire baskets and \$20 per month for the cardboard containers. Mr. White stated this additional revenue would help with labor, fuel, and maintenance costs for the department. Mr. White proposed closing the convenience centers on Sunday in order to give the staff a day off to spend with family. He also proposed discontinuing the acceptance of bulk waste due to a lot of commercial contractors dumping waste at the convenience centers. Mr. White stated bulk waste has grown 700 tons from FY2015 to FY2016 and the county will pay at least \$350,000 in tippage fees for bulk waste this year. After some discussion, Mr. Couch recommended Mr. White develop a policy proposal and then bring the issue back before the board for discussion. No action was taken on this matter.

Chairman Nevil stated the last item under New Business was for discussion and/or action to approve the tentative allocation from GDOT for land and easement acquisition. Mr. Couch provided a brief background concerning the land and easements needed for the runway protection zones for the Statesboro Bulloch Airport in order to meet FAA guidelines. Without

further discussion, Commissioner Thompson offered a motion to approve the tentative allocation from GDOT for land and easement acquisition. Commissioner Mosley seconded the motion and it carried unanimously with Commissioner Thompson, Commissioner Mosley, and Commissioner Ethridge all voting in favor of the motion.

Chairman Nevil called for general comments or statements from the commissioners and staff. The commissioners thanked everyone for their attendance and thanked the staff for all their hard work. Commissioner Mosley thanked everyone for their comments and appreciated the sharing of ideas, and thanked Mr. White for his presentation. Mrs. Gaines reminded the commissioners and staff of the upcoming ribbon cutting for Pineland's Women Center on July 29<sup>th</sup> at 11am. Hearing no further comments from the Board or Staff, Chairman Nevil, asked for a motion to adjourn. Commissioner Ethridge offered a motion to adjourn the meeting. Commissioner Mosley seconded the motion, and it carried unanimously with Commissioner Thompson, Commissioner Mosley and Commissioner Ethridge voting in favor of the motion.

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J. Garrett Nevil, Chairman

Attest: \_\_\_\_\_  
Olympia Gaines, Clerk of the Board

**BULLOCH COUNTY BOARD OF COMMISSIONERS  
AGENDA ITEM SUMMARY**

DEPARTMENT MAKING REQUEST:

Public Safety/Emergency Management

MEETING DATE: 8-4-2015

RESOLUTION ATTACHED?

YES	<input checked="" type="checkbox"/>
NO	<input type="checkbox"/>

REQUESTED MOTION OR ITEM TITLE:

Consent agenda item to approve the resolution for adoption of the recently approved Hazard Mitigation Plan.

SUMMARY/BACKGROUND ATTACH DETAILED SUMMARY, IF NEEDED:

Approval notice attached pending adoption by County and all Municipalities.

AGENDA CATEGORY (CHECK ONE)		FINANCIAL IMPACT STATEMENT									
PRESENTATION		BUDGETED ITEM?	YES	<input type="checkbox"/>	AMENDMENT REQUIRED?	YES	<input type="checkbox"/>				
			NO	<input checked="" type="checkbox"/>		NO	<input checked="" type="checkbox"/>				
PUBLIC HEARING		ATTACH DETAILED ANALYSIS, IF NEEDED:									
CONSENT	<input checked="" type="checkbox"/>	Resolution and Plan Attached.									
NEW BUSINESS											
OLD BUSINESS											
OTHER											
APPROVED FOR AGENDA											
DEPARTMENT DIRECTOR		PURCHASING OFFICER		OTHER		COUNTY CLERK		COUNTY STAFF ATTORNEY		COUNTY MANAGER	
YES	<input checked="" type="checkbox"/>	YES	<input type="checkbox"/>	YES	<input type="checkbox"/>	YES	<input checked="" type="checkbox"/>	YES	<input checked="" type="checkbox"/>	YES	<input checked="" type="checkbox"/>
NO	<input type="checkbox"/>	NO	<input type="checkbox"/>	NO	<input type="checkbox"/>	NO	<input type="checkbox"/>	NO	<input type="checkbox"/>	NO	<input type="checkbox"/>
INITIALELW		INITIAL		INITIAL		INITIAL <i>OB</i>		INITIAL <i>OSL</i>		INITIAL <i>W</i>	
DATE 7-22-15		DATE		DATE		DATE 7/29/15		DATE 7/29/15		DATE 7.29.15	
COMMISSION ACTION AND REFERRAL (Box 9)											
APPROVED	<input type="checkbox"/>	DATE TO BE RETURNED TO AGENDA									
DENIED	<input type="checkbox"/>										
DEFERRED	<input type="checkbox"/>	NOTES									
OTHER	<input type="checkbox"/>										

GEORGIA EMERGENCY MANAGEMENT AGENCY  
GEORGIA OFFICE OF HOMELAND SECURITY

NATHAN DEAL  
GOVERNOR



JIM BUTTERWORTH  
DIRECTOR

May 28, 2015

Honorable Garrett Nevil  
Chairman  
Bulloch County Board of Commissioners  
Post Office Box 347  
Statesboro, Georgia 30459

Dear Commissioner Nevil:

The Federal Emergency Management Agency (FEMA) has completed its review of the Bulloch County Multi-Jurisdictional Hazard Mitigation Plan for compliance with the programmatic requirements of the Federal Hazard Mitigation Planning Standards contained in 44 CFR Section 201.6(b)-(d). FEMA has determined that the Bulloch County Hazard Mitigation Plan Update is compliant with Federal standards, subject to formal community adoption.

The county and each municipality must pass individual resolutions adopting the Plan. Please forward the adopted and signed resolutions to Scott Sherman, Hazard Mitigation Planner, so that we may submit them to FEMA for inclusion in your plan for formal federal review and approval. Upon submittal of a copy of the participating jurisdictions' adoption documentation as well as documentation of the final public meeting, FEMA will issue formal approval of the Bulloch County Multi-jurisdictional Mitigation Plan. Should you have any questions or need additional information, please contact Scott Sherman, Hazard Mitigation Planner, at (912) 486-7939.

Sincerely,

A handwritten signature in black ink, appearing to read "Terry K. Lunn", is written over a faint, circular watermark or stamp.

Terry K. Lunn  
Hazard Mitigation Division Director

tl/ss

cc: Ted Wynn, Director  
Bulloch County Emergency Management Agency  
Bulloch County Municipalities  
Gordon Lowe, Area Coordinator  
Georgia Emergency Management Agency

**A RESOLUTION OF THE  
BULLOCH COUNTY BOARD OF COMMISSIONERS  
PURSUANT TO THE DISASTER MITIGATION ACT OF 2000  
AUTHORIZING ADOPTION OF THE  
BULLOCH COUNTY PRE-DISASTER HAZARD MITIGATION  
PLAN**

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WHEREAS, Bulloch County and its municipal governments are required to complete a Pre-Disaster Hazard Mitigation Plan by the Disaster Mitigation Act of 2000; and

WHEREAS, under the provisions of the Disaster Mitigation Act of 2000, local governments that complete Pre-Disaster Hazard Mitigation Plans will remain eligible for Federal mitigation funding; and

WHEREAS, Bulloch County and its municipal governments have completed a Pre-Disaster Hazard Mitigation Plan that fulfills the Federal requirements of the Disaster Mitigation Act of 2000.

**NOW THEREFORE LET IT BE RESOLVED THAT THE BULLOCH COUNTY BOARD OF COMMISSIONERS FORMALLY ADOPTS THIS PRE-DISASTER HAZARD MITIGATION PLAN.**

**RESOLVED THIS \_\_\_ DAY OF \_\_\_, 2015**

\_\_\_\_\_  
Signed: Garrett Nevil, Board Chairman

County Seal

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Attest: Olympia Gaines, Clerk of the Board

## CHAPTER 1 – INTRODUCTION TO HAZARD MITIGATION

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<b>Section I</b>	<b>Executive Summary</b>
<b>Section II</b>	<b>Community Profile</b>
<b>Section III</b>	<b>Geography</b>
<b>Section IV</b>	<b>Land Use</b>
<b>Section V</b>	<b>Authority</b>
<b>Section VI</b>	<b>Statement of the Problem</b>
<b>Section VII</b>	<b>Purpose of the Plan</b>
<b>Section VIII</b>	<b>Planning Methodology</b>
<b>Section IX</b>	<b>Plan Organization</b>
<b>Section X</b>	<b>Hazard Risk and Vulnerability Assessment</b>
<b>Section XI</b>	<b>Mitigation Goals &amp; Action Steps</b>
<b>Section XII</b>	<b>Multi-Jurisdictional Considerations</b>
<b>Section XIII</b>	<b>Plan Implementation &amp; Maintenance</b>
<b>Section XIV</b>	<b>Adoption by Local Government</b>

Table 1.1: Overview of updates to Chapter 1

I. Purpose and need of the plan, authority & statement of problem	<ul style="list-style-type: none"> <li>• Section VII outdated info replaced, links added for easy resource access</li> </ul>
II. Local methodology, brief description of plan update process, Participants in update process	<ul style="list-style-type: none"> <li>• Section VIII explained the people involved, and dates of plan update meetings 2011 through 2015, as well as where publicized</li> </ul>
III. Description of how each section of the original plan was reviewed and analyzed and whether it was revised	<ul style="list-style-type: none"> <li>• Section IX reflects a complete overhaul of the organization of the plan’s update to present a logical and concise revision.</li> </ul>
IV. Organization of the plan	<ul style="list-style-type: none"> <li>• See above</li> </ul>
V. Local Hazard, Risk, and Vulnerability (HRV) summary, local mitigation goals and objectives	<ul style="list-style-type: none"> <li>• Section XI explains how the (now Chapter 3) Goals and actionable strategies planned to address the additional input of ideas and current evaluations</li> </ul>
VI. Multi-Jurisdictional special considerations (HRV, goals, special needs)	<ul style="list-style-type: none"> <li>• Section XII identified the flood areas as spatial and somewhat consistent, and left wind and fire events to all regions</li> </ul>
VII. Adoption & implementation	<ul style="list-style-type: none"> <li>• This did not require revision</li> </ul>
VIII. Community Data (demographics, census, commerce, history, etc.)	<ul style="list-style-type: none"> <li>• Sections I and II 2010 census figures provided and links given</li> </ul>

## Section I - Executive Summary

The Federal Emergency Management Agency (FEMA) lists the major natural disaster declarations for the state of Georgia [at this website](#). From March of 1994 through March of 2014, there are 18 events, with 9 of those occurring in the last ten years. March of 2014 brought Bulloch County an Ice Storm named [Pax](#). The county knew what to do, set its plan in motion, and its citizens were informed, prepared, and kept safe.

In 2014 reimbursements to Bulloch County, the City of Statesboro, and the town of Portal for the Pax efforts are as follows: reimbursements totaling \$199,546.54 from FEMA and the State of Georgia. Here is the breakdown of where the dollar amounts received from FEMA and the State were due:

City of Statesboro - \$101,250.00  
Bulloch County - \$94,476.88  
City of Portal - \$3,819.66

The cost of a major disaster to our community goes well beyond those damages that are directly sustained. Recovery from disasters requires resources to be diverted from other important public and private programs, and adversely affects the productivity of our workforce. The magnitudes of these losses are most appropriately considered at local, rather than national levels. As the costs from disasters continue to rise, it becomes more and more important for pre-disaster steps and strategies to be taken in order to reduce the losses for our community. This strategy is known as mitigation.

Building a more disaster resistant community is an initiative that challenges Bulloch County. Reducing the effects of natural disasters makes economic sense, and it is good public policy because it seeks to protect our citizens and our future. This hazard mitigation plan update is being developed in hopes of limiting these losses to individuals, families, businesses, and taxpayers, and seeks to: 1) assess natural and manmade risks; 2) identify specific mitigation actions to help reduce identified risks; 3) foster collaborative partnerships and positive community relationships between business owners, citizens, and the media; and 4) increase public awareness of and support for related initiatives.

The Pre-Disaster Mitigation (PDM) Plan was produced through a Georgia Emergency Management Agency (GEMA) PDM Planning Grant and the joint efforts of the Bulloch County Pre-Disaster Mitigation Committee. The integration of the current Bulloch County [Comprehensive Plan 2014 Update](#) , [Bulloch County Land Use Plan](#) , [Airport Master Plan](#) , [Short Term Work Program](#) , the [2013 Community Wildfire Protection Plan](#) , the county [Building and Zoning Codes](#) , [2010 Flood Insurance Study](#) , maps, ideas, and data from the [Georgia State Enhanced Mitigation Plan](#) , and Emergency Plans within the county and municipalities' Emergency Services Divisions, were all addressed when planning the action items to be implemented by the various agencies and individuals involved. No conflicts were identified and each will encompass the others for each update to continue that level of compliance. This plan is required to make the

County and municipalities eligible for federal and state public assistance funds in the event of an emergency situation. This year 2015 plan update assures the continuity of those qualifications.

This Plan Update identifies activities that can be undertaken by both the public and the private sectors to reduce safety hazards, health hazards, and property damages caused by natural hazards, and outlines activities that can be implemented to reduce or eliminate losses from the natural hazards that could occur in Southeast Georgia. The following chapters and appendices to the plan cover hazard identification and analyze an assessment of the County's risk assessment and vulnerability to natural hazards. The essence of the plan is contained in Chapters 2; Hazard History and Probability of recurrence, and Chapter 3; Mitigation Goals and Action Steps, which outlines activities which can be implemented to reduce exposure to natural hazards. The emphasis of the strategies section is on reducing losses from exposure to flooding events, high wind events, and wildfires. While these are not the only hazards within Bulloch County, they were identified as those hazards most likely to impact the greatest number of citizens and the greatest land area.

Additionally, flooding is also the only natural hazard where the area of impact can be predicted given the rainfall or severe weather event and the characteristics of the drainage basin. Thus, flood damage prevention has the most potential to reduce citizen exposure to natural hazards.



## Section II - Community Profile

Located in Southeast Georgia, Bulloch County was created February 8, 1796. Portions of Bulloch County were later added to Candler County. The County seat is Statesboro, founded in 1866. According to the year 2013 census estimate figures, the population of Bulloch County is 71,214, and Statesboro is 29,937 (see population table below).

The County spans approximately [682.6 square miles](#). While much of the land area in the County is classified as agricultural land, most of the population, approximately 41%, is located in the County seat: Statesboro.

### Populations:

	<a href="#">2013</a>
Bulloch County	71,214
Brooklet	1,395 ( <a href="#">2010 census</a> )
Portal	638 ( <a href="#">2010 census</a> )
Register	175 ( <a href="#">2010 census</a> )
Statesboro	29,937

### Section III - Geography

Bulloch County is located in the Coastal Plain in southeastern Georgia approximately 50 miles inland from the Atlantic Ocean along the 30° 25' north latitude. It is the state's seventh largest county in terms of land area, covering 682.6 square miles or about 437,700 acres – roughly one-half the size of Rhode Island. The climate is very temperate, with an average annual rainfall of 44 inches, although there has been a cyclic series of drought followed by excessive rainfall in recent years.

There are five drainage basins in Bulloch County. These include: the Ogeechee River along the eastern boundary; Mill Creek in the northeast portion of the county; to the south, Black Creek, the largest drainage area; Lotts Creek on the western border, and Ten Mile Creek, which drains the remainder of the western section of the county. The numerous tributaries which feed these major creeks and river fit into a dendritic drainage pattern. Bulloch County also has over 1,000 ponds larger than two acres in size. Cypress Lake, the largest pond, covers approximately 600 acres.

The county's topography is flat to gently rolling with a number of swamps and wetlands, as well as the aforementioned ponds. There are no major escarpments, bluffs, or significant hills; therefore, views and vistas are limited to areas where the cover has been removed to provide farming areas. Elevations range from 40 feet above sea level along the Ogeechee River and Black Creek near the Bryan County line to more than 300 feet at several points in the northern part of the county near the Jenkins County line. Brooklet is located at 155 feet above sea level, while Register's elevation is about 195 feet and Portal's is 295 feet.

### Section IV - Land Use

The projected population for Bulloch County from [2010 to 2015](#) had been expected to top 64,000, about a 21.9% increase, and did. Statesboro's continued growth as a regional

trade/service center, its location along I-16 near Savannah, and the continuing growth of Georgia Southern University and the public services sector will remain the local community's economic engine and major growth influences. Proper planning and land use management through hazard mitigation will provide the local communities with the ability to reduce damage caused by natural disasters, and recover more rapidly directly because of proper planning.

Statesboro is expected to continue to be the focus and center of most development in the county. The new perimeter roads around the city are yet another magnet for such growth. Residential growth is expected to continue around the City of Statesboro and extend beyond the perimeter roads off all main roads leading to the city. Zoning will tend to slow down the rapid growth of subdivisions in agricultural areas. There will continue to be limited residential growth near the Brooklet, Portal and Register areas.

The coordinated goals recommended by this plan recognize that management and control of land use in Bulloch County, Brooklet, Portal, Register and Statesboro are the critical keys to bringing about the desired hazard mitigation. The chosen goals and implementation actions are responsive to identified needs and consistent with community desires as expressed in this plan update, and the [Bulloch County Comprehensive Plan Update](#) and others. (See section 1 of this chapter.)

The desired community of the future is detailed in the understanding of what it will take to accomplish those goals, and implement the actions. The specific goals, and action steps established for the county and the municipalities are detailed in this plan. These action steps are the true heart of the plan and should be utilized to guide governmental decision-making on the location of development, infrastructure, and in specific and careful wording and enforcement of ordinances.

