

# **Appendix A**

**GEMA Worksheet #3a**  
**Jurisdiction: Bacon**  
**Hazard: Flood**

**Inventory of Assets**

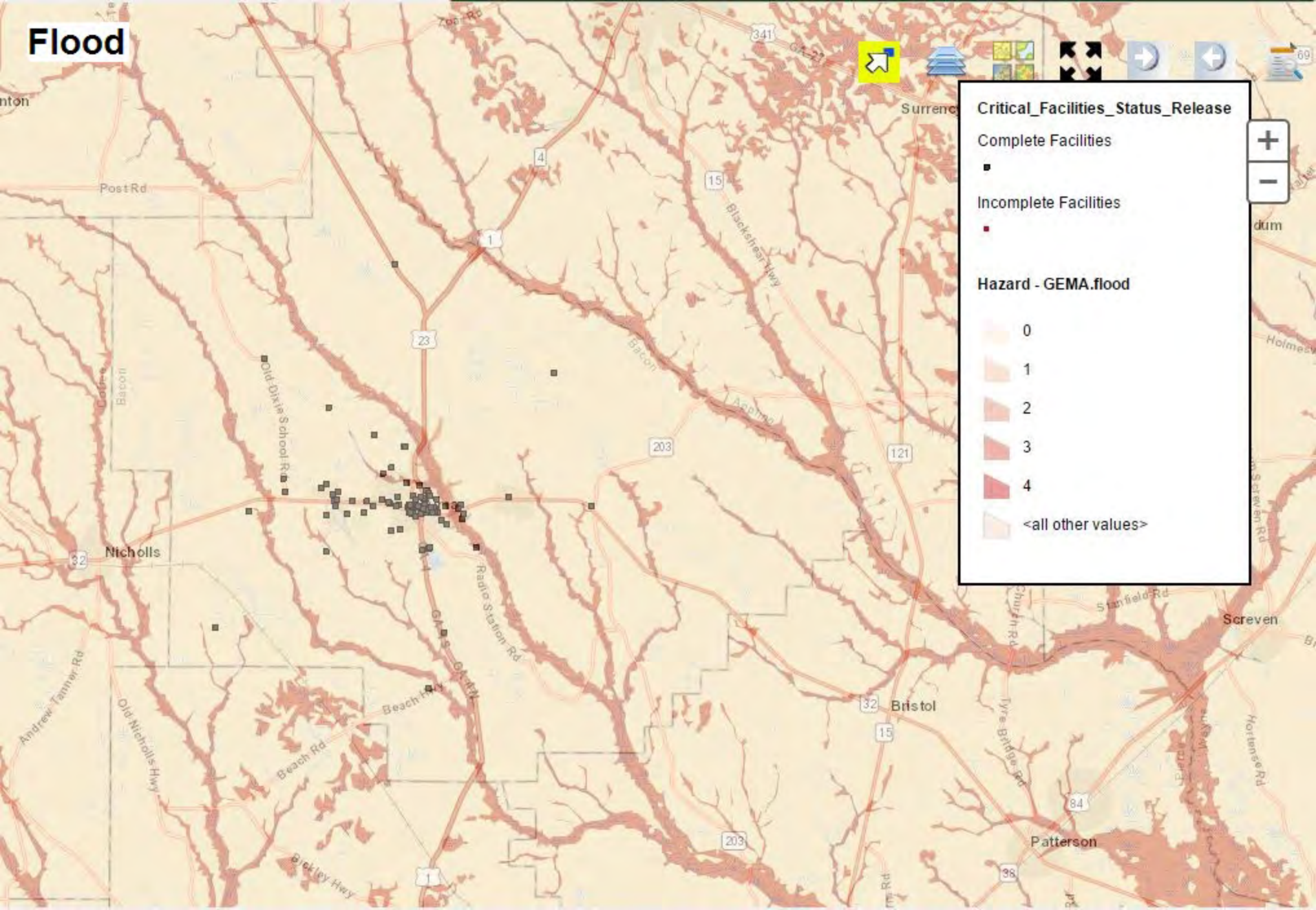
**Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.**

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	3,931	271	6.894%	207,940,361	21,348,263	10.267%	11,196	772	6.894%
Commercial	317	2	0.631%	43,241,481	684,845	1.584%	0	0	0%
Industrial	26	7	26.923%	14,184,654	4,589,857	32.358%	0	0	0%
Agricultural	674	171	25.371%	96,022,096	31,722,325	33.036%	0	0	0%
Religious/ Non-profit	129	5	3.876%	34,496,268	648,351	1.879%	0	0	0%
Government	102	11	10.784%	53,165,359	2,891,258	5.438%	0	0	0%
Education	5	0	0.000%	6,594,648	0	0.000%	0	0	0%
Utilities	9	1	11.111%	35,426,279	11,493,063	32.442%	0	0	0%
<b>Total</b>	<b>5,193</b>	<b>468</b>		<b>491,071,146</b>	<b>73,377,962</b>		<b>11,196</b>	<b>772</b>	

