

## **Appendices**

## **Appendices**

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# **APPENDIX A. HAZARD IDENTIFICATION, RISK, AND VULNERABILITY** **(HRV)**

## Appendix A. I – GEMA Worksheet 3A

### GEMA Worksheet #3a

### Inventory of Assets

**Jurisdiction: Charlton County and the Cities of Folkston and Homeland**

**Hazard: I. Hurricanes/Tropical Storms**

**Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community of State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	3,687	3,687	100.000%	202,624,362	202,624,362	100.000%	18,737	18,737	100%
Commercial	677	677	100.000%	45,066,144	45,066,144	100.000%	0	0	0%
Industrial	65	65	100.000%	4,254,320	4,254,320	100.000%	0	0	0%
Agricultural	763	763	100.000%	12,301,466	12,301,466	100.000%	0	0	0%
Religious/ Non- profit	38	38	100.000%	3,349,338	13,270,420	100.000%	0	0	0%
Government	23	23	100.000%	10,822,763	10,822,763	100.000%	0	0	0%
Education	7	7	100.000%	6,025,369	6,025,369	100.000%	0	0	0%
Utilities	39	39	100.000%	35,598,905	35,598,905	100.000%	0	0	0%
Total	5,299	5,299	100.000%	320,042,667	329,963,749	103.100%	18,737	18,737	

**Task B. Determine whether (and where) you want to collect additional inventory data.**

- |   |          |          |
|---|----------|----------|
|   | <b>Y</b> | <b>N</b> |
| 1. Do you know where the greatest damages may occur in your area?   | Y        |          |
| 2. Do you know whether your critical facilities will be operational after a hazard event?   | Y        |          |
| 3. Is there enough data to determine which assets are subject to the greatest potential damages?  | Y        |          |
| 4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?   | Y        |          |
| 5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? | Y        |          |
| 6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?   | Y        |          |
| 7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?   | Y        |          |

**GEMA Worksheet #3a**
**Inventory of Assets**
**Jurisdiction: Charlton County and the Cities of Folkston and Homeland**
**Hazard: II. Flood/SLOSH**
**Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community of State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	3,687	3,687	100.000%	202,624,362	202,624,362	100.000%	18,737	18,737	100%
Commercial	677	677	100.000%	45,066,144	45,066,144	100.000%	0	0	0%
Industrial	65	65	100.000%	4,254,320	4,254,320	100.000%	0	0	0%
Agricultural	763	763	100.000%	12,301,466	12,301,466	100.000%	0	0	0%
Religious/ Non-profit	38	38	100.000%	3,349,338	13,270,420	100.000%	0	0	0%
Government	23	23	100.000%	10,822,763	10,822,763	100.000%	0	0	0%
Education	7	7	100.000%	6,025,369	6,025,369	100.000%	0	0	0%
Utilities	39	39	100.000%	35,598,905	35,598,905	100.000%	0	0	0%
Total	5,299	5,299	100.000%	320,042,667	329,963,749	103.100%	18,737	18,737	

**Task B. Determine whether (and where) you want to collect additional inventory data.**
**Y N**

1. Do you know where the greatest damages may occur in your area?

Y

2. Do you know whether your critical facilities will be operational after a hazard event?

Y

3. Is there enough data to determine which assets are subject to the greatest potential damages?

Y

4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?

Y

5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?

Y

6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?

Y

7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?

Y

## GEMA Worksheet #3a

## Inventory of Assets

**Jurisdiction:** Charlton County and the Cities of Folkston and Homeland

**Hazard:** III. Wildfire

**Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community of State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	3,687	3,687	100.000%	202,624,362	202,624,362	100.000%	18,737	18,737	100%
Commercial	677	677	100.000%	45,066,144	45,066,144	100.000%	0	0	0%
Industrial	65	65	100.000%	4,254,320	4,254,320	100.000%	0	0	0%
Agricultural	763	763	100.000%	12,301,466	12,301,466	100.000%	0	0	0%
Religious/ Non-profit	38	38	100.000%	3,349,338	13,270,420	100.000%	0	0	0%
Government	23	23	100.000%	10,822,763	10,822,763	100.000%	0	0	0%
Education	7	7	100.000%	6,025,369	6,025,369	100.000%	0	0	0%
Utilities	39	39	100.000%	35,598,905	35,598,905	100.000%	0	0	0%
Total	5,299	5,299	100.000%	320,042,667	329,963,749	103.100%	18,737	18,737	

**Task B. Determine whether (and where) you want to collect additional inventory data.**

Y N

1. Do you know where the greatest damages may occur in your area?

Y

2. Do you know whether your critical facilities will be operational after a hazard event?

Y

3. Is there enough data to determine which assets are subject to the greatest potential damages?

Y

4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?

Y

5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?

Y

6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?

Y

7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?

Y



**GEMA Worksheet #3a****Inventory of Assets****Jurisdiction: Charlton County and the Cities of Folkston and Homeland****Hazard: IV. Tornado****Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community of State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	3,687	3,687	100.000%	202,624,362	202,624,362	100.000%	18,737	18,737	100%
Commercial	677	677	100.000%	45,066,144	45,066,144	100.000%	0	0	0%
Industrial	65	65	100.000%	4,254,320	4,254,320	100.000%	0	0	0%
Agricultural	763	763	100.000%	12,301,466	12,301,466	100.000%	0	0	0%
Religious/ Non-profit	38	38	100.000%	3,349,338	13,270,420	100.000%	0	0	0%
Government	23	23	100.000%	10,822,763	10,822,763	100.000%	0	0	0%
Education	7	7	100.000%	6,025,369	6,025,369	100.000%	0	0	0%
Utilities	39	39	100.000%	35,598,905	35,598,905	100.000%	0	0	0%
Total	5,299	5,299	100.000%	320,042,667	329,963,749	103.100%	18,737	18,737	

**Task B. Determine whether (and where) you want to collect additional inventory data.****Y      N**

- Do you know where the greatest damages may occur in your area? **Y**
- Do you know whether your critical facilities will be operational after a hazard event? **Y**
- Is there enough data to determine which assets are subject to the greatest potential damages? **Y**
- Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards? **Y**
- Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? **Y**
- Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence? **Y**
- Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives? **Y**

## GEMA Worksheet #3a

## Inventory of Assets

**Jurisdiction: Charlton County and the Cities of Folkston and Homeland**

**Hazard: V. Thunderstorm/Wind**

**Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community of State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	3,687	3,687	100.000%	202,624,362	202,624,362	100.000%	18,737	18,737	100%
Commercial	677	677	100.000%	45,066,144	45,066,144	100.000%	0	0	0%
Industrial	65	65	100.000%	4,254,320	4,254,320	100.000%	0	0	0%
Agricultural	763	763	100.000%	12,301,466	12,301,466	100.000%	0	0	0%
Religious/ Non-profit	38	38	100.000%	3,349,338	13,270,420	100.000%	0	0	0%
Government	23	23	100.000%	10,822,763	10,822,763	100.000%	0	0	0%
Education	7	7	100.000%	6,025,369	6,025,369	100.000%	0	0	0%
Utilities	39	39	100.000%	35,598,905	35,598,905	100.000%	0	0	0%
Total	5,299	5,299	100.000%	320,042,667	329,963,749	103.100%	18,737	18,737	

**Task B. Determine whether (and where) you want to collect additional inventory data.**

**Y N**

- Do you know where the greatest damages may occur in your area? Y
- Do you know whether your critical facilities will be operational after a hazard event? Y
- Is there enough data to determine which assets are subject to the greatest potential damages? Y
- Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards? Y
- Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? Y
- Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence? Y
- Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives? Y

## GEMA Worksheet #3a

## Inventory of Assets

**Jurisdiction:** Charlton County and the Cities of Folkston and Homeland

**Hazard:** VI. Severe Winter Storm

**Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community of State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	3,687	3,687	100.000%	202,624,362	202,624,362	100.000%	18,737	18,737	100%
Commercial	677	677	100.000%	45,066,144	45,066,144	100.000%	0	0	0%
Industrial	65	65	100.000%	4,254,320	4,254,320	100.000%	0	0	0%
Agricultural	763	763	100.000%	12,301,466	12,301,466	100.000%	0	0	0%
Religious/ Non-profit	38	38	100.000%	3,349,338	13,270,420	100.000%	0	0	0%
Government	23	23	100.000%	10,822,763	10,822,763	100.000%	0	0	0%
Education	7	7	100.000%	6,025,369	6,025,369	100.000%	0	0	0%
Utilities	39	39	100.000%	35,598,905	35,598,905	100.000%	0	0	0%
Total	5,299	5,299	100.000%	320,042,667	329,963,749	103.100%	18,737	18,737	

**Task B. Determine whether (and where) you want to collect additional inventory data.**

**Y N**

- Do you know where the greatest damages may occur in your area? Y
- Do you know whether your critical facilities will be operational after a hazard event? Y
- Is there enough data to determine which assets are subject to the greatest potential damages? Y
- Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards? Y
- Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? Y
- Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence? Y
- Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives? Y

## GEMA Worksheet #3a

## Inventory of Assets

**Jurisdiction: Charlton County and the Cities of Folkston and Homeland**

**Hazard: VII. Hail**

**Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community of State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	3,687	3,687	100.000%	202,624,362	202,624,362	100.000%	18,737	18,737	100%
Commercial	677	677	100.000%	45,066,144	45,066,144	100.000%	0	0	0%
Industrial	65	65	100.000%	4,254,320	4,254,320	100.000%	0	0	0%
Agricultural	763	763	100.000%	12,301,466	12,301,466	100.000%	0	0	0%
Religious/ Non- profit	38	38	100.000%	3,349,338	13,270,420	100.000%	0	0	0%
Government	23	23	100.000%	10,822,763	10,822,763	100.000%	0	0	0%
Education	7	7	100.000%	6,025,369	6,025,369	100.000%	0	0	0%
Utilities	39	39	100.000%	35,598,905	35,598,905	100.000%	0	0	0%
Total	5,299	5,299	100.000%	320,042,667	329,963,749	103.100%	18,737	18,737	

**Task B. Determine whether (and where) you want to collect additional inventory data.**

**Y N**

- Do you know where the greatest damages may occur in your area? Y
- Do you know whether your critical facilities will be operational after a hazard event? Y
- Is there enough data to determine which assets are subject to the greatest potential damages? Y
- Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards? Y
- Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? Y
- Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence? Y
- Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives? Y

## GEMA Worksheet #3a

## Inventory of Assets

Jurisdiction: Charlton County and the Cities of Folkston and Homeland Hazard: VIII. Drought

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community of State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	3,687	3,687	100.000%	202,624,362	202,624,362	100.000%	18,737	18,737	100%
Commercial	677	677	100.000%	45,066,144	45,066,144	100.000%	0	0	0%
Industrial	65	65	100.000%	4,254,320	4,254,320	100.000%	0	0	0%
Agricultural	763	763	100.000%	12,301,466	12,301,466	100.000%	0	0	0%
Religious/Nonprofit	38	38	100.000%	3,349,338	13,270,420	100.000%	0	0	0%
Government	23	23	100.000%	10,822,763	10,822,763	100.000%	0	0	0%
Education	7	7	100.000%	6,025,369	6,025,369	100.000%	0	0	0%
Utilities	39	39	100.000%	35,598,905	35,598,905	100.000%	0	0	0%
Total	5,299	5,299	100.000%	320,042,667	329,963,749	103.100%	18,737	18,737	

Task B. Determine whether (and where) you want to collect additional inventory data.

- |   |   |   |
|---|---|---|
|   | Y | N |
| 1. Do you know where the greatest damages may occur in your area?   | Y |   |
| 2. Do you know whether your critical facilities will be operational after a hazard event?   | Y |   |
| 3. Is there enough data to determine which assets are subject to the greatest potential damages?  | Y |   |
| 4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?   | Y |   |
| 5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? | Y |   |
| 6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?   |   |   |
| 7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?   | Y |   |

## GEMA Worksheet #3a

## Inventory of Assets

**Jurisdiction: Charlton County and the Cities of Folkston and Homeland**

**Hazard: IX. Lightning**

**Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community of State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	3,687	3,687	100.000%	202,624,362	202,624,362	100.000%	18,737	18,737	100%
Commercial	677	677	100.000%	45,066,144	45,066,144	100.000%	0	0	0%
Industrial	65	65	100.000%	4,254,320	4,254,320	100.000%	0	0	0%
Agricultural	763	763	100.000%	12,301,466	12,301,466	100.000%	0	0	0%
Religious/ Non-profit	38	38	100.000%	3,349,338	13,270,420	100.000%	0	0	0%
Government	23	23	100.000%	10,822,763	10,822,763	100.000%	0	0	0%
Education	7	7	100.000%	6,025,369	6,025,369	100.000%	0	0	0%
Utilities	39	39	100.000%	35,598,905	35,598,905	100.000%	0	0	0%
Total	5,299	5,299	100.000%	320,042,667	329,963,749	103.100%	18,737	18,737	

**Task B. Determine whether (and where) you want to collect additional inventory data.**

**Y N**

1. Do you know where the greatest damages may occur in your area? **Y**
2. Do you know whether your critical facilities will be operational after a hazard event? **Y**
3. Is there enough data to determine which assets are subject to the greatest potential damages? **Y**
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards? **Y**
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? **Y**
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence? **Y**
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives? **Y**

## GEMA Worksheet #3a

## Inventory of Assets

**Jurisdiction: Charlton County and the Cities of Folkston and Homeland**

**Hazard: X. Extreme Heat**

**Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community of State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	3,687	3,687	100.000%	202,624,362	202,624,362	100.000%	18,737	18,737	100%
Commercial	677	677	100.000%	45,066,144	45,066,144	100.000%	0	0	0%
Industrial	65	65	100.000%	4,254,320	4,254,320	100.000%	0	0	0%
Agricultural	763	763	100.000%	12,301,466	12,301,466	100.000%	0	0	0%
Religious/ Non-profit	38	38	100.000%	3,349,338	13,270,420	100.000%	0	0	0%
Government	23	23	100.000%	10,822,763	10,822,763	100.000%	0	0	0%
Education	7	7	100.000%	6,025,369	6,025,369	100.000%	0	0	0%
Utilities	39	39	100.000%	35,598,905	35,598,905	100.000%	0	0	0%
Total	5,299	5,299	100.000%	320,042,667	329,963,749	103.100%	18,737	18,737	

**Task B. Determine whether (and where) you want to collect additional inventory data.**

**Y N**

1. Do you know where the greatest damages may occur in your area? **Y**
2. Do you know whether your critical facilities will be operational after a hazard event? **Y**
3. Is there enough data to determine which assets are subject to the greatest potential damages? **Y**
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards? **Y**
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? **Y**
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence? **Y**
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives? **Y**

## GEMA Worksheet #3a

## Inventory of Assets

**Jurisdiction:** Charlton County and the Cities of Folkston and Homeland

**Hazard:** XI. Public Health Emergency

**Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.**

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community of State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	3,687	3,687	100.000%	202,624,362	202,624,362	100.000%	18,737	18,737	100%
Commercial	677	677	100.000%	45,066,144	45,066,144	100.000%	0	0	0%
Industrial	65	65	100.000%	4,254,320	4,254,320	100.000%	0	0	0%
Agricultural	763	763	100.000%	12,301,466	12,301,466	100.000%	0	0	0%
Religious/ Non-profit	38	38	100.000%	3,349,338	13,270,420	100.000%	0	0	0%
Government	23	23	100.000%	10,822,763	10,822,763	100.000%	0	0	0%
Education	7	7	100.000%	6,025,369	6,025,369	100.000%	0	0	0%
Utilities	39	39	100.000%	35,598,905	35,598,905	100.000%	0	0	0%
Total	5,299	5,299	100.000%	320,042,667	329,963,749	103.100%	18,737	18,737	

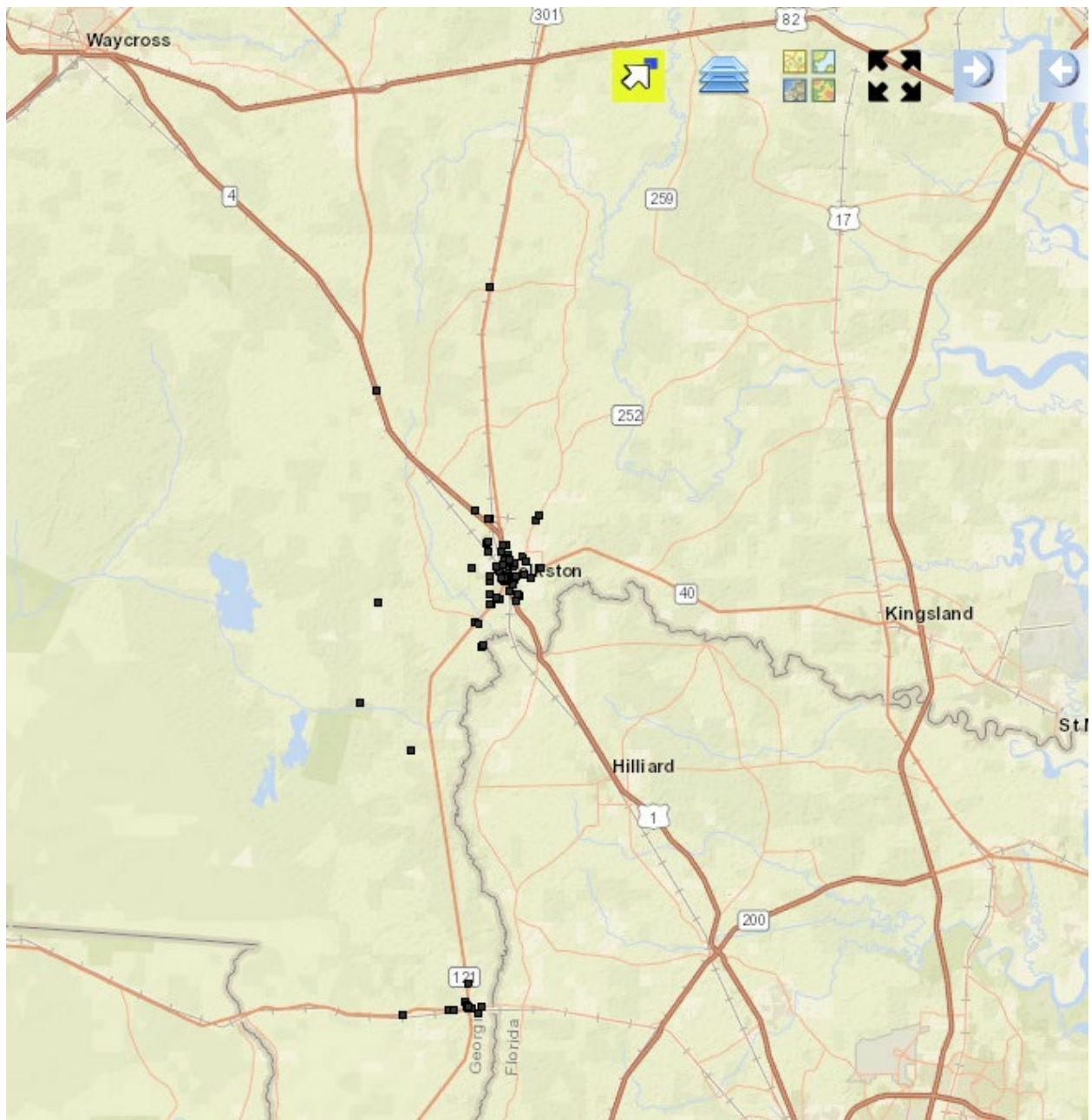
**Task B. Determine whether (and where) you want to collect additional inventory data.**

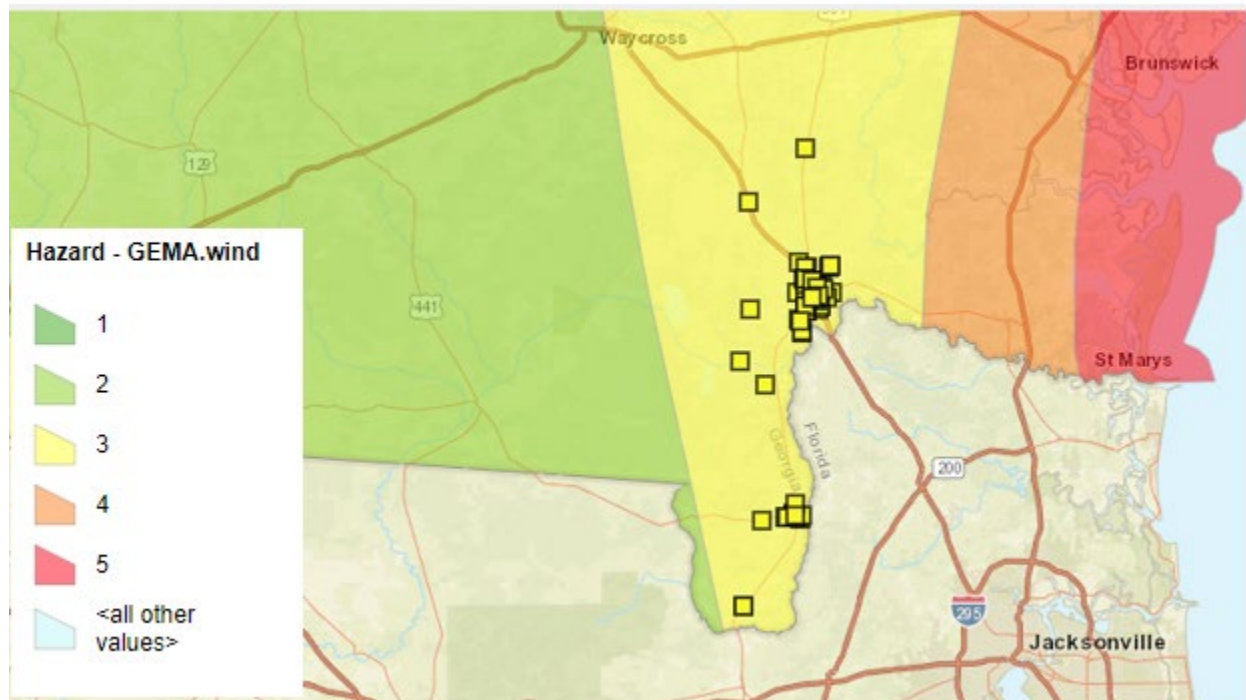
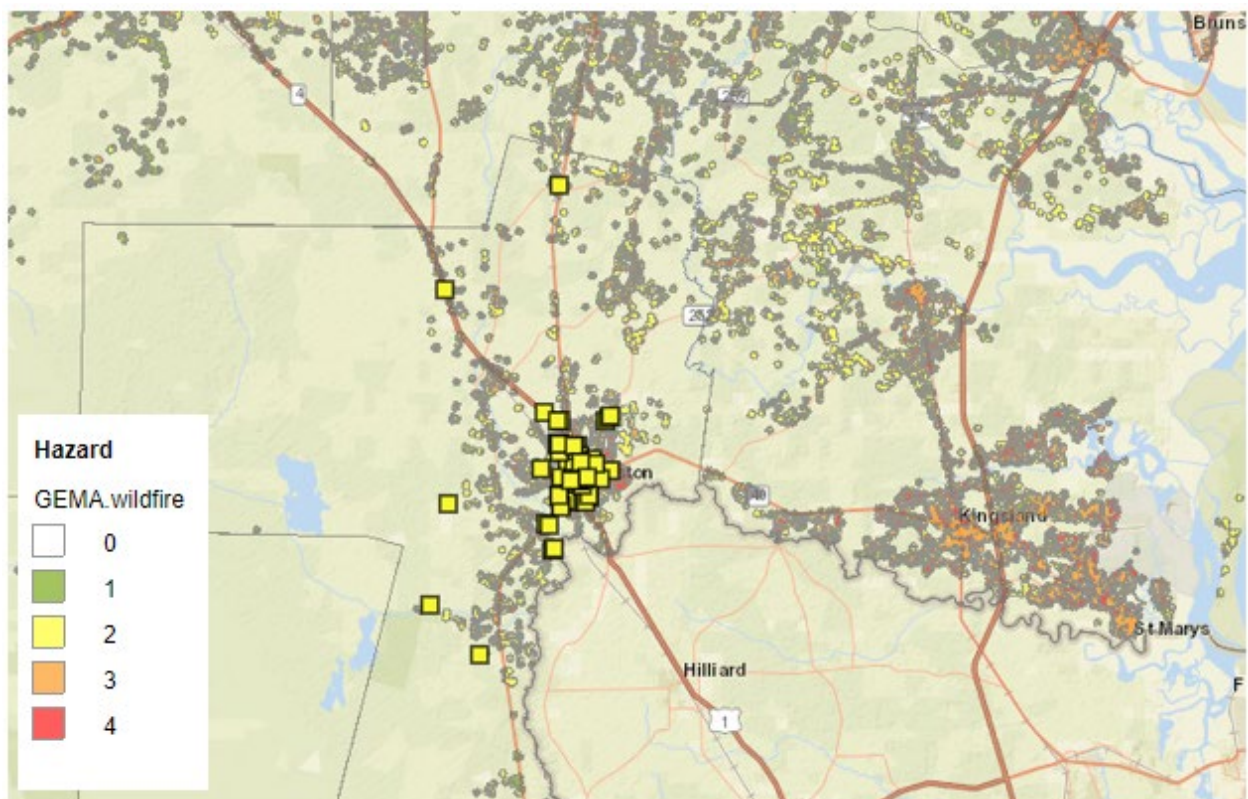
**Y N**

- Do you know where the greatest damages may occur in your area? Y
- Do you know whether your critical facilities will be operational after a hazard event? Y
- Is there enough data to determine which assets are subject to the greatest potential damages? Y
- Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards? Y
- Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? Y
- Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence? Y
- Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives? Y



## Appendix A.II – GMIS Critical Facilities Maps





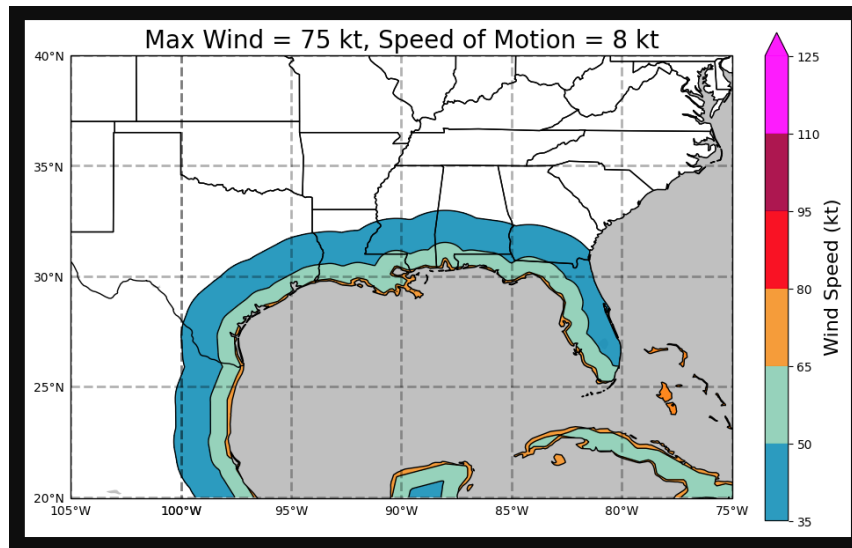


Disclaimer: This data is not to be used to determine any base flood elevations or flood zone designations for NFIP (National Flood Insurance Program) purposes. For NFIP flood insurance and regulation purposes, please refer to the published effective FIRI (Flood Rate Insurance Map) for your area of concern. Figures classified for Current Flood Zone, Endangered Flood Zone, and Embankment Flood Zone are based on a 20-year return period flood hazard and extent of inundation.

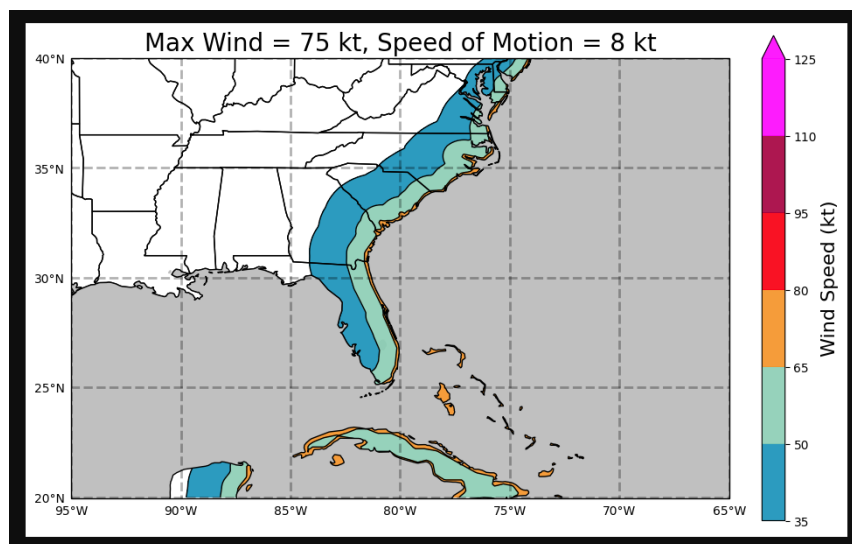
## Appendix A.III – Maximum Envelop of Wind Map (MEOW)

Examples of the Maximum Envelope of Wind  
(Source: NOAA. <http://www.nhc.noaa.gov/aboutmeow.shtml>)  
(Category 1, 8 knots forward motion)

### Gulf Coast

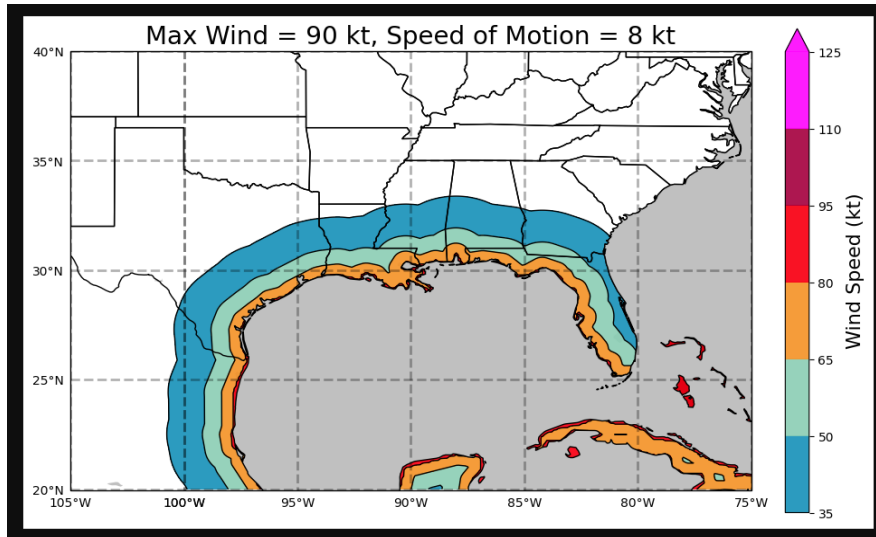


### East Coast

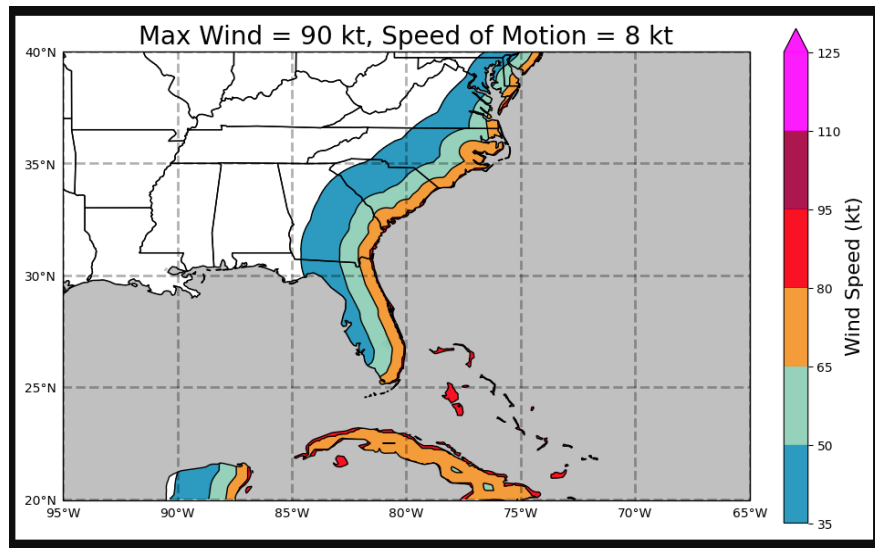


(Category 2, 8 knots forward motion)

### Gulf Coast

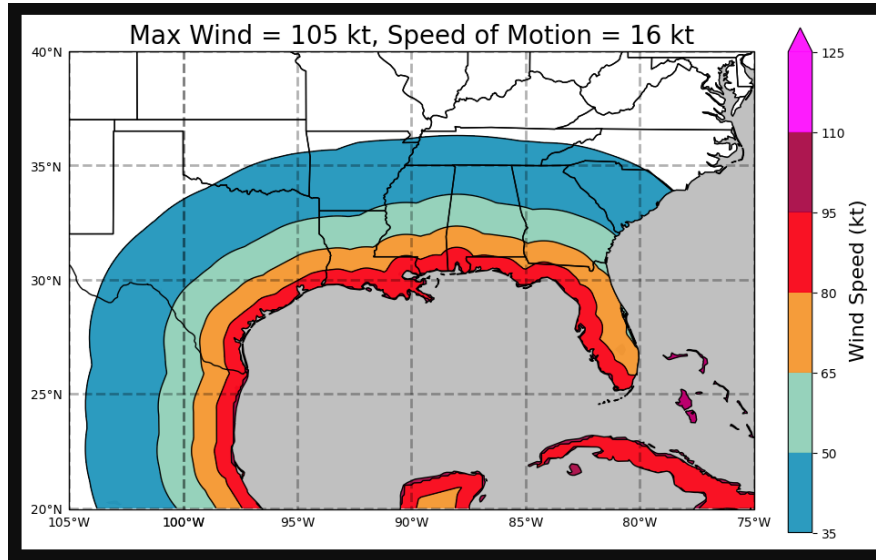


### East Coast

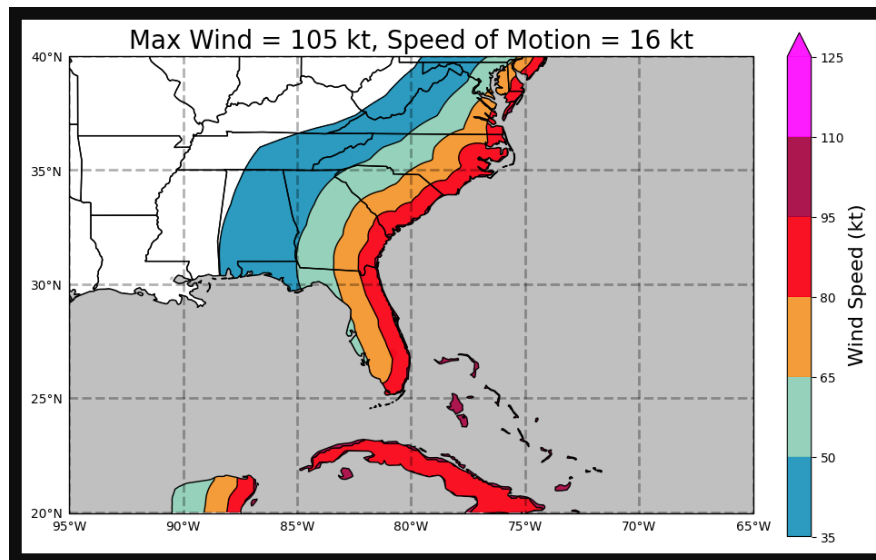


(Category 3, 16 knots forward motion)

### Gulf Coast

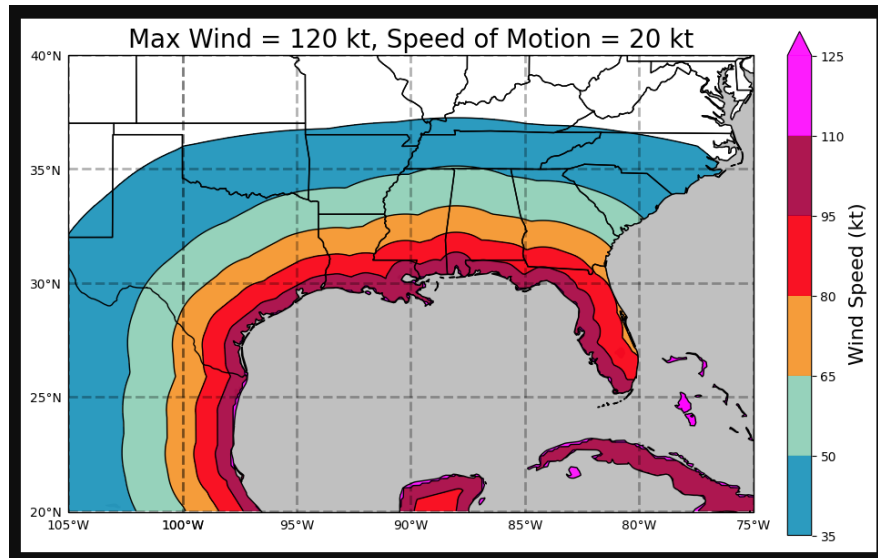


### East Coast

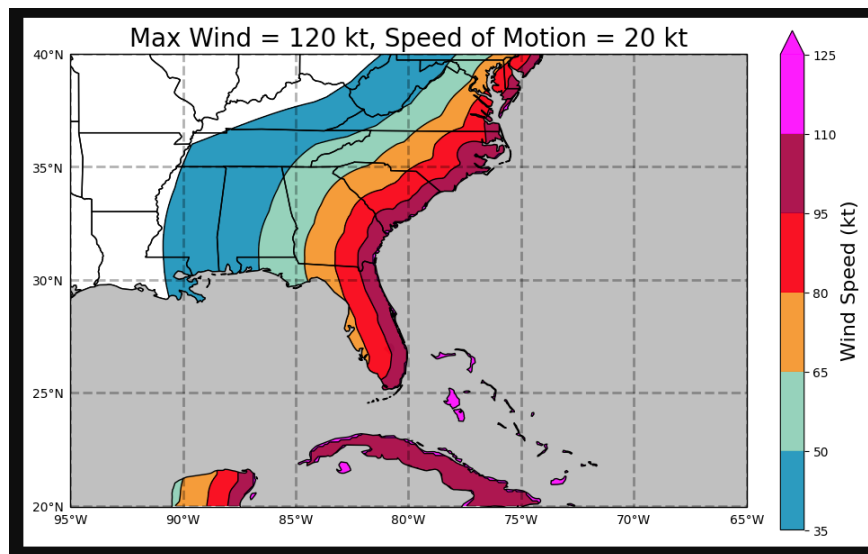


(Category 4, 20 knots, forward motion)

