

Charlton County, Georgia



Hazard Mitigation Plan 2018-2023

Including the City of Folkston and the City of Homeland

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

Effective Oct. 7, 2018 to Oct. 7, 2023

Table of Contents

Chapter 1: Introduction to the Planning Process..... 1

Chapter #2: Local Natural Hazard, Risk, and Vulnerability (HRV) Summary 18

Chapter #3: Local Technological/Man-Made Hazard, Risk and Vulnerability (HRV) Summary
..... 73

Chapter #4: Local Natural Hazard Mitigation Goals and Objectives 85

Chapter #5: Local Technological/Man-Made Hazard Mitigation Goals and Objectives 149

Chapter #6: Executing The Plan: 153

Appendices..... 159

Chapter 1: Introduction to the Planning Process

Summary of Changes

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

CHAPTER 1 Section	Updates to Section
I. Purpose and Need, Authority & Statement of Problem	<ul style="list-style-type: none"> ●Language updated to reflect that this was an update to the existing plan
II. Local Methodology, Brief Description of the Plan Update Process and Participants in the Update Process	<ul style="list-style-type: none"> ●All participating jurisdictions are the same as in the original plan
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"> ●Planning Committee reviewed each section ●Updates made using National, State & Local data
IV. Organization of Plan	<ul style="list-style-type: none"> ●Consistent With original plan
V. Local Hazard, Risk and Vulnerability (HRV) Summary, Local Mitigation Goals and Objectives	<ul style="list-style-type: none"> ●Updates made using National, State & Local data ● SLOSH added with Flood ● Extreme Heat & Lightning added to Natural Hazards, Public Health Emergency added to Technological Hazards.
VI. Multi-Jurisdictional Special Considerations (HRV, Goals, Special Needs)	<ul style="list-style-type: none"> ●No major changes from original plan
VII. Adoption, Implementation, Monitoring and Evaluation (A General Description of the Processes)	<ul style="list-style-type: none"> ●Evaluation methods revised and updated..
VIII. Community Data (Demographics, Census, Commerce, History, Etc.)	<ul style="list-style-type: none"> ●Updates made using most recent available Census Bureau data.

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

Section I

Purpose and Need, Authority and Statement of Problem

This document is the official plan update to the original Charlton County Pre-Disaster Mitigation Plan approved by the Georgia Emergency Management Agency (GEMA) and the Federal Emergency Management Agency on October 26, 2007 and the subsequent update was approved in 2013.

The purpose of this document is to provide an overview of the natural hazards that may impact Charlton County, the City of Folkston and the City of Homeland, Georgia. Its purpose is also to outline Charlton County’s, the City of Folkston’s and the City of Homeland’s plans for the

Hazard Mitigation of potential loss of life and damages to property and the economy that may occur with these events.

This Plan is a direct result of meetings & research done by the local governmental officials and citizens of Charlton County, the City of Folkston and the City of Homeland after they formed the Charlton County Hazard Mitigation Plan Update Committee (otherwise known as the Charlton County HMPUC). This Plan is the result of their commitment to reduce the risks of natural hazards and the effects of those natural hazards on their communities. The City of Folkston and the City of Homeland are the only incorporated cities located in Charlton County.

Hazard Mitigation is a means to address the potential damages that may be caused by natural or man-made disasters. This extends to addressing potential loss of life, property, economy, etc. that would not otherwise be addressed.

Authority for the development of this Plan was given by the Charlton County Commission as a result of their execution of the Grantee-Subgrantee Agreement for the Charlton County Hazard Mitigation Grant Program (HMGP) Planning Project and by the Cities of Folkston and Homeland located in Charlton County through their participation in the planning project.

In order to initiate an outreach program to neighboring communities, governments, local and regional agencies, agencies authorized to regulate development, businesses and the public, two Public Hearing Notices were published in the Charlton County legal organ newspaper. In addition, e-mail lists were kept updated and those on them were informed of meetings through e-mails and/or telephone calls. Surrounding county EMA Directors were notified of the plan update and invited (by phone calls) to participate in the process. None of these surrounding county EMA directors attended any meetings or gave any input. Additionally, several area county Hazard Mitigation Plans were being updated at the same time and active meeting list were maintained for scheduling purposes.

Planning Division staff from the Southern Georgia Regional Commission, which represents eighteen adjoining counties in the region (including Charlton County) attended the Charlton County meetings. They participated in all aspects of the planning process and provided a regional perspective in the formation of the multi-jurisdictional Charlton County Hazard Mitigation Plan.

Through all of their efforts, the multi-jurisdictional Charlton County/City of Folkston/City of Homeland Hazard Mitigation Plan along with a comprehensive range of Mitigation Goals, Objectives and Action Steps were developed (see Chapter 4 & Chapter 5) which will assist the local governments to emphasize a more direct approach to Hazard Mitigation. The long-term goal is to reduce potential natural disaster losses to life, property and the economy through Hazard Mitigation efforts.

Section II

Local Methodology, Plan Update Process and Participants

This Charlton County Hazard Mitigation Plan Update encompasses the jurisdictions of Charlton County and the Cities of Folkston and Homeland all located in Southeast Georgia. Each of these jurisdictions also participated in the 2007 Hazard Mitigation Plan and 2013 Hazard Mitigation Plan Update. The Southern Georgia Regional Commission provided technical assistance. A Charlton County Hazard Mitigation Plan Update Committee (Charlton County HMPUC) was formed and an eighteen (18) month planning effort was undertaken which produced a Plan update containing updated Mitigation Goals, Objectives and Action Steps to reduce, or eliminate, the potential for loss of life and damage to property and the economy caused by all disasters (see Chapter 4 & Chapter 5).

An important part of the planning process is the Organization of resources. Assessing risks is also an important step in the development of the Plan. This includes identifying hazards, profiling hazard events, inventorying assets and estimating losses. Developing the Hazard Mitigation Plan, as well as, Implementing the Plan and Monitoring Its Progress are the final key parts of the planning process.

Potential members of the Charlton County HMPUC were contacted by telephone or by letter/e-mail concerning their participation on the Committee. Michael Jacobs of the Southern Georgia Regional Commission (a regional planning agency) provided technical assistance to the Charlton County HMPUC. The Charlton County HMPUC was comprised of representatives from Charlton County, the City of Folkston and the City of Homeland and also included representation from other groups and individuals, as shown below, who attended meetings and/or conducted research:

Charlton County Administrator – Hampton Raulerson
Charlton County Supervisor of Elections – Brenda Hodges
Charlton County Road Superintendant – Ronnie Pollock
Charlton County Public Works Coordinator – Joanna Powell
Nassau County, Florida EMA Director – Martha Oberdorfer
Charlton County Fire Chief – C. L. Lewis
Charlton County Emergency Management Agency Director – Bruce Young
Folkston City Manager – Leonard H. Lloyd
City of Folkston City Clerk – Darlene Williamson
City of Homeland Public Works Superintendent – Steve Rewis
City of Homeland Mayor – Ouida Johnson
City of Homeland City Councilman – Joseph K. Taylor
Georgia Emergency Management Agency Mitigation Planner – Shelby Meyers
Georgia Forestry Commission Chief Ranger – Roger Todd
USFWS Okefenokee NWR Fire Management Specialist – Terri Jenkins
Southern Georgia Regional Commission Planner – Michael Jacobs

The Committee held the following meetings, the sign-in sheets of which are included in Appendix E:

- Kick-off public hearing – July 26, 2016
- First workshop – August 9, 2016
- Second workshop – August 30, 2016
- Third workshop – September 27, 2016
- Fourth workshop – January 31, 2017
- Fifth workshop – February 28, 2017
- Final public hearing – August 28, 2018

Building upon the approved 2013 Plan, each chapter was reviewed chronologically with updated hazard, risk, and vulnerability data, as well as previous accomplishments of mitigation strategy efforts.

Open discussion was permitted at all public meetings for suggestions and/or comments regarding the plan update process. Also, during general question and answer periods, comments (if any) were noted by the Southern Georgia Regional Commission staff and incorporated into the plan as appropriate.

Copies of the 2013 Plan were made available at each meeting, while relevant chapters and sections under discussion were photocopied and distributed to those in attendance for comments. Outside the formal meetings, parts of the plan were e-mailed to certain individuals who were unable to attend the meetings, and their comments were sought. Copies of the 2013 Plan and the draft Plan Update document were also available at the Charlton County Commission, Charlton County EMA Office, City of Folkston, City of Homeland and on the SGRC website.

For the plan update, the Charlton County Hazard Mitigation Plan Update Committee (HMPUC) reviewed all chapters and sections of the prior plan and updated them as appropriate using national, state, and local data sources. The prior plan was used as a basis for the update. The HMPUC reviewed the individual parts of the prior plan (with an emphasis on the hazards, goals, objectives, and action steps) and update these elements through open discussion in which updates were noted by SGRC staff, who then used notes from the workshops to create the new Hazard Mitigation Plan document.

The Wildfire sections were updated using the Georgia Forestry Commission’s Charlton County “Community Wildfire Protection Plan.” The CWPP was consulted to ensure consistency between the CWPP and HMP, and all action items from the CWPP that were still relevant were included as action steps in the HMP. Land use descriptions, information about zoning, and information about community services were updated using the Charlton County/City of Folkston/City of Homeland Comprehensive Plan. Other documents used were the State of Georgia Hazard Mitigation Plan, Charlton County Local Emergency Operations Plan (LEOP), and information from the National Climatic Data Center (NCDC). The State Hazard Mitigation Plan and LEOP were consulted to ensure the HMP would be consistent with both these plans, and data from the NCDC were used to create the Hazard Frequency Table and associated information regarding each hazard, which can be found in Chapter 2. Charlton County does not have a Flood Mitigation Assistance Plan but does have a Flood Insurance Study revised on July 7, 2014.

Public Comment and Participation:

The publication of a Public Notice in the legal organ is considered the legal method of notifying the public and inviting them to meetings.

The public was invited to attend and comment during two public hearings. One public hearing (Kick-Off Meeting) was held on July 26, 2016 and was advertised in the July 20, 2016 edition of *The Charlton County Herald* (see Appendix E, Section I). Five (5) citizens including staff and members of the Charlton County HMPUC attended this public hearing, as well as one (1) staff member from the Southern Georgia Regional Commission and one (1) GEMA representative (see Appendix E, Section II). There were no substantive comments other than those complimentary of the planning process itself. Therefore, there was no need to consider or add materials derived from public comments at that time. No public comments were made at later meetings.

A second and final public hearing was held on Aug. 28, 2018 and was advertised in *The Charlton County Herald* (see Appendix E, Section I). Citizens including staff and members of the Charlton County HMPUC were present (see Appendix E, Section II).

As mentioned above, in order to initiate an outreach program to neighboring communities, governments, agencies and businesses, two Public Hearing Notices were published in the Charlton County legal organ newspaper. In addition, e-mail lists were kept updated and those on them were informed of meetings through e-mails and/or telephone calls.

The Charlton County HMPUC decided on the following Mission Statement and the following Vision Statement in the original plan and re-confirmed them in this update to help guide them through the planning process.

Charlton County/City of Folkston/City of Homeland
Hazard Mitigation Plan Update Committee
Mission Statement

This committee’s mission is to make Charlton County, The City of Folkston, The City of Homeland, its citizens, local governments, communities, residences and businesses less vulnerable to the effects of all hazards. This will be accomplished through the effective administration of Hazard Mitigation Programs, hazard risk assessments, wise floodplain management and a coordinated approach to mitigation policy through state, regional and local planning activities.

Charlton County/City of Folkston/City of Homeland
Hazard Mitigation Plan Update Committee
Vision Statement

This committee’s vision is to institutionalize a local Hazard Mitigation ethic through leadership, professionalism and excellence, thus leading the way to a safe, sustainable, Charlton County, City of Folkston and City of Homeland.

Due to Charlton County, the City of Folkston and the City of Homeland being such close-knit communities, the Charlton County HMPUC chose not to break into subcommittees, but to address issues as a whole group. Various members of this group had direct knowledge relating to Charlton County, City of Folkston and City of Homeland infrastructure and agencies,

emergency planning, hazard planning and the running of major departments and emergency services. Through their efforts this Plan was developed.

The Charlton County HMPUC was responsible for identifying natural hazard events and completing a profile (please see Chapter 2 Sections I-X, Chapter 3 Section I, Appendix A, & Appendix D), vulnerability assessment (please see Chapter 2 Sections I-X, Chapter 3 Section I, Appendix A & Appendix D), potential loss estimation (please see Chapter 2 Sections I-X, Chapter 3 Sections I, Appendix A & Appendix D) and updating the Georgia Mitigation Information System (GMIS) Critical Facilities Inventory (please see <https://www.itos.uga.edu/gema>). They were also responsible for reviewing and updating the Mitigation Goals, Objectives and Action Steps (please see Chapter 4 Sections I-X & Chapter 5 Section I), among other responsibilities. Note that the SHELUDS maps in Appendix A are the most recent available due to budget constraints.

Section III

Description of Review, Analysis and Revision Method

For the plan update, the Charlton County Hazard Mitigation Plan Update Committee (HMPUC) reviewed all chapters and sections of the original plan and updated them (if appropriate) using National, State and Local sources. In particular, SLOSH (Sea, Lake and Overland Surges from Hurricanes) was added to the Flood hazard (as this was the first update that GEMA SLOSH maps extended into Charlton County) and the Wildfire section(s) were updated using the updated Georgia Forestry Commission’s Charlton County “Community Wildfire Protection Plan”. The previous (2013) Hazard Mitigation Plan included the following hazards: Hurricane/Tropical Storm, Flood, Wildfire, Tornado, Thunderstorm/Wind, Severe Winter Storm, Hail, and Drought, In this current update, Lightning, Extreme Heat and Public Health Emergency were added as new hazards. Other chapters and sections were updated using the Charlton County/City of Folkston/City of Homeland Comprehensive Plan-Five Year Short Term Work Program, State of Georgia Hazard Mitigation Plan, the Charlton County Flood Insurance Study (Charlton County does not have a Flood Mitigation Assistance Plan), and information from the National Climatic Data Center (NCDC), as well as HAZUS. These documents were reviewed by the HMPUC prior to being incorporated into the Hazard Mitigation Plan. Relevant information from these plans and documents was incorporated into this Hazard Mitigation Plan by first reviewing the plans and documents, then identifying any relevant information, then the relevant information was reviewed through open discussion by the HMPUC, then SGRC staff incorporated that information into this plan when preparing the plan document.

After organizing resources, an update of the risk assessment was performed. New forms, worksheets and data (included in the Appendices) were also completed. Afterward, the Mitigation Goals, Objectives and Action Steps were reviewed to determine if they were to remain the same, be added to, modified or removed. New Goals, Objectives, and Action Steps were added for the new hazards that were included.

In particular, Chapters 1,2,3,4,5,6 and 7 have been updated to reflect the new material. Please see the tables at the beginning of the chapters to further show which sections were changed and what information was updated.

Section IV Organization of the Plan

This Plan focuses on ten (10) natural hazards and one (1) technological/man-made hazard chosen by the Charlton County HMPUC that may effect and cause damage to Charlton County, the City of Folkston and the City of Homeland. Chapter 2 and Chapter 4 are each subdivided into Sections I through X; These sections reflect the 10 natural hazards that were chosen. The natural hazards are as follows: I: Hurricane/Tropical Storm, II: Flood/SLOSH, III: Wildfire, IV: Tornado, V: Thunderstorm/ Wind, VI: Severe Winter Storm, VII: Hail, VIII: Drought, IX: Lightning and X: Extreme Heat.

Eight (8) of these natural hazards are an equal threat to all geographic areas of the community. Of the remaining two (2), Flood/SLOSH and Wildfire are the only spatially definable hazards chosen by Charlton County, the City of Folkston and the City of Homeland and are limited to somewhat smaller areas (For Flood/SLOSH see Chapter 2 Section II and Appendix A Section II & For Wildfire see Chapter 2 Section III and Appendix A Section III). Charlton County does contains two different wind hazard zones (see Chapter 2 Section V).

Other natural hazards such as Seismic, Landslide, Sinkhole and Dam were examined and determined to be non-factors in Charlton County, the City of Folkston and the City of Homeland based on past history and information contained in Appendix F. These events have not occurred in the community and are not expected to occur, therefore they are not included in this plan.

In Chapter 3 and Chapter 5, one new technological/man-made hazard was also chosen and is shown: Public Health Emergency.

This Plan also contains a Hazard, Risk and Vulnerability (HRV) Assessment (see Appendix A), a comprehensive range of Mitigation Goals, Objectives and Action Steps (Chapter 4, Sections I-X & Chapter 5 Section I) and other information on Implementation of the Action Plan, Monitoring and Plan Update and Maintenance (see Chapter 6) and other FEMA required items and materials (Various Chapters, Sections & Appendices).

In the future, Charlton County Commissioners and City Council Members of the City of Folkston and the City of Homeland will assign staff to complete the comprehensive range of Mitigation Goals, Objectives and Action Steps and other pertinent items and reports contained in this Plan.

The Charlton County, the City of Folkston and the City of Homeland Hazard Mitigation Plan exists in one bound volume appended with various papers and documents, as well as a single PDF available on the SGRC website. The planning efforts of Charlton County, the City of Folkston and the City of Homeland are meant to be an ongoing process and the Plan is meant to be amended as appropriate.

This Plan was prepared for:

Charlton County Board of Commissioners

68 Kingsland Drive
Folkston, Georgia 31537
Voice: (912) 496-2549 Fax: (912) 496-1156

This Plan was prepared by:

Michael V. Jacobs, Senior Planner, Editor
Southern Georgia Regional Commission
1725 South Georgia Parkway, West
Waycross, Georgia 31503
Voice: (912) 285-6097 Fax: (912) 285-6126
mvjacobs@sgrc.us

Copies of the Plan are on file and may be examined at the Charlton County Commission Offices, Folkston City Hall, Homeland City Hall, Charlton County Emergency Management Agency, Charlton County Public Library, Southern Georgia Regional Commission (as well as the SGRC website), and at the Georgia Emergency Management Agency (GEMA).

Section V **Local Hazard, Risk and Vulnerability (HRV) Summary, Local Mitigation Goals and Objectives**

The Charlton County HMPUC determined that the 8 hazards established in the original 2007 Plan & 2013 Plan Update were still the most significant threat to Charlton County, The City of Folkston and the City of Homeland but also added SLOSH in with the Flood hazard, Lightning, Extreme Heat and Public Health Emergency to the list.

A Hazard, Risk and Vulnerability (HRV) Assessment has been formulated through a variety of information obtained during the planning process. Information has been obtained from web sites, published sources and personal accounts regarding hazards, their history in the community, and when & where they were active. These information resources are discussed throughout this plan, and may also be seen in various Appendices.

The vulnerability of Charlton County, the City of Folkston and the City of Homeland to natural hazards (including types, numbers, and value of properties) is included in the GEMA Worksheet #3A: Inventory of Assets (contained in Appendix A), the GMIS Critical Facilities Inventory (see Appendix A), and the GEMA Worksheet: Charlton County/City of Folkston/City of Homeland PDM Hazard Frequencies Table (see Appendix D). Chapter 2 Sections I-X and Chapter 3 Section I contain an overall summary of each hazard and its past and potential effect on the community.

The type and value of the various properties in the communities is obtained as a base value as reported on GEMA Worksheet #3A: Inventory of Assets (contained in Appendix A and adjusted for the coverage of each possible selected hazard). Critical Facilities and Critical Infrastructure are also examined as to the present value and potential losses from hazards (see Appendix A).

A description that identifies and analyses a comprehensive range of Mitigation Goals, Objectives, and Action Steps to reduce the effects of each hazard (based on risk assessment findings) is included in Chapter 4 Sections I-X and Chapter 5 Section I. In Chapter 6 Section I, there is a description related to prioritization of these Mitigation Goals, Objectives, and Action Steps through the use of cost/benefit analysis, STAPLEE (Social, Technical, Administrative, Political, Legal, Economic and Environmental), and other criteria.

In Chapter 6 there are sections on Implementing the Action Plan (see Section I), Evaluation and Monitoring (see Section II), and Plan Update and Maintenance (see Section III). Each jurisdiction has identifiable comprehensive ranges of Mitigation Goals, Objectives, and Action Steps related to them that are contained in Chapter 4 Sections I-X and Chapter 5 Section I.

Section VI **Multi-Jurisdictional Special Considerations**

Charlton County has the number five largest total area of any county in Georgia, which itself is the largest state east of the Mississippi River. Charlton County has approximately 782.4 square miles of total area according to the Georgia Statistics System (www.georgiastats.uga.edu). As such, certain services, including certain emergency services, may be located some distance away from population centers.

Charlton County (estimated population: 13,549) has two incorporated Cities, Folkston (estimated population: 2,972) and Homeland (estimated population: 898), plus the unincorporated communities of Saint George (estimated population 2,841) and the much smaller communities of Moniac and Winokur. The distance from the north end of the County to the south end is approximately 50 miles by road, and the distances between population centers create challenges for emergency services and other services. The northwest area of the County includes over 200 square miles of the Okefenokee Swamp, with very sparse population and some areas that cannot be accessed by road from the eastern part of the County. The southern part of the County is adjacent to Nassau and Baker Counties in Florida, and have experienced population growth associated with the growth of the Jacksonville Metropolitan Area. As such, a significant population lives within what can be characterized as the “wildland urban interface” (WUI), and is exposed to wildfire risk.

Virtually all of Charlton County, the City of Folkston and the City of Homeland may be affected by wildfire. Geographical differences are not so much dependent on jurisdiction, as on land use and fire district resources.

All of the five (5) Fire Department properties in Charlton County are staffed by volunteers. The county has zero (0) full time fire departments. It does now maintain a full-time Fire Chief and Assistant Fire Chief position. This and other factors combine to not only effect the overall safety of the residents, but also effect the reporting of the dangerous or hazardous conditions that we are attempting to report on, and plan Hazard Mitigation for, here. The City of Folkston and the City of Homeland do not have fire departments.

The following relates to the ISO Classes of Charlton County, the City of Folkston and the City of Homeland. Regarding ISO Documentation:

CHARLTON COUNTY

Station 1: Folkston Class 5/9

Station 2: St. George: Class 5/9

Station 3: Racepond: Class 5/9

Station 4 GA Bend: Class 5/9

Station 5: Winokur: Class 5/9

In Chapter 2 Sections I-X and in Chapter 3 Section I, multi-jurisdictional differences for each hazard are described.

Section VII

Adoption, Implementation, Monitoring and Evaluation

Prior to the final public hearing, the final draft plan was submitted to all local governments (Charlton County, City of Folkston, City of Homeland) for their final reviews to take place.

The final draft plan was submitted to GEMA and FEMA for their approval. After their approval, and any recommended changes, resolutions were passed by the local governments after a public hearing for comment and review on Aug. 28, 2018 adopting the Plan Update. Copies of the resolutions are available in Appendix E.

The comprehensive range of Mitigation Goals, Objectives and Action Steps (see Chapter 4 Sections I-X & Chapter 5 Section I), which contains items related to all local governments, will be implemented as soon as possible and/or as funds become available to do so.

All sections of the Plan shall be monitored and evaluated annually by the Charlton County EMA. Incremental accomplishments of Mitigation Goals Objectives and Action Steps will be reported to the public through appropriate means (TV, Web Site, Local Newspaper, City Council Meetings, County Commission Meetings, etc.).

The Charlton County EMA Director will be charged with ensuring that this plan is implemented, monitored, and periodically updated in subsequent years. The EMA Director will oversee implementation, monitoring, and updates for all jurisdictions (Charlton County and the Cities of Folkston and Homeland). The method that the Charlton County EMA will use to monitor the plan and evaluate implementation progress will be the following:

- The Charlton County EMA will conduct quarterly telephone interviews with the various local governments and area agencies in order to chart their plan progress.
- The EMA Director will hold formal public meetings at least once a year to monitor the progress of the plan implementation and allow the public a forum for expressing concerns, opinions, and ideas.
- Throughout the year, a series of informal meetings will be held in which various aspects of the plan, including monitoring and evaluation, are discussed.

The major criteria to measure plan success at the end of each year will be the number of Goals, Objectives and Action Steps, or components thereof that have been completed, which in turn will result in savings of life, money, property. For further details on plan execution, see Chapter 6.

Section VIII
Community Data

**2015 Joint Charlton County
Comprehensive Plan Update**
for
Charlton County
and
The Cities of Folkston and Homeland

Adopted 4/23/2015

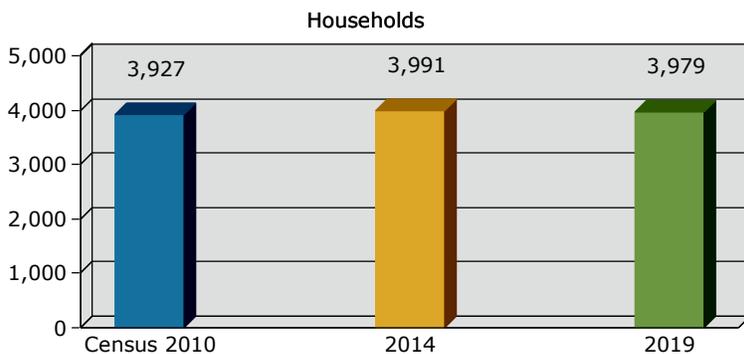
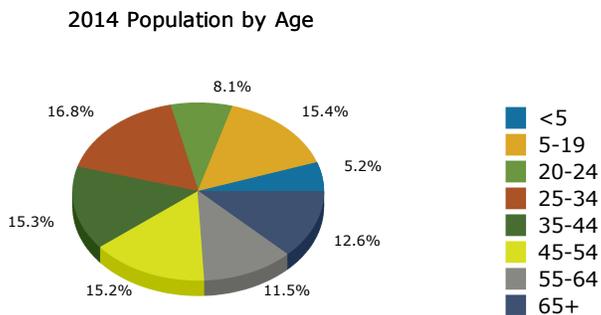
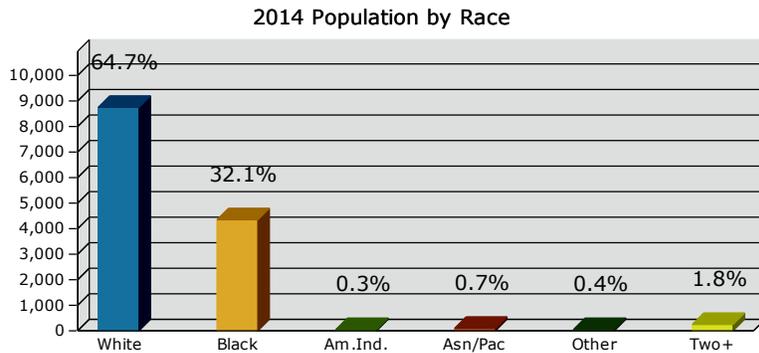
Analysis of Data and Information

The following brief summarization of data for Charlton County, the City of Folkston, and the City of Homeland serves from the “2015 Joint Charlton County Comprehensive Plan for Charlton County and the Cities of Folkston and Homeland” as a visual profile of the area. Data were provided by ESRI 2014 and 2019 forecasts, based on the US Census Bureau’s 2010 Census data.

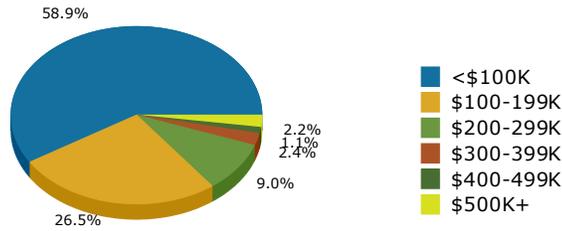
Charlton County

The 2014 population of Charlton County is 13,549. The estimated increase for 2019 is 0.12%, indicating a fairly stable population. This is further confirmed by only a slight increase in the number of households in the area. Approximately two-thirds of the population is white and one-third is black; other racial/ethnic groups form only a very small part of the population.

The median age in Charlton County is 38, compared with a median US age of 37.7.

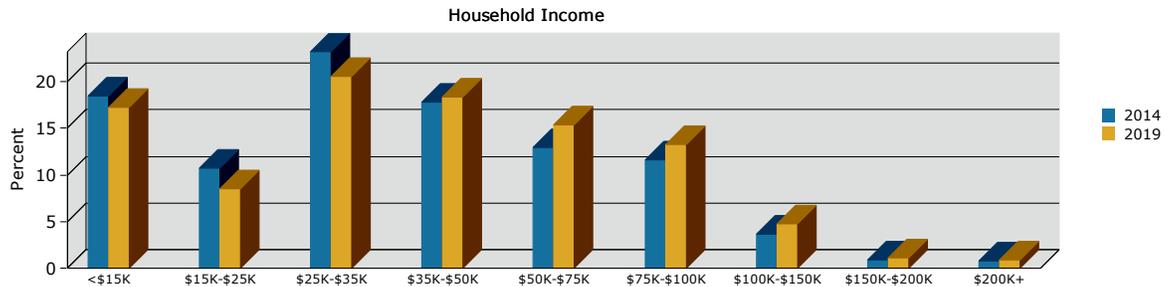
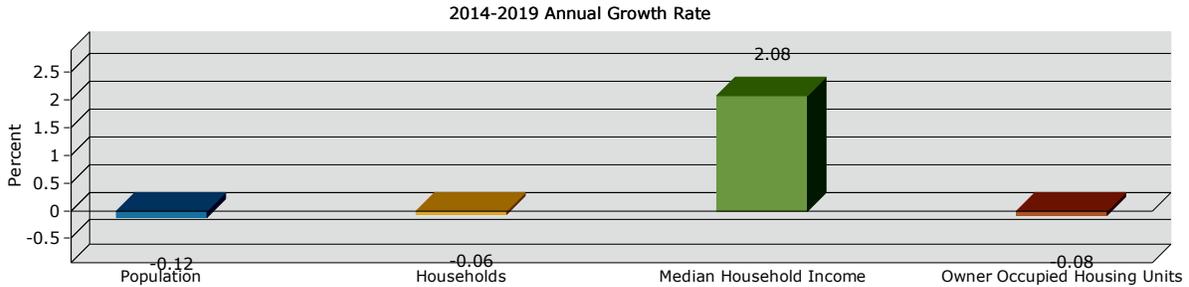


2014 Home Value



More than half of all homes in Charlton County are valued at less than \$100,000, about one-quarter are valued between \$100,000 and \$200,000, and only about 15% of the housing stock is

valued at more than \$200,000. The majority are owner-occupied, about one-quarter are rentals, and about 13.8% of the housing stock is vacant.

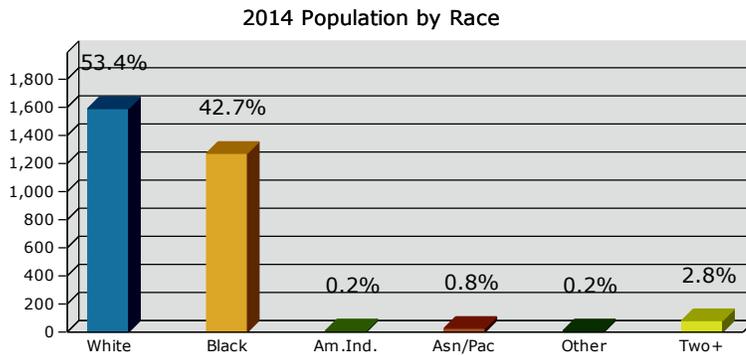


Average household income has been increasing, reaching a level of about \$35,000. However, wages are expected to decline in the next five years due to a flight of higher-income jobs to nearby areas such as Waycross and Jacksonville. The average household income for Charlton County is \$44,234.

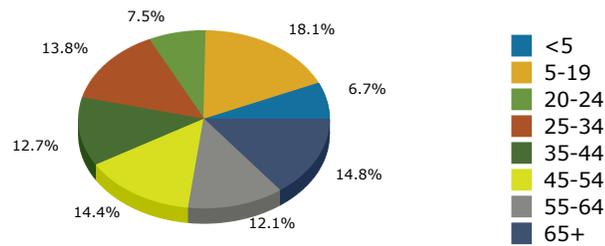
City of Folkston

The 2014 population of the City of Folkston is 2,972. The estimated increase for 2019 is 0.17%, again indicating a fairly stable population. This is further confirmed by only a slight increase in the number of households in the city. Approximately half of the population in the City of Folkston is white and half is black; other racial/ethnic groups make up only a very small part of the population.

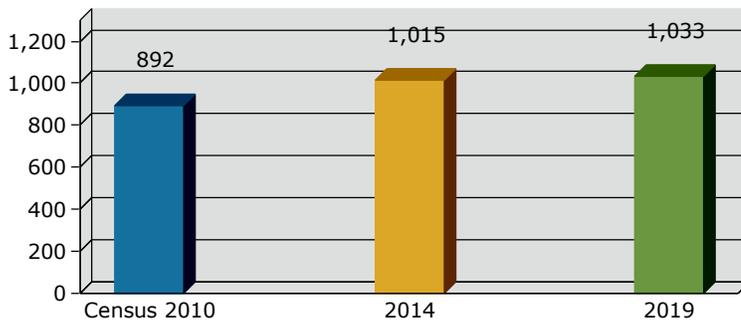
The median age in the City of Folkston is 38.3, compared with a median US age of 37.7.



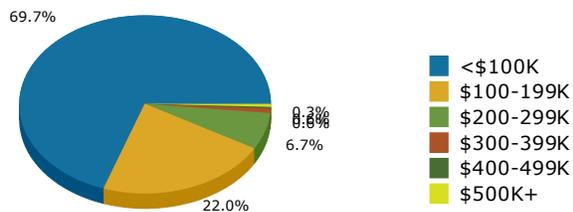
2014 Population by Age



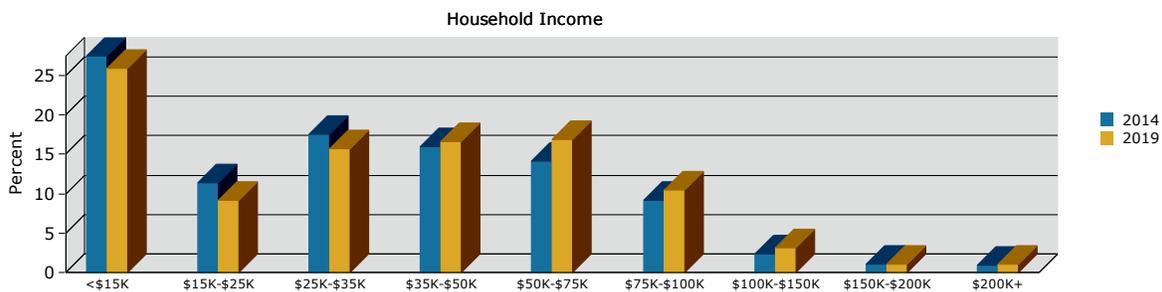
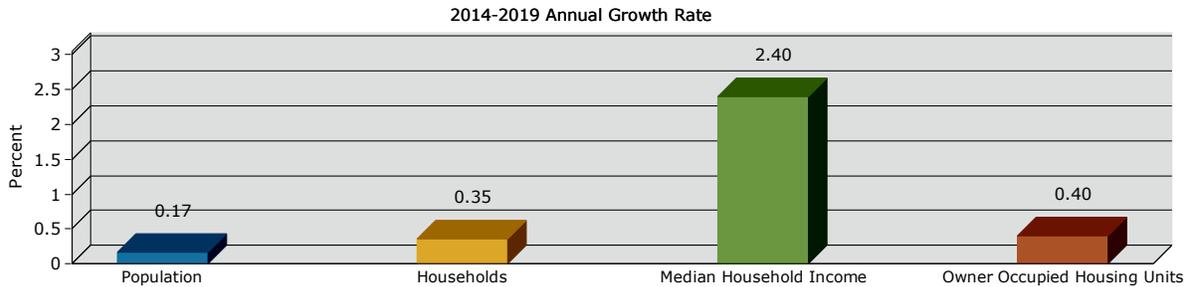
Households



2014 Home Value



Roughly two-thirds of the homes in the City of Folkston are valued at less than \$100,000, about one-quarter are valued between \$100,000 and \$200,000, and only about 8% of the housing stock is valued at more than \$200,000. The majority are owner-occupied, about one-third are rentals, and about 10% of the housing stock is vacant.

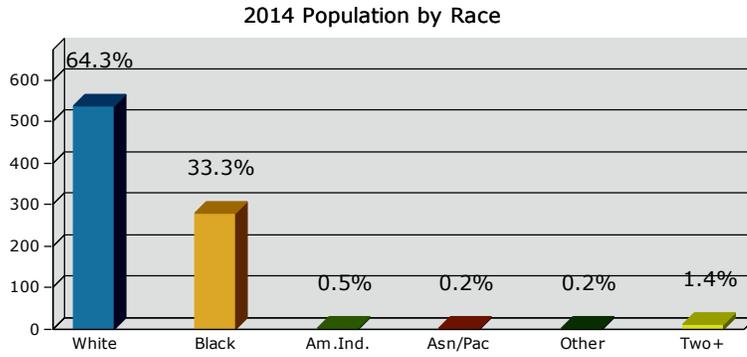


As in the unincorporated area of the county, average household income has been increasing, reaching a level of about \$35,000. The percentage of salaries above \$35,000 is expected to increase by 2019, indicating a concentration of higher-paying jobs within the incorporated boundaries of the county. The average household income for the City of Folkston is \$40,131.

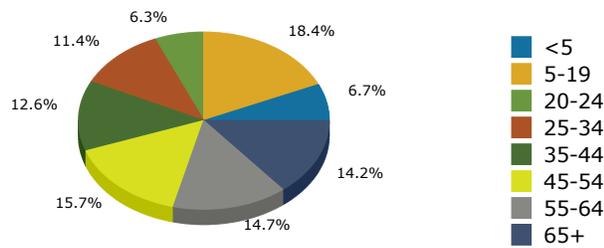
City of Homeland

The 2014 population for the City of Homeland is 838, reflecting a continuing decreasing trend from 910 in 2010 to 782 in 2019. The estimated change for 2019 is -1.37%, reflecting a natural decrease in the largely retirement-aged population without an influx of younger residents. This is further confirmed by a slight decrease in the number of households in the city. As is the case for Charlton County, the City of Homeland’s population is approximately two-thirds white and one-third black; other racial/ethnic groups make up only a very small part of the population.

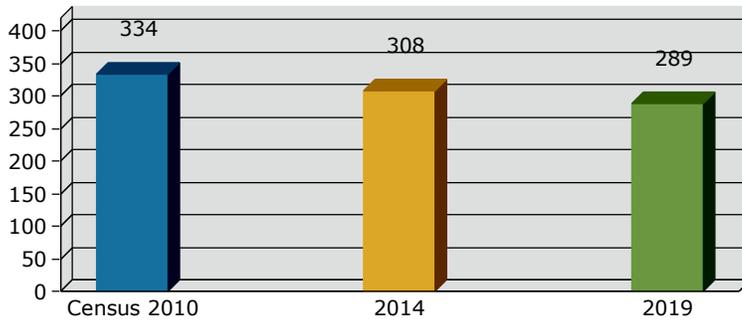
The median age for the City of Homeland is 41.1, compared with a median US age of 37.7.