## **Section V - Authority**

In the past, federal legislation has provided funding for disaster relief, recovery, and some hazard mitigation planning. The Pre-Disaster Mitigation (PDM) Program was authorized by the Robert T. Stafford Disaster Assistance and Emergency Relief Act (Stafford Act), 42 USC, as amended by the Disaster Mitigation Act of 2000. The Disaster Mitigation Act of 2000 (DMA 2000) is the latest legislation which sought to improve this planning process and was put into motion on October 10, 2000, when the President signed the Act (Public Law 106-390). The new legislation reinforces the importance of mitigation planning and emphasizes planning for disasters before they occur. As such, this Act establishes a pre-disaster hazard mitigation program and new requirements for the national Hazard Mitigation Grant Program (HMGP). Section 322 of the Act specifically addresses continuous mitigation planning at the state and local levels.

The State and the communities must have a current, approved mitigation plan update 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.

## **Section VI - Statement of the Problem**

Since 1990, Bulloch County has experienced 6 [Disaster Declarations](#) and numerous emergencies. Large County land area, coastal plains topography, poorly planned development or a lack of disaster recovery resources can exacerbate our community's susceptibility to natural and man-made hazards.

In order to develop a dynamic plan for managing hazard risk in Bulloch County we need to develop a model that educates the public regarding hazard mitigation, incorporates hazard mitigation into the development planning process, continue to update the hazard mitigation plan, and seek funding for emerging needs.

## **Section VII - Purpose of the Plan**

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

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

Mitigation is the ongoing effort to lessen negative effects from natural disasters on people and property. The Federal Emergency Management Agency has designated

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

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

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

## **Section VIII - Planning Methodology**

Development of the Bulloch County Hazard Mitigation Plan Update was a concerted effort on the part of Bulloch County and the City of Statesboro, and Towns of Brooklet, Portal, and Register. By proclamation, the Bulloch County Board of Commissioners approved the following scope of work for the development of the plan:

- Formation of the Bulloch County Hazard Mitigation Plan Update Committee, including electing Committee Officers, comprised of -
- Mr. Ted Wynn – Bulloch County Emergency Management Agency Director and Chair of the Bulloch County Hazard Mitigation Plan Update Committee, Vice Chair; Lee Eckles (Public Safety/EMA), and the GEMA Hazard Mitigation Planner; Scott Sherman
- Participation included the following individuals collectively: Ted Wynn, Lee Eckles (Public Safety), Nancy Akins (911), Kelly Barnard (911), Jason Boyles (Statesboro)

City Engineer), Sheriff Lynn M. Anderson (BCSO), Major Scott Brunson (Statesboro PD), Robert Chesire (City of Statesboro), Roger Smith (Savannah Red Cross), Thomas Couch (County Manager), Mike Motes (EGRMC), Maggie Fitzgerald (HR, BOC), Toni Flatman (Health Dept), Kathy Boykin (Airport), Shelby Freeman (Public Health, State of Georgia), Benjamin Tapley (Brooklet), Tim Grams (City of Statesboro Fire Chief), Cindy Heart (Southeast Health District Nurse Manager, State of Georgia), Chris Hill (Warden – Correctional Institute), Jason Sapp (Portal PD), Mike Arrieta (Portal Clerk), J. R. Holloway (SPD Ret.), Garrett Nevils (Chairman, Bulloch County Board of Commissioners), Jimmy Wayne Smith (Correctional Institute), Angie Rosengard (OTC), Randy Turner (Register), Wendell Turner (Public Safety Dir/Statesboro PD), Wes Harris (County Agent), Andy Welch (County Manager), Gordon Lowe (GEMA), Doug Chassereau (GFC), Yuntalay Gadson and Angel Bowers (SEHD), Paul Webb (Transportation Director – BC Board of Education), Debra Wiese (Public Health, State of Georgia), Kathryn Wood (Nursing Director BOE), Tom Woodrum (Capt. Statesboro PD), Scott Sherman (GEMA), and a citizen volunteer, JoAnn Sherman (V.A. nurse Ret.).

(See Minutes and Sign-in sheets in Appendix E. *(Some of the earlier sign-in sheets could not be obtained due to a change in personnel.)*)

- Department Directors/Chiefs/Mayors/Chairpersons/Staff from Bulloch County, City of Statesboro, and all three town governments, Fire Departments, Police and Sheriff's office, various private businesses, two of the three local colleges, The Georgia Board of Health, Georgia Forestry Commission, Georgia Emergency Management Agency, and the Red Cross.
- Two formal, public meetings, and several (5) informal meetings occurred to decide upon hazards to be included, amass Hazard, Risk and Vulnerability (HRV) assessment data, and formulate goals and mitigation strategies based on collected assessments.
- Advertised public meetings at least twice (15 August, 2011 and 16 July, 2014) during the planning process, (Public Notice, word of mouth, and volume e-mail invitations – see Appendix E) and with [a public review of the draft plan](#) to be scheduled.

The local Emergency Management Agency Director, Ted Wynn, served as Chair of the Bulloch County Hazard Mitigation Plan Update Committee and was responsible for daily oversight, planning, and coordination of plan development. A public meeting was held on 15 August, 2011 for local and state representatives to introduce Bulloch County residents to the Hazard Mitigation plan update process and to address any questions or concerns of the community in relation to it. (see Appendix E)

The Bulloch County Hazard Mitigation Plan Update was developed with extensive research. Public input was considered critical to the success of the plan, and was solicited regularly. On June 10<sup>th</sup>, 2014, the draft of Chapter 2 was posted on the Bulloch [County website](#) for public review and input and the other chapters were [later offered there](#) for review as well.

## **Section IX - Plan Organization**

The Bulloch County Hazard Mitigation Plan Update is organized in a fashion to assist local government officials, county residents, public and private sector organizations, and any other interested parties in participating in, and planning for natural hazards. The Hazard Mitigation Plan Update contains (Worksheets 3) Hazard, Risk and Vulnerability (HRV) assessments (Appendix A), sections on natural hazards that typically occur within the county, and a section identifying specific mitigation goals, and associated courses of action. Finally, a framework for plan implementation and maintenance is presented. These were evaluated with current datasets, condensed, and revised to reflect seven current existing natural hazards specific to Bulloch County and its municipalities.

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

Each destructive force (Water, Wind, and Fire) was analyzed for spatial occurrences, frequency, and changes made to an action plan wherever members deemed relevant, instead of the prior format of addressing each of the seven hazards individually, & the redundancies that resulted from that approach.

## **Section X - Hazard, Risk and Vulnerability Assessment**

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

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

Damages from Water:

- Drought
- Flooding

Damages from Wind:

- Coastal Storms
- Severe winter storms (Ice)
- Tornadoes
- Thunderstorms/ High Wind Events

Damages from Wildfires:

- Wildfires, Wildland fires, and Urban Interface fires

*(2) Hazard Event Profiling:* Past hazard event data were collected through an extensive process that utilized input from Plan Update Committee members, research on past disaster declarations in the County, information provided from the National Climatic Data Center(NCDC), and the National Weather Service, a review of current Flood Insurance Rate Maps (FIRM), internet and newspaper data searches, interviews with local residents, interviews with GEMA, and Federal, state (the Georgia Mitigation Information System website,) and local agencies.

The committee analyzed the causes and characteristics of each hazard, how the hazard had affected Bulloch County in the past, and what part of Bulloch County's population and infrastructure had historically been vulnerable to each specific hazard.

*(3) Vulnerability Assessment:* The asset inventory component of the HRV assessment data included the inclusion into a database that provides county infrastructure and critical facilities data as well as structure dollar values for loss estimates. This critical facilities database collected data which includes structure location, value, construction details, was there a vulnerable population present, and facility type. This information was also entered into the State of Georgia's Mitigation Information System.

As an EOC, State Patrol Facility, and two Elementary Schools had been built since the original Hazard Mitigation Plan was written, these critical facilities were entered into the system as well as updating all of the structure values of the critical facilities already listed therein.

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. Bulloch County critical facilities are listed in Appendix A.

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 all structures countywide and affected critical facilities and population exposed to each hazard. GEMA Worksheet #3, provided in Appendix D, outlines this step of the HRV assessment.

Assessing vulnerability, for the purposes of this plan, also included a review of the Bulloch County Comprehensive Plan, and Land Use Plan to assess general land use patterns and development trends.

*(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 main source of this information was the County Tax Assessor's Office.

A good example of a loss estimate for a spatial hazard is as follows:

A flooding event could potentially impact ~ 40% of the gross digest. These are sub-categorized as: Residential \$781,633,942, Agricultural losses - \$130,858,872, Commercial - \$467,931,627, Industrial - \$150,439,658, for Utilities - \$54,706,321, Religious & Non-profit - \$30,241,110, Governmental - \$62,296,996, & Educational properties at \$158,106,321.

Additionally, an unknown percentage of the total raw/forage farm gate value: \$77,425,273 as well as an unknown monetary percentage of the timber product output as 68.2% of the county land is forested (based upon figures from 2011 County Guide). As seen in the Georgia Mitigation Information System (GMIS) reports (in Appendix); Countywide, flood could incur \$8,353,171 in losses involving those critical facilities having a flood hazard score greater than zero.

## **Section XI - Mitigation Goals & Action Steps**

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

committee meeting, along with data and input from GEMA, and GFC. Past occurrences of disasters and historical trend data aided committee members in assigning priorities. After ensuring that all interested persons had been given ample opportunity to contribute to strategy development, mitigation action steps were next 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 suited for Bulloch County as it is today. STAPLEE worksheets can be found in Appendix D.

## **Section XII – Multi-Jurisdictional Considerations**

The City of Statesboro, Town of Brooklet, Town of Portal, Town of Register and Bulloch County were active participants in the plan update process. Mitigation goals, and action items identified in this plan for wind and fire damage are applicable to all municipalities and the County areas, unless specifically noted otherwise.

In flood especially, action items with an emphasis on higher spatial frequency of occurrence and extent, was adapted for those areas.

## **Section XIII - Plan Implementation & Maintenance**

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

Bulloch County currently utilizes comprehensive land use planning and building codes to guide and control development within the county. These existing mechanisms will have hazard mitigation strategies integrated into their guidance. Local authorities responsible for the Local Emergency Operations Plan (LEOP) and other plans, as applicable to multi-jurisdictional plans, will utilize guidance from this Hazard Mitigation Plan. Mitigation action items also include strong educational outreach strategies that were identified by the plan update committee, and are to be implemented throughout.

The Bulloch County Hazard Mitigation Plan Update Committee had developed a method to ensure that regular review and update of the Plan occurs. The Emergency Management Agency Director will assemble a committee when deemed necessary (other involved Plans are updated, & after severe hazard events), and after any severe hazard event. Committee members will be responsible for monitoring and evaluating the progress of the mitigation strategies in the Plan. The committee will review each goal and action step to determine relevance to changing situations in the County, as well as changes in state and federal policy and to ensure that goals are addressing current and

expected conditions. The committee will also review the risk assessment portion of the Plan Update to determine if this information should be modified.

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

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

#### **Section XIV – Adoption by Local Government**

It is the intent of the Bulloch County Board of Commissioners to submit this plan update to Georgia Emergency Management Agency (GEMA) and Federal Emergency Management Agency (FEMA) Region IV for approval. Having approval by GEMA and FEMA Region IV, the Bulloch County Board of Commissioners and the governing bodies for the City of Statesboro, Town of Brooklet, Town of Portal and Town of Register will formally adopt the Bulloch County Hazard Mitigation Plan Update and submit their present resolutions to be included into the plan update.

## CHAPTER 2 – NATURAL HAZARD RISK AND VULNERABILITY (HRV) SUMMARY

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- Section I    **WATER:**        Drought, Flooding, and Hurricane fallout
- Section II   **WIND:**         Severe Winter Storms, Tornadoes, & Windstorms
- Section III   **FIRE:**            Wildfires

A brief summary of the changes that have been made:

Chapter 2 Section	Updates to Section
Chapter 2: Consolidation of hazard events	The original plan divided this chapter amongst sixteen hazards. This update simplifies this by writing three sections by their destructive force.
I. <b><u>WATER:</u></b> Drought, Flooding, & damage secondary to hurricanes pgs. 2 - 18	<ul style="list-style-type: none"> <li>• Added/Updated: Storm events to present, &amp; their frequency re-evaluated</li> <li>• Added new &amp; eliminated outdated County critical facilities and revised their values</li> </ul>
II. <b><u>WIND:</u></b> Severe Winter Storms, Tornadoes, & Windstorms/ Thunderstorms Pgs. 18 - 24	<ul style="list-style-type: none"> <li>• Added/Updated: Storm events to present, &amp; their frequency re-evaluated</li> <li>• Added new &amp; eliminated outdated Bulloch County critical facilities and have revised their values</li> </ul>
III. <b><u>FIRE:</u></b> Wildfires Pgs. 24 - 26	<ul style="list-style-type: none"> <li>• Added/Updated: Storm events to present utilizing a more concise and recent dataset from the CWPP</li> <li>• Added new &amp; eliminated outdated County critical facilities and revised their values</li> </ul>

The Bulloch County Multijurisdictional Hazard Mitigation Plan Update Committee initially identified all natural hazards which could potentially enter Bulloch County. This list was then refined to include those hazards most likely to have a negative impact on the county through Worksheet 1. (in Appendix A) Although there are 48 hail events ranging from 0.75" to 2.75" in size in 2008, *only the 25 Sept. 2011 event listed property damages*. That hail was 1.75" in size and inflicted \$25K in property

damage. As there are not many things one could choose as a mitigating defense against hail; it was decided that none were thought to be practical given the scope of the hazard.

The plan update executive committee determined that the seven remaining hazards which posed a direct, measurable threat to Bulloch County could be consolidated to three sections by the detrimental force(s) of nature contributing to the final damages we attempt to mitigate here.

In the April 2014 meetings, this Risk Assessment was researched and analyzed thoroughly.

**Note:** All on-line data provided through the GEMA On-line PDM [Critical Facility tools](#) are provided in the Appendix A. Property values were updated to reflect the US inflation rate increase from March of 2004 to March of 2014 as seen at: <http://usinflation.org/us-inflation-rate-calculator/>.

## SECTION I – WATER: Drought, Flooding, & damage secondary to Hurricanes

### A. Hazard Identification

The Bulloch County Hazard Mitigation Plan Update Committee reviewed historical data from the National Climatic Data Center, the Georgia Department of Natural Resources and the Georgia Forestry Commission in researching drought conditions in Bulloch County. By definition, a drought is a protracted lack of rain or periods of abnormally dry weather sufficiently prolonged for the lack of water to cause a serious hydrologic imbalance in the affected area. Drought conditions affect the cultivation of crops as well as a water availability and water quality. Drought is also a key factor in wildfire development. Drought conditions make natural fuels (grass, brush, trees, and dead vegetation) more flammable.

More than 84 percent of Bulloch County is considered Agricultural-Forestry. In a county with considerable rural acreage, natural water sources from rainfall amounts affect the many residential and commercial property wells, and are vital to efficient firefighting in isolated properties.

### B. Hazard Profile

Drought is a condition of climatic dryness that is severe enough to reduce soil moisture and water levels below the minimum necessary for sustaining plant, animal, and economic systems. Unlike some hazard events such as floods, drought has neither a clearly defined onset, nor spatial restriction within Bulloch County. It can, however; be a contributing factor for wildfire (which is addressed in Section III of this chapter).

#### Drought Probability and Experience:

(source: [GEMA 2014 State Mitigation Plan](#))

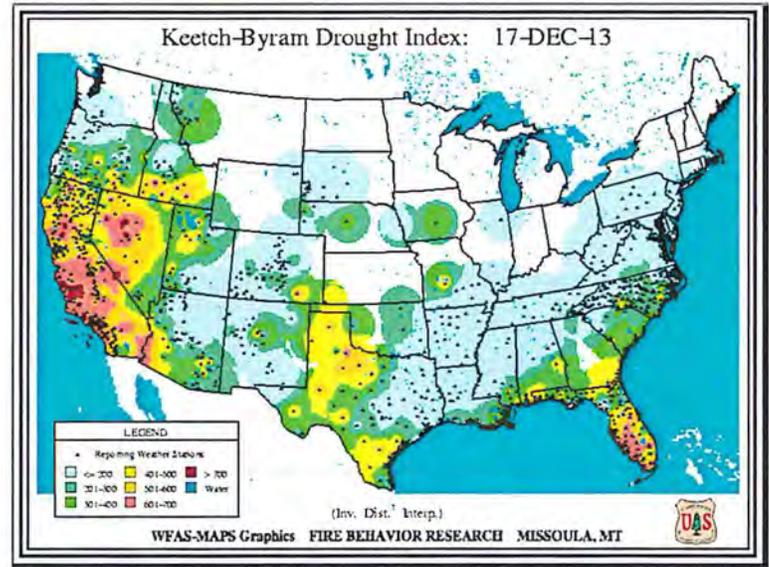
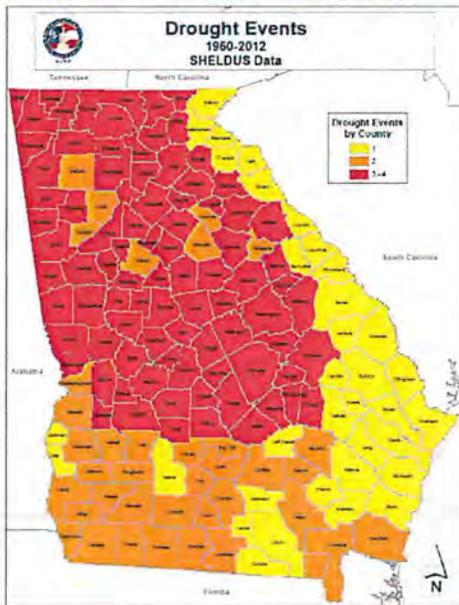
Year	Area Affected	Remarks
1903-05	Statewide	Severe
1924-27	North-central Georgia	One of the most severe of the century
1930-35	Mostly statewide	Affected most of US
1938-44	Statewide	Regional drought
1950-57	Statewide	Regional drought
1968-71	Southern and Central Georgia	Variable severity
1977	Statewide	Disaster 3044
1985-90	North and Central Georgia	Regional drought
1999-2009	Statewide	Severe

Table 2.18: Notable Drought Events in Georgia

Looking at the Georgia 100 year record from 1903 to 2003, 37 of those 100 years were affected by drought. This yields a probability of [a 37% chance of a drought occurring in any given year](#). The map below shows one event in Bulloch county from 1960 – 2012. (Which conflicts with the statewide stats) Now, at the records kept with US Drought Monitor we have events of severe or extreme drought occurring June of 2000 through November of 2000, June of 2001, Nov. 2001 – Nov 2002, May of 2007, June 2011 – June 2012, and Dec. of 2012 – Feb of 2013 (6 events in an almost 13 year period) which demonstrates that an attempt to quantify this hazard would be folly, (county, state, and federal data do NOT agree) therefore drought is not included in the Hazard Frequency Table in Appendix A.