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

# Flood



## Critical\_Facilities\_Status\_Release

Complete Facilities



Incomplete Facilities



## Hazard - GEMA.flood

0

1

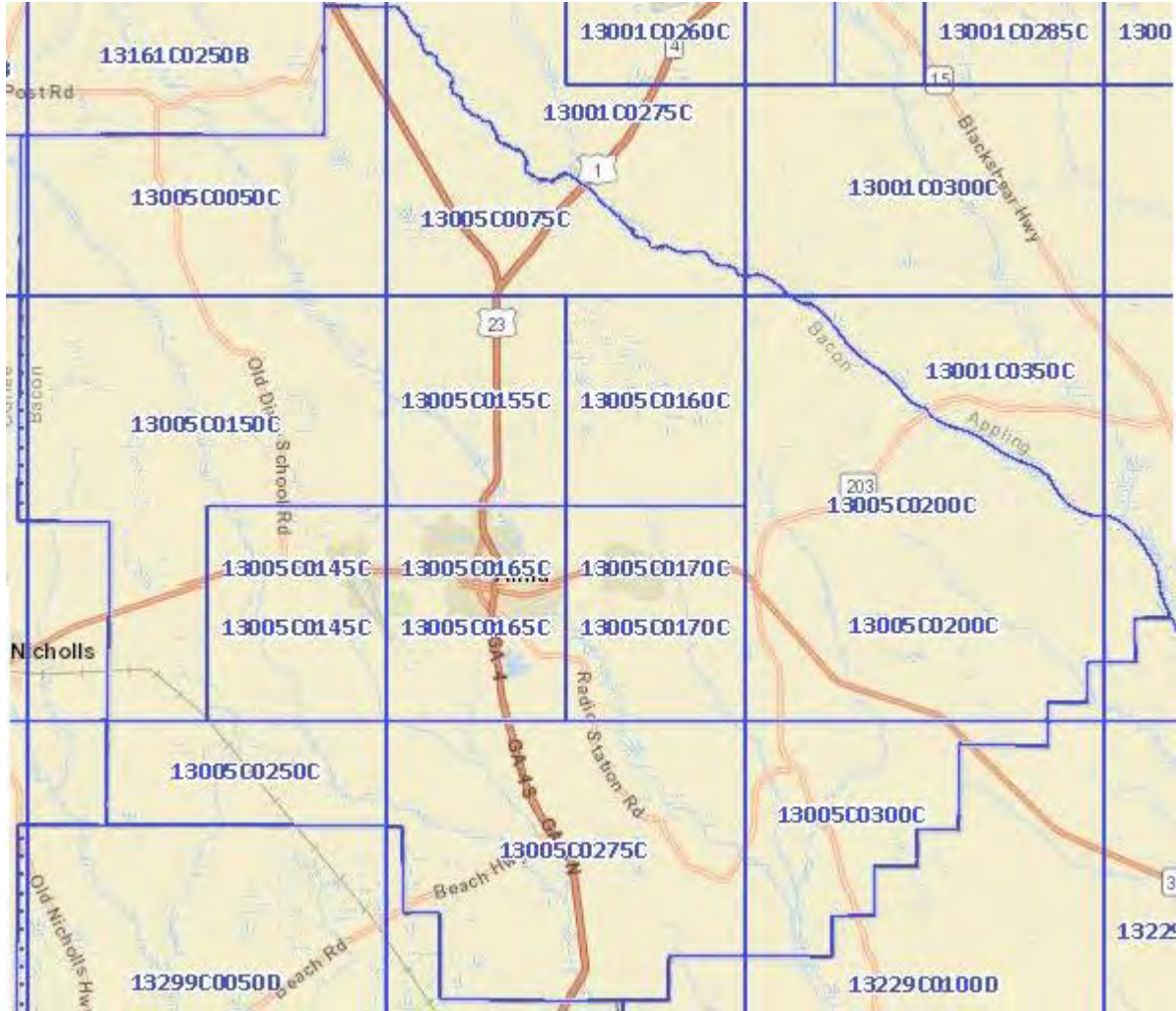
2

3

4

<all other values>

# Flood Insurance Rate Maps for Bacon County and the City of Alma.



Data Source: FEMA website

## GEMA Worksheet #3a

## Inventory of Assets

Jurisdiction: Bacon

Hazard: 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.**

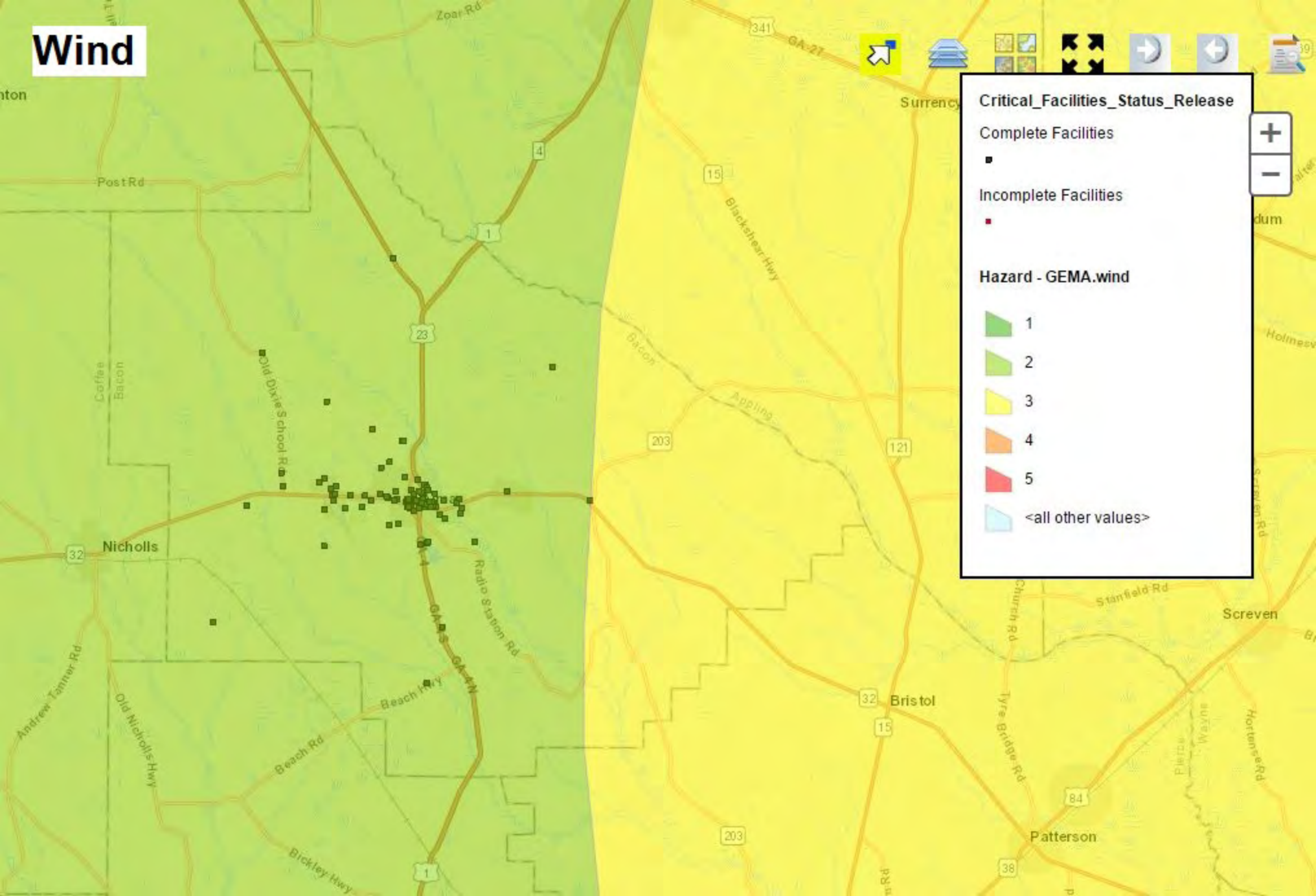
Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community of State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	3,931	3,931	100.000%	207,940,361	207,940,361	100.000%	11,196	11,196	100%
Commercial	317	317	100.000%	43,241,481	43,241,481	100.000%	0	0	0%
Industrial	26	26	100.000%	14,184,654	14,184,654	100.000%	0	0	0%
Agricultural	674	674	100.000%	96,022,096	96,022,096	100.000%	0	0	0%
Religious/ Non- profit	129	129	100.000%	34,496,268	34,496,268	100.000%	0	0	0%
Government	102	102	100.000%	53,165,359	53,165,359	100.000%	0	0	0%
Education	5	5	100.000%	6,594,648	6,594,648	100.000%	0	0	0%
Utilities	9	9	100.000%	35,426,279	35,426,279	100.000%	0	0	0%
<b>Total</b>	<b>5,193</b>	<b>5,193</b>		<b>491,071,146</b>	<b>491,071,146</b>		<b>11,196</b>	<b>11,196</b>	