2014 Population by Age

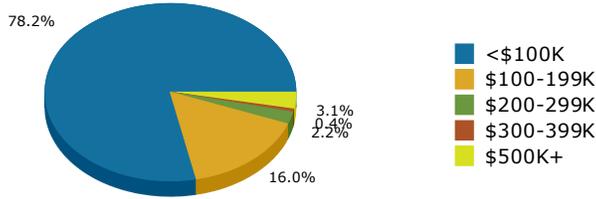


Households

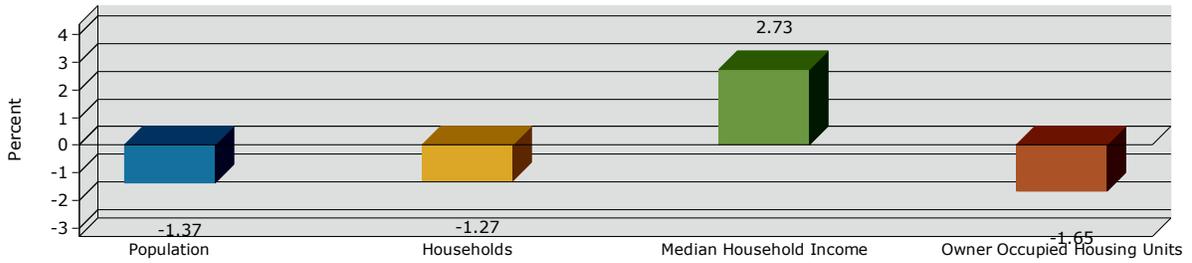


Roughly three-quarters of the houses in the City of Homeland are valued at less than \$100,000, about one-quarter are valued between \$100,000 and \$200,000 and only about 5% of the housing stock is valued at more than \$200,000. Roughly half of the homes are owner-occupied, the remainder are rentals, and about 10% of the housing stock is vacant.

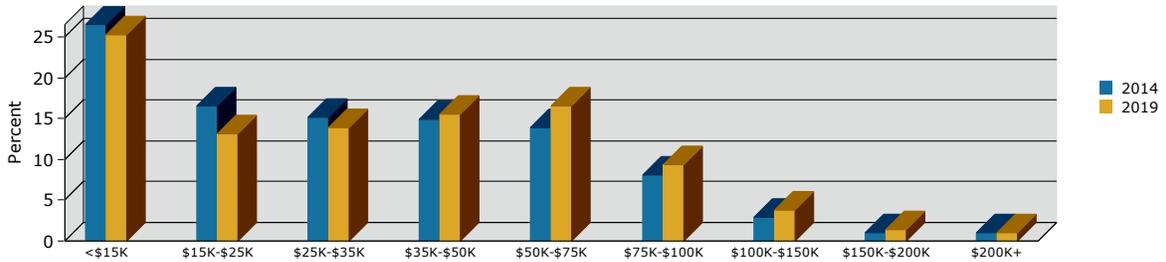
2014 Home Value



2014-2019 Annual Growth Rate



Household Income



As in the unincorporated area of the county, average household income has been increasing, reaching a level of about \$35,000. The percentage of salaries above \$35,000 is expected to increase by 2019, indicating a concentration of higher-paying jobs within the incorporated boundaries of the city. The average household income for the City of Homeland is \$39,503.

Chapter #2: Local Natural Hazard, Risk, and Vulnerability (HRV) Summary

Summary of changes:

Table 2.1 provides a brief description of each section in this chapter and a summary of changes that have been made.

Chapter 2 Section	Updates to Section
I. Hurricane/Tropical Storm	Updated data and information; edited for clarity
II. Flood/SLOSH	SLOSH added to Flood Hazard. Updated data and information; edited for clarity
III. Wildfire	Updated data and information; edited for clarity
IV. Tornado	Updated data and information; edited for clarity
V. Thunderstorm/Wind	Updated data and information; edited for clarity
VI. Severe Winter Storm	Updated data and information; edited for clarity
VII. Hail	Updated data and information; edited for clarity
VIII. Drought	Updated data and information; edited for clarity
IX. Lightning	New hazard
X. Extreme Heat	New hazard

Table 2.1: Overview of updates to Chapter 2

Through the use of GEMA Worksheet #1: Identify The Hazard (copy contained in Appendix D), the FEMA described methodology and other factors, various data was collected (see various Appendices). The Charlton County HMPUC listed all of the hazards that may occur. Afterward, they focused on the hazards commonly recognized as threats to the jurisdictions that were the most prevalent and most likely to occur and cause damages in Charlton County, the City of Folkston and the City of Homeland.

The ten (10) chosen natural hazards are the same eight (8) hazards that were included in the 2007 Plan and 2013 Hazard Mitigation Plan Update (Hurricane/Tropical Storm, Flood, Wildfire, Tornado, Thunderstorm/Wind, Severe Winter Storm, Hail, and Drought) with the addition of Lightning and Extreme Heat. SLOSH (Sea, Lake and Overland Surges from Hurricanes) was added to the Flood Hazard, as this was the first update that GEMA SLOSH maps covered Charlton County.

Eight (8) of these are an equal threat to all geographic areas of the community. Of the remaining two, Flood/SLOSH and Wildfire are the only spatially definable hazards chosen by Charlton County, the City of Folkston and the City of Homeland and are limited to somewhat smaller areas (For Flood/SLOSH see Chapter 2 Section II and Appendix A Section II & For Wildfire see Chapter 2 Section III and Appendix A Section III). Charlton County does contain two different wind hazard zones (see Chapter 2 Section V).

Various Wildfire maps and other information have been produced through the Georgia Forestry Commission's "Community Wildfire Protection Plan" for Charlton, County (see Appendix C).

Other natural hazards such as Seismic, Landslide, Sinkhole and Dam were examined and determined to be non-factors in Charlton County, the City of Folkston and the City of Homeland based on past history and information contained in Appendix F.

Summary of Changes To Potential Loss Values:

The Residential values are based on U.S. Census data using the median value of owner occupied housing units in Charlton County, 2011-2015, of \$82,000.00 (see Appendix B) and in all other cases the value assigned by the Charlton County Tax Assessor (see Appendix F).

In the GMIS Critical Facilities Inventory appearing on-line at <https://www.itos.uga.edu/gema> and in Appendix A, we estimate the potential losses that could occur to the Critical Facilities and Infrastructure. When available, we also estimate many values related to disaster losses including replacement costs, content loss, displacement costs and other values.

The replacement values contained in this inventory are either those included in insurance information held by the local governments or were figured at a commercial project cost rate of \$300.00 per square foot, depending on their building type and present construction. Architect John McCall of McCall and Associates estimates this in an e-mail (see Appendix B).

In some cases involving machinery & equipment (such as water systems, sewer systems, lift stations, etc.) that are mainly contained out of doors, and in some cases of metal building construction, best guess replacement estimates were provided by Michael Jacobs of the Southern Georgia Regional Commission based on over twenty years of experience as a public facilities grant writer.

Damage to crops is not taken into account in any of these figures. According to the most recent figures (2011) on The University of Georgia's Website www.georgiastats.uga.edu (Georgia County Guide), Poultry/Eggs, Row & Forage Crops, Livestock/Aquaculture, Forestry & Forest Products, Vegetables, Ornamental & Horticultural, Fruits & Nuts and Other including Agritourism account for a total Farm Gate Value total of approximately \$22,888,000. This is \$202,549.00 per farm or \$1,121.00 per acre.

Section I Hurricanes/Tropical Storms

A. Identification of Hazard:

The threat of Hurricanes/Tropical Storms has been chosen by the Charlton County HMPUC as one of the most likely hazard to occur & cause damage in Charlton County, the City of Folkston and the City of Homeland based on past experience, the FEMA described methodology and other factors. Historic data has been examined from various sources (see Appendix A Section I) and

from the National Climatic Data Center (see Appendix F), as well as from local history and personal accounts, in order to determine frequency of events.

Tropical Cyclones are the general term used for all circulating weather systems over tropical water. Tropical Cyclones are destructive and have the potential to cause great damage and loss of life and are divided into four major types: Tropical Disturbance, Tropical Depressions, Tropical Storms and Hurricanes.

A Tropical Disturbance is a discrete tropical weather system of apparently organized convection originating in the tropics or subtropics, having a non-frontal migratory character, and maintaining its identity for 24 hours or more.

Tropical Depressions are defined as an organized system of clouds and thunderstorms with a defined circulation and maximum sustained winds of 38 mph.

Tropical Storms are defined as an organized system of strong thunderstorms with a defined circulation and maximum sustained winds of 50 to 73 mph.

A Hurricane is defined as an intense tropical weather system with a well defined circulation and maximum sustained winds of 74 mph or higher. Hurricanes are categorized as category 1 through category 5, as described in the table below.

SAFFIR-SIMPSON HURRICANE SCALE

<i>Category</i>	<i>Wind Speed</i>	<i>Damage</i>
1	74-95 mph	Minimal, no real damage to building structures. Unanchored mobile homes, shrubbery and trees damaged. Also some coastal road flooding and minor pier damage.
2	96-110 mph	Moderate, some damage to roofs, door and windows. Considerable damage to vegetation, mobile homes and piers.
3	111-130 mph	Extensive, some structural damage to small residences and utility buildings. Mobile homes are destroyed. Flooding near the coast destroys smaller structures with larger structures damaged by floating debris.
4	131-155 mph	Extreme, some complete roof failure on small residences. Major erosion of beach areas. Major damage to lower floors of structures near the shore.
5	>155 mph	Catastrophic, complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away.

Hurricane/Tropical Storm season in Georgia is officially from June 1 through November 30, but they may occur slightly before or after those dates.

Whether the Hurricane/Tropical Storm is a short-term event or a long term event depends on many factors including category, strength, speed and impact of other weather systems including fronts and wind patterns.

Because of its location, Charlton County, the City of Folkston and the City of Homeland are vulnerable to severe Hurricanes/Tropical Storms forming in both the Atlantic Ocean and the Gulf of Mexico. Also, because of their location, Hurricanes may degrade into Tropical Storms, Tropical Depressions or Tropical Disturbances by the time they reach Charlton County, the City of Folkston and the City of Homeland. Or, the Tropical Storms, Depressions or Disturbances may never reach Hurricane strength before making shore. These may or may not contain Tornadoes or Hail. The effects vary depending on the severity of the Hurricane/Tropical Storm and the duration of the event.

B. Profile of Hurricane/Tropical Storm Events, Frequency of Occurrences, Probability:

The historic record for Hurricanes/Tropical Storms is spotty at best with many unreported and underreported events. All of Charlton County, the City of Folkston and the City of Homeland are vulnerable to Hurricanes/Tropical Storms due to their proximity to the coasts of both the Atlantic Ocean and the Gulf of Mexico. The effects of the hazard are usually substantial.

Members of the Charlton County HMPUC have witnessed many unreported and underreported tropical events occurring in Charlton County, the City of Folkston and the City of Homeland.

Charlton County (Including the Cities of Folkston and Homeland):

According to the NOAA Storm Events Database (see Appendix F), there are 6 reports of Tropical Storms occurring in Charlton County (including the Cities) between 01/01/1950 and 12/31/2017. The Historic Recurrence Interval is 11.33 years. This is a 8.82% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.3, the past 20-year frequency is 0.3, and the past 50-year frequency is 0.12 (see the Hazard Frequency Table in Appendix D).

Since the previous Hazard Mitigation Plan was completed, three Hurricane/Tropical Storm events have occurred. On Sept. 1, 2016, Tropical Storm Hermine caused widespread flooding, wind gusts up to 55 mph, and impassable roads due to downed trees and storm debris. On Oct. 6, 2017, Tropical Storm Matthew caused widespread flooding, wind gusts up to 55 mph, and impassable roads due to downed trees and storm debris. On Sept. 10-11, 2017, Tropical Storm Irma caused widespread major flooding in Charlton County. The St. Marys River at Traders Hill set a record flood stage at 19.30 ft on Sept. 15th at 1445 EDT. Major flooding occurred at this level. Storm total rainfall included 9.3 inches 10 miles SW of Folkston, 9.85 inches in Homeland, and 4.66 inches 3 miles SSW of Folkston.

Although the most complete available data were used for this analysis, the possibility remains that other hurricane/tropical storm events may have occurred in the community that went unreported or underreported.

Since the previous plan was completed, no changes have occurred that would affect the community's overall vulnerability to the hazard.

See also the HAZUS report included in Appendix C.

C./D. Inventory of Assets Exposed and Potential Loss to Hurricanes/Tropical Storms:

The threat of Hurricanes/Tropical Storms is usually limited to the time around Hurricane/Tropical Storm Season (June 1 through November 30).

In Worksheet 3A: Inventory of Assets appearing in Appendix A Section I, we estimate that all of Charlton County, the City of Folkston and the City of Homeland are vulnerable to Hurricanes/Tropical Storms.

Charlton County (Including the Cities of Folkston and Homeland):

Unless otherwise specifically noted, it has been determined that approximately 100% of the Residential property (4,436 of 4,436) in Charlton County (which includes the Residential properties in the individual cities) may be effected which have a total value of \$363,752,000.00. Also, 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,776 of 1,776) in Charlton County (which includes those property types in the individual cities) may be effected which have a total value of \$321,839,740.

In addition, all 103 of the Critical Facilities and Infrastructure for Charlton County (including the Cities of Folkston and Homeland) are located in areas that may be effected by Hurricanes/Tropical Storms and are located in the 100 mph-109 mph (Hazard Score of 3) area and have a total of 1,083,382 square feet with a total replacement value of \$470,952,414.00 and a total content value of \$8,600,310.00 (see GMIS Critical Facilities Inventory Database Reports). Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

While we have these values listed, we recognize that Hurricanes/Tropical Storms would not normally fully impact the value of these properties, or be big enough to wipe out all assets.

E. Land Use and Development Trends Related to Hurricanes/Tropical Storms:

Slight population growth has occurred in the years since the 2010 U.S. Census. The 2016 population of Charlton County (the most recent figure currently available) is estimated at 12,497, a 2.68% increase since 2010. The largest population change (officially) has occurred in that large numbers of the 2010 population were shifted from Charlton County to the City of Folkston, in part due to the geographic location of the prison population. The number of occupied house in Charlton County (including Folkston and Homeland) is also estimated at 3,474 in the 2012-2016 U.S. Census American Community Survey.

The City of Folkston has adopted the 2017 NEC, which is in effect now. Charlton County, the City of Folkston and the City of Homeland have adopted building codes. The 2018 NEC and updates to the prior codes including International Electrical & Plumbing & Mechanical Codes.

were done in January, 2018. The County now has Code Enforcement Officer who also serves the cities on request.

The community has standards in place to restrict building in flood hazard areas (Charlton County Code of Ordinances, Sec. 140-68): New construction must be elevated or floodproofed in areas designated as “AO” shallow flooding areas. Encroachments within special flood hazard (“AE”) zones is prohibited unless a registered professional engineer certifies that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community (Sec. 140-67). New construction is prohibited within 20 feet of streams (Sec. 140-66(a)(2)). Due to existing septic systems in flood-prone areas, there is a great danger of fecal coliform contamination of river waters as a result of flooding of both old and hardship septic tank systems located along the rivers and tributaries. Water recharge areas are currently protected by ordinance.

Wetland areas are protected by ordinance. Soil and Sedimentation Control Ordinances are in effect.

Charlton County has enacted a subdivision ordinance. Throughout Charlton County, if not zoned already, all areas are in the process of being zoned agricultural. There is at least a 4-5 mile area already zoned around the City of Folkston and the City of Homeland with the majority being either agricultural or some form of residential. There is more residential zoning in the City of Folkston and the City of Homeland than anything else. Most highways are zoned for setbacks.

Current trends are for agricultural areas to be converted to residential areas.

Charlton County, the City of Folkston and the City of Homeland are all members of the National Flood Insurance Program. All of the local governments have some part of their jurisdictions located within a floodplain. Floodplain maps for each local government are located in Appendix A Section II.

Charlton County and the Cities of Folkston and Homeland do not participate in the Community Rating System (CRS) program. As of August 25, 2017, they were not eligible according to FEMA (<http://www.fema.gov/library/viewRecord.do?id=3629>) and other information at <http://www.fema.gov> .

Since the previous plan was completed, there have been no changes in development within the community that would increase or decrease the community’s overall vulnerability to the hazard.

F. Multi-Jurisdictional Hurricane/Tropical Storm Differences:

All of Charlton County, the City of Folkston and the City of Homeland may be equally affected by Hurricanes/Tropical Storms. Such events are normally area-wide and not difference in the severity is expected between Charlton County, the City of Folkston and the City of Homeland. However, the impact of a Hurricane/Tropical Storm will likely be more severe in places with higher population density due to more people being in danger, more people needing to

evacuated, more debris from damaged buildings, and other impacts associated with higher population density.

In Worksheet 3A: Inventory of Assets appearing in Appendix A Section I, we estimate that 100.0% of Charlton County and the Cities of Folkston and Homeland are vulnerable to Hurricanes/Tropical Storms.

G. General Overall HRV Summary of Hurricanes/Tropical Storms Events And Their Impact On The Community:

Hurricanes/Tropical Storms have the potential to cause damage at any place, at any time, throughout Charlton County, the City of Folkston and the City of Homeland. They are usually preceded by some watch or warning well in advance. Of course, the cost of the damage and potential loss of life may be higher if the path of the Hurricanes/Tropical Storms were to occur in populated areas and municipalities, as opposed to if it were to occur in more agricultural based sections of the Charlton County.

The Charlton County HMPUC recognizes Hurricanes/Tropical Storms as the most likely natural hazard to occur and cause damage. They developed a comprehensive range of Mitigation Goals, Objectives and Action Steps to lessen Hurricane/Tropical Storm impacts on Charlton County and the City of Folkston and the City of Homeland. These are contained in Chapter 4 Section I.

Section II **Flood/SLOSH**

A. Identification of Hazard:

The threat of a Flood/SLOSH has been chosen by the Charlton County HMPUC as one of the most likely hazard to occur & cause damage in Charlton County, the City of Folkston and the City of Homeland based on past experience, the FEMA described methodology and other factors. Historic data has been examined from various sources (see Appendix A Section II) and from the National Climatic Data Center (see Appendix F), as well as from local history and personal accounts, in order to determine frequency of events.

It goes without saying that Floods/SLOSH are destructive, many times occur without warning and they may occur at any time. Drainage ditches and canals that are improperly cleaned or maintained contribute significantly to Flooding occurrences which may require the homeowners to experience hours, if not days, of water filled yards and water damage even in the cities.

There are several different kinds of Floods, three of which can occur in Georgia: River Floods, Coastal Floods and Urban Floods. Most Flash Floods are caused by rain from slow moving Thunderstorms, Thunderstorms repeatedly moving over the same area, or heavy rains from Hurricane/Tropical Storm events.

Flash Floods are the number one weather related killer in the United States and flooding accounts for the majority of natural hazard damages. Six (6) inches of fast moving water can knock a person off of his or her feet. Two (2) feet of water can float a full sized automobile. More than half of Flood victims are in vehicles that moving water sweeps away.

Charlton County, the City of Folkston and the City of Homeland are all members of the National Flood Insurance Program. All of the local governments have some part of their jurisdictions located within a floodplain. As of 2018, all jurisdictions are in compliance with NFIP requirements, and they plan to remain in compliance by enforcing flood plain ordinances which prohibit or severely limit development in floodplains.

Charlton County and the Cities of Folkston and Homeland do not participate in the Community Rating System (CRS) program. As of August 25, 2017, they were not eligible according to FEMA (<http://www.fema.gov/library/viewRecord.do?id=3629>) and other information at <http://www.fema.gov>.

SLOSH (Sea, Lake and Overland Surges from Hurricanes) was added to the Flood Hazard, as this was the first plan update that GEMA SLOSH maps extended into Charlton County.

B. Profile of Flood/SLOSH Events, Frequency of Occurrences, Probability:

The historic record for Flood/SLOSH is spotty at best with many unreported or underreported Flood/SLOSH events. Members of the Charlton County HMPUC have witnessed many unreported and underreported cases of minor to major flooding occurring within Charlton County, the City of Folkston and the City of Homeland, some lasting for days at a time, following large rain events. Only certain areas of Charlton County, the City of Folkston and the City of Homeland are usually vulnerable to major flooding, however.

Many of these major flooding areas are located on or adjacent to the St. Marys River, Okefenokee Swamp/Suwannee River, Satilla River and numerous other creeks and streams. In the City of Folkston and the City of Homeland, there are certain areas surrounding the drainage canals that are also subject to flooding.

One of the major problems encountered is that FEMA Disaster Declarations frequently occur on the Florida side of the St. Mary's River, but are not given on the Georgia side, where flooding is just as bad, or worse.

There is reliable flood depth data, crest height, or data regarding height over flood stage that may be used in order to attempt to determine extent contained in the Flood Insurance Study for Charlton County, Georgia and Incorporated Areas dated July 7, 2014. There are also base flood elevations provided by FEMA in their floodplain maps.

For the St. Marys River at Moniac (see chart below), the historic crest is 22.98 ft on April 5, 1973; a more recent crest was 17.51 ft on Sept. 13, 2017. The low water record for this location is 3.52 ft on July 10, 2011. For the St. Marys River at Traders Hill, the highest historic crest on record is 19.30 ft on Sept. 15, 2017 (see chart on the following page). Low water records for this location are currently not available.

(Source: National Weather Service website:

<https://water.weather.gov/ahps2/river.php?wfo=jax&wfoid=18729&riverid=204108&pt%5B%5D=146588&pt%5B%5D=152550&allpoints=146588%2C144041%2C152550%2C150554&data%5B%5D=impacts>)

St. Marys River At Moniac (MNIG1)

[Return to Top](#)

Flood Stage: 12 Feet Latest Stage: 6.05
Current Warnings/Statements/Advisories: None currently.

Vertical datum height surveyed by the USGS
[Complete information about the St. Marys River at Moniac available from NWS Jacksonville, FL](#)

NOTE:Forecasts are not available for the St. Marys River at Moniac. Only observed stages are available for this point.
 Vertical datum height surveyed by the USGS

Flood Impacts

If you notice any errors in the below information, please contact our [Webmaster](#)

17
 Trailers and houses on both sides of the river become endangered.

15
 Flooding begins to impact Mocassin Creek Circle on Florida side with some portions of the road becoming cut-off. Access roads on both sides of the river in Florida and Georgia begin to flood.

14
 Betha State Forest campground sites completely flooded on Florida side and water begins to enter campground parking lot.

12
 Betha State Forest campground sites begin to flood on the Florida side just north of the gage.

Flood Categories (in feet)	Historic Crests	Recent Crests
Major Flood Stage: 17	(1) 22.98 ft on 04/05/1973	(1) 17.51 ft on 09/13/2017
Moderate Flood Stage: 15	(2) 19.90 ft on 09/19/1928	(2) 12.15 ft on 04/16/2015
Flood Stage: 12	(3) 19.15 ft on 08/24/2008	(3) 12.04 ft on 12/26/2014
Action Stage: 10	(4) 18.69 ft on 06/28/2012	(4) 12.24 ft on 10/01/2014
Low Stage (in feet): 4.6	(5) 18.41 ft on 09/13/1964	(5) 15.16 ft on 09/09/2014
	(6) 17.78 ft on 09/09/2004	(6) 14.32 ft on 09/08/2014
	(7) 17.57 ft on 03/30/1970	(7) 14.05 ft on 04/20/2014
	(8) 17.51 ft on 09/13/2017	(8) 13.17 ft on 04/09/2014
	(9) 17.03 ft on 02/18/1998	(9) 11.64 ft on 03/19/2014
	(10) 16.38 ft on 09/29/2004 (P)	(10) 9.31 ft on 02/27/2013
	Show More Historic Crests	Show More Recent Crests
	(P): Preliminary values subject to further review.	(P): Preliminary values subject to further review.

Low Water Records

(1) 3.52 ft on 07/10/2011
 (2) 4.20 ft on 05/26/2012
 (3) 4.29 ft on 07/05/2008
 (4) 4.30 ft on 10/21/2010
 (5) 4.59 ft on 07/19/2015
[Show More Low Water Records](#)

St. Marys River At Traders Hill (SMTG1)

[Return to Top](#)

Flood Stage: 7 Feet Latest Stage: 1.36

Current Warnings/Statements/Advisories: None currently.

[Complete information about the St. Marys River at Traders Hill](#) available from [NWS Jacksonville, FL](#)

NOTE: Forecasts are not available for the St. Marys River at Traders Hill. Only observed stages are available for this point.

Flood Impacts

If you notice any errors in the below information, please contact our [Webmaster](#)

7

Traders Hill Campground Boat Ramp and Parking Lot begins to flood.

Flood Categories (in feet)

Major Flood Stage: 16

Moderate Flood Stage: 12

Flood Stage: 7

Action Stage: 5

Low Stage (in feet): 0.4

Historic Crests

(1) 19.30 ft on 09/15/2017

(2) 8.42 ft on 08/12/2017

(P): Preliminary values subject to further review.

Recent Crests

(1) 19.30 ft on 09/15/2017

(2) 8.42 ft on 08/12/2017

(P): Preliminary values subject to further review.

Low Water Records

Currently none available.

Charlton County (Including the Cities of Folkston and Homeland):

According to National Climatic Data Center information (see Appendix F), there are 19 reports of Flood (including region/area wide & heavy rain events) occurring in Charlton County (including the City of Folkston and the City of Homeland) between 01/01/1950 and 12/31/2017. Of these, there were at least five (5) cases that were considered major events. These events cost between \$10,000.00 and \$3,500,000.00. The total cost reported has been \$3,700,000.00. Total injuries were reported as zero (0). The Historic Recurrence Interval is 3.58 years. This is a 27.94% Historic Frequency Chance per year. The past ten (10) year Record Frequency Per Year is 0.6, the past twenty (20) year is 0.85 and the past fifty (50) year is 0.38 (see GEMA PDM Hazard Frequencies Table contained in Appendix D Section I).

Since the previous Hazard Mitigation Plan was completed, two Heavy Rain events have occurred. On Aug. 4, 2015, a weak surface low was over southeast Georgia with a trough extending across the local area. This trough combined with high instability triggered a few strong storms with heavy rainfall. A RAWS site measured about 3.33 inches in about 2 hours in Charlton County near the Traders Hill community. On June 12, 2017, very heavy waves of slow moving showers and thunderstorms produced rainfall amounts of 3-5 inches. The RAWs station in the NW Okefenokee Swamp measured a daily rainfall total of 2.83 inches. Both events caused some localized flooding and some temporarily impassable roads.

FIRMs in effect for Charlton County and the Cities of Folkston and Homeland include:

NOTE: Each map cited below is preceded by 13049C followed by the number referenced below.

One set for Charlton County, including the Cities of Folkston and Homeland contains maps IND0B, 025C, 050C, 075C, 100C, 125D, 150C, 175C, 200C, 225D, 250D, 275C, 300C, 325C, 335D, 345D, 350D, 355D, 360D, 365D, 400C, 410D, 420D, 425D, 430C, 440C, 450C, 460D, 470D, 475D, 480C, 485C, 490C, 495C, 510D, 520D, 525D, 535C, 555C, and 560D

FIRMS ending in “C” are effective 9/25/2009. FIRMS ending in “D” are effective 7/7/2014.

The GMIS Critical Facilities Inventory Database Reports and Maps (see Appendix A Section II) show that certain areas of Charlton County and the Cities of Folkston and Homeland fall within the Flood Hazard Area. Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

See also the HAZUS report included in Appendix C.

Since the previous plan was completed, no changes have occurred that would affect the community’s overall vulnerability to this hazard.

C./D. Inventory of Assets and Potential Loss Exposed to Flood/SLOSH:

The threat of a Flood/SLOSH is a constant in Charlton County, the City of Folkston and the City of Homeland due to the unpredictability and random occurrence of the hazard. When and where they will occur and the potential damage that they will cause is not easy to figure due to the hazard and the strength levels of the causes that may trigger the occurrence.

In Worksheet 3A: Inventory of Assets appearing in Appendix A Section II, we estimate that 3.88% of Charlton County (including the Cities of Folkston and Homeland) is vulnerable to Floods.

In order to determine the number of non-critical Facilities structures potentially effected by Flood/SLOSH, it was assumed that the Critical Facilities themselves were representative of the building patterns of the community. Therefore, a figure of approximately 3.88% was used to extrapolate numbers and values of various classes of structures.

Jurisdiction	# of Critical Facilities in Flood Hazard Zone	Hazard Score	Replacement Value	Content Value
Charlton County	1	4	\$217,500	\$0.00
City of Folkston	3	3	\$90,000	\$300,000
City of Homeland	0	0	\$0.00	\$0.00
TOTAL	4	XXXXXXX	\$307,500	\$300,000

Table 2.2: Summary of “Critical Facilities Report FLOOD from GMIS”

Charlton County (including the Cities of Folkston and Homeland):

Approximately 3.88% of the Residential property (172 of 4,436) in Charlton County (which includes the Residential properties in the individual cities) may be effected which have a total value of \$14,104,000. Also, approximately 3.88% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (69 of 1,776) in Charlton County (which includes those property types in the individual cities) may be effected which have a total value of \$12,992,480.

According to the inventory database reports and maps, 4 of the Critical Facilities and Infrastructure for Charlton County (including the Cities of Folkston and Homeland) are located in a Flood Hazard Area (1 in a hazard Score of 4 and 3 in a Hazard Score of 3) and have a total of 1,025 square feet (see GMIS Critical Facilities Inventory Database Reports contained Appendix A Section II). The total value of these 4 Critical Facilities is \$307,500.00, as well as a content value of \$300,000.00

Unincorporated Charlton County:

Approximately 3.88% of the Residential property (114 of 2,941) in Unincorporated Charlton County may be effected which have a total value of \$9,348,000.00. Also, approximately 3.88% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (40 of 996) in Unincorporated Charlton County may be effected which have a total value of \$8,504,260.

1 of the Critical Facilities and Infrastructure for Charlton County (under the jurisdiction of Charlton County) are located in a Flood Hazard Area (Hazard Score of 4) and have a total of 725 square feet (see GMIS Critical Facilities Inventory Database Reports contained in Appendix A Section II). The total value of this 1 Critical Facility is \$217,500.00, as well as a content value of \$0.00

City of Folkston:

Approximately 3.88% of the Residential property (45 of 1,160) in the City of Folkston may be effected which have a total value of \$3,690,000.00. Also, approximately 3.88% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (24 of 656) in the City of Folkston may be effected which have a total value of \$4,368,377.

3 of the Critical Facilities and Infrastructure for the City of Folkston are located in a Flood Hazard Area (Hazard Score of 3) and have a total of 300 square feet (see GMIS Critical Facilities Inventory Database Reports contained in Appendix A Section II). The total value of these 3 Critical Facilities is \$90,000.00, as well as a content value of \$300,000.00

City of Homeland:

Approximately 3.88% of the Residential property (13 of 335) in the City of Homeland may be effected which have a total value of \$1,066,000. Also, approximately 3.88% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (5 of 124) in the City of Homeland may be effected which have a total value of \$119,843.

0 of the Critical Facilities and Infrastructure for the City of Homeland are located in a Flood Hazard Area and have a total of 0 square feet (see GMIS Critical Facilities Inventory Database Reports contained in Appendix A Section II). The total value of these 0 Critical Facilities is \$0.00, as well as a content value of \$0.00

While we have these values listed, we recognize that a Flood/SLOSH event would not normally fully impact the value of these properties, or be big enough to wipe out all assets.

The GMIS reports that there are four 4 NFIP Repetitive Loss Properties, all of which are residential structures.

Jurisdiction	# of Properties	# of Losses	Amount Paid
Charlton County	4	12	\$304,922.97
City of Folkston	0	0	\$0.00
City of Homeland	0	0	\$0.00
TOTAL	4	12	\$304,922.97

Table 2.3: Summary of “Repetitive Loss Properties”

E. Land Use and Development Trends Related to Flood/SLOSH:

Slight population growth has occurred in the years since the 2010 U.S. Census. The 2016 population of Charlton County (the most recent figure currently available) is estimated at 12,497, a 2.68% increase since 2010. The largest population change (officially) has occurred in that large numbers of the 2010 population were shifted from Charlton County to the City of Folkston, in part due to the geographic location of the prison population. The number of occupied houses in Charlton County (including Folkston and Homeland) is also estimated at 3,474 in the 2012-2016 U.S. Census American Community Survey.

Much population growth in recent years in Charlton County has occurred in areas nearer to the Jacksonville Metro Area, which coincides with areas closer to the St. Marys River, which forms the boundary between Charlton County and Florida. This means that more development has been occurring closer to, or even in, flood prone areas. The County and Cities are endeavoring to address this issue through building codes, code enforcement, and comprehensive land use planning that encourages development further away from rivers and other water bodies. The St. Marys River corridor is part of the “Mixed Use Transition” character area in Charlton County’s comprehensive plan, in which agricultural and forestry land uses are recommended and intensive residential development is discouraged.

The City of Folkston has adopted the 2017 NEC, which is in effect now. Charlton County, the City of Folkston and the City of Homeland have adopted building codes including the 2012 International Building Code and the 2012 International Property Maintenance Code. The 2018 NEC and updates to the prior codes including International Electrical & Plumbing & Mechanical Codes. will be done in January, 2018. The County now has Code Enforcement Officer who also serves the cities on request.

Wetland areas are protected by ordinance. Soil and Sedimentation Control Ordinances are in effect.

Charlton County has enacted a subdivision ordinance. Throughout Charlton County, if not zoned already, all areas are in the process of being zoned agricultural. There is at least a 4-5 mile area already zoned around the City of Folkston and the City of Homeland with the majority

being either agricultural or some form of residential. There is more residential zoning in the City of Folkston and the City of Homeland than anything else. Most highways are zoned for setbacks.

Current trends are for agricultural areas to be converted to residential areas.

Charlton County, the City of Folkston and the City of Homeland are all members of the National Flood Insurance Program. All of the local governments have some part of their jurisdictions located within a floodplain. Floodplain maps for each local government are located in Appendix A Section II.

Charlton County and the Cities of Folkston and Homeland do not participate in the Community Rating System (CRS) program. As of August 25, 2017, they were not eligible according to FEMA (<http://www.fema.gov/library/viewRecord.do?id=3629>) and other information at <http://www.fema.gov> .

Several new FIRM maps have been completed for Charlton County, and the Cities of Folkston and Homeland since the previous PDM.

Since the previous plan was completed CDBG grants for street paving and drainage to address flooding issue have been applied for and installed in certain areas.

F. Multi-Jurisdictional Flood/SLOSH Differences:

According to GIS data from FEMA, 48.0% of Charlton County as a whole (including the Cities) is within a flood hazard area: 3.4% within Zone “AE” and 44.6% within zone “A”. Regarding the two Cities, 9.6% of the City of Folkston is within a flood hazard area (all Zone “A”), and 12.1% of the City of Homeland is within a flood hazard area (also all Zone “A”).

Charlton County, the City of Folkston and the City of Homeland are all members of the National Flood Insurance Program. All of the local governments have some part of their jurisdictions located within a floodplain.

Charlton County and the Cities of Folkston and Homeland do not participate in the Community Rating System (CRS) program. As of August 25, 2017, they were not eligible according to FEMA (<http://www.fema.gov/library/viewRecord.do?id=3629>) and other information at <http://www.fema.gov> .

G. General Overall HRV Summary of Flood/SLOSH Events And their Impact On the Community:

Floods/SLOSH have the potential to cause damage in any flood-prone area, at any time throughout Charlton County, the City of Folkston and the City of Homeland. Of course, the cost of the damage and potential loss of life may be higher if the Flood/SLOSH were to occur in populated areas and municipalities, as opposed to if it were to occur in more agricultural based

sections of Charlton County. Damage caused by it can vary depending on amount of flooding and severity, among other factors.

The Charlton County HMPUC recognizes Flood/SLOSH as one of the most likely natural hazard to occur and cause damage. They developed a comprehensive range of Mitigation Goals, Objectives and Action Steps to lessen Flood/SLOSH impact on Charlton County and the City of Folkston and the City of Homeland. These are contained in Chapter 4 Section II.

Section III **Wildfire**

A. Identification of Hazard:

The threat of Wildfire has been chosen by the Charlton County HMPUC as one of the most likely hazard to occur & cause damage in Charlton County, the City of Folkston and the City of Homeland based on past experience, the FEMA described methodology and other factors.

Historic data has been examined from various sources (see Appendix A Section III) and from the National Climatic Data Center (see Appendix F), as well as from local history and personal accounts, in order to determine frequency of events. The Georgia Forestry Commission was also contacted for information regarding the County's hazard history. The data included in this section is the data from the community's most current Community Wildfire Protection Plan.

Nationwide, approximately 80 percent of wildfires are caused by people. Smoking in forested areas and improperly extinguishing campfires are two common causes of wildfire. Lightning is also a major igniter of fires. Between 1960 and 2015, according to the National Interagency Fire Center (www.nifc.gov), an average of 4.5 million acres each year were burned in wildfires in the United States. Over 10 million acres burned in 2015 alone in the U.S. Although wildfires occur naturally and serve important functions for forest ecosystems, they also present a danger to human life and property. In Charlton County, where a significant portion of the land is used for forestry, wildfires can have an economic impact. At the same time, periodic controlled burns may be necessary to maintain healthy forest ecosystems.

Low humidity, lack of recent precipitation (or drought conditions), wind speed and temperature are a combination of weather conditions that favor the kindling and spread of forest or brush fires. Dead fuel moisture, in combination with the above, also provides for the kindling and spread of forest or brush fires. Much of Charlton County and some areas in and near the City of Folkston and the City of Homeland are wooded with commercial and free growing pine trees and other trees. These trees can and do catch fire frequently in both small and large fire events.

In Charlton County (including the Cities of Folkston and Homeland), according to the Georgia Forestry Commission's "Community Wildfire Protection Plan" there has been an average of 74 reported Wildland fires per year over the past 50 years burning an average of 1,002 acres per year. This data is not broken down by Jurisdiction

Wildfires often begin unnoticed. They spread quickly and can change direction rapidly, igniting brush, trees and homes. Or, fire may smolder for weeks at a time in the underbrush and then ignite some distance away, resisting efforts to eradicate it, and spreading quickly throughout the area. Surface Fires are the most common type of Wildfires, moving slowly and burning along the forest floor, killing and damaging vegetation. Ground Fires, another type, usually start by lightning and burn on or below the forest floor through the root systems. These tend to be of longer duration because of the organic soils and some have burned for over one year. The final type, Crown Fires, spread by wind moving quickly along the tops of trees.

B. Profile of Wildfire Events, Frequency of Occurrences, Probability:

The historic record for minor to major Wildfire is spotty at best with many unreported or underreported events. All of Charlton County, the City of Folkston and the City of Homeland are vulnerable to Wildfires due to their unpredictability and random occurrences. The effects can range from minimal damage to severe and widespread damage. Wildfires can occur at any time of the year.

Members of the Charlton County HMPUC have witnessed many unreported and under reported cases of minor to major Wildfire events occurring in Charlton County, the City of Folkston and the City of Homeland, some lasting for days, weeks or months at a time.

In 2007, Charlton County was part of the Georgia Bay Complex wildfire, which burned for more than two months and burned approximately 441,705 acres, and again in 2011 were part of the Honey Prairie Fire which lasted a full year and consumed 309,200 acres.

In 2017, Charlton County was part of the West Mims wildfire which started April 6, 2017 and burned for several months resulting in a loss of approximately 152,515 acres before being largely put out by heavy rains.

These fires occurred in extreme drought years with the majority of burned acreage occurring in the Okefenokee Wildlife Refuge.

According to the Georgia Forestry Commission, the leading causes of these fires was lightning (23%) and debris burning (22%) causing 12% and 32%, respectively, of the acres burned. Incendiary, or Arson, caused 17% of the fires accounting for 45% of acres lost.

Charlton County (Including the Cities of Folkston and Homeland):

According to National Climatic Data Center information (see Appendix F), there are 4 reports of Wildfires in the community between 01/01/1950 and 12/31/2017. However, more complete data were obtained from the Georgia Forestry Commission. In Charlton County (including the Cities of Folkston and Homeland), with the best available information, we have recorded 3,623 events in fifty (50) years (which includes the aforementioned 4 events listed in the NCDC database) with a Historic Recurrence Interval of 0.01 years. This is a 7,246.00% Historic Frequency Chance per year. The past ten (10) year Record Frequency Per Year is 46.5, the past twenty (20) year is 55.3, and the past fifty (50) year is 72.46 (see GEMA PDM Hazard Frequencies Table

contained in Appendix D Section I). Since the previous Hazard Mitigation Plan was completed, there have been 205 wildfires reported, with a total of 30,384 acres burned. This number includes a record-setting wildfire event in 2017 in which 29,180 acres were burned.