### Recent Historical Occurrence of Drought in Georgia

(source: [GEMA 2014 State Mitigation Plan](#))



### C. Assets Exposed to Hazard

Drought conditions typically pose little or no threat to structures; however, fires can occur as a result of dry weather. The Bulloch County Hazard Mitigation Plan Update Committee concluded that drought, in itself, presents no credible threat to critical facilities.

Wildfire, as a result of drought, was considered, and the Committee determined that this hazard does bear a significant threat to the community & will be addressed in Section III.

### D. Estimate of Potential Losses

Drought affects water levels for use by industry, agriculture, and individual consumers. Drought, through agricultural crop damages and the farmers' loss of revenue, has a domino effect, resulting in economic and environmental complications and personal hardships to the rest of the community.

A severe drought event will not directly involve structures in Bulloch County, but a drought could adversely affect [71,214](#) citizens, and agricultural revenues as seen below.

(source: [GEMA 2014 State Mitigation Plan](#))

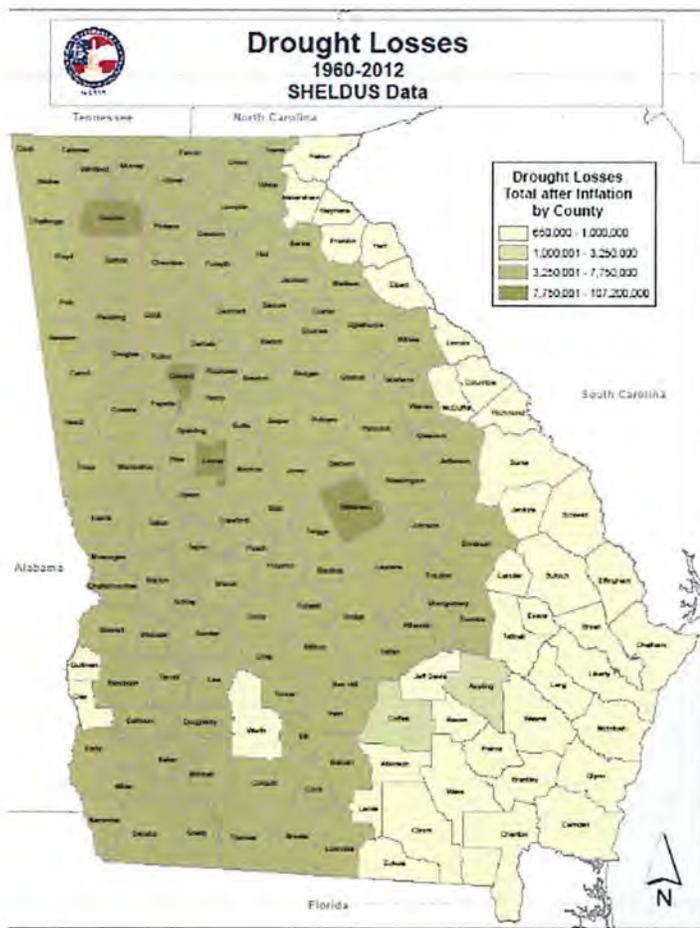
## E. Land Use & Development Trends

The Bulloch County Zoning Department has this Mission Statement:

“To promote orderly growth, development, redevelopment and preservation of the unincorporated areas of Bulloch County; to administer the following ordinances and plans related to development: Comprehensive Land Use Plan, Zoning Ordinance, Subdivision Ordinance, Flood Ordinance, Tower Ordinance, Sign Ordinance, Soil Erosion and Sedimentation Ordinance, Building Ordinance and Manufactured Home Ordinance.

With regard to current zoning and development issues, the staff will focus on implementing the growth management measures recommended with Comprehensive Plan and Future Land Use Map. Development ordinance changes being considered include provisions for conservation subdivision regulation, storm water controls, and overlay protection districts for the Statesboro-Bulloch County Airport and major commercial corridors leading to Statesboro.”

Bulloch County, City of Statesboro, and the Towns of Brooklet, Portal, and Register do not, at this time, have land use or development trends limited to drought.



## F. Multi-Jurisdictional Concerns

All of Bulloch County could potentially be affected by drought conditions, particularly as concerns the agriculture, livestock, and forestry community and the inherent threat of wildfire. As a result, any mitigation steps taken related to drought should be undertaken on a countywide basis and include the City of Statesboro, Town of Brooklet, Town of Portal and Town of Register.

## G. Hazard Summary

Drought is a threatening hazard of nature common to virtually all climates. It originates from a deficiency of precipitation over an extended period of time, usually a season or more. Ample water supply is critical to the economic condition of Bulloch County. During droughts, crops do not mature, wildlife and livestock are undernourished, firefighting water reserves diminish, and unemployment increases. The economic losses sustained

during Bulloch County's protracted droughts (see map above) give emphasis to our vulnerability to this natural hazard.

Chapter 3 provides the Bulloch County Pre-Disaster Mitigation Plan Update Committee's Drought related Goals, and Action steps in both the steps common to all events section, as well as water hazards section.

## **SECTION I – WATER continued:**

### **A. Flood Hazard Identification**

Bulloch County is located in a known floodplain. Flooding from major hazardous events has occurred many times in the past 200 years. Flash Flooding occurs during prolonged rainfall or intense rainfall over a short period of time; rivers overflow their banks; severe thunderstorms may bring heavy rain in the spring and summer; coastal storms and the secondary inland damages from hurricanes are a constant threat in the summer and fall months.

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 lowlands, adjacent to rivers and oceans that are subject to recurring floods. The Bulloch County Hazard Mitigation Plan Update Committee examined historical data from the [National Climatic Data Center](#), past newspaper articles, the [State of Georgia Hazard Mitigation Strategy](#), historical facts from Bulloch County Citizens, and from [FEMA presidentially declared disasters](#) during its research on the effects of flooding in Bulloch County.

Nature is not the only cause of flooding. New construction and paving alter land's ability to drain properly. As a result, runoff is increased two to six times over what would occur on natural terrain. Areas that were initially zoned as low-risk can quickly become high-risk as urban development alters typography.

### **B. Hazard Profile**

Within Bulloch County, flooding has caused significant damage on several occasions. Presidential Declarations for recent flood events include: From October 1, 1994 to November 16, 1994, the Federally Declared flood disaster (DR 1042) where Bulloch, together with 12 neighboring counties, received disaster funding for flooding along with tornadoes and high winds, 11 March, 1998 (DR1209), when individual assistance was given within Bulloch County as one of 119 Georgia Counties with flood damages due to flooding from severe storms which included tornadoes. [The NCDC Bulloch County database](#) lists flooding in June of 2004, March and June of 2005, a flash flood on 12/14/2009, on [8/6/2013 a flash flood](#) which incurred approximately \$10,000 in property damage, and 13 days later, Statesboro had [a flash flood event](#) with approximately \$50,000 in property damage: "A nearly stationary front remained draped across Southeast Georgia through the day. Numerous showers and thunderstorms developed across the region and became nearly stationary across the Statesboro area. The heavy rainfall produced flash flooding as well as two dam failures.

Event Narrative: Bulloch County 911 dispatch relayed numerous reports of road closures in or near the Statesboro city limits. Approximately 20 to 25 water rescues were reported due to flooding in the first floor of an apartment complex and homes along Johnson Street and West Site Road as well as Hodges Circle. Two dam failures were also reported northeast of Statesboro. One of the dams was along Buck Creek Road. Twenty-two homes were also impacted in the Statesboro area." End quote.

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

Chapter I Geography section thoroughly describes the 5 drainage basins and topography within Bulloch County.

Approximately 42 percent of the land area in Bulloch County falls within a 100-year flood zone (see maps to follow). No Critical Facilities exist within the 100-year flood zone for Brooklet, Portal, or Register. The Town of Portal contains no flood zone areas, Brooklet contains ~ 8% percent flood zone areas, Statesboro contains ~ 20% percent flood zone areas and Register contains approximately 18% flood zone areas.

The Bulloch County Flood Insurance Study (found in Appendix B) addresses the five drainage basins described in Section III of Chapter 1, as does the Flood Extent Table (also found in Appendix B).

Historical Crests for Ogeechee River at Rocky Ford

**Historic Crests**

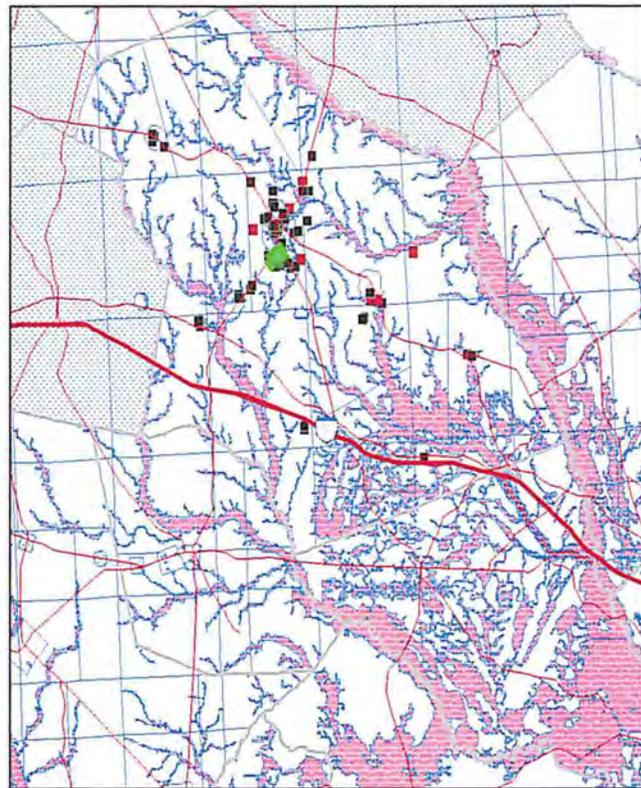
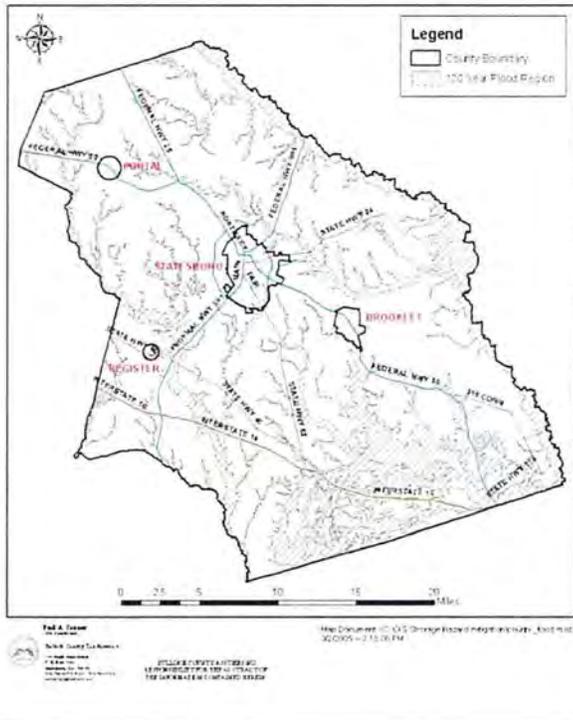
- (1) 13.92 ft on 03/23/2003
- (2) 12.50 ft on 03/31/2005
- (3) 12.41 ft on 04/06/2009
- (4) 11.83 ft on 07/13/2013
- (5) 11.62 ft on 12/27/2009
- (6) 10.68 ft on 03/10/2007
- (7) 10.08 ft on 03/01/2004
- (8) 9.82 ft on 03/12/2008
- (9) 9.51 ft on 10/11/2005
- (10) 9.29 ft on 01/08/2006
- (11) 8.98 ft on 02/11/2011
- (12) 8.71 ft on 12/31/2002
- (13) 6.95 ft on 06/17/2012

(P): Preliminary values subject to further review.

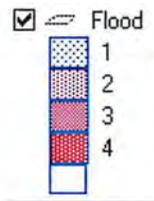
As seen in the Hazard Frequency Table in Appendix A, the county has had 6 flood events in the past 10 years, and 11 events within the past 20 years. This indicates that, in an average year, there is a 55% to 60% chance of a flood event occurring.

Bulloch County Flood Maps from March of 2005, and current (2014) Georgia Mitigation Information System (GMIS) maps of same follow:

# Bulloch County Flood Areas



GMIS Bulloch County Flood Areas



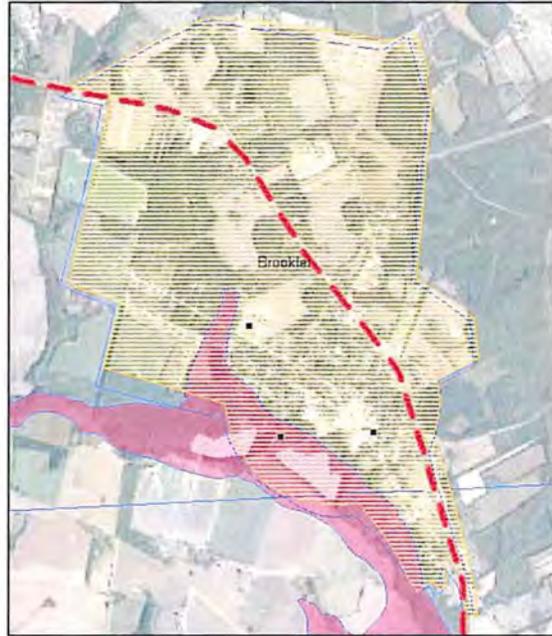
The flood hazard scores are derived from the FEMA Q3 “Zone” values. The Q3 layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination.

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

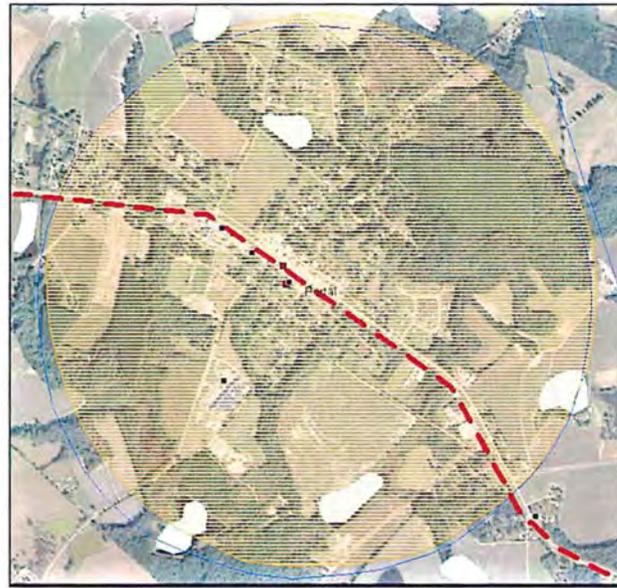
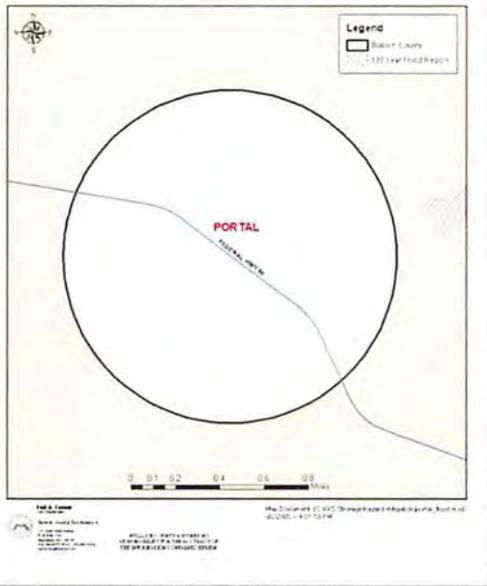
### Brooklet Flood Areas



### GMIS Brooklet Flood Areas



### Portal Flood Areas



### GMIS Portal Flood Areas



### C. Assets Exposed to Hazard

The Bulloch County Hazard Mitigation Plan Update Committee established a list with location of all critical facilities within the County. Bulloch County GIS prepared maps of the County showing the boundaries of the flood hazard areas. (See above) Any existing critical facility located in the floodplain will be reviewed for flood mitigation measures.

The Brooklet Police Department has relocated its Police Dept. out of a flood area into its new addition built at the City Hall; 104 Church Street in January of 2015. The Plan Update Committee is not aware at this time of any future building planned for a floodplain area. A list of critical facilities and maps are located in Appendix A.

### D. Estimate of Potential Losses

Estimating indirect costs from flood damage was prepared using guidance provided in How-To-Guide 386-2, Understanding Your Risks, Identifying Hazards and Estimating Losses. Worksheet 3, in Appendix A, reflects loss estimates for each of the critical facility categories within Bulloch County.

A flooding event could potentially impact ~ 40% of the gross digest. These are sub-categorized as: Residential \$232,751,430, Agricultural losses - \$51,715,591, Commercial - \$32,818,610, Industrial - \$55,079,462, for Utilities - \$14,905,856, Religious & Non-profit - \$3,680,827, Governmental - \$10,283,947, & Educational properties at \$9,939,544 which amounts to \$411,175,267. Add to that Statesboro's 20% (\$374,253,826), Brooklet's 8% (\$6,887,466), and Register's 18% (\$1,308,180), and that total jumps to \$793,624,739 for structures.