### Gulf Coast



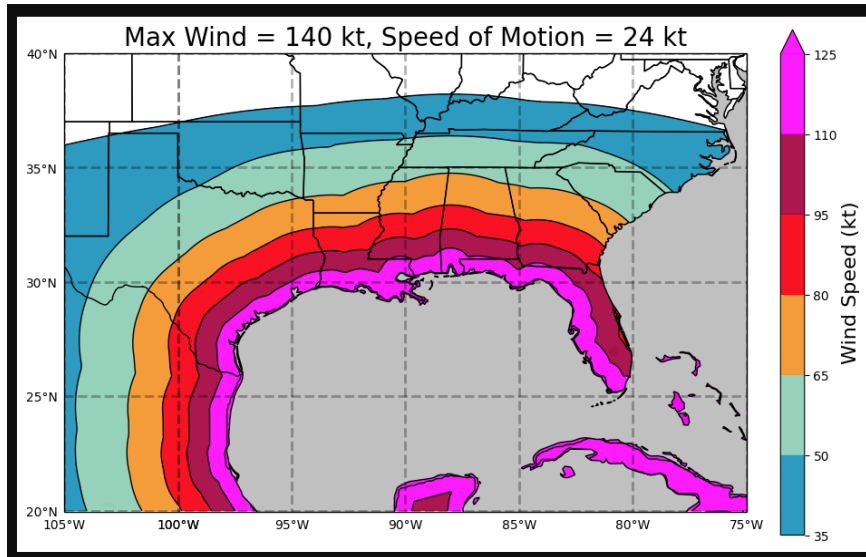
### East Coast



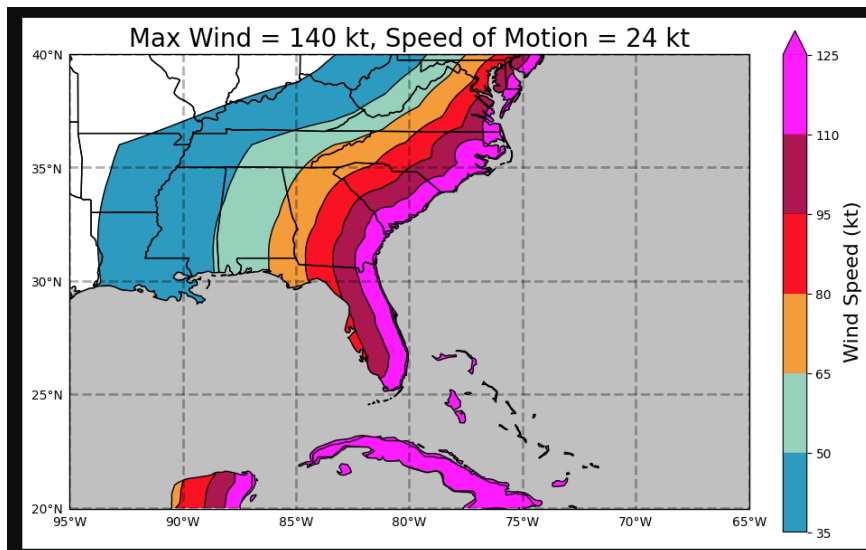


(Category 5, 24 knots, forward motion)

### Gulf Coast

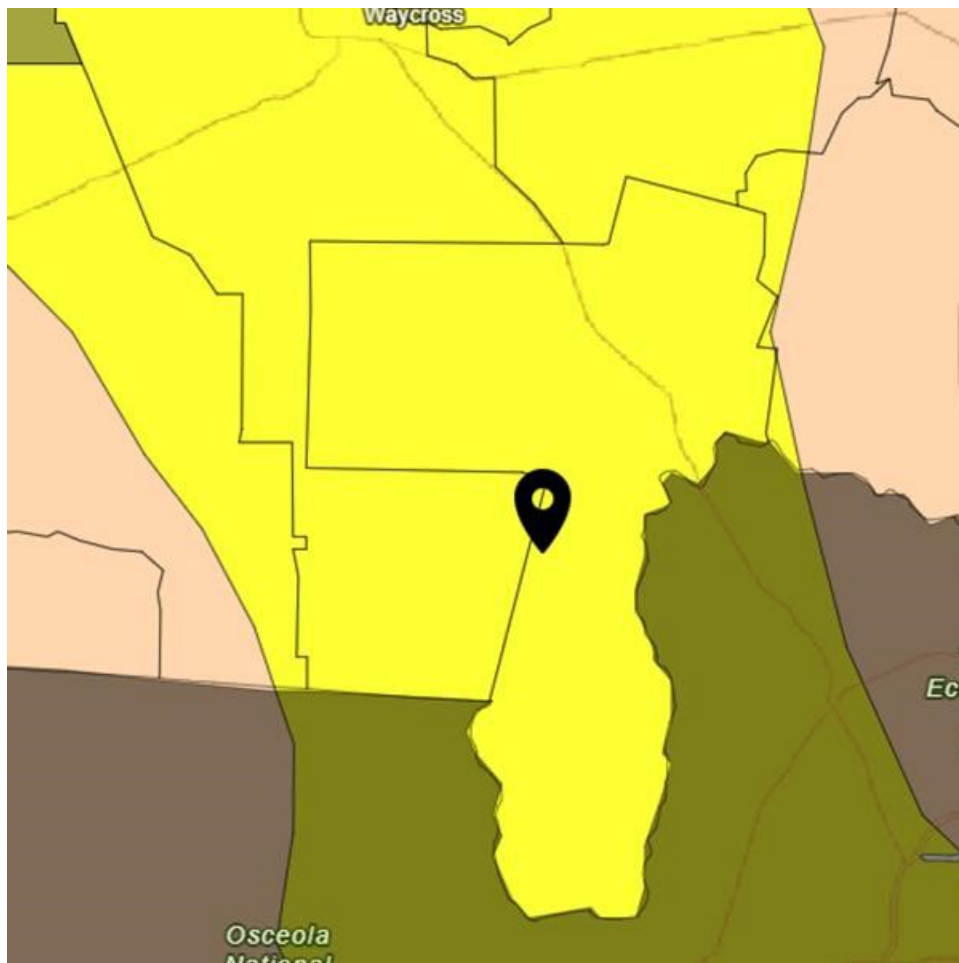


### East Coast





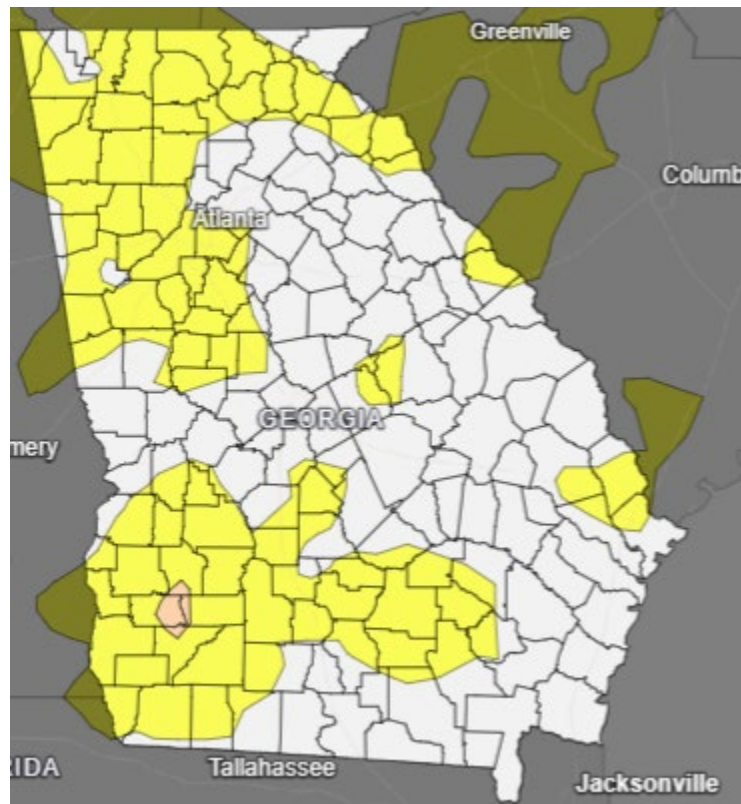
#### Appendix A.IV – Drought Monitor and Map








*(U.S. Drought Monitor August 25, 2021)*



August 25, 2022

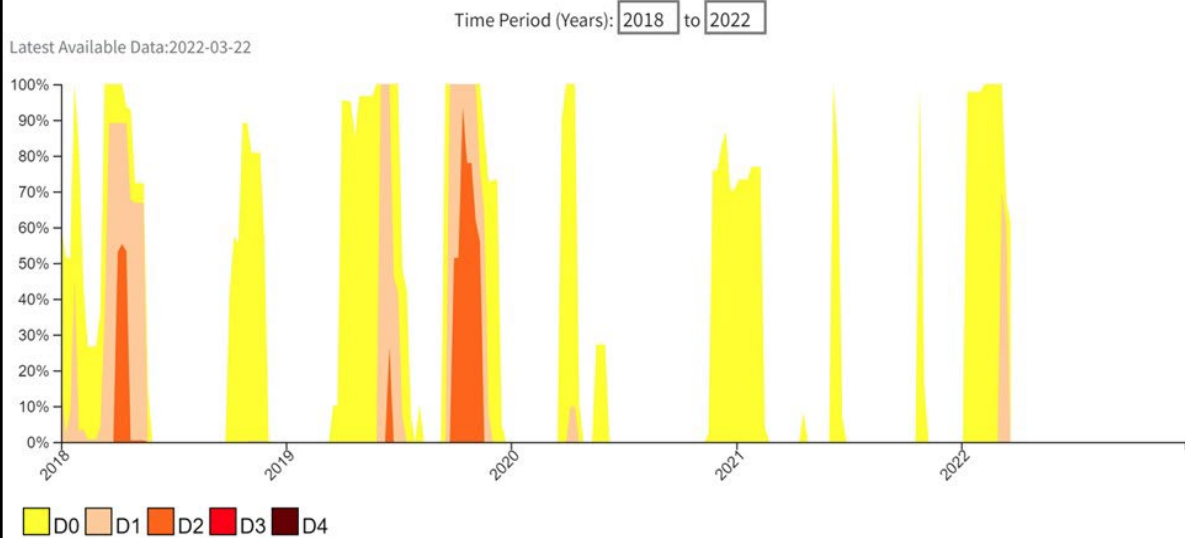


	<b>D0 - Abnormally Dry</b> <ul style="list-style-type: none"> <li>Topsoil moisture decreases; planting is delayed</li> <li>Fire risk is elevated</li> </ul>	<b>43.6%</b> of GA (D0–D4)
	<b>D1 - Moderate Drought</b> <ul style="list-style-type: none"> <li>Crops are vulnerable; soil moisture is low</li> <li>Gardens and lawns require more water</li> <li>Stream and pond levels are lower; water temperatures increase</li> </ul>	<b>0.4%</b> of GA (D1–D4)
	<b>D2 - Severe Drought</b> <ul style="list-style-type: none"> <li>Crops are stressed; hay yield is low; producers feed cattle early; planting is delayed; soil is hard; conditions are dustier than usual</li> <li>Small streams dry up; rivers are very low</li> <li>Tree mortality begins</li> </ul>	<b>0.0%</b> of GA (D2–D4)
	<b>D3 - Extreme Drought</b> <ul style="list-style-type: none"> <li>Majority of hay/grazing is lost; agriculture suffers economic losses</li> <li>Outdoor burn bans are implemented</li> <li>Rivers and livestock ponds are dry; wells are drying up; mandatory water conservation is implemented</li> </ul>	<b>0%</b> of GA (D3–D4)
	<b>D4 - Exceptional Drought</b> <ul style="list-style-type: none"> <li>Agricultural economy is severely impacted</li> <li>Fire risk is high; fire activity increases</li> <li>Tree mortality is high; army worm outbreaks occur</li> </ul>	<b>0%</b> of GA (D4)

Source(s): [NDMC](#), [NOAA](#), [USDA](#)

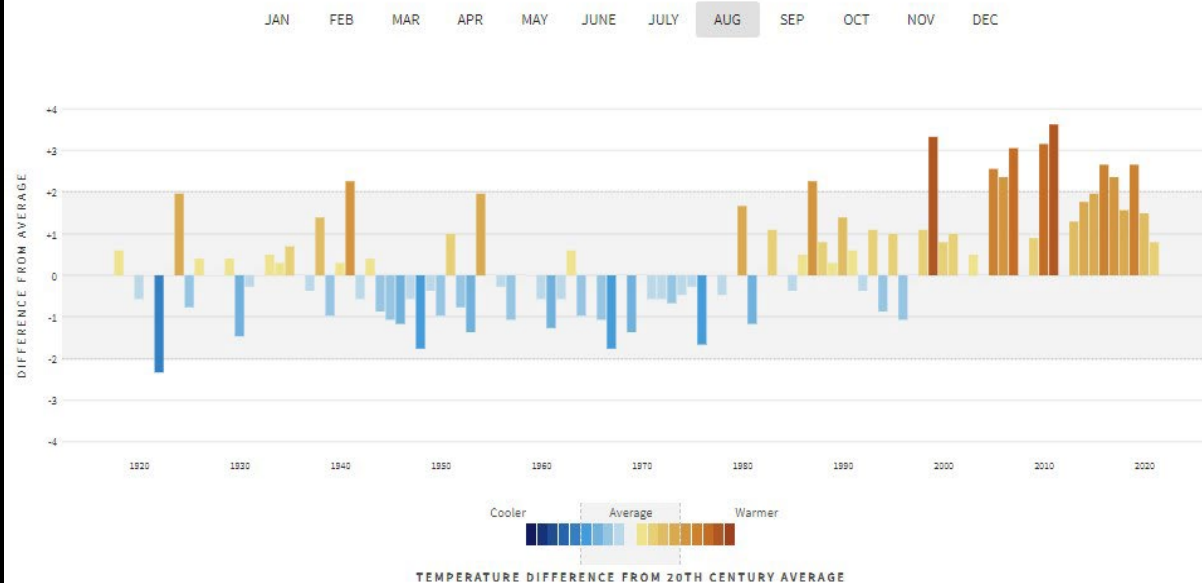
### 2000 - Present (Weekly)

The U.S. Drought Monitor (USDM) is a national map released every Thursday, showing parts of the U.S. that are in drought. The USDM relies on drought experts to synthesize the best available data and work with local observers to interpret the information. The USDM also incorporates ground truthing and information about how drought is affecting people, via a network of more than 450 observers across the country, including state climatologists, National Weather Service staff, Extension agents, and hydrologists. [Learn more.](#)



### Average Temperatures 1918-2022

Temperature difference from 20th century average for August between 1918 and 2022








## APPENDIX B. GROWTH AND DEVELOPMENT TRENDS

### Appendix B.I – Census Demographic Summary


<input type="text" value="Enter state, county, city, town, or zip code"/> <input type="button" value="-- Select a fact --"/> <input type="button" value="CLEAR"/> <input type="button" value="TABLE"/> <input type="button" value="MAP"/> <input type="button" value="CHART"/> <input type="button" value="DASH"/>	
All Topics	Charlton County, Georgia
Population Estimates, July 1 2021, (V2021)	12,766
PEOPLE	
Population	
Population Estimates, July 1 2021, (V2021)	12,766
Population estimates base, April 1, 2020, (V2021)	12,518
Population, percent change - April 1, 2020 (estimates base) to July 1, 2021, (V2021)	2.0%
Population, Census, April 1, 2020	12,518
Population, Census, April 1, 2010	12,171
Age and Sex	
Persons under 5 years, percent	4.5%
Persons under 18 years, percent	18.2%
Persons 65 years and over, percent	16.0%
Female persons, percent	41.1%
Race and Hispanic Origin	
White alone, percent	65.3%
Black or African American alone, percent (a)	29.5%
American Indian and Alaska Native alone, percent (a)	1.7%
Asian alone, percent (a)	0.8%
Native Hawaiian and Other Pacific Islander alone, percent (a)	0.1%
Two or More Races, percent	2.6%
Hispanic or Latino, percent (b)	6.0%
White alone, not Hispanic or Latino, percent	60.6%
Population Characteristics	
Veterans, 2016-2020	891
Foreign born persons, percent, 2016-2020	6.6%
Housing	
Housing units, July 1, 2021, (V2021)	4,694
Owner-occupied housing unit rate, 2016-2020	71.2%
Median value of owner-occupied housing units, 2016-2020	\$97,200
Median selected monthly owner costs -with a mortgage, 2016-2020	\$1,138
Median selected monthly owner costs -without a mortgage, 2016-2020	\$401
Median gross rent, 2016-2020	\$533
Building permits, 2021	32


<b>Families &amp; Living Arrangements</b>	
Households, 2016-2020	122,354,219
Persons per household, 2016-2020	2.60
Living in same house 1 year ago, percent of persons age 1 year+, 2016-2020	86.2%
Language other than English spoken at home, percent of persons age 5 years+, 2016-2020	21.5%
<b>Computer and Internet Use</b>	
Households with a computer, percent, 2016-2020	91.9%
Households with a broadband Internet subscription, percent, 2016-2020	85.2%
<b>Education</b>	
High school graduate or higher, percent of persons age 25 years+, 2016-2020	88.5%
Bachelor's degree or higher, percent of persons age 25 years+, 2016-2020	32.9%
<b>Health</b>	
With a disability, under age 65 years, percent, 2016-2020	8.7%
Persons without health insurance, under age 65 years, percent	10.2%
<b>Economy</b>	
In civilian labor force, total, percent of population age 16 years+, 2016-2020	63.0%
In civilian labor force, female, percent of population age 16 years+, 2016-2020	58.4%
Total accommodation and food services sales, 2017 (\$1,000) (c)	938,237,077
Total health care and social assistance receipts/revenue, 2017 (\$1,000) (c)	2,527,903,275
Total transportation and warehousing receipts/revenue, 2017 (\$1,000) (c)	895,225,411
Total retail sales, 2017 (\$1,000) (c)	4,949,601,481
Total retail sales per capita, 2017 (c)	\$15,224
<b>Transportation</b>	
Mean travel time to work (minutes), workers age 16 years+, 2016-2020	26.9
<b>Income &amp; Poverty</b>	
Median household income (in 2020 dollars), 2016-2020	\$64,994
Per capita income in past 12 months (in 2020 dollars), 2016-2020	\$35,384
Persons in poverty, percent	11.4%
<b>BUSINESSES</b>	
<b>Businesses</b>	
Total employer establishments, 2020	8,000,178
Total employment, 2020	134,163,349
Total annual payroll, 2020 (\$1,000)	7,564,809,878
Total employment, percent change, 2019-2020	0.9%
Total nonemployer establishments, 2019	27,104,006
All employer firms, Reference year 2017	5,744,643
Men-owned employer firms, Reference year 2017	3,480,438
Women-owned employer firms, Reference year 2017	1,134,549
Minority-owned employer firms, Reference year 2017	1,014,968
Nonminority-owned employer firms, Reference year 2017	4,371,152
Veteran-owned employer firms, Reference year 2017	351,237
Nonveteran-owned employer firms, Reference year 2017	4,968,606

GEOGRAPHY	
Geography	
 Population per square mile, 2020	93.8
 Population per square mile, 2010	87.4
 Land area in square miles, 2020	3,533,038.28
 Land area in square miles, 2010	3,531,905.43
 FIPS Code	1

[About datasets used in this table](#)

#### Value Notes

 Estimates are not comparable to other geographic levels due to methodology differences that may exist between different data sources.

Some estimates presented here come from sample data, and thus have sampling errors that may render some apparent differences between geographies statistically indistinguishable. Click the Quick Info  icon to the left of each row in TABLE view to learn about sampling error.

The vintage year (e.g., V2021) refers to the final year of the series (2020 thru 2021). Different vintage years of estimates are not comparable.

Users should exercise caution when comparing 2018-2020 ACS 5-year estimates to other ACS estimates. For more information, please visit the [2020 5-year ACS Comparison Guidance](#) page.

#### Fact Notes

- (a) Includes persons reporting only one race
- (c) Economic Census - Puerto Rico data are not comparable to U.S. Economic Census data
- (b) Hispanics may be of any race, so also are included in applicable race categories

#### Value Flags

- Either no or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest or upper interval of an open ended distribution.
- F Fewer than 25 firms
- D Suppressed to avoid disclosure of confidential information
- N Data for this geographic area cannot be displayed because the number of sample cases is too small.
- FN Footnote on this item in place of data
- X Not applicable
- S Suppressed; does not meet publication standards
- NA Not available
- Z Value greater than zero but less than half unit of measure shown

QuickFacts data are derived from: Population Estimates, American Community Survey, Census of Population and Housing, Current Population Survey, Small Area Health Insurance Estimates, Small Area Income and Poverty Estimates, State and County Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building Permits.



## Appendix B.II – Tax Digest

### Charlton County

GEORGIA DEPARTMENT OF REVENUE Local Government Services Division County Digest Section				2021 TAX DIGEST CONSOLIDATED SUMMARY			
County:CHARLTON County #:024 Tax District:CHARLTON COUNTY							
Dist #: 00 Assessment %: 040 Tot Parcels:6986							
AGRICULTURAL				CONSERVATION USE			
Code	Count	Acres	40% Value	Code	Count	Acres	40% Value
A1	938		11,235,492	V3	9	124.23	191,480
A3	18	67.07	114,920	V4	275	4,264.58	4,836,594
A4	297	2,263.78	2,716,486	V5	527	68,832.2	34,169,168
A5	354	122,987.52	28,889,366	V6	134		244,920
A6	865		1,647,408	ENVIRONMENTALLY SENSITIVE			
A7				Code	Count	Acres	40% Value
A9	7	0	53,542	W3			
AA				W4			
AB	4		2,182	W5			
AF	28		1,085,789	PROPERTY EXEMPTIONS			
AI	1		120	Code	Count	M&O	Bond
AZ				SA	0	0	
BROWNFIELD PROPERTY				SB	0	0	
Code	Count	Acres	40% Value	SF	8	2,760.087	
B1				SH	0	0	
B3				SJ	64	10,621.688	
B4				SP	938	555,022	
B5				SN	0	0	
B6				ST	0	0	
COMMERCIAL				SV	811	24,154.452	
Code	Count	Acres	40% Value	SW	0	0	
C1	724		37,548,684	SX			
C3	192	147.59	2,060,173	STATE HOMESTEAD EXEMPTIONS			
C4	50	284.91	1,158,962	S1	1,625	3,250,000	
C5	8	617.14	790,440	S3	17	34,000	
C7				S4	29	116,000	
C9				S5	30	1,325,246	
CA				S6			
CB	18		6,695	S7			
CF	371		15,227,030	S8			
CI	142		3,085,536	S9			
CP	6		1,634,338	SC	475	950,000	
CZ	10		30,659	SD	10	463,384	
FLPA FAIR MARKET ASSMT				SE	0	0	
Code	Count	Acres	40% Value	SG	0	0	
F3				SS	0	0	
F4				LOCAL HOMESTEAD EXEMPTIONS			
F5	64	95,659.28	28,591,440	L1	0	0	
F9				L2	0	0	
				L3	0	0	
Total	64	95,659.28	28,591,440	L4	0	0	
HISTORIC				L5			
Code	Count	Acres	40% Value	L6			
H1				L7			



H3			
INDUSTRIAL			
Code	Count	Acres	40% Value
I1	58		2,499,036
I3	2	12.21	37,760
I4	6	66.53	118,000
I5	3	975.7	424,040
I7			
I9			
IA			
IB			
IF	3		7,191,524
II	2		450,496
IP	2		1,412,843
IZ			

#### FOREST LAND CONSERVATION USE

Code	Count	Acres	40% Value
J3			
J4			
J5	64	95,659.28	27,606,885
J9			

#### PREFERENTIAL

Code	Count	Acres	40% Value
P3			
P4			
P5			
P6			
P7			
P9			

#### QUALIFIED TIMBERLAND

Code	Count	Acres	40% Value
Q4			
Q5			

#### RESIDENTIAL

Code	Count	Acres	40% Value
R1	11,054		77,022,729
R3	4,023	3,890.62	13,781,920
R4	1,368	6,494.34	9,491,861
R5	18	646.8	560,360
R6	534		383,289
R7			
R9	10	0	16,022
RA	2		8,630
RB	760		582,972
RF	2		159
RI			
RZ			

#### RESIDENTIAL TRANSITIONAL

Code	Count	Acres	40% Value
T1			
T3			

L8			
L9			
		1,016	16,840,016
TOTAL		5,023	61,069,895
			0
EXEMPT PROPERTY			
Code	Count	40% Value	
E0			
E1	189	35,783,727	
E2	188	3,985,282	
E3	41	317,153	
E4	30	252,120	
E5	4	1,019,143	
E6	25	3,924,913	
E7			
E8			
E9	17	299,678	

TOTAL	494	45,582,016	
-------	-----	------------	--

#### SUMMARY

Code	Count	Acres	40% Value
Agricultural	2,512	125,318.37	45,745,305
Brownfield Property			
Commercial	1,521	1,049.64	61,542,517
Historical			
Industrial	76	1,054.44	12,133,699
Forest Land Cons Use	64	95,659.28	27,606,885
Preferential			
Qualified Timberland			
Residential	17,771	11,031.76	101,847,942
Residential Transitional			
Utility	38	0	39,115,719
Conservation Use	945	73,221.01	39,442,162
Environmentally Sensitive			
Motor Vehicle	4,288		3,942,760
Mobile Home	1,024		6,454,194
Timber 100%	130	16,209	11,950,145
Heavy Equipment	0		0
Gross Digest	28,369	323,543.5	349,781,328
Exemptions Bond			
Net Bond Digest			349,781,328
Gross Digest	28,369	323,543.5	349,781,328
Exemptions-M&O			61,069,895
Net M&O Digest			288,711,433

#### TAX LEVIED

TYPE	ASSESSED VALUE	MILLAGE	TAX
M & O	288,711,433	.000	0.00
BOND	349,781,328	.000	0.00

T4

UTILITY

Code	Count	Acres	40% Value
U1			
U2	36	0	39,090,164
U3			
U4			
U5			
U7			
U9	2	0	25,555
UA			
UB			
UF			
UZ			

City of Folkston

<b>GEORGIA DEPARTMENT OF REVENUE</b> <b>Local Government Services Division</b> <b>County Digest Section</b>	<b>2021 TAX DIGEST CONSOLIDATED</b> <b>SUMMARY</b>
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County:CHARLTON County #:024 Tax District:FOLKSTON

Dist #: 05 Assessment %: 040 Tot Parcels:1063

AGRICULTURAL			
Code	Count	Acres	40% Value
A1	1		24,200
A3			
A4	10	83.66	196,236
A5	2	42.05	33,708
A6	2		3,360
A7			
A9			
AA			
AB			
AF	3		11,002
AI			
AZ			

BROWNFIELD PROPERTY			
Code	Count	Acres	40% Value
B1			
B3			
B4			
B5			
B6			

COMMERCIAL			
Code	Count	Acres	40% Value
C1	449		35,264,404
C3	144	92.23	1,861,553
C4	23	104.64	886,922
C5	3	181.11	383,920
C7			
C9			
CA			
CB			
CF	209		5,194,643
CI	104		2,039,419
CP	3		874,476
CZ	1		5,932

FLPA FAIR MARKET ASSMT			
Code	Count	Acres	40% Value
F3			
F4			
F5			
F9			

Total

HISTORIC			
Code	Count	Acres	40% Value
H1			

CONSERVATION USE			
Code	Count	Acres	40% Value
V3			
V4	6	73.91	161,884
V5	1	16.51	23,080
V6	1		680

ENVIRONMENTALLY SENSITIVE			
Code	Count	Acres	40% Value
W3			
W4			
W5			

PROPERTY EXEMPTIONS			
Code	Count	M&O	Bond
SA	0	0	
SB	0	0	
SF	4	1,505,145	
SH	0	0	
SJ	0	0	
SP	178	132,245	
SN	65	0	
ST	0	0	
SV	7	162,362	
SW	0	0	
SX			

STATE HOMESTEAD EXEMPTIONS			
Code	Count	Acres	40% Value
S1			
S3			
S4			
S5	6	202,118	
S6			
S7			
S8			
S9			
SC			
SD	2	71,396	
SE	0	0	
SG	0	0	
SS	0	0	

LOCAL HOMESTEAD EXEMPTIONS			
Code	Count	Acres	40% Value
L1			
L2			
L3			
L4			
L5			
L6			
L7			

INDUSTRIAL			
Code	Count	Acres	40% Value
I1	36		1,737,320
I3	2	12.21	37,760
I4	5	45.07	86,760
I5	2	94.2	170,200
I7			
I9			
IA			
IB			
IF	1		1,567,328
II	1		449,518
IP	1		909,605
IZ			
FOREST LAND CONSERVATION USE			
Code	Count	Acres	40% Value
J3			
J4			
J5			
J9			
PREFERENTIAL			
Code	Count	Acres	40% Value
P3			
P4			
P5			
P6			
P7			
P9			
QUALIFIED TIMBERLAND			
Code	Count	Acres	40% Value
Q4			
Q5			
RESIDENTIAL			
Code	Count	Acres	40% Value
R1	1,362		13,504,767
R3	789	542.04	3,008,725
R4	77	324.78	845,223
R5	1	48.18	141,080
R6	25		19,160
R7			
R9			
RA			
RB	67		44,215
RF			
RI			
RZ			
RESIDENTIAL TRANSITIONAL			
Code	Count	Acres	40% Value
T1			
T3			

L8				
L9				
TOTAL		262	2,073,266	0
EXEMPT PROPERTY				
Code	Count	40% Value		
E0				
E1	59	5,933,476		
E2	59	1,861,164		
E3	6	94,177		
E4	3	93,520		
E5	4	1,019,143		
E6	11	3,472,792		
E7				
E8				
E9	3	197,800		
TOTAL		145	12,672,072	
SUMMARY				
Code	Count	Acres	40% Value	
Agricultural	18	125.71	268,506	
Brownfield Property				
Commercial	936	377.98	46,511,269	
Historical				
Industrial	48	151.48	4,958,491	
Forest Land Cons Use				
Preferential				
Qualified Timberland				
Residential	2,321	915	17,563,170	
Residential Transitional				
Utility	12	0	4,466,043	
Conservation Use	8	90.42	185,644	
Environmentally Sensitive				
Motor Vehicle	660		654,180	
Mobile Home	147		704,988	
Timber 100%	3	20	12,693	
Heavy Equipment	0		0	
Gross Digest	4,153	1,680.59	75,324,984	
Exemptions Bond				
Net Bond Digest			75,324,984	
Gross Digest	4,153	1,680.59	75,324,984	
Exemptions-M&O			2,073,266	
Net M&O Digest			73,251,718	
TAX LEVIED				
TYPE	ASSESSED VALUE	MILLAGE	TAX	
M & O	73,251,718	8.114	594,364.44	
BOND	75,324,984			

T4

UTILITY			
Code	Count	Acres	40% Value
U1			
U2	11	0	4,441,815
U3			
U4			
U5			
U7			
U9	1	0	24,228
UA			
UB			
UF			
UZ			

City of Homeland

GEORGIA DEPARTMENT OF REVENUE Local Government Services Division County Digest Section				2021 TAX DIGEST CONSOLIDATED SUMMARY			
County:CHARLTON County #:024 Tax District:HOMELAND				Dist #: 10 Assessment %: 040 Tot Parcels:522			
AGRICULTURAL				CONSERVATION USE			
Code	Count	Acres	40% Value	Code	Count	Acres	40% Value
A1	11		234,769	V3			
A3	5	1.43	5,160	V4	10	152.57	182,160
A4	11	34.74	46,400	V5	5	155.39	139,800
A5	5	167.38	117,600	V6			
A6	20		18,524	ENVIRONMENTALLY SENSITIVE			
A7				Code	Count	Acres	40% Value
A9				W3			
AA				W4			
AB				W5			
AF	1		672	PROPERTY EXEMPTIONS			
A1				Code	Count	M&O	Bond
AZ				SA	0	0	
BROWNFIELD PROPERTY				SB	0	0	
Code	Count	Acres	40% Value	SF	0	0	
B1				SH	0	0	
B3				SJ	0	0	
B4				SP	68	29,156	
B5				SN	1	0	
B6				ST	0	0	
COMMERCIAL				SV	15	263,371	
Code	Count	Acres	40% Value	SW	0	0	
C1	42		327,289	SX			
C3	10	11.39	32,440	STATE HOMESTEAD EXEMPTIONS			
C4	5	30.98	72,000	S1			
C5				S3			
C7				S4			
C9				S5	0	0	
CA				S6			
CB				S7			
CF	24		86,845	S8			
CI	3		12,434	S9			
CP				SC			
CZ				SD	1	28,228	
FLPA FAIR MARKET ASSMT				SE	0	0	
Code	Count	Acres	40% Value	SG	0	0	
F3				SS	0	0	
F4				LOCAL HOMESTEAD EXEMPTIONS			
F5				L1			
F9				L2			
Total				L3			
HISTORIC				L4			
Code	Count	Acres	40% Value	L5			
H1				L6			
				L7			

H3	INDUSTRIAL		
Code	Count	Acres	40% Value
I1			
I3			
I4			
I5			
I7			
I9			
IA			
IB			
IF			
II			
IP			
IZ			

FOREST LAND CONSERVATION USE

Code	Count	Acres	40% Value
J3			
J4			
J5			
J9			

PREFERENTIAL

Code	Count	Acres	40% Value
P3			
P4			
P5			
P6			
P7			
P9			

QUALIFIED TIMBERLAND

Code	Count	Acres	40% Value
Q4			
Q5			

RESIDENTIAL

Code	Count	Acres	40% Value
R1	1,025		5,038,640
R3	435	325.13	893,864
R4	42	156.85	279,400
R5			
R6	7		7,140
R7			
R9	1	0	2,000
RA			
RB	53		20,119
RF			
R1			
RZ			

RESIDENTIAL TRANSITIONAL

Code	Count	Acres	40% Value
T1			
T3			

L8  
L9

TOTAL	85	320,755	0
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EXEMPT PROPERTY

Code	Count	40% Value
E0		
E1	39	362,977
E2	22	336,580
E3		
E4	1	5,640
E5		
E6		
E7		
E8		
E9		

TOTAL	62	705,197
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SUMMARY

Code	Count	Acres	40% Value
Agricultural	53	203.55	423,125
Brownfield Property			
Commercial	84	42.37	531,008
Historical			
Industrial			
Forest Land Cons Use			
Preferential			
Qualified Timberland			
Residential	1,563	481.98	6,241,163
Residential Transitional			
Utility	9	0	1,709,552
Conservation Use	15	307.96	321,960
Environmentally Sensitive			
Motor Vehicle	187		134,710
Mobile Home	100		638,605
Timber 100%	0	0	0
Heavy Equipment	0		0
Gross Digest	2,011	1,035.86	10,000,123
Exemptions Bond			
Net Bond Digest			10,000,123
Gross Digest	2,011	1,035.86	10,000,123
Exemptions-M&O			320,755
Net M&O Digest			9,679,368

TAX LEVIED

TYPE	ASSESSED VALUE	MILLAGE	TAX
M & O	9,679,368	3.070	29,715.66
BOND	10,000,123		

T4

UTILITY

Code	Count	Acres	40% Value
U1			
U2	9	0	1,709,552
U3			
U4			
U5			
U7			
U9			
UA			
UB			
UF			
UZ			



## APPENDIX C. OTHER PLANNING DOCUMENTS

### Appendix C. I – 2020 Comprehensive Plan Short Term Work Program

**Charlton County 5-Year Community Work Program Update**  
(2021 - 2025)

PROJECTS	ESTIMATED COST	RESPONSIBLE PARTY	FUNDING SOURCE	GOAL	FY 21	FY 22	FY 23	FY 24	FY 25
<b>CULTURAL RESOURCES</b>									
Display items of historical significance at the Chamber of Commerce building and on the Chamber website.	Staff time	Okefenokee Chamber of Commerce	General Fund	4	X	X	X	X	X
<b>ECONOMIC DEVELOPMENT</b>									
Provide funding for Charlton/Folkston Development Authority and its programs.	\$29,000 per year	Charlton County	General Fund	1	X	X	X	X	X
Provide funding to the Chamber of Commerce for promotion of the County to attract business and promote eco-tourism.	\$10,000 per year	Charlton County	General Fund	1	X	X	X	X	X
Participate in workforce development.	\$7,500	Charlton County	General Fund	1	X	X	X	X	X
Improve the General Class Business Airport.	\$25,000 per year	Charlton County	General Fund	1	X	X	X	X	X
Evaluate methods of incentivizing medical services to locate in the County.	Staff time	Charlton County; Chamber of Commerce	General Fund	1	X	X	X	X	X
<b>HOUSING</b>									
Provide funding for building and code enforcement program.	\$40,000 per year	Charlton County	General Fund	2	X	X	X	X	X
Conduct review of ordinances on an as-needed basis.	\$2,500	Charlton County	General Fund	2	X	X	X	X	X
Establish & Maintain Firewise Community Programs/Plans for all communities within the county.	\$80,000	Charlton County, City of Folkston, City of Homeland	Georgia Forestry Commission	2	X	X	X	X	X
Fund neighborhood revitalization to address substandard housing within the Thomas Camp neighborhood.	\$750,000/project	Charlton County	General Fund, CDBG, grants, CHIP	2	X	X	X		
Fund housing rehabilitation to upgrade the quality of existing substandard housing within the northeast border of Folkston; specifically the area of SR 252 and HWY 40.	\$750,000/year	Charlton County	General Fund, CDBG, grants, CHIP	2	X	X	X	X	X

<b>LAND USE</b>									
Adopt a Zoning Ordinance in an effort to support land uses that encourage growth, enhance economic development, provide employment opportunities, and promote environmental sustainability.	\$15,000	Charlton County	General Fund	6	X	X	X	X	X
<b>NATURAL RESOURCES</b>									
Provide funding and support for the St Marys River Management Committee.	\$800/year	Charlton County	General Fund	3	X	X	X	X	X
Develop a Master Plan for outdoor recreation that will not contribute adverse environmental impacts.	\$15,000 (one-time fee)	Charlton County	General Fund	3	X	X	X	X	X
Implement recommendations from the Master Plan for outdoor recreation to support increased river access and sports programming and facilities.	\$300,000	Charlton County	General Fund, SPLOST, grants	3	X	X	X	X	X
Implement the highest priority management measures recommended in the Spanish Creek Watershed Management Plan to address fecal coliform and dissolved oxygen impairments in Spanish Creek.	\$650,000	Charlton County	319 grant, General Fund, grants	3	X	X	X	X	X
<b>TRANSPORTATION</b>									
Pave portions of Newell Road and other Connector Roads.	\$500,000	Charlton County	General Fund, SPLOST, grants	7	X	X	X	X	X
Maintain Roads & Bridges, to include street paving and Drainage.	\$500,000 per year	Charlton County	General Fund, SPLOST, grants, CDBG	7	X	X	X	X	X
Resurface Suwannee Canal Road with Bike Lane from Hwy 121 to Refuge.	\$750,000	Charlton County and ONWR	General Fund, SPLOST, grants	7	X	X	X	X	X
Support regional efforts to identify and support bicycle trails and supportive infrastructure.	\$15,000	Charlton County	General Fund, SPLOST, grants	7	X	X	X	X	X
Upgrade dirt roads to paved roads with associated improvements (curb, gutter, drainage, and sidewalks) in the St. George community.	\$750,000 per year	Charlton County, GDOT	SPLOST, TSPLOST, CDBG, grants	7			X	X	X

PROJECTS	ESTIMATED COST	RESPONSIBLE PARTY	FUNDING SOURCE	GOAL	FY 21	FY 22	FY 23	FY 24	FY 25
<b>BROADBAND</b>									
Provide adequate high speed broadband access for local industries and commercial businesses.	\$10,000,000	Charlton County, City of Folkston, Public/Private Partnership	General Fund, SPLOST, grants, private funding	9	X	X	X	X	X
Adopt a Broadband Ordinance.	Staff time	Charlton County	General Fund	9	X	X	X	X	X
Apply for Broadband Ready Certification.	Staff time	Charlton County	General Fund	9	X	X	X	X	X
Review and reduce any obstacles to roll-out or development of broadband infrastructure.	Staff time	Charlton County	General Fund	9	X	X	X	X	X

**City of Folkston 5-Year Community Work Program Update**  
(2021 - 2025)

PROJECTS	ESTIMATED COST	RESPONSIBLE PARTY	FUNDING SOURCE	GOAL	FY 21	FY 22	FY 23	FY 24	FY 25
<b>CULTURAL RESOURCES</b>									
Support programs and agencies that promote and protect the historical and unique character of Folkston.	\$20,000	City of Folkston	General Fund	4	X	X	X	X	X
<b>NATURAL RESOURCES</b>									
Complete water audits to reduce number of gallons not metered.	\$10,000 per year	City of Folkston	Water-sewer funds, grants	4	X	X	X	X	X
Support programs that encourage and promote eco-tourism for local businesses.	\$10,000 per year	City of Folkston	General Fund	4	X	X	X	X	X
<b>ECONOMIC DEVELOPMENT</b>									
Provide funding for the Charlton/Folkston Development Authority.	\$26,000	City of Folkston	General Fund	1	X	X	X	X	X
Revitalize the core downtown business districts.	\$25,000	City of Folkston	General Fund, grants	1	X	X	X	X	X
Provide funding and support for the Chamber of Commerce.	\$35,000	City of Folkston	General Fund	1	X	X	X	X	X
<b>HOUSING</b>									
Request property owners clean up and maintain areas per the Dangerous Building Ordinance.	\$10,000 per year	City of Folkston	General Fund	2	X	X	X	X	X
<b>LAND USE</b>									
Revise ordinances in conflict with desired development and growth patterns.	\$15,000 per year	City of Folkston	General Fund	6	X	X	X	X	X

PROJECTS	ESTIMATED COST	RESPONSIBLE PARTY	FUNDING SOURCE	GOAL	FY 21	FY 22	FY 23	FY 24	FY 25
Support and enforce land use regulations.	\$10,000 per year	City of Folkston	General Fund	6	X	X	X	X	X
<b>COMMUNITY FACILITIES &amp; SERVICES</b>									
Complete maintenance on the train museum located in the historic depot.	\$20,000 per year	City of Folkston	SPLOST, CDBG, General Fund	5	X	X	X	X	X
Maintain the Veteran's Park.	\$20,000 per year	City of Folkston	SPLOST, CDBG, General Fund	5	X	X	X	X	X
Repair, refurbish, and replace defective wastewater lift stations, manholes, and distribution lines.	\$100,000	City of Folkston	General Fund	5	X	X	X	X	X
Provide funding and monthly support for the Charlton County Library.	\$25,000 per year	City of Folkston	General Fund	5	X	X	X	X	X
Improve and maintain the rail viewing platform.	\$20,000 per year	City of Folkston	SPLOST, CDBG, General Fund	5	X	X	X	X	X
Repair and replace defective water/sewer lines.	\$25,000 per year	City of Folkston	Water/Sewer funds, grants, SPLOST	5	X	X	X	X	X
Expand water system and build 1.5 MGD wastewater treatment plant.	\$10,000,000-\$12,000,000	City of Folkston	USDA Loan/Grant program	5	X	X	X	X	X
<b>INTERGOVERNMENTAL COORDINATION</b>									
Participate in committees, groups, and organizations promoting intergovernmental coordination.	\$5,000 per year	City of Folkston	General Fund	8	X	X	X	X	X
Pursue intergovernmental cooperation between Cities, County, and all boards and authorities.	\$5,000 per year	City of Folkston	General Fund	8	X	X	X	X	X

<b>BROADBAND</b>									
Provide adequate high speed broadband access for local industries and commercial businesses.	\$10,000,000	City, County, Public/Private Partnership	General Fund, SPLOST, grants, private funding	9	X	X	X	X	X
Adopt a Broadband Ordinance.	Staff time	City of Folkston	General Fund	9	X	X	X	X	X
Apply for Broadband Ready Certification.	Staff time	City of Folkston	General Fund	9	X	X	X	X	X
Review and reduce any obstacles to roll-out or development of broadband infrastructure.	Staff time	City of Folkston	General Fund	9	X	X	X	X	X
<b>TRANSPORTATION</b>									
Support drainage and paving of unpaved roads as funding is available.	\$1,000,000	City of Folkston	LARP, DOT, General Fund, CDBG, SPLOST	7	X	X	X	X	X

**City of Homeland 5-Year Community Work Program Update**  
(2021 - 2025)

PROJECTS	ESTIMATED COST	RESPONSIBLE PARTY	FUNDING SOURCE	GOAL	FY 21	FY 22	FY 23	FY 24	FY 25
<b>ECONOMIC DEVELOPMENT</b>									
Fund the Homeland Economic Development Authority and its programs.	\$50,000	City of Homeland	General Fund	1	X	X	X	X	X
<b>HOUSING</b>									
Fund the building and code enforcement program.	\$25,000	City of Homeland	Fees and General Fund	2	X	X	X	X	X
<b>COMMUNITY FACILITIES &amp; SERVICES –</b>									
Upgrade all recreational facilities and parks on an as-needed basis.	\$20,000	City of Homeland	General Fund, grants	5	X	X	X	X	X
Upgrade water system facilities and infrastructure on an as needed basis.	\$50,000	City of Homeland	CDBG, USDA, grants, and General Fund	5	X	X	X	X	X
Construct new City Hall with built in fireproof vault.	\$300,000	City of Homeland	CDBG, USDA, grants, and General Fund	5	X	X	X	X	X
Maintain and replace existing fleet on an as-needed basis.	\$25,000 - \$30,000	City of Homeland	General Fund, grants, and SPLOST	5	X	X	X	X	X
<b>BROADBAND</b>									
Encourage broadband internet providers to offer services within Homeland.	Staff Time	City of Homeland	General Fund	9	X	X	X	X	X
<b>TRANSPORTATION –</b>									
Provide storm water drainage improvements to Nature Trail Estates Subdivision.	\$100,000	City of Homeland	LMIG, DOT, CDBG, SPLOST, and General Fund	7	X	X	X	X	X
Resurface roads on an as needed basis.	\$100,000	City of Homeland	General Fund, SPLOST, DOT	7	X	X	X	X	X





## **Community Wildfire Protection Plan**

### ***An Action Plan for Wildfire Mitigation and Conservation of Natural Resources***

## **Charlton County, Georgia**



Prepared by;  
Roger Todd, Chief Ranger, Charlton County  
Will Fell, CWPP Specialist (Initial Plan 2010, updated 2016)  
Beryl Budd, Wildfire Prevention Specialist (Revised 2018)

Georgia Forestry Commission  
33152 Hwy 121  
Folkston, GA 31537

The following report is a collaborative effort among various entities; the representatives listed below comprise the core decision-making team responsible for this report and mutually agree on the plan's contents:

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## Appended Documents

Charlton County Southern Wildfire Risk Assessment Summary Report (SWRA)

Charlton County Wildfire Pre-suppression Plan

NFPA 1141 Standard for Fire Protection Infrastructure for Land Development in Suburban and Rural Areas.