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



# Wind

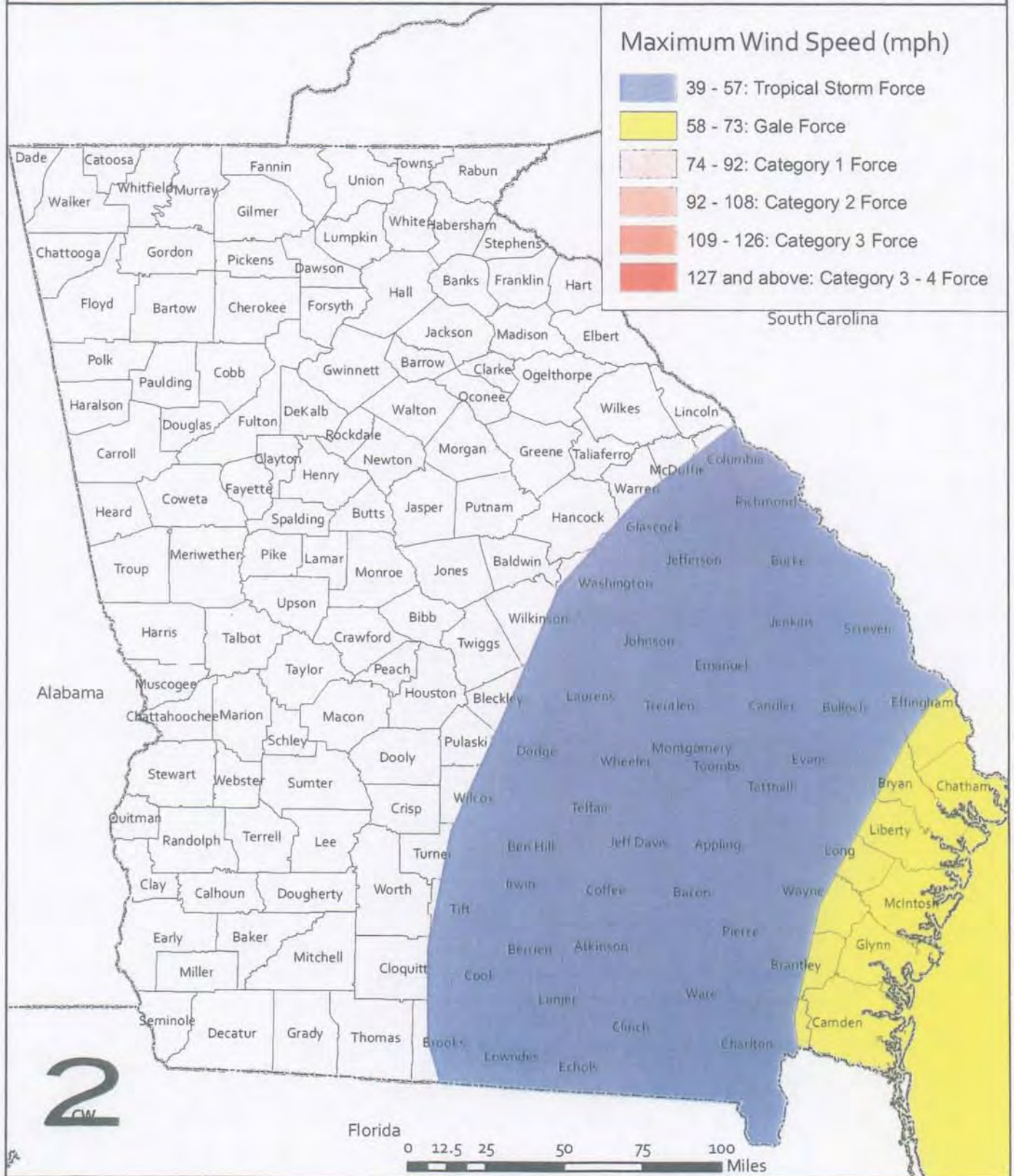




# Maximum Envelope of Wind

## Georgia Coast Landfall - Category 1 Hurricane

### Sustained Winds of 75 mph - Forward Speed of 9 mph



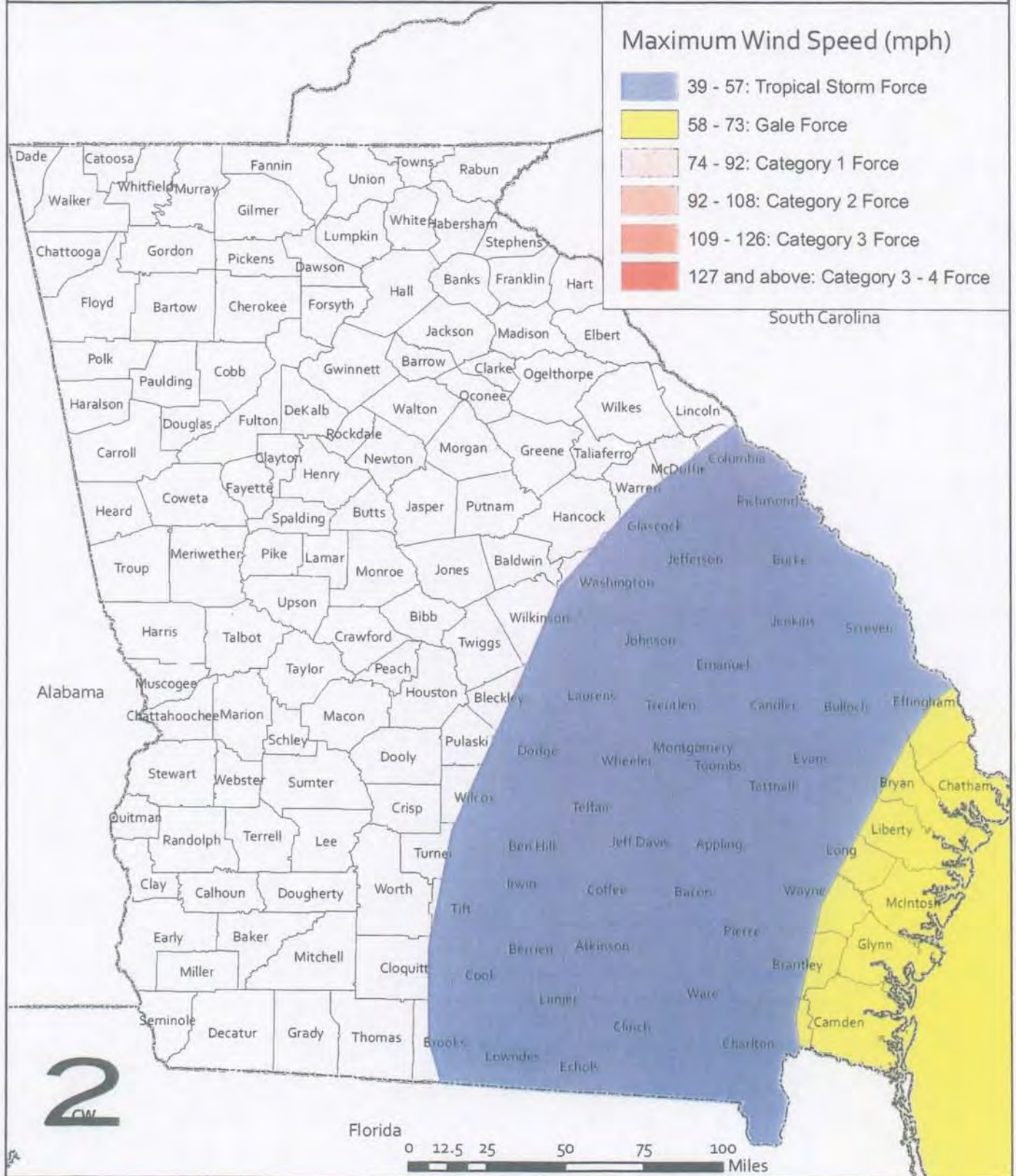




# Maximum Envelope of Wind

## Georgia Coast Landfall - Category 1 Hurricane

### Sustained Winds of 75 mph - Forward Speed of 9 mph





# GEMA Worksheet #3a

# Inventory of Assets

**Jurisdiction: Bacon**

**Hazard: Wildfire**

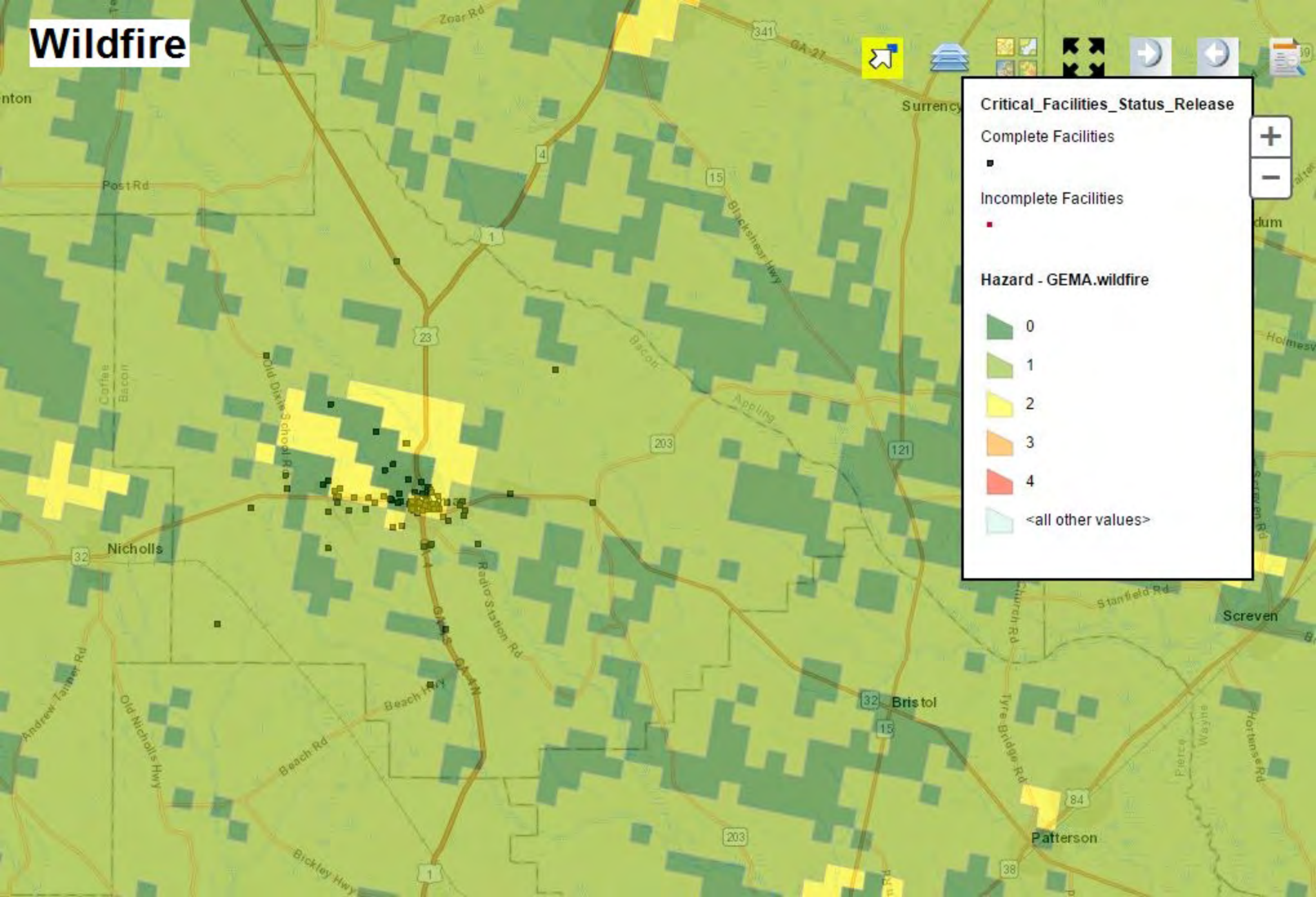
**Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.**

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	3,931	2,948	75.000%	207,940,361	155,955,271	75.000%	11,196	8,397	75%
Commercial	317	238	75.000%	43,241,481	32,431,111	75.000%	0	0	0%
Industrial	26	20	75.000%	14,184,654	10,638,491	75.000%	0	0	0%
Agricultural	674	506	75.000%	96,022,096	72,016,572	75.000%	0	0	0%
Religious/ Non-profit	129	97	75.000%	34,496,268	25,872,201	75.000%	0	0	0%
Government	102	77	75.000%	53,165,359	39,874,019	75.000%	0	0	0%
Education	5	4	75.000%	6,594,648	4,945,986	75.000%	0	0	0%
Utilities	9	7	75.000%	35,426,279	26,569,709	75.000%	0	0	0%
<b>Total</b>	<b>5,193</b>	<b>3,895</b>		<b>491,071,146</b>	<b>368,303,360</b>		<b>11,196</b>	<b>8,397</b>	

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

# Wildfire



**Critical\_Facilities\_Status\_Release**

Complete Facilities  
■

Incomplete Facilities  
■

**Hazard - GEMA.wildfire**

0  
1  
2  
3  
4  
<all other values>

# GEMA Worksheet #3a

# Inventory of Assets

Jurisdiction: Bacon

Hazard: 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.**

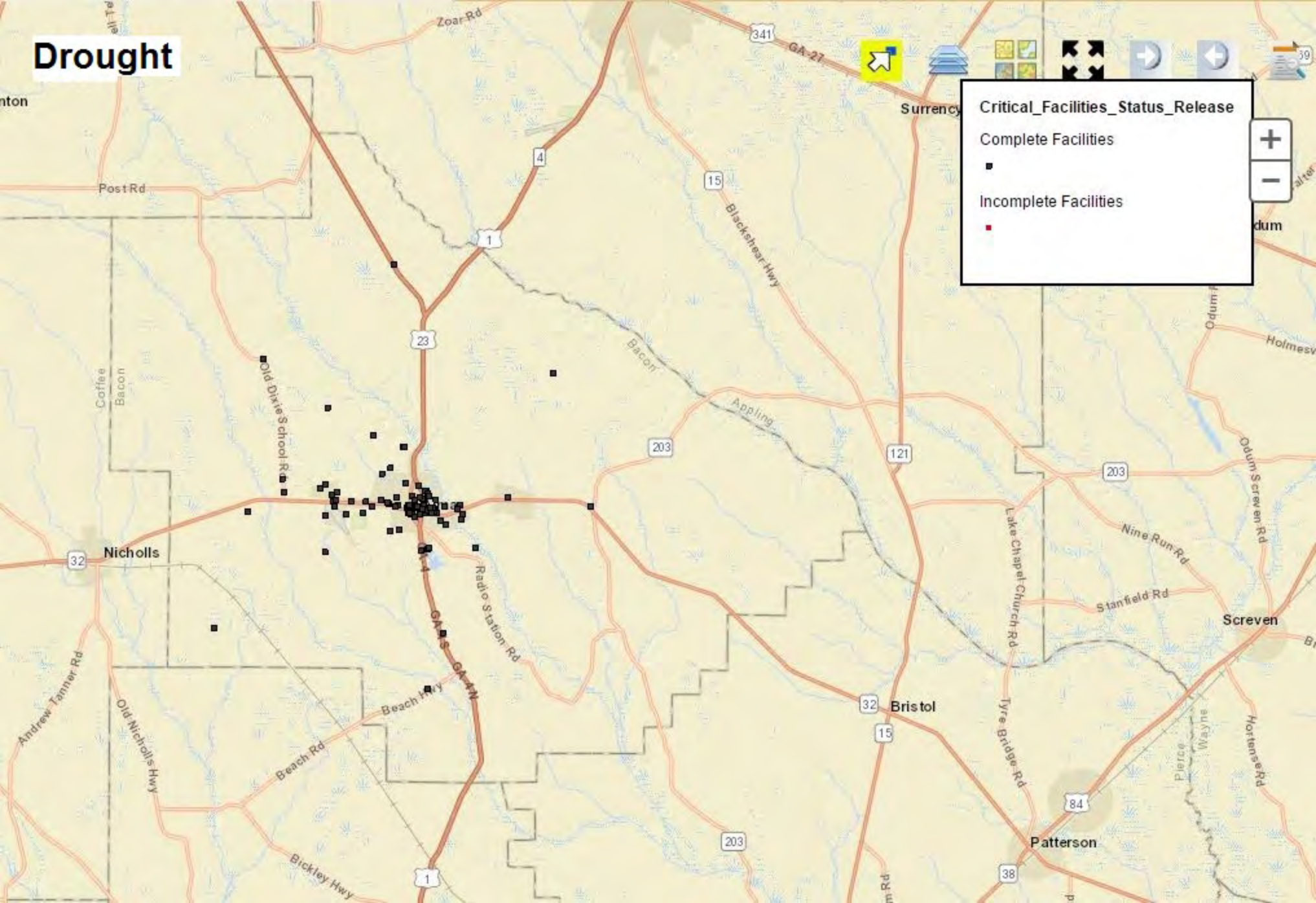
Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community of State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	3,931	3,931	100.000%	207,940,361	207,940,361	100.000%	11,196	11,196	100%
Commercial	317	317	100.000%	43,241,481	43,241,481	100.000%	0	0	0%
Industrial	26	26	100.000%	14,184,654	14,184,654	100.000%	0	0	0%
Agricultural	674	674	100.000%	96,022,096	96,022,096	100.000%	0	0	0%
Religious/ Non-profit	129	129	100.000%	34,496,268	34,496,268	100.000%	0	0	0%
Government	102	102	100.000%	53,165,359	53,165,359	100.000%	0	0	0%
Education	5	5	100.000%	6,594,648	6,594,648	100.000%	0	0	0%
Utilities	9	9	100.000%	35,426,279	35,426,279	100.000%	0	0	0%
<b>Total</b>	<b>5,193</b>	<b>5,193</b>		<b>491,071,146</b>	<b>491,071,146</b>		<b>11,196</b>	<b>11,196</b>	

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



# Drought



## Critical\_Facilities\_Status\_Release

Complete Facilities



Incomplete Facilities



# United States Drought Monitor

## Map Service

### Selected Map Information

Change Selection

#### Map Link

This is the link to your selected map.