Additionally, an unknown percentage of the total raw/forage farm gate value: \$77,425,273 as well as an unknown monetary percentage of the timber product output as 68.2% of the county land is forested (based upon figures from *2011 County Guide*).

As seen in the Georgia Mitigation Information System (GMIS) reports (in Appendix); Countywide, flood could incur \$8,353,171 in losses involving those critical facilities having a flood hazard score greater than zero.

### E. Land Use & Development Trends

Bulloch County, the city of Statesboro, and the town of Brooklet participate in the National Flood Insurance Program (NFIP), Portal does not have identified flood areas, and Register was newly [sanctioned on 8/5/2011](#) and is addressing that. There are specific [local ordinances](#) prohibiting development in flood-prone areas, and construction must adhere to the Georgia State Minimum Standard Codes (Uniform Codes Act) and the International Building Code. The minimum standards established by these codes do provide reasonable protection to persons and property within structures that comply with the regulations for most natural hazards. The county has four repetitive loss residential properties; one of which was in Statesboro and the other three are in unincorporated areas. The Brooklet Police Dept. moved its office from a flood area to their City Hall.

## **F. Multi-Jurisdictional Concerns**

Less than forty-two percent (< 42%) of Bulloch County could potentially be affected by flood conditions, particularly as concerns a hurricane or storm event. Statesboro has approximately 20% of its land area exposed to flood events; Brooklet has approximately 8%; Portal has no flood areas; and the town of Register has about 18% exposed to flood events.

## **G. Hazard Summary**

The Bulloch County Hazard Mitigation Plan Update Committee located flood prone areas and the roads and bridges likely to be affected. The GMIS report identified the critical facilities found in the higher hazard score areas which included a town police station (evaluating their alternatives at present), one alternative school, and two utilities. The county has four repetitive loss residential properties; one in Statesboro and the other three are in unincorporated areas. A committee member visited the flood prone police station in Brooklet in 2014 and an officer (Shawn Berry) there explained that they were evaluating the rebuild versus relocate costs. A followup call revealed that the Brooklet Police office (in January 2015) relocated its new building addition at Brooklet City Hall. Members identified many mitigation measures as a high priority. These measures can be seen in Chapter #3 amongst others, and should receive full consideration for implementation following the assigned priorities stated therein.

## **SECTION I – WATER *continued***

### **A. Hurricane/Coastal Storm Hazard Identification**

Hurricanes and tropical storms, as well as tropical depressions, are all tropical cyclones defined as warm-core non-frontal synoptic-scale cyclones, originating over tropical or subtropical waters, with organized deep convection and closed surface wind circulation about a well-defined center. A hurricane is a category of tropical storm with 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. Hurricane winds blow in a large spiral around a calm center called the eye, which can be 20-30 *miles* wide. When a hurricane nears land, it may bring torrential rains, destructively high winds, storm surges, coastal flooding, inland flooding, and sometimes, tornadoes. A single hurricane can last for more than two weeks over water and can extend outward 400 miles. The hurricane season for the Atlantic coast is June 1<sup>st</sup> to November 30<sup>th</sup>.

On average, five hurricanes strike the United States every year. In a two-year period, an average of three significant (category 3 or higher) hurricanes will strike the United States. Resulting inland effects include heavy rainfalls, riverine flooding, and high winds. Hurricanes can flood both coastal and inland areas, even as the storm dissipates in wind strength; while windy hurricanes primarily affect coastal areas with their high winds and storm surge. Because hurricanes are large moving storm systems, they can affect entire states or entire coastlines. Therefore, hurricanes/tropical storms are not, by themselves, separate or distinct hazards. But should the (now inland) storm stall over an area, the amount of flash flood water will be more than most area could handle.

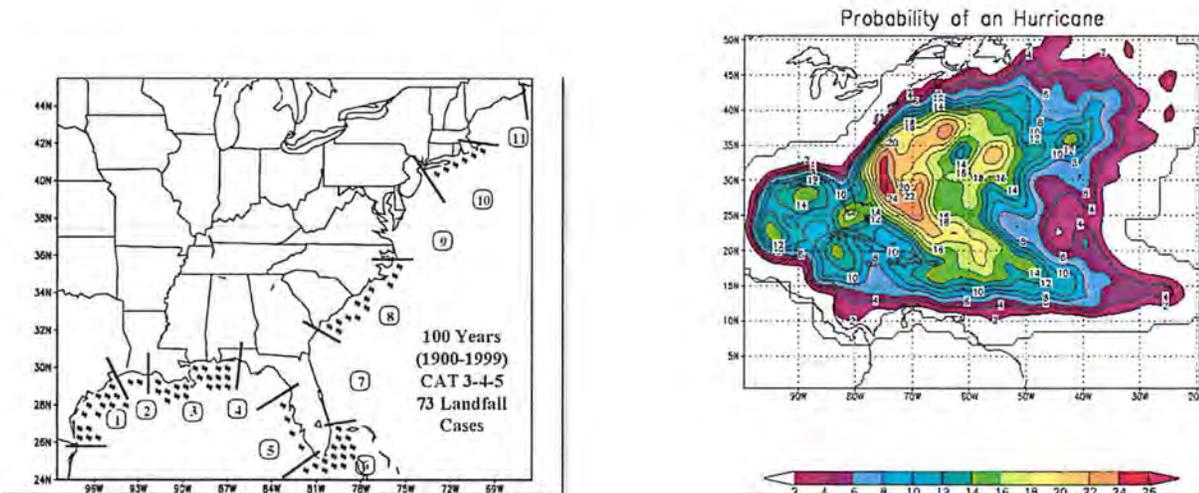
## B. Hazard Profile

In the fifty years from 1964 through most of 2014 (present), Bulloch County has been negatively affected by the following hurricanes as windstorm events only. None of the [flash flood dates](#) coincide with the dates listed below as they were separate occurrences.

- Hurricane Dora September 9, 1964
- Hurricane Bertha July 11, 1996
- Hurricane Fran September 3, 1996
- Hurricane Floyd September 14, 1999
- Tropical Storm [Jeanne](#) (DR 1567)
- Hurricane Katrina (EM 3218) -- signed September 5, 2005
- Tropical Storm [Alberto](#) in June of 2006

The probability of a hazardous flooding event caused by a hurricane winds in Bulloch County is less than 1 percent per year.

Below are maps showing the 100 year history of Atlantic Hurricane landfall locations and current probability.



**Extent:** The best available method for determining potential extent or magnitude of a future hurricane wind event is to review historical records. Based on hazard history for Georgia, the potential extent for a future hurricane wind event in Georgia is a Category 4 Hurricane producing maximum sustained winds of up to 156 miles per hour.

HAZUS-MH (a natural hazard based geographic information system developed by the Federal Emergency Management Agency) predicts that there is a 2% chance of a hurricane or tropical storm causing peak 3-second gusts of 73-83 mph in Bulloch County.

## C. Assets Exposed to Hazard

All structures and facilities within Bulloch County, City of Statesboro, Towns of Brooklet, Portal (to a lesser extent), and Register could be damaged by a hurricane event causing flash flooding, including

all public safety facilities, government buildings, water and wastewater treatment facilities, public utilities, education centers, the public library and commercial, farm & agricultural, and residential areas.

#### **D. Estimate of Potential Losses**

A hurricane could potentially affect over 71,091 structures in Bulloch County, the City of Statesboro, & the towns of Brooklet, Portal, and Register at an estimated dollar value of \$4.237 Billion, and could have a negative impact on 71,214 persons.

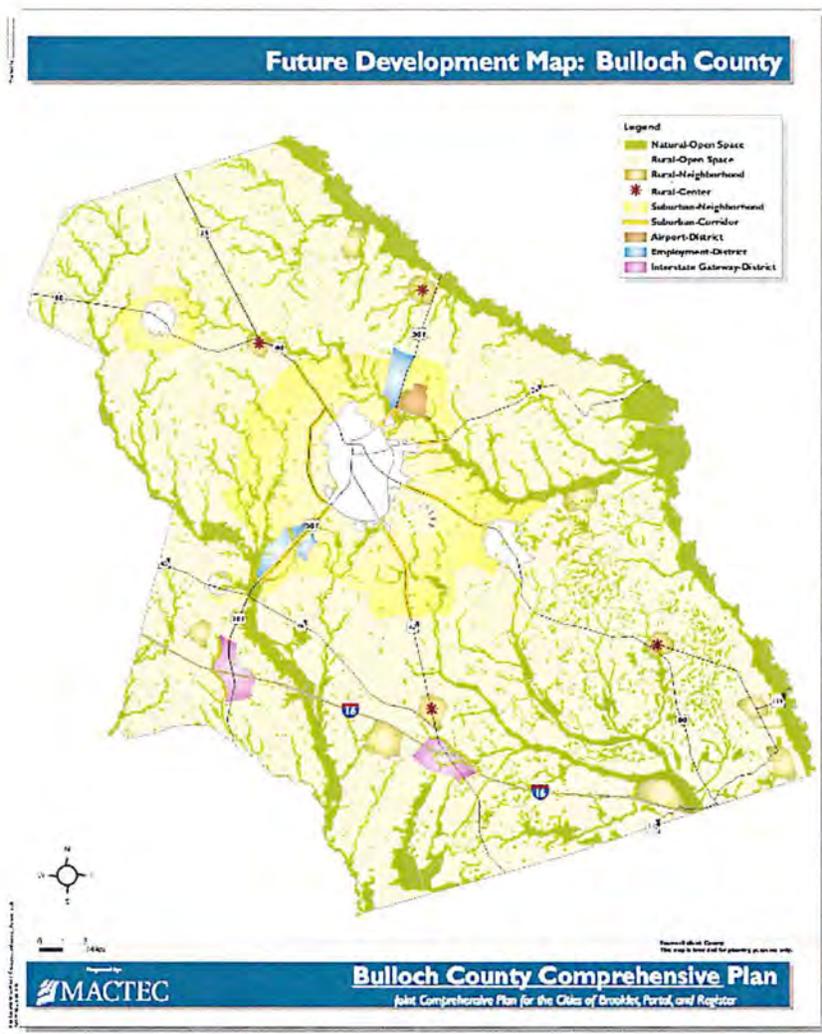
Based on the GEMA on-line critical facility tools, all critical facilities for a total of \$1,663,733,189 are located within a hurricane wind hazard area. (GMIS Wind reports are located in Appendix A.)

#### **E. Land Use & Developmental Trends**

The largest concerns during a hurricane event are the reparations after flooding caused by heavy rainfall, and more frequently; the damages from high winds. The likelihood of storm surge as far inland as Bulloch County is almost non-existent. Bulloch County, Statesboro, and Brooklet participate in the [National Flood Insurance Program](#) (NFIP). The town of Register was newly sanctioned by the program on 08/05/2011, and Portal has no flood areas. Although there are no specific local ordinances prohibiting development in flood-prone areas, construction must adhere to the Georgia State Minimum Standard Codes (Uniform Codes Act) and the International Building Code. The minimum standards established by these codes provide reasonable protection to persons and property within structures that comply with the regulations for most natural hazards.

When dealing with flood events; there are fifteen emergency support functions within law enforcement, search and rescue, firefighting, and public health administration. Each of these serves a very specific purpose with specific agencies tasked with them. (E.g. If there are roads being washed out or bridges being potentially compromised, that comes under the jurisdiction of DOT.) If there's a need or a request for additional law enforcement support, that's going to come under the jurisdiction of Georgia State Patrol and they will do whatever is necessary to provide the personnel. The extent of the flood event will dictate how many resources will need to be involved.

The [Land Use Plan](#) and the [Coastal Georgia Comprehensive Economic Development Strategy](#) show development trends overlaid upon the following flood plain map:



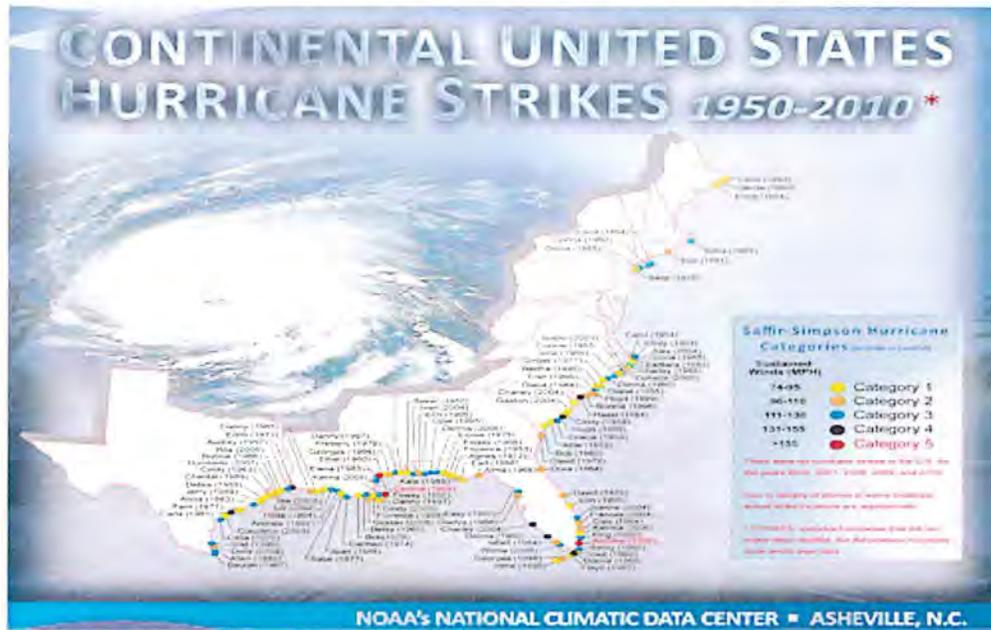
## F. Multi-Jurisdictional Concerns

All of Bulloch County, the City of Statesboro, Towns of Brooklet, Portal, and Register could potentially be affected by a hurricane consequence event. As a result, any mitigation steps taken related to hurricanes should be undertaken on a countywide basis and include its municipalities.

## G. Hazard Summary

Bulloch County has a low probability for exposure to potential damages caused by hurricanes, with the exception of hurricane winds traveling inland. Committee members spent considerable time deliberating appropriate mitigation strategies to reduce the destruction from windstorms. While no amount of mitigation can prevent the damages caused by a Category 5 hurricane, early warning systems could save lives and property, and are being implemented.

In the following graphic, NOAA'S NCDC shows all hurricane landfall sites in the United States from 1950 to 2010.



## SECTION I – WATER *continued*

### A. Severe Winter Storm/Ice Storm Hazard Identification

Severe winter storms bring the threat of freezing rain, ice and snow accumulation. Heavy accumulations of ice, especially when accompanied by high winds, can result in extensive damage to trees and above ground electric and media transmission lines. Ice and snow covered roads pose hazardous conditions for traffic and can greatly complicate response and recovery efforts.

Severe winter storms could result in the loss of utilities, expected increase in traffic accidents, impassable roads, and short-term lost income and productivity when normal commuting is hindered. Critical facilities are exposed to the effects of severe winter storms, but vulnerability is a function of the potential disruption of services (primarily electricity) and transportation systems. Extremely cold temperatures accompanied by strong winds can result in wind chills that cause bodily injury such as frostbite and death. A variety of phenomena and conditions occur during winter storms. The National Weather Service uses the following terminology:

- Heavy snowfall - the accumulation of six or more inches of snow in a 12-hour period or eight or more inches in a 24-hour period.
- Blizzard - the occurrence of sustained wind speeds in excess of 35 miles per hour accompanied by heavy snowfall or large amounts of blowing or drifting snow.
- Ice storm - an occurrence where rain falls from warmer upper layers of the atmosphere to the colder ground, freezing upon contact with the ground and exposed objects near the ground.

- Freezing drizzle/freezing rain - the effect of drizzle or rain freezing upon impact on objects that have a temperature of 32 degrees Fahrenheit or below.
- Sleet - solid grains or pellets of ice formed by the freezing of raindrops or the refreezing of largely melted snowflakes. This ice does not cling to surfaces.
- Wind chill - an apparent temperature that describes the combined effect of wind and low air temperatures on exposed skin.

A severe winter storm can be large enough to affect several states, while others may affect only a single community. Many winter storms are accompanied by freezing temperatures that can last for prolonged periods. The Bulloch County Hazard Mitigation Plan Update Committee researched historical data from the National Climatic Data Center, The National Weather Service, FEMA Declared disaster listings, and our own County history for information relating to winter storms in Bulloch County. A heavy accumulation of ice, especially when accompanied by high winds, destroys trees and power lines. Sidewalks, streets, and highways become extremely hazardous to pedestrians and motorists, and the very real threat of hypothermia exists for people, livestock, poultry and pets.

## B. Hazard Profile

Records maintained by the State Climatologist's office indicate that Bulloch County is in the region that usually receives less than 3-inches of snow per year. Although winter storms occur infrequently, they have the potential to wreak havoc on the community when they do strike. Statistically, Bulloch County can expect a winter storm frequency of 15-20% in any given year.