## I. OBJECTIVES

The mission of the following report is to set clear priorities for the implementation of wildfire mitigation in Charlton County. The plan includes prioritized recommendations for the appropriate types and methods of fuel reduction and structure ignitability reduction that will protect this community and its essential infrastructure. It also includes a plan for wildfire suppression. Specifically, the plan includes community-centered actions that will:

- Educate citizens on wildfire, its risks, and ways to protect lives and properties,
- Support fire rescue and suppression entities,
- Focus on collaborative decision-making and citizen participation,
- Develop and implement effective mitigation strategies, and
- Develop and implement effective community ordinances and codes.

## II. COMMUNITY COLLABORATION

The core team convened on August 9, 2009 to assess risks and develop the Community Wildfire Protection Plan. The group is comprised of representatives from local government, local fire authorities, and the state agency responsible for forest management. Below are the groups included in the task force:

Charlton County Government  
*Charlton County Fire  
Rescue  
Emergency Management  
Board of County Commissioners*  
Georgia Forestry Commission  
US Fish and Wildlife Service.

It was decided to conduct community assessments on the basis of the on high risk communities and the individual fire districts in the county. The chiefs of the six fire departments in the county assessed their districts and reconvened on September 23, 2009 for the purpose of completing the following:

Risk Assessment	Assessed wildfire hazard risks and prioritized mitigation actions.
Fuels Reduction	Identified strategies for coordinating fuels treatment projects.



Structure Ignitability	Identified strategies for reducing the ignitability of structures within the Wildland interface.
Emergency Management	Forged relationships among local government and fire districts and developed/refined a pre-suppression plan.
Education and Outreach	Developed strategies for increasing citizen awareness and action and to conduct homeowner and community leader workshops.

### III. COMMUNITY & WILDFIRE HISTORY



Charlton County, in southeast Georgia, is the state's 111th county. Comprising 781 square miles, the county borders Florida and includes most of the

Okefenokee Swamp. It was carved from a part of Camden County and officially recognized by the state legislature in 1854. Portions of Ware

County were added to Charlton in 1855. Charlton County was named for Robert Milledge Charlton, a nineteenth-century jurist, U.S. senator, and mayor of Savannah. The current courthouse was built in 1928 and placed on the National Register of Historic Places in

1980. The area was originally inhabited by Creek Indians, and the first white settlers came from neighboring counties in Florida, North Carolina, and South Carolina.

Folkston, the county seat of Charlton since 1901, became the focal point for transportation after the arrival of railroads in the 1880s and grew to become the county's largest city by the end of the nineteenth century. Named after William Brandon Folks of Waycross, Folkston was not officially incorporated until 1911. For many years it was the major stopping point for railroad passengers traveling between Florida and points north, giving rise to a number of fine hotels around the train depot. The depot has today been restored, and it now houses the Okefenokee Chamber of Commerce and the Folkston–Charlton County Development Authority.

The major attraction in the county is the Okefenokee Swamp. Floyds Island Hammock (also known as the Hebard Cabin) in the swamp is the site of a cabin used by naturalists and writers in the 1930s. Folkston Train Depot and the "Folkston Funnel" Train Viewing Platform have been restored, allowing railroad fans to see as many as sixty trains go by within one twenty-four-hour period. Old Folkston Grammar School, built in 1926 and recently renovated, is now the home of the Okefenokee Education and Research Center. Sponsored by the City of Folkston and the Georgia Wildlife Federation, the center includes a 2,700-square-foot exhibit area and the Okefenokee Heritage Garden,

representing four local habitats. The William Mizell House, on four acres of "urban forest," is a two-story wood-frame house with a greenhouse and pavilion and is included on the National Register of Historic Places. Located on Route 2, Sardis Church, built around 1821, is the oldest church in the county. (New Georgia Encyclopedia)

More than 98 percent of the county's land is forest, making it the most timbered of Georgia's counties. Rich titanium deposits lie between Charlton and neighboring Ware County, much of it bordering the Okefenokee National Wildlife Refuge. In 1997 concerned county residents protested the DuPont Company's plan for a titanium strip mine, resulting in the company's eventual donation of 16,000 acres to the people of Georgia—the largest land preservation gift in Georgia history.

Annual events include National Wildlife Week and Earth Day Art Festival, the Okefenokee Festival, the Folkston RailWatch, the Cherokee of Georgia Council Spring Pow Wow, and the Mizell House Gala.

According to the 2010 U.S. census, the county population was 12,171 (68.6 percent white, 28.5 percent black, and 2.5 percent Hispanic, .6 percent Native American, .4 percent Asian), a 6.5 percent increase since 2010. (US Census Bureau 2016)

#### *Wildfire History*

Charlton County, one of the largest counties in Georgia in land area, is also one of the most heavily forested with 98% of the land area in forest. Even though a large portion of the western part of the county is within the confines of Okefenokee National Wildlife Refuge, there are still almost 300,000 acres of commercial timberland within the confines of the county. The county is oriented such that it is over 50 road miles from the southernmost Big Bend area to the Brantley County line on the north. While the main population center is Folkston near the center of the county there are several small communities and developments spread the length of the county with a significant risk as wildland urban interface around them.

Charlton County is protected by Charlton County Fire Rescue (CCFR) consisting of 5 strategically placed fire stations in the main communities of Charlton County; Folkston, Saint

George, Race Pond, Winokur and Georgia Bend Communities. The CCFR is a combination

Department consisting of one career position serving as the Fire Chief , with Volunteer Firefighters filling the remainder of the department's personnel. As of August 2016 the CCFR manpower consisted of 60 members including the Chief. The Georgia Forestry Commission maintains a county protection unit located about three miles south of Folkston on Hwy 121 to respond to wildfires throughout the county. The city of Folkston and the adjacent incorporated town of Homeland are serviced by a pressurized water system with hydrants well placed throughout the city.

Over the past fifty years, Charlton County has averaged 74 reported wildland fires per year. The occurrence of these fires is fairly uniform throughout the year with a slight peak in the months of February and March and a slight decrease during the fall months. These fires have burned an average of 1,002 acres annually. While the numbers of fires remain fairly similar every month, there is a marked difference in the monthly acreage lost. The monthly acres lost during the late winter through summer period show a ten-fold increase over the acres lost during the fall and early winter. Additionally, while the annual numbers of fires have not increased noticeably during the 50-year period that records are available, the annual acreage lost appears to have increased in later years. This perhaps a result of the decrease in the practice of prescribed burning and the resultant increase in wildland fuel loadings. Despite this alarming trend in fire behavior, more homes are being built outside of traditional communities into the wildland urban interface. The leading causes of these fires, was lightning and debris burning causing 23% and 22% respectively of the fires and 12% and 32% respectively of the acres burned. More alarming is that incendiary or arson while causing only 17% of the fires account for 45% of the acres lost.

During the last 10 years, fiscal year 2008 thru 2017, the county has averaged having 46 wildfires annually with an average size of 85 acres per fire. Lightning has been the major cause during these years, causing 38% and burning 80% of the total acres. Debris burning is the 2<sup>nd</sup> leading cause accounting for 18% of the fires and burning 3% of the acres. Incendiary (arson) and machine use are also leading causes with each accounting for 12% of these fires and respectively 1% and 12% of the acreage burned during these years.

Georgia Forestry Commission Wildfire Records show that in the past five years, FY2014 – FY2018, 6 Homes have been lost or damaged by wildfire in Charlton County resulting in estimated losses of \$714,000 along with 20 outbuildings valued at \$788,500. According to reports during this period 263 homes have been directly or indirectly threatened by these fires. Additionally, 5 vehicles valued at \$35,000 and 5 pieces of other mechanized equipment suffered damages estimated at \$13,700. This is a substantial loss of non-timber property attributed to wildfires in Charlton County.

It is of significance that the Okefenokee National Wildlife Refuge lies partially within Charlton County. This National Wildlife Refuge, a component of the US Department of the Interior, encompasses 186,565 acres in Charlton County and has a well-documented history and occurrence of wildfires. The majority of the refuge is nationally designated wilderness, and is inaccessible to fire suppression equipment. Large fire occurrence had trended to a 4-6-year cycle over the past 20-

year period, with most of the larger fires occurring during moderate to severe droughts. The fires occurring are during this period are almost exclusively lightning fires. These large refuge fires do have a profound impact to local GFC units, personnel and equipment. Recent large wildfires occurring on refuge lands and beyond the refuge boundary have burned hundreds of thousands of acres and have burned for periods of several months to a year before being declared out.

**\*\*Please note that wildfires occurring on the Okefenokee National Wildlife Refuge are not reflected in following tables.**



**Wildfires usually occur from lightning in the Okefenokee National Wildlife Refuge**

**Charlton County wildfire activity during the last complete fiscal year, July 1, 2017 thru June 30 2018. This table also includes averages for the last 5 years.**

County = Charlton	Cause	Fires		Acres	Fires 5 Yr Avg	Acres 5 Yr Avg
<a href="#">Campfire</a>	Campfire	0		0.00	0.60	1.15
<a href="#">Children</a>	Children	0		0.00	0.20	0.10
<a href="#">Debris: Ag Fields, Pastures, Orchards, Etc</a>	Debris: Ag Fields, Pastures, Orchards, Etc	0		0.00	0.40	4.90
<a href="#">Debris: Escaped Prescribed Burn</a>	Debris: Escaped Prescribed Burn	3		1.05	3.20	17.47
<a href="#">Debris: Household Garbage</a>	Debris: Household Garbage	0		0.00	0.20	0.06
<a href="#">Debris: Other</a>	Debris: Other	1		1.90	0.60	0.96
<a href="#">Debris: Residential, Leafpiles, Yard, Etc</a>	Debris: Residential, Leafpiles, Yard, Etc	5		3.50	2.80	4.12
<a href="#">Debris: Site Prep - Forestry Related</a>	Debris: Site Prep - Forestry Related	3		3.40	1.80	14.37
<a href="#">Incendiary</a>	Incendiary	1		11.60	3.60	41.68
<a href="#">Lightning</a>	Lightning	4		25.60	12.80	5,912.00
<a href="#">Machine Use</a>	Machine Use	2		0.30	2.00	1.42
<a href="#">Miscellaneous: Cutting/Welding/Grinding</a>	Miscellaneous: Cutting/Welding/Grinding	0		0.00	0.40	0.18
<a href="#">Miscellaneous: Firearms/Ammunition</a>	Miscellaneous: Firearms/Ammunition	0		0.00	0.20	0.02
<a href="#">Miscellaneous: Fireworks/Explosives</a>	Miscellaneous: Fireworks/Explosives	0		0.00	0.20	0.44
<a href="#">Miscellaneous: Other</a>	Miscellaneous: Other	0		0.00	1.80	2.32

<a href="#">Miscellaneous: Power lines/Electric fences</a>	Miscellaneous: Power lines/Electric fences	6	5.20	3.80	23.79
<a href="#">Miscellaneous: Structure/Vehicle Fires</a>	Miscellaneous: Structure/Vehicle Fires	0	0.00	0.20	0.04
<a href="#">Miscellaneous: Woodstove Ashes</a>	Miscellaneous: Woodstove Ashes	0	0.00	0.40	1.46
<a href="#">Railroad</a>	Railroad	7	6.10	2.60	2.18
<a href="#">Undetermined</a>	Undetermined	3	0.12	6.40	20.60
<b>Totals for County: Charlton Year: 2018</b>		35	58.77	44.20	6,049.26

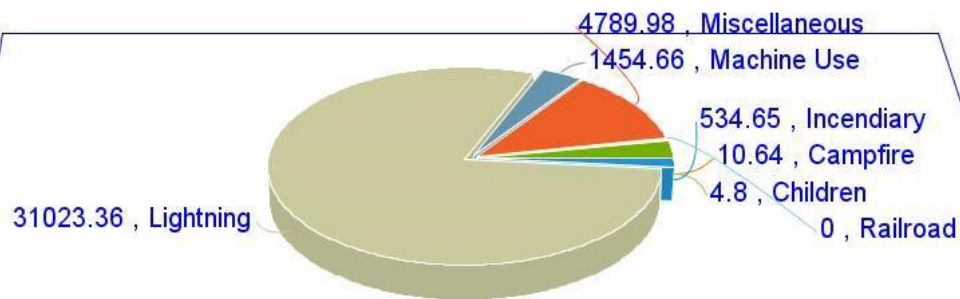
Acreage Burned /Number of Fires for Charlton County For FY 2008-2017					
Year	Acreage Burned	Number of Fires	Average Size	Statewide Average Size	
2008	519.91	51	10.19	4.56	
2009	281.36	29	9.70	3.90	

2010	202.00	30	6.73	3.93
2011	7,366.94	101	72.94	17.56
2012	228.00	49	4.65	5.08
2013	196.74	19	10.35	4.53
2014	155.93	36	4.33	5.02
2015	380.64	50	7.61	4.42
2016	470.91	45	10.46	6.29
2017	29,180.07	55	530.55	11.60
<b>Average</b>	<b>3,898.25</b>	<b>46</b>	<b>84.74</b>	<b>6.69</b>

<b>Acreage Burned /Number of Fires by Fire Cause for Charlton County for FY 2008-2017</b>		
<b>Fire Cause</b>	<b>Acreage Burned</b>	<b>Number of Fires</b>
Campfire	10.64	6
Children	4.80	3
Debris Burning	1,043.91	84
Incendiary	534.65	57
Lightning	31,023.36	173
Machine Use	1,454.66	56

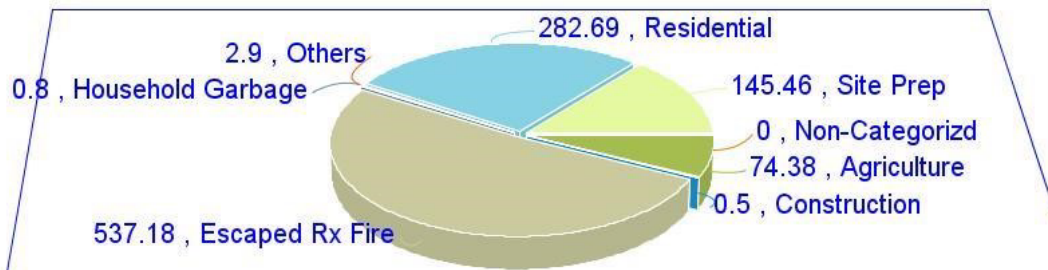
Miscellaneous	4,789.98	43
Railroad	0.00	0
Smoking	2.61	4
Undetermined	112.09	32
<b>Total</b>	<b>38,976.70</b>	<b>458</b>

Acreage Burned by Cause of Fire For Charlton County For FY 2008-2017



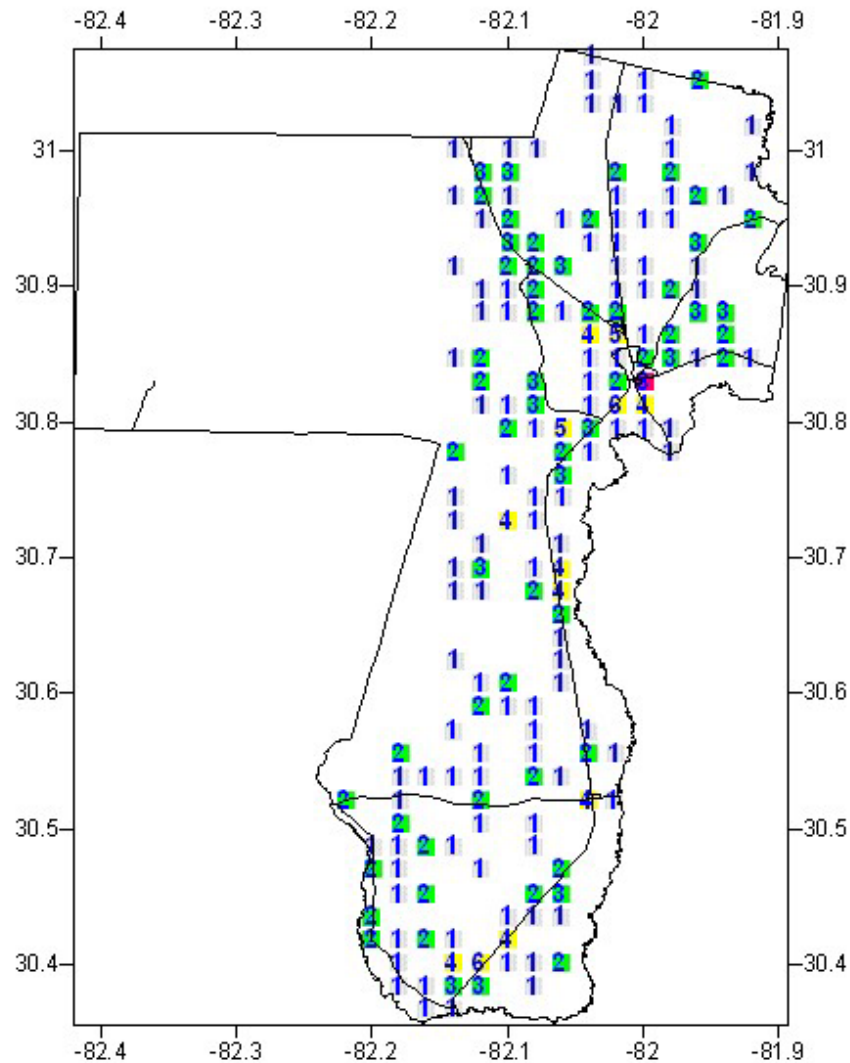


Acreage Burned By Debris Burning Sub Cause For Charlton County For FY 2008-2017

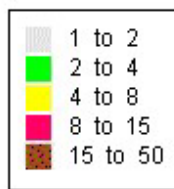


Fire Cause

# Fire Occurrence Map for Charlton County for Fiscal Year 2007-2011



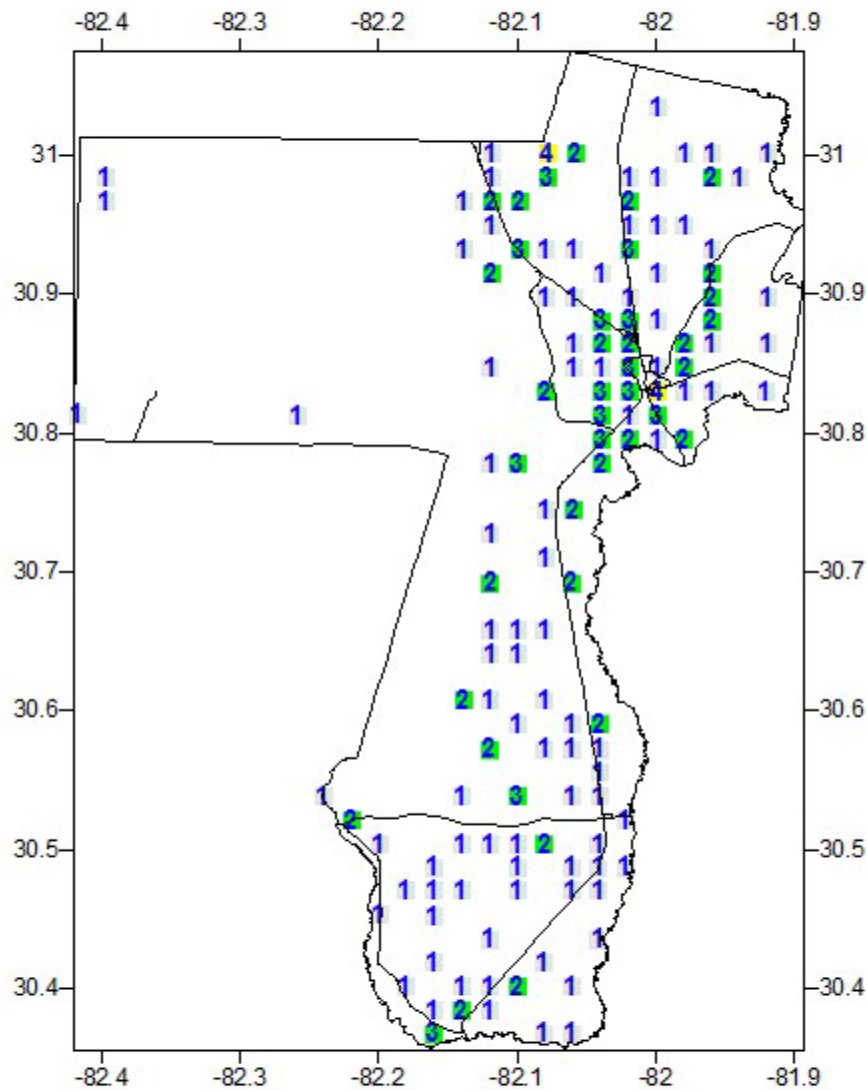
GEORGIA FORESTRY  
COMMISSION



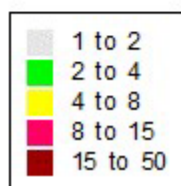
GEORGIA FORESTRY  
COMMISSION



# Fire Occurrence Map for Charlton County for Fiscal Year 2012-2016



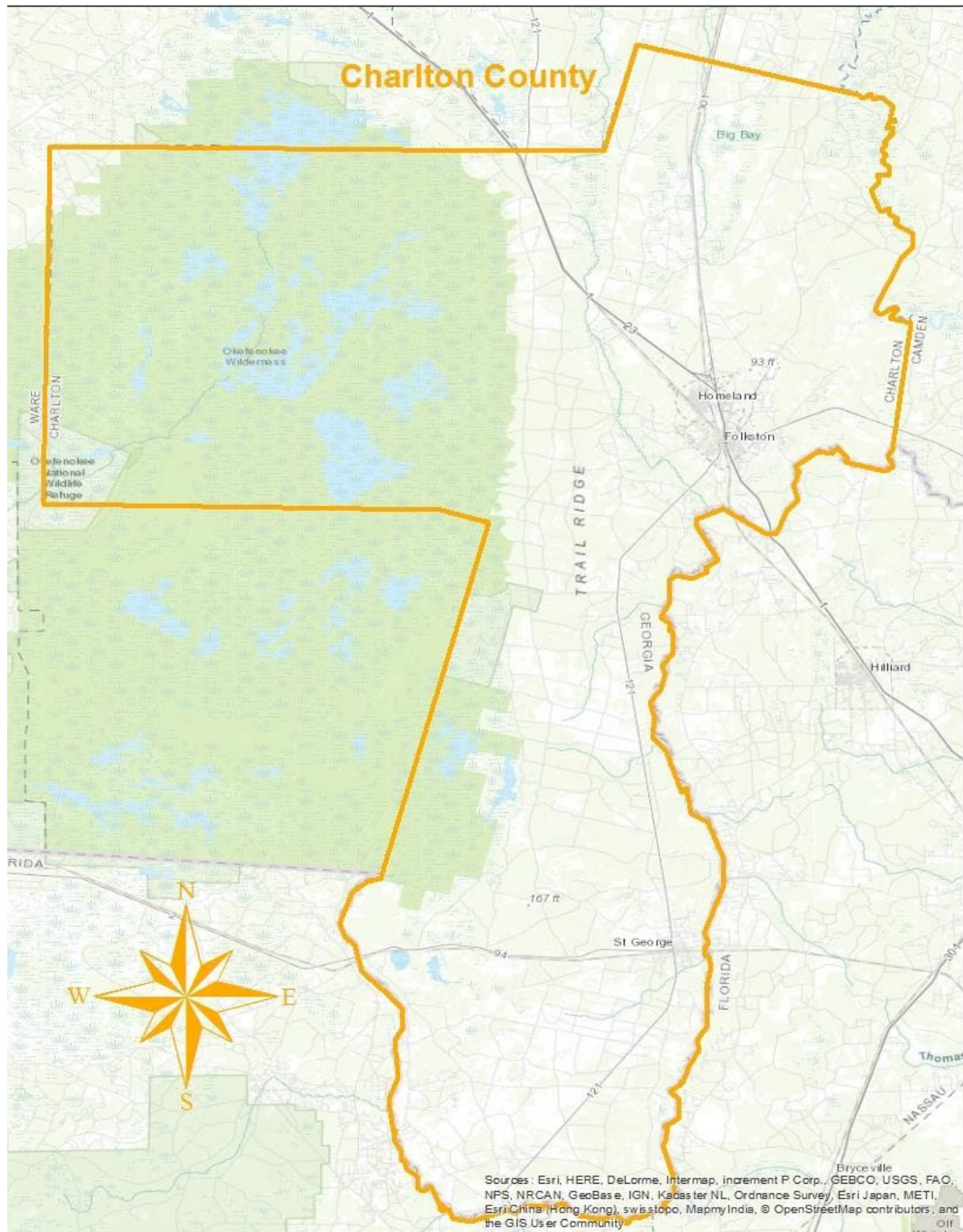
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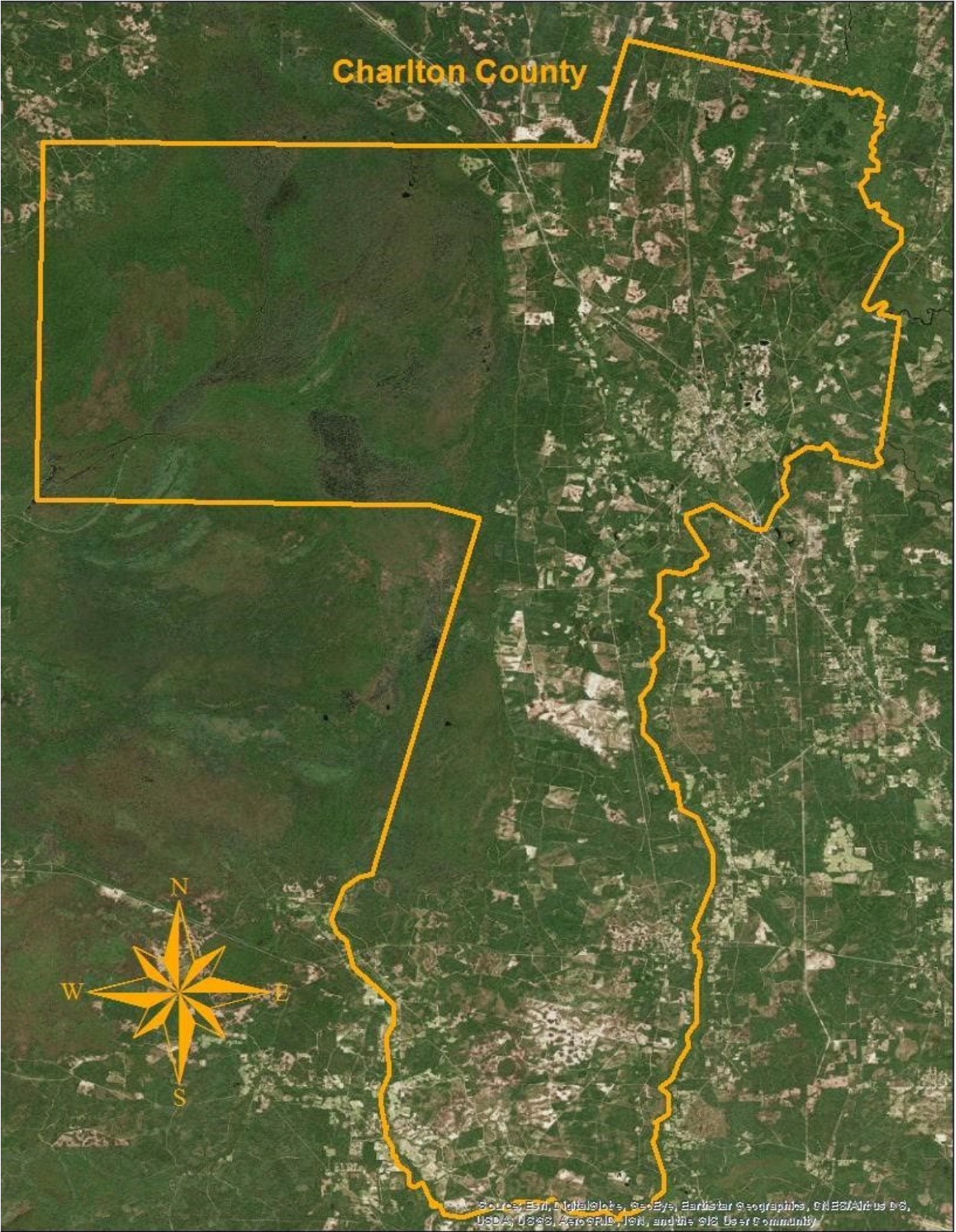
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COMMISSION





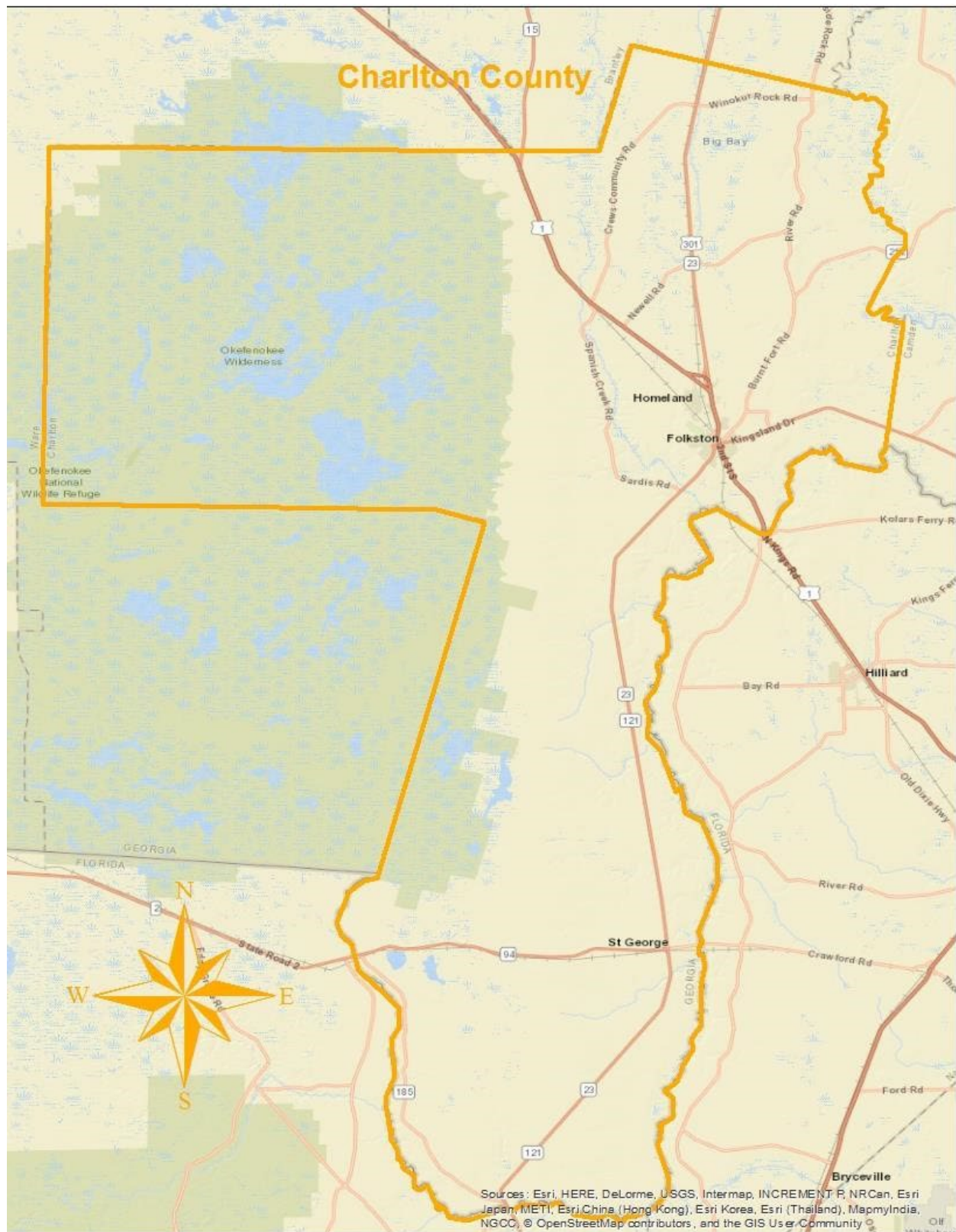














## V. COMMUNITY WILDFIRE RISK ASSESSMENT

### *The Wildland-Urban Interface*

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

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



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



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



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

wetlands.