[http://droughtmonitor.unl.edu/data/jpg/20160726/20160726\\_ga\\_trd.jpg](http://droughtmonitor.unl.edu/data/jpg/20160726/20160726_ga_trd.jpg)

#### HTML Code

Copy the following code into the HTML code of your page to display an image of this map.

```

```

Copy the following code into the HTML code of your page to link to this map.

```
<a href="http://droughtmonitor.unl.edu/data/jpg/20160726/20160726_ga_trd.jpg" >[insert your text here]</a>
```

The map will look like this example below:

**U.S. Drought Monitor**  
**Georgia**

**July 26, 2016**  
(Released Thursday, Jul. 28, 2016)  
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D1	D1-D2	D2-D3	D3-D4	D4
Current	34.09	65.11	37.74	20.47	10.59	0.00
Last Week 7/19/16	34.96	65.04	37.55	20.48	9.65	0.00
3 Months Ago 4/26/16	74.21	25.79	7.02	0.00	0.00	0.00
Start of Calendar Year 1/1/16	87.26	12.64	0.00	0.00	0.00	0.00
Start of Water Year 6/1/15	63.46	36.54	17.71	1.20	0.00	0.00
One Year Ago 7/26/15	41.84	58.16	22.88	1.35	0.00	0.00

**Intensity**

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

**Author:**  
Brad Rippey  
U.S. Department of Agriculture

<http://droughtmonitor.unl.edu/>

# GEMA Worksheet #3a

# Inventory of Assets

**Jurisdiction: Bacon**

**Hazard: 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.**

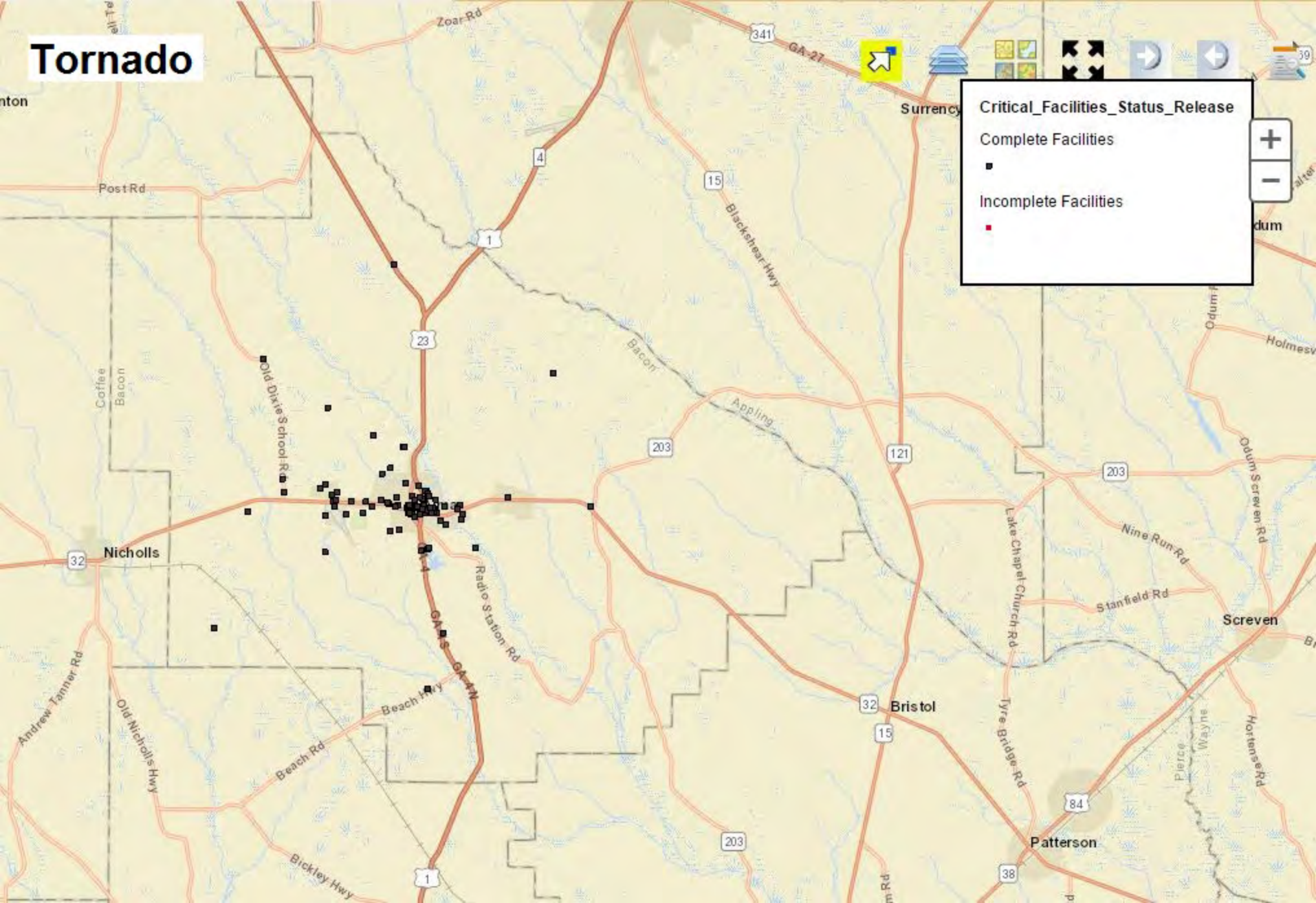
Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community of State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	3,931	3,931	100.000%	207,940,361	207,940,361	100.000%	11,196	11,196	100%
Commercial	317	317	100.000%	43,241,481	43,241,481	100.000%	0	0	0%
Industrial	26	26	100.000%	14,184,654	14,184,654	100.000%	0	0	0%
Agricultural	674	674	100.000%	96,022,096	96,022,096	100.000%	0	0	0%
Religious/ Non-profit	129	129	100.000%	34,496,268	34,496,268	100.000%	0	0	0%
Government	102	102	100.000%	53,165,359	53,165,359	100.000%	0	0	0%
Education	5	5	100.000%	6,594,648	6,594,648	100.000%	0	0	0%
Utilities	9	9	100.000%	35,426,279	35,426,279	100.000%	0	0	0%
<b>Total</b>	<b>5,193</b>	<b>5,193</b>		<b>491,071,146</b>	<b>491,071,146</b>		<b>11,196</b>	<b>11,196</b>	

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



# Tornado



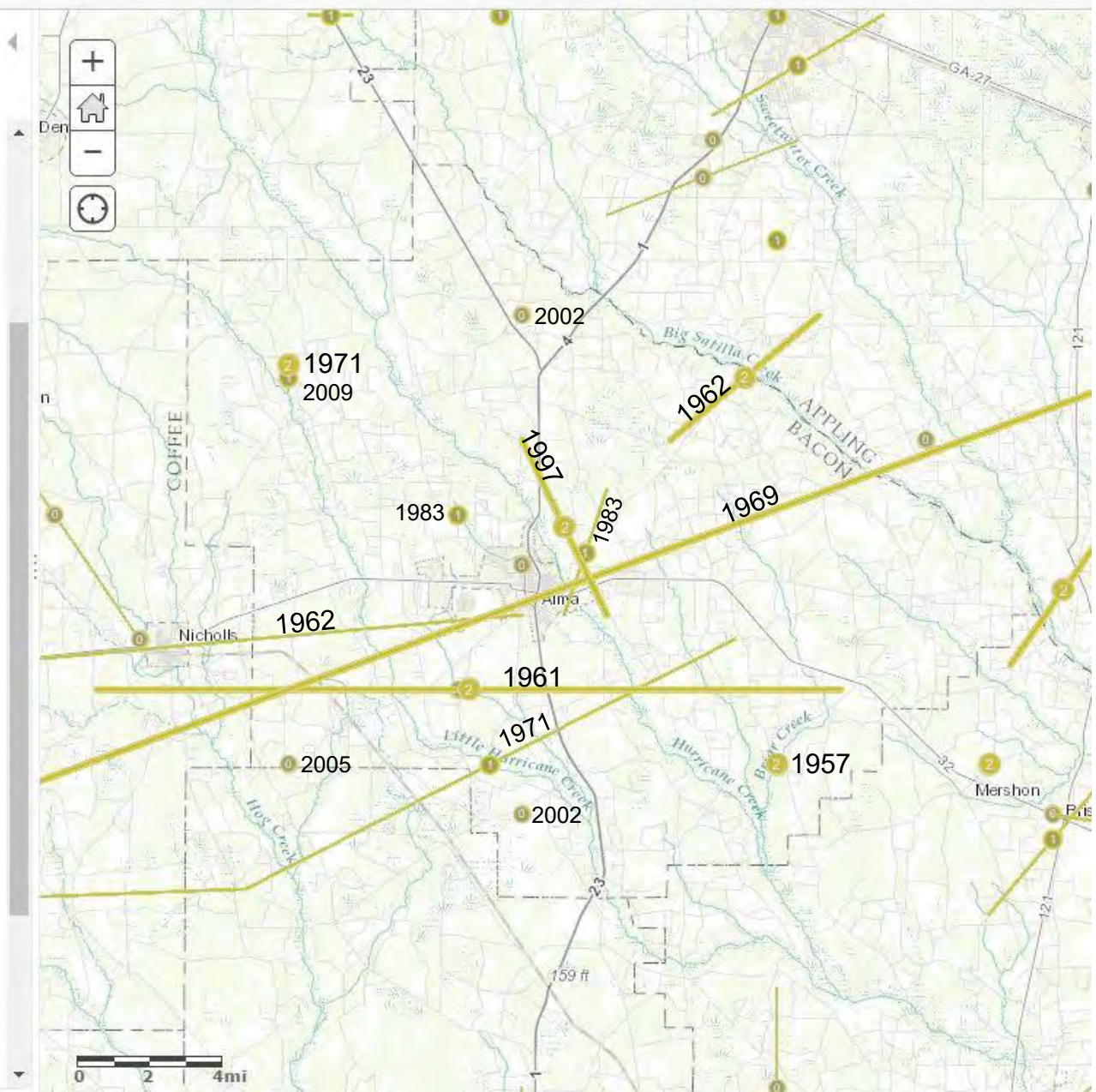
**Critical\_Facilities\_Status\_Release**