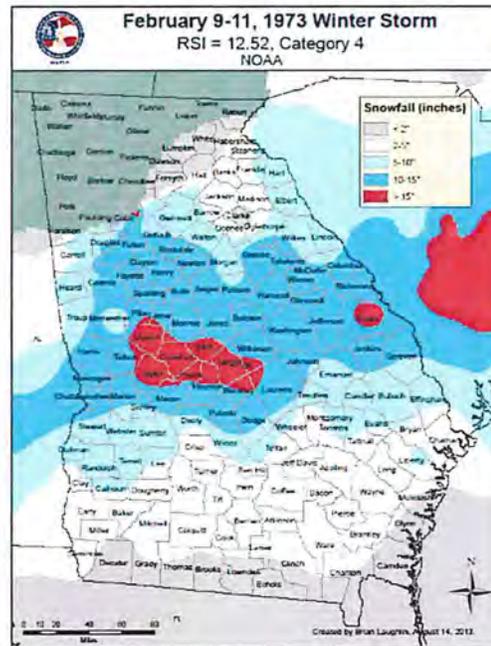
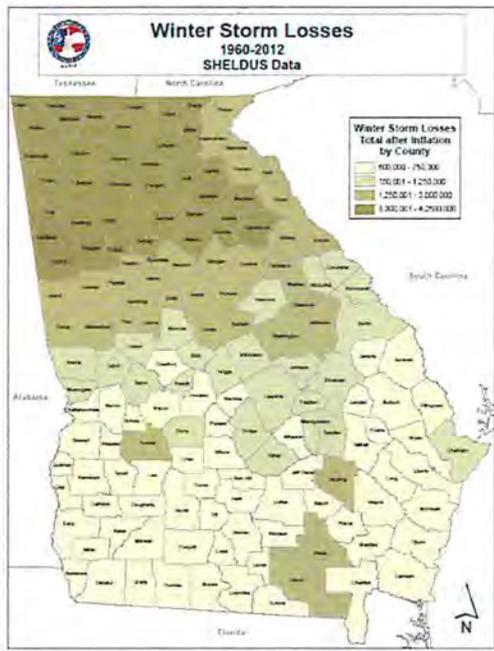
In February of 2014 (Feb. 11–14, 2014) an Ice Storm (named Pax) was declared as a natural disaster by Federal authorities, Governor of the State of Georgia and Bulloch County declarations. (These declarations and news publications can be found in Appendix A.) Recent ice storms in Bulloch County have occurred in 2002, 2011, & 2014.

"March 6, 2014

Gov. Nathan Deal today announced that President Obama approved his request for a major disaster declaration for 39 counties that sustained damage the [Feb. 10-14 winter storm](#). The declaration allows for the federal government to reimburse 75 percent of eligible expenditures and damage costs.

"The winter weather that overtook our state in mid-February caused millions of dollars' worth of damage in many parts of our state," Deal said. "The state of Georgia mobilized significant resources to ensure the safety of our citizens and our property during a time of crisis, and our costs far exceeded the federal threshold for disaster assistance. I appreciate the cooperation of President Obama and FEMA during this response effort."

The 39 counties are: Baldwin, *Bulloch*, Burke, Butts, Candler, Carroll, Columbia, Coweta, Dade, Emanuel, Fayette, Fulton, Gilmer, Glascock, Hancock, Haralson, Heard, Jasper, Jefferson, Jenkins, Johnson, Jones, Lamar, McDuffie, Meriwether, Monroe, Morgan, Newton, Pickens, Pike, Richmond, Screven, Spalding, Upson, Walker, Warren, Washington, Whitfield and Wilkes counties."



These maps from the [State Plan](#) show the extent seen for Georgia winter storms

### C. Assets Exposed to Hazard

In evaluating assets that may potentially be compromised by the effects of winter storms, the committee determined that all critical facilities, as well as all public, private and commercial property, are susceptible to some degree. The cost for replacement of power lines, (supplies and man hours) and the cost of monitoring and debris cleanup must be factored in. Plans for a County “Storm Debris Plan” have begun.

### D. Estimate of Potential Losses

In the February 2014 Ice Storm Event, expenses included: Statesboro Fire Dept. overtime pay, mileage etc. = \$28,659., public works; personnel expenses, equipment expenses, tippage, etc. had a cumulative total exceeding \$110,607., Bulloch County Sheriff’s Office deputies incurred \$13,744 in overtime pay from 11-13 February, debris for the landfill cost = \$13,560.68, Bulloch County EMS’s projected cost of Pax = \$1,118.64, and the board of Commissioners Transportation budget suffered equipment, labor & overhead expenditures of \$83,187.50. The aftermath: removal of > 664 tons of debris = \$134,798.61 in 38 pieces of equipment during 871 man-hours of their use.

A severe winter storm could potentially impact 71,091 structures in Bulloch County, City of Statesboro, Towns of Brooklet, Portal, and Register at an estimated dollar value of \$1,695,030,290, and could impact 71,214 persons.

## E. Land Use & Developmental Trends

Bulloch County, the City of Statesboro, & the towns of Brooklet, Portal, and Register currently have no land use or development trends specific to winter storms.



## F. Multi-Jurisdictional Concerns

All of Bulloch County can potentially see damages from winter storms. As a result, any mitigation steps taken related to winter storms should be undertaken on a countywide basis and include the City of Statesboro, and towns of Brooklet, Portal and Register.

## G. Hazard Summary

Winter storms, typically afford communities some advance warning. The National Weather Service issues winter storm warnings and advisories as these storms make their way south/southeast. Unfortunately, even with advance warning, some of the most destructive winter storms have occurred in the southern United States, where buildings, infrastructure, livestock, poultry, and crops are not typically designed to sustain prolonged severe winter conditions. Even minor winds during ice-loading can break or uproot trees. Also, motorists not accustomed to driving in snow and icy conditions pose an additional danger on roads and highways. With a large percentage of dirt road, hills, and curves, school buses cannot safely make their routes. Bulloch County does not possess the winter road equipment (e.g. plows and salt trucks) that make driving easier for motorists. Therefore, the impact from a winter storm lasts longer, and is more dangerous, for motorists. The Bulloch County Hazard Mitigation Plan Update Committee recognized the dangers posed by winter storms and identifies specific mitigation actions in Chapter 3.

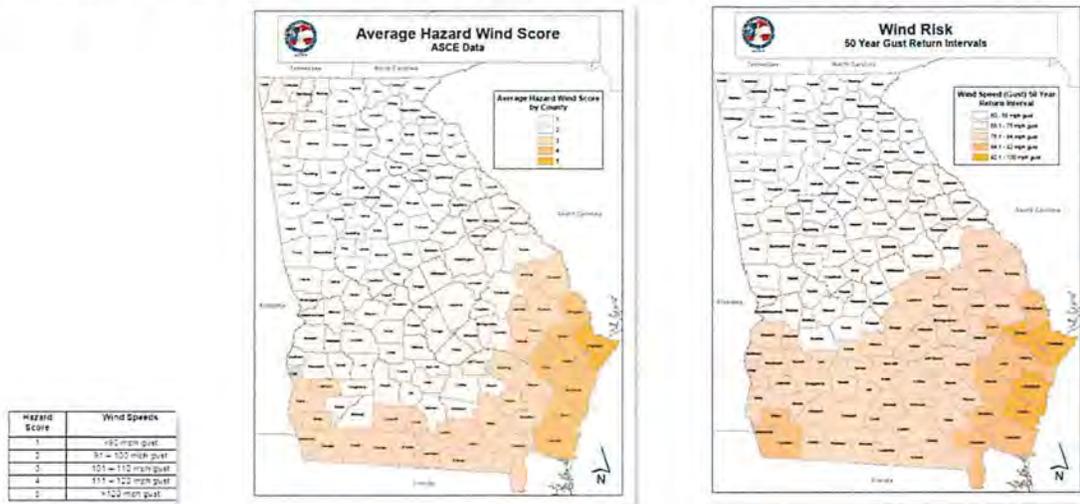
## SECTION II – WIND

### A. Tornado Hazard Identification

A tornado is a violently rotating column of air (seen only when containing condensation, dust, or debris) in contact with the surface of the ground. Exceptionally large tornadoes may not exhibit the classic “funnel” shape but may appear as a large, turbulent cloud near the ground or a large rain shaft. Destructive because of strong winds and windborne debris, tornadoes can topple buildings, roll mobile homes, uproot vegetation and launch small to large objects hundreds of yards. Tornado season typically from March through August; however, tornadoes can strike at any time of the year if ideal weather front conditions are present.

## B. Hazard Profile

According to records maintained by the [National Climactic Data Center](#), Bulloch County has been struck by four tornados in the last 10 years, & seven tornadoes in the last 20 years with property damages reported at \$445K. Frequency of occurrence can be expected at 35 - 40% per year



## C. Assets Exposed to Hazard

All structures and facilities within Bulloch County, City of Statesboro, Towns of Portal, and Register could, and some have, seen damages by tornadoes or straight line winds as they are among the most unpredictable of weather phenomena and are indiscriminate as to when or where they strike. Brooklet is also susceptible as the surrounding towns have had tornado events and their damage.

## D. Estimate of Potential Losses

From the seven listed tornadoes (see NCDC 20 year tornado document in Appendix A), there was a total of \$445K in damages and 4 reports of injuries during that period.

Tornadoes have the capability of damaging countless structures, citizens, livestock, crops, equipment, and vehicles.

To understand the enormity of just how wide and strong a tornado can become; [the El Reno tornado](#) in Oklahoma in 2013:

“According to the National Weather Service in Norman, Okla., the tornado, which struck the area near El Reno, Okla., was the widest on record at 2.6 miles. The NWS also upgraded the intensity of the storm to EF5, which is the strongest level a tornado can reach on the Enhanced Fujita Scale. The tornado was on the ground for 16.2 miles, during May 31, 2013.”



ENHANCED FUJITA SCALE*		
CATEGORY	WINDS (MPH)	DAMAGE
EF-5	>200	INCREDIBLE
EF-4	166-200	DEVASTATING
EF-3	136-165	SEVERE
EF-2	111-135	CONSIDERABLE
EF-1	86-110	MODERATE
EF-0	65-85	LIGHT

\*SCALE OF WIND DAMAGE CAUSED BY TORNADOES

Based on the GEMA on-line critical facility tools, all critical facilities for a total of \$1,663,733,189, and [71,214](#) citizens are located within a tornado hazard area. GMIS reports are in the Appendix.

### E. Land Use & Developmental Trends



Bulloch County is located in wind zone III, which is associated with 200-mph wind speeds. The county currently has no land use or developmental trends related to tornados. Existing building codes do not require structures to meet or exceed design wind speeds of 200 miles per hour.

### F. Multi-Jurisdictional Concerns

All of Bulloch County has the same design wind speed of 200 mph as determined by the American Society of Civil Engineers (ASCE). As stated previously, the entire county can potentially be affected by a tornado. As a result, any mitigation steps taken related to tornados should be undertaken on a countywide basis and include the City of Statesboro and Towns of Brooklet, Portal and Register. Wind retrofitting has already begun on many of the buildings on Georgia Southern University campus in Statesboro.

### G. Hazard Summary

Due to the threat of a tornado occurrence during a hurricane, tropical storm / depression or thunderstorm event, Bulloch County has a fairly high potential for damage from tornadic winds. Bulloch County residents need to be prepared for a tornado event as much as is possible. Should a tornado hit certain portions of the county that are highly concentrated with homes, vulnerable populations, or any of the critical facilities identified, depending upon the strength and duration of the event, significant losses could occur. Due to the destructive nature of tornados, mitigation actions related to tornados should be implemented countywide as the funding becomes available. This is consistent with the original plan's goals and action items.

## **SECTION II – WIND continued**

### **A. Hazard Identification *Thunderstorm wind/ high winds***

*Note: The NCDC database separates these events, but for expediency, they will be addressed together here because of the similarities in how best to begin to mitigate wind's destructiveness.*

High Wind- Sustained non-convective winds of 35 knots (40 mph) or greater lasting for 1 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), result 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.

### **B. Hazard Profile**

The Hazard frequency table (HFT) for *high wind/hurricane wind* lists [4 days in both ten and twenty](#) year recorded history for Bulloch County. This, by extension, gives any given year a 20% - 40% chance of occurrence.

The table shows [81 days](#) of *thunderstorm wind* for ten years and [116 in the past twenty years](#), (74 of which reported \$565.85K in property damages and 3 of those collectively listed \$15K in crop damages) which gives a range of 58% to 81% chance of occurrence in any given year.

The reported wind damages were \$9,000.00 on 3/8/08 for high wind. The event on 7/11/1998 also reported an injury. (The HFT can be found in Appendix A and is comprised of data from the [National Climatic Data Center](#), past newspaper articles, the [State of Georgia Hazard Mitigation Strategy](#), historical facts from Bulloch County Citizens, and from [FEMA presidentially declared disasters](#) during its research on the effects of high wind in Bulloch County.)

### **C. Assets Exposed to the Hazard**

Strong winds in a county with a consistent elevation such as ours have no spatially defined constraints, and could cause destruction to any residents, livestock, crop and timber assets, and

structures. With prior knowledge and proper and timely mitigation measures, the damages can be minimized.

### D. Estimate of Potential Losses

In a worst case scenario, those structures not wind retrofitted to withstand winds to 50 knots would need repair or replacing at a price up to \$4,237,575,724. A possible 71,091 structures within Bulloch County could be damaged to some degree, while ~ 71,214 citizens could be affected. Based on the GEMA on-line critical facility tools, all critical facilities for a total of \$1,663,733,189 are located within the wind hazard area.

All of the counties in Georgia show an 80% occurrence of wind events and damages secondary to those winds. Wind retrofitting needs to be done on a broad basis, especially to critical facilities and in vulnerable population locations. Wind retrofit is addressed in the next chapter for implementation countywide as funding becomes available.

### E. Land Use & Development Trends

Bulloch County, the City of Statesboro, and the towns of Brooklet, Portal, and Register are studying where wind damage losses have already occurred, and where historically older structures need to wind retrofit where feasible.

The Future Development Map on the following page indicates recommended land uses and development patterns for a 20-year planning horizon.



## **F. Multi - Jurisdictional Concerns**

In evaluating damage potential from thunderstorm winds, the committee determined that all critical facilities, as well as all public, private and commercial property, are susceptible to thunderstorm winds on an equal basis in all areas within the county.

## **G. Hazard Summary**

The Bulloch County Hazard Mitigation Plan Update Committee utilized data primarily from the National Climatic Data Center and the National Weather Service to research thunderstorm winds and their impact on Bulloch County. 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, tall or fragile crops, as well as areas with exposed property and infrastructure, and above ground utility lines. Thunderstorm winds can cause power outages, transportation and economic disruptions, significant property damage and pose a high risk for injuries and loss of life. The committee saw no reason to change the approach to wind taken in the original plan.

## **SECTION III – WILDFIRE**

From 2012 through the end of June of 2013, a 27 page [Community Wildfire Protection Plan](#) (CWPP) was written for Bulloch County by the leaders in our local Georgia Forestry Unit, Bulloch County EMA, the Bulloch County Fire Department, and the Statesboro Fire Department. Much of the information gathered for this section of this plan update has been taken from that CWPP as it is the best available information, & the most current. A copy of the CWPP can be found in Appendix A.

### **A. Hazard Identification**

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

Wildfires result from the interaction of three essential elements: fuel, ignition (heat), and oxygen. Natural and man-made forces cause these three crucial elements to coincide in a manner that produces wildfire events. Typically, fuel consists of natural vegetation. However, as the urban and suburban footprint expands, wildfires may utilize other means of fuel such as buildings. In terms of ignition or source of heat, the primary natural source is lightning. However, humans are responsible for more wildfires than lightning (causing around 80% of fires). Man-made sources vary from the unintentional

(Fireworks, campfires, machinery) to the intentional (arson). With these elements provided, the wildfires may spread as long as oxygen is present.



occurred there. In evaluating assets that are vulnerable to wildfire, the committee determined that a moderate number of critical facilities, as well as most public, private and commercial property, are at risk. The current fire occurrence map shown here represents the fires occurring in years 1997-2002.

#### **D. Estimate of Potential Losses**

A wildfire event could potentially harm 71,091 structures in Bulloch County, City of Statesboro, Towns of Brooklet, Portal, and Register at an estimated dollar value of \$4.2 Billion, and could impact 65,981 persons. Based on the GEMA on-line critical facility tools, a total of \$644,373,185 in assets for critical facilities are located within the wildfire hazard area. From the CCWP: In the last eleven years, Bulloch County lost over \$87,000 in residential properties, > \$200,000 in outbuildings lost, and > \$30,000 in vehicles and other mechanized equipment.

#### **E. Land Use & Developmental Trends**

Bulloch County is dominated by large tracts of undeveloped land, much of it in private ownership. Of the undeveloped land in the county, over 90 percent is considered Agricultural-Forestry, dominated by cropland and forestry. Losses of assets such as these from fire can devastate families whose income is dependent upon their growth. The inclusion of fire buffer zones is being greatly encouraged due to the many Florida & South Georgia fires in the last decade.

#### **F. Multi-Jurisdictional Concerns**

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

#### **G. Hazard Summary**

As so much of Bulloch County is agriculture and forest, wildfire remains a critical threat. Due to the destructive nature of wildfires, the committee feels that mitigation strategies for reducing the likelihood of, or losses from, wildfire are critical to the health and safety of Bulloch County residents. These can be found in the next chapter. The only changes in approach to Wildfires from the original PDM would be added emphasis due to the growing number of occurrences, and the added knowledge from the completed 2013 CWPP adding action item ideas.