The GMIS Critical Facilities Inventory Database Reports and Maps (see Appendix A Section III), based on the predicted model of the GEMA database, addresses Wildfire. This model has determined that certain areas of Charlton County, the City of Folkston and the City of Homeland fall within the Wildfire Hazard Area. Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

As you can see above, there are several sources of information that have different determinations of wildfire risks although all place certain areas of Charlton County and the Cities of Folkston and Homeland within Wildfire hazard areas.

Since the previous plan was completed, no changes have occurred that would affect the community's overall vulnerability to the hazard.

C./D. Inventory of Assets Exposed and Potential Loss to Wildfire:

The threat of Wildfire is a constant in Charlton County, the City of Folkston and the City of Homeland due to the unpredictability and random occurrence of the hazard. When and where it will occur and the potential damage that it will cause is not easy to figure due to the hazard and the intensity levels that may occur.

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

There are three (3) major categories of wildland-urban interface: Depending on the set of conditions present, any of these areas may be at risk from wildfire. A wildfire risk assessment can determine the level of risk. These are:

"Boundary" Wildland-Urban Interface is characterized by areas of development where homes, especially new subdivision, press against the public and private wildlands, such as private or commercial forest land or public forests or parks. This is the classic type of wildland-urban interface, with a clearly defined boundary between the suburban fringe and the rural countryside.

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

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

Charlton County (including the Cities of Folkston and Homeland):

Based on the average of the information contained in Worksheet 3A, it is estimated that approximately 77% of the Residential property (3,401 of 4,436) in Charlton County (which includes the Residential properties in the individual cities) may be effected which have a total value of \$278,882,000. Also, approximately 70% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,243 of 1,776) in Charlton County (which includes those property types in the individual cities) may be effected which have a total value of \$216,459,763.

In addition, 17 of the Critical Facilities and Infrastructure for Charlton County (including the Cities of Folkston and Homeland) are located in a Wildfire hazard area and have a hazard score of 2 with a total of 314,934 square feet. In addition, 46 of the Critical Facilities and Infrastructure have a hazard score of 1 with a total of 378,249 square feet. See GMIS Critical Facilities Inventory Database Reports contained in Appendix A Section III). Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

The total value of these 17 Critical Facilities located in Hazard Score 2 is \$120,561,200, as well as a content value of \$641,310. The total value of these 46 Critical Facilities located in Hazard Score 1 is \$178,212,114, as well as a content value of \$3,093,900. The total value of these 63 Critical Facilities is \$298,773,314 as well as a content value of \$3,735,210.

The total property type numbers in the individual cities & unincorporated Charlton County (based on the Critical Facilities & Infrastructures in Wildfire Hazard areas) used to extrapolate numbers of structures that may be at risk.

Unincorporated Charlton County:

Based on the average of the information contained in Worksheet 3A, it is estimated that approximately 92% of the Residential property (2,706 of 2,941) in unincorporated Charlton County may be effected which have a total value of \$221,892,000. Also, approximately 92% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (916 of 996) in unincorporated Charlton County may be effected which have a total value of \$168,600,090.

In addition, 2 of the Critical Facilities and Infrastructure for Charlton County (under the jurisdiction of Charlton County) is located in a Wildfire hazard area and has a hazard score of 2 with a total of 301 square feet. In addition, 34 of the Critical Facilities and Infrastructure have a

hazard score of 1 with a total of 134,239 square feet. See GMIS Critical Facilities Inventory Database Reports contained in Appendix A Section III). Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

The total value of the 2 Critical Facility located in Hazard Score 2 is \$8,250,000, as well as a content value of \$53,350. The total value of these 34 Critical Facilities located in Hazard Score 1 is \$48,537,700, as well as a content value of \$1,314,000. The total value of these 36 Critical Facilities is \$56,787,700, as well as a content value of \$1,367,350

Since 36 out of 39 Critical Facilities & Infrastructure (under the jurisdiction of Charlton County) are located in a Wildfire Hazard area, the figure of 92% was used to extrapolate numbers of structures that may be at risk.

City of Folkston:

Based on the average of the information contained in Worksheet 3A, it is estimated that approximately 31% of the Residential property (360 of 1160) in City of Folkston may be effected which have a total value of \$29,520,000. Also, approximately 31% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (203 of 656) in City of Folkston may be effected which have a total value of \$41,438,870

In addition, 5 of the Critical Facilities and Infrastructure for the City of Folkston are located in a Wildfire hazard area and have a hazard score of 2 with a total of 296,070 square feet. In addition, 12 of the Critical Facilities and Infrastructure have a hazard score of 1 with a total of 244,010 square feet. See GMIS Critical Facilities Inventory Database Reports contained in Appendix A Section III). Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

The total value of these 5 Critical Facilities located in Hazard Score 2 is \$91,871,000, as well as a content value of \$300,000. The total value of these 12 Critical Facilities located in Hazard Score 1 is \$129,674,414, as well as a content value of \$1,779,900. The total value of these 17 Critical Facilities is \$221,545,414, as well as a content value of \$2,079,900.

Since 17 out of 54 Critical Facilities & Infrastructure (in the City of Folkston) are located in a Wildfire Hazard area, the figure of 31% was used to extrapolate numbers of structures that may be at risk

City of Homeland:

Based on the average of the information contained in Worksheet 3A, it is estimated that approximately 100% of the Residential property (335 of 335) in City of Homeland may be effected which have a total value of \$27,470,000. Also, approximately 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (124 of 124) in City of Homeland may be effected which have a total value of \$6,420,803.

In addition, all 10 of the Critical Facilities and Infrastructure for the City of Homeland are located in a Wildfire hazard area and have a Hazard Score of 2 with a total of 18,563 square feet. See GMIS Critical Facilities Inventory Database Reports contained in Appendix A Section III). Complete inventory information is contained at <https://www.itos.uga.edu/gema>. The total value of these 10 Critical Facilities located in Hazard Score 2 is \$20,440,200, as well as a content value of \$287,960.

Since 10 out of 10 Critical Facilities & Infrastructure (in the City of Homeland) are located in a Wildfire Hazard area, the figure of 100% was used to extrapolate numbers of structures that may be at risk.

Critical Facilities by Wildfire Hazard Zone

Jurisdiction:	Wildfire Hazard Score 1	Wildfire Hazard Score 2	Totals:
Unincorporated Charlton County – Number of Facilities:	34	2	36
Total Value:	\$48,537,700 +\$1,314,000 contents	\$8,250,000 +\$53,350 contents	\$56,787,700 +\$1,367,350 contents
City of Folkston – Number of Facilities:	12	5	17
Total Value:	\$129,674,414 +\$1,779,900 contents	\$91,871,000 + \$300,000 contents	\$221,545,414 + \$2,079,900 contents
City of Homeland-Number of Facilities:	0	10	10
Total Value:	\$0.00	\$20,440,200 +\$287,960 contents	\$20,440,200 + \$287,960 contents
Total – Number of Facilities:	46	17	63
Total Value:	\$178,212,114 + \$3,093,900 contents	\$120,561,200 + \$641,310 contents	\$298,773,314 + \$3,735,210 contents

Table 2.4: Critical Facilities by Wildfire Hazard Zone (data source: GMIS, Charlton County, City of Folkston, City of Homeland)

While we have these values listed, we recognise that Wildfires would not normally fully impact the value of these properties, or be big enough to wipe out all assets.

E. Land Use and Development Trends Related to Wildfire:

Slight population growth has occurred in the years since the 2010 U.S. Census. The 2016 population of Charlton County (the most recent figure currently available) is estimated at 12,497, a 2.68% increase since 2010. The largest population change (officially) has occurred in that large numbers of the 2010 population were shifted from Charlton County to the City of Folkston, in part due to the geographic location of the prison population. The number of occupied houses in Charlton County (including Folkston and Homeland) is also estimated at 3,474 in the 2012-2016 U.S. Census American Community Survey.

The City of Folkston has adopted the 2017 NEC, which is in effect now. Charlton County, the City of Folkston and the City of Homeland have adopted building codes including the 2012 International Building Code and the 2012 International Property Maintenance Code. The 2018 NEC and updates to the prior codes including International Electrical & Plumbing & Mechanical Codes. will be done in January, 2018. The County now has Code Enforcement Officer who also serves the cities on request.

Charlton County has enacted a subdivision ordinance. Throughout Charlton County, if not zoned already, all areas are in the process of being zoned agricultural. There is at least a 4-5 mile area already zoned around the City of Folkston and the City of Homeland with the majority being either agricultural or some form of residential. There is more residential zoning in the City of Folkston and the City of Homeland than anything else. Most highways are zoned for setbacks.

Current trends are for agricultural areas to be converted to residential areas.

Georgia law requires that a permit be issued for most types of outdoor burning. To request a permit all that is needed to be done is to contact the local Georgia Forestry Commission or visit www.gatrees.org to apply online. If conditions are favorable for burning, a permit will be granted. According to Georgia law, burning without a permit is a misdemeanor with fines up to \$1,000.00.

Since the previous plan was completed, Charlton County has applied for and received several FEMA Assistance to Firefighters Grants and a Staffing for Adequate Fire and Emergency Response Grant that are being used to lower the risk of Wildfire by providing improved firefighter equipment, training, protective gear, new fire engines, and increased volunteer recruitment and retention.

Development continues to take place in Charlton County and in the City of Folkston and the City of Homeland with a large amount of new construction taking place in areas bordered by pine tree production and other naturally growing trees. More and more people are making their homes in woodland settings in or near forest or in rural areas. This residential development in the Wildland-Urban Interface (WUI) has a twofold problematic effect: More people live in or near to forest land that is naturally subject to wildfires that are a natural part of the forest ecosystem; and because fires are suppressed, the fuel load (dead branches, leaves, etc.) increases without being

cleaned out by wildfires as would happen in a normally functioning forest ecosystem. Also, human activity (for example, bonfires, trash burning) can contribute to the risk of wildfires, and this risk increases as the population increases. These homeowners enjoy the beauty of the environment, but face the real danger of wildfires. This is not a new phenomenon, but has always been the case. However, Charlton County continues to experience growth associated with the Jacksonville, Florida metro area. The trend is for this to continue.

F. Multi-Jurisdictional Wildfire Differences:

Virtually all of Charlton County, the City of Folkston and the City of Homeland may be effected by Wildfire. Much of Charlton County is occupied by the Okefenokee Swamp which is largely unoccupied.

In Worksheet 3A: Inventory of Assets appearing in Appendix A Section III, we estimate that varying amounts of Charlton County and the Cities of Folkston and Homeland are vulnerable to Wildfires. The City of Homeland is at the greatest risk for wildfires (100% of residential property). Risk is lowest overall for the City of Folkston (31% of residential property), while for the unincorporated County, not including the Cities, 92% of residential property is within areas at risk for wildfire.

The GMIS Critical Facilities Inventory Database Reports and Maps (see Appendix A Section III), based on the predicted model of the GEMA database, addresses Wildfire. This model has determined that certain areas of Charlton County and the Cities of Folkston and Homeland fall within the Wildfire Hazard Area. Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

For Charlton County, it appears that the vast majority of the county is located in a area with a Hazard Score of one (1) meaning Very Low. Approximately half of the City of Folkston (approximately the north and west sections) has a Hazard Score of zero (0) and is listed as Agriculture in the Risk Class. The other approximate half of the City of Folkston (approximately the east and south sections) has a Hazard Score of one (1) meaning Very Low. Approximately half of the City of Homeland (approximately the north and west sections) has a Hazard Score of zero (0) and is listed as Agriculture in the Risk Class. The other approximate half of the City of Homeland (approximately the east and south sections) has a Hazard Score of two (2) meaning Low. However, based on past events data, fire instances, duration of fires and fire damage we dispute these findings.

Various Wildfire maps and other information have been produced through the Georgia Forestry Commission and included in their Community Wildfire Protection Plan” for Charlton County (see Appendix C).

According to those maps, there are seven (7) areas in Charlton County that have at least 1 fire occurrence per 1,000 acres per year. Three (3) of these areas are within the City of Folkston and City of Homeland City Limits and within the community of St. George. These cover much of those areas. Other high areas of occurrences occur in some higher populated areas of the county (including surrounding the Cities of Folkston, Homeland and the community of St. George), as well as along the Florida border and along the transportation corridors of the County, particularly

in “The Bend” area. The majority of Charlton County appears in the middle range of fire occurrences.

The Charlton County Fire Department and the Georgia Forestry Commission in their “Community Wildfire Protection Plan” (see Appendix C) has determined through Hazard ratings that the following areas have a High, Very High or Extreme level of probability concerning Wildfire:

Coleraine (Extreme)
May Bluff (Extreme)
St. Marys Bluff (Extreme)
Traders Hill (Extreme)
Dixie Lake (Very High)
Folkston District (Very High)
Forest Lake (Very High)
Homeland (Very High)
Live Oak Estates (Very High)
Racepond District (Very High)
Sam Howard Road (Very High)
Uptonville (Very High)
Winokur District (Very High)
Black River (High)
Camp Pinckney (High)
GA Bend District (High)
Spring Lake (High)
Stokes Lake (High)
Yankee Forest (High)

In addition, staff of the Okefenokee Wildlife Refuge lists the Davis Community (located on Spanish Creek Road, Trail Ridge and Davis Road) and Kingfisher Landing Community (south of Race Pond), and the Martha Dowling Road area as being in critical danger during wildfire events in the wildlife refuge. They have prepared a Wildland Urban Interface Threat Zone Map for 3 miles around the Okefenokee Swamp and will eventually cover 10 miles around the refuge identifying specific properties that are in the WUI.

All of the five (5) Fire Department properties in Charlton County are staffed by volunteers. The county has zero (0) full time fire departments. It does now maintain a full-time Fire Chief and Assistant Fire Chief position. This and other factors combine to not only effect the overall safety of the residents, but also effect the reporting of the dangerous or hazardous conditions that we are attempting to report on, and plan Hazard Mitigation for, here. The City of Folkston and the City of Homeland do not have fire departments.

The following relates to the ISO Classes of Charlton County, the City of Folkston and the City of Homeland. Regarding ISO Documentation:

CHARLTON COUNTY
Station 1: Folkston Class 5/9

Station 2: St. George: Class 5/9
Station 3: Racepond: Class 5/9
Station 4 GA Bend: Class 5/9
Station 5: Winokur: Class 5/9

As you can see above, there are several sources of information (see Appendix A Section III and Appendix C) that have different determinations of wildfire risks although all place most areas of Charlton County and the Cities of Folkston and Homeland within Wildfire hazard areas.

G. General Overall HRV Summary of Wildfire Events And their Impact On The Community:

Wildfire has the potential to cause damage in any Wildfire prone area, at any time, throughout Charlton County, the City of Folkston and the City of Homeland. Of course, the cost of the damage and the potential loss of life may be higher if the Wildfires were to occur in the populated areas and municipalities, as opposed to if it were to occur in more agricultural based sections of Charlton County. The effects can range from minimal damage to severe and widespread damage. Wildfires can occur at any time of the year.

The Charlton County HMPUC recognized Wildfire as one of the most likely natural hazard to occur and cause damages. They developed a comprehensive range of Mitigation Goals, Objectives and Action Steps to lessen Wildfire impact on Charlton County, the City of Folkston and the City of Homeland, which are contained in Chapter 4 Section III.

Charlton County and the Cities of Folkston and Homeland have completed a comprehensive mapping of the community's environmentally sensitive areas. The County and Cities have completed their Community Wildfire Protection Plan, which contains goals and objectives to decrease the community's overall vulnerability to this hazard. Since the previous plan was approved, there are no new changes in development within the community that would increase or decrease the community's overall vulnerability to this hazard.

Section IV Tornado

A. Identification of Hazard:

The threat of a Tornado has been chosen by the Charlton County HMPUC as one of the most likely hazard to occur & cause damage in Charlton County, the City of Folkston and the City of Homeland based on past experience, the FEMA described methodology and other factors. Historic data has been examined from various sources (see Appendix A Section IV) and from the National Climatic Data Center (see Appendix F), as well as from local history and personal accounts in order to determine frequency of events.

A Tornado is a violently rotating column of air extending to the ground. Tornadoes are one of nature's most destructive forces. Tornadoes can generate wind speeds of up to 318 miles per hour. A Tornado's damage path can be more than a mile wide and fifty (50) miles in length.

ENHANCED FUJITA WIND DAMAGE SCALE

<i>Number</i>	<i>Wind Speed</i>	<i>Damage</i>
EF-0	65 To 85 mph	Light damage. Some damage chimneys; branches broken off trees; shallow-rooted trees pushed over; sign boards damaged.
EF-1	86 mph to 110 mph	Moderate Damage., The lower limit is the beginning of hurricane wind speed; peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads; attached garages may be destroyed.
EF-2	111 mph to 135 mph	Significant Damage. Roofs torn off frame houses; mobile homes demolished; boxcars overturned; large trees snapped or uprooted; highrise windows broken and blown in; light-object missiles generated.
EF-3	136 mph to 165mph	Severe Damage. Roofs and walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off the ground and thrown.
EF-4	166 mph to 200 mph	Devastating, damage. Well-constructed houses leveled; structures with weak foundations blown away some distance; cars thrown and large missiles generated.
EF-5	Above 200 mph	Incredible, damage. Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles fly through the air in excess of 100 m (109 yards);

		trees debarked; steel reinforced concrete structures badly damaged.
--	--	---

From: Wikipedia

Tornadoes have the potential to be destructive and may occur at any time. Tornadoes may develop quickly in Charlton County, the City of Folkston and the City of Homeland. Tornadoes can occur at any place, at any time, due to inclement weather conditions, as a result of a passing front, or as part of Thunderstorm or Hurricane/Tropical Storm events. Tornado season in Georgia is typically from March through August. Tornadoes are most likely to occur between 3:00 p.m. and 9:00 p.m.

Tornadoes may cause damage to Charlton County, the City of Folkston and the City of Homeland at any time, but Hurricane/Tropical Cyclone season (June 1 to November 30th) is another time that they are particularly active. Not until the last minute, if then, is it possible to determine when and where the path of a Tornado is.

B. Profile of Tornado Events, Frequency of Occurrences, Probability:

The historic record for Tornadoes is spotty at best with many unreported or underreported Tornado events. All of Charlton County, the City of Folkston and the City of Homeland are vulnerable to Tornadoes due to their unpredictability and random occurrences. The effects of this hazard are usually substantial and occur with little to no warning.

Members of the Charlton County HMPUC have witnessed many unreported and underreported cases of Tornado events occurring within Charlton County, the City of Folkston and the City of Homeland.

Charlton County and its Cities have experienced Tornado Watches and Warnings but rarely a Tornado. However, in 2010 an EF0 tornado touchdown occurred in the unincorporated community of Saint George with winds of 80 mph. Minor damage occurred to a post office and several mobile homes. There was widespread tree damage. An old abandoned brick building was severely damaged. A number of buildings, including the laundromat, had portions of their roofs damaged. One of the railroad crossing arms at the town's main intersection was completely blown off.

Charlton County (Including the Cities of Folkston and Homeland):

According to National Climatic Data Center information (see Appendix F), there are 11 reports of Tornadoes (including funnel clouds) occurring in Charlton County (including the Cities of Folkston and Homeland) between 01/01/1950 and 12/31/2017. Of these, there were at least five (5) cases that were considered major events and cost between \$1,000.00 and \$100,000.00 each. The total cost reported has been \$ 168,000.00.

Of those 11 reports listed above, two were Funnel Clouds, five were F-0 Tornadoes, two were F-1 Tornadoes, one was an EF-0 and one was an EF-1. For further information, see the tornado maps in Appendix A.

In Charlton County (including the Cities of Folkston and Homeland), with the best available information, we have recorded 11 events in 68 years with a Historic Recurrence Interval of 6.18 years. This is a 16.18% Historic Frequency Chance per year. The past ten (10) year Record Frequency Per Year is 0.3, the past twenty (20) year is 0.35 and the past fifty (50) year is 0.22 (See GEMA PDM Hazard Frequencies Table contained in Appendix D Section I). Since the last Hazard Mitigation Plan was approved, there has only been one event; this event was a funnel cloud, near the community of Traders Hill, in unincorporated Charlton County, on April 23, 2017. A spotter observed this funnel cloud along State Road 121. No damage and no injuries were recorded.

The GMIS Critical Facilities Inventory Database Reports and Maps (see Appendix A Section IV), based on the predicted model of the GEMA database, does not address the hazard of Tornadoes, however a map, etc. has been printed out showing no data (see Appendix A Section IV). Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

See also the HAZUS report included in Appendix C.

Since the previous plan was completed, no changes have occurred that would affect the community's overall vulnerability to this hazard.

C./D. Inventory of Assets Exposed and Potential Loss to Tornadoes:

The threat of Tornadoes is a constant in Charlton County, the City of Folkston and the City of Homeland due to their unpredictability and random occurrence of the hazard. When and where they will occur, and the potential damage that they may cause, is not easy to determine due to the unpredictability of the hazard itself and the intensity levels of Tornadoes that may occur.

In GEMA Worksheet 3A: Inventory of Assets appearing in Appendix A Section IV, we estimate that all of Charlton County and the Cities of Folkston and Homeland are vulnerable to Tornadoes.

Charlton County (including the Cities of Folkston and Homeland):

Unless otherwise specifically noted, it has been determined that approximately 100% of the Residential property (4,436 of 4,436) in Charlton County (which includes the Residential properties in the individual cities) may be effected which have a total value of \$363,752,000.00. Also, 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,776 of 1,776) in Charlton County (which includes those property types in the individual cities) may be effected which have a total value of \$321,839,740.

In addition, all 103 of the Critical Facilities and Infrastructure for Charlton County (including the Cities of Folkston and Homeland) are located in areas that may be affected by tornadoes. These facilities have a total area of 1,083,382 square feet with a total replacement value of \$470,952,414.00 and a total content value of \$8,600,310.00 (see GMIS Critical Facilities

Inventory Database Reports). Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

While we have these values listed, we recognize that Tornadoes would not normally fully impact the value of these properties, or be big enough to wipe out all assets.

E. Land Use and Development Trends Related to Tornadoes

Slight population growth has occurred in the years since the 2010 U.S. Census. The 2016 population of Charlton County (the most recent figure currently available) is estimated at 12,497, a 2.68% increase since 2010. The largest population change (officially) has occurred in that large numbers of the 2010 population were shifted from Charlton County to the City of Folkston, in part due to the geographic location of the prison population. The number of occupied houses in Charlton County (including Folkston and Homeland) is also estimated at 3,474 in the 2012-2016 U.S. Census American Community Survey.

The City of Folkston has adopted the 2017 NEC, which is in effect now. Charlton County, the City of Folkston and the City of Homeland have adopted building codes including the 2012 International Building Code and the 2012 International Property Maintenance Code. The 2018 NEC and updates to the prior codes including International Electrical & Plumbing & Mechanical Codes. will be done in January, 2018. The County now has Code Enforcement Officer who also serves the cities on request.

Charlton County has enacted a subdivision ordinance. Throughout Charlton County, if not zoned already, all areas are in the process of being zoned agricultural. There is at least a 4-5 mile area already zoned around the City of Folkston and the City of Homeland with the majority being either agricultural or some form of residential. There is more residential zoning in the City of Folkston and the City of Homeland than anything else. Most highways are zoned for setbacks.

Current trends are for agricultural areas to be converted to residential areas.

Since the previous plan was completed, there have been no changes in development within the community that would increase or decrease the community's overall vulnerability to the hazard.

F. Multi-Jurisdictional Tornado Differences:

All of Charlton County, the City of Folkston and the City of Homeland may be equally effected by Tornadoes. However, due to the higher population density within the Cities of Folkston and Homeland, a direct hit from a powerful tornado in that area would likely cause more damage and casualties than in the less populous areas of unincorporated Charlton County.

In Worksheet 3A: Inventory of Assets appearing in Appendix A Section IV, we estimate that 100% of Charlton County and the Cities of Folkston and Homeland are vulnerable to Tornadoes.

No differences between the jurisdictions have been identified at this time.

G. General Overall HRV Summary of Tornado Events And their Impact On The Community:

Tornadoes have the potential to cause damage at any place, at any time, throughout Charlton County, the City of Folkston and the City of Homeland. Of course, the cost of the damage and potential loss of life may be higher if the Tornado were to occur in populated areas and municipalities, as opposed to if they were to occur in more agricultural based sections of Charlton County. Most Tornadoes cause substantial damage.

The Charlton County HMPUC recognizes Tornadoes as one of the most likely natural hazard to occur and cause damage. They developed a comprehensive range of Mitigation Goals, Objectives and Action Steps to lessen Tornadoes impact on Charlton County, the City of Folkston and the City of Homeland. These are contained in Chapter 4 Section IV.

Section V **Thunderstorms & Wind**

A. Identification of Hazard:

The threat of Thunderstorms and Wind has been chosen by the Charlton County HMPUC as one of the most likely hazard to occur & cause damage in Charlton County, the City of Folkston and the City of Homeland based on past experience, the FEMA described methodology and other factors. Historic data has been examined from various source (see Appendix A Section V) and the National Climatic Data Center (see Appendix F), as well as from local history and personal accounts, in order to determine frequency of events.

Thunderstorms and Wind have the potential to be destructive and may occur at any time. Thunderstorms may develop quickly in Charlton County, the City of Folkston and the City of Homeland due to inclement weather conditions, a passing front, or Hurricane/Tropical Storm events. Wind events may occur on their own, due to inclement weather, as a result of a passing front, or as part of Thunderstorm or Hurricane/Tropical Storm events.

Thunderstorms are one of the most common weather products of our atmosphere. They can create a dazzling display of light and sound, but do not underestimate these storms. They can cause serious injury, substantial property damage, even death. Dangers associated with Thunderstorms include lightning, hail, heavy rain, flooding and strong winds. The straight line Wind in a Thunderstorm can exceed 100 mph and can be as damaging as a Tornado. Lightning associated with these events is perhaps one of the leading causes of Wildfire in Charlton County. Lightning can occur even if it is not raining.

NOAA Types of Thunderstorms:

THE SINGLE CELL STORM:

Single cell thunderstorms usually last between 20-30 minutes. A true single cell storm is actually quite rare because often the gust front of one cell triggers the growth of another.

Most single cell storms are not usually severe. However, it is possible for a single cell storm to produce a brief severe weather event. When this happens, it is called a pulse severe storm. Their updrafts and downdrafts are slightly stronger, and typically produce hail that barely reaches severe limits and/or brief microbursts (a strong downdraft of air that hits the ground and spreads out). Brief heavy rainfall and occasionally a weak tornado are possible. Though pulse severe storms tend to form in more unstable environments than a non-severe single cell storm, they are usually poorly organized and seem to occur at random times and locations, making them difficult to forecast.

THE MULTICELL CLUSTER STORM:

The multicell cluster is the most common type of thunderstorm. The multicell cluster consists of a group of cells, moving along as one unit, with each cell in a different phase of the thunderstorm life cycle. Mature cells are usually found at the center of the cluster with dissipating cells at the downwind edge of the cluster.

Multicell Cluster storms can produce moderate size hail, flash floods and weak tornadoes.

Each cell in a multicell cluster lasts only about 20 minutes; the multicell cluster itself may persist for several hours. This type of storm is usually more intense than a single cell storm, but is much weaker than a supercell storm.

THE MULTICELL LINE STORM (SQUALL LINE):

The multicell line storm, or squall line, consists of a long line of storms with a continuous well-developed gust front at the leading edge of the line. The line of storms can be solid, or there can be gaps and breaks in the line.

Squall lines can produce hail up to golf-ball size, heavy rainfall, and weak tornadoes, but they are best known as the producers of strong downdrafts. Occasionally, a strong downburst will accelerate a portion of the squall line ahead of the rest of the line. This produces what is called a bow echo. Bow echoes can develop with isolated cells as well as squall lines. Bow echoes are easily detected on radar but are difficult to observe visually.

THE SUPERCELL STORM:

The supercell is a highly organized thunderstorm. Supercells are rare, but pose a high threat to life and property. A supercell is similar to the single-cell storm because they both have one main updraft. The difference in the updraft of a supercell is that the updraft is extremely strong, reaching estimated speeds of 150-175 miles per hour. The main characteristic which sets the supercell apart from the other thunderstorm types is the presence of rotation. The rotating updraft of a supercell (called a mesocycle when visible on radar) helps the supercell to produce extreme

severe weather events, such as giant hail (more than 2 inches in diameter, strong downbursts of 80 miles an hour or more, and strong to violent tornadoes.

The surrounding environment is a big factor in the organization of a supercell. Winds are coming from different directions to cause the rotation. And, as precipitation is produced in the updraft, the strong upper-level winds blow the precipitation downwind. Hardly any precipitation falls back down through the updraft, so the storm can survive for long periods of time.

The leading edge of the precipitation from a supercell is usually light rain. Heavier rain falls closer to the updraft with torrential rain and/or large hail immediately north and east of the main updraft. The area near the main updraft (typically towards the rear of the storm) is the preferred area for severe weather formation.

While most Thunderstorm and Wind events are relatively minimal short term events in Charlton County, the City of Folkston and the City of Homeland, there is also the possibility of long term Thunderstorms and Wind events associated with Hurricane/Tropical Storm events or passing fronts. Thunderstorms and Wind events typically last thirty (30) minutes. Thunderstorms and Wind events can occur at any time, but are most likely to occur in the afternoon and evening hours in the spring and summer.

B. Profile of Thunderstorm and Wind Events, Frequency of Occurrences, Probability:

The historic record for Thunderstorms and Wind is spotty at best with many unreported or underreported events. All of Charlton County, the City of Folkston and the City of Homeland are vulnerable to Thunderstorms and Wind due to their unpredictability and random occurrences but the effects, if any, are usually minimal.

Members of the Charlton County HMPUC have witnessed many unreported and underreported cases of minimal to severe Thunderstorm & Wind events occurring within Charlton County, the City of Folkston and the City of Homeland.

Beaufort Wind Scale
Developed in 1805 by Sir Francis Beaufort of England

Force	Wind (Knots)	WMO Classification	Appearance of Wind Effects	
			On the Water	On Land
0	Less than 1	Calm	Sea surface smooth and mirror-like	Calm, smoke rises vertically
1	1-3	Light Air	Scaly ripples, no foam crests	Smoke drift indicates wind direction, still wind vanes
2	4-6	Light Breeze	Small wavelets, crests glassy, no breaking	Wind felt on face, leaves rustle, vanes begin to move
3	7-10	Gentle Breeze	Large wavelets, crests begin to break, scattered whitecaps	Leaves and small twigs constantly moving, light flags extended
4	11-16	Moderate Breeze	Small waves 1-4 ft. becoming longer, numerous whitecaps	Dust, leaves, and loose paper lifted, small tree branches move
5	17-21	Fresh Breeze	Moderate waves 4-8 ft taking longer form, many whitecaps, some spray	Small trees in leaf begin to sway

6	22-27	Strong Breeze	Larger waves 8-13 ft, whitecaps common, more spray	Larger tree branches moving, whistling in wires
7	28-33	Near Gale	Sea heaps up, waves 13-19 ft, white foam streaks off breakers	Whole trees moving, resistance felt walking against wind
8	34-40	Gale	Moderately high (18-25 ft) waves of greater length, edges of crests begin to break into spindrift, foam blown in streaks	Twigs breaking off trees, generally impedes progress
9	41-47	Strong Gale	High waves (23-32 ft), sea begins to roll, dense streaks of foam, spray may reduce visibility	Slight structural damage occurs, slate blows off roofs
10	48-55	Storm	Very high waves (29-41 ft) with overhanging crests, sea white with densely blown foam, heavy rolling, lowered visibility	Seldom experienced on land, trees broken or uprooted, "considerable structural damage"
11	56-63	Violent Storm	Exceptionally high (37-52 ft) waves, foam patches cover sea, visibility more reduced	
12	64+	Hurricane	Air filled with foam, waves over 45 ft, sea completely white with driving spray, visibility greatly reduced	

NOAA

Charlton County (Including the Cities of Folkston and Homeland):

According to National Climatic Data Center information (see Appendix F), there are 104 reports of Thunderstorms/Wind occurring in Charlton County (including the City of Folkston and the City of Homeland) between 01/01/1950 and 12/31/2017. The total cost reported has been \$276,500.00 (including \$50,000.00 in crop damage). Total injuries were reported as two (2). During a recent storm event on August 19, 2014, a tree was blown down at the intersection of Orange and Lincoln Streets in the town of homeland. More severe storm events have occurred in the past. On Aug. 13, 2008, a storm in the City of Homeland caused a tree to fall on a trailer home and injure two residents inside. The victims were taken to the local hospital. Another significant storm occurred in the unincorporated community of Moniac on Nov. 6, 2002. Many large trees fell across power lines, causing widespread outages, and damage was estimated at \$10,000.

In Charlton County (including the Cities of Folkston and Homeland), with the best available information, we have recorded 104 events in 68 years with a Historic Recurrence Interval of 0.65 years. This is a 152.94% Historic Frequency Chance per year. The past ten (10) year Record Frequency Per Year is 4.0, the past twenty (20) year is 4.45 and the past fifty (50) year is 2.08 (see GEMA PDM Hazard Frequencies Table contained in Appendix D Section I). Since the previous Hazard Mitigation Plan was completed, there have been 13 thunderstorm/wind events, all of which resulted in downed trees, debris on roads, and downed power lines.

The GMIS Critical Facilities Inventory Database Reports and Maps (see Appendix A Section V), based on the predicted model of the GEMA database, does not address the hazard of Thunderstorms, however maps, etc., have been printed out showing no data (see Appendix A section V). Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

The GMIS Critical Facilities Inventory Database Reports and Maps (see Appendix A Section V), based on the predicted model of the GEMA database, does address the hazard of Wind. This model has determined that all of Charlton County, the City of Folkston and the City of Homeland are all within the Wind hazard area. This model also attempts to determine certain wind speed areas for the hazard of Wind, and has identified Wind speeds of 90 mph to 99 mph & 100 mph to 109 mph exist. 100% of Charlton County and the City of Folkston and the City of Homeland are included in some Wind Hazard area. Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

These GEMA wind maps are basic wind speeds for a three (3) second wind gust speeds with a fifty (50) year return interval that are contained in the 2000 International Building Code and place Charlton County in two (2) separate areas (See Appendix A Section V). These areas are 90-99 mph and 100-109 mph for a three (3) second gust. The 90-99 mph Wind boundary area, as appearing on the Wind hazard map, is basically a small area on the extreme west side of Charlton County to the Charlton County line. The 100-109 mph Wind boundary area is basically the entire county including the City of Folkston and the City of Homeland, east to the Charlton County line.

Since the previous plan was completed, notable thunderstorm/wind events have occurred (see above). The listing of these events does not include Hurricane/Tropical Storm events, for which this plan has a separate section.

Since the previous plan was completed, no changes have occurred that would affect the community's overall vulnerability to the hazard.

C./D, Inventory of Assets Exposed and Potential Loss to Thunderstorms & Wind:

The threat of Thunderstorms & Wind is a constant in Charlton County, the City of Folkston and the City of Homeland due to the unpredictability and random occurrence of the hazard. When and where they will occur and the potential damage that they will cause is not easy to predict due to the hazard and the strength levels of the Thunderstorms and Wind that may occur.

In GEMA Worksheet 3A: Inventory of Assets (appearing in Appendix A Section V), we estimate that all of Charlton County and the City of Folkston and the City of Homeland are vulnerable to Thunderstorms and Wind.

Charlton County (including the Cities of Folkston and Homeland):

Unless otherwise specifically noted, it has been determined that approximately 100% of the Residential property (4,436 of 4,436) in Charlton County (which includes the Residential properties in the individual cities) may be effected which have a total value of \$363,752,000.00. Also, 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,776 of 1,776) in Charlton County (which includes those property types in the individual cities) may be effected which have a total value of \$321,839,740.

In addition, all 103 of the Critical Facilities and Infrastructure for Charlton County (including the Cities of Folkston and Homeland) are located in areas that may be effected by Hurricanes/ Tropical Storms and are located in the 100 mph-109 mph (Hazard Score of 3) area and have a total of 1,083,382 square feet with a total replacement value of \$470,952,414.00 and a total content value of \$8,600,310.00 (see GMIS Critical Facilities Inventory Database Reports). Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

While we have these values listed, we recognize that a Thunderstorms & Wind event would not normally fully impact the value of these properties, or be big enough to wipe out all assets.

E. Land Use and Development Trends Related to Thunderstorms & Wind:

Slight population growth has occurred in the years since the 2010 U.S. Census. The 2016 population of Charlton County (the most recent figure currently available) is estimated at 12,497, a 2.68% increase since 2010. The largest population change (officially) has occurred in that large numbers of the 2010 population were shifted from Charlton County to the City of Folkston, in part due to the geographic location of the prison population. The number of occupied houses in Charlton County (including Folkston and Homeland) is also estimated at 3,474 in the 2012-2016 U.S. Census American Community Survey.

The City of Folkston has adopted the 2017 NEC, which is in effect now. Charlton County, the City of Folkston and the City of Homeland have adopted building codes including the 2012 International Building Code and the 2012 International Property Maintenance Code. The 2018 NEC and updates to the prior codes including International Electrical & Plumbing & Mechanical Codes. will be done in January, 2018. The County now has Code Enforcement Officer who also serves the cities on request.

The St. Marys River and the Satilla River are protected to the 100 year floodplain, no septic systems are allowed within 100 feet of the river and no construction is allowed up to twenty five (25) feet from the rested edge of the river through river corridor protection ordinance. However, there is a great danger of fecal coliform contamination of river waters as a result of flooding of both old and hardship septic tank systems located along the rivers and tributaries. Water recharge areas are currently protected by ordinance.

Wetland areas are protected by ordinance. Soil and Sedimentation Control Ordinances are in effect.

Charlton County has enacted a subdivision ordinance. Throughout Charlton County, if not zoned already, all areas are in the process of being zoned agricultural. There is at least a 4-5 mile area already zoned around the City of Folkston and the City of Homeland with the majority being either agricultural or some form of residential. There is more residential zoning in the City of Folkston and the City of Homeland than anything else. Most highways are zoned for setbacks.

Current trends are for agricultural areas to be converted to residential areas.

Charlton County, the City of Folkston and the City of Homeland are all members of the National Flood Insurance Program. All of the local governments have some part of their jurisdictions

located within a floodplain. Floodplain maps for each local government are located in Appendix A Section II.

Charlton County and the Cities of Folkston and Homeland do not participate in the Community Rating System (CRS) program. As of August 25, 2017, they were not eligible according to FEMA (<http://www.fema.gov/library/viewRecord.do?id=3629>) and other information at <http://www.fema.gov>.

Since the previous plan was completed, there have been no changes in development within the community that would increase or decrease the community's overall vulnerability to the hazard.

F. Multi-Jurisdictional Thunderstorm & Wind Differences:

All of Charlton County, the City of Folkston and the City of Homeland may be equally affected by Thunderstorms & Wind. However, the impact may be more severe in places with higher population density due to more people being in danger, more people needing to be evacuated, more debris from damaged buildings, and other impacts associated with higher population density.

100% of Charlton County and the City of Folkston and the City of Homeland are included in some Wind Hazard area. Complete inventory information is contained at <https://www.itos.uga.edu/gema>. The GEMA wind maps, which show basic wind speeds for a three (3) second wind gust speeds with a fifty (50) year return interval, as defined in the 2000 International Building Code, place Charlton County in two (2) separate areas (See Appendix A Section V). These areas are 90-99 mph and 100-109 mph for a three (3) second gust. The 90-99 mph Wind boundary area, as appearing on the Wind hazard map, is basically a small area on the extreme west side of Charlton County to the Charlton County line. The 100-109 mph Wind boundary area is basically the entire county including the City of Folkston and the City of Homeland, east to the Charlton County line.