The wildland fire risk assessments conducted in 2015 by the Georgia Forestry Commission returned an average score of 109, placing Charlton County in the “very high” hazard range. A new Community Risk Assessment is presently being conducted by a team of Wildfire Mitigation Specialist and should be completed by 2019. The risk assessment instrument used to evaluate wildfire hazards to Charlton County’s WUI was the Hazard and Wildfire Risk Assessment Checklist. The instrument takes into consideration accessibility, vegetation (based on fuel models), roofing assembly, building construction, and availability of fire protection resources, placement of gas and electric utilities, and additional rating factors. The following factors contributed to the wildfire hazard score for Charlton County:

- Dead end roads with inadequate turn arounds
- Narrow roads without drivable shoulders
- Long, narrow, and poorly labeled driveways
- Limited street signs and homes not clearly addressed
- Thick, highly flammable vegetation surrounding many homes

- Minimal defensible space around structures
- Homes with wooden siding and roofs with heavy accumulations of vegetative debris
- No pressurized or non-pressurized water systems available
- Above ground utilities
- Large, adjacent areas of forest or wildlands
- Heavy fuel buildups in adjacent wildlands
- Undeveloped lots comprising half the total lots in many rural communities.
- High occurrence of wildfires in several locations □ Distance from fire stations
- Lack of homeowner or community organizations
- Train Crossings – many of which have inadequate slope for heavy equipment access, such as lowboy trailers hauling dozers or tractor plow units



**Wildland Urban Interface (WUI) is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels.**

	Fire Dept	Access	Surrounding Vegetation	Building Construction	Fire Protection	Utilities	Additional Factors	Score	Hazard Rating
<b>Community</b>									
Homeland	Folkston	10	20	15	14	9	39	107	Very High
Dixie Lake	Folkston	10	20	10	14	9	45	108	Very High
Traders Hill	Folkston	15	20	25	25	9	43	137	Extreme
Camp									
Pinckney	Folkston	12	20	5	17	9	30	93	High
Live Oak			20						Very High
Estates									
Yankee	Folkston	16		0	20	9	35	100	
Forest	Folkston	10	20	10	17	9	31	97	High
Colrain	Folkston	20	20	20	25	9	38	132	Extreme
May Bluff	Folkston	13	20	20	27	9	39	128	Extreme
Spring Lake	Folkston	11	20	10	15	9	21	86	High
Forest Lake	Folkston	23	20	10	15	9	37	114	Very High
Black River	Folkston	9	10	5	18	9	43	94	High
Stokes Lake	Folkston	13	20	5	18	9	31	96	High
Folkston									Very High
District	Folkston	18	35	15	29	4	17	118	High
Sam Howard									Very High
Rd	Racepond	20	20	25	16	3	23	107	High
Uptonville	Racepond	5	30	20	18	6	23	102	Very High
Racepond									Very High
District	Racepond	5	30	20	18	7	23	103	High
St. Marys									
Bluff	Ga Bend	18	45	15	29	4	17	128	Extreme
Ga Bend									
Dist	Ga Bend	11	30	10	25	4	16	96	High
Winokur Dist	Winokur	20	30	10	22	7	28	117	Very High
Average		14	24	13	20	8	30	109	Very High

## Summary of Charlton County Assessment Ratings



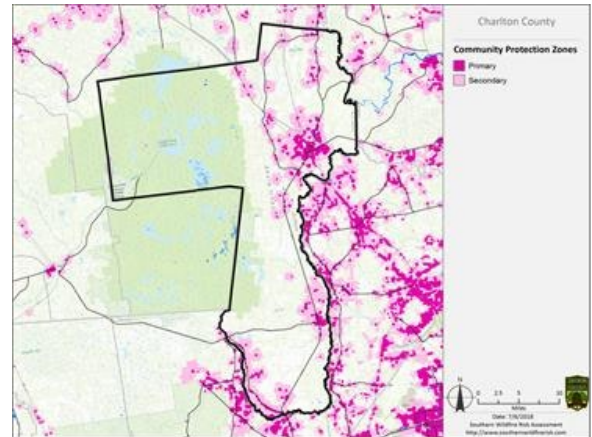
**Prescribed burning of woodlands is the best management practice to reduce hazardous fuel accumulation. The Georgia Forestry Commission can provide a prescribed burning plan, establish fire breaks, and can also provide equipment standby and assist with burning when personnel are available. Forestry contractors can also provide this service.**

## **VI. SOUTHERN WILDFIRE RISK ASSESSMENT & RISK HAZARD MAPS**

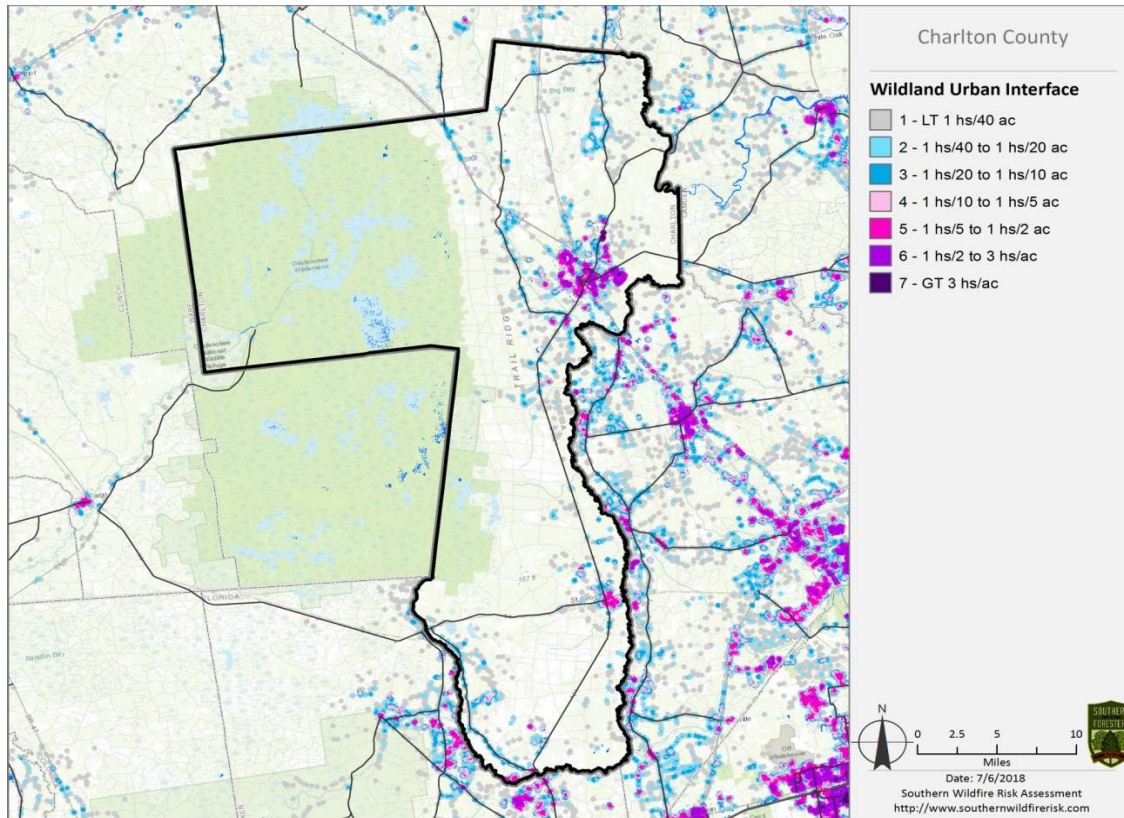
The Southern Wildfire Risk Assessment tool, developed by the Southern Group of State Foresters, was released to the public in July 2014. This tool allows users of the Professional Viewer application of the Southern Wildfire Risk Assessment (SWRA) web Portal (SouthWRAP) to define a specific project area and summarize wildfire related information for this area. A detailed risk summary report is generated using a set of predefined map products developed by the Southern Wildfire Risk Assessment project which have been summarized explicitly for the user defined project area. A risk assessment summary was generated for Charlton County. The SouthWRAP ((SWRA) products included in this report are designed to provide the information needed to support the following key priorities:

- Identify areas that are most prone to wildfire.
- Identify areas that may require additional tactical planning, specifically related to mitigation projects and Community Wildfire Protection Planning.
- Provide the information necessary to justify resource, budget and funding requests.

- Allow agencies to work together to better define priorities and improve emergency response, particularly across jurisdictional boundaries.
- Define wildland communities and identify the risk to those communities.
- Increase communication and outreach with local residents and the public to create awareness and address community priorities and needs.
- Plan for response and suppression resource needs.
- Plan and prioritize hazardous fuel treatment.
- The Southern Wildfire Risk Assessment and Hazard Maps do not accurately reflect the risk threat of the Okefenokee swamp/refuge lands, the fire intensity, burn probability, and rate of spread. Models specific to the refuge more accurately reflect the wildfire potential and risk associated with those lands.

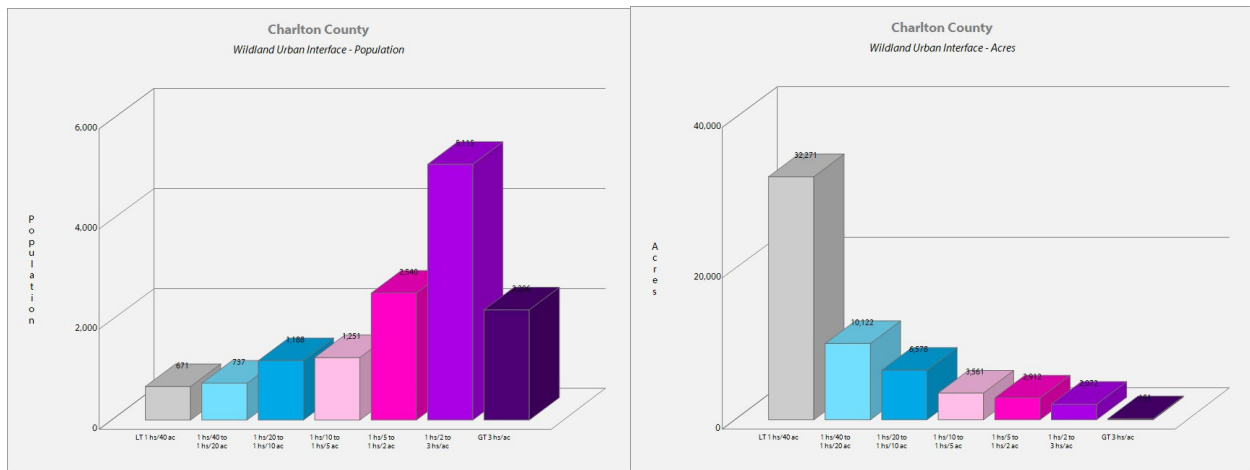


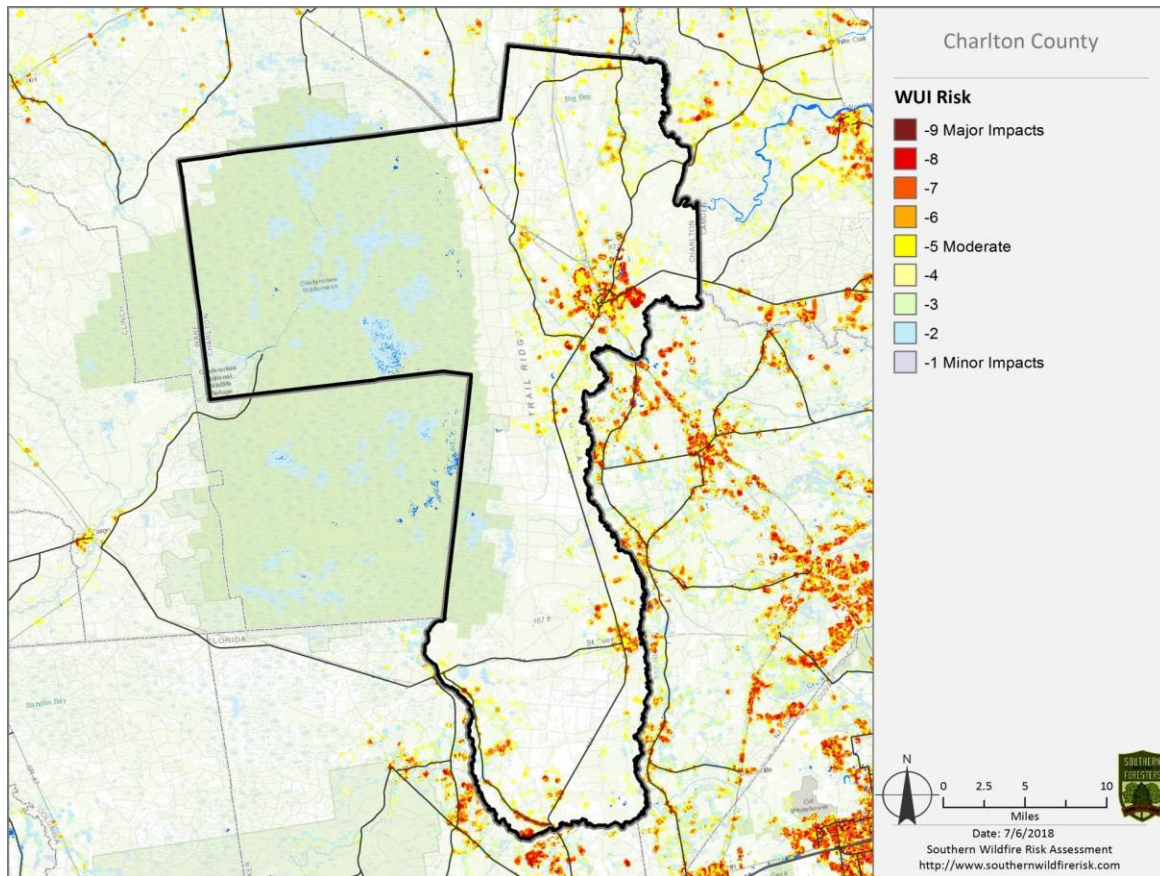




Above: Wildland Urban Interface (WUI) m

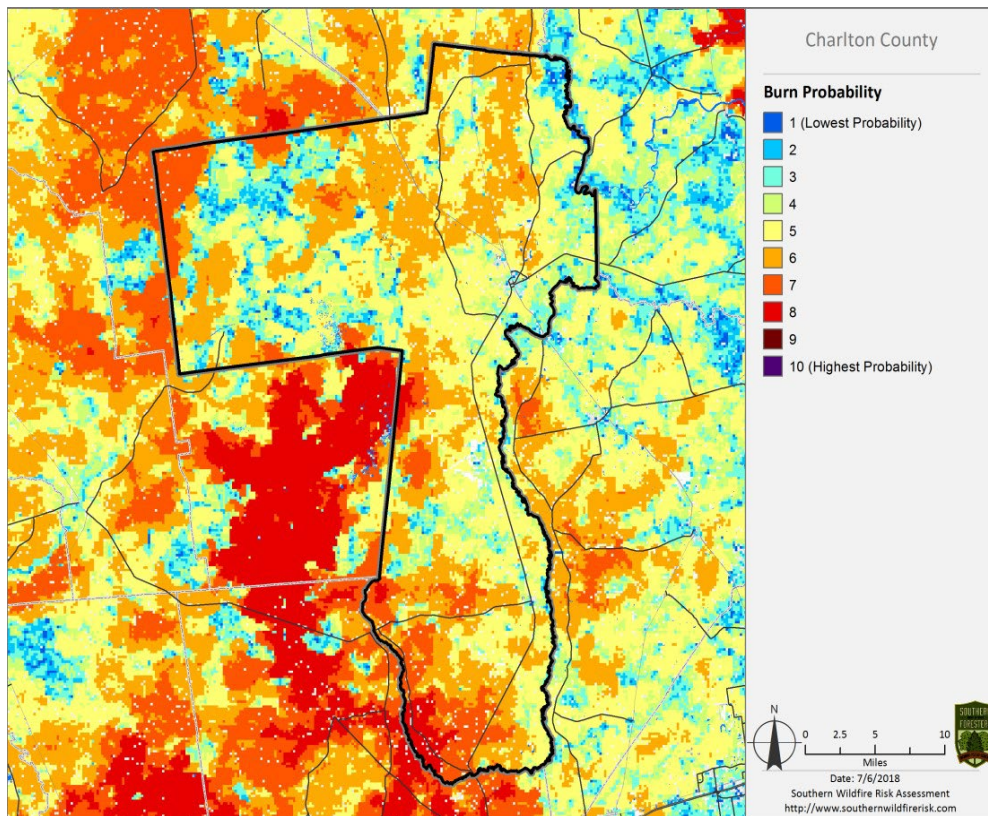
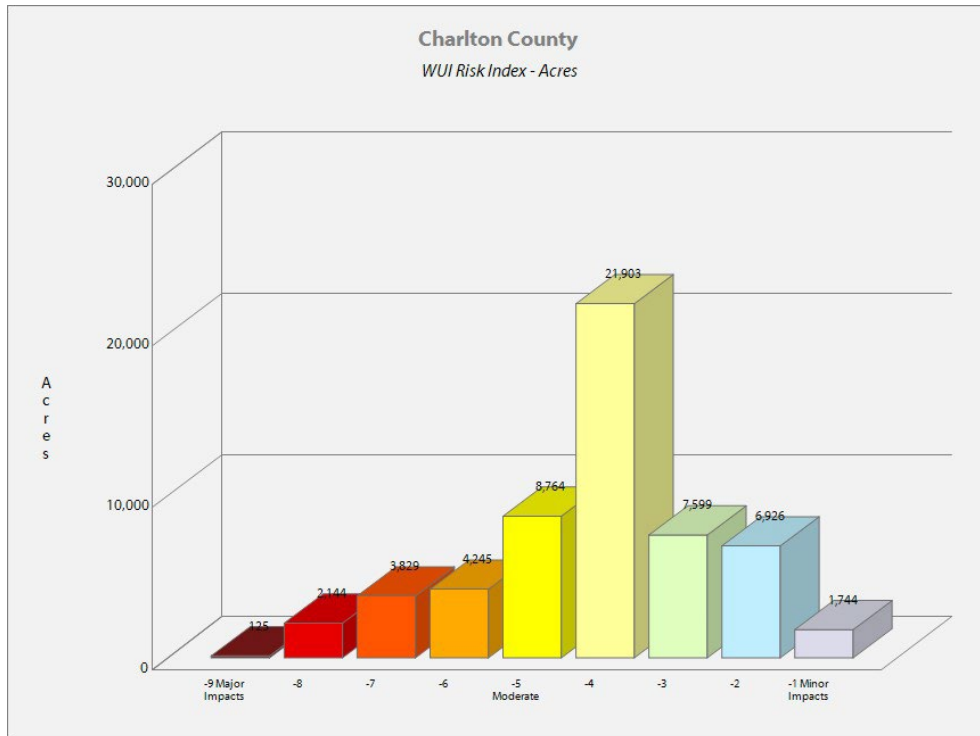
Below: WUI Population (left) WUI Acres (right)





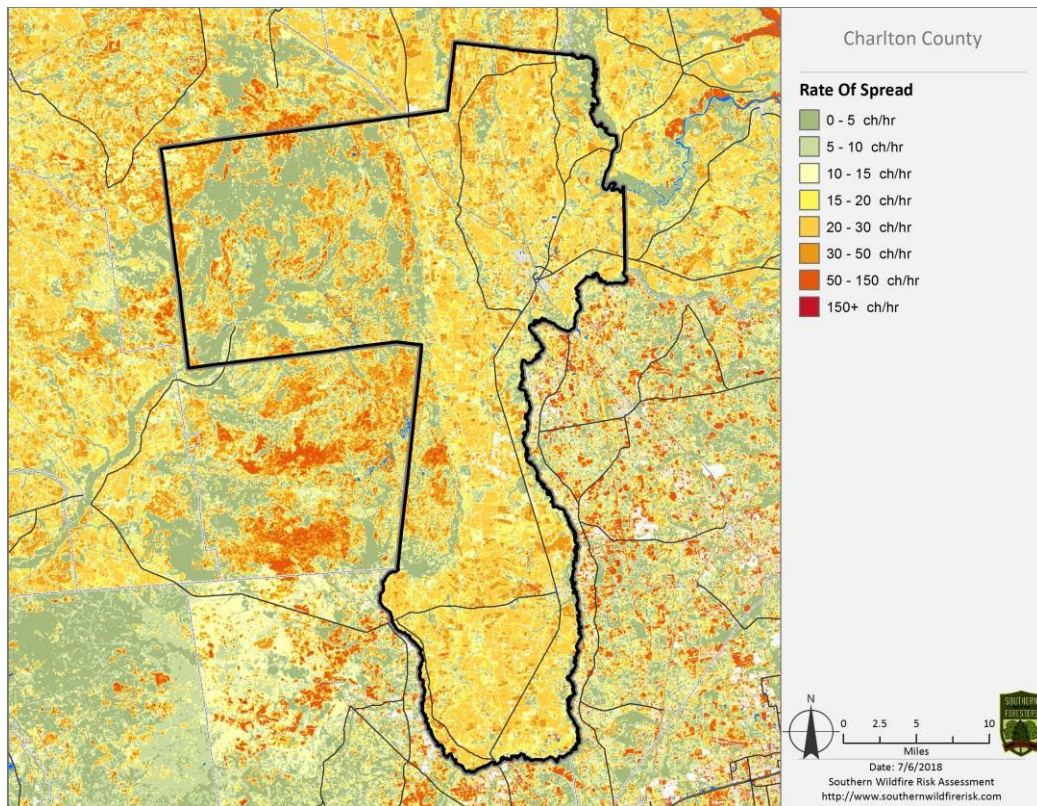
Above: Wildland Urban Interface (WUI) Risk map      Below: WUI Risk Index Acres



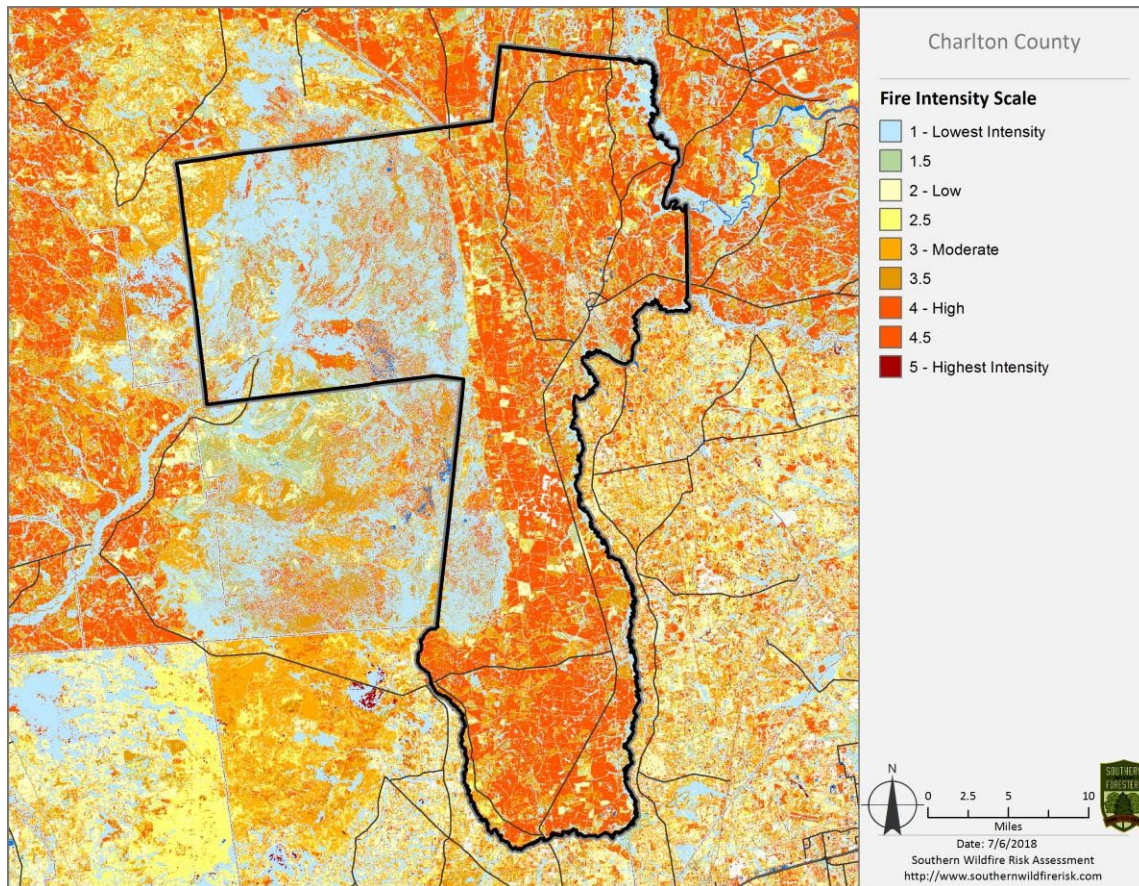


**Above: Burn Probability map**

**Below: Rate of Spread map**

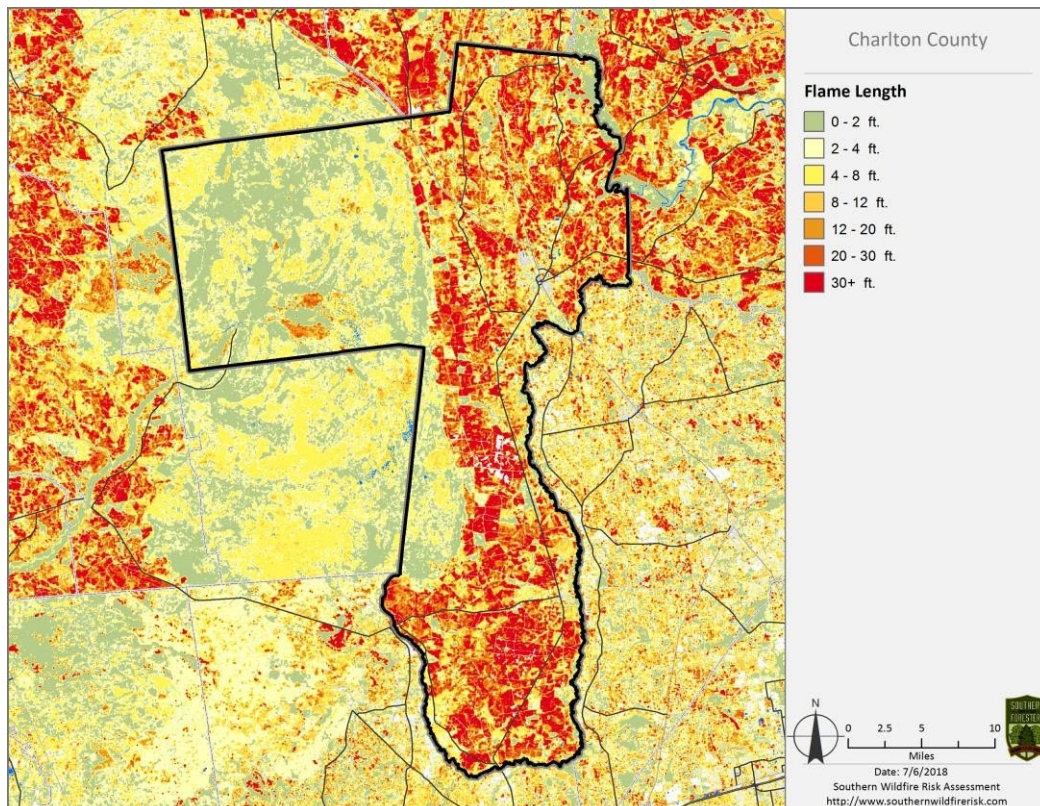
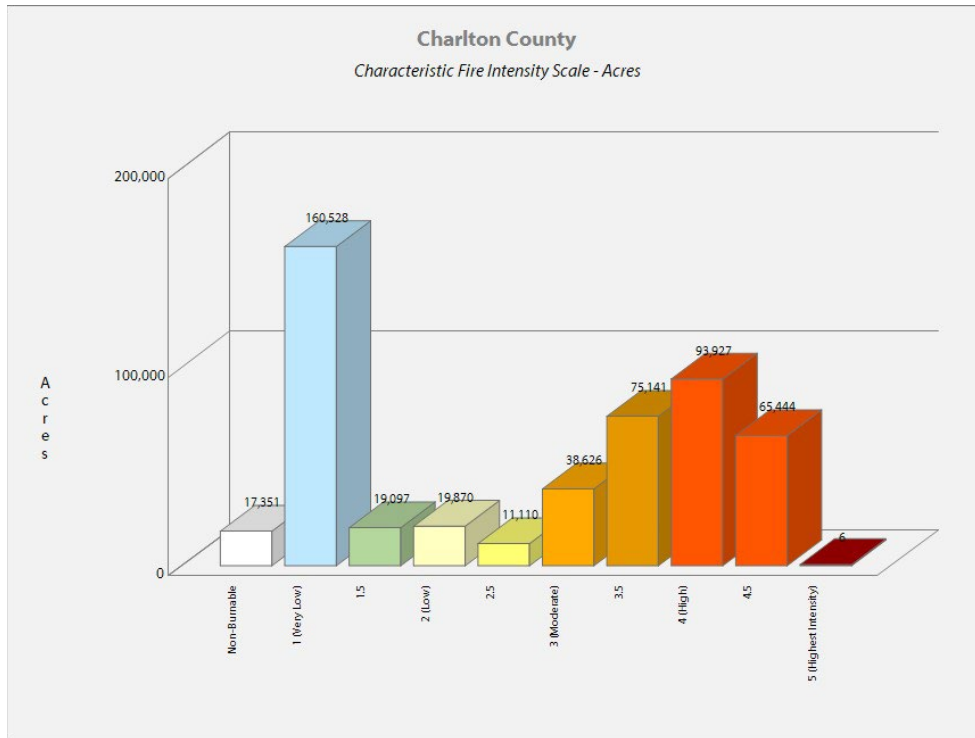






**Above: Fire Intensity Scale map**

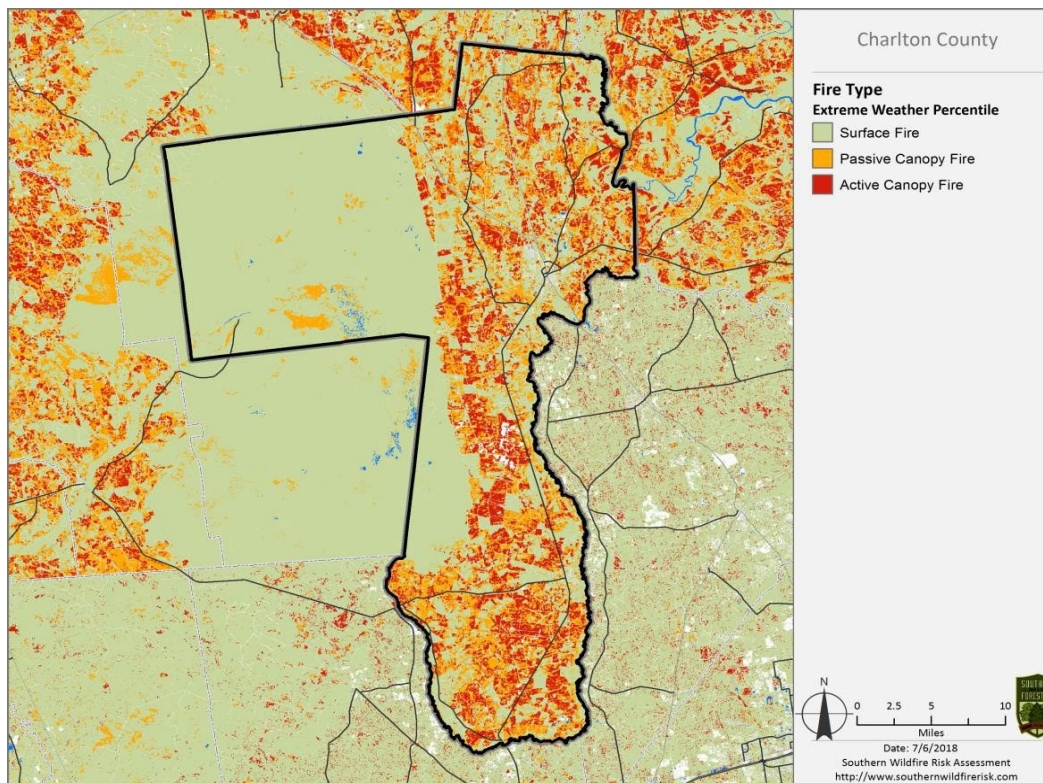
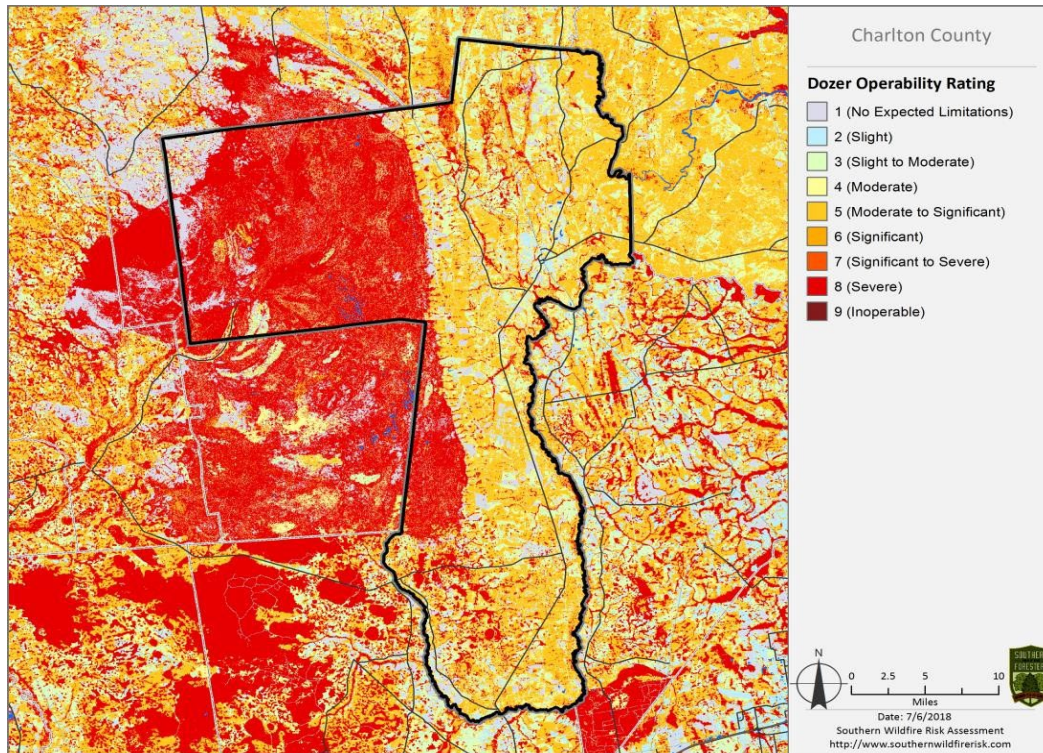
Below: Fire intensity Scale Acres



Above: Flame Length map



**Below: Dozer Operability Rating map**



**Above: Fire Type map**

## VII. PRIORITIZED MITIGATION RECOMMENDATIONS

### *Executive Summary*

As Southeast Georgia continues to see increased growth from other areas seeking less crowded and warmer climates, new development will occur more frequently on forest and wildland areas. The County will have an opportunity to significantly influence the wildland fire safety of new developments. It is important that new development be planned and constructed to provide for public safety in the event of a wildland fire emergency.

Over the past 30 years, much has been learned about how and why homes burn during wildland fire emergencies. Perhaps most importantly, case histories and research have shown that even in the most severe circumstances, wildland fire disasters can be avoided. Homes can be designed, built and maintained to withstand a wildfire even in the absence of fire services on the scene. The national Firewise Communities program is a national awareness initiative to help people understand that they don't have to be victims in a wildfire emergency. The National Fire Protection Association has produced two standards for reference: NFPA 1144 Standard for Reducing Structure Ignition Hazards from Wildland Fire. 2010 Edition and NFPA 1141 Standard for Fire Protection Infrastructure for Land Development in Suburban and Rural Areas.

In 2012 the International Code Council developed the International Wildland Urban Interface Code (IWUIC). This code was adopted by the Georgia Legislature in 2014 for Counties to use when developing building and zoning codes in the Wildland Urban Interface (WUI) to help reduce risk and minimize structure loss. When new developments are built in the Wildland/Urban Interface, a number of public safety challenges may be created for the local fire services: (1) the water supply in the immediate areas may be inadequate for fire suppression; (2) if the development is in an outlying area, there may be a longer response time for emergency services; (3) in a wildfire emergency, the access road(s) may need to simultaneously support evacuation of residents and the arrival of emergency vehicles; and (4) when wildland fire disasters strike, many structures may be involved simultaneously, quickly exceeding the capability of even the best equipped fire departments.

The following recommendations were developed by the Charlton County CWPP Core team as a result of surveying and assessing fuels and structures and by conducting meetings and interviews with county and city officials. A priority order was determined based on which mitigation projects would best reduce the hazard of wildfire in the assessment area.

*Proposed Community Hazard and Structural Ignitability Reduction Priorities*

Primary Protection for Community and Its Essential Infrastructure		
Treatment Area	Treatment Types	Treatment Method(s)
1. All Structures	Create minimum of 50feet of defensible space**	Trim shrubs and vines to 50-feet from structures, trim overhanging limbs, replace flammable plants near homes with less flammable varieties, remove vegetation around chimneys.
2. Applicable Structures	Reduce structural ignitability**	Clean flammable vegetative material from roofs and gutters, store firewood appropriately, install skirting around raised structures, store water hoses for ready access, and replace pine straw and mulch around plantings with less flammable landscaping materials.

3. Community Clean-up Day National Wildfire Preparedness Day 1 <sup>st</sup> Saturday in May	Cutting, mowing, pruning**	Cut, prune, and mow vegetation in shared community spaces.
4. Driveway Access	Culvert installation	See that adequate lengths of culverts are installed to allow emergency vehicle access.
5. Road Access	Identify needed road improvements	As roads are upgraded, widen to minimum standards with at least 50-foot diameter cul-de sacs or turn arounds.

6. Codes and Ordinances	Examine existing codes and ordinances.  Utilize the International Wildland Urban Interface Code (IWUIC)	Amend and enforce existing building codes as they relate to skirting, propane tank locations, public nuisances (trash/debris on property), Property address marking standards and other relevant concerns Review the need for subdivision and development ordinances for public safety concerns.  Adopt and enforce uniform addressing ordinance.
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### **Proposed Community Wildland Fuel Reduction Priorities**

Treatment Area	Treatment Types	Treatment Method(s)
1. Adjacent WUI Lands	Reduce hazardous fuels	Encourage prescribed burning for private landowners and industrial timberlands particularly adjacent to residential areas.  County resolution to state recommending that the Ga Forestry Commission not charge for prescribed burning in WUI areas.  Seek grant for WUI mitigation team.
2. Railroad Corridors	Reduce hazardous fuels	Encourage railroads to better maintain their ROW eliminating brush and grass through herbicide and mowing. Maintain firebreaks along ROW adjacent to residential areas.
3. Existing Fire Lines	Reduce hazardous fuels	Clean and re-harrow existing lines. Utilize equipment for mastication of understory fuels near housing development and other improvements.



<b>Proposed Improved Community Wildland Fire Response Priorities</b>		
1. Water Sources	Dry Hydrants	Inspect, maintain and improve access to existing dry hydrants. Add signage along road to mark the hydrants. Locate additional dry hydrants as needed.
2. Fire Stations	Equipment	Wildland hand tools. Lightweight Wildland PPE Gear. Investigate need for “brush” trucks.
3. Water Sources	Drafting equipment	Investigate need for additional drafting pumps.
4. Personnel	Training	Obtain Wildland Fire Suppression training for Fire Personnel. Ready Set Go training.
**Actions to be taken by homeowners and community stakeholders		

*Proposed Education and Outreach Priorities*

1. Conduct “How to Have a Firewise Home” Workshop for Charlton County Residents
<p>Set up and conduct a workshop for homeowners that teach the principles of making homes and properties safe from wildfire. Topics for discussion include defensible space, landscaping, building construction, etc. Workshop will be scheduled for evenings or weekends when most homeowners are available and advertised through local media outlets.</p> <p>Distribute materials promoting firewise practices and planning through local community and governmental meetings.</p>
2. Conduct “Firewise” Workshop for Community Leaders
<p>Arrange for GFC Firewise program to work with local community leaders and governmental officials on the importance of “Firewise Planning” in developing ordinances and codes as the county as the need arises. Identify “Communities at Risk” within the county for possible firewise community recognition.</p>
3. Spring Clean-up Event (National Wildfire Preparedness Day – 1 <sup>st</sup> Saturday in May annually)

Conduct clean-up event every spring involving the Georgia Forestry Commission, Charlton County Fire Departments and community residents. Set up information table with educational materials and refreshments. Initiate the event with a morning briefing by GFC Firewise coordinator and local fire officials detailing plans for the day and safety precautions. Activities to include the following:

- Clean flammable vegetative material from roofs and gutters
- Trim shrubs and vines to 30 feet away from structures
- Trim overhanging limbs
- Clean hazardous or flammable debris from adjacent properties

Celebrate the work with a community cookout, with Community officials, GFC and Charlton Fire Departments discussing and commending the work accomplished.

#### 4. Informational Packets

Develop and distribute informational packets to be distributed by realtors, insurance agents, and others. Included in the packets are the following:

- Be Firewise Around Your Home
- Firewise Guide to Landscape and Construction
- Firewise Communities USA brochures
- Ready Set Go educational materials
- Fire Adapted Community information

#### 5. Wildfire Protection Display

Create and exhibit a display for the general public at the local events. The display can be independent or combined with the Georgia Forestry Commission display.

#### 6. Media

Invite the Folkston and Waycross news media to community “Firewise” functions for news coverage and regularly submit press releases documenting wildfire risk improvements in Charlton County. Utilize radio and social media to reach new audiences.

Add READY – SET – GO to the ongoing FIREWISE Programs:

The Ready, Set, Go! Program seeks to develop and improve the dialogue between fire departments and the residents they serve. Engaging in this dialogue is particularly important for the fire service, because national studies have shown that firefighters are uniquely respected in their communities and can project a trusted voice to the public preparedness appeal. They can also explain what fire resources are available during an event and the role that individuals can play in preparedness and early evacuation – if called for by their local officials – to increase the safety of residents and responding firefighters to a wildland fire.