**CHAPTER 3 – Natural Hazard Mitigation Goals & Action Steps**

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- Section I**      Those Action Steps Which Are Applicable to All Listed Hazards  
**Section II**     **Water**  
**Section III**    **Wind**  
**Section IV**    **Fire**

<b>Chapter 3: Section</b>	<b>Updates to Section</b>
<b>I. ALL:</b> Consolidation of hazard action steps <i>Pgs. 1 to 7</i>	The original plan divided this chapter amongst sixteen hazards. This update simplifies this by writing the first section as those steps which apply to all hazards addressed within this plan update, & hazards are grouped by destructive force
<b>II. WATER:</b> Drought, Flooding, & damage secondary to hurricanes <i>Pgs. 7 to 15</i>	<ul style="list-style-type: none"> <li>• Updated data research: The update needed to address the completed, deleted, new, and unchanged steps</li> <li>• Evaluated/updated: Action steps related to water damage events</li> </ul>
<b>III. WIND:</b> Severe Winter Storms, Ice storms, Tornadoes, & Windstorms/ Thunderstorms <i>Pgs. 15 to 19</i>	<ul style="list-style-type: none"> <li>• Updated data research</li> <li>• Evaluated/updated: Action steps related to wind damage events</li> <li>• Data added concerning the completed, deleted, new and ongoing steps</li> </ul>
<b>IV. FIRE:</b> Wildfires <i>Pgs. 19 through 27</i>	<ul style="list-style-type: none"> <li>• Updated data research: The update needed to address the completed, deleted, new, and ongoing steps</li> <li>• Evaluated/updated: Action steps related to wildfire damage events</li> </ul>

All datasets were updated to 2009-2015 statistics, and events (where applicable) and narrative sections were updated to reflect current evaluations. Public input was sought during these updates by invitations, e-mail notifications, word of mouth, and on 24 June, 2014, the draft of Chapter #2 was uploaded to the Bulloch County website: <http://bullochcounty.net/> and the public was asked to review and submit any additions or corrections for the committee's review. In Mid-March 2015; [all four Chapters](#) were on the website to solicit the public's input.

Governance: The Bulloch County [Board of Commissioners](#) is comprised of a chairman and county commissioners representing each of six districts, population: [72,694](#) (52% urban, 48% rural) .Its total land area: 682 square miles, & estimated median household income in 2009: \$32,185. The county seat of [Statesboro](#): (The city's government includes a mayor, mayor pro tem, and four city council members representing all five districts, population [29,937](#), total land area 12.5 square miles, & estimated median household income in 2012: \$21,627). County municipalities include [Register](#) (a mayor and 5 council members, population [173](#), total land area is 0.78 square miles, & estimated per capita income in 2012: \$17,858 , and represented at the 11 Feb 2015 meeting), [Portal](#) (a mayor and 5 council members, population [617](#), total land area 1.74 square miles, & estimated per capita income in 2012: \$14,329), and [Brooklet](#) (a mayor and 5 council members, population [1395](#), total land area is 3.06 square miles, & estimated per capita income in 2012: \$22,172); each of which were represented in this update development. The population links for the County, City, and towns will contain available financial data.

New to the chapter: Sections F and G were created to address the status of existing action steps with regard to their continued use, or disuse. The following action steps were deleted: **1:15** and **1:16** were deleted as they directed the County to acquire updated FEMA FIRMS, & add or amend local land use plans. Both of those have since been accomplished. These will be removed from the next plan update.

This chapter (formerly Chapter #4) will be known as Chapter #3 as the plan update for natural hazards was not expected to address man-made hazards. Those "other than natural" hazards are thoroughly covered in various emergency services' procedural plans in both countywide jurisdiction as well as each municipality.

The requirements for the hazard mitigation plan update evaluations have evolved over time to include elements that were not present in the previously approved plan. With regard to Chapter #3; (the areas for action steps the county and cities wish to take), the Hazard Mitigation Plan Update Committee has gone over each step utilizing its feasibility with regard to Social considerations, Technical feasibility and impacts, Aministrative staffing and funding concerns, Political support from citizens, Legal implications, Economic cost and benefit analysis, & Environmental effects and their cohesion with existing land use goals (STAPLEE) criteria (as per FEMA guidance), and stated whether that step was completed, no longer applies, or is ongoing. The STAPLEE questions worksheet may be found in Appendix D. This chapter addresses forming strategies which will reduce or eliminate our vulnerability to natural hazards, how we strive to maintain the maximum continuity in business and governmental

operations, & our personal quality of life. In addition, and in accordance with this current plan review tool's list of required elements; for each step, the committee now lists a responsible party, the coordinating authority, estimated start and completion dates, an estimated cost for the goods and services to implement this action, and the funding source sought for this action. We also review each step's priority to reflect current conditions. The addition of PAX ice storm was the only hazard (hazard event) given new emphasis.

The Bulloch Hazard Mitigation Plan Update Committee analyzed the risk assessment data and developed appropriate goals and mitigation strategies over many e-mail communications, and one formal committee meeting session devoted to only these action step strategies. Committee members identified many strategies and sought input from community residents, elected officials and staff from state and local agencies at their public meeting on 16 July, 2014 at the County EOC at 1:30 PM. This meeting was well attended and participants contributed very good ideas not previously addressed. These new steps included input from all perspectives of Bulloch County, and City & town personnel.

Bulloch County has experienced the greatest amount of damage in the past from those hazard events that create flooding issues, causing road closures and water contamination; those events that create high winds, causing destruction of property; and from those events that create wildfire losses. Plan Update Committee members chose not to expand the scope of the plan to address technical hazards.

Goals were developed that would focus mitigation efforts on reducing personal, material, and productivity losses from these types of events. The goals and action steps developed by the Bulloch County Hazard Mitigation Planning Committee and Plan Update Committee are contained herein.

**Goal:**

***To create a safer, less vulnerable community with a greater capacity to cope with hazards and disasters and their aftermath.***

This primary list of action steps apply to all of the chosen natural hazards, and are listed first to reduce redundancy.

1:1 Develop and distribute emergency management presentations, brochures, pamphlets, public service announcements and utilize other relevant information streams such as our Facebook & Twitter presence (as time allows), for civic organizations, business, and the public concerning Project Impact, Weather Radio, & Community Safe Shelter programs (BC, CS, TB, TP, TR)						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Med	Bulloch County (BC) Public Safety/EMA	GA Forestry, FEMA, GEMA, DNR, etc.	In Place	Ongoing	Man Hours, & printing costs	Gen funds & grants

1:2 Develop, coordinate, and conduct emergency management training/exercise programs (BC, CS)						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
High	B C Public Safety/EMA	GA Forestry, FEMA, GEMA, DNR, etc.	In Place	Ongoing (as new staffing dictates)	Man hours, & training supplies	Gen funds & grants

1:3 Enforce existing ordinances aimed at protecting life and property from natural hazard damages (BC, CS, TB, TP, TR)						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
High	BC Planning & Zoning	EMA, FD's, GA Forestry	In Place	Ongoing	Man Hours	Local Govts

1:4 Purchase up-to-date communications equipment (radios, phones, or tablets, batteries and chargers) which have multi-channel capabilities as need dictates (BC, CS, TB, TP, TR)						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
High	Bulloch County Public Safety	EMA	2015	2016	25,000	Sherriff's offices, Fire Grants

1:5 Purchase generators and trailers for use (as needed) at critical facilities and vulnerable citizen shelters (BC, CS, TP)

<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
Med	BC Public Safety/EMA	County Comm. & City Councils	2015	2017 (EOC Completed)	≤ \$60,000 each	FEMA, Bulloch County funds, and City funding

1:6 Maintain an advanced warning system to alert the citizens of impending natural disasters & encourage enrollment in this (IPAWS, Reverse 911, and social media such as Facebook, & Twitter as time allows) (BC, CS)

<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
High	BC Public Safety/EMA	City Councils	2015	2015	\$50,000	Grants & Gen Funds

1:7 Provide current First Responder Training (CERT) for Bulloch County citizens on a regular basis in addition to the Citizen Corp. already in place in Statesboro (BC, TB, TP, TR)

<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
High	BC EMA	GEMA/FEMA	2015	ongoing	Staff Time	GEMA/FEMA

1:8 Review, update and add any necessary floodplain, zoning, and building regulations

<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
High	B County Comm. & City Councils	Admin.	Ongoing	Annually	Staff time	General Funds

1:9 Increase public awareness of safety procedures, and other disaster plans by publishing articles in the local newspaper, holding public meetings & providing bulletins to churches & the schools (BC, CS, TB, TP, TR)

<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
High	B County Public Safety	County EMA	2015	Ongoing	\$10,000.	General Funds

1:10 Increase public awareness of all the assistance that the local Emergency Management Agency can provide for its citizens, & act as the liaison for local, state and federal authorities (BC, CS, TB, TP, TR)

<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
High	Bulloch County Public Safety	County EMA	2015	Ongoing	Man hours	General Fund

1:11 Update and coordinate all Emergency Response Plans on an annual basis (BC, CS, TB, TP, TR)

<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
High	Bulloch County Public Safety	County EMA	In Place	Annually review	Staff hours	General Funds & Grants

1:12 Create an SOP for evacuation of threat areas utilizing several software programs, & the NWS resources for specific events with regard to hazardous materials spatial data (BC, CS, TB, TP, TR)

<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
High	Bulloch County Public Safety/EMA	City & County Admins	2015	2016	\$2,000	Staff hours, & General funds

1:13 Review existing zoning restrictions with natural hazards as the focus (BC, CS, TB, TP, TR)

<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
Low	Bulloch County & City Planning Depts.	City and County Admins	2015	2017	\$2,500	Staff hours General funds

1:14 Evaluate building codes & standards to better stand up to wind, water, and fire (BC)						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Low	Bulloch County & all City Planning Depts.	City and County Admins	2015	2016	\$2,500	Local General Funding

1:15 Update local FEMA FIRM maps						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Low	FEMA	Bulloch County Public Safety	2011	Completed 08/05/10	\$250,000+	Federal

1:16 Update local Land Use Plan(s)						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Low	City & Bulloch County Planning Depts.	City & County Admins	2010	Have since been completed	\$75,000	State & Local

1:15 Increase public awareness of Project Impact Weather Radio & Community Safe Shelter Program by publishing articles in the local newspaper & providing bulletins to local churches & schools, and through a presence on social media such as a Facebook and Twitter (BC, CS, TB, TP, TR)						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Medium	Bulloch County Public Safety	Newspapers Private sources	Started in 2009 and is in place	Ongoing	\$3,000	Local Private

1:16 Augment the EMA staff with an Emergency Management Specialist to implement programs, plans, acquire grant funding, and advise & coordinate EMA current activities and new initiatives in response to the consistent population growth within Bulloch County. (BC)						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Medium	BC EMA	EMA/County Admin	2016	2018	\$30,000.00	FEMA & General Funds

1:17 Incorporate hazard mitigation principals into all aspects of public-funded building (BC, CS, TB, TP, TR)						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Medium	Local Govt.	Building Authority	2015	Ongoing	Staff salary	General Funds

*Action steps 1:1, 1:16, and 1:17 are new in this first (2015) update.*

Action steps which carried over that did not complete when originally protracted were lacking in funding to do so, or funds needed to be allocated elsewhere for various reasons.

## SECTION II – Water

- **Goal: Reduce drought and flood damage, (& damages secondary to hurricanes) to citizens and existing & future structures, especially critical facilities, within Bulloch County. And to reduce economic losses incurred due to destroyed crops, businesses closing to implement repairs/replacements, and to sustain sanitary conditions while removing flood waters.**

**Priority Key:** High – Years 1 & 2;  
 Medium – Years 2 & 3;  
 Low – ≥ 4 Years

Committee members developed action steps for each goal, and evaluated the steps using previously discussed STAPLEE criterion. The STAPLEE Excel worksheet can be found in Appendix D.

**Key:**

Bulloch County – **BC**; City of Statesboro – **CS**; Town of Brooklet – **TB**; Town of Portal – **TP**; Town of Register – **TR**; Georgia Forestry Commission – **GFC**; Private Non-Profits – **PNP**; Board of Education – **BOE**; Environmental Protection Agency – **EPA**; Department of Agriculture - **DOA**

**A. Mitigation Goals**

- **Goal: Reduce flood damage, (& damages secondary to hurricanes) to citizens and existing & future structures, especially critical facilities, within Bulloch County. And to reduce economic losses incurred due to destroyed crops, businesses closing to implement repairs/replacements, school closures, and to sustain sanitary conditions while removing flood waters.**

As indicated in Chapter 2, Section I, drought conditions can have a negative impact on the local economy by harming the agriculture industry. The greatest threat, however, posed by drought conditions is from potential wildfires. Much of the county is made up of forest and woodlands. Forest fires are generally the result of dry conditions combined with lightning or human carelessness. The Bulloch County Hazard Mitigation Plan Update Committee determined that drought conditions needed to be mitigated incorporating efforts to reduce the impact of wildfire.

Conversely, flooding has also caused considerable damage in Bulloch County over time. These difficulties arise from hazard events such as heavy rainfall in a small amount of time, storm surge coming from coastal storms or hurricanes, thunderstorms and some winter storms.

The first goal is directed at drought and states: Reduce economic losses from drought in Bulloch County

The second goal is to: Reduce economic losses from flood water in Bulloch County

The mitigation strategies presented here strive to lessen the damages from these events. Those Action Steps that were to be deleted are as follows:

**2:3** was found to be unnecessary and deleted. **2:8** was deleted as it listed adding an ordinance for wider easements, and that is under the guidance of Georgia Department of Transportation. **2:9** was found to be redundant and was deleted. **2:14** Asked for building codes with regard to setbacks & elevations to be reviewed and had since been completed. **2:15** was asking to adopt ordinances pertaining to Greenspace areas and was completed. **2:16** addressed wetland areas and was deleted as not being feasible at present. **2:19** Asked for an acquisition of flood prone properties within the City of Statesboro and is still under evaluation at this time.

Steps numbered **2:16**, **2:17**, and **2:18** are new to the plan.

*The deleted action steps will be permanently removed at this plan's next revision.*

## B. Range of Mitigation Options

The Bulloch County Hazard Mitigation Plan Update Committee has identified the following mitigation measures in an effort to minimize the potentially destructive effects of drought-inflicted wildfires. The committee has identified both structural and non-structural mitigation measures to directly address flooding events within our community as well. The plan update committee's focus is on the preservation of life and property, with particular emphasis on vulnerable populations and critical facilities. Suggested measures may result in modifications to current policies and the implementation of local ordinances to ensure that these mitigation measures are initiated. The proposed strategies hold no inherent risk for historic sites, or special considerations in the community.

### C:1. Mitigation Strategy for Drought

**Goal: Reduce economic losses (e.g. [Cattle](#)) to assets from drought events in Bulloch County.**

#### Action Step:

2:1 Seek input from DOA / [Extension Service](#) and agriculture industry to enact water conservation procedures with regard to drought. (EPD, DOA, [Extension office](#))

<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Medium	Georgia EPD	Bulloch County EMA	2015 (proceeding)	Ongoing	\$2,000	State

### C:2. Mitigation strategies for flooding

#### Action Steps:

2:2 Assess storm water runoff & watershed plans and evaluate efficiency of present culverts & drainage ditches ([BC](#), [CS](#), [TB](#), [TP](#), [TR](#))

<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
High	BC & City Public Works	City & County Admin.	2015 in place	Ongoing	\$3,500	Local Funds, DCA, & FMA

	Depts.					
2:3 Update community hurricane evacuation plans to reflect population changes, additional residential & commercial development, and longer clearance times (BC) Unnecessary						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
High	Bulloch County		2007	Deleted	\$3,000	Local

2:3 Explore feasibility of cost sharing to move property owners who are in areas repetitively experiencing losses due to flood waters (BC, CS) was deferred due to lack of funding						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
Medium	City and County Planning	City & County Admin	2015	2017	% of Property Value(s)	Federal, State, Local

2:4 Seek funding to acquire flood prone properties & convert the land to low impact uses such as recreational areas (BC, CS) deferred						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
Medium	City & County Planning & Zoning	County & City Admin	2015	2017	Property Assessment	Grants & Local Funding

2:5 Regulate building in areas prone to flooding & greatly discourage building critical facilities in flood prone areas (BC)						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
Medium	City/County Planning Depts.	City & County Admin	2015	Ongoing	Staff Hours	Local

2:6 Seek funding to repair municipal sewer infrastructure due to flooding & I&I problems (CS) was deferred due to lack of funding						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
Low	City of	City Admin	2015	2017	> \$2,000	Local

	Statesboro Water/Sewer					
2:8 Evaluate adding a local ordinance allowing for wider easements to keep ditches & culverts accessible for maintenance- <b>Rely upon DOT Guidance</b>						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
High	Statesboro Water & Sewer	BC Planning & Zoning	2007	Deleted	\$2,500	Local

2:7 Preserve wetlands to allow excess water to be captured (BC)						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
Medium	City & County Planning & Zoning	City & County Admin	In place	Ongoing	\$2,500	Fed, St. & Local

2:9 Evaluate the establishment of a no-rise requirement for encroachments into the 100-year floodplain- <b>Deleted/redundant</b>						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
Medium	BC Building Inspection		2008	Deleted	\$2,500	Local

2:8 Evaluate the adoption of setback requirements (i.e. ?? feet from top of banks of creeks & ?? from tops of river banks) (BC) (at a minimum – yield to State Law)						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
Low	City/County Planning Depts.	City & County Admin	2015	2016	Staff Hours	Local

2:9 Discourage large developments on unpaved roads without having done paving, & drainage improvements (BC, CS, TB, TP, TR) deferred – no monies allocated						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
High	City & County Planning	City & County Admin	2015	Ongoing	> \$7,500	Local & Staff Hours

	Depts.					
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2:10 Develop cost study on paving roads vs. maintaining unpaved roads (BC, CS, TB, TP, TR) deferred – no monies allocated

<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
High	BC Public Works	BC Planning & Zoning	2015	Ongoing (population and new construction continue to increase)	≥ \$15,000 per year	Local & Staff Hours

2:14 Review building codes and add, if necessary, fixed setbacks from water sources & specify home elevations (BC, CS) Completed

<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
High	Bulloch Co. Building Inspections	Statesboro Building Inspections	2006	Completed	\$3,500	Local

2:15 Adopt ordinances to control building, while adding Greenspace in known flood areas (BC)

<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Medium	City & County Planning Depts.	City & County Admin	2008	Completed	\$7,000	Local

2:16 Approach organizations to gauge interest in wetland areas (BC) Deleted (Not feasible)

<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Low	BC Planning & Zoning		2011	Deleted	\$3,000	Local

2:11 Preserve areas in and around watercourses (BC, CS, TB, TP, TR)						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
High	City & County Planning	City & County Admin	In place	Ongoing	\$5,000	Local

2:12 Evaluate the restoration & preservation of wetland areas (BC, CS, TB, TP, TR) deferred						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
Medium	City/County Planning	City & County Admin	2015	Ongoing	\$4,500	Local

<del>2:19 Use available monies &amp; seek funds to acquire flood prone property as necessary (SB)</del>						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
Medium	Statesboro Planning & Development		2014	Deleted - Redundant	\$3K – 200K	

2:13 Educate property owners/prospective property owners on risks associated with residing in areas of recurrent flooding (BC, CS, TB, TR)						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
High	BC Planning & Zoning	BC Public Safety	In place	Ongoing	\$3,000	State, Local

2:14 Seek funding to improve existing dirt roads in flood prone areas (BC, CS, TB, TR) deferred – no monies allocated						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
High	BC Public Works	BC Planning & Zoning	2015	Ongoing	\$2,500 – 200K+	State & Local

2:15 Evaluate increasing the sizes of retention basins & runoff canals as necessary (BC)						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Low	BC Public Works	BC Planning & Zoning	In place	Ongoing	≥\$7,500	Local

2:16 Conduct NFIP Community workshops to provide information, & incentives for property owners to acquire flood insurance (BC, CS, TB, TR) deferred						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Medium	City & County Bldg & Zoning Depts.	City & County Planning Depts.	2015	Ongoing consistent with increased population	Staff Hours	General Funds

2:17 Use outreach programs to advise homeowners of risks to life, health, & safety from these hazards (BC, CS, TB, TP, TR)						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Medium	Fire Depts., County Extension, & Building & Zoning Depts.	Planning Depts.	In place	Ongoing	Staff Hours	General Funds

2:18 Educate property owners about flood mitigation techniques & technical assistance programs for same (BC, CS, TB, TR)						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Medium	Fire Depts., County Extension, & Building & Zoning Depts.	Planning Depts.	2015 Facebook page already does)	Ongoing	Staff Hours	General Funds

#### **D. Multi-Jurisdictional Considerations**

Drought conditions affect all of Bulloch County. Critical facilities and vulnerable populations are located in the municipalities as well as in unincorporated areas of the county. As a result, any mitigation steps taken related to drought and drought inflicted wildfires should be undertaken on a countywide basis and will include the City of Statesboro, Town of Brooklet, and Town of Portal, and Town of Register. Steps taken for flood are to be undertaken in at least 60% of Bulloch County & include the City of Statesboro, and the towns of Brooklet and Register. Portal has no known areas of flooding. Statesboro is in the process of addressing its repetitive flood areas, and Register is addressing its need for NFIP participation.