- Complete Facilities
- Incomplete Facilities



### Legend

- EF4 Tornado  
4
- EF4 Tornado Track
- EF3  
EF3 Tornado  
3  
EF3 Tornado Track
- EF2  
EF2 Tornado  
2  
EF2 Tornado Track
- EF1  
EF1 Tornado  
1  
EF1 Tornado Track
- EF0  
EF0 Tornado  
0  
EF0 Tornado Track



**GEMA Worksheet #3a**

**Inventory of Assets**

**Jurisdiction: Bacon**

**Hazard: Hurricane/Tropical 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.**

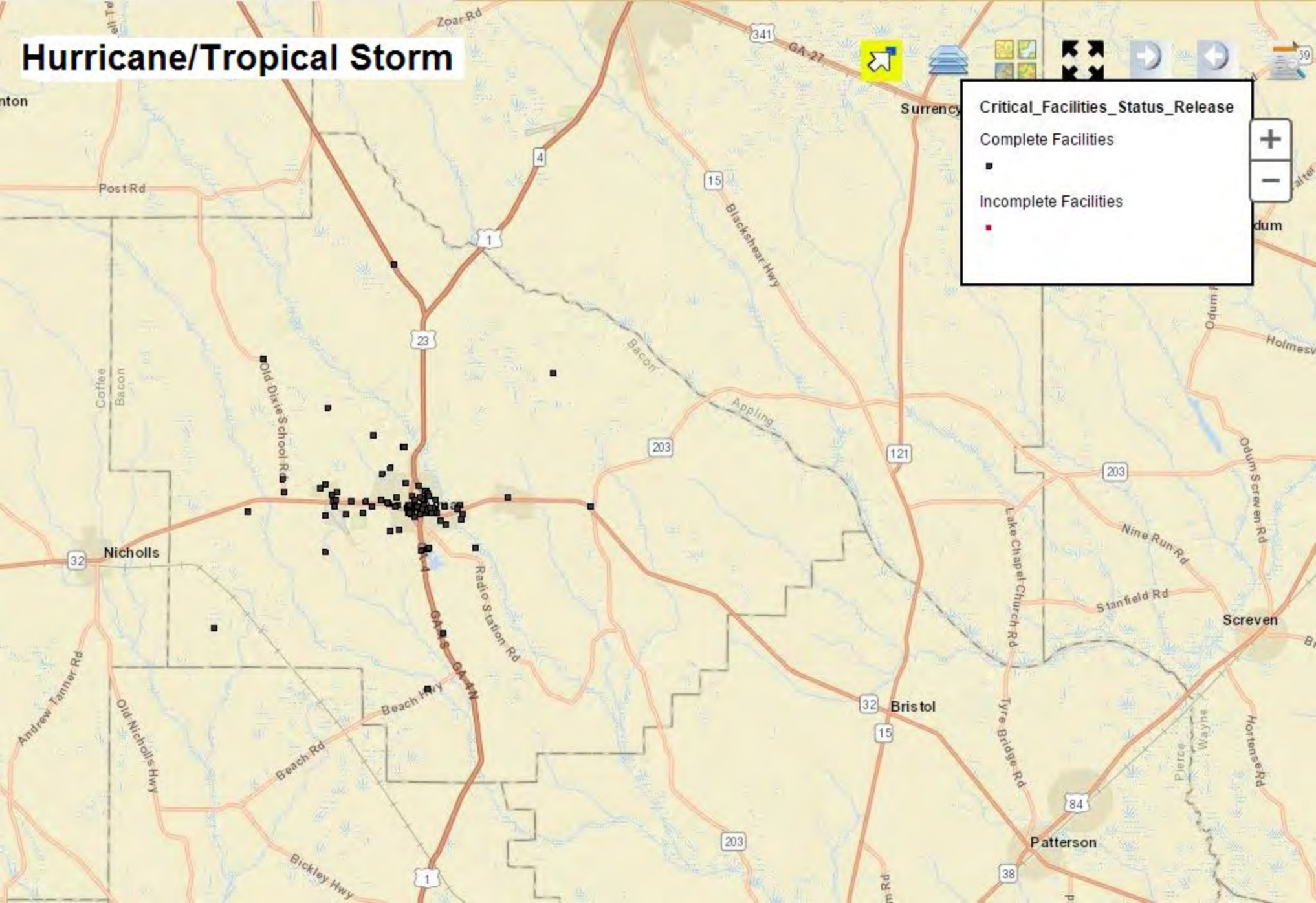
Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community of State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	3,931	3,931	100.000%	207,940,361	207,940,361	100.000%	11,196	11,196	100%
Commercial	317	317	100.000%	43,241,481	43,241,481	100.000%	0	0	0%
Industrial	26	26	100.000%	14,184,654	14,184,654	100.000%	0	0	0%
Agricultural	674	674	100.000%	96,022,096	96,022,096	100.000%	0	0	0%
Religious/ Non-profit	129	129	100.000%	34,496,268	34,496,268	100.000%	0	0	0%
Government	102	102	100.000%	53,165,359	53,165,359	100.000%	0	0	0%
Education	5	5	100.000%	6,594,648	6,594,648	100.000%	0	0	0%
Utilities	9	9	100.000%	35,426,279	35,426,279	100.000%	0	0	0%
<b>Total</b>	<b>5,193</b>	<b>5,193</b>		<b>491,071,146</b>	<b>491,071,146</b>		<b>11,196</b>	<b>11,196</b>	

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



# Hurricane/Tropical Storm



**Critical\_Facilities\_Status\_Release**

- Complete Facilities
- Incomplete Facilities

Map navigation controls: zoom in (+), zoom out (-), and other navigation icons.

**GEMA Worksheet #3a**  
**Jurisdiction: Bacon**  
**Hazard: Hail**

**Inventory of Assets**

**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.**

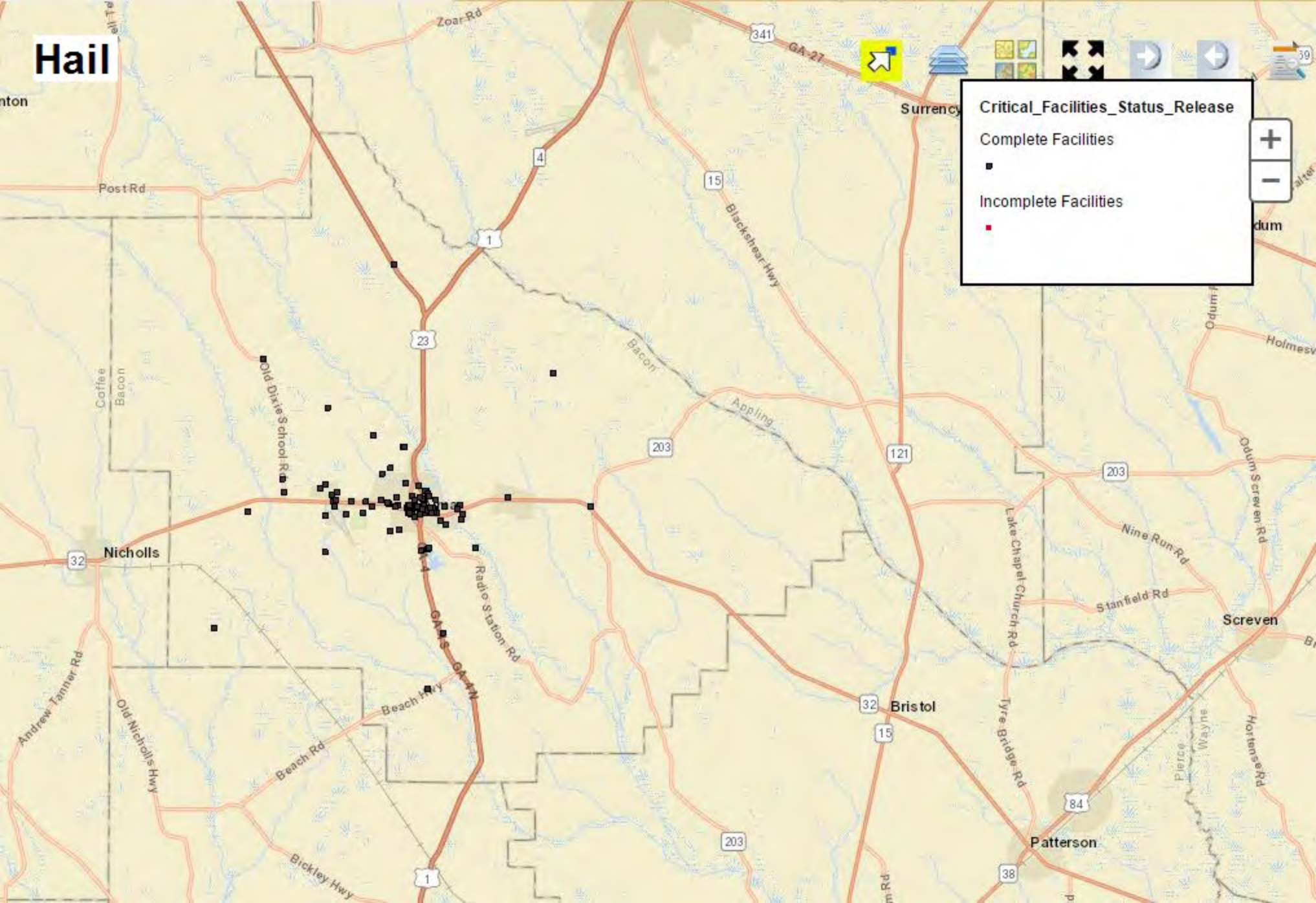
Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community of State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	3,931	3,931	100.000%	207,940,361	207,940,361	100.000%	11,196	11,196	100%
Commercial	317	317	100.000%	43,241,481	43,241,481	100.000%	0	0	0%
Industrial	26	26	100.000%	14,184,654	14,184,654	100.000%	0	0	0%
Agricultural	674	674	100.000%	96,022,096	96,022,096	100.000%	0	0	0%
Religious/ Non-profit	129	129	100.000%	34,496,268	34,496,268	100.000%	0	0	0%
Government	102	102	100.000%	53,165,359	53,165,359	100.000%	0	0	0%
Education	5	5	100.000%	6,594,648	6,594,648	100.000%	0	0	0%
Utilities	9	9	100.000%	35,426,279	35,426,279	100.000%	0	0	0%
<b>Total</b>	<b>5,193</b>	<b>5,193</b>		<b>491,071,146</b>	<b>491,071,146</b>		<b>11,196</b>	<b>11,196</b>	