The RSG! Program works in complimentary and collaborative fashion with Firewise and other existing wildland fire public education efforts. It amplifies their preparedness messages to individuals to better achieve the common goal we all share of fire-adapted communities. When firefighters encourage residents to take personal responsibility for preparing their property and family for WUI/wildland fire, residents become an active part of the solution to the problem of increasing fire losses.

The Ready, Set, Go! (RSG) Program is managed by the International Association of Fire Chiefs (IAFC). Launched nationally in March 2011 at the Wildland-Urban Interface (WUI 2011) Conference, the program helps fire departments to teach individuals who live in high risk wildfire areas – and the wildland-urban interface – how to best prepare themselves and their properties against fire threats.



**Mastication equipment, such as pictured on left, can be very effective in mowing or mulching understory fuels to reduce wildfire hazard. This management practice is practical for areas near homes where prescribed burning may not be possible. This type of service is available from private contractors.**

## **VIII. ACTION PLAN**

### *Roles and Responsibilities*

The following roles and responsibilities have been developed to implement the action plan:

Role	Responsibility
Hazardous Fuels and Structural Ignitability Reduction	
Charlton County WUI Fire Council	Create this informal team or council comprised of residents, GFC officials, Charlton County Fire Rescue, a representative from the city and county government and the EMA Director for Charlton County. Meet periodically to review progress towards mitigation goals, appoint and delegate special activities, work with federal, state, and local officials to assess progress and develop future goals and action plans. Work with residents to implement projects and firewise activities.
Key Messages to focus on	<ol style="list-style-type: none"><li>1 Defensible Space and Firewise Landscaping</li><li>2 Debris Burning Safety</li><li>3 Firewise information for homeowners</li><li>4 Prescribed burning benefits</li><li>5 Ready Set Go! Information for homeowners</li></ol>
Communications objectives	<ol style="list-style-type: none"><li>1 Create public awareness for fire danger and defensible space issues.</li><li>2 Identify most significant human cause fire issues.</li><li>3 Enlist public support to help prevent these causes.</li><li>4 Encourage people to employ fire prevention and defensible spaces in their communities.</li></ol>
Target Audiences	<ol style="list-style-type: none"><li>1 Homeowners/Homeowner Associations</li><li>2 Forest Landowners and users</li><li>3 Civic Groups</li><li>4 School Groups</li><li>5 General Public</li></ol>

Methods	<ol style="list-style-type: none"> <li>1 News Releases</li> <li>2 Personal Contacts</li> <li>3 Key messages and prevention tips</li> <li>4 Visuals such as signs, brochures and posters</li> <li>5 Radio and TV</li> <li>6 Social Media</li> </ol>
Spring Clean-up Day – National Wildfire Preparedness Day (1 <sup>st</sup> Saturday in May annually)	
Event Coordinator	Coordinate day's events and schedule, catering for cookout, guest attendance, and moderate activities the day of the day of the event.
Event Treasurer	Collect funds from residents to cover food, equipment rentals, and supplies.
Publicity Coordinator	Advertise event through neighborhood newsletter, letters to officials, and public service announcements (PSAs) for local media outlets. Publicize post-event through local paper and radio PSAs.
Work Supervisor	Develop volunteer labor force of community residents; develop labor/advisory force from Georgia Forestry Commission, Charlton County Fire Departments, and Emergency Management Agency. Procure needed equipment and supplies. In cooperation with local city and county officials, develop safety protocol. Supervise work and monitor activities for safety the day of the event.

#### *Funding Needs*

The following funding is needed to implement the action plan:

Project	Estimated Cost	Potential Funding Source(s)
1. Create a minimum of 50 feet of defensible space around structures	Varies	Residents will supply labor and fund required work on their own properties.
2. Reduce structural ignitability by cleaning flammable vegetation from roofs and gutters; appropriately storing firewood, installing skirting around raised structures, storing water hoses for ready access, replacing pine needles and mulch around plantings with less flammable material.	Varies	Residents will supply labor and fund required work on their own properties.

3. Amend codes and ordinances to provide better driveway access, increased visibility of house numbers, properly stored firewood, minimum defensible space brush clearance, required Class A roofing materials and skirting around raised structures, planned maintenance of community lots.	No Cost	To be adopted by city and county government.  International Wildland Urban Interface Code IWUIC
4. Spring Cleanup Day National Wildfire Preparedness Day	Varies	Community Business Donations.
5. Fuel Reduction Activities	\$15 / acre	FEMA & USFS Grants

#### *Assessment Strategy*

To accurately assess progress and effectiveness for the action plan, the Charlton County WUI Fire Council will implement the following:

Annual wildfire risk assessment will be conducted to re-assess wildfire hazards and prioritize needed actions.

- Mitigation efforts that are recurring (such as mowing, burning, and clearing of defensible space) will be incorporated into an annual renewal of the original action plan.
- Mitigation efforts that could not be funded in the requested year will be incorporated into the annual renewal of the original action plan.
- Continuing educational and outreach programs will be conducted and assessed for effectiveness. Workshops will be evaluated based on attendance and post surveys that are distributed by mail 1month and 6 months following workshop date.
- The Charlton County WUI Council will publish an annual report detailing mitigation projects initiated and completed, progress for ongoing actions, funds received, funds spent, and in-kind services utilized. The report will include a “state of the community” section that critically evaluates mitigation progress and identifies areas for improvement. Recommendations will be incorporated into the annual renewal of the action plan.

- An annual survey will be distributed to residents soliciting information on individual mitigation efforts on their own property (e.g., defensible space). Responses will be tallied and reviewed at the next Charlton County WUI Council meeting. Needed actions will be discussed and delegated.

This plan should become a working document that is shared by local, state, and federal agencies that will use it to accomplish common goals. An agreed-upon schedule for meeting to review accomplishments, solve problems, and plan for the future should extend beyond the scope of this plan. Without this follow up this plan will have limited value

## IX. MITIGATION ASSISTANCE & GRANT FUNDING

Community Protection Grant: US Forest Service sponsored prescribed fire program. Communities with “at-risk” properties that lie within ten miles of a National Forest, National Park Service or Bureau of Land Management tracts may apply with the Georgia Forestry Commission to have their land prescribe burned free-of-charge. Forest mastication, where it is practical with Georgia Forestry Commission equipment, is also available under this grant program.

FEMA Mitigation Policy MRR-2-08-01: through GEMA – Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation Program (PDM).

1. To provide technical and financial assistance to local governments to assist in the implementation of long term, cost-effective hazard mitigation accomplishments.
2. This policy addresses wildfire mitigation for the purpose of reducing the threat to all risk structures through creating defensible space, structural protection through the application of ignition resistant construction and limited hazardous fuel reduction to protect life and property.
3. With a completed registered plan (addendum to the State Plan) counties can apply for pre-mitigation funding. They will also be eligible for HMGP funding if the county is declared under a wildfire disaster.

Georgia Forestry Commission: Plowing and prescribed burning assistance, as well as forest mastication, can be obtained from the GFC as a low-cost option for mitigation efforts.



The Georgia Forestry Commission Firewise Community Mitigation Assistance Grants – Nationally recognized Firewise Communities can receive up to \$5000 grants to help address potential wildfire risk reduction projects. Grant submission can be made through local Georgia Forestry Commission offices or your Regional Wildfire Prevention Specialist.

The International Association of Fire Chiefs (IAFC) and American International Group, Inc. (AIG) offer grants to assist local fire departments in establishing or enhancing their community fuels mitigation programs while educating members of the community about community wildfire readiness and encouraging personal action.

## X. GLOSSARY

*Community-At-Risk – A group of two or more structures whose proximity to forested or wildland areas places homes and residents at some degree of risk.*

*Critical Facilities – Buildings, structures or other parts of the community infrastructure that require special protection from an approaching wildfire.*

*CWPP – The Community Wildfire Protection Plan.*

*Defensible Space – The immediate landscaped area around a structure (usually a minimum of 30 ft.) kept “lean, clean and green” to prevent an approaching wildfire from igniting the structure.*

*Dry Hydrant - A non-pressurized pipe system permanently installed in existing lakes, ponds and streams that provides a suction supply of water to a fire department tank truck.*

*FEMA – The Federal Emergency Management Agency whose mission is to support our citizens and first responders to ensure that as a nation we work together to build, sustain, and improve our capability to prepare for, protect against, respond to, recover from, and mitigate all hazards.*

*Fire Adapted Community – A community fully prepared for its wildfire risk by taking actions to address safety, homes, neighborhoods, businesses and infrastructure, forest, parks, open spaces, and other community assets.*

*Firewise Program – A national initiative with a purpose to reduce structural losses from wildland fires.*

*Firewise Community/USA – A national recognition program for communities that take action to protect themselves from wildland fire. To qualify a community must have a wildfire risk assessment by the Georgia Forestry Commission, develop a mitigation action plan, have an annual firewise mitigation/education event, have dedicated firewise leadership, and complete the certification application.*

*Fuels – All combustible materials within the wildland/urban interface or intermix including, but not limited to, vegetation and structures.*

*Fuel Modification – Any manipulation or removal of fuels to reduce the likelihood of ignition or the resistance to fire control.*

*Hazard & Wildfire Risk Assessment – An evaluation to determine an area's (community's) potential to be impacted by an approaching wildland fire.*

3. Amend codes and ordinances to provide better driveway access, increased visibility of house numbers, properly stored firewood, minimum defensible space brush clearance, required Class A roofing materials and skirting around raised structures, planned maintenance of community lots.	No Cost	To be adopted by city and county government.  International Wildland Urban Interface Code IWUIC
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*Fuel Modification – Any manipulation or removal of fuels to reduce the likelihood of ignition or the resistance to fire control.*

*Hazard & Wildfire Risk Assessment – An evaluation to determine an area's (community's) potential to be impacted by an approaching wildland fire.*

*Healthy Forests Initiative - Launched in August 2002 by President Bush (following passage of the Healthy Forests Restoration Act by Congress) with the intent to reduce the risks severe wildfires pose to people, communities, and the environment.*

*Home Ignition Zone (Structure Ignition Zone) - Treatment area for wildfire protection. The*

*"zone" includes the structure(s) and their immediate surroundings from 0-200 ft.*

*Mitigation – An action that moderates the severity of a fire hazard or risk.*

*National Fire Plan – National initiative, passed by Congress in the year 2000, following a landmark wildland fire season, with the intent of actively responding to severe wildland fires and their impacts to communities while ensuring sufficient firefighting capacity for the future.*

*National Fire Protection Association (NFPA) - An international nonprofit organization established in 1896, whose mission is to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating consensus codes and standards, research, training, and education.*

*National Wildfire Preparedness Day – Started in 2014 by the National Fire Protection Association as a day for communities to work together to prepare for the approaching wildfire season. It is held annually on the first Saturday in May.*

*Prescribed Burning (prescribed fire) –The use of planned fire that is deliberately set under specific fuel and weather condition to accomplish a variety of management objectives and is under control until it burns out or is extinguished.*

*Ready, Set, Go - A program fire services use to help homeowners understand wildfire preparedness, awareness, and planning procedures for evacuation.*

Southern Group of State Foresters – *Organization whose members are the agency heads of the forestry agencies of the 13 southern states, Puerto Rico and the Virgin Islands.*

Stakeholders– *Individuals, groups, organizations, businesses or others who have an interest in wildland fire protection and may wish to review and/or contribute to the CWPP content.*

Wildfire or Wildland Fire – *An unplanned and uncontrolled fire spreading through vegetative fuels.*

Wildland/Urban Interface - *The presence of structures in locations in which the authority having jurisdiction (AHJ) determines that topographical features, vegetation, fuel types, local weather conditions and prevailing winds result in the potential for ignition of the structures within the area from flames and firebrands from a wildland fire (NFPA 1144, 2008).*

## XI. SOURCES OF INFORMATION

Publications/Brochures/Websites:

- FIREWISE materials can be ordered at [www.firewise.org](http://www.firewise.org)
- Georgia Forestry Commission [www.georgiafirewise.org](http://www.georgiafirewise.org)
- Okefenokee Refuge [www.fws.gov/refuge/okefenokee/](http://www.fws.gov/refuge/okefenokee/)
- Examples of successful wildfire mitigation programs can be viewed at the website for National Database of State and Local wildfire Hazard Mitigation Programs sponsored by the U.S. Forest Service and the Southern Group of State Foresters [www.wildfireprograms.com](http://www.wildfireprograms.com)
- Information about a variety of interface issues (including wildfire) can be found at the USFS website for Interface South: [www.interfacesouth.org](http://www.interfacesouth.org)
- Information on codes and standards for emergency services including wildfire can be found at [www.nfpa.org](http://www.nfpa.org)
- Information on FEMA Assistance to Firefighters Grants (AFG) can be found at [www.firegrantsupport.com](http://www.firegrantsupport.com)



- Information on National Fire Plan grants can be found at <http://www.federalgrantswire.com/national-fire-plan--rural-fire-assistance.html>
- Southern Wildfire Risk Assessment website SouthWRAP [www.SouthernWildfireRisk.com](http://www.SouthernWildfireRisk.com)
- Fire Adapted Communities [www.fireadapted.org](http://www.fireadapted.org)
- Ready, Set, Go [www.wildlandfirersg.org](http://www.wildlandfirersg.org)
- National Wildfire Preparedness Day [www.wildfireprepdays.org](http://www.wildfireprepdays.org)

**Appended Documents:**

Charlton County Southern Wildfire Risk Assessment Summary Report (SWRA)

All files that make up this plan are available in an electronic format from the Georgia Forestry Commission.



**Georgia Forestry  
Commission 5645 Riggins  
Mill Rd.  
Dry Branch, GA. 31020**

**1-800-GA-TREES  
GaTrees.org**

***The Georgia Forestry  
Commission provides  
leadership, service, and  
education in the protection and  
conservation of Georgia's  
forest resources.***

***An Equal Opportunity Employer  
and Service Provider.***

## APPENDIX D. OTHER PLANNING DOCUMENTS

## Appendix D.I – Hazard Frequency Table

CHARLTON COUNTY HAZARD FREQUENCY TABLE										
Hazard	Number of Events in Historic Record	Number of Years in Historic Record	Number of Events in Past 10 Years	Number of Events in Past 20 Years	Number of Events in Past 50 Years	Historic Recurrence Interval (years)	Historic Frequency % chance/year	Past 10 Year Record Frequency Per Year	Past 20 Year Record Frequency Per Year	Past 50 Year Record Frequency Per Year
Hurricane/Tropical Storm	11	71	6	6	6	6.45	15.49%	0.6	0.3	0.12
Floods/SLOSH	10	23	1	10	10	2.30	43.48%	0.1	0.5	0.2
Wildfire	3828	71	465	1106	3623	0.02	5391.55%	46.5	55.3	72.46
Tornado	9	71	0	4	8	7.89	12.68%	0	0.2	0.16
Thunderstorm Wind	111	71	27	49		0.64	156.34%	2.7	2.45	0
Severe Winter Storm	2	71	2	2	2	35.50	2.82%	0.2	0.1	
Hail	49	71	6	29	49	1.45	69.01%	0.6	1.45	0.98
Drought	327	23	172	327	327	0.07	1421.74%	17.2	16.35	6.54
Lightning	2	71	2	2	2	35.50	2.82%	0.2	0.1	0.04
Extreme Heat	67	71	28	36	67	0.31	325.00%	3.2	1.95	0.78

**NOTE:** The historic frequency of a hazard event over a given period of time determines the historic recurrence interval. For example: If there have been 20 HazMat Releases in the County in the past 5 years, statistically you could expect that there will be 4 releases a year.

Realize that from a statistical standpoint, there are several variables to consider. 1) Accurate hazard history data and collection are crucial to an accurate recurrence interval and frequency. 2) Data collection and accuracy has been much better in the past 10-20 years (NCDC weather records). 3) It is important to include all significant recorded hazard events which will include periodic updates to this table.

By updating and reviewing this table over time, it may be possible to see if certain types of hazard events are increasing in the past



**GEMA Worksheet #2****Profile Hazard Events Step 2**

County:

Date:

How Bad Can It Get?

Task A. Obtain or create a base map.

GEMA will be providing you with a base map, USGS topos and DOQQ as part of our deliverables to local government for the planning process. Additionally, we will be providing you with detailed hazard layer coverages. These data layers originate from state or nationwide coverage or datasets. Therefore, it is important for local government to assess what you already have at the local level. It is important for you at the local level to have an idea of what existing maps you have available for the planning process. Some important things to think about:

- 1) What maps do we already have in the county that would be relevant to the planning process?
- 2) Have other local plans used maps or mapping technology where there is specific data that is also needed in my local plan?
- 3) What digital maps do we have?
- 4) Do we have any Geographic Information System (GIS) data, map themes or layers or databases here at the local level (or regional) that we can use?
- 5) If we do have any GIS data, where is it located at, and who is our local expert?
- 6) Are there any ongoing GIS or mapping initiatives at the local level in other planning or mapping efforts? If so, what are they, and what are the timetables for completion?
- 7) Are there mapping needs that have been identified at the local level in the past? If so, what are they and when were they identified?
- 8) Of the existing maps, GIS data and other digital mapping information, what confidence do we have at the local level that it is accurate data?

*Please answer the above questions on a separate sheet of paper and attach to this worksheet.*

It is important to realize that those counties that already have GIS and digital mapping, (ie: parcel level data, GPS fire hydrants, etc) higher levels of spatial accuracy and detail will exist for some data layers at the local level. However, for this planning process, that level of detail will not be needed on all layers in the overall mapping and analysis.

You can use existing maps from:

- Road Maps
- USGS topographic maps or Digital Orthophoto Quarter Quads (DOQQ)
- Topographic and/or planimetric maps from other agencies
- Aerial topographic and/or planimetric maps
- Field Surveys
- GIS software
- CADD software
- Digitized paper map

Title of Map	Scale	Date

Task B. Obtain a hazard event profile.	Task C. Record your hazard event profile information.
<b>Avalanche</b>	
<b>Coastal Storm / Coastal Erosion</b> <ol style="list-style-type: none"> <li>1. Get a copy of your FIRM. _____</li> <li>2. Verify that the FIRM is up-to-date and complete. _____</li> <li>3. Determine the annual rate of coastal erosion. _____</li> <li>4. Find your design wind speed. _____</li> </ol>	<ol style="list-style-type: none"> <li>1. Transfer the boundaries of your coastal storm hazard areas onto your base map.</li> <li>2. Transfer the BFEs onto your base map.</li> <li>3. Record the erosion rates on your base map: _____</li> <li>4. Record the design wind speed here and on your base map: _____</li> </ol>
<b>Dam Failure</b>	
<b>Drought</b>	
<b>Earthquake</b> <ol style="list-style-type: none"> <li>1. Go to the <a href="http://geohazards.cr.usgs.gov">http://geohazards.cr.usgs.gov</a> Website.</li> <li>2. Locate your planning area on the map.</li> <li>3. Determine your PGA. _____</li> </ol>	<ol style="list-style-type: none"> <li>1. Record your PGA: _____</li> <li>2. If you have more than one PGA print, download or order your PGA map.</li> </ol>
<b>Expansive Soils</b>	
<b>Extreme Heat</b>	
<b>Flood</b> <ol style="list-style-type: none"> <li>1. Get a copy of your FIRM. _____</li> <li>2. Verify the FIRM is up-to-date and complete. _____</li> </ol>	<ol style="list-style-type: none"> <li>1. Transfer the boundaries from your firm onto your base map (floodway, 100-yr flood, 500-yr flood).</li> <li>2. Transfer the BFEs onto your base map.</li> </ol>
<b>Hailstorm</b>	
<b>Hurricane</b>	
<b>Land Subsidence</b>	
<b>Landslide</b> <ol style="list-style-type: none"> <li>1. Map location of previous landslides. _____</li> <li>2. Map the topography. _____</li> <li>3. Map the geology. _____</li> <li>4. Identify three high-hazard areas on your map. _____</li> </ol>	<ol style="list-style-type: none"> <li>1. Mark the areas susceptible to landslides onto your base map.</li> </ol>
<b>Severe Winter Storm</b>	
<b>Tornado</b> <ol style="list-style-type: none"> <li>1. Find your design wind speed. _____</li> </ol>	<ol style="list-style-type: none"> <li>1. Record your design wind speed: _____</li> <li>2. If you have more than one design wind speed, print, download or copy your design wind speed zones, copy the boundary of your design wind speed zones on your base map, then record the design wind speed zones on your base map.</li> </ol>
<b>Tsunami</b>	
<b>Wildfire</b> <ol style="list-style-type: none"> <li>1. Map the fuel models located within the urban-wildland interface areas. _____</li> <li>2. Map the topography. _____</li> <li>3. Determine your critical fire weather frequency. _____</li> <li>4. Determine your fire hazard severity. _____</li> </ol>	<ol style="list-style-type: none"> <li>1. Draw the boundaries of your wildfire hazard areas onto your base map.</li> </ol>
<b>Other</b> <ol style="list-style-type: none"> <li>1. Map the hazard. _____</li> </ol>	<ol style="list-style-type: none"> <li>1. Record hazard event info on your base map.</li> </ol>

## Appendix D.IV – GEMA Worksheet #4

### Worksheet #4 Evaluate Alternative Mitigation Actions

1. Fill in the goal and its corresponding objective. Use a separate worksheet for each objective. The considerations under each criterion are suggested ones to use; you can revise these to reflect your own considerations (see Table 2-1).
2. Fill in the alternative actions that address the specific objectives the planning team identified in Worksheet #1.
3. **Scoring:** For each consideration, indicate a plus (+) for favorable, and a negative (-) for less favorable.

When you complete the scoring; negatives will indicate gaps or shortcomings in the particular action, which can be noted in the Comments section. For considerations that do not apply, fill in N/A for not applicable. Only leave a blank if you do not know an answer. In this case, make a note in the Comments section of the “expert” or source to consult to help you evaluate the criterion.

### **HURRICANE/TROPICAL STORMS**

STAPLEE Criteria	S (Social)	T (Technical)	A (Administrative)	P (Political)	L (Legal)	E (Economic)	E (Environmental)
Considerations →  for  Alternative Actions ↓	Community Acceptance Effect on Segment of Population	Technical Feasibility Long-term Solution Secondary Impacts	Funding Allocated Maintenance / Operations Staffing	Political Support Local Champion Public Support State Authority	Existing Local Authority Potential Legal Challenge Benefit of Action Cost of Action	Contributes to Economic Goals Outside Funding Required Effect on Land / Water Effect on Endangered Species	Effect on HAZMAT / Waste Sites Consistent with Community Environmental Goals Consistent With Federal Laws
<b>Mitigation Goal #1 – Prevent or reduce damage caused by Hurricanes/Tropical Storms in Charlton County, Folkston, and the City of Homeland.</b>							
<b>Objective #1 - Minimize losses to existing and future structures, especially Critical Facilities, and Infrastructure, and the public, due to Hurricanes/Tropical Storms.</b>							





[illegible]

[illegible]

[illegible]



[illegible]

## Flood/SLOSH

[illegible]



[illegible]

[illegible]



[illegible]

[illegible]

# WILDFIRE

STAPLEE Criteria	S	T	A	P	L	E	E
	(Social)	(Technical )	dministrativ	(Political)	(Legal)	(Economic)	(Environmental)
Considerations →  for  Alternative Actions ↓	Community Acceptance Effect on Segment of Population	Technical Feasibility Long-term Solution Secondary Impacts	Funding Allocated Maintenance / Operations Staffing	Political Support Local Champion Public Support	State Authority Existing Local Authority Potential Legal Challenge	Benefit of Action Cost of Action Contributes to Economic Goals Outside Funding Required	Effect on Land / Water
<b>Mitigation Goal #1: Prevent or reduce damage caused by wildfires in Charlton County, Folkston, and the City of Homeland.</b>							
<b>Objective #1: Minimize losses to existing and future structures, especially Critical Facilities Infrastructure and woodlands due to Wildfire.</b>							
Provide additional first responder training, training mannequins, 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	+	+	+	+	+	+	+

[illegible]





[illegible]



[illegible]



[illegible]

[illegible]



[illegible]



[illegible]

[illegible]















**Objective #2: To prepare all key personnel to help build preparedness for threats and hazards during Severe Winter Storms and other events and on hazard mitigation in general within Charlton County, the City of Folkston, and the City of Homeland.**

[illegible]

# HAIL

[illegible]

[illegible]

## DROUGHT

[illegible]



[illegible]

## LIGHTNING

STAPLEE Criteria	S		T			A			P			L			E			E				
	(Social )		(Technical)			dministrative			(Political )			(Legal)			(Economic)			(Environmental)				
Considerations →																						
for																						
Alternative Actions ↓																						
Mitigation Goal #1 - Prevent or reduce damage caused by Lightning in Charlton County, Folkston, and the City of Homeland.																						



**Objective #1: Minimize losses to existing and future structures, especially Critical Facilities, and Infrastructure, due to Lightning.**

<i>Educate the public on the risk of lightning.</i>	+	+		+	+		+		+		+	+	+	+	+	+	+	+	+	+	+	+		+		+	+	+
<i>Purchase portable warning signs that will inform residents.</i>	+	+		+	+		+		+		+	+	+	+	+	+	+	+	+	+	+	+		+		+	+	+

**Objective #2 (New): To prepare all key personnel to help build preparedness for threats and hazards during Lightning and other events and on hazard mitigation in general within Charlton County, the City of Folkston, and the City of Homeland.**

<i>Conduct "tabletop" exercises to help build preparedness for threats and hazards by providing a low-risk cost-effective environment to test and validate plans, policies, and capabilities and to identify resource requirements, capability gaps, strengths, areas for improvement,</i>	+		+	+	+		+		+		+	+	+	+	+	+	+	+	+	+	+		+		+	+	+
--	---	--	---	---	---	--	---	--	---	--	---	---	---	---	---	---	---	---	---	---	---	--	---	--	---	---	---



[illegible]

**PUBLIC HEALTH EMERGENCY**

[illegible]



[illegible]

## Appendix E.I - Agendas

### **HAZARDS REVIEW**

CHARLTON COUNTY HAZARD MITIGATION PLAN UPDATE WORKSHOP #1  
September 14, 2021

#### **Hazards contained in the 2018 HMP**

##### **Natural Hazards**

1. Hurricane/Tropical Storm
2. Flood/Slush
3. Wildfire
4. Tornado
5. Thunderstorm/Wind
6. Severe Winter Storm
7. Hail
8. Drought
9. Lightning
10. Extreme Heat

##### **Local Technological / Man-made Hazards**

1. Public Health Emergency
2. Chemical, Biological, Radiological, Nuclear, and Explosive (CBRNE) Incidents



**CHARLTON COUNTY AND THE CITIES OF FOLKSTON, AND HOMELAND  
HAZARD MITIGATION PLAN UPDATE  
WORKSHOP #2**

**ACTION STEPS  
October 11, 2021**

- I. Welcome and Introductions**
- II. Purpose of Workshop**
- III. Hazards Review**
- IV. Review and update Action Steps**
- V. Questions and Comments**
- VII. Closing Remarks**
  - a. Labor Match Form**
  - b. 3<sup>rd</sup> Workshop – May 12, 2022**





**CHARLTON COUNTY AND THE CITIES OF FOLKSTON, AND HOMELAND  
HAZARD MITIGATION PLAN UPDATE  
WORKSHOP #3**

**ACTION STEPS  
May 12, 2022**

- I. Welcome and Introductions**
- II. Purpose of Workshop**
- III. Reviewed the previous draft**
- IV. Continued to review and update Action Steps**
- V. Questions and Comments**
- VII. Closing Remarks**
  - a. Labor Match Form**

Appendix E.II – Notices

Charlton County 2023 HMP  
Kick-off Public Hearing 7-21-21

**HAZARD MITIGATION PLAN UPDATE PUBLIC HEARING**

Charlton County Including the Cities of Homeland, Folkston, and All Unincorporated Areas. Public Hearing for the Charlton County Multi-Jurisdictional Hazard Mitigation Plan Update.

The Charlton County Emergency Management Agency (EMA), in cooperation with the Southern Georgia Regional Commission (SGRC), invites the public to attend a Public Hearing to discuss the Charlton County Multi-Jurisdictional Hazard Mitigation Plan and provide an opportunity for public comment. The plan update is being developed in accordance with the Disaster Mitigation Act of 2000, which requires local governments to have an approved Hazard Mitigation Plan addressing natural hazards as a condition of receiving future federal disaster assistance.

The SGRC staff and Charlton County EMA will host a Public Hearing/Open House on August 5, 2021 at 10:00 am at the EOC Office located at 426 Rosa Park Rd. Folkston, GA 31637.

Comments are being accepted by email at [lhylton@sgrc.us](mailto:lhylton@sgrc.us), by fax at 229-333-5312, or by mailing them to Charlton HMP, 1937 Carlton Adams Dr., Valdosta, GA 31601. The previous draft of the Plan is available on the SGRC website, [www.sgrc.us](http://www.sgrc.us).

If you would like more information, please contact Loretta Hylton at the Southern Georgia Regional Commission, (229) 333-5277.

402 07/21

(SAVE THIS PAGE FOR 2<sup>nd</sup> Public Hearing Notice)

[illegible][illegible]

[illegible]

SIGN - IN SHEET  
SOUTHERN GEORGIA REGIONAL COMMISSION  
CHARLTON COUNTY AND CITIES OF FOLKSTON, AND HOMELAND 2023 HAZARD MITIGATION WORKSHOP  
THIRD WORKSHOP PUBLIC HEARING  
THURSDAY, MAY 12, 2023

[illegible]

## Appendix E.IV – Adoption Resolutions

## APPENDIX F. REPORTS AND INVENTORIES

### Appendix F.I – General Historic Reports

#### Storm Events Database

##### Search Results for Charlton County, Georgia

Event Types: Hurricane (Typhoon)

Charlton county contains the following zones:

Charlton, Northeastern Charlton , Western Charlton

0 events were reported between 01/01/1950 and 08/30/2022 (26540 days)

##### Summary Info:

Number of County/Zone areas affected:	0
Number of Days with Event:	0
Number of Days with Event and Death:	0
Number of Days with Event and Death or Injury:	0
Number of Days with Event and Property Damage:	0
Number of Days with Event and Crop Damage:	0
Number of Event Types reported:	0

##### Column Definitions:

'Mag': Magnitude, 'Dth': Deaths, 'Inj': Injuries, 'PrD': Property Damage, 'CrD': Crop Damage

Click on **Location** below to display details.

Available Event Types have changed over time. Please refer to the [Database Details](#) for more information.

Sort By: Date/Time (Oldest)

Location	County/Zone	SL	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
Totals:								0	0	0.00K	0.00K

Event Types: Tropical Storm

Charlton county contains the following zones:

Charlton, Northeastern Charlton , Western Charlton

6 events were reported between 01/01/1950 and 08/30/2022 (26540 days)

##### Summary Info:

Number of County/Zone areas affected:	1
Number of Days with Event:	6
Number of Days with Event and Death:	0
Number of Days with Event and Death or Injury:	0
Number of Days with Event and Property Damage:	0
Number of Days with Event and Crop Damage:	0
Number of Event Types reported:	1

##### Column Definitions:

'Mag': Magnitude, 'Dth': Deaths, 'Inj': Injuries, 'PrD': Property Damage, 'CrD': Crop Damage

Click on **Location** below to display details.

Available Event Types have changed over time. Please refer to the [Database Details](#) for more information.

Sort By: Date/Time (Oldest)

Location	County/Zone	SL	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
Totals:								0	0	0.00K	0.00K
<a href="#">CHARLTON (ZONE)</a>	CHARLTON (ZONE)	GA	09/05/2004	00:01	EST	Tropical Storm		0	0	0.00K	0.00K
<a href="#">CHARLTON (ZONE)</a>	CHARLTON (ZONE)	GA	09/25/2004	12:00	EST	Tropical Storm		0	0	0.00K	0.00K
<a href="#">CHARLTON (ZONE)</a>	CHARLTON (ZONE)	GA	06/01/2007	16:38	EST-5	Tropical Storm		0	0	0.00K	0.00K
<a href="#">CHARLTON (ZONE)</a>	CHARLTON (ZONE)	GA	09/01/2016	07:00	EST-5	Tropical Storm		0	0	0.00K	0.00K
<a href="#">CHARLTON (ZONE)</a>	CHARLTON (ZONE)	GA	10/06/2016	07:00	EST-5	Tropical Storm		0	0	0.00K	0.00K
<a href="#">CHARLTON (ZONE)</a>	CHARLTON (ZONE)	GA	09/10/2017	11:00	EST-5	Tropical Storm		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K



## Storm Events Database

### Search Results for Charlton County, Georgia

Event Types: Flood

Charlton county contains the following zones:

Charlton, Northeastern Charlton , Western Charlton

10 events were reported between 11/01/1950 and 12/30/2021 (25993 days)

#### Summary Info:

Number of County/Zone areas affected:	2
Number of Days with Event:	6
Number of Days with Event and Death:	0
Number of Days with Event and Death or Injury:	0
Number of Days with Event and Property Damage:	1
Number of Days with Event and Crop Damage:	0
Number of Event Types reported:	1

#### Column Definitions:

'Mag': Magnitude, 'Dth': Deaths, 'Inj': Injuries, 'PrD': Property Damage, 'CrD': Crop Damage

Click on **Location** below to display details.

Available Event Types have changed over time. Please refer to the [Database Details](#) for more information.

Sort By: Date/Time (Oldest) ▾

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
<b>Totals:</b>								0	0	25.00K	0.00K
<a href="#">CHARLTON (ZONE)</a>	CHARLTON (ZONE)	GA	03/01/1998	00:01	EST	Flood		0	0	25.00K	0.00K
<a href="#">CHARLTON (ZONE)</a>	CHARLTON (ZONE)	GA	09/09/2004	11:00	EST	Flood		0	0	0.00K	0.00K
<a href="#">CHARLTON (ZONE)</a>	CHARLTON (ZONE)	GA	09/09/2004	11:00	EST	Flood		0	0	0.00K	0.00K
<a href="#">CHARLTON (ZONE)</a>	CHARLTON (ZONE)	GA	09/10/2004	15:13	EST	Flood		0	0	0.00K	0.00K
<a href="#">CHARLTON (ZONE)</a>	CHARLTON (ZONE)	GA	06/25/2005	12:55	EST	Flood		0	0	0.00K	0.00K
<a href="#">CHARLTON (ZONE)</a>	CHARLTON (ZONE)	GA	06/25/2005	13:00	EST	Flood		0	0	0.00K	0.00K
<a href="#">CHARLTON (ZONE)</a>	CHARLTON (ZONE)	GA	06/25/2005	13:00	EST	Flood		0	0	0.00K	0.00K
<a href="#">CHARLTON (ZONE)</a>	CHARLTON (ZONE)	GA	06/25/2005	16:45	EST	Flood		0	0	0.00K	0.00K
<a href="#">CHARLTON (ZONE)</a>	CHARLTON (ZONE)	GA	07/02/2005	13:40	EST	Flood		0	0	0.00K	0.00K
<a href="#">CLARKING</a>	CHARLTON CO.	GA	07/07/2021	14:00	EST-5	Flood		0	0	0.00K	0.00K
<b>Totals:</b>								0	0	25.00K	0.00K

## Storm Events Database

### Search Results for Charlton County, Georgia

Event Types: Wildfire

Charlton county contains the following zones:

Charlton, Northeastern Charlton , Western Charlton

4 events were reported between 01/01/1950 and 08/31/2022 (26541 days)

#### Summary Info:

Number of County/Zone areas affected:	2
Number of Days with Event:	4
Number of Days with Event and Death:	0
Number of Days with Event and Death or Injury:	0
Number of Days with Event and Property Damage:	0
Number of Days with Event and Crop Damage:	0
Number of Event Types reported:	1

#### Column Definitions:

'Mag': Magnitude, 'Dth': Deaths, 'Inj': Injuries, 'PrD': Property Damage, 'CrD': Crop Damage

Click on **Location** below to display details.

Available Event Types have changed over time. Please refer to the [Database Details](#) for more information.

Sort By: Date/Time (Oldest) ▼

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
<b>Totals:</b>								0	0	0.00K	0.00K
<a href="#">COUNTYWIDE</a>	CHARLTON CO.	GA	05/30/1999	16:00	EST	Wildfire		0	0	0.00K	0.00K
<a href="#">ST GEORGE</a>	CHARLTON CO.	GA	07/11/2000	19:00	EST	Wildfire		0	0	0.00K	0.00K
<a href="#">CHARLTON (ZONE)</a>	CHARLTON (ZONE)	GA	05/01/2007	00:00	EST-5	Wildfire		0	0	0.00K	0.00K
<a href="#">CHARLTON (ZONE)</a>	CHARLTON (ZONE)	GA	05/01/2017	00:00	EST-5	Wildfire		0	0	0.00K	0.00K
<b>Totals:</b>								0	0	0.00K	0.00K

## Storm Events Database

### Search Results for Charlton County, Georgia

Event Types: Tornado

9 events were reported between 01/01/1950 and 01/31/2022 (26329 days)

#### Summary Info:

Number of County/Zone areas affected:	1
Number of Days with Event:	8
Number of Days with Event and Death:	0
Number of Days with Event and Death or Injury:	1
Number of Days with Event and Property Damage:	4
Number of Days with Event and Crop Damage:	0
Number of Event Types reported:	1

#### Column Definitions:

'Mag': Magnitude, 'Dth': Deaths, 'Inj': Injuries, 'PrD': Property Damage, 'CrD': Crop Damage

Click on [Location](#) below to display details.

Available Event Types have changed over time. Please refer to the [Database Details](#) for more information.

Select: All Tornadoes

Sort By: Date/Time (Oldest)

Location	County/Zone	St	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
<b>Totals:</b>								0	1	167.50K	0.00K
<a href="#">CHARLTON CO.</a>	CHARLTON CO.	GA	03/31/1961	13:20	CST	Tornado	F1	0	1	0.00K	0.00K
<a href="#">MATTOX</a>	CHARLTON CO.	GA	02/02/1996	19:20	EST	Tornado	F0	0	0	12.00K	0.00K
<a href="#">WINOKUR</a>	CHARLTON CO.	GA	11/08/1996	11:15	EST	Tornado	F0	0	0	0.00K	0.00K
<a href="#">FOLKSTON</a>	CHARLTON CO.	GA	02/22/1998	17:05	EST	Tornado	F0	0	0	5.00K	0.00K
<a href="#">ST GEORGE</a>	CHARLTON CO.	GA	03/30/2000	14:45	EST	Tornado	F0	0	0	0.50K	0.00K
<a href="#">WINOKUR</a>	CHARLTON CO.	GA	12/24/2002	11:43	EST	Tornado	F1	0	0	100.00K	0.00K
<a href="#">FOLKSTON</a>	CHARLTON CO.	GA	12/24/2002	11:50	EST	Tornado	F0	0	0	50.00K	0.00K
<a href="#">CLARKING</a>	CHARLTON CO.	GA	03/07/2008	10:20	EST-5	Tornado	EF1	0	0	0.00K	0.00K
<a href="#">ST GEORGE</a>	CHARLTON CO.	GA	01/21/2010	12:45	EST-5	Tornado	EF0	0	0	0.00K	0.00K
<b>Totals:</b>								0	1	167.50K	0.00K

## Storm Events Database

### Search Results for Charlton County, Georgia

Event Types: Thunderstorm Wind

111 events were reported between 11/01/1950 and 12/30/2021 (25993 days)

#### Summary Info:

Number of County/Zone areas affected:	1
Number of Days with Event:	90
Number of Days with Event and Death:	0
Number of Days with Event and Death or Injury:	1
Number of Days with Event and Property Damage:	32
Number of Days with Event and Crop Damage:	2
Number of Event Types reported:	1

#### Column Definitions:

'Mag': Magnitude, 'Dth': Deaths, 'Inj': Injuries, 'PrD': Property Damage, 'CrD': Crop Damage

#### Wind Magnitude Definitions:

Measured Gust:'MG', Estimated Gust:'EG', Measured Sustained:'MS', Estimated Sustained:'ES'

Click on **Location** below to display details.

Available Event Types have changed over time. Please refer to the Database Details for more information.