#### **E. Education & Awareness**

The Bulloch County Hazard Mitigation Planning Committee and Plan Update Committee have identified several methods of public education and awareness regarding hazard mitigation. All public information efforts are aimed at keeping the citizens of Bulloch County fully engaged in the implementation and periodic maintenance of this mitigation plan. Many of these education and awareness tools are multi-hazard in nature and include the following: implementing a countywide crisis alert or notification system, distribution of informational brochures or pamphlets, and public and private sector briefings through newspaper articles and church bulletins. Another improvement in this area is the use of social media. Current information which Public Safety and/or Bulloch County EMA wish to impart on a timely basis is now offered on the "[Bulloch County Public Safety/EMA](#)" Facebook page, and questions will be answered there, and on the Twitter feed as time permits.

#### **F. Completed & Deleted Action Steps**

The City of Statesboro has updated their [floodplain ordinances](#), which were adopted in July of 2010. Steps numbered **2:14** and **2:15** have also been completed. The following steps were deleted as redundant or not feasible: **2:3**, **2:8**, **2:9**, **2:16**, and **2:19**.

#### **G. Unchanged and New Action Steps**

No numbering had been necessary until revised and new action steps were introduced at this iteration of the county hazard mitigation plan. Therefore steps now numbered **2:1** through **2:15** are unchanged. Steps numbered **2:16**, **2:17**, and **2:18** are new to the plan.

## SECTION III – Wind

### A. Mitigation Goals

- **Goal: Avoid or diminish damage caused by high winds from hurricanes, tornadoes, severe winter storms, windstorms and coastal storms in Bulloch County. Strengthen critical facilities and large or vulnerable population centers in that effort.**

Wind poses the threat of great danger to the life and property of residents in Bulloch County. Tremendous storms create damage from high winds, tornadoes, or thunderstorm wind/high wind. Some of these events can create unsafe conditions from these damages, as well as tremendous property loss.

The stated goal: Minimize losses to lives, health, and property from the destructive forces of high wind events.

Mitigation measures reflect the efforts of the Bulloch Hazard Mitigation Plan Update Committee to reduce destruction from the high winds, as well as a focus to protect the lives and property of Bulloch County citizens, area work forces, and other visitors.

The action steps deleted are as follows:

**3:3** specified creating a community action group to aid in sheltering hazard affected citizens. This will be completed by the upcoming CERT training from the Georgia Emergency Management Agency. **3:6** addressed the review of building codes applicable to high wind events and had been completed. **3:7** asked for evaluation of moving existing utility lines underground and was deemed not feasible due to expense and was deleted.

**3:9** sought grant monies to wind retrofit important buildings now vulnerable and was deleted as redundant.

The action step numbered **3:7** is new to the plan.

**B. Range of Mitigation Options** - The Bulloch County Hazard Mitigation Plan Update Committee identified both structural and non-structural mitigation measures to ensure that the community adequately addresses relevant issues which could possibly occur in high wind event. Structural measures include retrofitting critical facilities to withstand tornadic winds (perhaps utilizing: structural bracing, straps & clips, anchor bolts, impact-resistant glass, reinforced doors, window shutters, waterproof adhesive sealing strips, and interlocking roofing shingles) and developing a community safe shelter program.

Several non-structural measures were identified to ensure that proper mitigation measures are undertaken. The proposed strategies hold no inherent risk for historic or special considerations in the community, but do take into consideration the needs and location of vulnerable populations, and are in harmony with other Bulloch County plans and procedures.

**Key:**

Bulloch County – **BC**; City of Statesboro – **CS**; Town of Brooklet – **TB**; Town of Portal – **TP**; Town of Register – **TR**; Georgia Forestry Commission – **GFC**; Private Non-Profits – **PNP**; Board of Education – **BOE**; Environmental Protection Agency – **EPA**; Department of Agriculture - **DOA**

**C: Mitigation Strategy for Tornadoes and other high wind events**

3:1 Educate public on tornado and high wind awareness, the use of storm shutters and window film, & loose objects outside from becoming projectiles (**BC**) (**CS**) (**TB**) (**TP**)(**TR**) (this is disseminated regularly through tornado drills and **FB** presence)

<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Medium	BC Public Safety/EMA	GEMA	2015	Ongoing	\$3,500	Local, State

3:2 Establish an early warning protocol, especially for those needing assistance (special needs & other vulnerable populations, etc.) (**BC**) (**CS**) (**TB**) (**TP**)(**TR**) deferred/no funding allocated

<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
High	BC Public Safety/EMA	County & Cities' Admins	2015	Ongoing/dynamic	≥\$4,000	Local

~~3:3 Create community action group designated to certain areas to make sure that people have evacuated to shelters (**BC**) Deleted/Redundant CERT covers~~

<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Medium	BC Public Safety		2008		\$5,000	Local

3:3 Work with BOE to ensure that all new educational facilities are designed to also serve as approved public shelters for emergency purposes (**BC**, **BOE**) (the new Sallie Zetterower design adhered to this)

<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
High	BC BOE, GEMA School Safety	FEMA, National Assoc. of Architects	In Place	Ongoing	> \$3,000	BOE Budget, FEMA

3:4 Seek funding for wind retrofitting of critical facilities (BC, CS, TB TP, TR) deferred/no funding allocated						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
Low	BC Public Safety	City Administration	2015	2017	Planning > \$3,000	Fed, St, & Local

3:6 Review effectiveness of building codes with regard to high wind for consistency with state and federal regulations (BC) <span style="background-color: yellow;">Completed</span>						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
High	BC Building inspections		2006		\$9,000	Local

3:7 Explore moving existing utility lines underground in high wind hazard areas						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
Low	BC Planning & Zoning	BC Public Safety, Utilities	2011	Deleted/Not Feasible	\$3,500	Local

3:5 Review feasibility of making a subdivision requirement for underground utility line placement (BC) deferred/no funding allocated						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
Low	BC Planning & Zoning	City & County Planning Depts.	2015	2016	\$4,500	Local (Staff Hours)

<del>3:9 Seek grants to upgrade critical facilities to be more resistant to airborne debris (BC, CS, TB TP, TR)</del>						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>

				Deleted/Redundant		
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3:6 Encourage the construction & use of safe rooms in homes, shelter areas of manufactured home parks, fairgrounds, shopping mall, and other vulnerable public structures (BC, CS, TB, TP, TR) deferred

<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Low	BC Public Safety/EMA	BC Admin	2015	Ongoing	Staff Hours	Local

3:7 Develop & maintain a database tracking community vulnerability to severe wind (BC, CS, TB, TP, TR)

<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Medium	Bldg. Authority	City & County Planning Depts.	2015	Ongoing	Staff Hours	General Funds

#### D. Multi-Jurisdictional Considerations

Hurricane wind, tornadoes, and all other high wind conditions affect all of Bulloch County as does an ice storm (which has many of the same issues such as power outages from downed trees, et. al.). Its critical facilities and vulnerable populations are located in the City of Statesboro as well as in unincorporated areas of the county. Alerting all residents of impending high winds or an ice storm event (such as Pax in 2014) is a county-wide concern.

#### E. Education & Awareness

The Bulloch County Hazard Mitigation Plan Update Committee has identified several methods of public education and awareness regarding hazard mitigation. All public information efforts are aimed at keeping the citizens of Bulloch County fully engaged in the implementation and periodic maintenance of this mitigation plan. Many of these education and awareness tools are multi-hazard in nature and include the following: implementing a countywide crisis alert or notification system, distribution of informative brochures or pamphlets, and public and private sector briefings through newspaper articles and church bulletins concerning updated county emergency procedures.

#### F. Completed & Deleted Action Steps

Step numbered 3:6 has been completed. The following steps were deleted as redundant or not feasible: 3:3, 3:7, and 3:9.

## G. Unchanged Action Steps

No numbering had been necessary until revised and new action steps were introduced at this iteration of the county hazard mitigation plan. Therefore steps now numbered 3:1 through 3:6 are unchanged. The action step numbered 3:7 is new to the plan.

## SECTION VI – WILDFIRES

### A. Mitigation Goals

**Goal: Reduce damage caused by wildfire in Bulloch County through education, precautions, and availability of firefighting training and assistance, assets, and plentiful water resources**

Potential wildfire situations are an extreme threat in Bulloch County. Much of the County is forest and woodlands. Periodic drought conditions, human error, and lightning strikes from thunderstorms have created a serious potential hazard to the lives and property (which includes agricultural assets and livestock) of Bulloch County residents.

“Georgia Forestry Commission Wildfire Records show that in the past 11 years, 11 homes have been lost or damaged by wildfire in Bulloch County resulting in estimated losses of \$87,000 along with 23 outbuildings valued at \$200,700. According to reports during this period 79 homes have been directly or indirectly threatened by these fires. Additionally 12 vehicles and other pieces of mechanized equipment valued at \$30,500 were lost. This is a substantial loss of non-timber property attributed to wildfires in Bulloch County.” ([CWPP can be found in Appendix C.](#))

The efforts of the Bulloch County Hazard Mitigation Plan Update Committee have been focused on reducing the impact of wildfire threats, preventing destruction of forests and structures, and protecting the life of residents from threat of wildfire.

The stated goal: Reduce damage caused by wildfire in Bulloch County.

Action Steps that were deleted:

**4:2** addressed citizen education on safe burning techniques and was deleted for the reason that it is a function of the Georgia Forestry Commission (GFC) seeks to do. **4:5** sought to access airborne fire suppression and is a function of GFC. Deleted. **4:8** would implement a hydrant testing program and has since been completed. Now deleted. **4:10** asked for an

ordinance to limit and enforce the use of burn permits. This is a function of GFC and was deleted. **4:15** was to have obtained and implemented a dry hydrant program and obtain additional units. Deleted as it was completed. **4:16** sought 2000 gallon to 3000 gallon capacity fire tankers for local fire departments. That had been accomplished and was deleted. **4:19** declared that no burn permits were to be issued during any drought period. This was deleted as it is a function of GFC. **4:24** was to modernize the E911 system. This also, had been accomplished and was deleted. **4:25** was to evaluate the use of private pools as firefighting water sources. This was not feasible and was deleted. On the next plan update, the deleted steps will be permanently removed. The action steps numbered **4:19**, **4:20**, **4:21** and **4:22** are new to the plan.

### B. Range of Mitigation Options

The Bulloch County Hazard Mitigation Plan Update Committee identified one structural and several non-structural mitigation measures to reduce the threat of a wildfire event. Non-structural measures may result in alterations to current land use policies and building codes, if necessary; to ensure that proper mitigation measures are undertaken. The proposed strategies hold no inherent risk for historic or otherwise special considerations in the community.

This set of action steps was enhanced by the vast amount of information within the recent (June of 2013) Community Wildfire Protection Plan (CWPP) which was a collaborative effort between the County and The Georgia Forestry Commission. The compilation of current datasets was studied by Ted Wynn (Director of Public Safety & EMA), Chris Ivey (Chief Bulloch Co. FD), Tim Grams (Chief Statesboro FD), and Doug Chassereau (Chief Ranger, Bulloch County Forestry Unit) all of whom mutually agreed upon the contents of the CWPP.

**Key:**

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### Mitigation Strategy for Wildfires

### Action Steps:

4:1 Increase public awareness of wildfire dangers by publishing articles in the local newspaper and providing bulletins to local churches and the schools. ( <b>BC, BOE</b> )						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Medium	BC Public Safety/EMA	Statesboro FD, BCFD, & GA Forestry	2015	Ongoing	> \$7,500	State and Local funds

4:2 Educate residents on safe techniques for burning leaves, debris, contractors' wood waste & trash ( <b>BC, CS, TB, TP, TR</b> ) A function of Georgia Forestry Commission ( <b>GFC</b> )						
<i>Priority</i>	<i>Responsible</i>	<i>Coordinating</i>	<i>Estimated</i>	<i>Estimated</i>	<i>Estimated</i>	<i>Potential</i>

	<i>party</i>	<i>authority</i>	<i>start</i>	<i>completion</i>	<i>cost</i>	<i>funding source(s)</i>
Low	BC Public Safety, City Bldg. Insp. Depts.	GA Forestry	2008	Deleted	-\$100	Local funds

4:2 Educate landowners on the benefits of creating and maintaining fire breaks (BC, GFC)

<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Low	GA Forestry	BC Public Safety/EMA	2015	Ongoing	\$2,000	State & Local Funding

4:3 Educate residents about providing (& maintaining) defensible space (30ft minimum setbacks) between buildings and flammable brush and/or forestland (BC, CS, TB, TP, TR, GFC)

<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Medium	GA Forestry	BC Public Safety, Statesboro FD	2015	Ongoing	\$7,500	State & Local Funding

4:5 Seek improved access to airborne fire protection. (BC) A Georgia Forestry Function

<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Low	BC Public Safety	GA Forestry	2011	Deleted	>\$100K	State

4:4 Seek state and federal grants to acquire better fire equipment (BC, CS, TB, TP, TR)

<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
High	BC Public Safety/EMA	BCFD, & Statesboro FD	2015	Ongoing	\$1,000	Fed & St grants & Gen Funds

4:5 Seek input from DOA/Extension Service & Agriculture industry to enact water conservation procedures WRT drought (**BC, DOA, Extension**)

<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
Medium	GA EPD, GA DOA, UGA Extension	BC Public Safety/EMA	2015	Ongoing	>\$3,500	GA EPD, GA DOA, UGA Extension, % BC Public Safety

4:8 Implement a consistent & regular Hydrant Testing program (**BC, CS, TB, TP, TR**)

<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
High	BC Public Safety	Municipal FD's	2006	Completed	\$15,000	Local

4:6 Improve wildland training at the local FD level (**BC, CS, TB, TR**)

<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
High	BC Public Safety/EMA	BC & Statesboro FD's & GFC	2015	(Partially completed in 2010) Ongoing	\$5,000	State & Local Funding

4:10 Create an ordinance to limit & enforce burn permits at the local level (especially during drought events) (**BC, CS, TB, TP, TR**) **Function of GFC**

<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
Medium	BC Public Safety	Mayors	2007	Deleted	\$5,000	Local Funding

4:8 Explore the Firewise Community initiative – interactive workshop engaging developers, planners, EMS, & Government Officials about Firewise concepts within the county (BC, GFC)						
Medium	Responsible party	Coordinating authority	Estimated start	Estimated completion	Estimated cost	Potential funding source(s)
Medium	BC Public Safety/EMA	GA Forestry	2015	Ongoing	\$1,000	State & Local Funding

4:9 Strictly follow GFC guidelines for controlled burns & permits & educate the citizens concerning the guidelines (BC, GFC)						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
Medium	GA Forestry	BC Public Safety	2015	Ongoing	\$5,000	State funds

4:10 Explore ordinance which would enact fines for people throwing lighted cigarettes out of moving vehicles (BC, CS, TB, TP, TR)						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
Low	BC Public Safety/EMA	City & County Managers	2015	2016	\$2,500	Local funding

4:15 Obtain and implement a dry hydrant program & adding addl. units per required need (BC) <span style="float: right;">Completed</span>						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
High	BC Public Safety		2006	Completed 2007 & 2008	\$300 per hydrant	RC&D/ Local match