G. General Overall HRV Summary of Thunderstorms & Wind Events And their Impact On The Community:

Thunderstorms & Wind have the potential to cause damage at any place, at any time, throughout Charlton County and the Cities of Folkston and Homeland. Of course, the cost of the damage and potential loss of life may be higher if Thunderstorms & Wind occur in populated areas and municipalities, as opposed to if they were to occur in more agricultural based sections of Charlton County. A majority of the Thunderstorms and Wind that pass through the area, however, cause minimal to no damage.

The Charlton County HMPUC recognizes Thunderstorms & Wind as one of the most likely natural hazard to occur and cause damage. They developed a comprehensive range of Mitigation Goals, Objectives and Action Steps to lessen Thunderstorm & Wind impact on Charlton County, the City of Folkston and the City of Homeland. These are contained in Chapter 4 Section V.

Since the previous plan was approved, there are no new changes in development within the community that would increase or decrease the community's overall vulnerability to this hazard.

Section VI **Severe Winter Storm**

A. Identification of Hazard:

The threat of a Severe Winter Storm has been chosen by the Charlton County HMPUC as one of the most likely hazard to occur & cause damage in Charlton County, the City of Folkston and the City of Homeland based on past experience, the FEMA described methodology and other factors. Historic data has been examined from various sources (See Appendix A Section VI) and the National Climatic Data Center (see Appendix F), as well as from local history and personal accounts, in order to determine frequency of events.

It goes without saying that Severe Winter Storms are destructive and may occur at any time during the winter months. Citizens in Charlton County, the City of Folkston and the City of Homeland are usually not prepared to handle Severe Winter Storms, unlike those in northern counties and cities that routinely deal with this hazard. In addition, because people in this area are generally not prepared for these Severe Winter Storms they frequently have automobile wrecks as a result of them. Being unprepared may result in loss of life or substantial damage to property and the economy.

Severe Winter Storms at the worst will produce 1”inch to 2” inches of snow and/or freezing rain producing sleet with temperatures usually in the teens and below. Most snow fall from winter storms usually melt within a 24 hour period. The damages that result from these storms may be substantial depending on the severity and longevity of the event, but they are usually minimal. Possible damage that may occur includes downed tree limbs, impassable roadways, power outages, increased emergency services workloads and failed water/sewer/septic systems both on a private and city-wide system scale.

B. Profile of Severe Winter Storm Events, Frequency of Occurrences, Probability:

The historic record for Severe Winter Storms is spotty at best with many unreported or underreported events. All of Charlton County, the City of Folkston and the City of Homeland are vulnerable to Severe Winter Storms but the effects are usually minimal. Severe Winter Storms can occur at any time during winter months with usually some warning being given in advance.

Members of the Charlton County HMPUC have witnessed many unreported and underreported cases of minimal to Severe Winter Storm events occurring within Charlton County, the City of Folkston and the City of Homeland.

Charlton County (Including The Cities of Folkston and Homeland):

According to National Climatic Data Center information (see Appendix F), there is one (1) reports of a Sleet/Severe Winter Storm occurring in Charlton County (including the Cities of Folkston and Homeland) occurring on 1/29/2014. During this anomalous winter weather event, freezing rain and snow flurries occurred when an area of low pressure deepened offshore of the Fl/Ga Atlantic coast and cold and moist air funnelled southward over southeast Georgia and

northeast Florida. A mixture of sleet and snow flurries occurred along U.S. Highway 301 between Folkston and Winokur. Icy and slippery roads were recorded. (See maps in Appendix A.)

In Charlton County (including the Cities of Folkston and Homeland), with the best available information, we have recorded 13 events in fifty six (56) years (including the 2014 event mentioned above that is listed in the NCDC) with a Historic Recurrence Interval of 4.31 years. This is a 23.21% Historic Frequency Chance per year. The past ten (10) year Record Frequency Per Year is 0.2 the past twenty (20) year is 0.6 and the past fifty (50) year is 0.24 (see GEMA PDM Hazard Frequencies Table contained in Appendix D Section I). There have been two Severe Winter Storm events since the last Hazard Mitigation Plan was approved. One event occurred on Jan. 3-4, 2018 when Winter Storm Grayson caused snow, sleet, and freezing rain from northern Florida to the Carolinas. In Charlton County, up to one-half inch of ice accumulation was observed near the City of Folkston, resulting in downed tree limbs and power lines. Multiple power outages were reported.

The GMIS Critical Facilities Inventory Database Reports and Maps (see Appendix A Section VI), based on the predicted model of the GEMA database, does not address Severe Winter Storms, however a map, etc. has been printed out showing no data (see Appendix A Section VI). Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

Since the previous plan was approved, there are no new changes in development within the community that would increase or decrease the community's overall vulnerability to this hazard.

C./D. Inventory of Assets Exposed and Potential Loss to Severe Winter Storms:

The threat of a Severe Winter Storm in Charlton County, the City of Folkston and the City of Homeland would primarily occur in the winter months with usually some warning being given in advance. When and where they will occur and the potential damage that they will cause is not easy to figure due to the hazard and the strength levels of the Severe Winter Storms that may occur.

In GEMA Worksheet 3A: Inventory of Assets appearing in Appendix A Section VI, we estimate that all of Charlton County and the Cities of Folkston and Homeland are vulnerable to Severe Winter Storms.

Charlton County (including the Cities of Folkston and Homeland):

Unless otherwise specifically noted, it has been determined that approximately 100% of the Residential property (4,436 of 4,436) in Charlton County (which includes the Residential properties in the individual cities) may be effected which have a total value of \$363,752,000.00. Also, 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,776 of 1,776) in Charlton County (which includes those property types in the individual cities) may be effected which have a total value of \$321,839,740.

In addition, all 103 of the Critical Facilities and Infrastructure for Charlton County (including the Cities of Folkston and Homeland) are located in areas that may be effected by Severe Winter Storms and have a total of 1,083,382 square feet with a total replacement value of \$470,952,414.00 and a total content value of \$8,600,310.00 (see GMIS Critical Facilities Inventory Database Reports). Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

While we have these values listed, we recognize that Severe Winter Storms would not normally fully impact the value of these properties, or be big enough to wipe out all assets. A exception for certain areas may be during a fire or wildfire in which the fire hydrant's water lines, or a fire trucks water tanks, may be frozen and thus are unable to be used.

E. Land Use and Development Trends Related to Winter Storms:

Slight population growth has occurred in the years since the 2010 U.S. Census. The 2016 population of Charlton County (the most recent figure currently available) is estimated at 12,497, a 2.68% increase since 2010. The largest population change (officially) has occurred in that large numbers of the 2010 population were shifted from Charlton County to the City of Folkston, in part due to the geographic location of the prison population. The number of occupied houses in Charlton County (including Folkston and Homeland) is also estimated at 3,474 in the 2012-2016 U.S. Census American Community Survey.

The City of Folkston has adopted the 2017 NEC, which is in effect now. Charlton County, the City of Folkston and the City of Homeland have adopted building codes including the 2012 International Building Code and the 2012 International Property Maintenance Code. The 2018 NEC and updates to the prior codes including International Electrical & Plumbing & Mechanical Codes. will be done in January, 2018. The County now has Code Enforcement Officer who also serves the cities on request.

Charlton County has enacted a subdivision ordinance. Throughout Charlton County, if not zoned already, all areas are in the process of being zoned agricultural. There is at least a 4-5 mile area already zoned around the City of Folkston and the City of Homeland with the majority being either agricultural or some form of residential. There is more residential zoning in the City of Folkston and the City of Homeland than anything else. Most highways are zoned for setbacks.

Current trends are for agricultural areas to be converted to residential areas.

Since the previous plan was completed, there have been no changes in development within the community that would increase or decrease the community's overall vulnerability to the hazard.

F. Multi-Jurisdictional Severe Winter Storm Differences:

All of Charlton County, the City of Folkston and the City of Homeland may be affected by Severe Winter Storms. In the event of icy roads, hazards would be greater along high-traffic corridors (US-1, US-301, GA-40, GA-252 and GA #121) and in more densely populated areas (mainly the Cities of Folkston and Homeland). The impact in terms of crop damage would likely

be more severely felt in unincorporated Charlton County, where more of the land is devoted to agriculture.

In Worksheet 3A: Inventory of Assets appearing in Appendix A Section VI, we estimate that 100% of Charlton County and the Cities of Folkston and Homeland are vulnerable to Severe Winter Storms.

No differences between the jurisdictions have been identified at this time.

G. General Overall HRV Summary of Severe Winter Storm Events And their Impact On The Community:

Severe Winter Storms have the potential to cause damage at any place, at any time during the winter months, throughout Charlton County, the City of Folkston and the City of Homeland. Of course, the cost of the damage and potential loss of life may be higher if the Severe Winter Storms were to occur in populated areas and municipalities, as opposed to if it were to occur in more agricultural based sections of the Charlton County. A majority of the Severe Winter Storms that pass through the area cause minimal to no damage.

The Charlton County HMPUC recognizes Severe Winter Storms as one of the most likely natural hazard to occur and cause damage. They developed a comprehensive range of Mitigation Goals, Objectives and Action Steps to lessen Severe Winter Storm impacts on Charlton County, the City of Folkston and the City of Homeland. These are contained in Chapter 4 Section VI.

Section VII **Hail**

A. Identification of Hazard:

The threat of Hail has been chosen by the Charlton County HMPUC as one of the most likely hazard to occur & cause damage in Charlton County, the City of Folkston and the City of Homeland based on past experience, the FEMA described methodology and other factors. Historic data has been examined from various sources (see Appendix A Section VII) and the National Climatic Data Center (see Appendix F), as well as from local history and personal accounts, in order to determine frequency of events.

Hail is precipitation in the form of lumps of ice that form in some storms. They are usually round and vary from pea size all the way up to grapefruit size. Hailstones generally form in Thunderstorms between currents of rising air called the updraft and the current of air descending toward the ground called the downdraft. Large Hailstones indicate strong updrafts in storms. The larger the Hail the stronger the updraft needed to hold it aloft in the storm.

In storms that cause Tornadoes, Hail often falls directly to the northeast or east of the path of the Tornado. The strong updraft is associated with the part of the storm that produces the Tornado. Fortunately, Hail very rarely kills anyone. However, a couple of dozen people are injured by

Hailstones each year. Of course, the best way to keep safe in Hailstorms is to immediately seek shelter.

While a relatively short term event in one location, it goes without saying that Hail is destructive and may occur at any time with various storms. Although that is the case, it may be more likely to occur during Tornado season in Georgia which is typically from March through August or during Hurricane/Tropical Storm season which is typically June 1 through November 30.

B. Profile of Hail Events, Frequency of Occurrences, Probability:

The historic record for Hail is spotty at best with many unreported or underreported Hail events. All of Charlton County, the City of Folkston and the City of Homeland are vulnerable to Hail due to its unpredictability and random occurrence, but the damage effects, if any, vary with the storm.

Members of the Charlton County HMPUC have witnessed many unreported and underreported Hail events occurring in Charlton County, the City of Folkston and the City of Homeland.

Charlton County (Including the Cities of Folkston and Homeland):

According to National Climatic Data Center information (see Appendix F), there were 49 reports of Hail occurring in Charlton County (including the City of Folkston and the City of Homeland) between 01/01/1950 and 12/31/2017. Of these, there were zero (0) cases that were considered major events. The total cost reported has been \$0.00. Total injuries were reported as zero (0).

Of the 49 reports of Hail listed above, twenty one (21) had .75 inch Hail size, six (6) had .88 inch Hail size, ten (10) had 1" Hail size, one (1) had 1.25 inch Hail size, one (1) had 1.50 inch Hail size, nine (9) had 1.75 inch Hail and one (1) had 2.00 inch Hail.

With the best available information, we have recorded 49 Hail events in 68 years with a Historic Recurrence Interval of 1.39 years. This is a 72.06% Historic Frequency Chance per year. The past ten (10) year Record Frequency Per Year is 1.2, the past twenty (20) year is 2.3 and the past fifty (50) year's is 0.98 (See GEMA PDM Hazard Frequencies Table contained in Appendix D Section I). Since the previous Hazard Mitigation Plan was approved, one hail event has been recorded, on May 25, 2014, near the unincorporated community of Winokur. Golf ball size hail was observed, but injuries and damage were reported as zero.

C./D. Inventory of Assets Exposed and Potential Loss to Hail:

The threat of Hail is a constant in Charlton County, the City of Folkston and the City of Homeland due to the unpredictability and the random occurrence of the hazard, however it may occur more frequently during Tornado season (March through August) or during Hurricane/Tropical Storm Season (June 1 through November 30). When and where it will occur

and the potential damage that it will cause is not easy to determine due to the hazard, amount, and size of Hail that may occur. In addition, Hail may move randomly from place to place and miss entire areas completely.

In GEMA Worksheet 3A: Inventory of Assets (appearing in Appendix A Section VII), we estimate that all of Charlton County and the City of Folkston and the City of Homeland are vulnerable to Hail.

Charlton County (including the Cities of Folkston and Homeland):

Unless otherwise specifically noted, it has been determined that approximately 100% of the Residential property (4,436 of 4,436) in Charlton County (which includes the Residential properties in the individual cities) may be effected which have a total value of \$363,752,000.00. Also, 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,776 of 1,776) in Charlton County (which includes those property types in the individual cities) may be effected which have a total value of \$321,839,740.

In addition, all 103 of the Critical Facilities and Infrastructure for Charlton County (including the Cities of Folkston and Homeland) are located in areas that may be effected by Hail and have a total of 1,083,382 square feet with a total replacement value of \$470,952,414.00 and a total content value of \$8,600,310.00 (see GMIS Critical Facilities Inventory Database Reports). Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

While we have these values listed, we recognize that a Hail event would not normally fully impact the value of these properties, or be big enough to wipe out all assets.

E. Land Use and Development Trends Related to Hail:

Slight population growth has occurred in the years since the 2010 U.S. Census. The 2016 population of Charlton County (the most recent figure currently available) is estimated at 12,497, a 2.68% increase since 2010. The largest population change (officially) has occurred in that large numbers of the 2010 population were shifted from Charlton County to the City of Folkston, in part due to the geographic location of the prison population. The number of occupied houses in Charlton County (including Folkston and Homeland) is also estimated at 3,474 in the 2012-2016 U.S. Census American Community Survey.

The City of Folkston has adopted the 2017 NEC, which is in effect now. Charlton County, the City of Folkston and the City of Homeland have adopted building codes including the 2012 International Building Code and the 2012 International Property Maintenance Code. The 2018 NEC and updates to the prior codes including International Electrical & Plumbing & Mechanical Codes. will be done in January, 2018. The County now has Code Enforcement Officer who also serves the cities on request.

The St. Marys River and the Satilla River are protected to the 100 year floodplain, no septic systems are allowed within 100 feet of the river and no construction is allowed up to twenty five (25) feet from the rested edge of the river through river corridor protection ordinance. However, there is a great danger of fecal coliform contamination of river waters as a result of flooding of

both old and hardship septic tank systems located along the rivers and tributaries. Water recharge areas are currently protected by ordinance.

Wetland areas are protected by ordinance. Soil and Sedimentation Control Ordinances are in effect.

Charlton County has enacted a subdivision ordinance. Throughout Charlton County, if not zoned already, all areas are in the process of being zoned agricultural. There is at least a 4-5 mile area already zoned around the City of Folkston and the City of Homeland with the majority being either agricultural or some form of residential. There is more residential zoning in the City of Folkston and the City of Homeland than anything else. Most highways are zoned for setbacks.

Current trends are for agricultural areas to be converted to residential areas.

Charlton County, the City of Folkston and the City of Homeland are all members of the National Flood Insurance Program. All of the local governments have some part of their jurisdictions located within a floodplain. Floodplain maps for each local government are located in Appendix A Section II.

Charlton County and the Cities of Folkston and Homeland do not participate in the Community Rating System (CRS) program. As of August 25, 2017, they were not eligible according to FEMA (<http://www.fema.gov/library/viewRecord.do?id=3629>) and other information at <http://www.fema.gov>.

Since the previous plan was completed, there have been no changes in development within the community that would increase or decrease the community's overall vulnerability to the hazard.

F. Multi-Jurisdictional Hail Differences:

All of Charlton County, the City of Folkston and the City of Homeland may be effected by Hail.

In GEMA Worksheet 3A: Inventory of Assets (appearing in Appendix A Section VII), we estimate that all of Charlton County and the City of Folkston and the City of Homeland are vulnerable to Hail.

The GMIS Critical Facilities Inventory Database Reports and Maps (see Appendix A Section VII), based on the predicted model of the GEMA database, does not address the hazard of Hail, however a map, etc. showing no data has been printed out (see Appendix A Section VII). Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

No differences between the jurisdictions have been identified at this time.

G. General Overall HRV Summary of Hail Events And their Impact On The Community:

Hail has the potential to cause damage at any place, at any time, throughout Charlton County, the City of Folkston and the City of Homeland. The cost of the damage will vary depending on the

size and quantity of hailstones and where they land. Damage to vehicles (especially roof dents) is one of the most widespread effects of major hailstorms; injuries to people are rarer but not unheard of. The damage effects of hail, if any, vary with the storm.

The Charlton County HMPUC recognizes Hail as one of the most likely natural hazard to occur and cause damage. They developed a comprehensive range of Mitigation Goals, Objectives and Action Steps to lessen Hail impacts on Charlton County, the City of Folkston and the City of Homeland. These are contained in Chapter 4 Section VII.

Section VIII **Drought**

A. Identification of Hazard:

The threat of a Drought has been chosen by the Charlton County HMPUC as one of the most likely hazard to occur & cause damage in Charlton County, the City of Folkston and the City of Homeland based on past experience, the FEMA described methodology and other factors. Historic data has been examined from various sources (see Appendix A Section VIII) and from the National Climatic Data Center (see Appendix F), as well as from local history and personal accounts, in order to determine frequency of events.

What is known as Drought is usually the result of several factors that combine together to gradually increase dry conditions in the community until they reach severe and extreme conditions. These factors could be related to weather patterns, lack of rainfall, wind conditions, lack of water from rivers & upstream areas or other factors.

Although Drought is usually associated with the summer months due to its more visible effects, it can occur at any time and its effects can last throughout the year and continue from year to year. These effects may range from agricultural losses, to increased wildfire and fire risk, to lack of water for citizens and fire fighting, to increased flooding risk, as well as a significant amount of other effects that influence other hazards and the safety of the community.

Crops (including trees) are usually most adversely effected by these events, along with county and city residents who lose water due to these events. Many residents of Charlton County and some of the residents in the City of Folkston and the City of Homeland have shallow wells which often go dry during Drought periods, thus leaving those residents without water for extended periods of time.

The *Palmer Z Index* measures short-term drought on a monthly scale. The *Palmer Crop Moisture Index (CMI)* measures short-term drought on a weekly scale and is used to quantify drought's impacts on agriculture during the growing season.

The *Palmer Drought Severity Index (PDSI)* (known operationally as the *Palmer Drought Index (PDI)*) attempts to measure the duration and intensity of the long-term drought-inducing circulation patterns. Long-term drought is cumulative, so the intensity of drought during the

current month is dependent on the current weather patterns plus the cumulative patterns of previous months. Since weather patterns can change almost literally overnight from a long-term drought pattern to a long-term wet pattern, the PDSI (PDI) can respond fairly rapidly.

The hydrological impacts of drought (e.g., reservoir levels, groundwater levels, etc.) take longer to develop and it takes longer to recover from them. The *Palmer Hydrological Drought Index (PHDI)*, another long-term drought index, was developed to quantify these hydrological effects. The PHDI responds more slowly to changing conditions than the PDSI (PDI).

The U.S. Drought Monitor <http://droughtmonitor.unl.edu/archive.html> is produced in partnership between the National Drought Mitigation Center at the University of Nebraska-Lincoln, the United States Department of Agriculture, and the National Oceanic and Atmospheric Administration and has been used to determine some of our data information.

It utilizes a variety of sources, including the Palmer Index(s), to rate an area as D0 (Abnormally Dry), D1 (Moderate Drought), D2 (Severe Drought), D3 (Extreme Drought) and D4 (Exceptional Drought). Any area rated at D0 or above was considered to be in a Drought for the purposes of this plan.

There have been cases in Charlton County, the City of Folkston and the City of Homeland where Drought conditions have lasted for years in a row.

B. Profile of Drought Events, Frequency of Occurrences, Probability:

The historic record for Drought is spotty at best with many unreported or underreported Drought events. All of Charlton County, the City of Folkston and the City of Homeland are vulnerable to Drought due its unpredictability and widespread coverage. The effects range depending on the severity of the drought and the length of time that it has occurred.

Members of the Charlton County HMPUC have witnessed many unreported and underreported cases of Drought events occurring within Charlton County, the City of Folkston and the City of Homeland.

Charlton County (including the Cities of Folkston and Homeland):

According to National Climatic Data Center information (see Appendix F), there is one (1) report of a Drought occurring in Charlton County (including the Cities of Folkston and Homeland) occurring on 12/1/2006. The total cost reported has been \$0.00. Total injuries were reported as zero (0).

According to U.S. Drought Monitor data (see Appendix A), there are 303 reports of drought events (D1, D2, D3, or D4) occurring in Charlton County (including the Cities) between 01/01/2000 and 12/31/2017. The Historic Recurrence Interval is 0.06 years. This is a 1,683.33% Historic

Frequency Chance per year. The past 10-year Record Frequency Per Year is 14.8, the past 20-year frequency is 15.15, and the past 50-year frequency is 6.06 (see the Hazard Frequency Table in Appendix D). These numbers include the 1 event listed in the NCDC that is mentioned above.

Since the previous Hazard Mitigation Plan became effective, 42 drought events have been reported. 3 of these have been extreme (D3), 10 have been severe (D2), and 29 have been moderate (D1).

The GMIS Critical Facilities Inventory Database Reports and Maps (see Appendix A Section VIII), based on the predicted model of the GEMA database, does not address the hazard of Drought, however a map, etc. has been printed out showing no data (see Appendix A Section VIII). Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

Since the previous plan was completed, no changes have occurred that would affect the community's overall vulnerability to this hazard.

C./D. Inventory of Assets Exposed and Potential Loss to Drought:

The threat of a Drought is a constant in Charlton County, the City of Folkston and the City of Homeland due to the unpredictability and widespread coverage of the hazard. Drought events tend to be area-wide and will likely not be limited to certain areas of the community, although the effect on residents will depend on the infrastructure and services available (for example, the depth of wells).

In Worksheet 3A: Inventory of Assets appearing in Appendix A Section VIII, we estimate that all of Charlton County and the Cities of Folkston and Homeland area vulnerable to Drought.

Charlton County (including the Cities of Folkston and Homeland):

Unless otherwise specifically noted, it has been determined that approximately 100% of the Residential property (4,436 of 4,436) in Charlton County (which includes the Residential properties in the individual cities) may be effected which have a total value of \$363,752,000.00. Also, 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,776 of 1,776) in Charlton County (which includes those property types in the individual cities) may be effected which have a total value of \$321,839,740.

In addition, all 103 of the Critical Facilities and Infrastructure for Charlton County (including the Cities of Folkston and Homeland) are located in areas that may be effected by Drought and have a total of 1,083,382 square feet with a total replacement value of \$470,952,414.00 and a total content value of \$8,600,310.00 (see GMIS Critical Facilities Inventory Database Reports). Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

While we have these values listed, we recognize that a Drought event would not normally fully impact the value of these properties, or be big enough to wipe out all assets.

E. Land Use and Development Trends Related to Drought:

Slight population growth has occurred in the years since the 2010 U.S. Census. The 2016 population of Charlton County (the most recent figure currently available) is estimated at 12,497, a 2.68% increase since 2010. The largest population change (officially) has occurred in that large numbers of the 2010 population were shifted from Charlton County to the City of Folkston, in part due to the geographic location of the prison population. The number of occupied houses in Charlton County (including Folkston and Homeland) is also estimated at 3,474 in the 2012-2016 U.S. Census American Community Survey.

The City of Folkston has adopted the 2017 NEC, which is in effect now. Charlton County, the City of Folkston and the City of Homeland have adopted building codes including the 2012 International Building Code and the 2012 International Property Maintenance Code. The 2018 NEC and updates to the prior codes including International Electrical & Plumbing & Mechanical Codes. will be done in January, 2018. The County now has Code Enforcement Officer who also serves the cities on request.

The St. Marys River and the Satilla River are protected to the 100 year floodplain, no septic systems are allowed within 100 feet of the river and no construction is allowed up to twenty five (25) feet from the rested edge of the river through river corridor protection ordinance. However, there is a great danger of fecal coliform contamination of river waters as a result of flooding of both old and hardship septic tank systems located along the rivers and tributaries. Water recharge areas are currently protected by ordinance.

Wetland areas are protected by ordinance. Soil and Sedimentation Control Ordinances are in effect.

Charlton County has enacted a subdivision ordinance. Throughout Charlton County, if not zoned already, all areas are in the process of being zoned agricultural. There is at least a 4-5 mile area already zoned around the City of Folkston and the City of Homeland with the majority being either agricultural or some form of residential. There is more residential zoning in the City of Folkston and the City of Homeland than anything else. Most highways are zoned for setbacks.

Current trends are for agricultural areas to be converted to residential areas.

Charlton County, the City of Folkston and the City of Homeland are all members of the National Flood Insurance Program. All of the local governments have some part of their jurisdictions located within a floodplain. Floodplain maps for each local government are located in Appendix A Section II.

Charlton County and the Cities of Folkston and Homeland do not participate in the Community Rating System (CRS) program. As of August 25, 2017, they were not eligible according to FEMA (<http://www.fema.gov/library/viewRecord.do?id=3629>) and other information at <http://www.fema.gov> .

Since the previous plan was completed, there have been no changes in development within the community that would increase or decrease the community's overall vulnerability to the hazard.

F. Multi-Jurisdictional Drought Differences:

All of Charlton County, the City of Folkston and the City of Homeland may be effected by Drought. There is an equal chance of Drought occurring in any jurisdiction.

In Worksheet 3A: Inventory of Assets appearing in Appendix A Section VIII, we estimate that all of Charlton County and the Cities of Folkston and Homeland area vulnerable to Drought.

The GMIS Critical Facilities Inventory Database Reports and Maps (see Appendix A Section VIII), based on the predicted model of the GEMA database, do not address Drought, however a map, etc. has been printed out showing no data (see Appendix A Section VIII). Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

Due to the area-wide nature of drought events, all of Charlton County and the Cities of Folkston and Homeland are at equal risk. However, households in unincorporated Charlton County are served by well water (unless served by city water systems) while the Cities of Folkston and Homeland operates their own municipal water and sewer systems. According to the City Clerk, the City of Folkston is permitted to withdraw up to 1.500 millions of gallons per day. According to the City Clerk, the City of Homeland is permitted to withdraw up to 150,000 gallons per day. Due to the capacity of the municipal water systems, it is predicted that households in the Cities of Folkston and Homeland will be better protected from drought-related water shortages than households in the unincorporated county, which must rely on their own local wells for water. Data regarding the depth of individual wells are not currently available.

No differences between the jurisdictions have been identified at this time.

G. General Overall HRV Summary of Drought Events And their Impact On The Community:

Drought has the potential to cause damage at any place, at any time, throughout Charlton County, the City of Folkston and the City of Homeland. Of course, the cost of the damage may be higher if the Drought were to occur in populated areas and municipalities, as opposed to if it were to occur in more agricultural based sections of Charlton County.

The Charlton County HMPUC recognizes Drought as one of the most likely natural hazard to occur and cause damage. They developed a comprehensive range of Mitigation Goals, Objectives and Action Steps to lessen Drought impact on Charlton County, the City of Folkston and the City of Homeland. These are contained in Chapter 4 Section VIII.

Section IX **Lightning**

A. Identification of Hazard:

Lightning is a giant spark of electricity in the atmosphere or between the atmosphere and the ground. In the initial stages of development, air acts as an insulator between the positive and negative charges in the cloud and between the cloud and the ground; however, when the differences in charges becomes too great, this insulating capacity of the air breaks down and there is a rapid discharge of electricity that we know as lightning. Lightning most often strikes during thunderstorms, but can strike many miles from the center of the storm, or can even strike in areas not covered by a storm (this phenomenon is known as a “bolt from the blue”).

According to NOAA (<http://www.lightningsafety.noaa.gov/>), lightning strikes the United States about 25 million times a year. Although most lightning occurs in the summer, people can be struck at any time of year. Lightning kills an average of 47 people in the United States each year, and hundreds more are severely injured.

Lightning can strike in any place at any time but, contrary to popular myth, is not attracted to metal. Tall, isolated structures with a pointy shape are most likely to be struck by lightning. When thunder and lightning are present, the best course of action is to seek shelter inside a robust building. Sheltering under a tree increases the risk of getting struck by lightning and is more dangerous than being out in the open. Most cars protect their occupants from lightning because they have metal roofs and sides; contrary to popular myth, it is not the car’s rubber tires that protect the occupants. When sheltering inside a building, one should avoid metal objects (metal doors, plumbing, electronics, etc.). (Source: <http://www.lightningsafety.noaa.gov/myths.shtml>)

The threat of Lightning has been chosen by the Charlton County HMPUC as one of the most likely natural hazard to occur & cause damage in Charlton County and in the Cities of Folkston and Homeland based on past experience, the FEMA described methodology and other factors. Historic data has been examined from various sources (see Appendix A Section IX) including the National Climatic Data Center (see Appendix F), as well as from local history and personal accounts, in order to determine frequency of events. In addition, hazard maps generated by the GMIS Critical Facilities Inventory were examined.

Lightning has the potential to be destructive and may occur at any time. Thunderstorms which have Lightning may develop quickly in Charlton County and in the Cities of Folkston and Homeland due to inclement weather conditions, a passing front, or Hurricane/Tropical Storm events.

Lightning one of the most common weather products of our atmosphere. It can create a dazzling display of light and sound, but do not underestimate these storms. They can cause serious injury, substantial property damage, even death. Lightning associated with these events is perhaps one of the leading causes of Wildfire in Charlton County. Lightning can occur even if it is not raining.

While most events that cause Lightning are relatively minimal short term events in Charlton County and in the Cities of Folkston and Homeland, there is also the possibility of long term Lightning events associated with Hurricanes/Tropical Storms or passing fronts. Lightning events

typically last thirty (30) minutes. Lightning events can occur at any time, but are most likely to occur in the afternoon and evening hours in the spring and summer.

B. Profile of Lightning Events, Frequency of Occurrences, Probability: The historic record for Lightning is spotty at best with many unreported or underreported events. All of Charlton County and the Cities of Folkston and Homeland are vulnerable to Lightning due to their unpredictability and random occurrences but the effects, if any, are usually minimal.

Members of the Charlton County HMPUC have witnessed many unreported and underreported cases of minimal to severe Lightning events occurring within Charlton County and the Cities of Folkston and Homeland.

Vaisala's National Lightning Detection Network (NLDN) reports that in the Charlton County area there were an average of 12 to 20 Lightning flashes per square mile per year between 2007 and 2016. We have used an average of 20 Lightning flashes per square mile to calculate our figures (see Appendix A Section IX).

Charlton County (including the Cities of Folkston and Homeland):

According to National Climatic Data Center information (see Appendix F), there was one (1) report of Lightning occurring in Charlton County (including the Cities of Folkston and Homeland) between 1/1/1950 and 12/31/2017. This event occurred on 8/15/2012 and was considered a major Event, with a cost of \$2,000.00. Lightning started a fire at a power substation in Folkston. Power outages were caused to customers in Charlton, Camden and Nassau counties. Total injuries were reported as zero (0). Since the previous Hazard Mitigation Plan was approved, no further lightning events have been recorded. The Historic Recurrence Interval is 68.00 years. This is a 1.47% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.1, the past 20-year frequency is 0.05, and the past 50-year frequency is 0.02 (see the Hazard Frequency Table in Appendix D).

While Thunderstorms, Hurricanes and Tropical Storms (which would usually contain Lightning) were reported by NCDC during the time period calculated, the number of Lightning flashes/strikes was unable to be calculated.

The GMIS Critical Facilities Inventory Database Reports and Maps (see Appendix A Section IX), based on the predicted model of the GEMA database, do not address the hazard of Lightning, however a map, etc. has been printed out showing no data (see Appendix A Section IX). Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

C./D. Inventory of Assets Exposed and Potential Loss to Lightning:

The threat of Lightning is a constant in Charlton County, the City of Folkston and the City of Homeland due to the unpredictability and random occurrence of the hazard. When and where it will occur and the potential damage that it will cause is not easy to predict due to the hazard and the strength levels of accompanying storms, etc. that may occur.

In GEMA Worksheet 3A: Inventory of Assets (appearing in Appendix A Section IX), we estimate that all of Charlton County and the City of Folkston and the City of Homeland are vulnerable to Lightning.

Charlton County (including the Cities of Folkston and Homeland):

Unless otherwise specifically noted, it has been determined that approximately 100% of the Residential property (4,436 of 4,436) in Charlton County (which includes the Residential properties in the individual cities) may be effected which have a total value of \$363,752,000.00. Also, 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,776 of 1,776) in Charlton County (which includes those property types in the individual cities) may be effected which have a total value of \$321,839,740.

In addition, all 103 of the Critical Facilities and Infrastructure for Charlton County (including the Cities of Folkston and Homeland) are located in areas that may be effected by Lightning and have a total of 1,083,382 square feet with a total replacement value of \$470,952,414.00 and a total content value of \$8,600,310.00 (see GMIS Critical Facilities Inventory Database Reports). Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

While we have these values listed, we recognize that a Lightning event would not normally fully impact the value of these properties, or be big enough to wipe out all assets.

E. Land Use and Development Trends Related to Lightning:

Slight population growth has occurred in the years since the 2010 U.S. Census. The 2016 population of Charlton County (the most recent figure currently available) is estimated at 12,497, a 2.68% increase since 2010. The largest population change (officially) has occurred in that large numbers of the 2010 population were shifted from Charlton County to the City of Folkston, in part due to the geographic location of the prison population. The number of occupied houses in Charlton County (including Folkston and Homeland) is also estimated at 3,474 in the 2012-2016 U.S. Census American Community Survey.

The City of Folkston has adopted the 2017 NEC, which is in effect now. Charlton County, the City of Folkston and the City of Homeland have adopted building codes including the 2012 International Building Code and the 2012 International Property Maintenance Code. The 2018 NEC and updates to the prior codes including International Electrical & Plumbing & Mechanical Codes. will be done in January, 2018. The County now has Code Enforcement Officer who also serves the cities on request.

Charlton County has enacted a subdivision ordinance. Throughout Charlton County, if not zoned already, all areas are in the process of being zoned agricultural. There is at least a 4-5 mile area already zoned around the City of Folkston and the City of Homeland with the majority being either agricultural or some form of residential. There is more residential zoning in the City of Folkston and the City of Homeland than anything else. Most highways are zoned for setbacks.

Current trends are for agricultural areas to be converted to residential areas. Since the last Hazard Mitigation Plan was approved, there have not been any changes in development that impact the community's overall vulnerability to the hazard of lightning.

F. Multi-Jurisdictional Lightning Differences:

All of Charlton County, the City of Folkston and the City of Homeland may be effected by Lightning. There is an equal chance of Lightning occurring in any jurisdiction.

In Worksheet 3A: Inventory of Assets appearing in Appendix A Section IX, we estimate that all of Charlton County and the Cities of Folkston and Homeland area vulnerable to Lightning.

The GMIS Critical Facilities Inventory Database Reports and Maps (see Appendix A Section IX), based on the predicted model of the GEMA database, do not address Lightning, however a map, etc. has been printed out showing no data (see Appendix A Section IX). Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

No differences between the jurisdictions have been identified at this time.

G. General Overall HRV Summary of Lightning Events and Their Impact On the Community: Lightning has the potential to cause damage at any place, at any time, throughout Charlton County and the Cities of Folkston and Homeland. Of course, the cost of the damage and potential loss of life may be higher if Lightning occurs in populated areas and municipalities, as opposed to if it were to occur in more agricultural based sections of Charlton County. A majority of the Lightning that passes through the area, however, cause minimal to no damage.

The Charlton County HMPUC recognizes Lightning as one of the most likely natural hazard to occur and cause damage. They developed Mitigation Goals, Objectives, Tasks and Action Steps to lessen Lightning impact on Charlton County and the Cities of Folkston and Homeland. These are contained in Chapter 4 Section IX.

Section X **Extreme Heat**

A. Identification of Hazard: The threat of Extreme Heat has been chosen by the Charlton County HMPUC as one of the most likely natural hazard to occur and cause damage in Charlton County and in the Cities of Folkston and Homeland, based on past experience, the FEMA described methodology, and other factors. Historic data have been examined from various sources (see Appendix A, Section X) including the National Climatic Data Center (see Appendix F), as well as from local history and personal accounts, in order to determine frequency of events. In addition, hazard maps generated by the GMIS Critical Facilities Inventory were examined.

The major hazard presented by heat waves is not so much to infrastructure as to the population. Despite the comparatively warm climate of Charlton County and the Cities of Folkston and Homeland, there are many residents who are not adequately prepared to handle extreme heat events

(for example, those without air conditioning in their homes). The risk is particularly high for the elderly and the young. Extreme Heat is a hazard that may result in loss of life or damage to property and the economy. Due to weather forecasting methods, most extreme heat events can be predicted with some level of accuracy ahead of time.

HEAT INDEX:

The table below shows the heat index as calculated by the National Weather Service. It is based on temperature and humidity.

Heat Index Category and Effects

Category	Heat Index	Possible heat disorders for people in high risk groups
Extreme Danger	130° F or higher	Heat stroke or sunstroke likely.
Danger	105 - 129° F	Sunstroke, muscle cramps, and/or heat exhaustion likely. Heatstroke possible with prolonged exposure and/or physical activity.
Extreme Caution	90 - 105° F	Sunstroke, muscle cramps, and/or heat exhaustion possible with prolonged exposure and/or physical activity.
Caution	80 - 90° F	Fatigue possible with prolonged exposure and/or physical activity.

NOAA's Watch, Warning, and Advisory Products for Extreme Heat

Each National Weather Service Forecast Office issues the following heat-related products as conditions warrant:

Excessive Heat Outlooks: Issued when the potential exists for an excessive heat event in the next 3-7 days. An Outlook provides information to those who need considerable lead time to prepare for the event, such as public utility staff, emergency managers, and public health officials. See the mean heat index and probability forecasts maps.