Select: All Wind Speeds

Sort By: Date/Time (Oldest)

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
<b>Totals:</b>								0	2	217.00K	51.00K
<a href="#">CHARLTON CO.</a>	CHARLTON CO.	GA	04/26/1975	18:15	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
<a href="#">CHARLTON CO.</a>	CHARLTON CO.	GA	02/27/1984	09:30	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
<a href="#">CHARLTON CO.</a>	CHARLTON CO.	GA	10/11/1990	18:30	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
<a href="#">CHARLTON CO.</a>	CHARLTON CO.	GA	08/05/1992	18:15	PST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
<a href="#">CHARLTON CO.</a>	CHARLTON CO.	GA	08/18/1992	17:15	PST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
<a href="#">Folkston</a>	CHARLTON CO.	GA	02/11/1995	22:00	EST	Thunderstorm Wind	0 kts.	0	0	135.00K	50.00K
<a href="#">CHARLTON CO.</a>	CHARLTON CO.	GA	11/07/1995	20:05	EST	Thunderstorm Wind	0 kts.	0	0	3.00K	0.00K
<a href="#">RIVERSIDE</a>	CHARLTON CO.	GA	02/02/1996	19:00	EST	Thunderstorm Wind	55 kts.	0	0	0.00K	0.00K
<a href="#">FOLKSTON</a>	CHARLTON CO.	GA	02/02/1996	19:00	EST	Thunderstorm Wind	55 kts.	0	0	2.00K	0.00K
<a href="#">MATTOX</a>	CHARLTON CO.	GA	02/02/1996	19:10	EST	Thunderstorm Wind	60 kts.	0	0	2.50K	0.00K
<a href="#">ST GEORGE</a>	CHARLTON CO.	GA	06/07/1996	18:05	EST	Thunderstorm Wind	60 kts.	0	0	2.00K	0.00K
<a href="#">WINOKUR</a>	CHARLTON CO.	GA	08/05/1996	16:50	EST	Thunderstorm Wind	60 kts.	0	0	2.00K	0.00K
<a href="#">WINOKUR</a>	CHARLTON CO.	GA	09/16/1997	15:45	EST	Thunderstorm Wind		0	0	1.50K	0.00K
<a href="#">FOLKSTON</a>	CHARLTON CO.	GA	11/02/1997	00:10	EST	Thunderstorm Wind		0	0	2.00K	0.00K
<a href="#">FOLKSTON</a>	CHARLTON CO.	GA	02/16/1998	10:00	EST	Thunderstorm Wind		0	0	2.00K	0.00K
<a href="#">ST GEORGE</a>	CHARLTON CO.	GA	04/08/1998	13:40	EST	Thunderstorm Wind		0	0	2.00K	0.00K
<a href="#">WINOKUR</a>	CHARLTON CO.	GA	04/08/1998	16:00	EST	Thunderstorm Wind		0	0	1.50K	0.00K
<a href="#">FOLKSTON</a>	CHARLTON CO.	GA	06/19/1998	18:45	EST	Thunderstorm Wind		0	0	0.50K	0.00K
<a href="#">UPTONVILLE</a>	CHARLTON CO.	GA	06/22/1998	16:45	EST	Thunderstorm Wind		0	0	1.00K	0.00K
<a href="#">FOLKSTON</a>	CHARLTON CO.	GA	07/22/1998	15:25	EST	Thunderstorm Wind		0	0	1.50K	0.00K
<a href="#">FOLKSTON</a>	CHARLTON CO.	GA	07/28/1998	16:30	EST	Thunderstorm Wind		0	0	1.50K	0.00K
<a href="#">ST GEORGE</a>	CHARLTON CO.	GA	08/08/1998	13:30	EST	Thunderstorm Wind		0	0	1.50K	0.00K
<a href="#">ST GEORGE</a>	CHARLTON CO.	GA	08/09/1998	14:20	EST	Thunderstorm Wind		0	0	1.50K	0.00K
<a href="#">FOLKSTON</a>	CHARLTON CO.	GA	01/02/1999	22:50	EST	Thunderstorm Wind		0	0	1.50K	0.00K
<a href="#">FOLKSTON</a>	CHARLTON CO.	GA	08/02/1999	19:45	EST	Thunderstorm Wind		0	0	3.50K	0.00K

FOLKSTON	CHARLTON CO.	GA	09/07/1999	16:38	EST	Thunderstorm Wind		0	0	2.50K	0.00K
FOLKSTON	CHARLTON CO.	GA	01/24/2000	08:11	EST	Thunderstorm Wind		0	0	2.50K	0.00K
FOLKSTON	CHARLTON CO.	GA	02/27/2000	13:45	EST	Thunderstorm Wind		0	0	0.50K	0.00K
FOLKSTON	CHARLTON CO.	GA	03/27/2000	17:05	EST	Thunderstorm Wind		0	0	2.50K	0.00K
HOMELAND	CHARLTON CO.	GA	03/27/2000	17:30	EST	Thunderstorm Wind		0	0	3.00K	0.00K
FOLKSTON	CHARLTON CO.	GA	03/27/2000	19:40	EST	Thunderstorm Wind		0	0	2.50K	0.00K
FOLKSTON	CHARLTON CO.	GA	06/15/2000	17:00	EST	Thunderstorm Wind		0	0	2.50K	0.00K
FOLKSTON	CHARLTON CO.	GA	07/11/2000	18:00	EST	Thunderstorm Wind		0	0	2.50K	0.00K
FOLKSTON	CHARLTON CO.	GA	03/13/2001	05:00	EST	Thunderstorm Wind		0	0	2.50K	0.00K
FOLKSTON	CHARLTON CO.	GA	03/13/2001	05:00	EST	Thunderstorm Wind		0	0	2.50K	0.00K
FOLKSTON	CHARLTON CO.	GA	03/15/2001	16:10	EST	Thunderstorm Wind		0	0	0.50K	0.00K
ST GEORGE	CHARLTON CO.	GA	06/16/2001	16:35	EST	Thunderstorm Wind		0	0	2.00K	0.00K
FOLKSTON	CHARLTON CO.	GA	06/14/2002	20:30	EST	Thunderstorm Wind		0	0	5.00K	0.00K
ST GEORGE	CHARLTON CO.	GA	07/20/2002	14:20	EST	Thunderstorm Wind		0	0	2.00K	0.00K
MONIAC	CHARLTON CO.	GA	11/06/2002	05:40	EST	Thunderstorm Wind		0	0	10.00K	0.00K
FOLKSTON	CHARLTON CO.	GA	02/22/2003	15:10	EST	Thunderstorm Wind	60 kts. EG	0	0	5.00K	0.00K
FOLKSTON	CHARLTON CO.	GA	03/13/2003	11:15	EST	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
ST GEORGE	CHARLTON CO.	GA	04/25/2003	12:45	EST	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
FOLKSTON	CHARLTON CO.	GA	05/18/2003	17:00	EST	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
COUNTYWIDE	CHARLTON CO.	GA	06/11/2003	16:00	EST	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
ST GEORGE	CHARLTON CO.	GA	07/26/2003	17:00	EST	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
FOLKSTON	CHARLTON CO.	GA	07/30/2003	14:35	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
RACEPOND	CHARLTON CO.	GA	01/26/2004	17:30	EST	Thunderstorm Wind	50 kts. ES	0	0	0.00K	0.00K
ST GEORGE	CHARLTON CO.	GA	06/01/2004	16:05	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
ST GEORGE	CHARLTON CO.	GA	06/03/2004	16:50	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
ST GEORGE	CHARLTON CO.	GA	06/29/2004	19:25	EST	Thunderstorm Wind	56 kts. MG	0	0	0.00K	0.00K
FOLKSTON	CHARLTON CO.	GA	07/15/2004	11:40	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HOMELAND	CHARLTON CO.	GA	07/15/2004	11:55	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
WINOKUR	CHARLTON CO.	GA	07/15/2004	16:10	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
FOLKSTON	CHARLTON CO.	GA	05/10/2006	20:45	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
FOLKSTON	CHARLTON CO.	GA	07/29/2006	16:30	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
FOLKSTON	CHARLTON CO.	GA	07/29/2006	16:30	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HOMELAND	CHARLTON CO.	GA	03/02/2007	05:00	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HOMELAND	CHARLTON CO.	GA	04/15/2007	06:15	EST-5	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
FOLKSTON	CHARLTON CO.	GA	06/11/2007	13:35	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
FOLKSTON	CHARLTON CO.	GA	07/13/2007	14:55	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
RACEPOND	CHARLTON CO.	GA	07/20/2007	18:33	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
PAXTON	CHARLTON CO.	GA	07/21/2007	20:45	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HOMELAND	CHARLTON CO.	GA	08/11/2007	18:50	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
TRADERS HILL	CHARLTON CO.	GA	06/10/2008	15:57	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HOMELAND	CHARLTON CO.	GA	06/10/2008	16:00	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HOMELAND	CHARLTON CO.	GA	06/28/2008	15:25	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HOMELAND	CHARLTON CO.	GA	07/23/2008	10:00	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HOMELAND	CHARLTON CO.	GA	08/13/2008	13:40	EST-5	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
HOMELAND	CHARLTON CO.	GA	08/13/2008	14:00	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HOMELAND	CHARLTON CO.	GA	08/13/2008	14:15	EST-5	Thunderstorm Wind	50 kts. EG	0	2	0.00K	0.00K
HOMELAND	CHARLTON CO.	GA	08/13/2008	14:15	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
WINOKUR	CHARLTON CO.	GA	04/13/2009	16:00	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HOMELAND	CHARLTON CO.	GA	06/22/2009	18:05	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HOMELAND	CHARLTON CO.	GA	06/29/2009	16:15	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HOMELAND	CHARLTON CO.	GA	01/21/2010	12:20	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
COLERAIN	CHARLTON CO.	GA	06/18/2010	17:25	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
FOLKSTON	CHARLTON CO.	GA	06/26/2010	16:28	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
FOLKSTON	CHARLTON CO.	GA	06/26/2010	16:30	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
ST GEORGE	CHARLTON CO.	GA	06/26/2010	16:30	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K

HOMELAND	CHARLTON CO.	GA	06/23/2011	13:30	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
FOLKSTON	CHARLTON CO.	GA	06/23/2011	14:06	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HOMELAND	CHARLTON CO.	GA	06/23/2011	14:15	EST-5	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
COLERAIN	CHARLTON CO.	GA	09/20/2011	13:55	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
NEWELL	CHARLTON CO.	GA	05/06/2012	15:30	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
PAXTON	CHARLTON CO.	GA	06/12/2012	12:20	EST-5	Thunderstorm Wind	45 kts. EG	0	0	0.00K	1.00K
UPTONVILLE	CHARLTON CO.	GA	07/30/2012	14:10	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
PAXTON	CHARLTON CO.	GA	08/15/2012	14:40	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
PAXTON	CHARLTON CO.	GA	09/18/2012	09:40	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HOMELAND	CHARLTON CO.	GA	09/20/2012	13:08	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
PAXTON	CHARLTON CO.	GA	01/30/2013	09:30	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
STOKESVILLE	CHARLTON CO.	GA	05/19/2013	20:45	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
PAXTON	CHARLTON CO.	GA	02/21/2014	10:30	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
NEWELL	CHARLTON CO.	GA	06/20/2014	17:50	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
WINOKUR	CHARLTON CO.	GA	06/24/2014	17:13	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HOMELAND	CHARLTON CO.	GA	08/19/2014	14:45	EST-5	Thunderstorm Wind	45 kts. EG	0	0	0.50K	0.00K
FOLKSTON	CHARLTON CO.	GA	04/19/2015	15:58	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
FOLKSTON	CHARLTON CO.	GA	04/19/2015	21:00	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HOMELAND	CHARLTON CO.	GA	06/30/2015	13:34	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
FOLKSTON DAVIS ARPT	CHARLTON CO.	GA	07/16/2016	16:17	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HOMELAND	CHARLTON CO.	GA	07/16/2016	16:25	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
UPTONVILLE	CHARLTON CO.	GA	07/17/2016	16:26	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HOMELAND	CHARLTON CO.	GA	01/22/2017	18:20	EST-5	Thunderstorm Wind	61 kts. EG	0	0	0.00K	0.00K
HOMELAND	CHARLTON CO.	GA	06/15/2017	16:35	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
UPTONVILLE	CHARLTON CO.	GA	06/02/2018	15:45	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HOMELAND	CHARLTON CO.	GA	06/02/2018	16:00	EST-5	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
FOLKSTON DAVIS ARPT	CHARLTON CO.	GA	06/02/2018	16:00	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
TOLEDO	CHARLTON CO.	GA	03/01/2019	13:58	EST-5	Thunderstorm Wind	40 kts. EG	0	0	0.50K	0.00K
PAXTON	CHARLTON CO.	GA	04/19/2019	10:10	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HOMELAND	CHARLTON CO.	GA	04/19/2019	10:50	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
ST GEORGE	CHARLTON CO.	GA	04/20/2020	03:40	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
Totals:								0	2	217.00K	51.00K

## Storm Events Database

### Search Results for Charlton County, Georgia

Event Types: Winter Storm

Charlton county contains the following zones:

Charlton, Northeastern Charlton , Western Charlton

1 events were reported between 11/01/1950 and 12/30/2021 (25993 days)

#### Summary Info:

Number of County/Zone areas affected:	1
Number of Days with Event:	1
Number of Days with Event and Death:	0
Number of Days with Event and Death or Injury:	0
Number of Days with Event and Property Damage:	0
Number of Days with Event and Crop Damage:	0
Number of Event Types reported:	1

#### Column Definitions:

'Mag': Magnitude, 'Dth': Deaths, 'Inj': Injuries, 'PrD': Property Damage, 'CrD': Crop Damage

Click on **Location** below to display details.

Available Event Types have changed over time. Please refer to the [Database Details](#) for more information.

Sort By: Date/Time (Oldest) ▼

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
Totals:								0	0	0.00K	0.00K
<a href="#">CHARLTON (ZONE)</a>	CHARLTON (ZONE)	GA	01/03/2018	07:33	EST-5	Winter Storm		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K



## Storm Events Database

### Search Results for Charlton County, Georgia

Event Types: Hail

49 events were reported between 11/01/1950 and 12/30/2021 (25993 days)

#### Summary Info:

Number of County/Zone areas affected:	1
Number of Days with Event:	33
Number of Days with Event and Death:	0
Number of Days with Event and Death or Injury:	0
Number of Days with Event and Property Damage:	0
Number of Days with Event and Crop Damage:	0
Number of Event Types reported:	1

#### Column Definitions:

'Mag': Magnitude, 'Dth': Deaths, 'Inj': Injuries, 'PrD': Property Damage, 'CrD': Crop Damage

Click on **Location** below to display details.

Available Event Types have changed over time. Please refer to the [Database Details](#) for more information.

Select: All Hail

Sort By: Date/Time (Oldest) ▾

Location	County/Zone	St.	Date	Time	I.Z.	Type	Mag	Dth	Inj	PrD	CrD
<b>Totals:</b>								0	0	0.00K	0.00K
<a href="#">CHARLTON CO.</a>	CHARLTON CO.	GA	04/30/1971	07:00	CST	Hail	1.75 in.	0	0	0.00K	0.00K
<a href="#">CHARLTON CO.</a>	CHARLTON CO.	GA	04/26/1975	18:00	CST	Hail	1.75 in.	0	0	0.00K	0.00K
<a href="#">WINOKUR</a>	CHARLTON CO.	GA	09/16/1997	15:30	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">RACEPOND</a>	CHARLTON CO.	GA	06/19/1998	16:45	EST	Hail	1.00 in.	0	0	0.00K	0.00K
<a href="#">WINOKUR</a>	CHARLTON CO.	GA	06/19/1998	16:55	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">FOLKSTON</a>	CHARLTON CO.	GA	06/19/1998	17:35	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">FOLKSTON</a>	CHARLTON CO.	GA	06/28/1998	16:37	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">FOLKSTON</a>	CHARLTON CO.	GA	01/02/1999	17:40	EST	Hail	0.88 in.	0	0	0.00K	0.00K
<a href="#">ST GEORGE</a>	CHARLTON CO.	GA	11/21/1999	13:50	EST	Hail	1.50 in.	0	0	0.00K	0.00K
<a href="#">RACEPOND</a>	CHARLTON CO.	GA	03/27/2000	16:50	EST	Hail	1.75 in.	0	0	0.00K	0.00K
<a href="#">FOLKSTON</a>	CHARLTON CO.	GA	03/27/2000	17:00	EST	Hail	1.75 in.	0	0	0.00K	0.00K
<a href="#">FOLKSTON</a>	CHARLTON CO.	GA	03/27/2000	17:15	EST	Hail	2.00 in.	0	0	0.00K	0.00K
<a href="#">FOLKSTON</a>	CHARLTON CO.	GA	03/27/2000	17:30	EST	Hail	0.88 in.	0	0	0.00K	0.00K
<a href="#">RACEPOND</a>	CHARLTON CO.	GA	03/27/2000	18:35	EST	Hail	1.75 in.	0	0	0.00K	0.00K
<a href="#">WINOKUR</a>	CHARLTON CO.	GA	04/24/2000	12:50	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">WINOKUR</a>	CHARLTON CO.	GA	04/24/2000	14:47	EST	Hail	0.88 in.	0	0	0.00K	0.00K
<a href="#">FOLKSTON</a>	CHARLTON CO.	GA	06/13/2000	16:45	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">FOLKSTON</a>	CHARLTON CO.	GA	05/27/2001	17:14	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">ST GEORGE</a>	CHARLTON CO.	GA	06/18/2001	13:15	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">FOLKSTON</a>	CHARLTON CO.	GA	06/26/2001	18:15	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">FOLKSTON</a>	CHARLTON CO.	GA	05/31/2002	16:00	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">WINOKUR</a>	CHARLTON CO.	GA	06/22/2004	13:45	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">FOLKSTON</a>	CHARLTON CO.	GA	07/15/2004	11:40	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">HOMELAND</a>	CHARLTON CO.	GA	07/15/2004	11:55	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">WINOKUR</a>	CHARLTON CO.	GA	07/15/2004	16:10	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">HOMELAND</a>	CHARLTON CO.	GA	07/15/2004	16:45	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">FOLKSTON</a>	CHARLTON CO.	GA	03/14/2005	16:52	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">FOLKSTON</a>	CHARLTON CO.	GA	03/25/2005	06:15	EST	Hail	1.75 in.	0	0	0.00K	0.00K



<u>FOLKSTON</u>	CHARLTON CO.	GA	03/26/2005	12:20	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<u>RACEPOND</u>	CHARLTON CO.	GA	02/03/2006	19:00	EST	Hail	1.00 in.	0	0	0.00K	0.00K
<u>FOLKSTON</u>	CHARLTON CO.	GA	02/03/2006	20:40	EST	Hail	1.00 in.	0	0	0.00K	0.00K
<u>MONIAC</u>	CHARLTON CO.	GA	04/08/2006	17:35	EST	Hail	1.75 in.	0	0	0.00K	0.00K
<u>ST GEORGE</u>	CHARLTON CO.	GA	05/15/2006	13:00	EST	Hail	0.88 in.	0	0	0.00K	0.00K
<u>ST GEORGE</u>	CHARLTON CO.	GA	05/15/2006	15:15	EST	Hail	0.88 in.	0	0	0.00K	0.00K
<u>RACEPOND</u>	CHARLTON CO.	GA	05/15/2006	15:30	EST	Hail	1.00 in.	0	0	0.00K	0.00K
<u>FOLKSTON</u>	CHARLTON CO.	GA	05/15/2006	18:15	EST	Hail	1.00 in.	0	0	0.00K	0.00K
<u>HOMELAND</u>	CHARLTON CO.	GA	06/13/2007	12:40	EST-5	Hail	1.00 in.	0	0	0.00K	0.00K
<u>ST GEORGE</u>	CHARLTON CO.	GA	06/25/2008	16:36	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
<u>HOMELAND</u>	CHARLTON CO.	GA	10/09/2008	11:30	EST-5	Hail	1.00 in.	0	0	0.00K	0.00K
<u>UPTONVILLE</u>	CHARLTON CO.	GA	10/09/2008	12:00	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
<u>FOLKSTON</u>	CHARLTON CO.	GA	04/13/2009	16:40	EST-5	Hail	1.00 in.	0	0	0.00K	0.00K
<u>HOMELAND</u>	CHARLTON CO.	GA	04/13/2009	16:43	EST-5	Hail	1.25 in.	0	0	0.00K	0.00K
<u>MATTOX</u>	CHARLTON CO.	GA	06/18/2009	22:06	EST-5	Hail	0.88 in.	0	0	0.00K	0.00K
<u>NEWELL</u>	CHARLTON CO.	GA	04/25/2010	15:55	EST-5	Hail	1.00 in.	0	0	0.00K	0.00K
<u>PAXTON</u>	CHARLTON CO.	GA	05/21/2010	17:35	EST-5	Hail	1.75 in.	0	0	0.00K	0.00K
<u>FOLKSTON</u>	CHARLTON CO.	GA	06/26/2010	16:18	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
<u>TRADERS HILL</u>	CHARLTON CO.	GA	05/12/2011	15:35	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
<u>FOLKSTON</u>	CHARLTON CO.	GA	05/14/2011	11:40	EST-5	Hail	1.00 in.	0	0	0.00K	0.00K
<u>WINOKUR</u>	CHARLTON CO.	GA	05/25/2014	15:40	EST-5	Hail	1.75 in.	0	0	0.00K	0.00K
<b>Totals:</b>								0	0	0.00K	0.00K

## Storm Events Database

### Search Results for Charlton County, Georgia

Event Types: Drought

Charlton county contains the following zones:

Charlton, Northeastern Charlton , Western Charlton

1 events were reported between 01/01/1950 and 01/31/2022 (26329 days)

#### Summary Info:

Number of County/Zone areas affected:	1
Number of Days with Event:	1
Number of Days with Event and Death:	0
Number of Days with Event and Death or Injury:	0
Number of Days with Event and Property Damage:	0
Number of Days with Event and Crop Damage:	0
Number of Event Types reported:	1

#### Column Definitions:

'Mag': Magnitude, 'Dth': Deaths, 'Inj': Injuries, 'PrD': Property Damage, 'CrD': Crop Damage

Click on **Location** below to display details.

Available Event Types have changed over time. Please refer to the [Database Details](#) for more information.

Sort By: Date/Time (Oldest) ▼

Location	County/Zone	St.	Date	Time	I.Z.	Type	Mag	Dth	Inj	PrD	CrD
<b>Totals:</b>								0	0	0.00K	0.00K
<a href="#">CHARLTON (ZONE)</a>	CHARLTON (ZONE)	GA	12/01/2006	00:00	EST-5	Drought		0	0	0.00K	0.00K
<b>Totals:</b>								0	0	0.00K	0.00K

## Storm Events Database

### Search Results for Charlton County, Georgia

Event Types: Lightning

2 events were reported between 11/01/1950 and 12/30/2021 (25993 days)

#### Summary Info:

Number of County/Zone areas affected:	1
Number of Days with Event:	2
Number of Days with Event and Death:	0
Number of Days with Event and Death or Injury:	0
Number of Days with Event and Property Damage:	2
Number of Days with Event and Crop Damage:	0
Number of Event Types reported:	1

#### Column Definitions:

'Mag': Magnitude, 'Dth': Deaths, 'Inj': Injuries, 'PrD': Property Damage, 'CrD': Crop Damage

Click on **Location** below to display details.

Available Event Types have changed over time. Please refer to the [Database Details](#) for more information.

Sort By: Date/Time (Oldest) ▼

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
<b>Totals:</b>								0	0	102.00K	0.00K
<a href="#">HOMELAND</a>	CHARLTON CO.	GA	08/15/2012	15:00	EST-5	Lightning		0	0	2.00K	0.00K
<a href="#">CHARLTON CO.</a>	CHARLTON CO.	GA	07/21/2019	18:30	EST-5	Lightning		0	0	100.00K	0.00K
<b>Totals:</b>								0	0	102.00K	0.00K

## Storm Events Database

### Search Results for Charlton County, Georgia

Event Types: Excessive Heat

Charlton county contains the following zones:

Charlton, Northeastern Charlton , Western Charlton

0 events were reported between 01/01/1950 and 08/30/2022 (26540 days)

#### Summary Info:

Number of County/Zone areas affected:	0
Number of Days with Event:	0
Number of Days with Event and Death:	0
Number of Days with Event and Death or Injury:	0
Number of Days with Event and Property Damage:	0
Number of Days with Event and Crop Damage:	0
Number of Event Types reported:	0

#### Column Definitions:

'Mag': Magnitude, 'Dth': Deaths, 'Inj': Injuries, 'PrD': Property Damage, 'CrD': Crop Damage

Click on **Location** below to display details.

Available Event Types have changed over time. Please refer to the [Database Details](#) for more information.

Sort By: Date/Time (Oldest) ▼

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
Totals:								0	0	0.00K	0.00K

## Appendix F.II – Critical Facilities

### Charlton County Critical Facilities

Id	Name	Jurisdiction	Address	City	Facility Types	Building Value
60879	Charlton County Antenna Repeater #1	Folkston city	Courthouse, 1520 Third Street	Folkston	Emergency Services, Communications	350000.00
60880	Charlton County Antenna Repeater #2	Charlton County	GA Bend FD, Okefenokee Pkwy @ C.R. #3	Folkston	Emergency Services, Communications	350000.00
60881	Charlton County BOE: St. George Elementary	Charlton County	GA Hwt. #121 S	Folkston	Education, K - 12	7227000.00
60882	Charlton County Cooperative Extension	Folkston city	55 Kingsland Drive	Folkston	Government, Government Offices	669600.00
60883	Charlton County Health Dept. Homecare	Folkston city	302 First Street S	Folkston	Medical, Medical Offices	300000.00
60884	Charlton County Health Dept.	Folkston city	2587 Third Street N	Folkston	Medical, Medical Offices	2135700.00
60885	Charlton County Public Library	Folkston city	1291 Indian Trail	Folkston	Education, Library	2625000.00
60886	Charlton County Senior Center	Folkston city	1520 Third Street	Folkston	Government, Day Care	1631100.00
60887	City of Folkston Water Line System	Folkston city	541 First Street	Folkston	Government, Water/Sewer	50000000.00
60888	City of Folkston Sewerline System	Folkston city	Gowen Drive Extension	Folkston	Government, Water/Sewer	50000000.00
60889	City of Folkston City Hall	Folkston city	541 First Street	Folkston	Government, City Hall	1233900.00
60890	City of Folkston Depot-Chamber of Commerce	Folkston city	Main Street W.	Folkston	Government, Government Offices	1132800.00
60898	U.S. 301 N Lift Station	Folkston city	U.S. 301 North	Folkston	Government, Water/Sewer	300000.00
60897	Prison Lift Station	Folkston city	S.R. 252	Folkston	Government, EMS	300000.00
60896	S.R. 252 Lift Station	Charlton County	S.R. 252	Folkston	Government, EMS	300000.00
60895	Folkston Park Care And Rehabilitation	Folkston city	36261 Okefenokee Drive	Folkston	Medical, Medical Offices	8400000.00
60894	Accession Medical Group St. Vincent's Primary Care	Folkston city	2383 Third Street	Folkston	Medical, Medical Offices	1200000.00
60893	Traders Hill Pump House	Charlton County	Tracy's Ferry Road	Folkston	Government, Water/Sewer	300000.00
60892	Charlton County EMS Station #2 St. George	Charlton County	Georgia Avenue	Folkston	Emergency Services, EMS	291000.00
60891	St. George Pump House	Charlton County	Georgia Avenue	Folkston	Government, Water/Sewer	450000.00
60890	Georgia Power Substation	Charlton County	U.S. #1 North	Folkston	Government, Water/Sewer	7500000.00
60889	Charlton County BOE-Folkston Elementary School	Folkston city	34754 Okefenokee Drive	Folkston	Emergency Services, EMA	21416700.00
60888	Charlton County BOE-Bethune Middle School	Folkston city	285 Little Phoebe Church Road	Folkston	Education, K - 12	27666300.00
60887	City of Folkston Water System-Burnford Road	Folkston city	Burnford Road	Folkston	Government, Water/Sewer	1000000.00
60886	Kingsland Drive Lift Station	Charlton County	426 Rosa Parks Road (St 40)	Folkston	Government, Water/Sewer	300000.00
60885	Charlton County EMS 22140	Charlton County	426 Rosa Parks Road	Folkston	Emergency Services, EMS	0.00
60884	Action Packed Services	Folkston city	1516 Third Street	Folkston	NGO, Clinics	1920000.00
60883	Camp Pinckney Baptist Church	Charlton County	72 Camp Pinckney Road	Folkston	Emergency Services, Non-Profit	4500000.00
60882	First Baptist Church	Folkston city	1320 Third Street	Folkston	Emergency Services, Non-Profit	4800000.00
60881	St. George Church of God	Charlton County	GA Highway #94	Folkston	Emergency Services, Non-Profit	5347500.00
60880	Annelia Care	Folkston city	3435 Second Street	Folkston	Medical, Medical Offices	2475000.00
60879	Charlton County Road Dept. St. George	Charlton County	GA Highway #94	Folkston	Government, Transportation	200000.00
60878	Charlton County EMA	Charlton County	426 Rosa Parks Road	Folkston	Government, EMA	8773200.00
60877	QREMC Electric Substation #1	Folkston city	Third Street	Folkston	NGO, Private	3080000.00
60876	QREMC Electric Substation 3	Homeland city	630 U.S. #1	Homeland	NGO, Private	3080000.00
60875	QREMC Electric Substation #2	Charlton County	12416 Johnson Street	Folkston	NGO, Private	3080000.00
60874	Georgia Power Substation	Folkston city	2625 Third Street	Folkston	NGO, Private	3500000.00
60873	Commercial Radio Tower	Homeland city	558 U.S. #1	Homeland	Emergency Services, Communications	300000.00
60872	City of Folkston Water System-Homeland	Charlton County	Homeland Park Road	Folkston	Government, Water/Sewer	7500000.00
60871	Folkston Police Department	Folkston city	541 First Street	Folkston	Law Enforcement, Police	642600.00
60870	Charlton County BOE-Maintenance	Folkston city	2248 Third Street	Folkston	Education, K - 12	2925000.00
60869	Charlton County BOE-Bus Shop	Folkston city	54 Albert Court	Folkston	Education, Transportation	1260000.00
60868	Charlton County BOE-Alternative School	Folkston city	2190 Third Street	Folkston	Education, K - 12	938400.00
60867	Charlton County BOE Administration	Folkston city	37 Touchdown Ln	Folkston	Education, K - 12	3915000.00
60866	Hent Street Lift Station	Folkston city	Henri Street	Folkston	Government, Water/Sewer	300000.00
60865	Pinehurst Substation Lift Station	Charlton County	Audley Avenue	Folkston	Government, Water/Sewer	300000.00
60864	Okefenokee Drive Lift Station	Folkston city	Okefenokee Drive	Folkston	Government, Water/Sewer	300000.00
60863	Overpass Lift Station	Folkston city	Okefenokee Parkway	Folkston	Government, Water/Sewer	300000.00
60862	Paxton Road Lift Station	Folkston city	Paxton Road	Folkston	Government, Water/Sewer	300000.00
60861	Main Street Lift Station	Folkston city	Main Street	Folkston	Government, Water/Sewer	300000.00

60860	Pinewood Street Lift Station	Folkston city	Pinewood Street	Folkston	Government, Water/Sewer	300000.00
60869	Thomas Camp Lift Station	Charlton County	Thomas Road	Folkston	Government, Water/Sewer	300000.00
60888	Action Pack Head Start	Charlton County	244 Mary M. Bethune Drive	Folkston	Education, Day Care	1920000.00
60887	New Life Baptist Church	Charlton County	244 Mary M. Bethune Drive	Folkston	Emergency Services, EMS	2805000.00
60891	City of Folkston Housing Authority	Folkston city	434 5th Street	Folkston	Government, Government Offices	12000000.00
60892	City of Folkston Road Dept.	Folkston city	541 First Street	Folkston	Government, Transportation	585000.00
60893	Georgia GA DHR DIACS	Folkston city	401 West Oak Street	Folkston	Law Enforcement, Police	1500000.00
60894	Coastal Pines Adult Ed.	Folkston city	68 Kingsland Drive	Folkston	Education, Jr Colleges	0.00
60895	City of Homelands Waterline System	Homeland city	401 Pennsylvania Ave.	Homeland	Government, Water/Sewer	11000000.00
60896	City of Homelands Machinery Enclosure	Homeland city	701 Pennsylvania Ave.	Homeland	Government, Transportation	660000.00
60897	City of Homelands Road Dept.	Homeland city	681 Pennsylvania Avenue	Homeland	Government, Transportation	445200.00
60898	Charlton County Commission Offices	Folkston city	401 Kingsland Drive	Folkston	Government, Court House	5625600.00
60899	Charlton County Storage Building OERC	Folkston city	Kingsland Drive	Folkston	Government, Government Offices	4800000.00
60900	Roberson Daycare	Folkston city	117 Milton Street	Folkston	Education, Day Care	540000.00
60901	USPO-Folkston	Folkston city	3845 Main Street	Folkston	Government, Communications	960000.00
60902	Folkston Maintenance/Electrical Shop	Charlton County	GA #252	Folkston	Government, Transportation	5970000.00
60903	Charlton County 911	Folkston city	1520 Third Street	Folkston	Emergency Services, Communications	0.00
60904	Charlton County Antenna Repeater #3	Charlton County	240 Dawsey Crews Road	Folkston	Emergency Services, Communications	3500000.00
60905	USPO-St. George	Charlton County	Highway #94	Folkston	NGO, Communications	900000.00
60906	Charlton County Transfer Station	Charlton County	Highway #94 West	Folkston	NGO, Landfill	702000.00
60907	Georgia GFC Forestry Commission-St. George	Charlton County	Highway #94 West	Folkston	Emergency Services, Fire Fighters	150000.00
60908	Visiting Nurses	Folkston city	3722 Main Street	Folkston	Medical, Medical Offices	900000.00
60909	McKinney Community Health Center	Folkston city	101A East Main Street	Folkston	Medical, Medical Offices	720000.00
60910	Pine Village Campground	Homeland city	400 Bowery Lane	Folkston	NGO, Private	600000.00
60911	Georgia GFC Forestry Gowen Tower	Charlton County	Davis Road	Folkston	Emergency Services, Fire Fighters	150000.00
60912	U.S. FWS Service Chienliere Refuge	Charlton County	Highway #121 South @ Swamp Perimeter Road	Folkston	Law Enforcement, Police	2002500.00
60913	Charlton County Maintenance Shop	Charlton County	Highway #121 South	Folkston	Government, Transportation	540000.00
60914	Georgia GDOT Transportation Maintenance Facility	Charlton County	Highway #121 South	Folkston	Government, Transportation	675000.00
60915	Trader's Hill Recreation Area	Charlton County	Highway #121 South	Folkston	Government, Government Offices	217500.00
60916	Georgia GFC Forestry Gowen Tower	Charlton County	Highway #121 South	Folkston	Emergency Services, Fire Fighters	660000.00
60917	GEO Corrections Water System	Folkston city	Highway #252 North	Folkston	Government, Water/Sewer	300000.00
60918	GEO Corrections State Prison	Folkston city	Highway #252 North	Folkston	Law Enforcement, Prisons	88701000.00
60919	DREMAC Radio Tower	Folkston city	GA Highway #252 North/317 Bulus Edwards Rd.	Folkston	Emergency Services, Communications	350000.00
60920	CHESSER ISLAND ROAD LANDFILL, INC. MSWL	Folkston city	OT Chesser Island Rd 12.1 Mi Sw	Folkston	Government, Landfill	3000000.00
60921	Homeland Police Department	Homeland city	401 Pennsylvania Ave	Homeland	Law Enforcement, Police	153600.00
60922	Charlton County Fire Department Station #4 GA Blend	Charlton County	Georgia Blend FD, GA Hwy. #121 @ C.R. #3	Folkston	Emergency Services, Fire Fighters	360000.00
60923	Charlton County FD Station #2 St. George	Charlton County	St. George FD, FL Ave./GA Hwy #121	Folkston	Emergency Services, Fire Fighters	1467000.00
60924	Charlton County FD Station #1 Folkston	Folkston city	Railroad Ave.	Folkston	Emergency Services, Fire Fighters	1743900.00
60925	Charlton County FD Station #3 Racepoint	Charlton County	Racepoint, U.S. #1 N	Folkston	Emergency Services, Fire Fighters	525000.00
60926	Charlton County FD Station #5 Winokur	Charlton County	Winokur, Route 3 Box 111/U.S. #301 N	Folkston	Emergency Services, Fire Fighters	720000.00
60927	Charlton County Sheriff's Office	Folkston city	1520 3rd St Suite C	Folkston	Law Enforcement, Sheriff	2400000.00
60928	Charlton County Courthouse	Folkston city	1520 Third Street	Folkston	Law Enforcement, Court House	6945600.00
60929	City of Homeland City Hall	Homeland city	401 Pennsylvania Ave	Homeland	Government, City Hall	647400.00
60930	City of Folkston (NPCP)	Folkston city	Gowen Drive Extension	Folkston	Government, Water/Sewer	6501414.00
60931	City of Homeland Water System	Homeland city	607 Pennsylvania Ave	Homeland	Government, Water/Sewer	750000.00
60932	City of Folkston Water System	Folkston city	541 First St	Folkston	Government, Water/Sewer	750000.00
60933	Charlton County Airport Davis Field	Charlton County	Highway #121 South	Folkston	Government, Transportation	1500000.00
60934	Charlton County BOE-High School	Folkston city	994 Indian Trail (GA #40 Connector)	Folkston	Education, K - 12	52142100.00
60935	Unison Behavioral Health	Charlton County	396 Kingsland Dr.	Folkston	Medical, Medical Offices	460000.00
60936	Hopkins, Gowen Oil Co.	Charlton County	369 3 Mainstreet	Folkston	NGO, Transportation	152000.00

## APPENDIX G. HAZUS REPORT



Hazard Risk Analyses  
Supplement to the Charlton County  
Join Mitigation Plan





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## **Introduction**

The Federal Disaster Mitigation Act of 2000 (DMA2K) requires state, local, and tribal governments to develop and maintain a mitigation plan to be eligible for certain federal disaster assistance and hazard mitigation funding programs.

Mitigation seeks to reduce a hazard's impacts, including loss of life, property damage, disruption to local and regional economies, and the expenditure of public and private funds for recovery. Sound mitigation must be based on a sound risk assessment that quantifies the potential losses of a disaster by assessing the vulnerability of buildings, infrastructure, and people.

In recognition of the importance of planning in mitigation activities, FEMA Hazus-MH, a powerful disaster risk assessment tool based on geographic information systems (GIS). This tool enables communities of all sizes to predict estimated losses from floods, hurricanes, earthquakes, and other related phenomena and to measure the impact of various mitigation practices that might help reduce those losses.

In 2021, the Georgia Department of Emergency Management partnered with The Southern Georgia Regional Commission (SGRC) to develop a detailed risk assessment focused on defining hurricane, riverine flood and tornado impacts for Georgia. This assessment identifies the characteristics and potential consequences of the disaster, how much of the community could be affected by the disaster, and the impact on community assets. In the following years, the Georgia Association of Regional Commissions (GARC) are utilizing this workflow to define impacts in other counties in Georgia. This document provides the results for Charlton County.

## **Risk Assessment Process Overview**

Hazus-MH Version 2.2 SP1 was used to perform the analyses for Charlton County. The Hazus-MH application includes default data for every county in the US. This Hazus-MH data was derived from a variety of national sources and in some cases the data are also several years old. Whenever possible, using local provided data is preferred. Charlton County provided building inventory information from the county's property tax assessment system. This section describes the changes made to the default Hazus-MH inventory and the modeling parameters used for each scenario.

### **County Inventory Changes**

The default Hazus-MH site-specific point inventory was updated using data compiled from the Georgia Emergency Management Agency (GEMA). The default Hazus-MH aggregate inventory (General Building Stock) was also updated prior to running the scenarios. Reported losses reflect the updated data sets.