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



# Hail



**Critical\_Facilities\_Status\_Release**

- Complete Facilities
- Incomplete Facilities



## GEMA Worksheet #3a

## Inventory of Assets

**Jurisdiction: Bacon**

**Hazard: Severe Winter Storm**

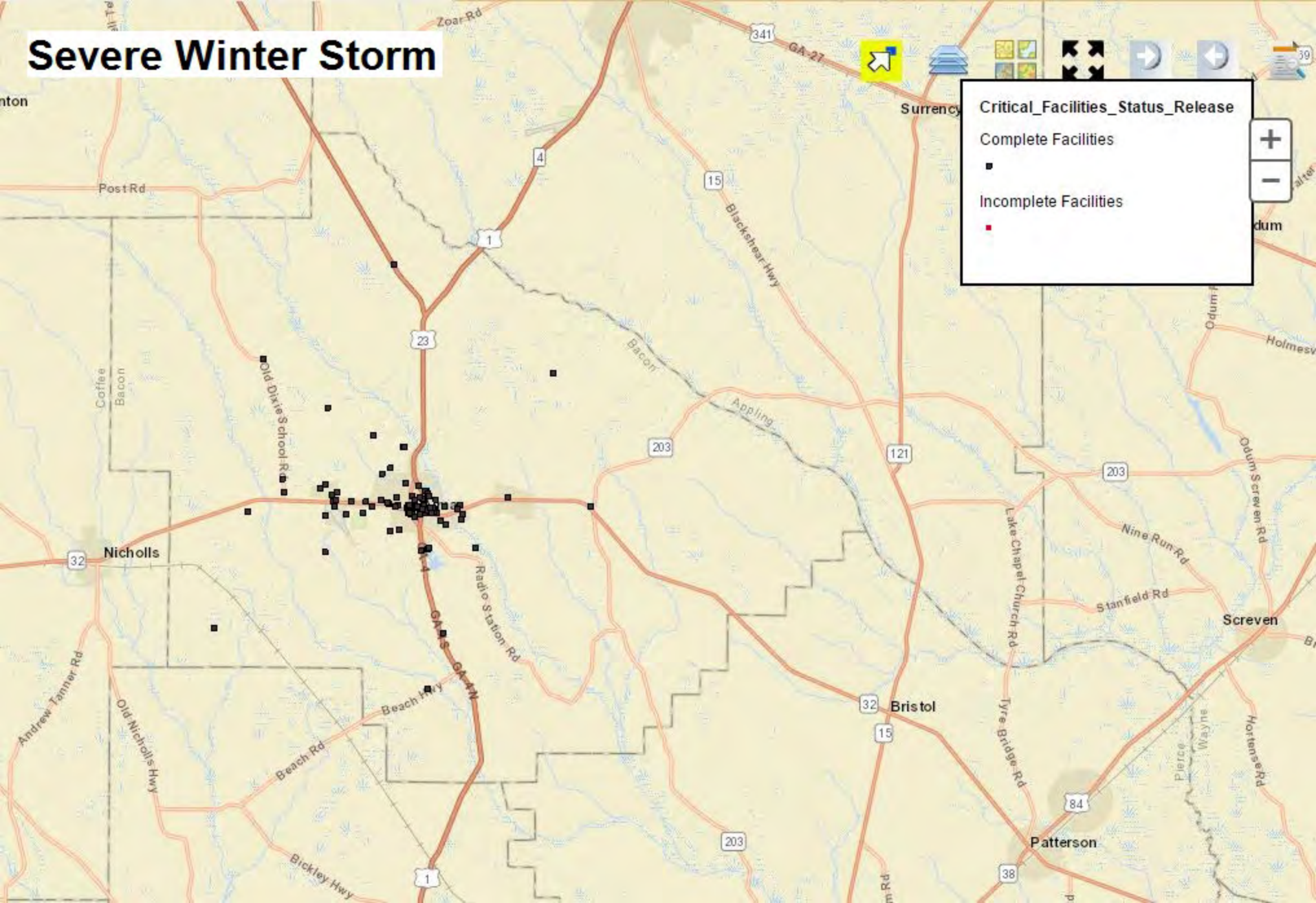
**Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.**

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	3,931	3,931	100.000%	207,940,361	207,940,361	100.000%	11,196	11,196	100%
Commercial	317	317	100.000%	43,241,481	43,241,481	100.000%	0	0	0%
Industrial	26	26	100.000%	14,184,654	14,184,654	100.000%	0	0	0%
Agricultural	674	674	100.000%	96,022,096	96,022,096	100.000%	0	0	0%
Religious/ Non- profit	129	129	100.000%	34,496,268	34,496,268	100.000%	0	0	0%
Government	102	102	100.000%	53,165,359	53,165,359	100.000%	0	0	0%
Education	5	5	100.000%	6,594,648	6,594,648	100.000%	0	0	0%
Utilities	9	9	100.000%	35,426,279	35,426,279	100.000%	0	0	0%
<b>Total</b>	<b>5,193</b>	<b>5,193</b>		<b>491,071,146</b>	<b>491,071,146</b>		<b>11,196</b>	<b>11,196</b>	

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

# Severe Winter Storm



# **Appendix B**




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Search

## U.S. Census Quick Facts

## QuickFacts

## Bacon County, Georgia

QuickFacts provides statistics for all states and counties, and for cities and towns with a population of 5,000 or more.

All Topics	BACON COUNTY, GEORGIA	UNITED STATES
People		
Population		
Population estimates, July 1, 2015, (V2015)	11,299	321,418,820
Population estimates base, April 1, 2010, (V2015)	11,096	308,758,105
Population, percent change - April 1, 2010 (estimates base) to July 1, 2015, (V2015)	1.8%	4.1%
Population, Census, April 1, 2010	11,096	308,745,538
Age and Sex		
Persons under 5 years, percent, July 1, 2015, (V2015)	6.5%	6.2%
Persons under 5 years, percent, April 1, 2010	7.4%	6.5%
Persons under 18 years, percent, July 1, 2015, (V2015)	25.9%	22.9%
Persons under 18 years, percent, April 1, 2010	25.5%	24.0%
Persons 65 years and over, percent, July 1, 2015, (V2015)	14.4%	14.9%
Persons 65 years and over, percent, April 1, 2010	13.3%	13.0%
Female persons, percent, July 1, 2015, (V2015)	50.9%	50.8%
Female persons, percent, April 1, 2010	50.5%	50.8%
Race and Hispanic Origin		
White alone, percent, July 1, 2015, (V2015) (a)	80.8%	77.1%
White alone, percent, April 1, 2010 (a)	78.6%	72.4%
Black or African American alone, percent, July 1, 2015, (V2015) (a)	16.7%	13.3%
Black or African American alone, percent, April 1, 2010 (a)	15.4%	12.6%
American Indian and Alaska Native alone, percent, July 1, 2015, (V2015) (a)	0.4%	1.2%
American Indian and Alaska Native alone, percent, April 1, 2010 (a)	0.2%	0.9%
Asian alone, percent, July 1, 2015, (V2015) (a)	0.6%	5.6%
Asian alone, percent, April 1, 2010 (a)	0.3%	4.8%
Native Hawaiian and Other Pacific Islander alone, percent, July 1, 2015, (V2015) (a)	0.2%	0.2%
Native Hawaiian and Other Pacific Islander alone, percent, April 1, 2010 (a)	0.1%	0.2%
Two or More Races, percent, July 1, 2015, (V2015)	1.4%	2.6%
Two or More Races, percent, April 1, 2010	1.3%	2.9%
Hispanic or Latino, percent, July 1, 2015, (V2015) (b)	8.1%	17.6%
Hispanic or Latino, percent, April 1, 2010 (b)	7.1%	16.3%
White alone, not Hispanic or Latino, percent, July 1, 2015, (V2015)	73.7%	61.6%
White alone, not Hispanic or Latino, percent, April 1, 2010	76.0%	63.7%
Population Characteristics		
Veterans, 2010-2014	502	20,700,711
Foreign born persons, percent, 2010-2014	5.8%	13.1%
Housing		
Housing units, July 1, 2015, (V2015)	4,726	134,789,944
Housing units, April 1, 2010	4,801	131,704,730
Owner-occupied housing unit rate, 2010-2014	69.7%	64.4%
Median value of owner-occupied housing units, 2010-2014	\$74,200	\$175,700
Median selected monthly owner costs -with a mortgage, 2010-2014	\$823	\$1,522
Median selected monthly owner costs -without a mortgage, 2010-2014	\$320	\$457
Median gross rent, 2010-2014	\$606	\$920
Building permits, 2015	0	1,182,582
Families and Living Arrangements		
Households, 2010-2014	3,953	116,211,092
Persons per household, 2010-2014	2.71	2.63
Living in same house 1 year ago, percent of persons age 1 year+, 2010-2014	86.7%	85.0%
Language other than English spoken at home, percent of persons age 5 years+, 2010-2014	9.6%	20.9%
Education		
High school graduate or higher, percent of persons age 25 years+, 2010-2014	74.2%	86.3%
Bachelor's degree or higher, percent of persons age 25 years+, 2010-2014	12.1%	29.3%
Health		
With a disability, under age 65 years, percent, 2010-2014	12.5%	8.5%
Persons without health insurance, under age 65 years, percent	▲ 22.0%	▲ 10.5%
Economy		
In civilian labor force, total, percent of population age 16 years+, 2010-2014	54.3%	63.5%
In civilian labor force, female, percent of population age 16 years+, 2010-		

2014	51.6%	58.7%
Total accommodation and food services sales, 2012 (\$1,000) (c)	8,954	708,138,598
Total health care and social assistance receipts/revenue, 2012 (\$1,000) (c)	D	2,040,441,203
Total manufacturers shipments, 2012 (\$1,000) (c)	D	5,696,729,632
Total merchant wholesaler sales, 2012 (\$1,000) (c)	160,887	5,208,023,478
Total retail sales, 2012 (\$1,000) (c)	72,655	4,219,821,871
Total retail sales per capita, 2012 (c)	\$6,488	\$13,443
<b>Transportation</b>		
Mean travel time to work (minutes), workers age 16 years+, 2010-2014	22.5	25.7
<b>Income and Poverty</b>		
Median household income (in 2014 dollars), 2010-2014	\$37,698	\$53,482
Per capita income in past 12 months (in 2014 dollars), 2010-2014	\$18,109	\$28,555
Persons in poverty, percent	25.9%	13.5%
<b>Businesses</b>		
Total employer establishments, 2014	214	7,563,085
Total employment, 2014	2,536	121,079,879
Total annual payroll, 2014	82,842	5,940,442,637
Total employment, percent change, 2013-2014	-0.7%	2.4%
Total nonemployer establishments, 2014	592	23,836,937
All firms, 2012	937	27,626,360
Men-owned firms, 2012	436	14,844,597
Women-owned firms, 2012	368	9,878,397
Minority-owned firms, 2012	223	7,952,386
Nonminority-owned firms, 2012	669	18,987,918
Veteran-owned firms, 2012	40	2,521,682
Nonveteran-owned firms, 2012	812	24,070,685
<b>Geography</b>		
Population per square mile, 2010	42.9	87.4
Land area in square miles, 2010	258.58	3,531,905.43
FIPS Code	13005	00

This geographic level of poverty and health estimates are not comparable to other geographic levels of these estimates

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 to the left of each row in TABLE view to learn about sampling error.