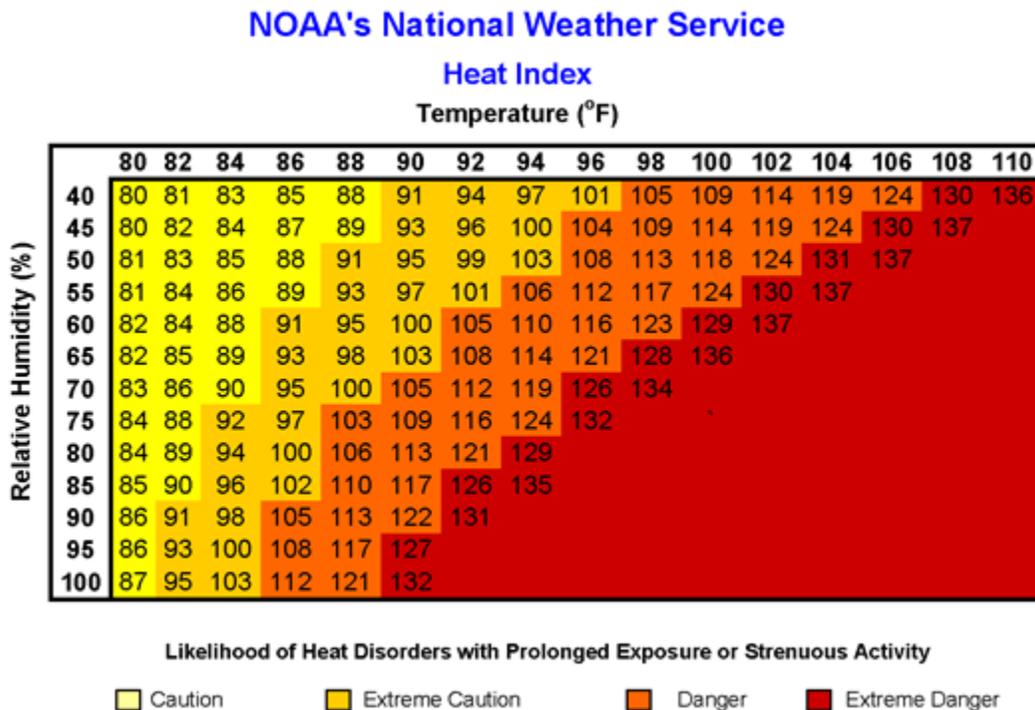
Excessive Heat Watches: Issued when conditions are favorable for an excessive heat event in the next 24 to 72 hours. A Watch is used when the risk of a heat wave has increased but its occurrence and timing is still uncertain. A Watch provides enough lead time so that those who need to prepare can do so, such as cities officials who have excessive heat event mitigation plans.

Excessive Heat Warning/Advisories: Issued when an excessive heat event is expected in the next 36 hours. These products are issued when an excessive heat event is occurring, is imminent, or has a very high probability of occurring. The warning is used for conditions posing a threat to life or property. An advisory is for less serious conditions that cause significant discomfort or inconvenience and, if caution is not taken, could lead to a threat to life and/or property.

How Forecasters Decide Whether to Issue Excessive Heat Products

NOAA’s heat alert procedures are based mainly on Heat Index Values. The Heat Index, sometimes referred to as the apparent temperature, is given in degrees Fahrenheit. The Heat Index is a measure of how hot it really feels when relative humidity is factored with the actual air temperature.

The Heat Index chart below shows Heat Index Values for various temperatures and humidity levels. As an example, if the air temperature is 96° F and the relative humidity is 65%, the heat index—i.e., how hot it feels—is 121° F. The Weather Service will initiate alert procedures when the Heat Index is expected to exceed 105°-110° F (depending on local climate) for at least 2 consecutive days.



IMPORTANT: Since heat index values were devised for shady, light wind conditions, **exposure to full sunshine can increase heat index values by up to 15° F.** Also, **strong winds**, particularly with very hot, dry air, can be extremely hazardous.

B. Profile of Extreme Heat Events, Frequency of Occurrences, Probability:

The historic record for Extreme Heat is spotty at best, with many unreported or underreported events. All of Charlton County and the Cities of Folkston and Homeland are equally vulnerable to Extreme Heat, although more severe effects are likely to be seen in densely populated areas. Extreme Heat can occur at any time during the warmer months of the year. Most Extreme Heat events can be predicted somewhat in advance.

The Heat Index in relation to the number of Heat Disorders during extreme heat events is unknown. Extreme Heat events, however, can significantly increase certain other listed hazards including Wildfire and Drought.

Charlton County (including the Cities of Folkston and Homeland):

According to National Climatic Data Center (NCDC) information (see Appendix F), there are zero (0) reports of Extreme Heat events occurring in Charlton County (including the Cities of Folkston and Homeland) between 01/01/1950 and 12/31/2017. However, the National Weather Service provides more complete data.

According to National Weather Service data, there are 39 reports of extreme heat events occurring in Charlton County (including the Cities) between 01/01/2006 and 12/31/2017. The Historic Recurrence Interval is 0.31 years. This is a 325.00% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 3.2, the past 20-year frequency is 1.95, and the past 50-year frequency is 0.78 (see the Hazard Frequency Table in Appendix D).

Since the previous Hazard Mitigation Plan became effective, 14 extreme heat events have occurred. These were all Heat Advisories. These have all been Heat Advisories. Extreme Heat Warnings were issued in prior years (3 were issued in 2007). Recently, a heat advisory was issued on June 17, 2016 when temperatures approached 100 degrees Fahrenheit. Elderly residents and those without air conditioning were most affected, but no injuries or deaths were reported.

C/D. Inventory of Assets Exposed and Potential Loses to Extreme Heat:

The threat of Extreme Heat in Charlton County and the Cities of Folkston and Homeland would primarily occur in the summer months, usually with some advance warning being possible.

In Worksheet 3A: Inventory of Assets appearing in Appendix A Section X, we estimate that all of Charlton County and the Cities of Folkston and Homeland area vulnerable to Extreme Heat.

Charlton County (including the Cities of Folkston and Homeland):

Unless otherwise specifically noted, it has been determined that approximately 100% of the Residential property (4,436 of 4,436) in Charlton County (which includes the Residential properties in the individual cities) may be effected which have a total value of \$363,752,000.00. Also, 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,776 of 1,776) in Charlton County (which includes those property types in the individual cities) may be effected which have a total value of \$321,839,740.

In addition, all 103 of the Critical Facilities and Infrastructure for Charlton County (including the Cities of Folkston and Homeland) are located in areas that may be effected by Extreme Heat and have a total of 1,083,382 square feet with a total replacement value of \$470,952,414.00 and a total content value of \$8,600,310.00 (see GMIS Critical Facilities Inventory Database Reports). Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

While we have these values listed, we recognize that an Extreme Heat event would not normally fully impact the value of these properties, or be big enough to wipe out all assets.

Typically, the damage caused by Extreme Heat events consists of illness and injury to people (for example, heat stroke and sunstroke), rather than damage to buildings and infrastructure. However, Extreme Heat can increase the risk of Wildfires (see Chapter 2, Section III and Chapter 4, Section III for more information).

E. Land Use and Development Trends Related to Extreme Heat:

Slight population growth has occurred in the years since the 2010 U.S. Census. The 2016 population of Charlton County (the most recent figure currently available) is estimated at 12,497, a 2.68% increase since 2010. The largest population change (officially) has occurred in that large numbers of the 2010 population were shifted from Charlton County to the City of Folkston, in part due to the geographic location of the prison population. The number of occupied houses in Charlton County (including Folkston and Homeland) is also estimated at 3,474 in the 2012-2016 U.S. Census American Community Survey. Overall population growth means that a larger total number of people could potentially be impacted by Extreme Heat events, especially those without air conditioning. However, population growth has been slow enough that it is not expected to affect the community's overall vulnerability..

The City of Folkston has adopted the 2017 NEC, which is in effect now. Charlton County, the City of Folkston and the City of Homeland have adopted building codes including the 2012 International Building Code and the 2012 International Property Maintenance Code. The 2018 NEC and updates to the prior codes including International Electrical & Plumbing & Mechanical Codes. will be done in January, 2018. The County now has Code Enforcement Officer who also serves the cities on request.

Charlton County has enacted a subdivision ordinance. Throughout Charlton County, if not zoned already, all areas are in the process of being zoned agricultural. There is at least a 4-5 mile area already zoned around the City of Folkston and the City of Homeland with the majority being either agricultural or some form of residential. There is more residential zoning in the City of Folkston and the City of Homeland than anything else. Most highways are zoned for setbacks.

Current trends are for agricultural areas to be converted to residential areas. No other land use and development trends that would increase or decrease the community's overall vulnerability to extreme heat have been identified at this time.

F. Multi-Jurisdictional Extreme Heat Differences:

All of Charlton County and the Cities of Folkston and Homeland may be equally affected by Extreme Heat. No differences between the jurisdictions in this regard have been determined. However, some densely populated areas (mainly the City of Folkston but also to a certain extent the City of Homeland) may contain older buildings with unreliable air conditioning or no air conditioning. Higher numbers of residents in such areas could be adversely affected by Extreme Heat.

G. General Overall HRV Summary of Extreme Heat Events And their Impact On The Community:

Extreme Heat has the potential to cause damage at any place, at any time, throughout Charlton County and the Cities of Folkston and Homeland. The cost of the damage may be higher if an Extreme Heat event is accompanied by a power failure, preventing air conditioning systems from functioning.

The Charlton County HMPUC recognizes Extreme Heat as one of the most likely natural hazard to occur and cause damage. They have developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impact of Extreme Heat on Charlton County and the Cities of Folkston and Homeland. These are contained in Chapter 4, Section X

Chapter #3: Local Technological/Man-Made Hazard, Risk and Vulnerability (HRV) Summary

Summary of changes:

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

Chapter 3 Section	Updates to Section
I. Public Health Emergency	New hazard

Table 3.1: Overview of updates to Chapter 3

I. MAN-MADE Hazard – Public Health Emergency

A. Identification of Hazard

A Public Health Emergency is an event that impacts the health of a significant portion of the population. Public Health Emergencies can occur at any time without warning. Examples of Public Health Emergencies arising from natural causes include disease outbreaks (including pandemics and food-borne illnesses) and poisoning from naturally occurring environmental factors. Public Health Emergencies may occur by themselves or may occur secondary to other natural hazards, for example when flooding leads to contamination of drinking water supplies. Public Health Emergencies may also be man-made (for example, chemical spills, radiation incidents, and bioterrorism).

The [National Disaster Medical System](#) Federal Partners Memorandum of Agreement defines a Public Health Emergency as "an emergency need for health care [medical] services to respond to a disaster, significant outbreak of an infectious disease, bioterrorist attack or other significant or catastrophic event. For purposes of NDMS activation, a Public Health Emergency may include but is not limited to, Public Health Emergencies declared by the [Secretary of HHS](#) [Health and Human Services] under 42 U.S.C. 247d, or a declaration of a major disaster or emergency under the [Robert T. Stafford Disaster Relief and Emergency Assistance Act](#) (Stafford Act), 42 U.S.C. 5121-5206).

Source: "Public Health Emergency-United States"

[A Public Health Emergency from the Perspective of the U.S. National Disaster Medical System \(NDMS\)](#)". 2007-04-10.

[NATIONAL DISASTER MEDICAL SYSTEM MEMORANDUM OF AGREEMENT AMONG THE DEPARTMENTS OF HOMELAND SECURITY, HEALTH AND HUMAN SERVICES, VETERANS AFFAIRS, AND DEFENSE](#)" (PDF). 2005-09-26.

B. Profile of Public Health Emergency Events, Frequency of Occurrences, Probability:

Many identified natural hazards in Charlton County, the City of Folkston and the City of Homeland have the potential to lead to secondary Public Health Emergencies. These include but are not limited to:

- Large numbers of injuries requiring treatment after an extreme weather event
- Contamination of drinking water, food supplies, and/or living spaces due to flooding
- Health effects resulting from extreme heat/cold events
- Health effects resulting from people being displaced/homeless due to a natural hazard event
- Contamination of drinking water and/or soil resulting from industrial activity

Charlton County, the City of Folkston and the City of Homeland are also vulnerable to Public Health Emergencies that may occur naturally on their own, including but not limited to:

- Communicable disease outbreaks
- Pandemic influenza
- Mosquito-borne illness
- Food-borne illness

Diseases that cause a Public Health Emergency may have a rapid onset or a slow onset. They may be highly localized or may be widespread in nature. Depending on the nature of the public health emergency, treatment may or may not be immediately available.

Some examples of recent Public Health Emergencies include:

Opioid Crisis

Every day, more than 90 Americans die after overdosing on opioids.¹ The misuse of and addiction to opioids—including [prescription pain relievers](#), [heroin](#), and synthetic opioids such as [fentanyl](#)—is a serious national crisis that affects public health as well as social and economic welfare. The Centers for Disease Control and Prevention estimates that the total "economic burden" of prescription opioid misuse alone in the United States is \$78.5 billion a year, including the costs of healthcare, lost productivity, addiction treatment, and criminal justice involvement.²

In the late 1990s, pharmaceutical companies reassured the medical community that patients would not become addicted to prescription opioid pain relievers, and healthcare providers began to prescribe them at greater rates. This subsequently led to widespread diversion and misuse of these medications before it became clear that these medications could indeed be highly

addictive.^{3,4} Opioid overdose rates began to increase. In 2015, more than 33,000 Americans died as a result of an opioid overdose, including prescription opioids, heroin, and illicitly manufactured fentanyl, a powerful synthetic opioid.¹ That same year, an estimated 2 million people in the United States suffered from substance use disorders related to prescription opioid pain relievers, and 591,000 suffered from a heroin use disorder (not mutually exclusive).⁵ Here is what we know about the opioid crisis:

- Roughly 21 to 29 percent of patients prescribed opioids for chronic pain misuse them.⁶
- Between 8 and 12 percent develop an opioid use disorder.⁷⁻⁹
- An estimated 4 to 6 percent who misuse prescription opioids transition to [heroin](#).⁷⁻⁹
- About 80 percent of people who use heroin first misused prescription opioids.⁷

This issue has become a public health crisis with devastating consequences including increases in opioid misuse and related overdoses, as well as the rising incidence of [neonatal abstinence syndrome](#) due to opioid use and misuse during pregnancy. The increase in injection drug use has also contributed to the spread of infectious diseases including [HIV and hepatitis C](#). As seen throughout the history of medicine, science can be an important part of the solution in resolving such a public health crisis.

1. Rudd RA, Seth P, David F, Scholl L. Increases in Drug and Opioid-Involved Overdose Deaths — United States, 2010–2015. *MMWR Morb Mortal Wkly Rep*. 2016;65. doi:10.15585/mmwr.mm650501e1.
2. Florence CS, Zhou C, Luo F, Xu L. The Economic Burden of Prescription Opioid Overdose, Abuse, and Dependence in the United States, 2013. *Med Care*. 2016;54(10):901-906. doi:10.1097/MLR.0000000000000625.
3. Morone NE, Weiner DK. Pain as the fifth vital sign: exposing the vital need for pain education. *Clin Ther*. 2013;35(11):1728-1732. doi:10.1016/j.clinthera.2013.10.001.
4. Van Zee A. The Promotion and Marketing of OxyContin: Commercial Triumph, Public Health Tragedy. *Am J Public Health*. 2009;99(2):221-227. doi:10.2105/AJPH.2007.131714.
5. Center for Behavioral Health Statistics and Quality (CBHSQ). *2015 National Survey on Drug Use and Health: Detailed Tables*. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2016.
6. Vowles KE, McEntee ML, Julnes PS, Frohe T, Ney JP, van der Goes DN. Rates of opioid misuse, abuse, and addiction in chronic pain: a systematic review and data synthesis. *Pain*. 2015;156(4):569-576. doi:10.1097/01.j.pain.0000460357.01998.f1.
7. Muhuri PK, Gfroerer JC, Davies MC. Associations of Nonmedical Pain Reliever Use and Initiation of Heroin Use in the United States. *CBHSQ Data Rev*. August 2013.
8. Cicero TJ, Ellis MS, Surratt HL, Kurtz SP. The Changing Face of Heroin Use in the United States: A Retrospective Analysis of the Past 50 Years. *JAMA Psychiatry*. 2014;71(7):821-826. doi:10.1001/jamapsychiatry.2014.366.
9. Carlson RG, Nahhas RW, Martins SS, Daniulaityte R. Predictors of transition to heroin use among initially non-opioid dependent illicit pharmaceutical opioid users: A natural history study. *Drug Alcohol Depend*. 2016;160:127-134. doi:10.1016/j.drugalcdep.2015.12.026.

H1N1

2009 H1N1 was first detected in the United States in April 2009. This virus was a unique combination of influenza virus genes never previously identified in either animals or people. The virus genes were a combination of genes most closely related to North American swine-lineage H1N1 and Eurasian lineage swine-origin H1N1 influenza viruses. Because of this, initial reports referred to the virus as a swine origin influenza virus. However, investigations of initial human cases did not identify exposures to pigs and quickly it became apparent that this new virus was circulating among humans and not among U.S. pig herds.

[Infection with this new influenza A virus \(then referred to as ‘swine origin influenza A virus’\) was first detected in a 10-year-old patient in California](#) on April 15, 2009, who was tested for influenza as part of a clinical study. Laboratory testing at CDC confirmed that this virus was new to humans. Two days later, CDC laboratory testing confirmed a second infection with this virus in another patient, an 8-year-old living in California about 130 miles away from the first patient who was tested as part of an influenza surveillance project. There was no known connection between the two patients. Laboratory analysis at CDC determined that the viruses obtained from these two patients were very similar to each other, and different from any other influenza viruses previously seen either in humans or animals. Testing showed that these two viruses were resistant to the two antiviral drugs amantadine and rimantadine, but susceptible to the antiviral drugs oseltamivir and zanamivir. CDC began an immediate investigation into the situation in coordination with state and local animal and human health officials in California.

The cases of 2009 H1N1 flu in California occurred in the context of sporadic reports of human infection with North American-lineage [swine influenza viruses](#) in the United States, most often associated with close contact with infected pigs. (During December 2005 – January 2009, 12 cases of human infection with swine influenza were reported; five of these 12 cases occurred in patients who had direct exposure to pigs, six patients reported being near pigs, and the source of infection in one case was unknown). Human-to-human spread swine influenza viruses had been rarely documented and had not been known to result in widespread community outbreaks among people. In mid-April of 2009, however, the detection of two patients infected with swine origin flu viruses 130 miles apart, raised concern that a novel swine-origin influenza virus had made its way into the human population and was spreading among people.

CDC worked closely with state and local animal and human health officials on epidemiological investigations by tracing contacts of both patients to try to determine the source of their infection and by examining whether there was any link between the patients and pigs. Surveillance also was enhanced to try to detect additional cases of human illness with this virus. Based on the geographic location of the first cases, lack of contact between these cases and swine, and data collected through contact tracing and laboratory testing, CDC epidemiologists suspected that human-to-human transmission of this virus had taken place. In an article entitled [Swine Influenza A \(H1N1\) Infection in Two Children --- Southern California, March-April 2009](#) published on April 21, 2009 in the [Morbidity and Mortality Weekly Report \(MMWR\)](#), CDC described the cases and requested that state public health laboratories send to CDC all influenza A specimens that could not be subtyped. That same day CDC responded to media inquiries related to the MMWR from medical reporters. Within a day, three additional samples of this new virus were identified in San Diego County and Imperial County California hospitals and sent to CDC for

further testing. CDC laboratory testing confirmed that these samples also were positive for the virus that would come to be called “2009 H1N1.”

On April 23, 2009, samples submitted by Texas revealed two additional cases of human infections with 2009 H1N1, transforming the investigation into a multistate outbreak and response. At the same time, CDC was testing 14 samples from Mexico, some of which had been collected from patients who were ill before the first 2 U.S. (California) patients. Results from seven of the samples were positive for 2009 H1N1 and similar findings were reported for specimens submitted by Mexico to Canada. It had now become clear that cases were occurring in multiple countries and human to human spread of the virus appeared to be ongoing. That same day CDC held the first formal full press briefing to inform the media and guide the public and health care response to the rapidly evolving situation. CDC held nearly 60 press briefings during the 2009 H1N1 response.

On April 24, 2009, CDC uploaded complete gene sequences of the 2009 H1N1 virus to a publicly-accessible international influenza database, which enabled scientists around the world to use the sequences for public health research and for comparison against influenza viruses collected elsewhere, and an updated report on the outbreak was published online in the MMWR. On Saturday, April 25, 2009, under the rules of the International Health Regulations, [the Director-General of WHO declared the 2009 H1N1 outbreak a Public Health Emergency of International Concern](#) and recommended that countries intensify surveillance for unusual outbreaks of influenza-like illness and severe pneumonia. Also on April 25, 2009, New York City officials reported an investigation into a cluster of influenza-like illness in a high school, and CDC testing confirmed two cases of 2009 H1N1 influenza infection in Kansas, and another case in Ohio shortly after.

On April 26, 2009, the United States Government determined that a public health emergency existed nationwide; CDC’s Strategic National Stockpile (SNS) began releasing 25% of the supplies in the stockpile that could be used to protect and treat influenza. This included 11 million regimens of [antiviral](#) drugs, and personal protective equipment including over 39 million respiratory protection devices (masks and respirators), gowns, gloves and face shields, to states (allocations were based on each state’s population). [On April 27, the WHO Director-General raised the level of influenza pandemic alert from phase 3 to phase 4](#), based primarily on epidemiological data demonstrating human-to-human transmission and the ability of the virus to cause community-level outbreaks. Based on reports of widespread influenza-like-illness and many severe illnesses and deaths in Mexico, CDC issued a travel health warning recommending that United States travelers postpone all non-essential travel to Mexico. As in past influenza seasons, CDC urged the public and especially those people at highest risk of influenza-related complications, to protect themselves by taking antiviral drugs early in their illness when recommended by their doctor; CDC also advised that everyone take every day preventive actions like covering coughs and sneezes and staying home from work and school when ill to help reduce the spread of illness.

[On April 29, 2009 WHO raised the influenza pandemic alert from phase 4 to phase 5](#), signaling that a pandemic was imminent, and requested that all countries immediately activate their pandemic preparedness plans and be on high alert for unusual outbreaks of influenza-like illness

and severe pneumonia. The U.S. Government was already implementing its pandemic response plan. CDC continued to post and update [guidance](#) for states, clinicians, laboratories, schools, partners and the [public](#) on topics ranging from the non-pharmaceutical measures communities could take to limit spread of disease, to how to evaluate a patient for possible infection with 2009 H1N1 influenza, to how to care for children who might be sick with 2009 H1N1 influenza. On April 30, 2009, CDC issued an [MMWR Dispatch describing the initial outbreak of 2009 H1N1 influenza in Mexico](#). Findings in Mexico indicated that transmission in Mexico involved person-to-person spread with multiple generations of transmission. CDC also issued an [MMWR Dispatch on the outbreak of 2009 H1N1 influenza infection in a high school in New York City, that was, at the time, the largest reported cluster of 2009 H1N1 cases in the United States](#). The Dispatch suggested that the high school age students had respiratory and fever symptoms similar to those caused by a seasonal flu, but in addition, about half had diarrhea, which is more than expected with seasonal flu. As the details of the outbreak unfolded, the Federal response continued in high gear. Also on April 30, 2009, [HHS announced that the Federal government would purchase an additional 13 million treatment courses of antiviral drugs to help fight influenza](#). The additional treatment courses would be added to the SNS.

As the outbreak spread, CDC began receiving reports of school closures and implementation of community-level social distancing measures meant to slow the spread of disease. School administrators and public health officials were following their pandemic plans and doing everything they could to slow the spread of illness. (Social distancing measures are meant to increase distance between people. Measures include staying home when ill unless to seek medical care, avoiding large gatherings, telecommuting, and implementing school closures).

Enterovirus D68

In 2014, the United States experienced a nationwide outbreak of EV-D68 associated with severe respiratory illness. From mid-August 2014 to January 15, 2015, CDC or state public health laboratories confirmed a total of 1,153 people in 49 states and the District of Columbia with respiratory illness caused by EV-D68. Almost all of the confirmed cases were among children, many whom had asthma or a history of wheezing. Additionally, there were likely millions of mild EV-D68 infections for which people did not seek medical treatment and/or get tested.

CDC received about 2,600 specimens for enterovirus lab testing during 2014, which is substantially more than usual. About 36% of those tested positive for EV-D68. About 33% tested positive for an enterovirus or rhinovirus other than EV-D68.

EV-D68 was detected in specimens from 14 patients who died and had samples submitted for testing. State and local officials have the authority to determine and release information about the cause of these deaths.

In general, infants, children, and teenagers are most likely to get infected with enteroviruses and become ill. That's because they do not yet have immunity (protection) from previous exposures to these viruses. We believe this is also true for EV-D68. Adults can get infected with enteroviruses, but they are more likely to have no symptoms or mild symptoms.

Children with asthma may have a higher risk for severe respiratory illness caused by EV-D68 infection.

MERS

Middle East Respiratory Syndrome (MERS) is an illness caused by a virus (more specifically, a [coronavirus \(http://www.cdc.gov/coronavirus/index.html\)](http://www.cdc.gov/coronavirus/index.html)) called Middle East Respiratory Syndrome Coronavirus (MERS-CoV). MERS affects the respiratory system (lungs and breathing tubes). Most MERS patients developed severe acute respiratory illness with symptoms of fever, cough and shortness of breath. About 3-4 out of every 10 patients reported with MERS have died.

Health officials first reported the disease in Saudi Arabia in September 2012. Through retrospective investigations, health officials later identified that the first known cases of MERS occurred in Jordan in April 2012. So far, all cases of MERS have been linked through travel to or residence in countries in and near the Arabian Peninsula. The largest known outbreak of MERS outside the Arabian Peninsula occurred in the Republic of Korea in 2015. The outbreak was associated with a traveler returning from the Arabian Peninsula.

MERS-CoV has spread from ill people to others through close contact, such as caring for or living with an infected person. MERS can affect anyone. MERS patients have ranged in age from younger than 1 to 99 years old.

CDC continues to closely monitor the MERS situation globally and work with partners to better understand the risks of this virus, including the source, how it spreads, and how infections might be prevented. CDC recognizes the potential for MERS-CoV to spread further and cause more cases globally and in the U.S. We have provided information for travelers and are working with health departments, hospitals, and other partners to prepare for this. In May 2014, CDC confirmed two unlinked imported cases of MERS in the United States – one to [Indiana](#), the other to [Florida](#). Both cases were among healthcare providers who lived and worked in Saudi Arabia. Both traveled to the U.S. from Saudi Arabia, where they are believed to have been infected. Both were hospitalized in the U.S. and later discharged after fully recovering.

CDC and other public health partners continue to closely monitor the MERS situation. The CDC recognizes the potential for MERS-CoV to spread further and cause more cases in the United States and globally. In preparation for this, The CDC has done the following:

- Continued to collaborate with international partners on epidemiologic and laboratory studies to better understand MERS
- Improved the way they collect data about MERS cases
- Increased lab testing capacity in states to detect cases
- Developed guidance and tools for health departments to conduct public health investigations when MERS cases are suspected or confirmed
- Provided recommendations for healthcare infection control and other measures to prevent disease spread

- Provided guidance for flight crews, Emergency Medical Service (EMS) units at airports, and U.S. Customs and Border Protection (CPB) officers about reporting ill travelers to CDC
- Disseminated up-to-date information to the general public, international travelers, and public health partners
- Used Advanced Molecular Detection (AMD) methods to sequence the complete virus genome on specimens from the two U.S. MERS cases to help evaluate and further describe the characteristics of MERS-CoV.

Ebola Virus Disease

Ebola, previously known as Ebola hemorrhagic fever, is a rare and deadly disease caused by infection with one of the Ebola virus species. Ebola can cause disease in humans and nonhuman primates (monkeys, gorillas, and chimpanzees).

Ebola viruses are found in several African countries. Ebola was first discovered in 1976 near the Ebola River in what is now the Democratic Republic of the Congo. Since then, outbreaks have appeared sporadically in Africa.

The natural reservoir host of Ebola virus remains unknown. However, on the basis of evidence and the nature of similar viruses, researchers believe that the virus is animal-borne and that bats are the most likely reservoir. Four of the five virus strains occur in an animal host native to Africa.

People get Ebola through direct contact (through broken skin or mucous membranes in, for example, the eyes, nose, or mouth) with:

- Blood or body fluids (including but not limited to urine, saliva, sweat, feces, vomit, breast milk, and semen) of a person who is sick with or has died from Ebola;
- Objects (like needles and syringes) that have been contaminated with body fluids from a person who is sick with Ebola or the body of a person who has died from Ebola,
- Infected fruit bats or primates (apes and monkeys), and
- Possibly from contact with semen from a man who has recovered from Ebola (for example, by having oral, vaginal, or anal sex)

Ebola Virus Disease has no cure or vaccine and due to the high mortality rate and highly infectious nature of the virus, planning efforts in the United States have been focused on controlling exposure for potentially exposed travelers from the countries where the outbreaks have been rampant. Because the timeframe between a person contracting the disease and exhibiting symptoms can be up to 21 days, combined with the ease of international travel, prevention and planning have become a focal point in public health preparedness.

Zika

Zika virus disease (Zika) is a disease caused by Zika virus that is spread to people primarily through the bite of an infected *Aedes* species mosquito. The most common symptoms of Zika are fever, rash, joint pain, and conjunctivitis (red eyes). The illness is usually mild with symptoms

lasting for several days to a week after being bitten by an infected mosquito. People usually don't get sick enough to go to the hospital, and they very rarely die of Zika. For this reason, many people might not realize they have been infected. Once a person has been infected, he or she is likely to be protected from future infections.

Zika virus can be spread from a pregnant woman to her fetus and has been linked to a serious birth defect of the brain called [microcephaly](#) in babies of mothers who had Zika virus while pregnant. CDC recommends special precautions for pregnant women. Pregnant women should consider delaying travel to [areas with Zika](#).

Zika virus was first discovered in 1947 and is named after the Zika forest in Uganda. In 1952, the first human cases of Zika were detected and since then, outbreaks of Zika have been reported in tropical Africa, Southeast Asia, and the Pacific Islands. Zika outbreaks have probably occurred in many locations. Before 2007, at least 14 cases of Zika had been documented, although other cases were likely to have occurred and were not reported. Because the symptoms of Zika are similar to those of many other diseases, many cases may not have been recognized.

- In May 2015, the Pan American Health Organization (PAHO) issued an alert regarding the first confirmed Zika virus infection in Brazil and on Feb 1, 2016, the World Health Organization (WHO) declared Zika virus a public health emergency of international concern (PHEIC). Local transmission has been reported in many other countries and territories. Zika virus likely will continue to spread to new areas. As an arboviral disease, Zika virus is nationally notifiable.

Charlton County (including the Cities of Folkston and Homeland):

According to National Climatic Data Center (NCDC) information (see Appendix F), there are zero (0) reports of Public Health Emergency events occurring in Charlton County (including the Cities of Folkston and Homeland) between 01/01/1950 and 12/31/2016.

In Charlton County (including the Cities of Folkston and Homeland), with the best available information, we have estimated a total of 14 public health emergency events in 195 years. The Historic Recurrence Interval is 13.93 years. The Historic Frequency Chance is 7.18% per year. The past 10-year Record Frequency Per Year is 0.5, the past 20-year frequency is 0.25, and the past 50-year frequency is 0.1.

C/D. Inventory of Assets Exposed and Potential Loses to Public Health Emergency:

The areas of the county with the highest population density would likely be most vulnerable to diseases that spread from person to person. The main area of high population density in Charlton County are the Cities of Folkston and Homeland. In addition, facilities that serve large volumes of people could potentially be vehicles for the transmission of communicable disease, as in an influenza pandemic; such areas include schools, colleges, large employment centers, and large retail areas such as malls.

Due to Charlton County's, the City of Folkston's and the City of Homeland's humid subtropical climate, mosquito-borne illness is a greater hazard here than in many other parts of the country. Levels of exposure to mosquito-borne illness depend on several factors, including:

- Presence and prevalence of an illness-causing mosquito-borne virus;
- Presence of mosquitoes, which may be exacerbated both by natural standing water (such as lakes and ponds) and by standing water in man-made structures, such as old tires, buckets, and other containers;
- Human exposure to mosquito bites, which may be influenced by factors such as the use of insect repellent, the amount of time spent outside, and the availability of air conditioning and window screens in residences.

The Cities of Folkston & Homeland do not operate a mosquito control program. Charlton County does have a mosquito control program which include spraying, surveillance, and public education. Mosquito-borne disease is an especially great concern as of early 2016 due to a Zika virus outbreak based in South and Central America that included many cases just over the county boundary in Florida.

Public Health Emergencies involving food-borne illness are typically quite localized because the illness affects those people who have consumed food from a contaminated source, e.g. a certain product from a grocery store or restaurant. Consequently, no single part of Charlton County, the City of Folkston or the City of Homeland is more or less vulnerable to such an emergency. A Public Health Emergency involving illness transmitted through water can affect the entire population of a city, in cases where that city's entire water supply is affected. In rural areas where drinking water is obtained from wells, the effects of such an emergency may be more localized.

Damage from Public Health Emergencies is equally likely to occur in any area of the county so all assets are exposed equally to potential Public Health Emergency damage to some degree.

The potential loss from a Public Health Emergency depends entirely on the scope and severity of the emergency and the capacity of emergency management agencies and health care facilities to respond. Public Health Emergencies may be small and highly localized in nature, or may affect an entire community and result in many fatalities. Due to the wide variety of possible Public Health Emergencies, it is impossible to make precise generalized estimates of the potential loss. In Worksheet 3A: Inventory of Assets appearing in Appendix A Section XI, we estimate that all of Charlton County and the Cities of Folkston and Homeland are vulnerable to Public Health Emergencies.

Charlton County (including the Cities of Folkston and Homeland):

Unless otherwise specifically noted, it has been determined that approximately 100% of the Residential property (4,436 of 4,436) in Charlton County (which includes the Residential properties in the individual cities) may be effected which have a total value of \$363,752,000.00. Also, 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,776 of 1,776) in Charlton County (which includes those property types in the individual cities) may be effected which have a total value of \$321,839,740.

In addition, all 103 of the Critical Facilities and Infrastructure for Charlton County (including the Cities of Folkston and Homeland) are located in areas that may be effected by Public Health Emergencies and have a total of 1,083,382 square feet with a total replacement value of \$470,952,414.00 and a total content value of \$8,600,310.00 (see GMIS Critical Facilities Inventory Database Reports). Complete inventory information is contained at <https://www.itos.uga.edu/gema>.

E. Land Use and Development Trends Related to Public Health Emergency:

Slight population growth has occurred in the years since the 2010 U.S. Census. The 2016 population of Charlton County (the most recent figure currently available) is estimated at 12,497, a 2.68% increase since 2010. The largest population change (officially) has occurred in that large numbers of the 2010 population were shifted from Charlton County to the City of Folkston, in part due to the geographic location of the prison population. The number of occupied houses in Charlton County (including Folkston and Homeland) is also estimated at 3,474 in the 2012-2016 U.S. Census American Community Survey.

The City of Folkston has adopted the 2017 NEC, which is in effect now. Charlton County, the City of Folkston and the City of Homeland have adopted building codes including the 2012 International Building Code and the 2012 International Property Maintenance Code. The 2018 NEC and updates to the prior codes including International Electrical & Plumbing & Mechanical Codes. will be done in January, 2018. The County now has Code Enforcement Officer who also serves the cities on request.

The St. Marys River and the Satilla River are protected to the 100 year floodplain, no septic systems are allowed within 100 feet of the river and no construction is allowed up to twenty five (25) feet from the rested edge of the river through river corridor protection ordinance. However, there is a great danger of fecal coliform contamination of river waters as a result of flooding of both old and hardship septic tank systems located along the rivers and tributaries. Water recharge areas are currently protected by ordinance.

Wetland areas are protected by ordinance. Soil and Sedimentation Control Ordinances are in effect.

Charlton County has enacted a subdivision ordinance. Throughout Charlton County, if not zoned already, all areas are in the process of being zoned agricultural. There is at least a 4-5 mile area already zoned around the City of Folkston and the City of Homeland with the majority being either agricultural or some form of residential. There is more residential zoning in the City of Folkston and the City of Homeland than anything else. Most highways are zoned for setbacks.

Current trends are for agricultural areas to be converted to residential areas.

Charlton County, the City of Folkston and the City of Homeland are all members of the National Flood Insurance Program. All of the local governments have some part of their jurisdictions

located within a floodplain. Floodplain maps for each local government are located in Appendix A Section II.

Charlton County and the Cities of Folkston and Homeland do not participate in the Community Rating System (CRS) program. As of August 25, 2017, they were not eligible according to FEMA (<http://www.fema.gov/library/viewRecord.do?id=3629>) and other information at <http://www.fema.gov> .

A wide range of land use and development regulations act to protect public health in Charlton County, such as animal control ordinances, plumbing codes, solid waste management regulations, environmental regulations, and zoning regulations that minimize incompatible land uses. All such regulations contribute to reducing the likelihood of a Public Health Emergency.

F. Multi-Jurisdictional Public Health Emergency Differences:

Jurisdictional differences in vulnerability to Public Health Emergencies depend on the nature and severity of the emergency, and on the mitigation measures in place. For example, communities not covered by any active mosquito control program may be more vulnerable to outbreaks of mosquito-borne illness. The Cities of Folkston and Homeland are generally more vulnerable to public health emergencies that are exacerbated by higher population density.

G. General Overall HRV Summary of Public Health Emergency Events And their Impact On The Community:

The entire population of Charlton County and the Cities of Folkston and Homeland are conceivably at risk from a Public Health Emergency. In some past public health emergencies, railroad cars containing mail, etc., were fumigated with Sulphur and other chemicals in Charlton County after they exited from Florida. The level of risk depends on the emergency type and severity and the measures that are in place to control and respond to it. Some types of Public Health Emergencies are impossible to predict and occur swiftly, leaving little or no time to respond. Others are more gradual in their onset, and mitigation measures can be put in place ahead of time.

Chapter #4: Local Natural Hazard Mitigation Goals and Objectives

Summary of Changes:

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

Chapter 4 Section	Updates to Section
I. Hurricane/Tropical Storm	<ul style="list-style-type: none"> ● Updated Goals, Objectives & Action Step Formatting, Numbering & Data Fields, Updated or Deleted Prior Action Steps and Added New Action Steps (if applicable)
II. Flood/SLOSH	<ul style="list-style-type: none"> ● Updated Goals, Objectives & Action Step Formatting, Numbering & Data Fields, Updated or Deleted Prior Action Steps and Added New Action Steps (if applicable)
III. Wildfire	<ul style="list-style-type: none"> ● Updated Goals, Objectives & Action Step Formatting, Numbering & Data Fields, Updated or Deleted Prior Action Steps and Added New Action Steps (if applicable) ● Added new Objectives
IV. Tornado	<ul style="list-style-type: none"> ● Updated Goals, Objectives & Action Step Formatting, Numbering & Data Fields, Updated or Deleted Prior Action Steps and Added New Action Steps (if applicable)
V. Thunderstorm/Wind	<ul style="list-style-type: none"> ● Updated Goals, Objectives & Action Step Formatting, Numbering & Data Fields, Updated or Deleted Prior Action Steps and Added New Action Steps (if applicable)
VI. Severe Winter Storm	<ul style="list-style-type: none"> ● Updated Goals, Objectives & Action Step Formatting, Numbering & Data Fields, Updated or Deleted Prior Action Steps and Added New Action Steps (if applicable)
VII. Hail	<ul style="list-style-type: none"> ● Updated Goals, Objectives & Action Step Formatting, Numbering & Data Fields, Updated or Deleted Prior Action Steps and Added New Action Steps (if applicable)
VIII. Drought	<ul style="list-style-type: none"> ● Updated Goals, Objectives & Action Step Formatting, Numbering & Data Fields, Updated or Deleted Prior Action Steps and Added New Action Steps (if applicable)
IX. Lightning	<ul style="list-style-type: none"> ● New Hazard
X. Extreme Heat	<ul style="list-style-type: none"> ● New Hazard

Table 4.1: Overview of updates to Chapter 4: Local Natural Hazards, Mitigation Goals and Objectives

Overall Community Mitigation Goals, Policies and Values Narrative

While Charlton County, the City of Folkston and the City of Homeland each operate autonomously, there is a high level of cooperation exhibited when it comes to hazard mitigation and emergency planning efforts. Each local government has designated representatives to participate in the emergency management process, whether it be during planning, response, or recovery phases. The local Emergency Management Agency hosts regular meetings to gather all of the relevant local, regional and state partners together to develop effective plans and strengthen relationships among all of the stakeholders. Working together, Charlton County, the City of Folkston and the City of Homeland have been able to access resources available through several state and federal sources that have been instrumental in improving the technical capabilities of these communities to more effectively mitigate hazards and provide more accurate warning and preparatory information to their citizens.