## General Building Stock Updates

General Building Stock (GBS) is an inventory category that consists of aggregated data (grouped by census geography — tract or block). Hazus-MH generates a combination of site-specific and aggregated loss estimates based on the given analysis and user input.

The GBS records for Charlton County were replaced with data derived from parcel and property assessment data obtained from Charlton County. The county provided property assessment data was current as of December 2021 and the parcel data current as of December 2021. Records without improvements were deleted. The parcel boundaries were converted to parcel points located in the centroids of each parcel boundary; then, each parcel point was linked to an assessor record based upon matching

parcel numbers. The parcel assessor match-rate for Charlton County is 99.1%. The generated building inventory represents the approximate locations (within a parcel) of structures. The building inventory was aggregated by census block. Both the tract and block tables were updated. Table 1 shows the results of the changes to the GBS tables by occupancy class.

Table 1: GBS Building Exposure Updates by Occupancy Class\*

Occupancy Classification	Default Count	Updated Count	Default Exposure	Updated Exposure
Agricultural	9	0	\$ 2,279,000	\$ -
Commercial	151	215	\$ 87,395,000	\$ 101,427,000
Education	6	11	\$ 9,223,000	\$ 8,894,000
Government	5	22	\$ 2,627,000	\$ 67,606,000
Industrial	43	72	\$ 22,600,000	\$ 116,346,000
Religious	25	49	\$ 15,063,000	\$ 25,191,000
Residential	4336	4646	\$ 591,524,000	\$ 440,496,000
<b>Total</b>	<b>4575</b>	<b>5015</b>	<b>\$ 730,711,000</b>	<b>\$ 759,960,000</b>

\*The exposure values represent the total number and replacement cost for all Charlton County Buildings

For Charlton County, the updated GBS was used to calculate hurricane wind losses. The flood losses and tornado losses were calculated from building inventory modeled in Hazus-MH as User-Defined Facility (UDF)<sup>1</sup>, or site-specific points. Figure 1 shows the distribution of buildings as points based on the county provided data.

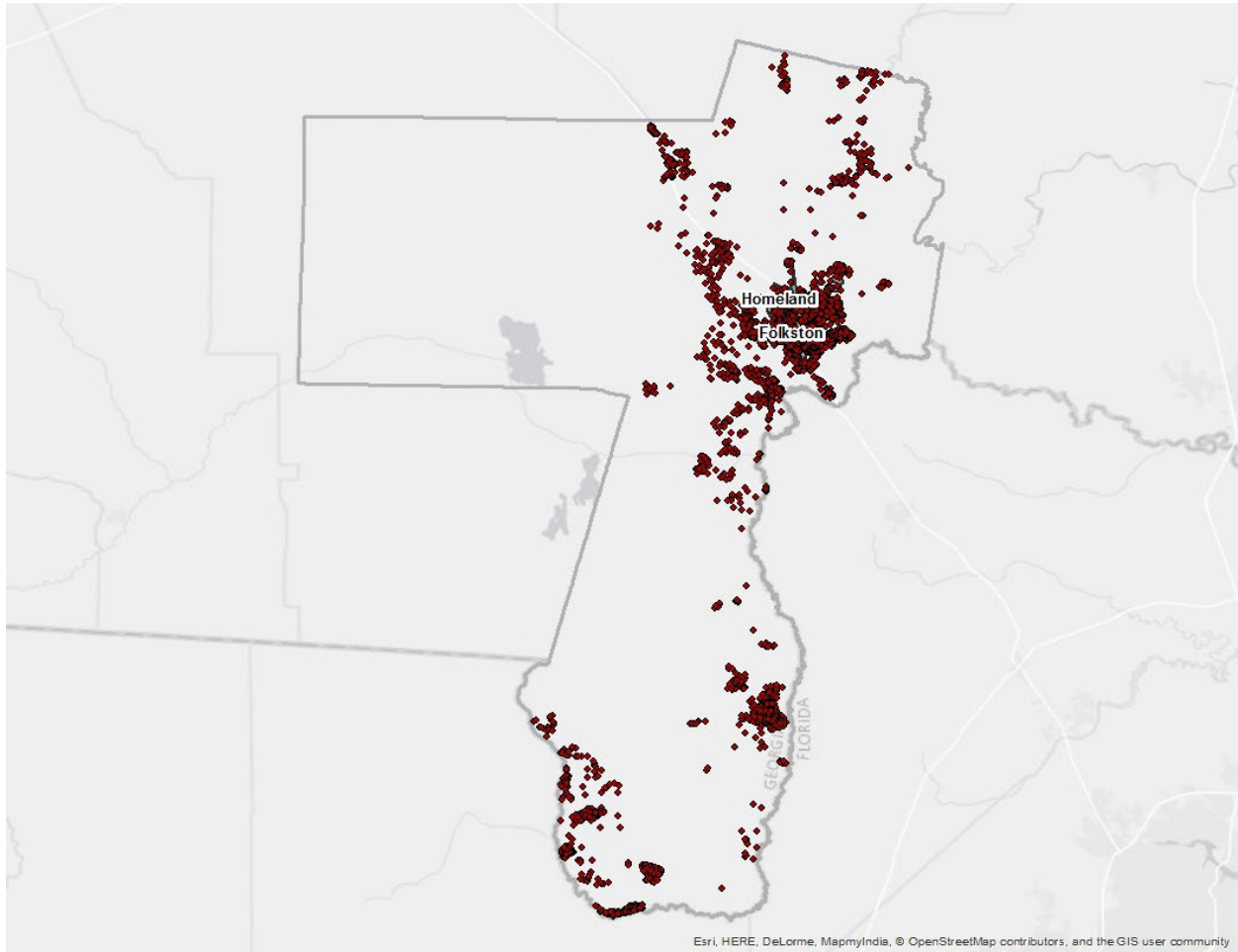


Figure 1: Charlton County Overview

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<sup>1</sup> The UDF inventory category in Hazus-MH allows the user to enter site-specific data in place of GBS data.

## Essential Facility Updates

The default Hazus-MH essential facility data was updated to reflect improved information available in the Georgia Mitigation Information System (GMIS). For these risk analyses, only GMIS data for buildings that Hazus-MH classified as Essential Facilities was integrated into Hazus-MH because the application provides specialized reports for these five types of facilities. Essential Facility inventory was updated for the analysis conducted for this report. The following table summarizes the counts and exposures, where available, by Essential Facility classification of the updated data for the county.

### Essential facilities include:

- Care facilities
- EOCs
- Fire stations
- Police stations
- Schools

Table 2: Updated Essential Facilities

Classification	Updated Count	Updated Exposure
Charlton County		
EOC	1	\$ 880,000
Care	3	\$ 11,595,000
Fire	8	\$ 5,775,000
Police	4	\$ 5,197,000
School	6	\$ 574,542,000
<b>Total</b>	<b>22</b>	<b>\$ 597,989,000</b>

Classification	Updated Count	Updated Exposure
Homeland		
EOC	0	\$ -
Care	0	\$ -
Fire	0	\$ -
Police	1	\$ 153,000
School	0	\$ -
<b>Total</b>	<b>1</b>	<b>\$ 153,000</b>

Classification	Updated Count	Updated Exposure
Folkston		
EOC	0	\$ -
Care	3	\$ 11,595,000
Fire	1	\$ 1,743,000
Police	2	\$ 3,042,000
School	5	\$ 574,002,000
<b>Total</b>	<b>11</b>	<b>\$ 590,382,000</b>

## Assumptions and Exceptions

Hazus-MH loss estimates may be impacted by certain assumptions and process variances made in this risk assessment.

- The Charlton County analysis used Hazus-MH Version 2.2 SP1, which was released by FEMA in May 2015.
- County provided parcel and property assessment data may not fully reflect all buildings in the county. For example, some counties do not report not-for-profit buildings such as government buildings, schools and churches in their property assessment data. This data was used to update the General Building Stock as well as the User Defined Facilities applied in this risk assessment.
- GBS updates from assessor data will skew loss calculations. The following attributes were defaulted or calculated:
  - Foundation Type was set from Occupancy Class
  - First Floor Height was set from Foundation Type
  - Content Cost was calculated from Replacement Cost
- It is assumed that the buildings are located at the centroid of the parcel unless building footprints are used. For this analysis of Charlton County, parcel centroids were used.
- The essential facilities extracted from the GMIS were only used in the portion of the analysis designated as essential facility damage. They were not used in the update of the General Building Stock or the User Defined Facility inventory.

The hazard models included in this risk assessment included:

- Hurricane assessment which was comprised of a wind only damage assessment
- Flood assessment based on the 1% annual chance event that includes riverine assessments
- Tornado assessment based on GIS modeling

# Hurricane Risk Assessment

## Hazard Definition

The National Hurricane Center describes a hurricane as a tropical cyclone in which the maximum sustained wind is, at minimum, 74 miles per hour (mph)<sup>2</sup>. The term hurricane is used for Northern Hemisphere tropical cyclones east of the International Dateline to the Greenwich Meridian. The term typhoon is used for Pacific tropical cyclones north of the Equator west of the International Dateline. Hurricanes in the Atlantic Ocean, Gulf of Mexico, and Caribbean form between June and November with the peak of hurricane season occurring in the middle of September. Figure 2 shows that many hurricanes have impacted the Atlantic and Gulf coasts of the United States.

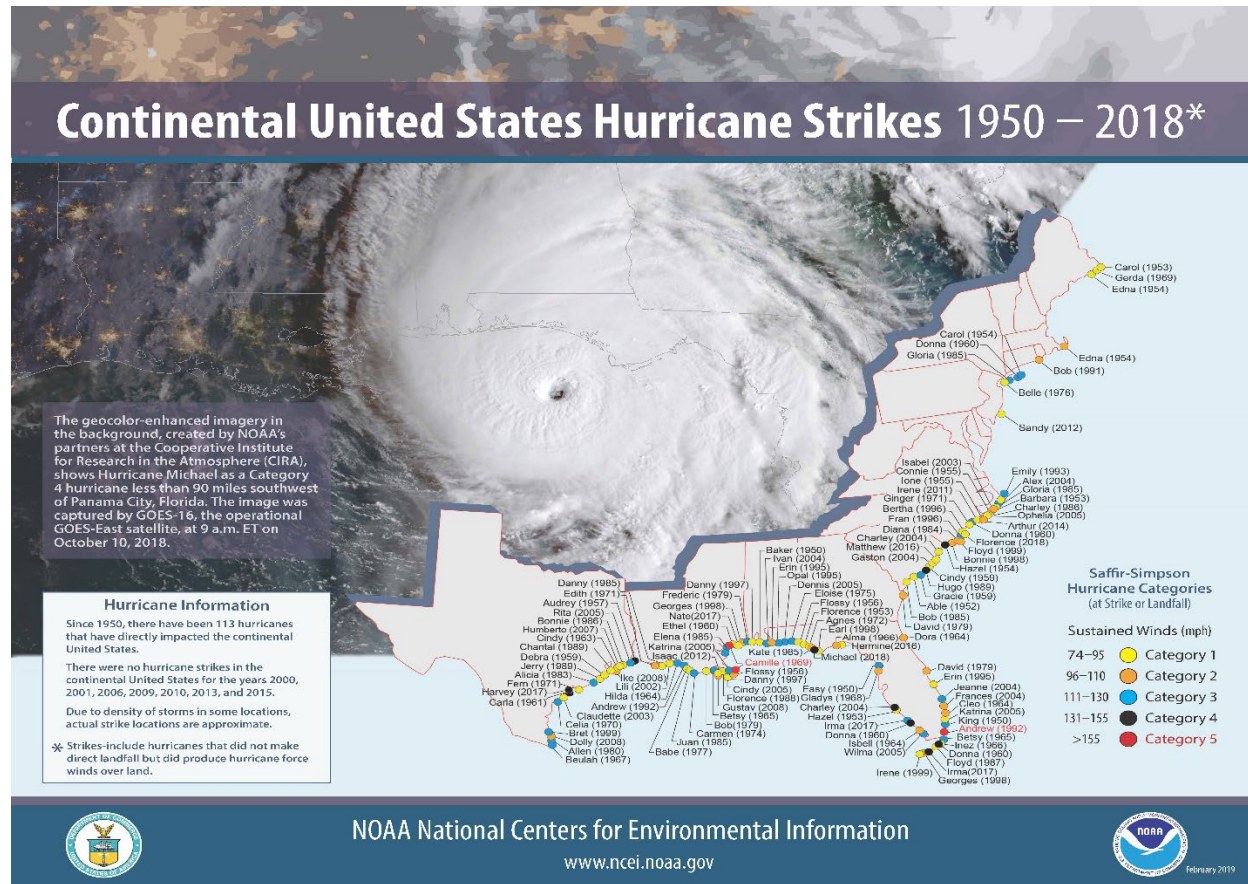


Figure 2: Continental United States Hurricane Strikes: 1950 to 2018<sup>3</sup>

Hurricane intensities are measured using the Saffir-Simpson Hurricane Wind Scale (Table 3). This scale is a 1 to 5 categorization based on the hurricane's intensity at the indicated time.

<sup>2</sup> National Hurricane Center (2011). "Glossary of NHC Terms." National Oceanic and Atmospheric Administration. <http://www.nhc.noaa.gov/aboutgloss.shtml#>. Retrieved 2-23-2012.

<sup>3</sup> Source: NOAA National Climatic Data Center



Table 3: Saffir-Simpson Hurricane Wind Scale

Category	Wind Speed (mph)	Damage
1	74 – 95	Very dangerous winds will produce some damage
2	96 – 110	Extremely dangerous winds will cause extensive damage
3	111 - 130	Devastating damage will occur
4	131 -155	Catastrophic damage will occur
5	> 155	Catastrophic damage will occur

Hurricanes bring a complex set of impacts. The winds from a hurricane produce a rise in the water level at landfall called storm surge. Storm surges produce coastal flooding effects that can be as damaging as the hurricane's winds. Hurricanes bring very intense inland riverine flooding. Hurricanes can also produce tornadoes that can add to the wind damages inland. In this risk assessment, only hurricane winds, and coastal storm surge are considered.

The National Oceanic and Atmospheric Administration's National Hurricane Center created the HURDAT database, which contains all of the tracks of tropical systems since the mid-1800s. This database was used to document the number of tropical systems that have affected Charlton County by creating a 20-mile buffer around the county to include storms that didn't make direct landfall in Charlton County but impacted the county. Since 1851, Charlton County has had 76 tropical systems within 20 miles of its county borders (Table 4).

Table 4: Tropical Systems affecting Charlton County

Year	Month	Day	Name	Wind (Knots)	Category
1868	October	4	NOTNAMED	50	TS
1868	October	5	NOTNAMED	40	TS
1871	August	18	NOTNAMED	60	TS
1871	August	18	NOTNAMED	60	TS
1871	August	18	NOTNAMED	50	TS
1871	August	23	NOTNAMED	60	TS
1871	August	23	NOTNAMED	50	TS
1871	September	6	NOTNAMED	50	TS
1873	June	2	NOTNAMED	40	TS
1873	June	2	NOTNAMED	40	TS
1873	September	19	NOTNAMED	60	TS
1874	September	28	NOTNAMED	60	TS
1877	September	20	NOTNAMED	40	TS
1877	September	20	NOTNAMED	40	TS
1878	October	11	NOTNAMED	40	TS
1880	September	8	NOTNAMED	40	TS
1882	October	11	NOTNAMED	50	TS
1885	August	31	NOTNAMED	40	TS
1885	September	21	NOTNAMED	40	TS
1885	September	30	NOTNAMED	30	TD
1885	October	12	NOTNAMED	50	TS
1888	September	9	NOTNAMED	45	TS
1888	September	9	NOTNAMED	40	TS
1893	June	16	NOTNAMED	50	TS
1896	September	29	NOTNAMED	100	H3
1898	October	2	NOTNAMED	115	H4
1898	October	2	NOTNAMED	90	H2
1900	October	12	NOTNAMED	35	TS
1907	June	29	NOTNAMED	45	TS
1910	October	19	NOTNAMED	50	TS
1912	July	15	NOTNAMED	45	TS
1912	July	15	NOTNAMED	40	TS
1914	September	17	NOTNAMED	60	TS
1914	September	17	NOTNAMED	40	TS
1915	August	2	NOTNAMED	40	TS
1915	August	2	NOTNAMED	40	TS
1919	October	1	NOTNAMED	40	TS
1924	September	16	NOTNAMED	40	TS
1926	July	28	NOTNAMED	60	TS
1928	September	18	NOTNAMED	80	H1
1932	September	15	NOTNAMED	45	TS
1938	October	24	NOTNAMED	40	TS
1946	October	8	NOTNAMED	40	TS
1946	October	8	NOTNAMED	35	TS
1946	November	2	NOTNAMED	25	TD
1946	November	2	NOTNAMED	25	TD
1947	September	24	NOTNAMED	50	TS
1947	September	24	NOTNAMED	45	TS
1947	October	7	NOTNAMED	40	TS
1947	October	7	NOTNAMED	35	TS
1950	September	7	EASY	40	TS
1953	September	20	NOTNAMED	40	TS
1960	July	29	BRENDA	30	TD
1964	June	6	NOTNAMED	30	TD
1964	October	5	HILDA	35	E
1968	June	7	ABBY	50	TS
1970	May	25	ALMA	25	TD
1970	May	25	ALMA	25	TD
1972	May	27	ALPHA	50	SS
1972	May	28	ALPHA	30	SD
1976	May	23	SUBTROP1	40	SS
1976	May	24	SUBTROP1	40	SS
1984	September	28	ISIDORE	45	TS
1985	October	10	ISABEL	35	TS
1985	October	11	ISABEL	30	TD
1985	October	11	ISABEL	30	TD
1994	November	21	GORDON	20	TD
1994	November	21	GORDON	20	TD
1996	October	8	JOSEPHINE	60	TS
1996	October	8	JOSEPHINE	45	E
1998	October	1	GEORGES	25	TD
2000	September	18	GORDON	40	TS
2000	September	18	GORDON	30	TD
2004	August	12	BONNIE	30	TD
2005	October	6	TAMMY	45	TS
2007	June	2	BARRY	30	TD

## Category Definitions:

TS – Tropical storm

TD – Tropical depression

CAT\_1 – Category 1 (same format for 2, 3, 4 and 5)

## Probabilistic Hurricane Scenario

The following probabilistic wind damage risk assessment modeled a Category 1 storm with maximum winds of 93 mph.

### Wind Damage Assessment

Wind losses were determined from probabilistic models run for the Category 1 storm which equates to the 1% chance storm event. Figure 3 shows wind speeds for the modeled hurricane.

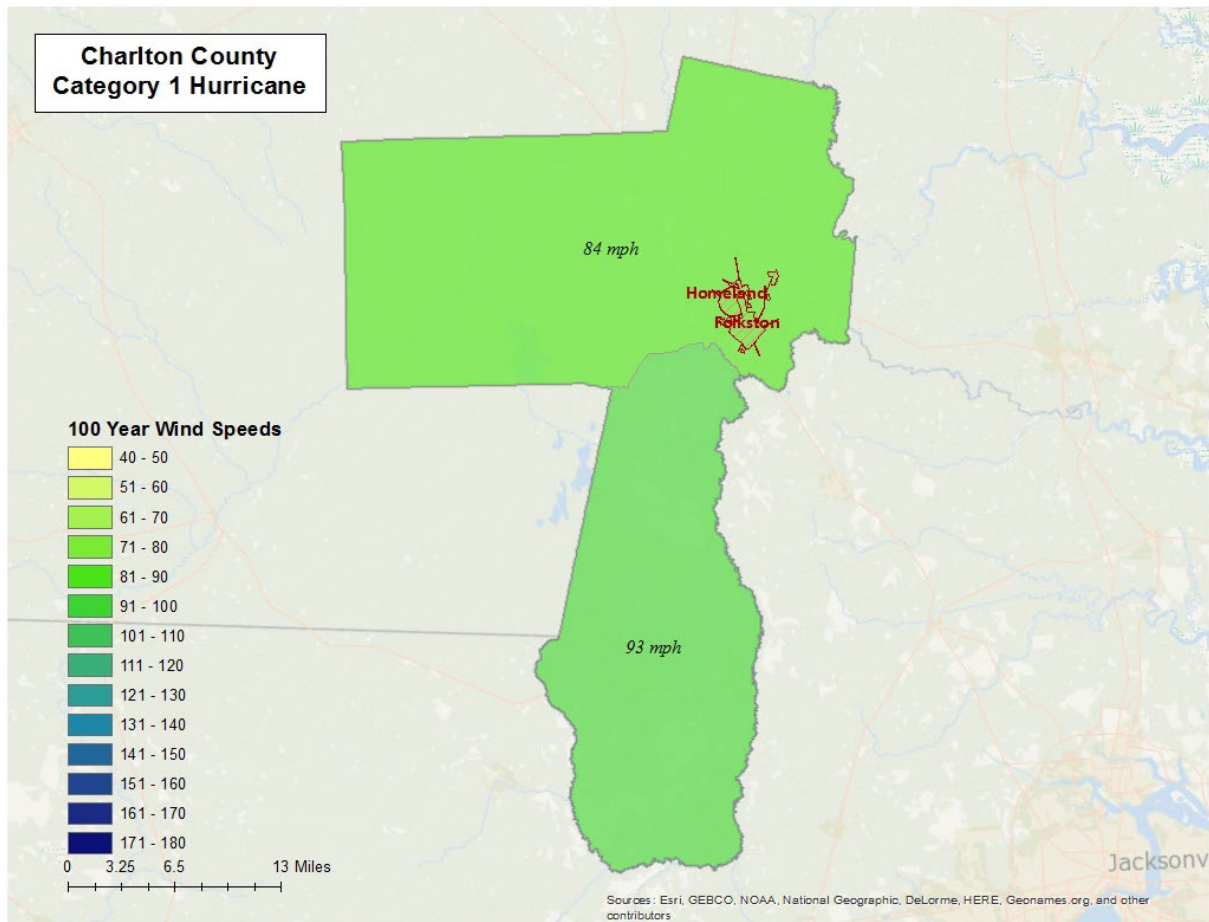


Figure 3: Wind Speeds by Storm Category

### Wind-Related Building Damages

Buildings in Charlton County are vulnerable to storm events, and the cost to rebuild may have significant consequences to the community. The following table shows a summary of the results of wind-related building damage in Charlton County for the Category 1 (100 Year Event) storm. The loss ratio expresses building losses as a percentage of total building replacement cost in the county. Figure 4 illustrates the building loss ratios of the modeled Category 1 storm.

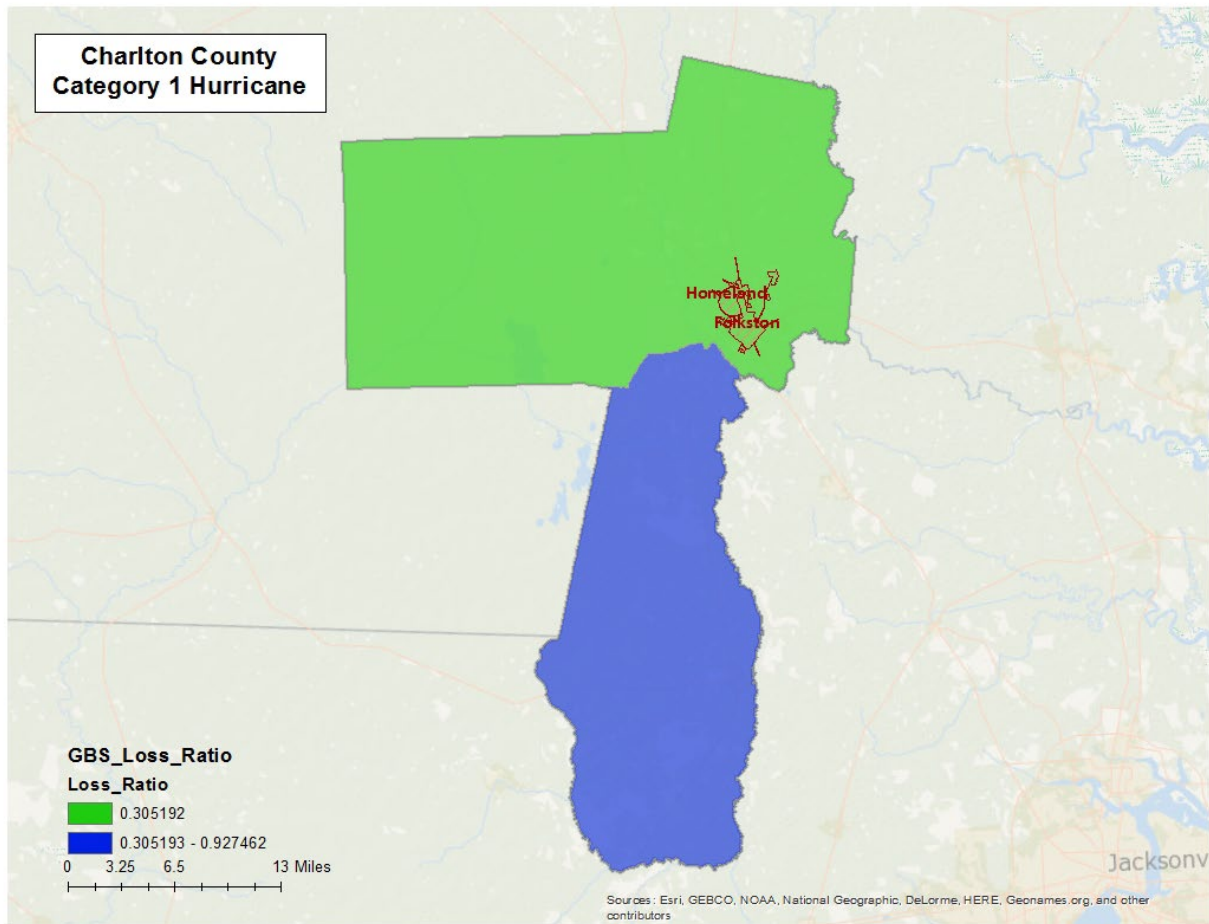


Figure 4: Hurricane Wind GBS Loss Ratios

Table 5 shows the Hurricane Wind Building Damage results including the number of buildings damaged, total building damage, and economic loss.

Table 5: Hurricane Wind Building Damage

Storm Classification	Number of Damaged Buildings	Building Damages	Total Economic Loss	Loss Ratio
Category 1	182	\$ 3,156,730	\$ 4,666,780	0.42

### Essential Facility Losses

Essential facilities are also vulnerable to storm events, and the potential loss of functionality may have significant consequences to the community. Hazus-MH identified the essential facilities that may be moderately or severely damaged by winds. The results are compiled in Table 6.

There are 22 essential facilities in Charlton County.

Classification	Number
EOC	1
Care	3
Fire	8
Police	4
School	6
<b>Total</b>	<b>22</b>

Table 6: Wind-Damaged Essential Facility Losses

Storm Classification	Facilities Moderately Damaged (>50%)	Facilities Completely Damaged (>50%)	Facilities with expected loss (<1day)
Category 1	0	0	22

### Shelter Requirements

Hazus-MH estimates the number of households evacuated from buildings with severe damage from high velocity winds as well as the number of people who will require short-term sheltering. The results are listed in Table 7 and mapped in Figure 5.

Table 7: Displaced Households and People

Storm Classification	# of Displaced Households	# of People Needing Short-Term Shelter
Category 1	2	0

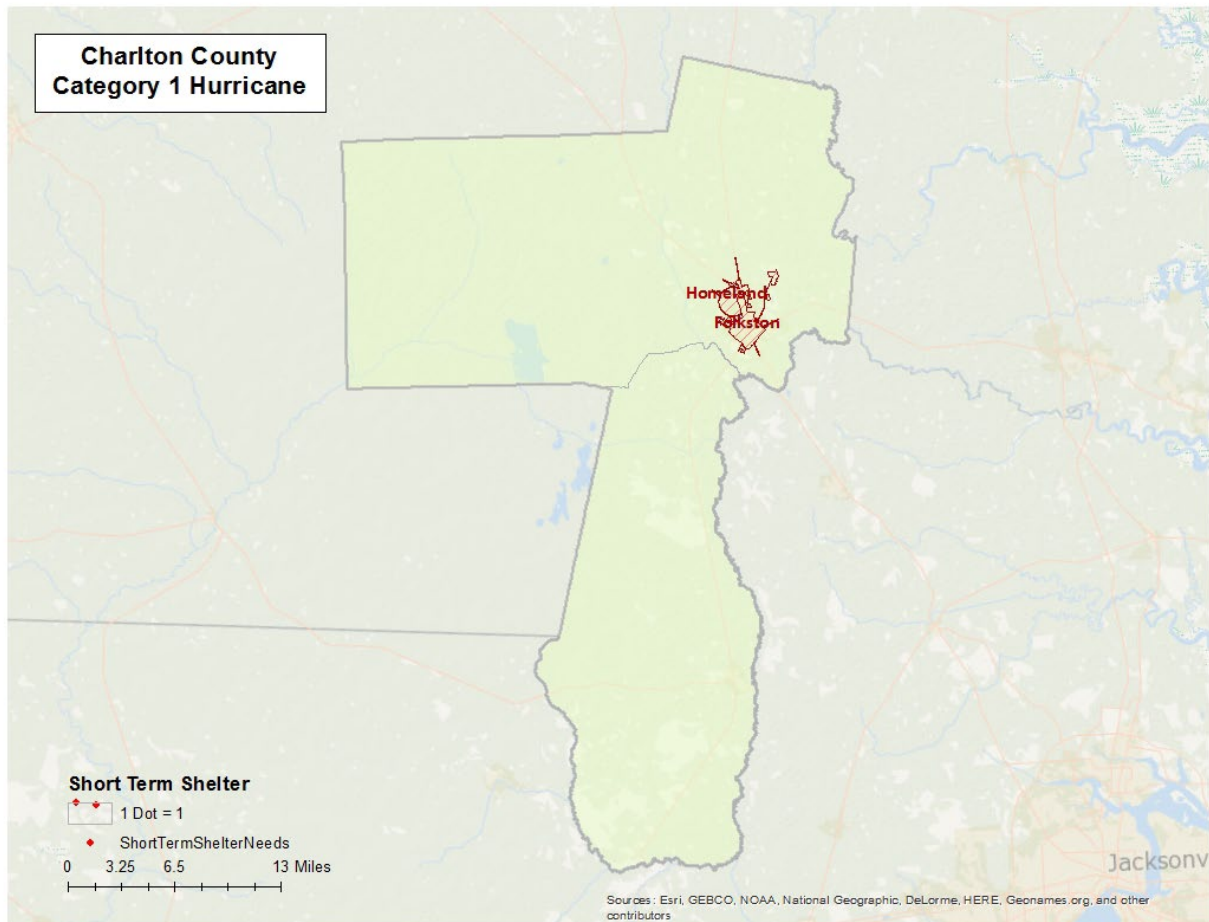


Figure 5: Hurricane Wind Shelter Requirements

### Debris Generated from Hurricane Wind

Hazus-MH estimates the amount of debris that will be generated by high velocity hurricane winds and quantifies it into three broad categories to determine the material handling equipment needed:

- Reinforced Concrete and Steel Debris
- Brick and Wood and Other Building Debris
- Tree Debris

Different material handling equipment is required for each category of debris. The estimates of debris for this scenario are listed in Table 8. The amount of hurricane wind-related tree debris that is estimated to require pick up at the public's expense is listed in the eligible tree debris column.

Table 8: Wind-Related Debris Weight (Tons)

Storm Classification	Brick, Wood, and Other	Reinforced Concrete/Steel	Tree Debris	Other Tree Debris	Total
Category 1	356	-	8,525	259,629	268,510



Figure 6 shows the distribution of all wind related debris resulting from a Category 1 hurricane. Each dot represents 20 tons of debris within the census tract in which it is located. The dots are randomly distributed within each census tract and therefore do not represent the specific location of debris sites.

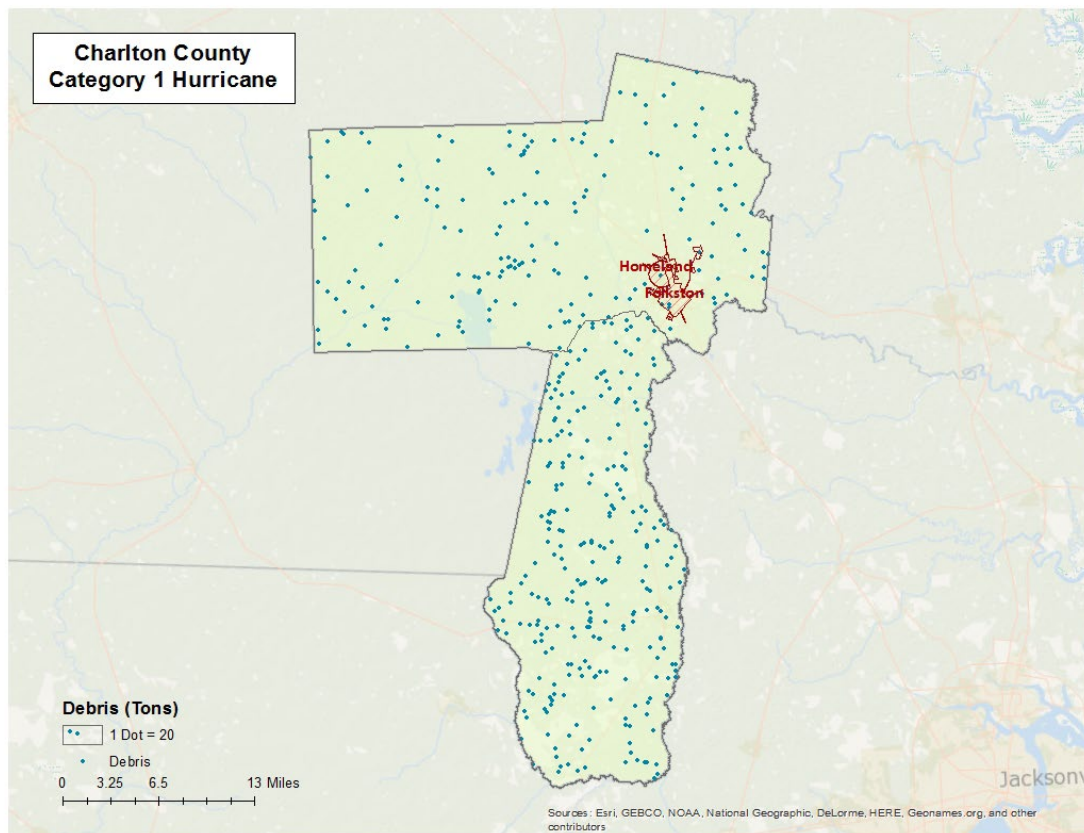


Figure 6: Wind-Related Debris Weight (Tons)

## **Flood Risk Assessment**

### **Hazard Definition**

Flooding is a significant natural hazard throughout the United States. The type, magnitude, and severity of flooding are functions of the amount and distribution of precipitation over a given area, the rate at which precipitation infiltrates the ground, the geometry and hydrology of the catchment, and flow dynamics and conditions in and along the river channel. Floods can be classified as one of three types: upstream floods, downstream floods, or coastal floods.

Upstream floods, also called flash floods, occur in the upper parts of drainage basins and are generally characterized by periods of intense rainfall over a short duration. These floods arise with very little warning and often result in locally intense damage, and sometimes loss of life, due to the high energy of the flowing water. Flood waters can snap trees, topple buildings, and easily move large boulders or other structures. Six inches of rushing water can upend a person; another 18 inches might carry off a car. Generally, upstream floods cause damage over relatively localized areas, but they can be quite severe in the local areas in which they occur. Urban flooding is a type of upstream flood. Urban flooding involves the overflow of storm drain systems and can be the result of inadequate drainage combined

with heavy rainfall or rapid snowmelt. Upstream or flash floods can occur at any time of the year in Georgia, but they are most common in the spring and summer months.

Downstream floods, also called riverine floods, refer to floods on large rivers at locations with large upstream catchments. Downstream floods are typically associated with precipitation events that are of relatively long duration and occur over large areas. Flooding on small tributary streams may be limited, but the contribution of increased runoff may result in a large flood downstream. The lag time between precipitation and time of the flood peak is much longer for downstream floods than for upstream floods, generally providing ample warning for people to move to safe locations and, to some extent, secure some property against damage.

Coastal floods occurring on the Atlantic and Gulf coasts may be related to hurricanes or other combined offshore, nearshore, and shoreline processes. The effects of these complex interrelationships vary significantly across coastal settings, leading to challenges in the determination of the base (1-percent-annual-chance) flood for hazard mapping purposes. Land area covered by floodwaters of the base flood is identified as a Special Flood Hazard Area (SFHA). The Charlton County flood risk assessment analyzed at risk structures in the SFHA.

The SFHA is the area where the National Flood Insurance Program's (NFIP) floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies. The owner of a structure in a high-risk area must carry flood insurance, if the owner carries a mortgage from a federally regulated or insured lender or receives

The following probabilistic risk assessment involves an analysis of a 1% annual chance riverine flood event.



### Riverine 1% Flood Scenario

Riverine losses were determined from the 1% flood boundaries downloaded from the FEMA Flood Map Service Center in December 2021. The flood boundaries were overlaid with the USGS 10 meter DEM using the Hazus-MH Enhanced Quick Look tool to generate riverine depth grids. The riverine flood depth grid was then imported into Hazus-MH to calculate the riverine flood loss estimates. Figure 7 illustrates the riverine inundation boundary associated with the 1% annual chance. Please note that the riverine flooding may not take into account elevated housing or raised Base Flood Elevation.

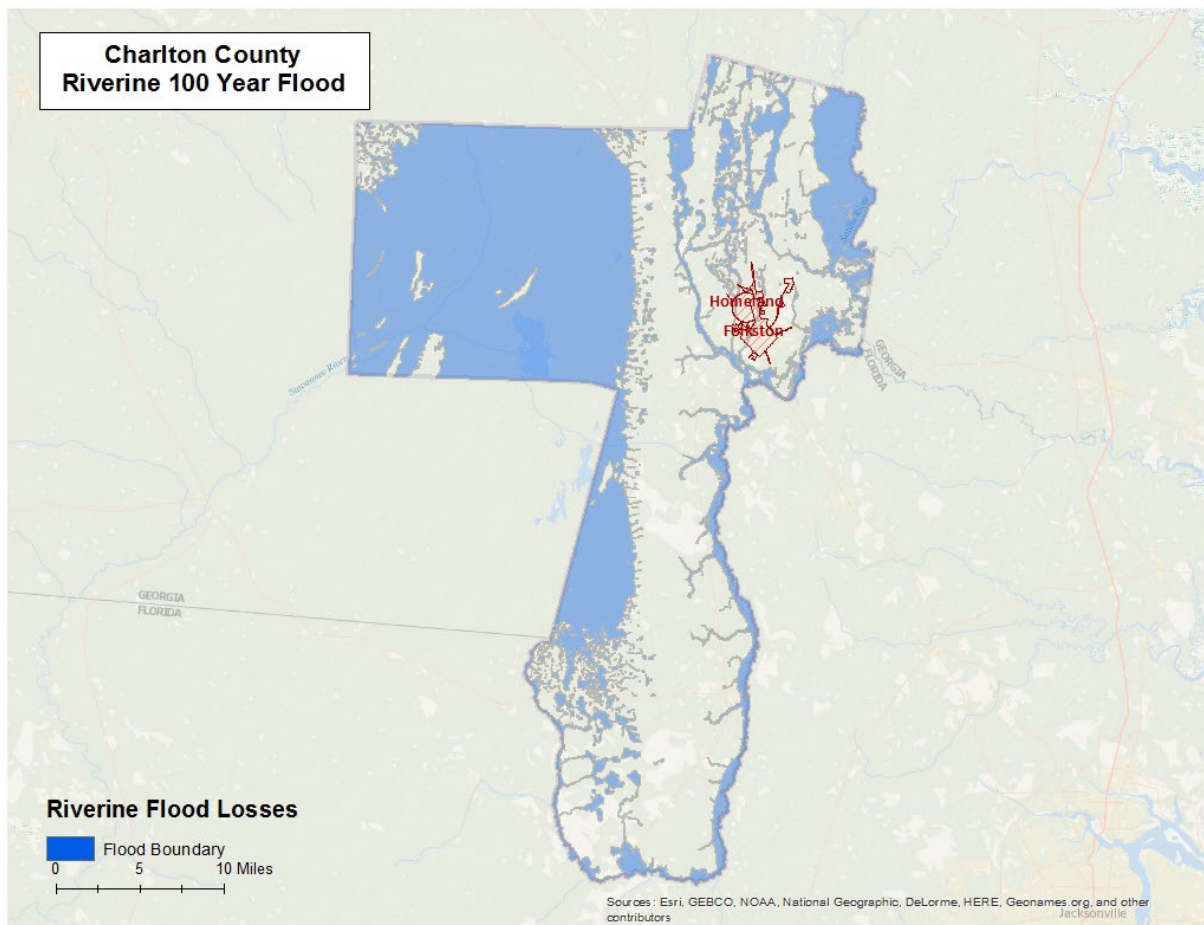


Figure 7: Riverine 1% Flood Inundation

### Riverine 1% Flood Building Damages

Buildings in Charlton County are vulnerable to flooding from events equivalent to the 1% riverine flood. The economic and social impacts from a flood of this magnitude can be significant. Table 9 provides a summary of the potential flood-related building damage in Charlton County by jurisdiction that might be experienced from the 1% flood. Figure 8 maps the potential loss ratios of total building exposure to losses sustained to buildings from the 1% flood by 2010 census block and Figure 9 illustrates the relationship of building locations to the 1% flood inundation boundary.