4:16 Seek funding to acquire 2000-3000 gallon capacity fire tankers for local FD's (BC) <span style="float: right;">Completed</span>						
<b>Priority</b>	<b>Responsible party</b>	<b>Coordinating authority</b>	<b>Estimated start</b>	<b>Estimated completion</b>	<b>Estimated cost</b>	<b>Potential funding source(s)</b>
Medium	BC Public Safety		2009	Added 4 in 2008 & 1 in 2010	>\$25,000 per	

4:11 Continue to create, monitor, & maintain GFC firebreaks around forested areas and structures. (GFC)						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Low	GA Forestry	Local FD's to monitor	2015	Ongoing	>\$100K	State funding

4:12 Seek funding to purchase brush trucks (BC)						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Medium	BC Public Safety/EMA	Local FD's	2015	Ongoing	\$1,500	Fed, St., and local

4:19 No burn permits will be issued during drought events (BC, CS, TB, TP, TR) Function of GFC						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Medium	BC Public Safety	City Admins.	2009	Deleted	Man-hours	Local budgets

4:13 Increase public awareness of Wildfire dangers by periodically publishing articles in the local newspaper, church bulletins, schools and PSA's during local TV broadcasts. Also maintain an EMA presence on social media such as Facebook & Twitter as time allows. (BC, BOE)						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Low	BC Public Safety/EMA	City & County FD's, & BC BOE	2015	Ongoing	\$2,500	State & Local funding

4:14 Educating the landowners concerning specific mitigation steps herein which apply to, and can benefit them (BC, GFC)						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Medium	GA Forestry	BC Public Safety/EMA	2015	Ongoing as population is dynamic	\$2,500	State & Local

4:15 Seek funding to keep all firefighters current with tactical training and equipment (BC)						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
High	BC Public Safety/EMA	GA Forestry	2015	Ongoing	>\$1,000	Fed. State, & Local

4:16 Seek funding for higher quality sets of turnout gear.(BC, CS)						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
High	BC Public Safety/EMA	BC & Statesboro Fire Depts.	2015	Ongoing	\$3,000	Fed, State, Local

4:24 Modernize E-911 system (BC)						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
High	BC Public Safety		2007	Completed in 2007	>\$200,000	Fed, State, Local

4:25 Evaluate the use of pools as firefighting water sources (BC, CS, TB, TP, TR)						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
			2014	Deleted; Not Feasible		

4:17 Seek funding for IPAWS training for BC Public Safety Staff (BC, CS)						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
High	BC Public Safety/EMA	BC Admin	2015	2015	< \$1,000	General Funds

4:18 IPAWS Certification for those staff members responsible for disseminating the warnings (BC, CS)						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
High	BC Public Safety/EMA	BC Admin	2015	2015	< \$1,000	General Funds

4:19 Seek grant money for prescribed burning in Wildland Urban Interface (WUI) areas						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Medium	BC EMA	GFS	2015	2016	Staff Hours	General Funds

4:20 Amend codes and ordinances to provide better driveway access, increased visibility of house numbers, properly stored firewood, minimum defensible space brush clearance, required Class A roofing materials and skirting around raised structures, and planned maintenance of community lots.						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Medium	City/County Planning	City/County Admin	In place	Ongoing	Staff hours	General Funds

4:21 Enlist the help of the local news media for disseminating data on useful fire informational sources and local Fire related projects and activities						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
Medium	City/County Fire Depts.	City/County Admin	2015	Ongoing	Staff Hours	General Funds

4:22 Promote preservation of open space or wildland-urban boundary zones to separate developed areas from high-hazard areas						
<i>Priority</i>	<i>Responsible party</i>	<i>Coordinating authority</i>	<i>Estimated start</i>	<i>Estimated completion</i>	<i>Estimated cost</i>	<i>Potential funding source(s)</i>
High	Zoning Depts.	Planning Depts.	2015	Ongoing	Staff Hours	General Funds

#### **D. Multi-Jurisdictional Considerations**

Wildfires/Wildland Fires happen due to many causes, and in many areas with Bulloch County. Critical facilities and vulnerable populations are located in the municipalities as well as in unincorporated areas of the county. As a result, any mitigation steps taken related to wildland fires and drought inflicted wildfires should be undertaken on a countywide basis and will include the City of Statesboro, Town of Brooklet, and Town of Portal, and Town of Register. It is important that future development be planned and constructed to provide for heightened

public safety in a wildland fire emergency event. Not all budgets being equal; seeking funding remains quite high in priority.

There are 23 Historical Places in Bulloch County (according to the [Natural Register of Historical Places](#)) at this writing. No conflicts exist with regard to the mitigation action items and the integrity of these places.

## **E. Education & Awareness**

The Bulloch County Hazard Mitigation Plan Update Committee has identified several methods of public education and awareness regarding hazard mitigation. All public information efforts are aimed at keeping the citizens of Bulloch County fully engaged in the implementation and periodic maintenance of this mitigation plan. Many of these education and awareness tools are multi-hazard in nature and include the following: implementing a countywide crisis alert or notification system, distribution of informational brochures or pamphlets, and public and private sector briefings through newspaper articles, church bulletins, and televised Public Service Announcements (PSA's) concerning wildfire dangers, and how to minimize their occurrences on public and private property thru prescribed burning and other mitigation actions to lower fuels and add defensible areas/spaces as well as stressing the judicious use of required burn permits as allowed.

## **F. Completed & Deleted Action Steps**

Steps numbered **4:8**, **4:15**, **4:16**, and **4:24** have been completed. The following steps were deleted as redundant or not feasible: **4:2**, **4:5**, **4:10**, **4:19**, and **4:25**.

## **G. Unchanged and New Action Steps**

No numbering had been necessary until revised and new action steps were introduced at this iteration of the county hazard mitigation plan. Therefore steps now numbered **4:1** through **4:22** are unchanged. Some were already begun, some deferred as no money was allocated due to budget constraints. The action steps numbered **4:19**, **4:20**, **4:21** and **4:22** are new to the plan.

## CHAPTER 4 – EXECUTING THE PLAN

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- Section I        Action Plan Implementation**
- Section II        Evaluation**
- Section III       Multi-Jurisdictional Strategy and Considerations**
- Section IV        Plan Update and Maintenance**

<b>Chapter 4 Section</b>	<b>Updates to Section</b>
Chapter 4: Plan Update Execution	The original plan had excess descriptive verbiage. This update sought to produce a more concise explanation of the process.
<i>I. Action Plan Implementation</i>	<ul style="list-style-type: none"> <li>• Added/Updated: information that the new template dictated, &amp; references to other plans</li> </ul>
<i>II. Evaluation</i>	<ul style="list-style-type: none"> <li>• Added/Updated: stressed open sharing with County municipalities</li> </ul>
<i>III. Multi-Jurisdictional Strategy and Considerations</i>	<ul style="list-style-type: none"> <li>• Added/Updated: Confirmed successes of action steps and the need to continue same</li> </ul>
<i>IV. Plan Updates &amp; Maintenance</i>	<ul style="list-style-type: none"> <li>• The addition of a second public meeting during an update to the plan.</li> </ul>

### SECTION I – ACTION PLAN IMPLEMENTATION

#### Administrative Actions

The hazard mitigation plan update process was overseen by the Bulloch County Emergency Management Agency. The Bulloch County Board of Commissioners has

authorized the submission of this plan to both GEMA and FEMA for their respective approvals.

### **Authority and Responsibility**

As determined during the planning process, the committee has chosen an Implementation Team comprised of the EMA Director, the County Manager, City of Statesboro Manager and the Councils of Brooklet, Portal and Register to assign tasks appropriately and ensure the ongoing execution of the Plan's updated action steps through branches of each city and county government (see Appendix E for documentation of those meetings.)

The Bulloch County Hazard Mitigation Plan Update Committee has developed a method to ensure that regular review and updating of the Plan occur. The Emergency Management Agency Director will assemble a committee in January of each year. This will allow for ample time to begin the process well before the plan expiration date. Committee members will be responsible for monitoring and evaluating the progress of the mitigation strategies in the Plan. The committee will review each goal and action step to determine relevance to changing situations in the County, as well as changes in state and federal policy and to ensure that goals are addressing current and expected conditions. The committee will also review the plan as it applies to any substantial hazard event after its occurrence and After Action Report.

The parties responsible for the various implementation actions, as assigned by the Implementation Team, will evaluate which implementation processes worked well, any difficulties encountered, how coordination efforts were proceeding, and which strategies should be revised.

### **Prioritization**

Members of the Bulloch County Hazard Mitigation Plan Update Committee prioritized the identified mitigation actions based on what would be perceived as most beneficial to the community. A list of mitigation goals, and related action items was compiled from the input of the plan update committee, as well as from others within the community and the Georgia Forestry for their input regarding wildfires. Several criteria were established to assist committee members in the prioritization of these suggested mitigation actions. Criteria included perceived cost benefit or cost effectiveness, availability of potential funding sources, overall feasibility, measurable milestones, multiple objectives, and both public and political support for the proposed actions. Through this prioritization process, several projects emerged as being a greater priority than others. Some of the projects will involve expending considerable amounts of funding to initiate the required actions. The cost benefit ratio for each action is based on best available data, but subjective in nature until such time as the actual scope of work is determined. The determination of

the actual cost benefit (such as the FEMA B/CA model) of a project will be implemented at time of application or funding request. Other projects allowed the community to pursue completion of the project using potential grant funding. Still others required no significant financial commitment by the community.

Basic project priority, lead agency, status, funding, and estimated costs are listed under each action statement in Chapter 4. Actions with no benefit ratio are deemed too subjective in nature or no relevant data was available.

### **Incorporation of Local Hazard Mitigation Plan into Other Plans**

Bulloch County had updated its 2009 Comprehensive Plan in the spring of 2014. At this time, evaluations of mitigation actions identified in the Hazard Mitigation Plan were conducted to determine what should be included in the Comprehensive Plan. Relevant sections of this Hazard Mitigation Plan should be included in the next revision of the Bulloch County Local Emergency Operations Plan (LEOP), and [many other local plans](#) as listed in Appendices B and C.

Estimation of potential damages and their costs in the event of a natural hazard achieves two goals: it enables the identification of critical economic targets for hazard mitigation measures, as well as to enhance the ability to prioritize post-disaster response in aiding the community to recover.

The Bulloch County area is fairly contained, so these emergency services' personnel sit in on, and contribute information for many of the same Plan, SOP, and EOP updates. This assists in making sure that plans and procedures do not conflict with one another. This mutual assistance was successfully demonstrated in the recent Pax Ice Storm.

## **SECTION II – EVALUATION**

The Emergency Management Agency Director will ensure that this plan is monitored at least annually or updated more often if deemed necessary.

The EMA Director will ensure the results of the evaluation(s) are reported to the Bulloch County Board of Commissioners, the Mayor of the City of Statesboro, and Towns of Brooklet, Portal and Register, as well as to any agencies or organizations having an interest or role in the hazard mitigation activities identified in Chapter three of the plan. Copies of the updated plans will be made available for public review at the Bulloch County Public Safety Department, County website, and the public library in Statesboro.

### **SECTION III – MULTI-JURISDICTIONAL STRATEGY AND CONSIDERATIONS**

The Emergency Management Agency is the overall implementation agency for projects such as Hazard Mitigation. Bulloch County and the municipalities have authorized the Bulloch County EMA to act, in a prudent manner, in their behalf.

The municipalities and the unincorporated county areas were included in the planning process. Participation from each jurisdiction was solicited by notices and e-mail invitation, and received by the Bulloch County Emergency Management Agency (see Appendix E.) The ice storm Pax after action views reinforced the co-operative sharing of assets and communications. As a result, a multi-jurisdictional plan was created for Bulloch County with the ideas and viewpoints of all participants included, and successful actions strengthened.

### **SECTION IV – PLAN UPDATE AND MAINTENANCE**

Per the requirements set forth in the Disaster Mitigation Act of 2000, Bulloch County is required to update and revise the plan every five years. At the direction of the EMA Director, a Bulloch County Hazard Mitigation Plan Update Committee will convene in order to accomplish this revision. This iteration of this plan is a product of the first update, and it seeks to enhance hazard mitigation for Bulloch County and its citizens.

All subsequent revision processes should include a firm schedule and timeline, and invite, and identify all agencies and organizations who wish to participate in the plan review. The Committee will review the mitigation goals, and action items to determine their relevance to dynamic situations within the county, as well as changes in State or Federal policy, and ensure they are addressing current and expected conditions. The Update Committee will also reassess the risk assessment portion of the plan to determine if this information should be modified, given any new available data.

Bulloch County is dedicated to involving the public directly in review and updates of the Hazard Mitigation Plan. During the plan revision process, the Committee will conduct, at a minimum, two public hearings. These public hearings will provide the public a forum for which they can express their concerns, opinions, or ideas about the plan. Additionally, any persons from the community express interest in participation in the planning process, they will be provided the opportunity to suggest mitigation measures for the community, and, as was done with this update, changes and additions can be reviewed as they are posted onto the county's website. Drafts of each chapter will be made available for review and input at the County website to reach as many citizens as is possible.

Documentation will be maintained to indicate all efforts at continued public involvement. This documentation will include newspaper sections reflecting the advertised public hearing notice, sign-in sheets, meeting minutes, etc. (Appendix E). All relevant

information will be forwarded to GEMA and FEMA as a product of the proposed plan revision.

The EMA Director will ensure the revised plan is presented to the Bulloch County Board of Commissioners, and the mayors and councils of the city of Statesboro, and the towns of Brooklet, Portal, and Register for formal adoption. In addition, all holders of the county plan will be provided the updated plan data.

No later than the conclusion of the five-year period following initial approval of the plan updates, the EMA Director shall submit a revised (updated) Hazard Mitigation Plan to the Georgia Emergency Management Agency and the Federal Emergency Management Agency for their review and coordination.

## BULLOCH COUNTY BOARD OF COMMISSIONERS AGENDA ITEM SUMMARY

DEPARTMENT MAKING REQUEST (Box 1)				MEETING DATE (Box 2) August 4, 2015					
Board of Commissioners				RESOLUTION ATTACHED? (Box 3)		YES	NO		
REQUESTED MOTION OR ITEM TITLE (Box 4)				Discussion and/or Action Regarding Confederate Monument at the Courthouse					
SUMMARY/BACKGROUND ATTACH DETAILED SUMMARY, IF NEEDED (Box 5)									
AGENDA CATEGORY (CHECK ONE) (Box 6)				FINANCIAL IMPACT STATEMENT (Box 7)					
PRESENTATION (6a)		BUDGETED ITEM? (7a)		YES	AMENDMENT REQUIRED? (7b)		YES		
				NO			NO		
PUBLIC HEARING (6b)		ATTACH DETAILED ANALYSIS, IF NEEDED (7c)							
CONSENT (6c)									
NEW BUSINESS (6d)									
OLD BUSINESS (6e)								X	
OTHER (6f)									
APPROVED FOR AGENDA (Box 8)									
DEPARTMENT DIRECTOR		PURCHASING OFFICER		OTHER		COUNTY STAFF ATTORNEY		COUNTY MANAGER	
YES		YES		YES		YES	✓	YES	✓
NO		NO		NO		NO		NO	
INITIAL		INITIAL		INITIAL		INITIAL <i>Ob</i>		INITIAL <i>Opn</i>	
DATE		DATE		DATE		DATE <i>7/29/15</i>		DATE <i>7/29/15</i>	
COMMISSION ACTION AND REFERRAL (Box 9)									
APPROVED		DATE TO BE RETURNED TO AGENDA							
DENIED									
DEFERRED		NOTES							
OTHER									

**BULLOCH COUNTY BOARD OF COMMISSIONERS  
AGENDA ITEM SUMMARY**

<b>DEPARTMENT MAKING REQUEST:</b>	<b>MEETING DATE: 8.4.2015</b>		
Tax Assessor/Tax Commissioner/Administration	<b>RESOLUTION ATTACHED?</b>	<b>YES</b>	
		<b>NO</b>	

**REQUESTED MOTION OR ITEM TITLE:**  
  
To approve the 2015 Millage Rates

**SUMMARY/BACKGROUND ATTACH DETAILED SUMMARY, IF NEEDED:**

<b>AGENDA CATEGORY (CHECK ONE)</b>		<b>FINANCIAL IMPACT STATEMENT</b>					
<b>PRESENTATION</b>		<b>BUDGETED ITEM?</b>	<b>YES</b>		<b>AMENDMENT REQUIRED?</b>	<b>YES</b>	
			<b>NO</b>			<b>NO</b>	
<b>PUBLIC HEARING</b>		<b>ATTACH DETAILED ANALYSIS, IF NEEDED:</b>					
<b>CONSENT</b>							
<b>NEW BUSINESS</b>	x						
<b>OLD BUSINESS</b>							
<b>OTHER</b>							

<b>APPROVED FOR AGENDA</b>											
<b>DEPARTMENT DIRECTOR</b>		<b>PURCHASING OFFICER</b>		<b>OTHER</b>		<b>COUNTY CLERK</b>		<b>COUNTY STAFF ATTORNEY</b>		<b>COUNTY MANAGER</b>	
<b>YES</b>		<b>YES</b>		<b>YES</b>		<b>YES</b>	x	<b>YES</b>		<b>YES</b>	
<b>NO</b>		<b>NO</b>		<b>NO</b>		<b>NO</b>		<b>NO</b>		<b>NO</b>	
<b>INITIAL</b>		<b>INITIAL</b>		<b>INITIAL</b>		<b>INITIAL ODG</b>		<b>INITIAL</b>		<b>INITIAL</b>	
<b>DATE</b>		<b>DATE</b>		<b>DATE</b>		<b>DATE 7.29.15</b>		<b>DATE</b>		<b>DATE</b>	

<b>COMMISSION ACTION AND REFERRAL (Box 9)</b>		
<b>APPROVED</b>		<b>DATE TO BE RETURNED TO AGENDA</b>
<b>DENIED</b>		
<b>DEFERRED</b>		<b>NOTES</b>
<b>OTHER</b>		