The hazards and risks associated with each of the local communities have changed with the addition of SLOSH to the Flood hazard and the addition of the hazards of Lightning, Extreme Heat and Public Health Emergency. Many of the action steps identified during previous versions of this plan are still relevant and remain a priority in this plan.

Authority for the development of this Plan was given by the Charlton County Commission as a result of their execution of the Grantee-Subgrantee Agreement for the Charlton County Hazard Mitigation Grant Program (HMGP) Planning Project; and by the Cities of Folkston and Homeland, located in Charlton County, through their participation in the planning project. The Charlton County Emergency Management Agency is authorized to oversee emergency management within Charlton County and the Cities of Folkston and Homeland.

The three jurisdictions have many current policies and programs related to hazard mitigation, which are described in detail in the Goals, Objectives, and Action Steps contained in Sections I through X of Chapter 4 of this Plan and in Section I of Chapter 5. Overall, with regard to hazard mitigation planning and implementation, the three jurisdictions share the same policies, programs, and resources across the board, due to the high level of coordination, cooperation, and resource sharing that exists between the three jurisdictions. All jurisdictions (within the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing Goals, Objectives, and Action Steps included in this plan. The amount of resources available to the three jurisdictions for expansion and improvement of existing programs will depend on factors such as the local government budgets and the availability of state and federal funding to support hazard mitigation activities.

Charlton County and the Cities of Folkston and Homeland participate in joint comprehensive planning, with a joint Comprehensive Plan that is updated every 5 years (the last updated was adopted in 2015). The Comprehensive Plan guides growth and development, and includes a Land Use element with “Character Area” maps designating the type of development, and restrictions on development, that are intended for various parts of the community. By informing zoning and development decisions, the Comprehensive Plan guides growth to areas where the population will be less vulnerable to many of the hazards covered in this Hazard Mitigation Plan, for example wildfires, which disproportionately affect residents of the Wildland-Urban Interface

area. The Comprehensive Plan is a multi-jurisdictional plan that is applicable to the County and both the Cities.

The Hazard Mitigation Plan is integrated into current policies and programs in multiple ways. It is used as guidance by the County Emergency Management Agency when making decisions about capital improvements. The Hazard Mitigation Plan and the Comprehensive Plan are coordinated; when one of these two documents is being updated, the other document is consulted in order to maintain consistency between the two. The Comprehensive Plan contains community policies to guide actions by local governments, and some of these policies are informed by the Hazard Mitigation Plan, as appropriate.

Although the County and Cities have limited staffing, the Southern Georgia Regional Commission is an excellent resource, providing assistance to local governments through a range of services and highly experienced staff. The SGRC assists the community with many of the functions involved in implementing this Plan, such as grant applications and other technical assistance.

Below, is a description of the comprehensive range of Mitigation Goals, Objectives and Action Steps that were developed by the Charlton County HMPUC to reduce damages and improve safety by Hazard Mitigation. These have been arranged by the natural hazards contained in Chapter Two Sections I-X and the hazard in Chapter 3 Section I. In this Chapter, in Sections I-X, there is an analysis and description of a comprehensive range of specific Mitigation Goals, Objectives and Action Steps and projects being considered to reduce the effects of each natural hazard. There is particular emphasis on future and existing buildings and infrastructure.

The Charlton County HMPUC discussed and identified the comprehensive range of Mitigation Goals, Objectives and Action Steps contained in Chapters 4 & 5 of this Plan after identifying the hazards noted in Chapter 2 Sections I-X and Chapter 3 Section I of this Plan. All areas of Charlton County, as well as the City of Folkston and the City of Homeland, were taken into account in the development of the comprehensive range of Mitigation Goals, Objectives and Action Steps. Identification of these has been developed over a long process after the weighing of many factors discovered during the planning process including risk assessment, storm history, past damage, community resources and other factors.

A list of the comprehensive range of Mitigation Goals, Objectives and Action Steps was compiled from the input of the Charlton County HMPUC, as well as from others within the community. Members of the Charlton County HMPUC prioritized the identified comprehensive range of Mitigation Goals, Objectives and Action Steps based on what would be perceived as most beneficial to the community. The benefits were all determined to be greater than the costs involved (if any).

Several criteria were established to assist the Charlton County HMPUC members in the prioritization of these suggested comprehensive range of Mitigation Goals, Objectives and Action Steps. Criteria included perceived cost benefit or cost effectiveness, availability of potential funding sources, overall feasibility, measurable milestones, multiple objectives, both public and political support for the proposed actions and the STAPLEE criteria.

Through this prioritization process, several projects emerged as being a greater priority than others. Some of the projects involved expending considerable amounts of funds to initiate the required actions. The determination of the cost benefit analysis (such as the FEMA B/CA model) of a project will be implemented at the time of project application or funding request. Other projects allowed the communities to pursue completion of the project using potential grant funding. Still others required no significant financial commitment by the communities.

There were no changes in the overall priorities since the previous plans were completed.

In Chapter 6 Section I-III there is a description of the planning process involved in selecting the comprehensive range of Mitigation Goals, Objectives and Action Steps. The Action Steps are given a rating of High, Medium, or Low Priority by the Charlton County HMPUC based on a number of factors (with a primary emphasis on prioritized cost versus benefit review) identified in Chapter 6 Section I.

Relevant comprehensive ranges of Mitigation Goals, Objectives and Action Steps are listed below throughout the chapter. The Charlton County EMA Director has been chosen by Charlton County, the City of Folkston and the City of Homeland to oversee the projects. The Charlton County EMA has been designated by Charlton County, the City of Folkston and the City of Homeland to be the coordinating agency for implementation and administration of these projects.

Section I

Hurricanes/Tropical Storms

A. Community Mitigation Goals:

As previously indicated in Chapter 2 Section I, Hurricanes/Tropical Storms may cause substantial damage to life and property in Charlton County, the City of Folkston and the City of Homeland. They are usually accompanied by some advanced notice, giving time to prepare. The Charlton County HMPUC believes that, due to the fact that these Hurricanes/Tropical Storms have the potential to be extremely violent and cause great damage, a comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) should be implemented to reduce the threat of Hurricane/Tropical Storm damage in Charlton County, the City of Folkston and the City of Homeland.

B. Identification and Analysis of Comprehensive Range of Mitigation Options:

The Charlton County HMPUC has identified the comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) in order to reduce or eliminate the damage caused by Hurricanes/Tropical Storms in the community.

1. Structural and Non-Structural Mitigation:

The comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) includes both structural solutions and non-structural mitigation solutions that the Charlton County HMPUC has taken into account.

2. Existing Policies, Regulations, Ordinances and Land Use:

The City of Folkston has adopted the 2017 NEC, which is in effect now. Charlton County, the City of Folkston and the City of Homeland have adopted building codes including the 2012 International Building Code and the 2012 International Property Maintenance Code. The 2018 NEC and updates to the prior codes including International Electrical & Plumbing & Mechanical Codes were done in January, 2018. The County now has a Code Enforcement Officer who also serves the cities on request.

Wetland areas are protected by ordinance. Soil and Sedimentation Control Ordinances are in effect.

Charlton County has enacted a subdivision ordinance. Throughout Charlton County, if not zoned already, all areas are in the process of being zoned agricultural. There is at least a 4-5 mile area already zoned around the City of Folkston and the City of Homeland with the majority being either agricultural or some form of residential. There is more residential zoning in the City of Folkston and the City of Homeland than anything else. Most highways are zoned for setbacks.

Current trends are for agricultural areas to be converted to residential areas.

Charlton County, the City of Folkston and the City of Homeland are all members of the National Flood Insurance Program. All of the local governments have some part of their jurisdictions located within a floodplain. Floodplain maps for each local government are located in Appendix A Section II.

Charlton County and the Cities of Folkston and Homeland do not participate in the Community Rating System (CRS) program. As of August 25, 2017, they were not eligible according to FEMA (<http://www.fema.gov/library/viewRecord.do?id=3629>) and other information at <http://www.fema.gov>.

The three jurisdictions have many current policies and programs related to hazard mitigation, which are described in detail in the Goals, Objectives, and Action Steps contained in Sections I through X of Chapter 4 of this Plan and in Section I of Chapter 5. All jurisdictions (within the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing Goals, Objectives, and Action Steps included in this plan. The amount of resources available to the three jurisdictions for expansion and improvement of existing programs will depend

on factors such as the local government budgets and the availability of state and federal funding to support hazard mitigation activities.

Since the previous plan was completed, there have been no changes in development within the community that would increase or decrease the community's overall vulnerability to the hazard.

All jurisdictions (within the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing goals, objectives and action steps included in this plan.

3. Community Values, Historic and Special Considerations:

Charlton County, the City of Folkston and the City of Homeland have historic buildings, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges in regards to the potential Hazard Mitigation Hurricane/Tropical Storm Planning Activities involving historic buildings. The Charlton County Courthouse and others are Critical Facilities that either already are on, or should be considered potentially eligible for, the National Register of Historic Places. The comprehensive range of Mitigation Goals, Objectives and Action Steps for this hazard are outlined below in Section C.

Worksheet #4-STAPLEE Criteria was completed for each Action Step. Please see worksheets contained in Appendix D Section I.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

C. Hurricane/Tropical Storm-Mitigation Strategy and Recommendation

Goal #1: Prevent or reduce damage caused by Hurricanes/Tropical Storms in Charlton County, the City of Folkston and the City of Homeland.

Objective #1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, and the public, due to Hurricanes/Tropical Storms.

Action Step #1: Continue to work with C.E.R.Ts (Community Emergency Response Teams) in Charlton County and the Cities of Folkston and Homeland.

Responsible Department	Charlton County EMA
Anticipated Cost	Staff Time

Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	New

Action Step #2: If possible, design new educational facilities to the level that they could be used as public shelters for emergency purposes and test current shelters and educational facilities for safety and effectiveness in Charlton County and the Cities of Folkston and Homeland.

Responsible Department	Charlton County BOE
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds/GEMA/FEMA/Homeland Security/Red Cross
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #3: Work with GDOT to improve unsafe roads in Charlton County and in the Cities of Folkston and Homeland that already are, or could be, evacuation routes including St. Mary's River Bluff Road.

Responsible Department	Charlton County/Folkston/Homeland Road Departments
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds/GA DCA CDBG/GDOT/FHWA
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #4: Construct a storage building for storage of emergency materials needed for shelters, relocate materials from other areas, secure additional cots and materials, medications and dehydrated foods for shelters. (Formerly Action Step 1.1.5)

Responsible Department	Charlton County EMA
Anticipated Cost	\$500,000
Existing & Potential Funding Sources	Local Operating Funds/GEMA/FEMA/Homeland Security/Red Cross
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	Medium
Status	Deferred from 2012-2017 due to costs

Action Step #5: Cut made to fit plywood window covers and install construction materials necessary for use during Hurricanes/Tropical Storms at Critical Facilities in Charlton County and the Cities of Folkston and Homeland. (Formerly Action Step 1.1.6)

Responsible Department	Charlton County/Folkston/Homeland Public Works Departments
Anticipated Cost	\$100,000
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	Medium
Status	Deferred from 2012-2017 due to costs

Action Step #6: Designate and attempt to supply new Red Cross Shelters in Charlton County and the Cities of Folkston and Homeland. (Formerly Action Step 1.1.7)

Responsible Department	Charlton County EMA
Anticipated Cost	\$100,000
Existing & Potential Funding Sources	Local Operating Funds/GEMA/FEMA/Homeland Security/Red Cross
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	Medium
Status	Ongoing

Action Step #7: Work with GDOT to improve highways in Charlton County and in the Cities of Folkston and Homeland that already are, or could be, evacuation routes., including US 1 in Downtown Folkston, SR 40 at same spot previously expanded. (Formerly Action Step 1.1.8)

Responsible Department	Charlton County/Folkston/Homeland Road Departments
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	GDOT/FHWA
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #8: Order 2 new ambulances, an assisted lift mechanism, cardiac monitors, additional Supplies and Equipment for Charlton County EMS. (Formerly Action Step 1.1.9)

Responsible Department	Charlton County EMS
Anticipated Cost	\$250,000
Existing & Potential Funding Sources	Local Operating Funds, FEMA
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Deferred from 2012-2017 due to costs

Objective #2: Advise the public of health & safety precautions and procedures necessary during Hurricanes/Tropical Storms and other events and on hazard mitigation, in general, in Charlton County, the City of Folkston and the City of Homeland.

Action Step #1: Acquire and distribute literature from state agencies regarding disaster health & safety issues in Charlton County and the Cities of Folkston and Homeland.

Responsible Department	Charlton County EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #2: Order additional road signage for emergency traffic circulation and publish most efficient routes in advance in Charlton County and the Cities of Folkston and Homeland.

Responsible Department	Charlton County/Folkston/Homeland Road Departments
Anticipated Cost	\$6,500
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #3: Distribute information concerning hazard mitigation to area news markets and by speaking at schools and civic clubs in Charlton County and the Cities of Folkston and Homeland.

Responsible Department	Charlton County EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #4: Provide funding for programs that enhance public safety and health in Charlton County.

Responsible Department	Charlton County EMA
Anticipated Cost	\$1,800,000
Existing & Potential Funding Sources	Local Operating Funds/Quality Growth Grants
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Objective #3: Ensure reliable electrical power and communications efficiency at Critical Facilities and among agencies during Hurricanes/Tropical Storms and other events in Charlton County, the City of Folkston and the City of Homeland.

Action Step #1: Purchase generators and trailer for use at Critical Facilities (including EMS/EMA Main Building, Folkston Elementary School Shelter serving 500, First Baptist Church serving 100, St. George Church of God serving 100, Camp Pinckney Baptist Church serving 100, St. George New Life Baptist Church serving 60, Winoker EOC, Folkston EOC, St. George EOC, Charlton Rd. Dept. Fuel Pumps, Charlton Road Dept. St. George Fuel Pumps, Lift Station Portable and pre-wire Critical Facilities & gas pumps for generator use in Charlton County and the Cities of Folkston and Homeland.

Responsible Department	Charlton County/Folkston/Homeland Public Works Departments
Anticipated Cost	\$300,000
Existing & Potential Funding Sources	Local Operating Funds/GEMA/FEMA/Homeland Security/Red Cross
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Deferred from 2012-2017 due to costs

Action Step #2: Purchase communications equipment (radios, pagers, batteries and chargers) that have multi-channel capabilities and store them at certain Critical Facilities in Charlton County and the Cities of Folkston and Homeland.

Responsible Department	Charlton County EMA
Anticipated Cost	\$100,000
Existing & Potential Funding Sources	Local Operating Funds/GEMA/FEMA/Homeland Security
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Deferred from 2012-2017 due to costs

Action Step #3: Install new and/or repair existing radio repeaters and antennas, which will be automated and zone specific, in Charlton County (especially at Winoker, Race Pond, Georgia Bend and Rayonnier Land at south end of county) and in the Cities of Folkston and Homeland.

Responsible Department	Charlton County EMA
Anticipated Cost	\$350,000
Existing & Potential Funding Sources	Local Operating Funds/GEMA/FEMA/Homeland Security
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Deferred from 2012-2017 due to costs

Action Step #4: Install GPS location systems in Emergency Vehicles.

Responsible Department	Charlton County Sheriff/Fire/EMS Departments, Folkston Police & Fire Departments, Homeland Police & Fire Departments
Anticipated Cost	\$2,500 per vehicle
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland

Timeframe	2018-2023
Priority	High
Status	Deferred from 2012-2017 due to project costs

Action Step #5: In Charlton County, purchase 15 Sheriff Vehicles for emergency use.

Responsible Department	Charlton County Sheriff's Department
Anticipated Cost	\$40,000 each
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County
Timeframe	Ongoing After Implementation 2018-2023
Priority	High
Status	New

Action Step #6: In the City of Homeland, purchase 1 Police Vehicle for emergency use.

Responsible Department	City of Homeland Police Department
Anticipated Cost	\$40,000 each
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	City of Homeland
Timeframe	Ongoing After Implementation 2018-2023
Priority	High
Status	Deferred from 2012-2017 due to project costs

Action Step #7: In the City of Folkston, purchase 5 Police Vehicle for emergency use.

Responsible Department	City of Folkston Police Department
Anticipated Cost	\$40,000 each
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	City of Homeland
Timeframe	Ongoing After Implementation 2018-2023
Priority	High
Status	New

Action Step #8: In the City of Homeland, purchase 2 generators for water facilities to use during emergencies and pre-wire for generators, to serve entire population of 910 persons.

Responsible Department	City of Homeland Water Dept./Charlton County EMA
Anticipated Cost	\$60,000 each
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	City of Homeland
Timeframe	2018-2023
Priority	High
Status	Deferred from 2012-2017 due to project costs

Action Step #9: In the City of Folkston, purchase 6 generators for the 3 water facilities to use during emergencies and pre-wire for generators, to serve entire population of 2,502 persons.

Responsible Department	City of Folkston Water Dept./Charlton County EMA
Anticipated Cost	\$60,000 each
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	City of Folkston
Timeframe	2018-2023

Priority	High
Status	Deferred from 2012-2017 due to project costs

Action Step #10: Identify kitchens, restaurants and fast food establishments that use natural gas or propane for use if electricity is out for long periods during emergency situations.

Responsible Department	Charlton County EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the Action Step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the Charlton County EMA. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (TV, Web Site, Local Newspaper, City Council Meetings, County Commission Meetings, social media, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of goals, objectives, and action steps, or components thereof, that have been completed, which in turn will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Completed And Deleted Action Steps:

Goal 1 Objective 1:

Action Step #1: Develop C.E.R.Ts (Community Emergency Response Teams) in Charlton County and the Cities of Folkston and Homeland. COMPLETED

Action Step #2: If possible, design new educational facilities to the level that they could be used as public shelters for emergency purposes and test current shelters and educational facilities for safety and effectiveness in Charlton County and the Cities of Folkston and Homeland. PARTIALLY COMPLETED-ONGOING: Bethune Middle School designed as shelter.

Action Step #4: Install automated recorders (and/or sign up for Code Red type system) and create a joint information line & website to educate and inform the public on hazardous weather information, closings, events, etc. COMPLETED

Action Step #5 (Now Action Step 1.1.4): Apply for a Red Cross storage trailer and construct a storage building for storage of emergency materials needed for shelters, etc., relocate materials from other areas, secure additional cots and materials, medications and dehydrated foods for shelters. PARTIALLY COMPLETED-ONGOING: County obtained a storage trailer from a local church.

Action Step #7 (Now Action Step 1.1.6): Designate and attempt to supply new Red Cross Shelters (including Middle School) and maintain an operating Red Cross office in Charlton County and the Cities of Folkston and Homeland. PARTIALLY COMPLETED: Middle School designated/supplied as new shelter. DELETED: Red Cross will not operate an office in the county.

Action Step #8 (Now Action Step 1.1.7): Work with GDOT to improve highways in Charlton County and in the Cities of Folkston and Homeland that already are, or could be, evacuation routes., including SR 252 past the Prison (round the curve where it dips down and frequently floods), US 1 Overpass, US 1 in Downtown Folkston, SR 40 at same spot previously expanded, and SR 121/85 in GA Bend, SR 94 in St. George. PARTIALLY COMPLETED-ONGOING: All except U.S. #1 in Downtown Folkston are now improved.

Goal 1 Objective 3:

Action Step #5: In Charlton County, purchase 3 Sheriff Vehicles for emergency use. COMPLETED.

Action Step #7: In the City of Folkston, purchase 5 Police Vehicle for emergency use. COMPLETED.

Action Step #10: In the City of Folkston, purchase 1 stationary generator for use at the prison wastewater treatment facilities during emergencies and pre-wire for generators to serve the approximately 2,492 prison population. COMPLETED.

G.Unchanged Action Steps:

Goal 1 Objective 1:

Action Step #2: If possible, design new educational facilities to the level that they could be used as public shelters for emergency purposes and test current shelters and educational facilities for safety and effectiveness in Charlton County and the Cities of Folkston and Homeland

Action Step #3: Work with GDOT to improve unsafe roads in Charlton County and in the Cities of Folkston and Homeland that already are, or could be, evacuation routes including St. Mary's River Bluff Road.

Action Step #5 (Now Action Step 1.1.4): Construct a storage building for storage of emergency materials needed for shelters, etc., relocate materials from other areas, secure additional cots and materials, medications and dehydrated foods for shelters.

Action Step #6 (Now Action Step 1.1.5): Cut made to fit plywood window covers and install construction materials necessary for use during Hurricanes/Tropical Storms at Critical Facilities in Charlton County and the Cities of Folkston and Homeland.

Action Step #7 (Now Action Step 1.1.6): Designate and attempt to supply new Red Cross Shelters (including Middle School) and maintain an operating Red Cross office in Charlton County and the Cities of Folkston and Homeland.

Action Step #8 (Now Action Step 1.1.7): Work with GDOT to improve highways in Charlton County and in the Cities of Folkston and Homeland that already are, or could be, evacuation routes., including US 1 in Downtown Folkston, SR40 at same spot previously expanded [Deleted completed roads previously in Action Step].

Action Step #9 (Now Action Step 1.1.8): : Order 2 new ambulance, an assisted lift mechanism, cardiac monitors, additional Supplies and Equipment for Charlton County EMS. (Changed quantities and added equipment).

Goal 1 Objective 2:

Action Step #1: Acquire and distribute literature from state agencies regarding disaster health & safety issues in Charlton County and the Cities of Folkston and Homeland.

Action Step #2: Order additional road signage for emergency traffic circulation and publish most efficient routes in advance in Charlton County and the Cities of Folkston and Homeland.

Action Step #3: Distribute information concerning hazard (changed from pre-disaster) mitigation to area news markets and by speaking at schools and civic clubs in Charlton County and the Cities of Folkston and Homeland.

Action Step #4: Provide funding for programs that enhance public safety and health in Charlton County

Goal 1 Objective 3:

Action Step #1: Purchase generators and trailer for use at Critical Facilities (including EMS/EMA Main Building, Folkston Elementary School Shelter serving 500, First Baptist Church serving 100, St. George Church of God serving 100, Camp Pinckney Baptist Church serving 100, St. George New Life Baptist Church serving 60 and others), Winoker EOC, Folkston EOC, St. George EOC, Charlton Rd. Dept. Fuel Pumps, Charlton Road Dept. St. George Fuel Pumps, Lift Station Portable and pre-wire Critical Facilities & gas pumps for generator use in Charlton County and the Cities of Folkston and Homeland. [Changed to stationary generators, except one lift station portable and added locations].

Action Step #2: Purchase communications equipment (radios, pagers, batteries and chargers) that have multi-channel capabilities and store them at certain Critical Facilities in Charlton County and the Cities of Folkston and Homeland.

Action Step #3: Install new and/or repair existing radio repeaters and antennas, which will be automated and zone specific, in Charlton County (especially at Winoker, Race Pond, Georgia Bend and Rayonnier Land at south end of county) and in the Cities of Folkston and Homeland.

Action Step #4: Install GPS location systems in Emergency Vehicles.

Action Step #6: In the City of Homeland, purchase 1 Police Vehicle for emergency use.

Action Step #8: In the City of Homeland, purchase 2 generators for water facilities use during emergencies and pre-wire for generators, to serve entire population of 910 persons.

Action Step #9: In the City of Folkston, purchase 6 generators for the 3 water facilities use during emergencies and pre-wire for generators, to serve entire population of 2,502 persons.

Action Step #11 (Now Action Step 1.3.10): Identify kitchens, restaurants and fast food establishments that use natural gas or propane for use if electricity is out for long periods during emergency situations.

Section II **Flood/SLOSH**

A. Community Mitigation Goals:

As previously indicated in Chapter 2 Section II, Floods/SLOSH may cause substantial damage to life, property and the economy in Charlton County, the City of Folkston and the City of Homeland. Floods/SLOSH are unpredictable and could happen at any time in any Flood of SLOSH prone area.

The Charlton County HMPUC believes that, due to the fact that many of the major Flood/SLOSH areas are located on or adjacent to the Satilla River & St. Marys River, numerous other creeks and streams and certain areas surrounding the main drainage canals in Charlton County, the City of Folkston and the City of Homeland and the fact that flooding regularly occurs in certain areas due to rainfall and other factors, this comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) should be implemented to reduce the threat of Flood/SLOSH damage in Charlton County, the City of Folkston and the City of Homeland.

B. Identification and Analysis of the Comprehensive Range of Mitigation Options: The Charlton County HMPUC has identified the comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) in order to reduce or eliminate the damage caused by Flood/SLOSH in Charlton County, the City of Folkston and the City of Homeland.

1. Structural and Non-Structural Mitigation:

The comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) includes both structural solutions and non-structural mitigation solutions that the Charlton County HMPUC has taken into account.

2. Existing Policies, Regulations, Ordinances and Land Use:

The City of Folkston has adopted the 2017 NEC, which is in effect now. Charlton County, the City of Folkston and the City of Homeland have adopted building codes including the 2012 International Building Code and the 2012 International Property Maintenance Code. The 2018 NEC and updates to the prior codes including International Electrical & Plumbing & Mechanical Codes. will be done in January, 2018. The County now has Code Enforcement Officer who also serves the cities on request.

The St. Marys River and the Satilla River are protected to the 100 year floodplain, no septic systems are allowed within 100 feet of the river and no construction is allowed up to twenty five (25) feet from the rested edge of the river through river corridor protection ordinance. However, there is a great danger of fecal coliform contamination of river waters as a result of flooding of both old and hardship septic tank systems located along the rivers and tributaries. Water recharge areas are currently protected by ordinance.

Wetland areas are protected by ordinance. Soil and Sedimentation Control Ordinances are in effect.

Charlton County has enacted a subdivision ordinance. Throughout Charlton County, if not zoned already, all areas are in the process of being zoned agricultural. There is at least a 4-5 mile area already zoned around the City of Folkston and the City of Homeland with the majority being either agricultural or some form of residential. There is more residential zoning in the City of Folkston and the City of Homeland than anything else. Most highways are zoned for setbacks.

Current trends are for agricultural areas to be converted to residential areas.

Charlton County, the City of Folkston and the City of Homeland are all members of the National Flood Insurance Program. All of the local governments have some part of their jurisdictions located within a floodplain. Floodplain maps for each local government are located in Appendix A Section II.

Charlton County and the Cities of Folkston and Homeland do not participate in the Community Rating System (CRS) program. As of August 25, 2017, they were not eligible according to FEMA (<http://www.fema.gov/library/viewRecord.do?id=3629>) and other information at <http://www.fema.gov> .

The three jurisdictions have many current policies and programs related to hazard mitigation, which are described in detail in the Goals, Objectives, and Action Steps contained in Sections I through X of Chapter 4 of this Plan and in Section I of Chapter 5. All jurisdictions (within the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing Goals, Objectives, and Action Steps included in this plan. The amount of resources available to the three jurisdictions for expansion and improvement of existing programs will depend on factors such as the local government budgets and the availability of state and federal funding to support hazard mitigation activities.

Since the previous plan was completed, there have been no changes in development within the community that would increase or decrease the community's overall vulnerability to the hazard.

All jurisdictions (within the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing goals, objectives and action steps included in this plan.

3. Community Values, Historic and Special Considerations:

Charlton County, the City of Folkston and the City of Homeland have historic buildings, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges in regards to the potential Hazard Mitigation Flood Planning Activities involving historic buildings The

comprehensive range of Mitigation Goals, Objectives and Action Steps for this hazard are outlined below in Section C.

There are no Critical Facilities that are also historic properties that appear in the floodplain according to GMIS. The GMIS reports do list four (4) Repetitive Loss/NFIP properties in Charlton County, but none in the Cities of Folkston or Homeland.

There are 4 of the Critical Facilities and Infrastructure for Charlton County (including the Cities of Folkston and Homeland) that are located in a Flood Hazard Area (1 in a hazard Score of 4 and 3 in a Hazard Score of 3) and have a total of 1,025 square feet (see GMIS Critical Facilities Inventory Database Reports contained Appendix A Section II). The total value of these 4 Critical Facilities is \$307,500.00, as well as a content value of \$300,000.00

Several of these are City of Folkston Wastewater Lift Stations. These may pose a danger of overflow and/or sewage contamination of the surrounding area should they be flooded. However, their current locations and function are essential to the efficient operation of the wastewater system; moving them is not recommended.

Worksheet #4-STAPLEE Criteria was completed for each Action Step. Please see worksheets contained in Appendix D Section I.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include Action Steps designed to protect new buildings and infrastructure from the effects of Flood/SLOSH.

5. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include Action Steps designed to protect existing buildings and infrastructure from the effects of Flood/SLOSH.

C. Flood-Mitigation Strategy and Recommendation:

Goal#1: Prevent or reduce damage caused by Floods/SLOSH in Charlton County, the City of Folkston and the City of Homeland.

Objective #1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, due to Floods/SLOSH.

Action Step #1: Conduct studies of and implement projects to protect the Critical Facilities & Infrastructure from Flood/SLOSH damages in Charlton County and the Cities of Folkston and Homeland.

Responsible Department	Charlton County/Folkston/Homeland Public Works Departments
Anticipated Cost	\$500,000 each project

Existing & Potential Funding Sources	Local Operating Funds/HUD CDBG
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #2: Conduct storm-water drainage replacement, repair & cleaning and maintain canals in Charlton County and the Cities of Folkston and Homeland.

Responsible Department	Charlton County/Folkston/Homeland Public Works Departments
Anticipated Cost	\$500,000 each project
Existing & Potential Funding Sources	Local Operating Funds/HUD CDBG
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #3: Plan flood and drainage projects in Charlton County on Allen O' Berry Road, Billie Thrift Road, Black River Area (Saint Mary's), B.M. Prescott Road, Bragg Street (St. George), Canady Loop, Chancey Road Bridge, Creek Landing Road, Emmaus Church Road, Forrest Lake Area, GA Hwy. #94, GA Hwy. #98, GA Hwy. #121 near 12 mile marker, GA Bend Area, Jimmy Todd Road, Lavender Road, Lowther Road, Newell Road, Paxton Road (at Sardis Road), Pinehurst Area (out GA Hwy. #40), Ralph Davis Road, Saint Mary's Bluff Road, Saint Mary's River Area, Willie Dixon Road, Roddenberry Road and in other Flood/SLOSH prone areas, including installing and replacing culverts.

Responsible Department	Charlton County Public Works Departments
Anticipated Cost	\$500,000 each project
Existing & Potential Funding Sources	Local Operating Funds/HUD CDBG
Jurisdiction	Unincorporated Charlton County
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #4: Update & enforce laws prohibiting developers from filling in drainage canals.

Responsible Department	Charlton County/Folkston/Homeland Building & Codes Department
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds/HUD CDBG
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Deferred from 2012-2017 due to political inactivity

Action Step #5: Attempt to take precautions at water facilities in unincorporated Charlton County and in the City of Folkston and the City of Homeland to insure flood protection, as funds become available to do so.

Responsible Department	Charlton County/Folkston/Homeland Public Works Departments
Anticipated Cost	\$500,000 each project

Existing & Potential Funding Sources	Local Operating Funds/GEMA/FEMA/HUD CDBG
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #6: Enact a public awareness campaign regarding Floods/SLOSH and develop brochures for developers & the public regarding land clearing, roads, erosion and building in unincorporated Charlton County and in the City of Folkston and the City of Homeland to insure Flood/SLOSH protection, as funds become available to do so.

Responsible Department	Charlton County EMA
Anticipated Cost	\$25,000
Existing & Potential Funding Sources	Local Operating Funds/GEMA/FEMA
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Deferred from 2012-2017 due to project costs

Action Step #7: Provide funding for the support of the St. Marys River Management Committee and contribute funding to support GA DNR programs that study the St. Marys and Satilla Rivers.

Responsible Department	Charlton County Commission/Folkston City Council/Homeland City Council
Anticipated Cost	\$5,000
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #8: Update & enforce laws regarding proper drainage (2000+ properties w/out culvert pipes), purchase pipes for public sale, change mail box locations, explore replacing undersized pipes with at least 18" & 24" pipes, construct more outfall ditches & acquire more drainage easements, do regular maintenance on drainage/outfall ditches in Charlton County and in the City of Folkston and the City of Homeland.

Responsible Department	Charlton County/Folkston/Homeland Road Departments
Anticipated Cost	\$500,000 each project
Existing & Potential Funding Sources	Local Operating Funds/HUD CDBG
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	Medium
Status	Ongoing

Action Step #9: Work to alleviate present & future evacuation & emergency access problems in subdivision areas in Charlton County and the City of Folkston and the City of Homeland.

Responsible Department	Charlton County/Folkston/Homeland Road Departments
Anticipated Cost	\$500,000 each project
Existing & Potential Funding Sources	Local Operating Funds/GEMA/FEMA/HUD CDBG/GDOT
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	Medium
Status	Ongoing

Action Step #10: Work to preserve wetland areas in Charlton County and the City of Folkston and the City of Homeland to assure that excess water can be captured.

Responsible Department	Charlton County/Folkston/Homeland Building & Code Departments
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	Medium
Status	Ongoing

Action Step #11: After Flood/SLOSH events, or other hazard events in Charlton County and the City of Folkston and the City of Homeland, attempt to perform analysis on properties effected to determine if events have occurred in the past and attempt to mitigate or purchase, if necessary.

Responsible Department	Charlton County EMA
Anticipated Cost	\$500,000 each project
Existing & Potential Funding Sources	Local Operating Funds/GEMA/FEMA/HUD CDBG
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	Medium
Status	Ongoing

Action Step #12: Plan flood and drainage projects in the City of Homeland in Nature Trail Estates area and in other flood-prone areas including installing and replacing culverts.

Responsible Department	City of Homeland Public Works Dept.
Anticipated Cost	\$500,000 each project
Existing & Potential Funding Sources	Local Operating Funds/GEMA/FEMA/HUD CDBG
Jurisdiction	City of Homeland
Timeframe	2018-2023
Priority	High
Status	Deferred from 2012-2017 due to project costs

Action Step #13: Continue membership in the NFIP by adopting updated ordinances and FIRM maps as updates are available

Responsible Department	Charlton County EMA
Anticipated Cost	Staff Time

Existing & Potential Funding Sources	Local Operating Funds/GEMA/FEMA Homeland Security
Jurisdiction	Unincorporated Charlton County and Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy.

All sections of the Plan shall be monitored and evaluated annually by the Charlton County EMA. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (TV, Web Site, Local Newspaper, City Council Meetings, County Commission Meetings, social media, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of goals, objectives, and action steps, or components thereof, that have been completed, which in turn will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Completed And Deleted Action Steps:

Goal #1 Objective #1:

Action Step #2: Conduct storm-water drainage replacement, repair & cleaning and maintain canals in Charlton County and the Cities of Folkston and Homeland. PARTIALLY COMPLETED: Laura Street area in Folkston street paving & drainage completed.

Action Step #3: Plan flood and drainage projects in Charlton County on Allen O’ Berry Road, Billie Thrift Road, Black River Area (Saint Mary’s), B.M. Prescott Road, Bragg Street (St. George), Canady Loop, Chancey Road Bridge, Clay Branch Bridge, Creek Landing Road, Dixie Lake Road Area, Emmaus Church Road, Farley Burnsed Road, Forrest Lake Area, GA Hwy. #94, GA Hwy. #98, GA Hwy. #121 near 12 mile marker, GA Bend Area, Gordon Street (St. George), Grace Chapel Baptist Church Road Area, Hatcher Branch Area, Heather Road, Jackson Street (St. George), Jimmy Todd Road, Lavender Road, Little Bluff Creek Area, Lonnie Todd Road, Lowther Road, Newell Road, Owen Aldridge Road, Paxton Road (at Altman Road, Dixie Lake Road, Sardis Road), Philadelphia Free Will Baptist Church Bridge, Pinehurst Area (out GA Hwy. #40), Ralph Davis Road, R.R. Raulerson Road, Quail Run, Saint Mary’s Bluff Road, Saint Mary’s River Area , Sam Crews Road Bridge, Scott Petty Road, Seab Kennison Road (off GA Hwy. #252), Snowden Road, Springlake Area, Thomas Street, Willie Dixon Road, Old Dixie Highway, Scott Petty Road, Back River area, River Bluff, Bailey Branch & Jo Mae Creek and in other flood prone areas, including installing and replacing culverts. PARTIALLY COMPLETED: Clay Branch Bridge, Dixie Lake Road Area, Farley Burnsed Road, Gordon Street (St. George), Grace Chapel Baptist Church Road Area, Hatcher Branch Area, Heather Road, Jackson Street (St. George), Little Bluff Creek Area, Lonnie Todd Road, Owen Aldridge Road, Paxton Road (at Altman Road, Dixie Lake Road), Philadelphia Free Will Baptist Church Bridge, R.R. Raulerson Road, Quail Run, Sam Crews Road Bridge, Scott Petty Road, Seab Kennison Road (off GA Hwy.

#252), Snowden Road, Springlake Area, Thomas Street, Old Dixie Highway, Scott Petty Road, Back River area, River Bluff, Bailey Branch & Jo Mae Creek improvements made. Roddenberry Road added to list.

Action Step #14 (Now Action Step 1.1.13): Plan flood and drainage projects in the City of Folkston in the Milton Street area and in other flood-prone areas including installing and replacing culverts. PARTIALLY COMPLETED.

G. Unchanged Action Steps:

Goal #1 Objective #1:

Action Step #1: Conduct studies of and implement projects to protect the Critical Facilities & Infrastructure from Flood damages in Charlton County and the Cities of Folkston and Homeland.

Action Step #2: Conduct storm-water drainage replacement, repair & cleaning and maintain canals in Charlton County and the Cities of Folkston and Homeland

Action Step #3: Plan flood and drainage projects in Charlton County on Allen O' Berry Road, Billie Thrift Road, Black River Area (Saint Mary's), B.M. Prescott Road, Bragg Street (St. George), Canady Loop, Chancey Road Bridge, Creek Landing Road, Emmaus Church Road, Forrest Lake Area, GA Hwy. #94, GA Hwy. #98, GA Hwy. #121 near 12 mile marker, GA Bend Area, Jimmy Todd Road, Lavender Road, Lowther Road, Newell Road, Paxton Road (at Sardis Road), Pinehurst Area (out GA Hwy. #40), Ralph Davis Road, Saint Mary's Bluff Road, Saint Mary's River Area, Willie Dixon Road, Roddenberry Road and in other Flood/SLOSH prone areas, including installing and replacing culverts. [Deleted roads completed and added roads].

Action Step #4: Update & enforce laws prohibiting developers from filling in drainage canals .

Action Step #5: Attempt to take precautions at water facilities in unincorporated Charlton County and in the City of Folkston and the City of Homeland to insure flood protection, as funds become available to do so.

Action Step #6: Enact a public awareness campaign regarding floods and develop brochures for developers & the public regarding land clearing, roads, erosion and building in unincorporated Charlton County and in the City of Folkston and the City of Homeland to insure flood protection, as funds become available to do so.

Action Step #7: Provide funding for the support of the St. Marys River Management Committee and contribute funding to support GA DNR programs that study the St. Marys and Satilla Rivers.

Action Step #8: Update & enforce laws regarding proper drainage (2000+ properties w/out culvert pipes), purchase pipes for public sale, change mail box locations, explore replacing undersized pipes with at least 18" & 24" pipes, construct more outfall ditches & acquire more drainage easements, do regular maintenance on drainage/outfall ditches in Charlton County and in the City of Folkston and the City of Homeland.

Action Step #9: Work to alleviate present & future evacuation & emergency access problems in subdivision areas in Charlton County and the City of Folkston and the City of Homeland.

Action Step #10: Work to preserve wetland areas in Charlton County and the City of Folkston and the City of Homeland to assure that excess water can be captured.

Action Step #11: After flood events, or other hazard events in Charlton County and the City of Folkston and the City of Homeland, attempt to perform analysis on properties effected to determine if events have occurred in the past and attempt to mitigate or purchase, if necessary.