Table 9: Charlton County Riverine 1% Building Losses

Occupancy Classification	Total Buildings	Total Buildings Damaged	Total Building Exposure	Total Losses to Buildings	Loss Ratio of Exposed to Damaged
<b>Folkston</b>					
Residential	814	1	\$ 102,123,204	\$ 34,015	0.03%
Industrial	55	1	\$ 102,624,393	\$ 528	0.00%
Commercial	164	1	\$ 85,451,963	\$ 483	0.00%
<b>Homeland</b>					
Residential	385	2	\$ 27,225,940	\$ 18,569	0.07%
<b>Unincorporated</b>					
Residential	3,447	93	\$ 311,151,039	\$ 1,854,356	0.60%
<b>County Total</b>					
Total	4,865	98	628,576,539	1,907,951	

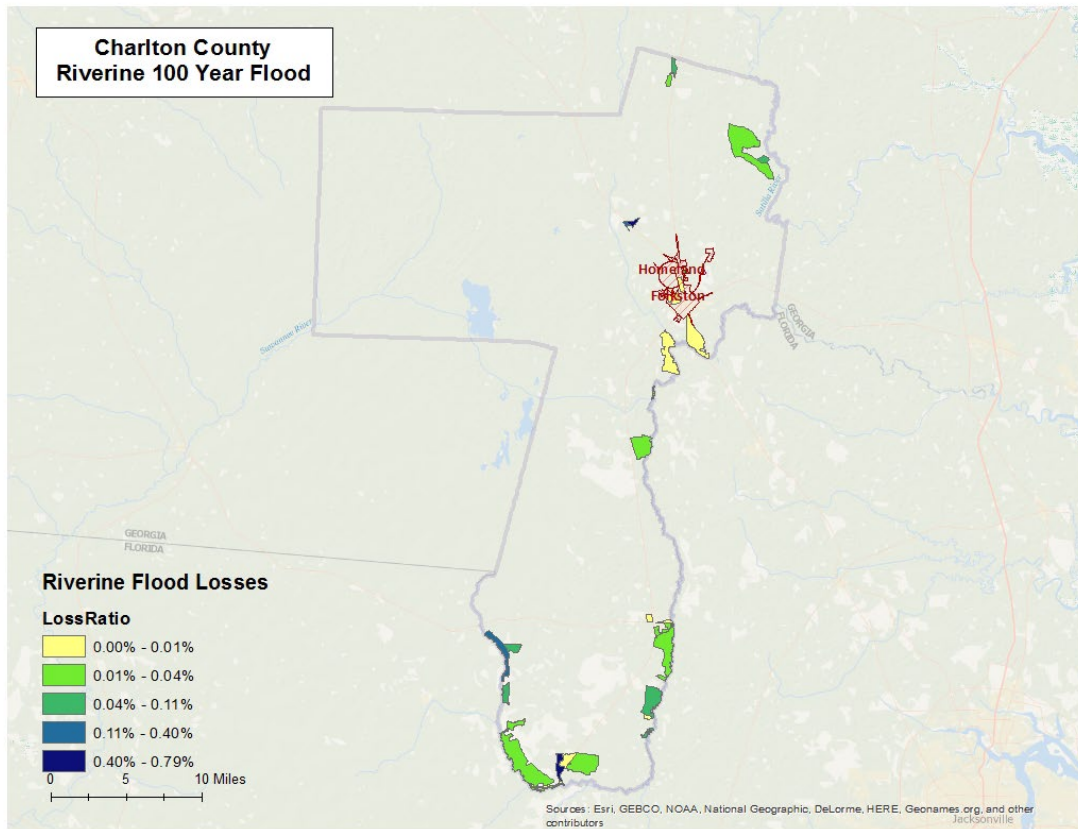


Figure 8: Potential UDF Loss Ratios from the 1% Riverine Flood

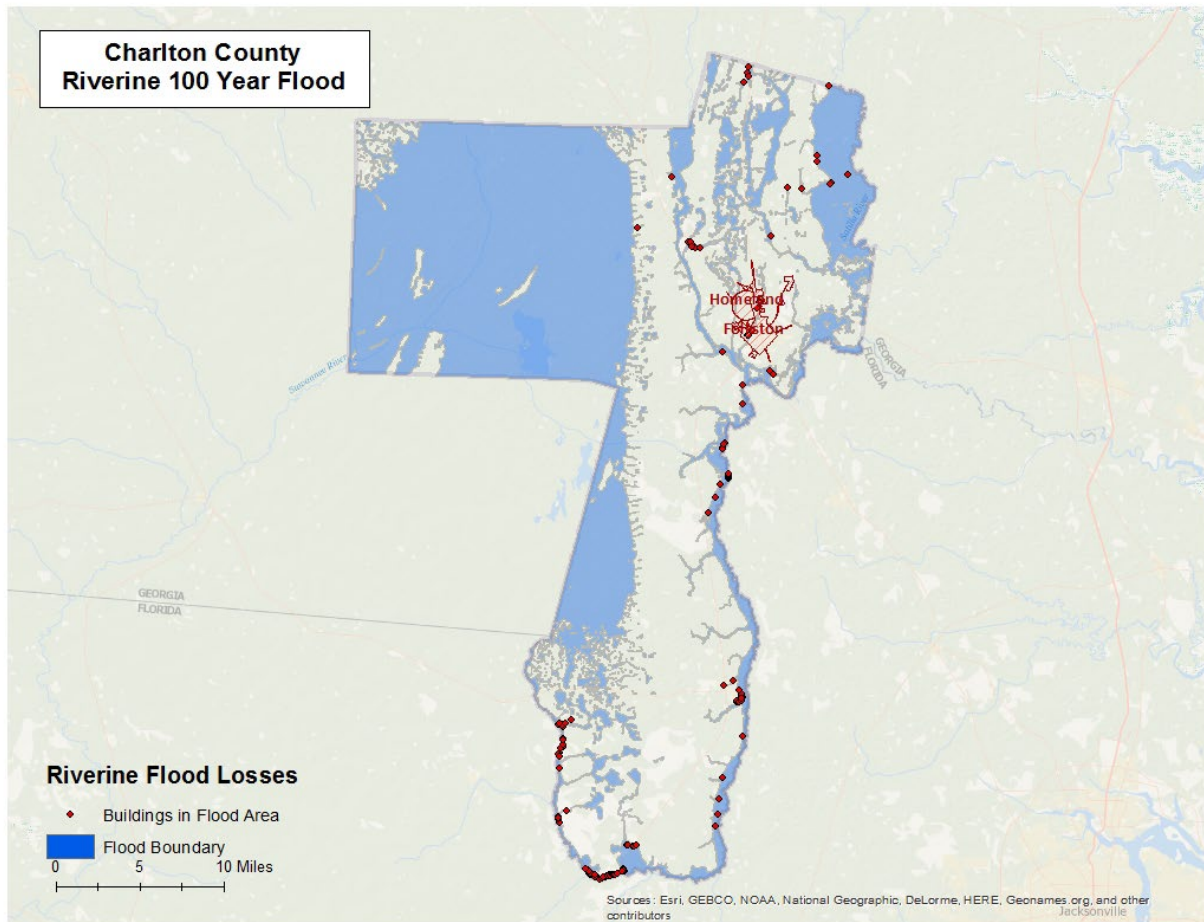


Figure 9: Damaged Buildings in 1% Riverine Flood

#### Riverine 1% Flood Essential Facility Losses

An essential facility may encounter many of the same impacts as other buildings within the flood boundary. These impacts can include structural failure, extensive water damage to the facility and loss of facility functionality (e.g. a damaged police station will no longer be able to serve the community). The analysis has identified that were 1 Essential Facilities subject to damage in the Charlton County riverine 1% probability floodplain.

Table 10: Expected Damage to Essential Facilities in 1% Riverine Flood

Classification	Total	Moderate	Substantial	Loss of Use
Fire Station	8	0	0	0
Hospitals	3	0	0	0
Police Stations	4	0	0	0
Schools	6	1	0	1
EOCs	1	0	0	0

### Riverine 1% Flood Shelter Requirements

Hazus-MH estimates that the number of households that are expected to be displaced from their homes due to riverine flooding and the associated potential evacuation. The model estimates 332 households might be displaced due to the flood. Displacement includes households evacuated within or very near to the inundated area. Displaced households represent 997 individuals, of which 473 may require short term publicly provided shelter. The results are mapped in Figure 10. These numbers may be overestimated for two reasons: elevated housing not taken into account and parcel centroids (not aligned exactly with actual structures).

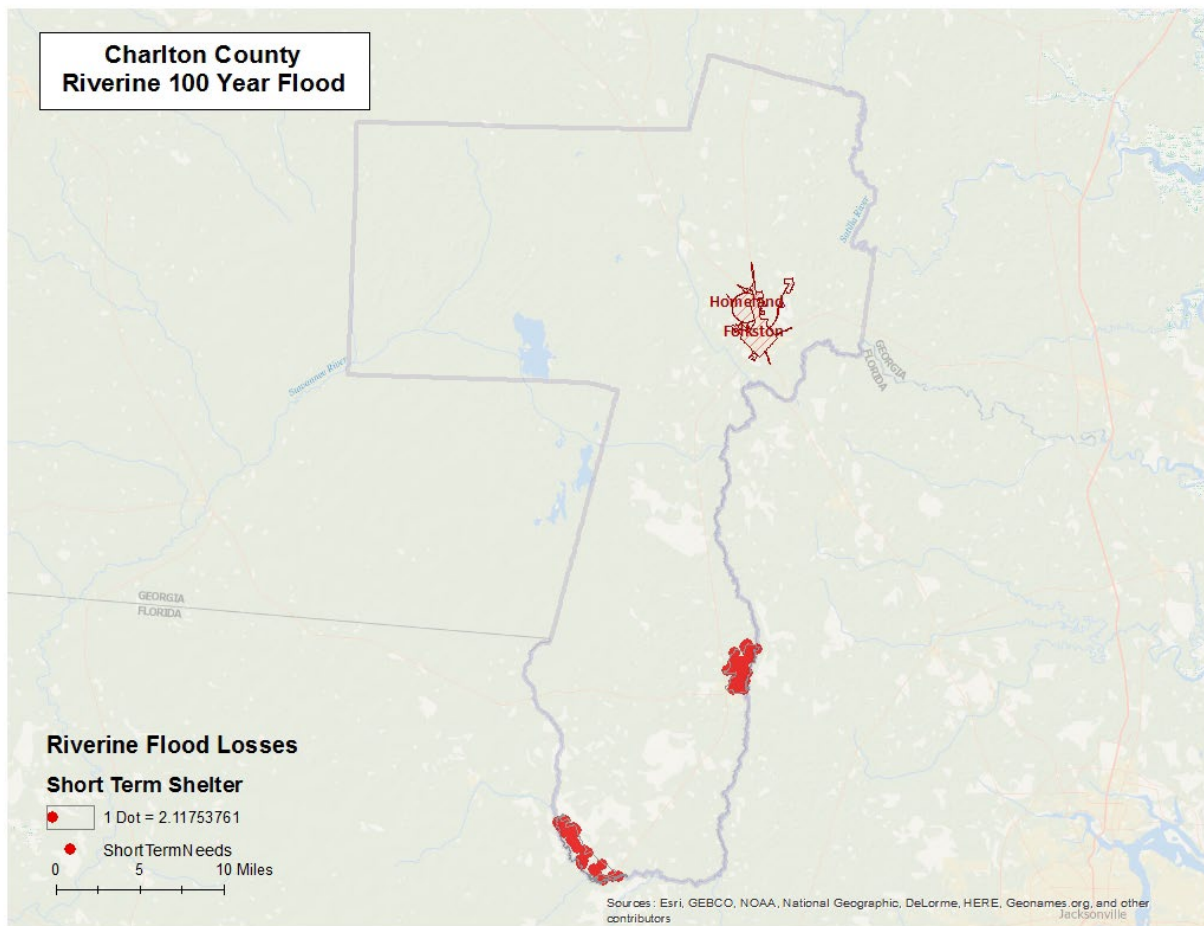


Figure 10: Estimated Flood Shelter Requirements in 1% Riverine Flood



### Riverine 1% Flood Debris

Hazus-MH estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories:

- Finishes (dry wall, insulation, etc.)
- Structural (wood, brick, etc.)
- Foundations (concrete slab, concrete block, rebar, etc.)

Different types of material handling equipment will be required for each category. Debris definitions applied in Hazus-MH are unique to the Hazus-MH model and so do not necessarily conform to other definitions that may be employed in other models or guidelines.

The analysis estimates that an approximate total of 3,925 tons of debris might be generated:

1) Finishes – 1,343 tons; 2) Structural - 908 tons; and 3) Foundations- 1,674 tons. The results are mapped in Figure 11.

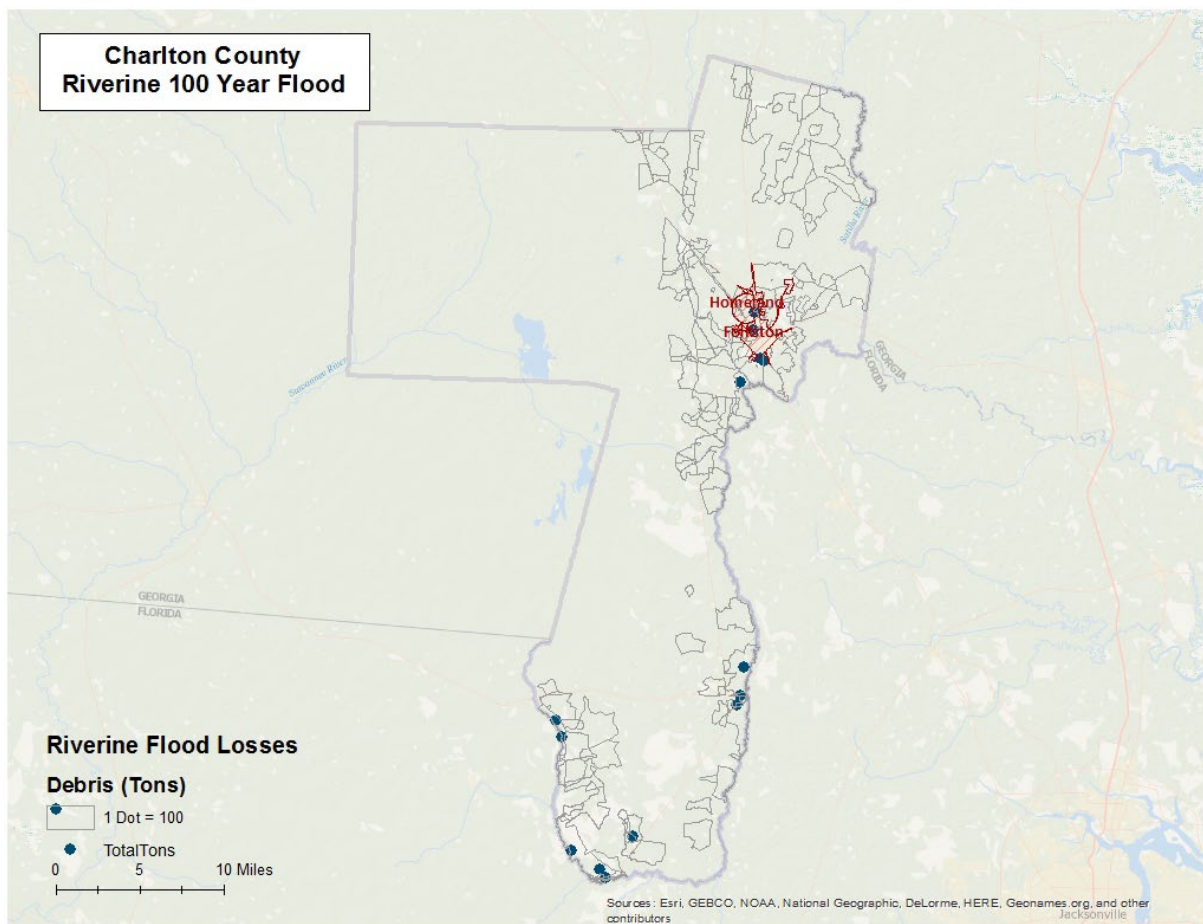


Figure 11: Flood Debris Weight (Tons) in 1% Riverine Flood

## **Tornado Risk Assessment**

### Hazard Definition

Tornadoes pose a great risk to the state of Georgia and its citizens. Tornadoes can occur at any time during the day or night. They can also happen during any month of the year. The unpredictability of tornadoes makes them one of Georgia's most dangerous hazards. Their extreme winds are violently destructive when they touch down in the region's developed and populated areas. Current estimates place the maximum velocity at about 300 miles per hour, but higher and lower values can occur. A wind velocity of 200 miles per hour will result in a wind pressure of 102.4 pounds per square foot of surface area—a load that exceeds the tolerance limits of most buildings. Considering these factors, it is easy to understand why tornadoes can be so devastating for the communities they hit.

Tornadoes are defined as violently-rotating columns of air extending from thunderstorms and cyclonic events. Funnel clouds are rotating columns of air not in contact with the ground; however, the violently-rotating column of air can reach the ground very quickly and become a tornado. If the funnel cloud picks up and blows debris, it has reached the ground and is a tornado.

Tornadoes are classified according to the Fujita tornado intensity scale. Originally introduced in 1971, the scale was modified in 2006 to better define the damage and estimated wind scale. The Enhanced Fujita Scale ranges from low intensity EF0 with effective wind speeds of 65 to 85 miles per hour, to EF5 tornadoes with effective wind speeds of over 200 miles per hour. The Enhanced Fujita intensity scale is included in Table 11.

Table 11: Enhanced Fujita Tornado Rating

Fujita Number	Estimated Wind Speed	Path Width	Path Length	Description of Destruction
EF0 <i>Gale</i>	65-85 mph	6-17 yards	0.3-0.9 miles	Light damage, some damage to chimneys, branches broken, sign boards damaged, shallow-rooted trees blown over.
EF1 <i>Moderate</i>	86-110 mph	18-55 yards	1.0-3.1 miles	Moderate damage, roof surfaces peeled off, mobile homes pushed off foundations, attached garages damaged.
EF2 <i>Significant</i>	111-135 mph	56-175 yards	3.2-9.9 miles	Considerable damage, entire roofs torn from frame houses, mobile homes demolished, boxcars pushed over, large trees snapped or uprooted.
EF3 <i>Severe</i>	136-165 mph	176-566 yards	10-31 miles	Severe damage, walls torn from well-constructed houses, trains overturned, most trees in forests uprooted, heavy cars thrown about.
EF4 <i>Devastating</i>	166-200 mph	0.3-0.9 miles	32-99 miles	Complete damage, well-constructed houses leveled, structures with weak foundations blown off for some distance, large missiles generated.
EF5 <i>Incredible</i>	Over 200 mph	1.0-3.1 miles	100-315 miles	Foundations swept clean, automobiles become missiles and thrown for 100 yards or more, steel-reinforced concrete structures badly damaged.

Source: <http://www.srh.noaa.gov>

### Hypothetical Tornado Scenario

For this report, an EF3 tornado was modeled to illustrate the potential impacts of tornadoes of this magnitude in the county. The analysis used a hypothetical path based upon an EF3 tornado event running along the predominant direction of historical tornadoes (southeast to northwest). The tornado path was placed to travel through Folkston. The selected widths were modeled after a re-creation of the Fujita-Scale guidelines based on conceptual wind speeds, path widths, and path lengths. There is no guarantee that every tornado will fit exactly into one of these categories. Table 12 depicts tornado path widths and expected damage.

Table 12: Tornado Path Widths and Damage Curves

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

Within any given tornado path there are degrees of damage. The most intense damage occurs within the center of the damage path, with decreasing amounts of damage away from the center. After the hypothetical path is digitized on a map, the process is modeled in GIS by adding buffers (damage zones) around the tornado path. Figure 12 describes the zone analysis.

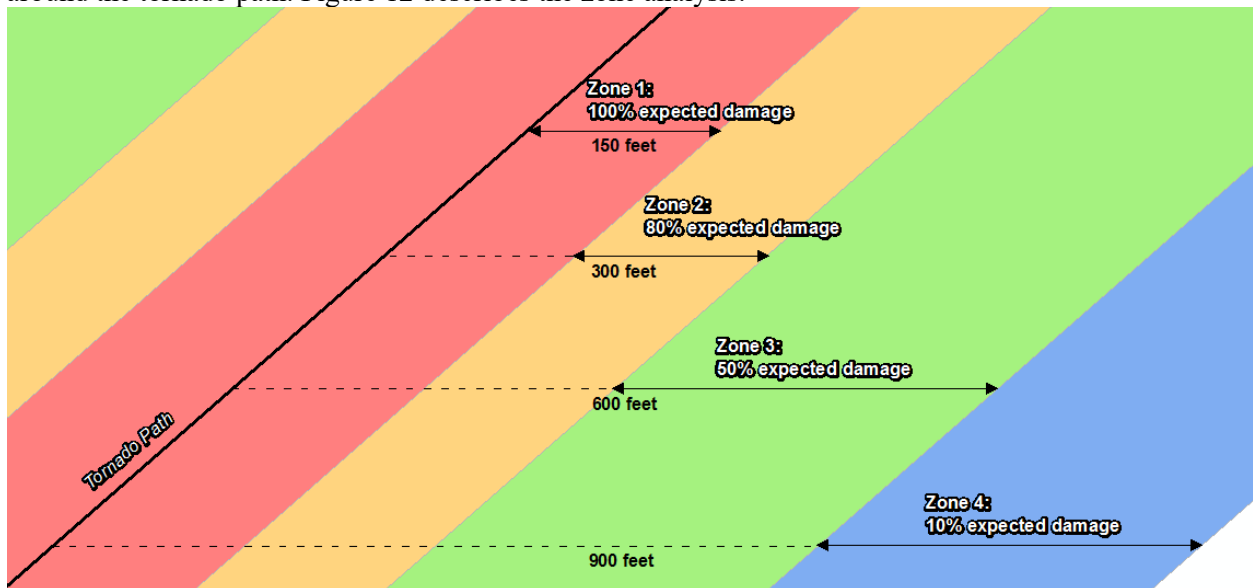


Figure 12: EF Scale Tornado Zones

An EF3 tornado has four damage zones, depicted in Table 13. Major damage is estimated within 150 feet of the tornado path. The outer buffer is 900 feet from the tornado path, within which buildings will not experience any damage. The selected hypothetical tornado path is depicted in Figure 13 and the damage curve buffer zones are shown in Figure 14.

Table 13: EF3 Tornado Zones and Damage Curves

Zone	Buffer (feet)	Damage Curve
1	0-150	80%
2	150-300	50%
3	300-600	10%
4	600-900	0%

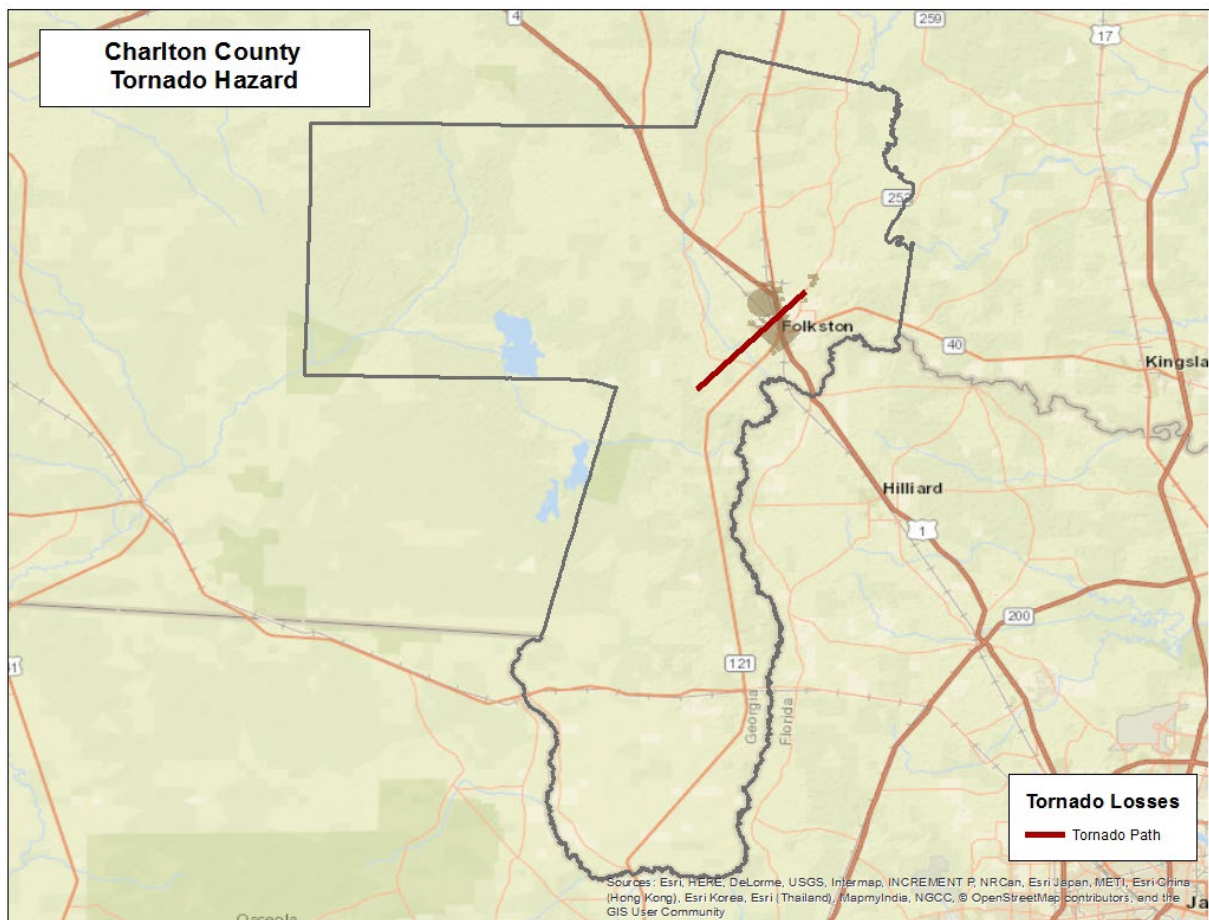


Figure 13: Hypothetical EF3 Tornado Path



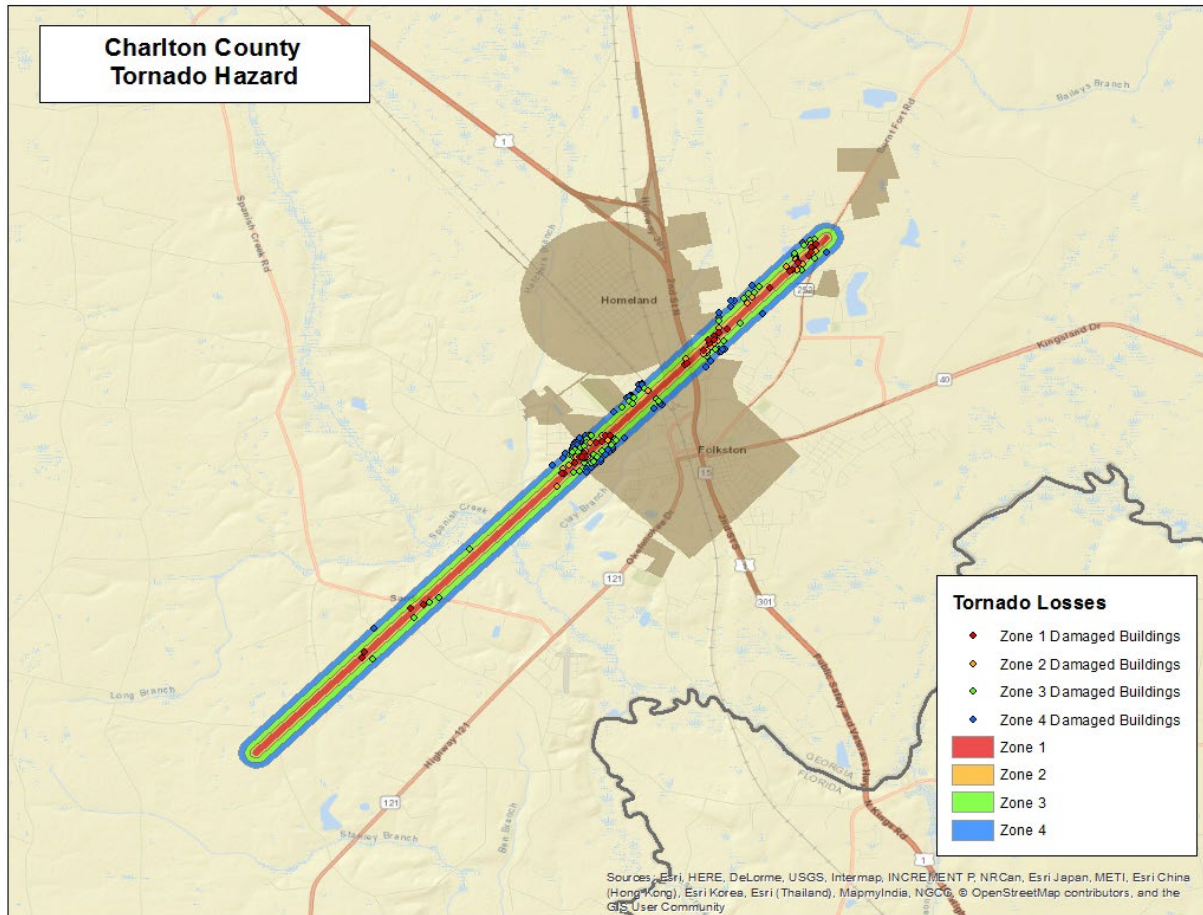


Figure 14: Modeled EF3 Tornado Damage Buffers

#### EF3 Tornado Building Damages

The analysis estimated that approximately 241 buildings could be damaged, with estimated building losses of approximately \$5.8 million. The building losses are an estimate of building replacement costs multiplied by the percentages of damage. The overlay was performed against parcels provided by Charlton County that were joined with Assessor records showing estimated property replacement costs. The Assessor records often do not distinguish parcels by occupancy class if the parcels are not taxable and thus the number of buildings and replacement costs may be underestimated. The results of the analysis are depicted in Table 14.

Table 14: Estimated Building Losses by Occupancy Type

Occupancy Classification	Buildings Damaged	Building Losses
Commerical	2	\$ 67,422
Religious	1	\$ -
Residential	238	\$ 5,742,201
<b>Total</b>	<b>241</b>	<b>\$ 5,809,623</b>

### EF3 Tornado Essential Facility Damage

There were no essential facilities located within 900 feet of the modeled tornado path.

The location of the damaged Essential Facilities is mapped in Figure 15.

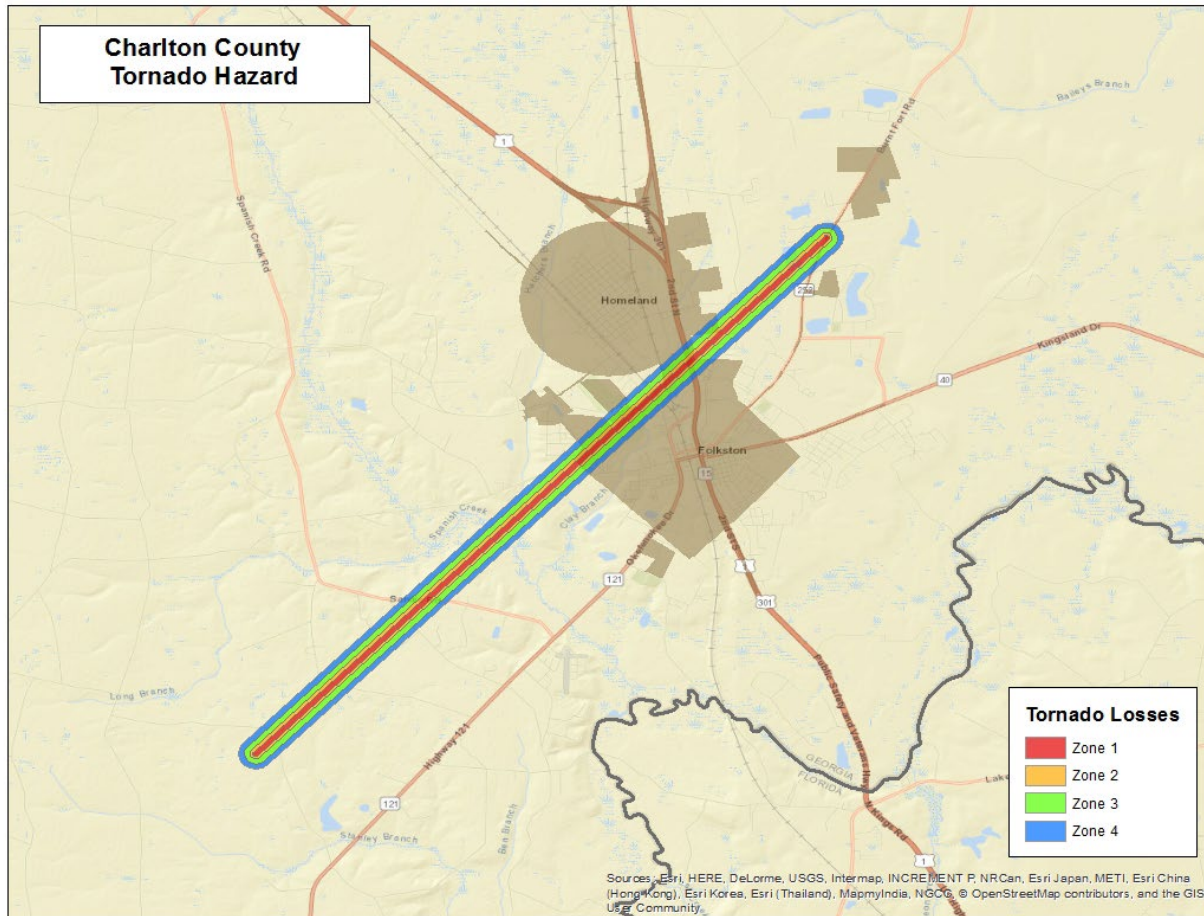


Figure 15: Modeled Essential Facility Damage in Charlton County

## **Exceptions Report**

Hazus Version 2.2 SP1 was used to perform the loss estimates for Charlton County, Georgia. Changes made to the default Hazus-MH inventory and the modeling parameters used to setup the hazard scenarios are described within this document.

Reported losses reflect the updated data sets. Steps, algorithms and assumptions used during the data update process are documented in the project workflow developed by the Polis Center.

### **Statewide Inventory Changes**

The default Hazus-MH Essential Facility inventory was updated for the entire state prior to running the hazard scenarios for Charlton County.

Statewide facility data were supplied by GEMA through the GMIS in June 2015. The Regional Commission updated the essential facilities in 2016. The updated data was used for this analysis. Table 15 summarizes the difference between the original Hazus-MH default data and the updated data for Charlton County.

Table 15: Essential Facility Updates

Occupancy Classification	Default		Updated	
	Replacement Cost	Default Count	Replacement Cost	Updated Count
Care	\$ 24,583,000	7	\$ 11,595,000	3
EOC	\$ 880,000	1	\$ 880,000	1
Fire	\$ 8,686,000	10	\$ 5,775,000	8
Police	\$ 15,150,000	9	\$ 5,197,000	4
School	\$ 61,761,000	9	\$ 574,542,000	6

### **County Inventory Changes**

The GBS records for Charlton County were replaced with data derived from parcel and property assessment data obtained from Charlton County. The county provided property assessment data was current as of December 2021 and the parcel data current as of December 2021.

### **General Building Stock Updates**

The parcel boundaries and assessor records were obtained from Charlton County. Records without improvements were deleted. The parcel boundaries were converted to parcel points located in the centroids of each parcel boundary unless there were building footprints. Each parcel point was linked to an assessor record based upon matching parcel numbers. The generated Building Inventory represents the approximate locations (within a parcel) of building exposure. The Building Inventory was aggregated by Census Block and imported into Hazus-MH using the Hazus-MH Comprehensive Data Management System (CDMS). Both the 2010 Census Tract and Census Block tables were updated.

The match between parcel records and assessor records was based upon a common Parcel ID. For this type of project, unless the hit rate is better than 85%, the records are not used to update the default aggregate inventory in Hazus-MH. The Parcel-Assessor hit rate for Charlton County was 99.1%.

Adjustments were made to records when primary fields did not have a value. In these cases, default values were applied to the fields. Table 16 outlines the adjustments made to Charlton County records.

Table 16: Building Inventory Default Adjustment Rates

Type of Adjustment	Building Count	Percentage
Area Unknown	559	11%
Construction Unknown	554	11%
Condition Unknown	265	5%
Foundation Unknown	539	11%
Year Built Unknown	245	5%

Portions of the CAMA values were either missing (<Null> or '0'), did not match CAMA domains or were unusable ('Unknown', 'Other', 'Pending'). These were replaced with 'best available' values. Missing YearBuilt values were populated from average values per Census Block. Missing Condition, Construction and Foundation values were populated with the highest-frequency CAMA values per Occupancy Class. Missing Area values were populated with the average CAMA values per Occupancy Class.

The resulting Building Inventory was used to populate the Hazus-MH General Building Stock and User Defined Facility tables. The updated General Building Stock was used to calculate flood and tornado losses. Changes to the building counts and exposure that were modeled in Charlton County are sorted by General Occupancy in Table 1 at the beginning of this report. If replacements cost or building value were not present for a given record in the Assessor data, replacement costs were calculated from the Building Area (sqft) multiplied by the Hazus-MH RS Means (\$/sqft) values for each Occupancy Class.

Differences between the default and updated data are due to various factors. The Assessor records often do not distinguish parcels by occupancy class when the parcels are not taxable; therefore, the total number of buildings and the building replacement costs for government, religious/non-profit, and education may be underestimated.

### User Defined Facilities

Local parcel and CAMA data were used to develop points representing the locations of buildings in the county, referred to as User Defined Facilities (UDF) in the Hazus model. For the flood model, this includes only buildings located in the 1% Annual Chance Riverine Flood Area. Table 17 identifies the total building count & exposure for the county and the total building count & exposure for buildings located in the 1% Annual Chance Riverine Flood Area.

Table 17: Building Count and Exposure for County and Riverine Flood Area

Feature	Counts	Exposure
Total buildings in the County	5,015	\$759,976,718
Total buildings inside the 1% Annual Chance Riverine Flood Area	175	\$16,318,760

It should be noted that UDFs are only used in the flood modeling process, due to the fact that it is important to identify if individual buildings are located within the flood area to obtain the depth of flood.

### Assumptions

- Flood analysis was performed on UDF. The point locations are parcel centroid accuracy.
- The analysis is restricted to the county boundary within the flood area. Events that occur near the county boundary do not contain loss estimates from adjacent counties.

The following attributes were defaulted or calculated:

First Floor Height was set from Foundation Type