The vintage year (e.g., V2015) refers to the final year of the series (2010 thru 2015). Different vintage years of estimates are not comparable.

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

- D Suppressed to avoid disclosure of confidential information
- F Fewer than 25 firms
- FN Footnote on this item in place of data
- NA Not available
- S Suppressed; does not meet publication standards
- X Not applicable
- 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.

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## Alma city, Georgia

2015 Population Estimate

**3,536**

*Source: Vintage 2015 Population Estimates: Population Estimates*

Median Household Income

**\$ 33,019**

*Source: 2010-2014 American Community Survey 5-Year Estimates*

Persons in poverty, percent

**32.7 %**

*Source: 2010-2014 American Community Survey 5-Year Profiles*

Educational Attainment: Percent high school graduate or higher

**76.8 %**

*Source: 2010-2014 American Community Survey 5-Year Profiles*

Persons without health insurance, percent

**21.1 %**

*Source: 2010-2014 American Community Survey 5-Year Profiles*

Median Housing Value

**\$ 74,900**

*Source: 2010-2014 American Community Survey 5-Year Estimates*

Total Housing Units

**1,437**

*Source: 2010-2014 American Community Survey 5-Year Estimates*

Number of Companies

**538**

*Source: 2012 Survey of Business Owners: Company Summary*

Male Median Income

**\$ 20,701**

*Source: 2010-2014 American Community Survey 5-Year Estimates*

Female Median Income

**\$ 11,946**

*Source: 2010-2014 American Community Survey 5-Year Estimates*

Veterans

**158**

*Source: 2010-2014 American Community Survey 5-Year Profiles*



**Bacon County and City of Alma Joint 5-Year Community Work Program Update**  
(2018 - 2022)

PROJECTS	ESTIMATED COST	RESPONSIBLE PARTY	FUNDING SOURCE	GOAL	FY 18	FY 19	FY 20	FY 21	FY 22
<b>1. ECONOMIC DEVELOPMENT</b>									
1.1. Continue to improve Downtown Alma	\$500,000	City of Alma, GDOT	City of Alma, grants, GDOT	1	x	x	x	x	x
1.2. Develop programs in conjunction with other agencies to market the area in order to expand the business base for economic development purposes	\$10,000	Development Authority	Local, Private	1	x	x	x	x	x
1.3. Develop programs in conjunction with other agencies to pursue academic excellence and workforce development (including ESL programs) for economic development purposes.	\$150,000	Development Authority, Coastal Pines, Board of Education, Family Connection	Federal, State, Local	1	x	x	x	x	x
1.4. Develop programs and scholarships for "soft skills" training, family living, and other life skills, in order to prepare students for success in the workforce	\$150,000	Development Authority, Coastal Pines, BO Board of Education E, Family Connection	Federal, State, Local	1	x	x	x	x	x
1.5. Continue to upgrade industrial park infrastructure.	\$2 Million	Development Authority, Bacon County, City of Alma	Federal, State, Local, USDA, other grants/loans	1	x	x	x	x	x
1.6. Create a Youth Empowerment program (including drug prevention) and facility to train and encourage area youth to start new businesses as a career option.	\$500,000	Development Authority, Bacon County, City of Alma, nonprofits	Federal, State, Local, Private	1	x	x	x		
1.7. Incorporate a Proactive Growth Plan for the City and County.	\$10,000	Development Authority, Bacon County, City of Alma, nonprofits	Federal, State, Local, Private	1	x	x			
1.8. Continue education efforts with the National Exchange Club	Staff time	Board of Education, Bacon County, City of Alma	Federal, State, Local, Private	1	x	x	x	x	x

PROJECTS	ESTIMATED COST	RESPONSIBLE PARTY	FUNDING SOURCE	GOAL	FY 18	FY 19	FY 20	FY 21	FY 22
<b>2. CULTURAL RESOURCES</b>									
2.1. Continue to improve the Downtown Theatre	\$50,000	City of Alma	City of Alma, Fox Institute, other grants/loans	2	x	x			
<b>3. NATURAL RESOURCES</b>									
3.1. Incorporate landscaping guidelines to create a unified and pleasing visual environment for the Bacon County Hospital.	\$10,000	Bacon County Hospital	Local	3	x	x	x	x	x
3.2. Continue to advertise, teach and encourage best management practices	\$25,000	County Extension Agent	UGA, DCA, Local	3	x	x	x	x	x
<b>4. COMMUNITY FACILITIES &amp; SERVICES</b>									
4.1. Continue with efforts to provide adequate infrastructure for industrial and residential development	\$1 million	Development Authority Bacon County, City of Alma,	Federal, State, Local, Private	4	x	x	x	x	x
4.2. Improve wastewater treatment capacity	\$6 million	City of Alma, Bacon County	Federal, State, Local, Grants	4	x	x	x		
4.3. Continue to support the construction of a 300-acre fishing lake for economic development purposes.	\$8 million	Development Authority, Bacon County, DNR	DNR, Local	4	x	x	x		
4.4. Acquire land (10 – 14 acres) and construct a youth community center within Bacon County or the City of Alma (including gym, outdoor pool, track, baseball field, etc.).	\$5 million	City of Alma, Bacon County	Federal, State, Local, Grants	4			x	x	x
4.5. Continue operating, improving, and expanding recreation programs, services, and facilities associated with the countywide recreation department.	\$1,180,000	Bacon County	DCA, SPLOST, Local	4	x	x	x	x	x

PROJECTS	ESTIMATED COST	RESPONSIBLE PARTY	FUNDING SOURCE	GOAL	FY 18	FY 19	FY 20	FY 21	FY 22
4.6. Continue to integrate parents, teachers, principals and the business community into school curriculum planning and school activities.	\$10,000	Board of Education	GA DOE, Local	4	x	x	x	x	x
4.7. Upgrade systems, extend hours of operation, expand programming, upgrade/expand jobs, and purchase computers at Bacon County Library.	\$50,000	Regional Library System, County Library, Board of Education	Local, Grants, SPLOST	4	x	x	x	x	x
4.8. Continue to regularly collect and dispose of yard waste.	\$100,000	City of Alma	Local	4	x	x	x	x	x
4.9. Continue to contract with a private company to regularly collect residential solid waste and to collect and/or operate drop-off center for "brown goods" and "white goods" (furniture, mattresses, appliances, etc.).	\$500,000 per year	City of Alma, Bacon County	Local	4	x	x	x	x	x
4.10. Create Master Fire Plan.	\$40,000	Bacon County Fire Department	Local, Grants	4	x				
4.11. Upgrade fire department vehicles, breathing gear, turnout gear, and other firefighting equipment as needed.	\$90,000	Bacon County Fire Department	Federal, State, Local, Grants	4	x	x	x	x	x
4.12. Provide training for the fire department, and build an additional fire station.	\$1 million	Bacon County Fire Department	Federal, State, Local, Grants	4		x	x	x	
4.13. Identify potential gaps in fire services and lower the ISO rating.	Staff time	Bacon County Fire Department	Federal, State, Local, Grants	4		x	x	x	
4.14. Purchase police cars when needed.	\$100,000	City of Alma, Bacon County	Federal, State, Local, Grants	4	x		x		x
4.15. Construct a new airport terminal.	\$900,000	City of Alma, Bacon County	Federal, State, Local, Grants	4, 7	x	x	x		
4.16. Expand the cemetery.	\$250,000	City of Alma, Bacon County	Federal, State, Local, Grants	4	x	x	x		



PROJECTS	ESTIMATED COST	RESPONSIBLE PARTY	FUNDING SOURCE	GOAL	FY 18	FY 19	FY 20	FY 21	FY 22
4.17. Improve the nursing home.	\$2.5 million	City of Alma, Bacon County	Federal, State, Local, Grants	4, 5	x	x	x		
4.18. Renovate the auditorium at the old school	\$100,000	City of Alma, Bacon County	Federal, State, Local, Grants	4	x	x	x		
<b>5. HOUSING</b>									
5.1. Continue to explore and support methods for renters of public housing and other properties to purchase their units through affordable housing programs.	\$500,000 (FHA, DCA, CDBG, USDA, local, private)	Alma Housing Authority	Federal, State, Local, Private	5	x	x	x	x	x
<b>6. LAND USE</b>									
(No projects identified)									
<b>7. TRANSPORTATION</b>									
7.1. Support the four-laning of SR 32 from I-75 to I-95	Staff time	GDOT, Bacon County, City of Alma	GDOT, Local	7	x	x	x	x	x
7.2. Continue to pave, resurface, and repair roads, bridges, and sidewalks within the City and County.	\$6,500,000	Bacon County, City of Alma, GDOT	Federal, State, Local, Grants	7	x	x	x	x	x
<b>8. INTERGOVERNMENTAL COORDINATION</b>									
8.1. Conduct an analysis of the financial impact of new growth in the community, and evaluate various financing methods for creating new infrastructure.	\$10,000	Development Authority, Bacon County, City of Alma	Federal, State, Local, Grants	8	x	x			



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GEORGIA DEPARTMENT OF REVENUE Local Government Services Division County Digest Section	2015 TAX DIGEST CONSOLIDATED SUMMARY
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County: BACON County #: 003 Tax District: BACON COUNTY