Action Step #12: Plan flood and drainage projects in the City of Homeland in Nature Trail Estates area and in other flood-prone areas including installing and replacing culverts.

Action Step #14 (Now Action Step 1.1.13): Continue membership in the NFIP by adopting updated ordinances and FIRM maps as updates are available

Section III **Wildfire**

A. Brief Narrative of Community Mitigation Goals: As previously indicated in Chapter 2 Section III, Wildfire may cause substantial damage to life, property and the economy in Charlton County, the City of Folkston and the City of Homeland. Wildfire is unpredictable and could happen at any place and at any time in Charlton County, the City of Folkston and the City of Homeland. The Charlton County HMPUC believes that, due to the fact that Wildfire may cause great damage, a comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) should be implemented to reduce the threat of Wildfire damage in Charlton County, the City of Folkston and the City of Homeland.

B. Identification and Analysis of the Comprehensive Range of Mitigation Options: The Charlton County HMPUC has identified the comprehensive range of Mitigation Goals, Objectives and Action Steps below in order to reduce or eliminate the damage caused by Wildfire in Charlton County, the City of Folkston and the City of Homeland.

1. Structural and Non-Structural Mitigation:

The comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) includes both structural solutions and non-structural mitigation solutions that the Charlton County HMPUC has taken into account.

2. Existing Policies, Regulations, Ordinances and Land Use:

The City of Folkston has adopted the 2017 NEC, which is in effect now. Charlton County, the City of Folkston and the City of Homeland have adopted building codes including the 2012 International Building Code and the 2012 International Property Maintenance Code. The 2018 NEC and updates to the prior codes including International Electrical & Plumbing & Mechanical Codes. will be done in January, 2018. The County now has Code Enforcement Officer who also serves the cities on request.

Charlton County has enacted a subdivision ordinance. Throughout Charlton County, if not zoned already, all areas are in the process of being zoned agricultural. There is at least a 4-5 mile area already zoned around the City of Folkston and the City of Homeland with the majority being either agricultural or some form of residential. There is more residential zoning in the City of Folkston and the City of Homeland than anything else. Most highways are zoned for setbacks.

Current trends are for agricultural areas to be converted to residential areas.

All of the five (5) Fire Department properties in Charlton County are staffed by volunteers. The county has zero (0) full time fire departments. It does now

maintain a full-time Fire Chief and Assistant Fire Chief position. This and other factors combine to not only effect the overall safety of the residents, but also effect the reporting of the dangerous or hazardous conditions that we are attempting to report on, and plan Hazard Mitigation for, here. The City of Folkston and the City of Homeland do not have fire departments.

The following relates to the ISO Classes of Charlton County, the City of Folkston and the City of Homeland. Regarding ISO Documentation:

CHARLTON COUNTY

Station 1: Folkston Class 5/9

Station 2: St. George: Class 5/9

Station 3: Racepond: Class 5/9

Station 4 GA Bend: Class 5/9

Station 5: Winokur: Class 5/9

Georgia law requires that a permit be issued for most types of outdoor burning. To request a permit all that is needed to be done is to contact the local Georgia Forestry Commission or visit www.gatrees.org to apply online. If conditions are favorable for burning, a permit will be granted. According to Georgia law, burning without a permit is a misdemeanor with fines up to \$1,000.00.

Since the previous plan was completed, Charlton County has applied for and received several FEMA Assistance to Firefighters Grants and a Staffing for Adequate Fire and Emergency Response Grant that are being used to lower the risk of Wildfire.

Development continues to take place in Charlton County and in the City of Folkston and the City of Homeland with a large amount of new construction taking place in areas bordered by pine tree production and other naturally growing trees. More and more people are making their homes in woodland settings in or near forest or in rural areas. These homeowners enjoy the beauty of the environment, but face the real danger of wildfires. This is not a new phenomenon, but has always been the case. The trend is for this to continue.

The three jurisdictions have many current policies and programs related to hazard mitigation, which are described in detail in the Goals, Objectives, and Action Steps contained in Sections I through X of Chapter 4 of this Plan and in Section I of Chapter 5. All jurisdictions (within the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing Goals, Objectives, and Action Steps included in this plan. The amount of resources available to the three jurisdictions for expansion and improvement of existing programs will depend on factors such as the local government budgets and the availability of state and federal funding to support hazard mitigation activities.

Since the previous plan was completed, there have been no changes in development within the community that would increase or decrease the community's overall vulnerability to the hazard.

All jurisdictions (within the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing goals, objectives and action steps included in this plan.

3. Community Values, Historic and Special Considerations:

Charlton County, the City of Folkston and the City of Homeland have historic buildings, a few of which are Critical Facilities. There are no historic or special considerations that pose significant challenges in regards to the potential Hazard Mitigation Wildfire Planning Activities involving historic buildings. The Charlton County Courthouse and others are Critical Facilities that should be considered potentially eligible for the National Register. The comprehensive range of Mitigation Goals, Objectives and Action Steps for this hazard are outlined below in Section C.

Worksheet #4-STAPLEE Criteria was completed for each Action Step. Please see worksheets contained in Appendix D Section I.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of wildfire.

5. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of wildfire.

C. Wildfire-Mitigation Strategy and Recommendation

Goal #1: Prevent or reduce damage caused by Wildfire in Charlton County, the City of Folkston and the City of Homeland.

Objective #1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, and woodlands due to Wildfire.

Action Steps:

Action Step #1: Provide additional first responder training, training manequins, extrication equipment, air units, air unit chargers, 1 Class A Pumper and/or Fire Knocker trucks, tankers, and other equipment to all Charlton County Volunteer Fire Stations for Wildfire use.

Responsible Department	Charlton County Fire Dept., Charlton County EMA
Anticipated Cost	\$1,750,000

Existing & Potential Funding Sources	Local Operating Funds/GEMA/FEMA, USFWS
Jurisdiction	Charlton County
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #2: Plan to acquire property for new Charlton County Volunteer Fire Stations (including Georgia Bend [New], moving Race Pond Station, & Station #1), new additions & modifications to existing stations.

Responsible Department	Charlton County Fire Dept., Charlton County EMA
Anticipated Cost	\$500,000 each
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Charlton County
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #3: In the City of Folkston and the City of Homeland (on Reynolds Road [New], Robin Lane [New], Paxton Road area and other areas), replace the four inch (4”) or less water lines with 6” to 8” water lines and hydrants, tie in Robin Lane and connect Homeland Water System.

Responsible Department	City of Folkston/City of Homeland Public Works Depts.
Anticipated Cost	\$1,500,000 each
Existing & Potential Funding Sources	Local Operating Funds, GA DCA CDBG
Jurisdiction	City of Folkston, City of Homeland
Timeframe	2018-2023
Priority	High
Status	Deferred from 2012-2017 due to project costs

Action Step #4: In the City of Folkston, extend water into the Spring Lake areas.

Responsible Department	City of Folkston Water Dept.\\\
Anticipated Cost	\$750,000 each project
Existing & Potential Funding Sources	Local Operating Funds, HUD CDBG
Jurisdiction	City of Folkston
Timeframe	2018-2023
Priority	High
Status	Deferred from 2012-2017 due to project costs

Action Step #5: In the City of Folkston, improve accuracy, effectiveness, efficiency and safety of the City’s water supply.

Responsible Department	City of Folkston Water Dept.
Anticipated Cost	\$500,000 each project
Existing & Potential Funding Sources	Local Operating Funds, GA DCA CDBG
Jurisdiction	City of Folkston
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #6: In the City of Folkston, complete the preparation of a comprehensive set of water system maps to identify problem areas.

Responsible Department	City of Folkston Water Dept.
Anticipated Cost	\$10,000
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	City of Folkston
Timeframe	2018-2023
Priority	High
Status	Deferred from 2012-2017 due to mapping issues.

Action Step #7: Work with CSX and other railroads to reduce inadequate slopes that impeded heavy fire equipment from crossing tracks including: Maddox Rd. (marginal), Martha Dowling Rd. (poor), Mizell Rd. (poor), Sawfly Rd. (poor), Old Racepond Rd. (not passable), Lidia Rd. (not passable) and others.

Responsible Department	Charlton County Road Dept.
Anticipated Cost	\$100,000
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Charlton County
Timeframe	2018-2023
Priority	High
Status	New

Action Step #8: Install four (4) deep wells and generator systems to run them with one (1) in Moniac and the other three (3) in roughly each county quadrant for emergency water usage, slowly replacing dry hydrants in those areas.

Responsible Department	Charlton County Public Works
Anticipated Cost	\$50,000 each site
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Charlton County
Timeframe	2018-2023
Priority	High
Status	New

Objective #2: Obtain a FireWise Community Status by educating the Charlton County, City of Folkston and the City of Homeland Fire Department personnel and the public on the hazards of Wildfire and the pre-disaster mitigation thereof.

Action Step #1: Maintain good public relations between the citizens of Charlton County and the City of Folkston and the City of Homeland and the County Fire Departments and plan to increase levels of awareness and resources during peak hazard conditions through the use of education sessions, community meetings, citizens academy, etc.

Responsible Department	Charlton County Commission, City of Folkston/City of Homeland City Councils
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds, GA Forestry
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	Medium
Status	Ongoing

Action Step #2: Partner with the Georgia Forestry Commission to provide education to Charlton County and City of Folkston and the City of Homeland communities and citizens on the pre-disaster mitigation of Wildfire and use & develop grade school based programs to educate children.

Responsible Department	Charlton County Commission, City of Folkston/City of Homeland City Councils
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds, GA Forestry, IAFC grants, USFWS
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	Medium
Status	Ongoing

Action Step #3: Plan RFD meetings in Charlton County and the Cities of Folkston and Homeland and hold joint mock fire drills for all fire stations.

Responsible Department	Charlton County Commission, City of Folkston/City of Homeland City Councils
Anticipated Cost	\$5,000
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	Medium
Status	Ongoing

Action Step #4: Work to implement the National Cohesive Wildland Fire Management Strategy and educate the public on its merits.

Responsible Department	Charlton County Commission, City of Folkston/City of Homeland City Councils
Anticipated Cost	\$2,000
Existing & Potential Funding Sources	Local Operating Funds, GA Forestry, NFPA Grants, IAFC Grants, USFWS, GEMA
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	Medium
Status	New

Action Step #5: Work to bring a Prevention Education Team (FPET) or Community Mitigation Assistance Team (CMAT) event to the area during periods of high wildfire activity or preparedness.

Responsible Department	Charlton County Commission, City of Folkston/City of Homeland City Councils
Anticipated Cost	\$50,000
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	Medium

Status	New
---------------	-----

Action Step #6: Work to bring fire and fire prevention training events to the area twice a year such as wildlands, major and commercial structural, haz-mat, etc.

Responsible Department	Charlton County Commission, City of Folkston/City of Homeland City Councils
Anticipated Cost	\$10,000 per year
Existing & Potential Funding Sources	Local Operating Funds, USFWS
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	Medium
Status	New

Objective #3: Implement priorities, projects and recommendations contained in GA Forestry Commission’s “Community Wildfire Protection Plan”.

Action Step #1: Create a minimum of 50 feet of defensible space around all governmental structures and recommend to homeowners & community stakeholders that they create same space through the trimming of shrubs and vines, overhanging limbs, replacement of flammable plants with less flammable varieties and remove vegetation around chimneys.

Responsible Department	Charlton County EMA, Charlton County Fire Dept. & Charlton County/City of Folkston/City of Homeland Public Works Depts.
Anticipated Cost	\$250 an acre
Existing & Potential Funding Sources	Local Operating Funds, DOHS-FEMA/GEMA, USFWS
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #2: Reduce structural ignitability by cleaning flammable vegetative materials from roofs and gutters, store firewood appropriately, install skirting around raised structures, store water hoses for easy access and replace pine straw and mulch around plantings with less flammable landscaping materials around all governmental structures and recommend same to homeowners and community stakeholders.

Responsible Department	Charlton County EMA, Charlton County Fire Dept. & Charlton County/City of Folkston/City of Homeland Public Works Depts.
Anticipated Cost	\$250 an acre
Existing & Potential Funding Sources	Local Operating Funds, DOHS-FEMA/GEMA, USFWS, NFPA grants
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #3: Hold Community Spring Clean Up Day on the 3rd Saturday in May and cut, prune and mow vegetation in shared community spaces.

Responsible Department	Charlton County EMA, Charlton County Fire Dept. & Charlton County/City of Folkston/City of Homeland Public Works Depts.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #4: Insure Driveway Access/Right-Of-Way Clearance by maintaining vertical and horizontal clearance for emergency equipment and seeing that adequate lengths and weight bearing capacity of culverts are installed to allow emergency vehicle access.

Responsible Department	Charlton County/City of Folkston/City of Homeland Road Depts., Building Inspection Depts. & Public Works Depts.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #5: Insure Road Access by identifying needed road improvements and as roads are upgraded, widen to minimum standards with at least 50 foot diameter cul-de-sacs or turn arounds.

Responsible Department	Charlton County/City of Folkston/City of Homeland Road Depts., Building Inspection Depts. & Public Works Depts.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #6: Examine existing codes and ordinances and amend and enforce existing building codes as they relate to skirting, propane tank locations, public nuisances (trash/debris on property), property address marking standards and other relevant concerns; Review subdivision and development ordinances for public safety concerns; Enact and enforce uniform addressing ordinance; Ensure and enforce offset clearances for structures from woodlands and undeveloped areas.

Responsible Department	Charlton County/City of Folkston/City of Homeland Building Inspection Depts. & Public Works Depts.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #7: Pass Resolutions to State of Georgia that recommend GA Forestry Commission not charge for prescribed burning in WUI areas.

Responsible Department	Charlton County Commission, City of Folkston/City of Homeland City Councils
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Deferred from 2012-2017 due to political issues

Action Step #8: On adjacent WUI Lands, reduce hazardous fuels by encouraging prescribed burning for private landowners and industrial timberlands particularly adjacent to residential areas; Seek grant for WUI Mitigation Team.

Responsible Department	Charlton County EMA, Charlton County Fire Dept., Charlton County/City of Folkston/City of Homeland Building Inspection Depts. & Public Works Depts.
Anticipated Cost	\$30 an acre
Existing & Potential Funding Sources	Local Operating Funds, DOHS-GEMA/FEMA, USFWS, GA Forestry
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #9: Encourage railroads to better maintain their ROW eliminating brush and grass through herbicide and mowing. Maintain firebreaks along ROW adjacent to residential areas.

Responsible Department	Charlton County Fire Dept., Charlton County/City of Folkston/City of Homeland Building Inspection Depts. & Public Works Depts.
Anticipated Cost	\$250 an acre
Existing & Potential Funding Sources	Local Operating Funds, DOHS-FEMA/GEMA, USFWS, GA Forestry
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #10: Improve existing fire lines by reducing hazardous fuels through the cleaning and re-harrowing of existing lines.

Responsible Department	Charlton County Fire Dept., Charlton County/City of Folkston/City of Homeland Building Inspection Depts. & Public Works Depts.
Anticipated Cost	\$250 an acre
Existing & Potential Funding Sources	Local Operating Funds, DOHS-FEMA/GEMA, USFWS, GA Forestry
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #11: Insure access to water sources and dry hydrants by inspecting, maintaining and improving access to existing dry hydrants, adding signage along roads to mark the hydrants and locating additional dry hydrants as needed.

Responsible Department	Charlton County EMA, Charlton County Fire Dept., Charlton County/City of Folkston/City of Homeland Road Depts. & Public Works Depts.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #12: Insure all fire stations and firefighters are equipped with wildland hand tools & lightweight PPE gear and investigate need for brush trucks.

Responsible Department	Charlton County EMA, Charlton County Fire Dept.
Anticipated Cost	\$80,000
Existing & Potential Funding Sources	Local Operating Funds, DHS FEMA/GEMA, AFG
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #13: Investigate need for additional drafting pumps and apply for grants, if necessary.

Responsible Department	Charlton County EMA, Charlton County Fire Dept.
Anticipated Cost	\$5,000
Existing & Potential Funding Sources	Local Operating Funds, DHS FEMA/GEMA, AFG
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #14: Insure that all personnel are trained in Wildfire Suppression.

Responsible Department	Charlton County EMA, Charlton County Fire Dept.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds, GA Forestry, USFWS
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #15: Conduct “Fire Adapted Communities” Workshop for Charlton County residents.

Responsible Department	Charlton County EMA, Charlton County Fire Dept.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds, GA Forestry, USFWS
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High

Status	Deferred from 2012-2017 due to project cost.
---------------	--

Action Step #16: Conduct “Fire Adapted Communities” Workshop for Charlton County community leaders.

Responsible Department	Charlton County EMA, Charlton County Fire Dept.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds, GA Forestry, USFWS
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Deferred from 2012-2017 due to project cost.

Action Step #17: Develop and distribute Fire Adapted Communities informational packets to code enforcement, realtors & insurance agents.

Responsible Department	Charlton County EMA, Charlton County Fire Dept.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds, GA Forestry, USFWS
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #18: Create and Exhibit a Wildfire Protection Display for the general public at the local events. The display can be independent or combined with the GA Forestry Commission display.

Responsible Department	Charlton County EMA, Charlton County Fire Dept.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds, GA Forestry, USFWS
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Deferred from 2012-2017 due to project cost.

Action Step #19: Invite Folkston & Waycross news media to community “Fire Adapted Communities” functions for news coverage and regularly submit press releases documenting wildfire risk improvements in Charlton County.

Responsible Department	Charlton County EMA, Charlton County Fire Dept.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds, GA Forestry, USFWS
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #20: Create a Charlton County WUI Fire Council to review progress towards mitigation goals, appoint & delegate special activities, work with Federal, State and Local officials to assess progress and develop future goals & action plans and work with residents to implement projects and Fire Adapted Communities activities.

Responsible Department	Charlton County EMA, Charlton County Fire Dept.
Anticipated Cost	Staff Time

Existing & Potential Funding Sources	Local Operating Funds, GA Forestry, USFWS
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #21: Work to implement the Ready, Set, Go! (RSG) Program and educate the public on its merits.

Responsible Department	Charlton County Commission, City of Folkston/City of Homeland City Councils
Anticipated Cost	\$5,000
Existing & Potential Funding Sources	Local Operating Funds, IAFC grants and supplies, USFWS
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	New

Objective #4: Obtain Fire Adapted Communities status for St. George and Georgia Bend (both new Firewise Communities), and other areas, by starting work on multi-agency, multi-county and multi-state (GA & FL) wildfire mitigation projects to address Wildfire risks.

Action Step #1: Maintain good public relations between the citizens of Charlton County and the City of Folkston, the City of Homeland and the surrounding Georgia counties of Brantley, Camden, Clinch and Ware & the Florida counties of Baker, Columbia & Nassau.

Responsible Department	Charlton County Commission, City of Folkston/City of Homeland City Councils
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds, USFWS
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	Medium
Status	New

Action Step #2: Coordinate work with all adjoining counties, planning increased levels of awareness and resources during peak wildfire hazard conditions through the use of education sessions, community meetings, citizen academies, etc.

Responsible Department	Charlton County Commission, City of Folkston/City of Homeland City Councils
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds, USFWS
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	Medium
Status	New

Action Step #3: Participate annually in National Community Wildfire Preparedness Day.

Responsible Department	Charlton County Commission, City of Folkston/City of Homeland City Councils
Anticipated Cost	\$500 per event
Existing & Potential Funding Sources	NFPA Grants, USFWS
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	Medium
Status	New

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the Charlton County EMA. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (TV, Web Site, Local Newspaper, City Council Meetings, County Commission Meetings, social media, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of goals, objectives, and action steps, or components thereof, that have been completed, which in turn will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Completed And Deleted Action Steps:

Goal #1 Objective #1

Action Step #1: Provide additional first responder training, training manequins, extrication equipment, air units, air unit chargers, 1 Class A Pumper and/or Fire Knocker trucks, tankers, and other equipment to all Charlton County Volunteer Fire Stations for Wildfire use. **PARTIALLY COMPLETE:** 2014: Equipment/PPE awarded \$319,630.00. 2014 (EMS) Equipment & Training awarded \$289,266.00. 2015: Vehicle awarded \$317,540.00. 2016: PPE Awarded \$18,667.00. 2016: Volunteer Retention awarded \$341,840.00.

Goal #1 Objective #3

Action Step #3: Hold Community Spring Clean Up Day on the 3rd Saturday in May and cut, prune and mow vegetation in shared community spaces. (COMPLETED-Changed to Ongoing)

Action Step #5: Insure Road Access by identifying needed road improvements and as roads are upgraded, widen to minimum standards with at least 50 foot diameter cul-de-sacs or turn arounds. (PARTIALLY COMPLETED: Gibson Post Road).

Action Step #6: Examine existing codes and ordinances and amend and enforce existing building codes as they relate to skirting, propane tank locations, public nuisances (trash/debris on property), property address marking standards and other relevant concerns; Review subdivision and development ordinances for public safety concerns; Enact and enforce uniform addressing ordinance. (PARTIALLY COMPLETED: Changed to International Building Codes, passed ordinance requiring burn permits and completed House Addressing Project)

Action Step #8: On adjacent WUI Lands, reduce hazardous fuels by encouraging prescribed burning for private landowners and industrial timberlands particularly adjacent to residential areas; Seek grant for WUI Mitigation Team. (PARTIALLY COMPLETED: Sample Firewise Land Clearance event held in St. George)

Action Step #11: Insure access to water sources and dry hydrants by mapping sites, inspecting, maintaining and improving access to existing dry hydrants, adding signage along roads to mark the hydrants and locating additional dry hydrants as needed. (PARTIALLY COMPLETED: GPS of Dry Hydrants completed.)

G. Unchanged Action Steps:

Goal #1 Objective #1

Action Step #1: Provide additional first responder training, training manequins, extrication equipment, air units, air unit chargers, 1 Class A Pumper and/or Fire Knocker trucks, tankers, and other equipment to all Charlton County Volunteer Fire Stations for Wildfire use

Action Step #2: Plan to acquire property for new Charlton County Volunteer Fire Stations (including Georgia Bend [New], moving Race Pond Station, & Station #1), new additions & modifications to existing stations.

Action Step #3: In the City of Folkston and the City of Homeland (on Reynolds Road [New], Robin Lane [New], Paxton Road area and other areas), replace the four inch (4") or less water lines with 6" to 8" water lines and hydrants, tie in Robin Lane and connect Homeland Water System.

Action Step #4: In the City of Folkston, extend water into the Spring Lake areas.

Action Step #5: In the City of Folkston, improve accuracy, effectiveness, efficiency and safety of the City's water supply.

Action Step #6: In the City of Folkston, complete the preparation of a comprehensive set of water system maps to identify problem areas.

Goal #1 Objective #2

Action Step #1: Maintain good public relations between the citizens of Charlton County and the City of Folkston and the City of Homeland and the County Fire Departments and plan to increase levels of awareness and resources during peak hazard conditions through the use of education sessions, community meetings, citizens academy, etc.

Action Step #2: Partner with the Georgia Forestry Commission to provide education to Charlton County and City of Folkston and the City of Homeland communities and citizens on the pre-disaster mitigation of Wildfire and use & develop grade school based programs to educate children.

Action Step #3: Plan RFD meetings in Charlton County and the Cities of Folkston and Homeland and hold joint mock fire drills for all fire stations.

Goal #1 Objective #3

Action Step #1: Create a minimum of 50 feet [changed from 30 feet] of defensible space around all governmental structures and recommend to homeowners & community stakeholders that they create same space through the

trimming of shrubs and vines, overhanging limbs, replacement of flammable plants with less flammable varieties and remove vegetation around chimneys.

Action Step #2: Reduce structural ignitability by cleaning flammable vegetative materials from roofs and gutters, store firewood appropriately, install skirting around raised structures, store water hoses for easy access and replace pine straw and mulch around plantings with less flammable landscaping materials around all governmental structures and recommend same to homeowners and community stakeholders.

Action Step #3: Hold Community Spring Clean Up Day on the 3rd Saturday in May and cut, prune and mow vegetation in shared community spaces. [Changed from new-completed to ongoing and from March to May].

Action Step #4: Insure Driveway Access/Right-Of-Way Clearance by maintaining vertical and horizontal clearance for emergency equipment and seeing that adequate lengths of culverts [and weight bearing capacity (New)] are installed to allow emergency vehicle access.

Action Step #5: Insure Road Access by identifying needed road improvements and as roads are upgraded, widen to minimum standards with at least 50 foot diameter cul-de-sacs or turn arounds.

Action Step #6: Examine existing codes and ordinances and amend and enforce existing building codes as they relate to skirting, propane tank locations, public nuisances (trash/debris on property), property address marking standards and other relevant concerns; Review subdivision and development ordinances for public safety concerns, Enact and enforce uniform addressing ordinance; [Ensure and enforce offset clearances for structures from woodlands and undeveloped areas. (New)].

Action Step #7: Pass Resolutions to State of Georgia that recommend GA Forestry Commission not charge for prescribed burning in WUI areas.

Action Step #8: On adjacent WUI Lands, reduce hazardous fuels by encouraging prescribed burning for private landowners and industrial timberlands particularly adjacent to residential areas; Seek grant for WUI Mitigation Team.

Action Step #9: Encourage railroads to better maintain their ROW eliminating brush and grass through herbicide and mowing. Maintain firebreaks along ROW adjacent to residential areas.

Action Step #10: Improve existing fire lines by reducing hazardous fuels through the cleaning and re-harrowing of existing lines.

Action Step #11: Insure access to water sources and dry hydrants by inspecting, maintaining and improving access to existing dry hydrants, adding signage along roads to mark the hydrants and locating additional dry hydrants as needed. [Removed mapping sites-completed].

Action Step #12: Insure all fire stations and firefighters are equipped with wildland hand tools & lightweight PPE gear and investigate need for brush trucks.

Action Step #13: Investigate need for additional drafting pumps and apply for grants, if necessary.

Action Step #14: Insure that all personnel are trained in Wildfire Suppression.

Action Step #15: Conduct “Fire Adapted Communities” [changed from “How to Have a Firewise Home”] Workshop for Charlton County residents.

Action Step #16: Conduct “Fire Adapted Communities” [changed from Firewise”] Workshop for Charlton County community leaders.

Action Step #17: Develop and distribute Fire Adapted Communities [changed from Firewise] informational packets to code enforcement, realtors & insurance agents.

Action Step #18: Create and Exhibit a Wildfire Protection Display for the general public at the local events. The display can be independent or combined with the GA Forestry Commission display.

Action Step #19: Invite Folkston & Waycross news media to community Fire Adapted Communities [changed from “Firewise”] functions for news coverage and regularly submit press releases documenting Wildfire risk improvements in Charlton County.

Action Step #20: Create a Charlton County WUI Fire Council to review progress towards mitigation goals, appoint & delegate special activities, work with Federal, State and Local officials to assess progress and develop future goals & action plans and work with residents to implement projects and Firewise activities.

Section IV **Tornado**

A. Brief Narrative of Community Mitigation Goals:

As previously indicated in Chapter 2 Section IV, Tornadoes may cause substantial damage to life, property and the economy in Charlton County, the City of Folkston and the City of Homeland. Tornadoes are unpredictable and could happen at any place and at any time in Charlton County, the City of Folkston and the City of Homeland. The Charlton County HMPUC believes that, due to the fact that these Tornadoes may be extremely violent and cause great damage, a comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) should be implemented to reduce the threat of Tornado damage in Charlton County, the City of Folkston and the City of Homeland.

B. Identification and Analysis of the Comprehensive Range of Mitigation Options:

The Charlton County HMPUC has identified the comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) in order to reduce or eliminate the damage caused by Tornadoes in Charlton County, the City of Folkston and the City of Homeland.

1. Structural and Non-Structural Mitigation:

The comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) includes both structural solutions and non-structural mitigation solutions that the Charlton County HMPUC has taken into account.

2. Existing Policies, Regulations, Ordinances and Land Use:

The City of Folkston has adopted the 2017 NEC, which is in effect now. Charlton County, the City of Folkston and the City of Homeland have adopted building codes including the 2012 International Building Code and the 2012 International Property Maintenance Code. The 2018 NEC and updates to the prior codes including International Electrical & Plumbing & Mechanical Codes. will be done in January, 2018. The County now has Code Enforcement Officer who also serves the cities on request.

Charlton County has enacted a subdivision ordinance. Throughout Charlton County, if not zoned already, all areas are in the process of being zoned agricultural. There is at least a 4-5 mile area already zoned around the City of Folkston and the City of Homeland with the majority being either agricultural or some form of residential. There is more residential zoning in the City of Folkston and the City of Homeland than anything else. Most highways are zoned for setbacks.

The three jurisdictions have many current policies and programs related to hazard mitigation, which are described in detail in the Goals, Objectives, and Action Steps contained in Sections I through X of Chapter 4 of this Plan and in Section I of Chapter 5. All jurisdictions (within the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing Goals, Objectives, and Action Steps included in this plan. The amount of resources available to the three jurisdictions for expansion and improvement of existing programs will depend on factors such as the local government budgets and the availability of state and federal funding to support hazard mitigation activities.

Current trends are for agricultural areas to be converted to residential areas.

Since the previous plan was completed, there have been no changes in development within the community that would increase or decrease the community's overall vulnerability to the hazard.

All jurisdictions (within the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing goals, objectives and action steps included in this plan.

3. Community Values, Historic and Special Considerations:

Charlton County, the City of Folkston and the City of Homeland have historic buildings, a few of which are Critical Facilities. There are no historic and special considerations that pose significant challenges in regards to the potential Hazard Mitigation Tornado Planning Activities involving historic buildings. The Charlton County Courthouse and others are Critical Facilities that should be considered potentially eligible for the National Register. The comprehensive range of Mitigation Goals, Objectives and Action Steps for this hazard are outlined below in Section C.

Worksheet #4-STAPLEE Criteria was completed for each Action Step. Please see worksheets contained in Appendix D Section I.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of Tornadoes.

5. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of Tornadoes.

C. Tornado-Mitigation Strategy and Recommendation:

Goal #1: Prevent or reduce damage caused by Tornadoes in Charlton County, the City of Folkston and the City of Homeland.

Objective #1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, due to Tornadoes.

Action Step #1: Use building inspection program to inspect for adequate tie-downs on manufactured housing in Charlton County and the City of Folkston and the City of Homeland.

Responsible Department	Charlton County/Folkston/Homeland Building & Codes Department
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #2: Plan for pre-disaster mitigation in Tornado & other hazard seasons by preparing public service announcements, brochures and solicit business participation in distributing information.

Responsible Department	Charlton County EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #3: Promote safe shelter rooms in areas of Charlton County and the City of Folkston and the City of Homeland where Tornadoes and other disasters frequent.

Responsible Department	Charlton County EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #4: Develop grid pattern/address based system to physically notify and check on high risk residents both before and after natural disaster events in the City of Folkston, the City of Homeland and in populated areas of Charlton County.

Responsible Department	Charlton County EMA
Anticipated Cost	\$20,000
Existing & Potential Funding Sources	Local Operating Funds/GEMA/FEMA
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Deferred from 2012-2017 due to project cost

Action Step #5: Apply for Response & Recovery Grant and secure funding for an automated hazardous weather alert system in Charlton County, the City of Folkston and the City of Homeland.

Responsible Department	Charlton County EMA
Anticipated Cost	\$20,000
Existing & Potential Funding Sources	Local Operating Funds/GEMA/FEMA
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Deferred from 2012-2017 due to project cost

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the Charlton County EMA. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (TV, Web Site, Local Newspaper, City Council Meetings, County Commission Meetings, social media, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of goals, objectives, and action steps, or components thereof, that have been completed, which in turn will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Completed And Deleted Action Steps:

None.

G. Unchanged Action Steps:

Goal 1 Objective 1

Action Step #1: Use building inspection program to inspect for adequate tie-downs on manufactured housing in Charlton County and the City of Folkston and the City of Homeland.

Action Step #2: Plan for pre-disaster mitigation in Tornado & other hazard seasons by preparing public service announcements, brochures and solicit business participation in distributing information.

Action Step #3: Promote safe shelter rooms in areas of Charlton County and the City of Folkston and the City of Homeland where Tornadoes and other disasters frequent.

Action Step #4: Develop grid pattern/address based system to physically notify and check on high risk residents both before and after natural disaster events in the City of Folkston, the City of Homeland and in populated areas of Charlton County.

Action Step #5: Apply for Response & Recovery Grant and secure funding for an automated hazardous weather alert system in Charlton County, the City of Folkston and the City of Homeland.

Section V

Thunderstorms & Wind

A. Brief Narrative of Community Mitigation Goals: As previously indicated in Chapter 2 Section V, Thunderstorms & Wind may cause substantial damage to life, property and the economy in Charlton County, the City of Folkston and the City of Homeland. Thunderstorms & Wind are unpredictable and could happen at any place and at any time in Charlton County or in the City of Folkston and the City of Homeland. The Charlton County HMPUC believes that, due to the fact that these Thunderstorms and Wind may be extremely violent and cause great damage, this comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) should be implemented to reduce the threat of Thunderstorm & Wind damage in Charlton County, the City of Folkston and the City of Homeland.

B. Identification and Analysis of the Comprehensive Range of Mitigation Options: The Charlton County HMPUC has identified the comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) in order to reduce or eliminate the damage caused by Thunderstorms & Wind in Charlton County, the City of Folkston and the City of Homeland.

1. Structural and Non-Structural Mitigation:

The comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) includes both structural solutions and non-structural mitigation solutions that the Charlton County HMPUC has taken into account.

2. Existing Policies, Regulations, Ordinances and Land Use:

The City of Folkston has adopted the 2017 NEC, which is in effect now. Charlton County, the City of Folkston and the City of Homeland have adopted

building codes including the 2012 International Building Code and the 2012 International Property Maintenance Code. The 2018 NEC and updates to the prior codes including International Electrical & Plumbing & Mechanical Codes. will be done in January, 2018. The County now has Code Enforcement Officer who also serves the cities on request.

The St. Marys River and the Satilla River are protected to the 100 year floodplain, no septic systems are allowed within 100 feet of the river and no construction is allowed up to twenty five (25) feet from the rested edge of the river through river corridor protection ordinance. However, there is a great danger of fecal coliform contamination of river waters as a result of flooding of both old and hardship septic tank systems located along the rivers and tributaries. Water recharge areas are currently protected by ordinance.

Wetland areas are protected by ordinance. Soil and Sedimentation Control Ordinances are in effect.

Charlton County has enacted a subdivision ordinance. Throughout Charlton County, if not zoned already, all areas are in the process of being zoned agricultural. There is at least a 4-5 mile area already zoned around the City of Folkston and the City of Homeland with the majority being either agricultural or some form of residential. There is more residential zoning in the City of Folkston and the City of Homeland than anything else. Most highways are zoned for setbacks.

Current trends are for agricultural areas to be converted to residential areas.

Charlton County, the City of Folkston and the City of Homeland are all members of the National Flood Insurance Program. All of the local governments have some part of their jurisdictions located within a floodplain. Floodplain maps for each local government are located in Appendix A Section II.

Charlton County and the Cities of Folkston and Homeland do not participate in the Community Rating System (CRS) program. As of August 25, 2017, they were not eligible according to FEMA (<http://www.fema.gov/library/viewRecord.do?id=3629>) and other information at <http://www.fema.gov> .

The three jurisdictions have many current policies and programs related to hazard mitigation, which are described in detail in the Goals, Objectives, and Action Steps contained in Sections I through X of Chapter 4 of this Plan and in Section I of Chapter 5. All jurisdictions (within the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing Goals, Objectives, and Action Steps included in this plan. The amount of resources available to the three jurisdictions for expansion and improvement of existing programs will depend

on factors such as the local government budgets and the availability of state and federal funding to support hazard mitigation activities.

Since the previous plan was completed, there have been no changes in development within the community that would increase or decrease the community's overall vulnerability to the hazard.

All jurisdictions (within the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing goals, objectives and action steps included in this plan.

3. Community Values, Historic and Special Considerations:

Charlton County, the City of Folkston and the City of Homeland have historic buildings, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges in regards to the potential Hazard Mitigation Thunderstorms & Wind Planning Activities involving wind retrofitting on historic buildings. The comprehensive range of Mitigation Goals, Objectives and Action Steps for this hazard are outlined below in Section C.

Worksheet #4-STAPLEE Criteria was completed for each Action Step. Please see worksheets contained in Appendix D Section I.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

C. Thunderstorms & Wind-Mitigation Strategy and Recommendation

Goal #1: Prevent or reduce damage caused by Thunderstorms and Winds in Charlton County, the City of Folkston and the City of Homeland.

Objective #1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, due to Thunderstorms and Winds.

Action Step #1: Increase public awareness of weather radio distribution, shelters, emergency procedures and the use of a local radio station as the emergency broadcast system station in Charlton

County and in the Cities of Folkston and Homeland through public safety announcements, publications and other means.

Responsible Department	Charlton County EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #2: Determine wind ratings and plan to wind retrofit Critical Facilities, in Charlton County and in the Cities of Folkston and Homeland as funds become available to do so.

Responsible Department	Charlton County EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	Medium
Status	Ongoing

Action Step #3: Disseminate information to the public concerning wind ratings and champion new construction being built to those minimum wind standards, and champion the wind retrofitting of existing buildings, in Charlton County and the Cities of Folkston and Homeland.

Responsible Department	Charlton County/Folkston/Homeland Building & Codes Department
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds/GEMA/FEMA
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	Medium
Status	Ongoing

Action Step #4: Enforce existing dangerous building ordinances to prevent or reduce the amount of loose materials blowing around and causing damage in Charlton County and the Cities of Folkston and Homeland.

Responsible Department	Charlton County/Folkston/Homeland Building & Codes Department
Anticipated Cost	\$20,000
Existing & Potential Funding Sources	Local Operating Funds/GEMA/FEMA
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	Medium
Status	Ongoing:

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the Charlton County EMA. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (TV, Web Site, Local Newspaper, City Council Meetings, County Commission Meetings, social media, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of goals, objectives, and action steps, or components thereof, that have been completed, which in turn will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Completed And Deleted Action Steps:

None

G. Unchanged Action Steps:

Goal 1 Objective 1

Action Step #1: Increase public awareness of weather radio distribution, shelters, emergency procedures and the use of a local radio station as the emergency broadcast system station in Charlton County and in the Cities of Folkston and Homeland through public safety announcements, publications and other means.

Action Step #2: Determine wind ratings and plan to wind retrofit Critical Facilities, in Charlton County and in the Cities of Folkston and Homeland as funds become available to do so.

Action Step #3: Disseminate information to the public concerning wind ratings and champion new construction being built to those minimum wind standards, and champion the wind retrofitting of existing buildings, in Charlton County and the Cities of Folkston and Homeland.

Action Step #4: Enforce existing dangerous building ordinances to prevent or reduce the amount of loose materials blowing around and causing damage in Charlton County and the Cities of Folkston and Homeland.

Section VI
Severe Winter Storm

A. Brief Narrative of Community Mitigation Goals:

As previously indicated in Chapter 2 Section VI, Severe Winter Storms may cause substantial damage to life, property and the economy in Charlton County, the City of Folkston and the City

of Homeland. Severe Winter Storms are usually predictable and could happen at any place in Charlton County, the City of Folkston and the City of Homeland during the period surrounding the winter months.

Severe Winter Storms may cause substantial problems. Charlton County, the City of Folkston and the City of Homeland are so far south that specialized equipment used during Severe Winter Storms that most northern counties and cities possess is not available. The Charlton County HMPUC believes that, due to the fact that these Severe Winter Storms have the potential to cause great damage, a comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) should be implemented to reduce the threat of Severe Winter Storm damage in Charlton County, the City of Folkston and the City of Homeland.

B. Identification and Analysis of Range of Comprehensive Range of Mitigation Options:

The Charlton County HMPUC has identified the comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) in order to reduce or eliminate the damage caused by Severe Winter Storms in Charlton County, the City of Folkston and the City of Homeland.

1. Structural and Non-Structural Mitigation:

The comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) includes both structural solutions and non-structural mitigation solutions that the Charlton County HMPUC has taken into account.

2. Existing Policies, Regulations, Ordinances and Land Use:

The City of Folkston has adopted the 2017 NEC, which is in effect now. Charlton County, the City of Folkston and the City of Homeland have adopted building codes including the 2012 International Building Code and the 2012 International Property Maintenance Code. The 2018 NEC and updates to the prior codes including International Electrical & Plumbing & Mechanical Codes. will be done in January, 2018. The County now has Code Enforcement Officer who also serves the cities on request.

Charlton County has enacted a subdivision ordinance. Throughout Charlton County, if not zoned already, all areas are in the process of being zoned agricultural. There is at least a 4-5 mile area already zoned around the City of Folkston and the City of Homeland with the majority being either agricultural or some form of residential. There is more residential zoning in the City of Folkston and the City of Homeland than anything else. Most highways are zoned for setbacks.

Current trends are for agricultural areas to be converted to residential areas.

The three jurisdictions have many current policies and programs related to hazard mitigation, which are described in detail in the Goals, Objectives, and

Action Steps contained in Sections I through X of Chapter 4 of this Plan and in Section I of Chapter 5. All jurisdictions (within the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing Goals, Objectives, and Action Steps included in this plan. The amount of resources available to the three jurisdictions for expansion and improvement of existing programs will depend on factors such as the local government budgets and the availability of state and federal funding to support hazard mitigation activities.

Since the previous plan was completed, there have been no changes in development within the community that would increase or decrease the community's overall vulnerability to the hazard.

All jurisdictions (within the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing goals, objectives and action steps included in this plan.

3. Community Values, Historic and Special Considerations:

Charlton County, the City of Folkston and the City of Homeland have historic buildings, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges in regards to the potential Hazard Mitigation Severe Winter Storm Planning Activities involving historic buildings. The comprehensive range of Mitigation Goals, Objectives and Action Steps for this hazard are outlined below in Section C.

Worksheet #4-STAPLEE Criteria was completed for each Action Step. Please see worksheets contained in Appendix D Section I.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

C. Severe Winter Storm-Mitigation Strategy and Recommendation:

Goal #1: Prevent or reduce damage caused by Severe Winter Storms in Charlton County, the City of Folkston and the City of Homeland.

Objective #1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, due to Severe Winter Storms.

Action Step #1: Continue the policy of wrapping exposed piping with insulation and installing new insulation layers at Critical Facilities in Charlton County and the City of Folkston and the City of Homeland.

Responsible Department	Charlton County/Folkston/Homeland Public Works Departments
Anticipated Cost	\$5,000 per year
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #2: Maintain temperatures above 32 degrees to prevent freezing in government owned occupied and unoccupied structures in Charlton County and the City of Folkston and the City of Homeland.

Responsible Department	Charlton County/Folkston/Homeland Public Works Departments
Anticipated Cost	\$5,000 per year
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	Medium
Status	Ongoing

Action Step #3: Disseminate information to the public concerning Severe Winter Storms, champion new construction being built to appropriate low temperature ratings and existing buildings being retrofitted in Charlton County and in the City of Folkston and the City of Homeland.

Responsible Department	Charlton County EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	Medium
Status	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the Charlton County EMA. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (TV, Web Site, Local Newspaper, City Council

Meetings, County Commission Meetings, social media, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of goals, objectives, and action steps, or components thereof, that have been completed, which in turn will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Completed And Deleted Action Steps:

None.

G. Unchanged Action Steps:

Action Step #1: Continue the policy of wrapping exposed piping with insulation and installing new insulation layers at Critical Facilities in Charlton County and the City of Folkston and the City of Homeland.

Action Step #2: Maintain temperatures above 32 degrees to prevent freezing in government owned occupied and unoccupied structures in Charlton County and the City of Folkston and the City of Homeland.

Action Step #3: Disseminate information to the public concerning Severe Winter Storms, champion new construction being built to appropriate low temperature ratings and existing buildings being retrofitted in Charlton County and in the City of Folkston and the City of Homeland.

Section VII **Hail**

A. Brief Narrative of Community Mitigation Goals:

As previously indicated in Chapter 2 Section VII, Hail may cause substantial damage to life, property and the economy in Charlton County, the City of Folkston and the City of Homeland. Hail is unpredictable and could happen at any place and at any time in Charlton County, the City of Folkston and the City of Homeland. The Charlton County HMPUC believes that, due to the fact that Hail may be extremely violent and cause great damage, a comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) should be implemented to reduce the threat of Hail damage in Charlton County, the City of Folkston and the City of Homeland.

B. Identification and Analysis of the Comprehensive Range of Mitigation Options:

The Charlton County HMPUC has identified the comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) in order to reduce or eliminate the damage caused by Hail in Charlton County, the City of Folkston and the City of Homeland.

1. Structural and Non-Structural Mitigation:

The comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) includes both structural & non-structural mitigation solutions that the Charlton County HMPUC has taken into account.

2. Existing Policies, Regulations, Ordinances and Land Use:

The City of Folkston has adopted the 2017 NEC, which is in effect now. Charlton County, the City of Folkston and the City of Homeland have adopted building codes including the 2012 International Building Code and the 2012 International Property Maintenance Code. The 2018 NEC and updates to the prior codes including International Electrical & Plumbing & Mechanical Codes. will be done in January, 2018. The County now has Code Enforcement Officer who also serves the cities on request.

Charlton County has enacted a subdivision ordinance. Throughout Charlton County, if not zoned already, all areas are in the process of being zoned agricultural. There is at least a 4-5 mile area already zoned around the City of Folkston and the City of Homeland with the majority being either agricultural or some form of residential. There is more residential zoning in the City of Folkston and the City of Homeland than anything else. Most highways are zoned for setbacks.

The three jurisdictions have many current policies and programs related to hazard mitigation, which are described in detail in the Goals, Objectives, and Action Steps contained in Sections I through X of Chapter 4 of this Plan and in Section I of Chapter 5. All jurisdictions (within the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing Goals, Objectives, and Action Steps included in this plan. The amount of resources available to the three jurisdictions for expansion and improvement of existing programs will depend on factors such as the local government budgets and the availability of state and federal funding to support hazard mitigation activities.

Current trends are for agricultural areas to be converted to residential areas.

Since the previous plan was completed, there have been no changes in development within the community that would increase or decrease the community's overall vulnerability to the hazard.

All jurisdictions (within the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing goals, objectives and action steps included in this plan.

3. Community Values, Historic and Special Considerations:

Charlton County, the City of Folkston and the City of Homeland have historic buildings, a few of which are Critical Facilities. There are historic or special considerations that pose significant challenges in regards to the potential Hazard Mitigation Hail Planning Activities involving historic buildings. These involve storm window installation on historic buildings. The comprehensive range of Mitigation Goals, Objectives and Action Steps for this hazard are outlined below in Section C.

Worksheet #4-STAPLEE Criteria was completed for each Action Step. Please see worksheets contained in Appendix D.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

C. Hail-Mitigation Strategy and Recommendation

Goal #1: Prevent or reduce damage caused by Hail in Charlton County, the City of Folkston and the City of Homeland.

Objective #1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, due to Hail.

Action Step #1: Install storm windows and/or ballistic film on new and existing Critical Facilities and promote their installation on new and existing private buildings in Charlton County and the City of Folkston and the City of Homeland.

Responsible Department	Charlton County/Folkston/Homeland Public Works Departments
Anticipated Cost	\$125,000
Existing & Potential Funding Sources	Local Operating Funds/GEMA/FEMA/Red Cross
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Deferred from 2012-2017 due to costs

Action Step #2: Encourage public to include hail damage under insurance coverage and store equipment & vehicles under shelters in Charlton County and the Cities of Folkston and Homeland.

Responsible Department	Charlton County EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the Charlton County EMA. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (TV, Web Site, Local Newspaper, City Council Meetings, County Commission Meetings, social media, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of goals, objectives, and action steps, or components thereof, that have been completed, which in turn will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Completed And Deleted Action Steps:

None.

G. Unchanged Action Steps:

Goal 1 Objective 1

Action Step #1: Install storm windows and/or ballistic film on new and existing Critical Facilities and promote their installation on new and existing private buildings in Charlton County and the City of Folkston and the City of Homeland.

Action Step #2: Encourage public to include hail damage under insurance coverage and store equipment & vehicles under shelters in Charlton County and the Cities of Folkston and Homeland.

Section VIII **Drought**

A. Brief Narrative of Community Mitigation Goals: As previously indicated in Chapter 2 Section VIII, Drought may cause damage to life, property and the economy in Charlton County, the City of Folkston and the City of Homeland, particularly in regards to crop damage. Its effects can be long term and the damage increases as time goes by. In addition, Drought conditions contribute to Wildfires in the community. The Charlton County HMPUC believes that, due to the fact that Drought can cause such damage, a comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) should be implemented to reduce the impact of Drought on Charlton County, the City of Folkston and the City of Homeland.

B. Identification and Analysis of Comprehensive Range of Mitigation Options: The Charlton County HMPUC has identified the comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) in order to reduce or eliminate the

damage caused by Drought in Charlton County, the City of Folkston and the City of Homeland. These include structural and non-structural solutions that the Committee has taken into account.

1. Structural and Non-Structural Mitigation:

The comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) includes both structural solutions and non-structural mitigation solutions that the Charlton County HMPUC has taken into account.

2. Existing Policies, Regulations, Ordinances and Land Use:

The City of Folkston has adopted the 2017 NEC, which is in effect now. Charlton County, the City of Folkston and the City of Homeland have adopted building codes including the 2012 International Building Code and the 2012 International Property Maintenance Code. The 2018 NEC and updates to the prior codes including International Electrical & Plumbing & Mechanical Codes. will be done in January, 2018. The County now has Code Enforcement Officer who also serves the cities on request.

The St. Marys River and the Satilla River are protected to the 100 year floodplain, no septic systems are allowed within 100 feet of the river and no construction is allowed up to twenty five (25) feet from the rested edge of the river through river corridor protection ordinance. However, there is a great danger of fecal coliform contamination of river waters as a result of flooding of both old and hardship septic tank systems located along the rivers and tributaries. Water recharge areas are currently protected by ordinance.

Wetland areas are protected by ordinance. Soil and Sedimentation Control Ordinances are in effect.

Charlton County has enacted a subdivision ordinance. Throughout Charlton County, if not zoned already, all areas are in the process of being zoned agricultural. There is at least a 4-5 mile area already zoned around the City of Folkston and the City of Homeland with the majority being either agricultural or some form of residential. There is more residential zoning in the City of Folkston and the City of Homeland than anything else. Most highways are zoned for setbacks.

Current trends are for agricultural areas to be converted to residential areas.

Charlton County, the City of Folkston and the City of Homeland are all members of the National Flood Insurance Program. All of the local governments have some part of their jurisdictions located within a floodplain. Floodplain maps for each local government are located in Appendix A Section II.

Charlton County and the Cities of Folkston and Homeland do not participate in the Community Rating System (CRS) program. As of August 25, 2017, they

were not eligible according to FEMA (<http://www.fema.gov/library/viewRecord.do?id=3629>) and other information at <http://www.fema.gov> .

The three jurisdictions have many current policies and programs related to hazard mitigation, which are described in detail in the Goals, Objectives, and Action Steps contained in Sections I through X of Chapter 4 of this Plan and in Section I of Chapter 5. All jurisdictions (within the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing Goals, Objectives, and Action Steps included in this plan. The amount of resources available to the three jurisdictions for expansion and improvement of existing programs will depend on factors such as the local government budgets and the availability of state and federal funding to support hazard mitigation activities.

Since the previous plan was completed, there have been no changes in development within the community that would increase or decrease the community's overall vulnerability to the hazard.

All jurisdictions (within the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing goals, objectives and action steps included in this plan.

3. Community Values, Historic and Special Considerations:

Charlton County, the City of Folkston and the City of Homeland have no historic and special considerations that pose significant challenges in regards to the potential Hazard Mitigation Drought Planning Activities involving historic buildings. The comprehensive range of Mitigation Goals, Objectives and Action Steps for this hazard are outlined below in Section C.

Worksheet #4-STAPLEE Criteria was completed for each Action Step. Please see worksheets contained in Appendix D Section I.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

C. Drought-Mitigation Strategy and Recommendation:

Goal #1: Prevent or reduce damage caused by Drought in Charlton County, the City of Folkston and the City of Homeland.

Objective #1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, due to Drought.

Action Step #1: Seek input from State and Federal agencies to enact procedures during Drought to limit water usage in Charlton County and the City of Folkston and the City of Homeland.

Responsible Department	Charlton County/Folkston/Homeland Building & Codes Departments
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #2: Replace antiquated water & sewer lines and equipment prone to failure in the City of Folkston and the City of Homeland through CDBG grant funds and other funds when available.

Responsible Department	Folkston/Homeland Public Works Departments
Anticipated Cost	\$750,000 each project
Existing & Potential Funding Sources	Local Operating Funds/HUD CDBG
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #3: Work with the County Extension Agent to distribute literature related to best management practices in Charlton County and the City of Folkston and the City of Homeland.

Responsible Department	Charlton County EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	Ongoing

Action Step #4: Promote increased usage of surface water and surface artesian flow for irrigation instead of well systems in Charlton County and the City of Folkston and the City of Homeland.

Responsible Department	Charlton County/Folkston/Homeland Public Works Departments
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	Medium

Status	Ongoing
--------	---------

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the Charlton County EMA. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (TV, Web Site, Local Newspaper, City Council Meetings, County Commission Meetings, social media, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of goals, objectives, and action steps, or components thereof, that have been completed, which in turn will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Completed And Deleted Action Steps:

None.

G. Unchanged Action Steps:

Goal 1 Objective 1

Action Step #1: Seek input from State and Federal agencies to enact procedures during Drought to limit water usage in Charlton County and the City of Folkston and the City of Homeland.

Action Step #2: Replace antiquated water & sewer lines and equipment prone to failure in the City of Folkston and the City of Homeland through CDBG grant funds and other funds when available.

Action Step #3: Work with the County Extension Agent to distribute literature related to best management practices in Charlton County and the City of Folkston and the City of Homeland.

Action Step #4: Promote increased usage of surface water and surface artesian flow for irrigation instead of well systems in Charlton County and the City of Folkston and the City of Homeland.

Section IX
Lightning

A. Brief Narrative of Community Mitigation Goals: As previously indicated in Chapter 2 Section IX, Lightning may cause substantial damage to life, property and the economy in Charlton County and in the Cities of Folkston and Homeland. Lightning is unpredictable and could happen at any place and at any time in Charlton County or in the Cities of Folkston and Homeland. The Charlton County HMPUC believes that, due to the fact that Lightning can cause such damage, a comprehensive range of Mitigation Goals, Objectives and Action Steps

(contained in Section C below) should be implemented to reduce the impact of Lightning on Charlton County, the City of Folkston and the City of Homeland.

B. Identification and Analysis of Comprehensive Range of Mitigation Options: The Charlton County HMPUC has identified the comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) in order to reduce or eliminate the damage caused by Lightning in Charlton County, the City of Folkston and the City of Homeland. These include structural and non-structural solutions that the Committee has taken into account.

1. Structural and Non-Structural Mitigation:

The comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) includes both structural solutions and non-structural mitigation solutions that the Charlton County HMPUC has taken into account.

2. Existing Policies, Regulations, Ordinances and Land Use:

The City of Folkston has adopted the 2017 NEC, which is in effect now. Charlton County, the City of Folkston and the City of Homeland have adopted building codes including the 2012 International Building Code and the 2012 International Property Maintenance Code. The 2018 NEC and updates to the prior codes including International Electrical & Plumbing & Mechanical Codes. will be done in January, 2018. The County now has Code Enforcement Officer who also serves the cities on request.

Charlton County has enacted a subdivision ordinance. Throughout Charlton County, if not zoned already, all areas are in the process of being zoned agricultural. There is at least a 4-5 mile area already zoned around the City of Folkston and the City of Homeland with the majority being either agricultural or some form of residential. There is more residential zoning in the City of Folkston and the City of Homeland than anything else. Most highways are zoned for setbacks.

The three jurisdictions have many current policies and programs related to hazard mitigation, which are described in detail in the Goals, Objectives, and Action Steps contained in Sections I through X of Chapter 4 of this Plan and in Section I of Chapter 5. All jurisdictions (within the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing Goals, Objectives, and Action Steps included in this plan. The amount of resources available to the three jurisdictions for expansion and improvement of existing programs will depend on factors such as the local government budgets and the availability of state and federal funding to support hazard mitigation activities.

Current trends are for agricultural areas to be converted to residential areas.

All jurisdictions (within the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing goals, objectives and action steps included in this plan.

3. Community Values, Historic and Special Considerations:

Charlton County, the City of Folkston and the City of Homeland have no historic and special considerations that pose significant challenges in regards to the potential Hazard Mitigation Drought Planning Activities involving historic buildings. The comprehensive range of Mitigation Goals, Objectives and Action Steps for this hazard are outlined below in Section C.

Worksheet #4-STAPLEE Criteria was completed for each Action Step. Please see worksheets contained in Appendix D Section I.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

C. Lightning-Mitigation Strategy and Recommendation:

Goal #1: Prevent or reduce damage caused by Lightning in Charlton County, the City of Folkston and the City of Homeland.

Objective #1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, due to Lightning.

Action Step #1: Provide every public outdoor recreation facility and every public school outdoor recreation facility with automatic warning device, if feasible.

Responsible Department	Charlton County/Folkston/Homeland Building & Codes Departments
Anticipated Cost	\$50,000
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	New

Action Step #2: Educate the public on the risks of Lightning

Responsible Department	Charlton County EMA
-------------------------------	---------------------

Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	New

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the Charlton County EMA. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (TV, Web Site, Local Newspaper, City Council Meetings, County Commission Meetings, social media, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of goals, objectives, and action steps, or components thereof, that have been completed, which in turn will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Completed And Deleted Action Steps:

None.

G. Unchanged Action Steps:

None.

Section X
Extreme Heat

A. Brief Narrative of Community Mitigation Goals: As previously indicated in Chapter 2 Section X, Extreme Heat may cause substantial damage to life, property and the economy in Charlton County and in the Cities of Folkston and Homeland. Extreme Heat is unpredictable and could happen at any place and at any time during the warmer months in Charlton County or in the Cities of Folkston and Homeland. The Charlton County HMPUC believes that, due to the fact that Extreme Heat can cause such damage, a comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) should be implemented to reduce the impact of Lightning on Charlton County, the City of Folkston and the City of Homeland.

B. Identification and Analysis of Comprehensive Range of Mitigation Options: The Charlton County HMPUC has identified the comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) in order to reduce or eliminate the damage caused by Extreme Heat in Charlton County, the City of Folkston and the City of Homeland. These include structural and non-structural solutions that the Committee has taken into account.

1. Structural and Non-Structural Mitigation:

The comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) includes both structural solutions and non-structural mitigation solutions that the Charlton County HMPUC has taken into account.

2. Existing Policies, Regulations, Ordinances and Land Use:

The City of Folkston has adopted the 2017 NEC, which is in effect now. Charlton County, the City of Folkston and the City of Homeland have adopted building codes including the 2012 International Building Code and the 2012 International Property Maintenance Code. The 2018 NEC and updates to the prior codes including International Electrical & Plumbing & Mechanical Codes. will be done in January, 2018. The County now has Code Enforcement Officer who also serves the cities on request.

Charlton County has enacted a subdivision ordinance. Throughout Charlton County, if not zoned already, all areas are in the process of being zoned agricultural. There is at least a 4-5 mile area already zoned around the City of Folkston and the City of Homeland with the majority being either agricultural or some form of residential. There is more residential zoning in the City of Folkston and the City of Homeland than anything else. Most highways are zoned for setbacks.

The three jurisdictions have many current policies and programs related to hazard mitigation, which are described in detail in the Goals, Objectives, and Action Steps contained in Sections I through X of Chapter 4 of this Plan and in Section I of Chapter 5. All jurisdictions (within the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing Goals, Objectives, and Action Steps included in this plan. The amount of resources available to the three jurisdictions for expansion and improvement of existing programs will depend on factors such as the local government budgets and the availability of state and federal funding to support hazard mitigation activities.

Current trends are for agricultural areas to be converted to residential areas.

All jurisdictions (within the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing goals, objectives and action steps included in this plan.

3. Community Values, Historic and Special Considerations:

Charlton County, the City of Folkston and the City of Homeland have no historic and special considerations that pose significant challenges in regards to the potential Hazard Mitigation Drought Planning Activities involving historic buildings. The comprehensive range of Mitigation Goals, Objectives and Action Steps for this hazard are outlined below in Section C.

Worksheet #4-STAPLEE Criteria was completed for each Action Step. Please see worksheets contained in Appendix D Section I.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

C. Extreme Heat-Mitigation Strategy and Recommendation:

Goal #1: Ensure the citizens of Charlton County, the City of Folkston and the City of Homeland are warned about the dangers of Extreme Heat.

Objective #1: Educate area citizens about the dangers of Extreme Heat events

Action Step #1: Provide community education materials

Responsible Department	Charlton County EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	New

Goal #2: Maintain comfortable temperatures in governmental buildings during warmer months.

Objective #1: Maintain HVAC mechanical systems in governmental buildings, update with new systems as required and add insulation.

Action Step #1: Inspects systems bi-annually, or as required.

Responsible Department	Charlton County EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023

Priority	High
Status	New

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the Charlton County EMA. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (TV, Web Site, Local Newspaper, City Council Meetings, County Commission Meetings, social media, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of goals, objectives, and action steps, or components thereof, that have been completed, which in turn will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Completed And Deleted Action Steps:

None.

G. Unchanged Action Steps:

None.

Chapter #5: Local Technological/Man-Made Hazard Mitigation Goals and Objectives

Summary of Changes:

This is the first Charlton County and the Cities of Folkston and Homeland plan update to include this chapter.

Section I **Public Health Emergency**

A. Brief Narrative of Community Mitigation Goals: As previously indicated in Chapter 3 Section I, a Public Health Emergency may cause substantial damage to life, health and the economy in Charlton County and in the Cities of Folkston and Homeland. Public Health Emergencies are unpredictable and could happen at any place and at any time in Charlton County or in the Cities of Folkston and Homeland. The Charlton County HMPUC believes that, due to the fact that Public Health Emergencies can cause such damage, a comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) should be implemented to reduce the impact of Public Health Emergencies on Charlton County, the City of Folkston and the City of Homeland.

B. Identification and Analysis of Comprehensive Range of Mitigation Options: The Charlton County HMPUC has identified the comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) in order to reduce or eliminate the damage caused by Public Health Emergencies in Charlton County, the City of Folkston and the City of Homeland. These include non-structural solutions that the Committee has taken into account.

1. Structural and Non-Structural Mitigation:

The comprehensive range of Mitigation Goals, Objectives and Action Steps (contained in Section C below) includes non-structural mitigation solutions that the Charlton County HMPUC has taken into account.

2. Existing Policies, Regulations, Ordinances and Land Use:

The City of Folkston has adopted the 2017 NEC, which is in effect now. Charlton County, the City of Folkston and the City of Homeland have adopted building codes including the 2012 International Building Code and the 2012 International Property Maintenance Code. The 2018 NEC and updates to the prior codes including International Electrical & Plumbing & Mechanical Codes. will be done in January, 2018. The County now has Code Enforcement Officer who also serves the cities on request.

The St. Marys River and the Satilla River are protected to the 100 year floodplain, no septic systems are allowed within 100 feet of the river and no construction is allowed up to twenty five (25) feet from the rested edge of the

river through river corridor protection ordinance. However, there is a great danger of fecal coliform contamination of river waters as a result of flooding of both old and hardship septic tank systems located along the rivers and tributaries. Water recharge areas are currently protected by ordinance.

Wetland areas are protected by ordinance. Soil and Sedimentation Control Ordinances are in effect.

Charlton County has enacted a subdivision ordinance. Throughout Charlton County, if not zoned already, all areas are in the process of being zoned agricultural. There is at least a 4-5 mile area already zoned around the City of Folkston and the City of Homeland with the majority being either agricultural or some form of residential. There is more residential zoning in the City of Folkston and the City of Homeland than anything else. Most highways are zoned for setbacks.

Current trends are for agricultural areas to be converted to residential areas.

Charlton County, the City of Folkston and the City of Homeland are all members of the National Flood Insurance Program. All of the local governments have some part of their jurisdictions located within a floodplain. Floodplain maps for each local government are located in Appendix A Section II.

Charlton County and the Cities of Folkston and Homeland do not participate in the Community Rating System (CRS) program. As of August 25, 2017, they were not eligible according to FEMA (<http://www.fema.gov/library/viewRecord.do?id=3629>) and other information at <http://www.fema.gov>.

All jurisdictions (within the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing goals, objectives and action steps included in this plan.

3. Community Values, Historic and Special Considerations:

Charlton County, the City of Folkston and the City of Homeland have no historic and special considerations that pose significant challenges in regards to the potential Hazard Mitigation Drought Planning Activities involving historic buildings. The comprehensive range of Mitigation Goals, Objectives and Action Steps for this hazard are outlined below in Section C.

Worksheet #4-STAPLEE Criteria was completed for each Action Step. Please see worksheets contained in Appendix D Section I.

4. New Buildings and Infrastructure:

The risk from a public health emergency is mainly to the residents of Charlton County and not to buildings and infrastructure. Therefore the mitigation

strategy and recommendations that follow include action steps designed to protect the health and safety of the general public, rather than new buildings and infrastructure.

5. Existing Buildings and Infrastructure:

The risk from a public health emergency is mainly to the residents of Charlton County and not to buildings and infrastructure. Therefore the mitigation strategy and recommendations that follow include action steps designed to protect the health and safety of the general public, rather than existing buildings and infrastructure.

C. Public Health Emergency-Mitigation Strategy and Recommendation:

Goal #1: Protect the population of Charlton County from the effects of Public Health Emergencies.

Objective #1: Prepare ways to reduce public exposure to potential or active Public Health Emergencies.

Action Step #1: Increase immunization education, prevention and pre-planning efforts, particularly for the homeless and low income individuals in the community, and host flu shot and other immunization clinics.

Responsible Department	Charlton County Health Department
Anticipated Cost	\$100,000
Existing & Potential Funding Sources	Local Operating Funds, GEMA. FEMA, Health Department
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	New

Action Step #2: Identify vulnerable populations (homeless, migrants, low income, etc.) and identify community groups to work with in order to reach and educate these populations regarding health issues.

Responsible Department	Charlton County Health Department
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds, GEMA. FEMA, Health Department
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	New

Action Step #3: Develop plan to identify community locations to obtain and distribute medical countermeasures, safe drinking water, food, ice, tarps, etc.

Responsible Department	Charlton County Health Department
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds, GEMA. FEMA, Health Department

Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	New

Action Step #4: Approach large businesses about working with the EMA on developing public health emergency plans.

Responsible Department	Charlton County EMA & Health Department
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds, GEMA, FEMA, Health Department
Jurisdiction	Unincorporated Charlton County & Cities of Folkston and Homeland
Timeframe	2018-2023
Priority	High
Status	New

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the Charlton County EMA. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (TV, Web Site, Local Newspaper, City Council Meetings, County Commission Meetings, social media, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of goals, objectives, and action steps, or components thereof, that have been completed, which in turn will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Completed And Deleted Action Steps:

None.

G. Unchanged Action Steps:

None.

Chapter #6: Executing The Plan:

Summary of Changes:

Table 6.1 provides a brief description of each section in this chapter and a summary of the changes that have been made.

Chapter 6 Section	Updates to Section
I. Implementation of the Action Plan	<ul style="list-style-type: none"> • Revised and Updated Language • Plan was updated to reflect cities' responsibilities
II. Evaluation, Monitoring, Updating	<ul style="list-style-type: none"> • Revised and Updated Language • Annual public evaluation meeting to be held instead of annual evaluation by telephone and informal meeting. • The section was not otherwise modified as it was found that lack of funding, not poor methodology, is responsible for the lack of results.
III. Plan Update & Maintenance	<ul style="list-style-type: none"> • Revised and Updated Language • Plan was updated to reflect the decisions of the Committee.

Table 6.1: Overview of updates to Chapter 6: Executing the Plan

Section I **Implementation of the Action Plan**

A. Administrative Actions: The meetings, planning process, prioritizing, etc. of the Charlton County HMPUC has been overseen by the Charlton County Emergency Management Agency. The Southern Georgia Regional Commission contracted with the Charlton County Commission to administer and facilitate the planning process. The Charlton County Commission, the City of Folkston and the City of Homeland will adopt the Plan (on approval by GEMA & FEMA) by the resolution(s) contained in Appendix E Section III

B. Authority and Responsibility: The Charlton County Commission (and the City of Folkston and the City of Homeland) have authorized the submission of this Plan to both GEMA and FEMA for approval.

As determined by the Charlton County Commission, the City of Folkston, the City of Homeland, and the Charlton County HMPUC, the Charlton County EMA Director will be responsible for this Plan and its continued usage as a planning document. The EMA Director will oversee implementation, monitoring, and updates for all jurisdictions (Charlton County and the Cities of Folkston and Homeland). The respective jurisdictions will be responsible for the implementation of the specific mitigation activities proposed in this plan.

C. Prioritization:

1. Methodology for Prioritization:

In prioritizing the implementing of action steps identified in this plan, those hazards deemed to pose the greatest threat will be given the primary consideration. In prioritizing the implementation feasibility of the action steps and projects, local governments will take into consideration the additional factors of cost and time. Those activities requiring little cost and staff time to implement will be given highest implementation priority. Those steps requiring additional funding for equipment or staff time beyond the normal budgets of the communities will be incorporated into the budget process when possible based on the cost-benefit analysis described below.

2. Use of Cost Benefit:

The data provided in Worksheet #3A will be utilized to quantify the number of persons and/or property at risk from each hazard. Combined with the criteria in Worksheet #4, this will allow local governments to assess the potential value of at-risk properties and the resulting benefits from the proposed action steps.

In prioritizing projects, the local governments will also utilize cost benefit analysis (CBA) to evaluate the feasibility of a major project. CBA is a well-established method for quantitatively comparing the benefits and costs of mitigation projects. The end result is a Benefit-Cost Ratio (BCR), which is derived from a project's total net present value of benefits divided by the total project cost estimate, which must include all documented project and maintenance costs. The benefits of mitigation projects are avoided damages, disruptions, losses, and casualties. Examples of common benefits include avoided or reduced damages to buildings, contents or infrastructure; economic impacts of loss of function of buildings; displacement costs for temporary quarters; loss of public services; loss of net business income; economic impacts of loss of function of infrastructure; road or bridge closures; loss of utility services; and deaths and injuries.

3. Use of Other Calculations: Availability of potential funding sources, overall feasibility, measurable milestones, multiple objectives, and the STAPLEE criteria were additional calculations performed. Those activities requiring smaller amounts of money and staff time to implement are given highest implementation priority. Those steps requiring additional funding for equipment or staff time beyond the normal budgets of the communities will be incorporated into the budget process when possible based on cost-benefit analysis. Higher priority was given to activities that meet multiple objectives and those which meet more of the STAPLEE criteria than others.

4. Use of Other Review Structure:

In addition to the cost benefit analysis, other factors that may affect the prioritization of projects include the availability of special tax, grant and/or loan funds which become available on a limited basis to finance implementation, such as SPLOST funds or FEMA Pre-Disaster Mitigation Program funds.

D. Incorporation of Local PDM Plan Into Other Plans/Planning Measures:

The previous (2013) Hazard Mitigation Plan was incorporated into appropriate planning mechanisms, such as comprehensive planning, by review and analysis conducted by the staff who were conducting the planning mechanisms. Information and action steps from the previous Hazard Mitigation Plan were taken into consideration for any relevant decisions by the community, and the previous Hazard Mitigation Plan was used as a basis for the current update.

This Plan will be reviewed by Charlton County, the City of Folkston and the City of Homeland. The requirements of this Hazard Mitigation Plan will be taken into consideration and should be incorporated into Comprehensive Plans, Five Year Short Term Work Program, Capital Improvement Plans, Local Emergency Operations Plans, and all other such Plans as appropriate.

Once this plan is approved, it will be used by consultants and planning committees responsible for the update process for the County and City Comprehensive Plans, Five Year Short-Term Work Programs (STWP), Capital Improvement Plans, Local Emergency Operation Plans (LEOP) and other such plans as appropriate.

To facilitate inclusion of this Plan, the Charlton County Commission and the City of Folkston and the City of Homeland will provide a copy of this Plan to the persons and/or committees responsible for writing and updating plans.

Section II **Evaluation, Monitoring & Updating**

A. Method:

The Charlton County EMA Director will be charged with ensuring that this plan is monitored and periodically updated in subsequent years. The method that the Charlton EMA will use to monitor the plan and evaluate implementation progress will be the following:

- The Charlton County EMA will conduct quarterly telephone interviews with the various local governments and area agencies in order to chart their plan progress.
- The EMA Director will hold formal public meetings at least once a year to monitor the progress of the plan implementation and allow the public a forum for expressing concerns, opinions, and ideas.
- Throughout the year, a series of informal meetings will be held in which various aspects of the plan, including monitoring and evaluation, are discussed.

B. Criteria Used To Monitor and Evaluate the Plan:

The major criteria to measure plan success will be the number of goals, objectives, and action steps, or components thereof, that have been completed, which in turn will result in savings of life, money, and property.

Section III **Plan Update and Maintenance**

A. Public Involvement:

Because the Hazard Mitigation Plan is intended to help ensure a safe and livable environment for all Charlton County, the City of Folkston and the City of Homeland residents, it is imperative that public involvement be an integral part of the planning process.

Since adoption of the original Charlton County Pre-Disaster Mitigation Plan, citizens have been kept involved and apprised of plan progress through such forums as regularly scheduled Commissioner meetings, public hearings, and applicable newspaper coverage. This same level of public education and awareness and citizen involvement will continue over the next five years until the next required update of the Hazard Mitigation Plan. When specific issues dictate, public hearings will be conducted, and all other community planning efforts (Comprehensive Plan, Regional Plan, etc.) will afford citizens the opportunity to participate in and comment on the need to incorporate hazard mitigation initiatives.

To facilitate the goal of continued public involvement in the planning process, the EMA will assure that the following steps are taken:

- The public will be directly involved in the update and review of the plan as members of the Hazard Mitigation Planning Committee.
- Copies of the plan will be kept on hand at appropriate agencies throughout Charlton County.
- The plan will be available City, County, and/or Regional Commission websites, and will contain an e-mail address and phone number the public can use for submitting comments and concerns about the plan.
- A public meeting will be held annually to provide the public with a forum for expressing concerns, opinions, and ideas. The EMA will set meeting schedules and dates and use County resources to publicize and host this meeting.

B. Timeframe:

Pursuant to the requirements set forth in the Disaster Mitigation Act of 2000, the community is again required to update and evaluate the plan no more than five years after its adoption. At least one year prior to the end of the required five-year update period, the EMA Director will begin

the planning process for a new update to this plan. This will consist of establishing a new planning committee that will be tasked with completing the update following the same process used for this update.

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

Chapter #7: Conclusion

Summary of changes:

- Revised and updated language.

Charlton County, the City of Folkston and the City of Homeland have suffered considerable damage in the past from natural hazards. Planning ahead and undertaking structural and nonstructural action steps before a disaster occurs can save lives and property. This philosophy has been the driving force behind the preparation of the Charlton County Hazard Mitigation Plan.

Education of the population and enhanced warning can decrease the vulnerability of the county's citizens and visitors. Continued and improved public information and communication with the population are important parts of this plan. Because of this planning process, Charlton County, City of Folkston and City of Homeland officials have gained a better understanding of the natural and man-made hazards affecting our community.

As a result of the planning process described in Chapter 1 and the hazard, risk, and vulnerability assessment in Chapter 2, Charlton County, the City of Folkston and the City of Homeland have a realistic perspective on the hazards to which the community is exposed. With the mitigation strategy outlined in Chapter 4, and the implementation plan included in Chapter 6, the local leaders have an "action plan" to follow when allocating resources to reduce their community's vulnerability to such hazards.

References

Charlton County Board of Tax Assessors (<http://www.qpublic.net/ga/charlton/>)

Federal Emergency Management Agency (www.fema.gov)

FEMA National Flood Insurance Program Community Status Book
(<https://www.fema.gov/national-flood-insurance-program-community-status-book>)

Georgia Emergency Management Agency, Georgia Mitigation Information System
(<https://apps.itos.uga.edu/GEMA.GMIS/>)

Georgia Emergency Management and Homeland Security Agency (<http://www.gema.ga.gov/>)

Georgia Forestry Commission (www.gatrees.org)

National Interagency Fire Center (www.nifc.gov)

National Oceanic and Atmospheric Administration, National Climatic Data Center, Storm Events Database (<http://www.ncdc.noaa.gov/stormevents/>)

Southern Georgia Regional Commission (www.sgrc.us)

U.S. Drought Monitor (<http://droughtmonitor.unl.edu/>)

United States Census Bureau (www.census.gov)

University of Georgia College of Agriculture and Environmental Sciences. *2014 Farm Gate Value Report*. (<http://caes2.caes.uga.edu/center/caed/pubs/annual.html>)

Appendices

Contents

Appendix A. Hazard Identification, Risk, and Vulnerability (HRV)

- Section I. Hurricane/Tropical Storm
 - Worksheet 3A
 - GMIS Critical Facilities Report & Map
 - Various Maps
- Section II. Flood/SLOSH
 - Worksheet 3A
 - GMIS Critical Facilities Report & Map
 - FEMA flood maps information
 - Various Maps
- Section III. Wildfire
 - Worksheet 3A
 - GMIS Critical Facilities Report & Map
 - Various Maps
- Section IV. Tornado
 - Worksheet 3A
 - GMIS Critical Facilities Report & Map
 - Various Maps
- Section V. Thunderstorm/Wind
 - Worksheet 3A
 - GMIS Critical Facilities Report & Map
 - Various Maps
- Section VI. Severe Winter Storm
 - Worksheet 3A
 - GMIS Critical Facilities Report & Map
 - Various Maps
- Section VII. Hail
 - Worksheet 3A
 - GMIS Critical Facilities Report & Map
 - Various Maps
- Section VIII. Drought
 - Worksheet 3A
 - GMIS Critical Facilities Report & Map
 - Various Maps
- Section IX. Lightning
 - Worksheet 3A
 - GMIS Critical Facilities Report & Map
 - Various Maps

Section X. Extreme Heat
Worksheet 3A
GMIS Critical Facilities Report & Map
Various Maps

Section X. Public Health Emergency
Worksheet 3A
GMIS Critical Facilities Report & Map
Various Maps

Appendix B – Growth and Development Trends / Community Information

Appendix C. Other Planning Documents

Community Wildfire Protection Plan
HAZUS

Appendix D. Worksheets Used In Planning Process

Hazard Frequency Table – Charlton County and the Cities of Folkston & Homeland
GEMA Worksheet #1
GEMA Worksheet #2
GEMA Worksheet #4 (for each objective)

Appendix E. Copies of Required Planning Documentation

I. Public Notices
II. Sign-in Sheets
III. Adoption Resolutions

Appendix F – Reports and Inventories

- I. General Historic Reports
 1. NCDC Data
 2. Flood/SLOSH-National Weather Service Data, Flood Insurance Study
 3. Extreme Heat-GA Forestry Commission Data
 4. Disaster & Hazard Events Information
 5. Other Hazard Information: Seismic, Landslide, Sinkhole, Dam
- II. Critical Facilities Inventory
- III. Charlton County Tax Digest