Dist #: 00 Assessment %: 040 Tot Parcels: 6420

RESIDENTIAL				UTILITY			
Code	Count	Acres	40% Value	Code	Count	Acres	40% Value
R1	8,774		67,108,563	U1			
R3	1,430	1,086.62	4,575,433	U2	22	0.88	17,723,502
R4	2,481	10,522.7	11,266,996	U3	1	0	1,733
R5	29	1,284.99	894,490	U4	4	30.81	36,305
R6	287		182,443	U5			
R7				U7			
R9	1	0	800	U9			
RA	3		99,200	UA			
RB	15		41,561	UB			
RF	3		6,295	UF	1		730
RI				UZ			
RZ							
RESIDENTIAL TRANSITIONAL				EXEMPT PROPERTY			
Code	Count	Acres	40% Value	Code	Count	40% Value	
T1				E0	1	459,200	
T3				E1	333	22,601,748	
T4				E2	199	4,332,460	
				E3	11	152,617	
HISTORIC				E4	20	111,473	
Code	Count	Acres	40% Value	E5	29	7,313,291	
H1				E6	12	1,143,712	
H3				E7			
AGRICULTURAL				E8			
Code	Count	Acres	40% Value	E9	68	926,384	
A1	2,133		16,079,255				
A3				TOTAL	673	37,040,885	
A4	234	2,859.59	2,207,267	HOMESTEAD AND PROPERTY EXEMPTIONS			
A5	669	60,486.61	25,986,001	Code	Count	M&O	Bond
A6	811		1,938,562	S1	1,588	3,176,000	
A7				SC	6	12,000	
A9				S2	0	0	
AA	1		6,068	S3	50	100,000	
AB	3		8,550	S4	409	1,636,000	
AF	15		471,117	S5	33	1,102,402	
AI	3		7,572	SD	0	0	
AZ	1		7,339	SS	2	37,173	
PREFERENTIAL				SE	0	0	
Code	Count	Acres	40% Value	SG	0	0	

P3			
P4	32	474.85	369,386
P5	60	9,716.55	4,678,663
P6	5		6,691
P7			
P9			

CONSERVATION USE

Code	Count	Acres	40% Value
V3	4	109.78	73,192
V4	132	2,482.16	1,965,624
V5	732	81,794.92	44,275,073
V6	3		1,281

BROWNFIELD PROPERTY

Code	Count	Acres	40% Value
B1			
B3			
B4			
B5			
B6			

FOREST LAND CONSERVATION USE

Code	Count	Acres	40% Value
J3			
J4			
J5	17	4,789.83	1,722,844
J9			

FLPA FAIR MARKET ASSMT

Code	Count	Acres	40% Value
F3			
F4			
F5	17	4,789.83	999,753
F9			

Total 17 4,789.83 999,753

ENVIRONMENTALLY SENSITIVE

Code	Count	Acres	40% Value
W3			
W4			
W5			

COMMERCIAL

Code	Count	Acres	40% Value
C1	634		15,245,625
C3	236	227.36	2,982,701
C4	80	524.79	1,294,370
C5	2	207.39	103,380
C7			
C9			
CA	5		484,476
CB	3		2,344
CF	287		12,465,883
CI	135		3,501,247
CP	4		3,427,424
CZ	2		7,669

INDUSTRIAL

Code	Count	Acres	40% Value
I1	80		4,549,428
I3	2	5.13	6,556
I4	17	127.66	289,702
I5	6	615.56	426,433

S6			
S7			
S8			
S9			
SF	7	6,199,413	
SA	92	1,263,693	
SB	0	0	
SP	109	130,701	
SH	0	0	
ST	0	0	
SV	868	30,235,993	
SJ	17	1,002,860	
SW	0	0	
SX			
SN	121	0	

DO NOT USE CODES L1-L9 ON STATE SHEET

- L1
- L2
- L3
- L4
- L5
- L6
- L7
- L8
- L9

TOTAL	3,302	44,896,235	0
-------	-------	------------	---

SUMMARY

Code	Count	Acres	40% Value
Residential	13,023	12,894.31	84,175,781
Residential Transitional			
Historical			
Agricultural	3,870	63,346.2	46,711,731
Preferential	97	10,191.4	5,054,740
Conservation Use	871	84,386.86	46,315,170
Brownfield Property			
Forest Land Cons Use	17	4,789.83	1,722,844
Environmentally Sensitive			
Commercial	1,388	959.54	39,515,119
Industrial	120	748.35	20,175,220
Utility	28	31.69	17,762,270
Motor Vehicle	8,597		15,920,640
Mobile Home	891		3,851,001
Timber 100%	126	88,805	6,220,860
Heavy Equipment	0		0
Gross Digest Exemptions Bond	29,028	266,153.18	287,425,376
Net Bond Digest			287,425,376
Gross Digest Exemptions-M&O	29,028	266,153.18	287,425,376
Net M&O Digest			242,529,141



			TAX LEVIED			
			TYPE	ASSESSED VALUE	MILLAGE	TAX
I7						
I9						
IA						
IB			M & O	242,529,141	.000	0.00
IF	7	8,849,001	BOND	287,425,376	.000	0.00
II	5	3,282,111				
IP	3	2,771,989				
IZ						

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GEORGIA DEPARTMENT OF REVENUE Local Government Services Division County Digest Section	2015 TAX DIGEST CONSOLIDATED SUMMARY
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County:BACON County #:003 Tax District:ALMA

Dist #: 05 Assessment %: 040 Tot Parcels:2608

RESIDENTIAL				UTILITY			
Code	Count	Acres	40% Value	Code	Count	Acres	40% Value
R1	2,100		21,674,428	U1			
R3	1,112	503.24	3,372,636	U2	8	0.88	9,691,632
R4	110	444.61	786,558	U3	1	0	1,733
R5	3	115.87	80,603	U4			
R6	9		2,750	U5			
R7				U7			
R9				U9			
RA	3		99,200	UA			
RB	1		2,800	UB			
RF	1		57	UF			
RI				UZ			
RZ							
RESIDENTIAL TRANSITIONAL				EXEMPT PROPERTY			
Code	Count	Acres	40% Value	Code	Count	40% Value	
T1				E0	1	459,200	
T3				E1	250	11,453,961	
T4				E2	84	2,324,222	
HISTORIC				E3	6	78,432	
Code	Count	Acres	40% Value	E4	2	32,550	
H1				E5	29	7,313,291	
H3				E6	8	1,106,730	
AGRICULTURAL				E7			
Code	Count	Acres	40% Value	E8			
A1	14		159,117	E9	28	427,211	
A3							
A4	5	19.61	18,911	<b>TOTAL</b>	<b>408</b>	<b>23,195,597</b>	
A5	6	180.84	144,996	HOMESTEAD AND PROPERTY EXEMPTIONS			
A6	8		9,150	Code	Count	M&O	Bond
A7				S1			
A9				SC			
AA				S2			
AB	1		100	S3			
AF	2		3,450	S4			
AI	1		408	S5	9	304,419	
AZ				SD	0	0	
PREFERENTIAL				SS	1	25,031	
Code	Count	Acres	40% Value	SE	0	0	
				SG	0	0	

P3				S6			
P4	2	36.3	26,954	S7			
P5				S8			
P6				S9			
P7				SF	5	4,056,639	
P9				SA	2	6,739	
CONSERVATION USE				SB	0	0	
Code Count	Acres	40%	Value	SP	79	91,399	
V3				SH	0	0	
V4	8	123.7	109,495	ST	0	0	
V5	4	251.88	181,679	SV	12	220,695	
V6				SJ	0	0	
BROWNFIELD PROPERTY				SW	0	0	
Code Count	Acres	40%	Value	SX			
B1				SN	87	0	
B3				DO NOT USE CODES L1-L9 ON STATE SHEET			
B4				L1			
B5				L2			
B6				L3			
FOREST LAND CONSERVATION USE				L4			
Code Count	Acres	40%	Value	L5			
J3				L6			
J4				L7			
J5				L8			
J9				L9			
FLPA FAIR MARKET ASSMT				TOTAL	195	4,704,922	0
Code Count	Acres	40%	Value	SUMMARY			
F3				Code	Count	Acres	40% Value
F4				Residential	3,339	1,063.72	26,019,032
F5				Residential			
F9				Transitional			
Total				Historical			
ENVIRONMENTALLY SENSITIVE				Agricultural	37	200.45	336,132
Code Count	Acres	40%	Value	Preferential	2	36.3	26,954
W3				Conservation Use	12	375.58	291,174
W4				Brownfield Property			
W5				Forest Land Cons Use			
COMMERCIAL				Environmentally Sensitive			
Code Count	Acres	40%	Value	Commercial	1,067	452.74	31,075,754
C1	487		13,122,562	Industrial	58	176.35	7,290,546
C3	227	214.31	2,964,473	Utility	9	0.88	9,693,365
C4	38	162.32	858,995	Motor Vehicle	1,589		3,400,580
C5	1	76.11	16,610	Mobile Home	10		29,746
C7				Timber 100%	0	0	0
C9	4		460,476	Heavy Equipment	0		0
CA	2		1,744	Gross Digest Exemptions Bond	6,123	2,306.02	78,163,283
CB	202		7,466,233	Net Bond Digest			78,163,283
CF	101		3,156,426	Gross Digest Exemptions- M&O	6,123	2,306.02	78,163,283
CI	3		3,020,566	Net M&O Digest			73,458,361
CP	2		7,669				
CZ							
INDUSTRIAL							
Code Count	Acres	40%	Value				
I1	37		1,266,120				
I3	1	2	2,800				
I4	11	74.35	138,594				



				TAX LEVIED		
				ASSESSSED		
			TYPE	VALUE	MILLAGE	TAX
I5	1	100				152,950
I7						
I9						
IA			M & O	73,458,361	11.635	854,688.03
IB			BOND	78,163,283	.000	0.00
IF	3					1,524,634
II	3					3,169,375
IP	2					1,036,073
IZ						

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# **Appendix C**

APPENDIX C  
Other Planning Documents

I

# Community Wildfire Protection Plan



GEORGIA FORESTRY  
COMMISSION



A Program of the Georgia Forestry Commission  
with support from the U.S. Forest Service

# Community Wildfire Protection Plan

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

## Bacon County



AUGUST 12, 2009

Prepared by;  
Pete Rewis, Chief Ranger Bacon County  
Will Fell CWPP Specialist  
Georgia Forestry Commission  
1238 GA Hwy 32 East  
Alma, GA 31510

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:

Roger Boatright  
Chairman Bacon County Board of Commissioners

Robert S Taylor  
Alma – Bacon County Fire Chief

Pete Rewis  
Chief Ranger, Bacon County Forestry Unit

Rhonda Johnson  
Bacon County EMA Director

Wendell Taylor  
Bennett Still District Fire Chief

Art Cothern  
New Lacy District Fire Chief

Louis Martinez  
Sessoms District Fire Chief

Jerry Taylor  
Taylortown District Fire Chief

Billy Tatum  
Ware District Fire Chief

Roger Varnadore  
Warnock District Fire Chief

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## I. OBJECTIVES

The mission of the following report is to set clear priorities for the implementation of wildfire mitigation in Bacon 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 in February of 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:

Bacon County Government

*Fire Rescue*

*Emergency Management*

*Board of County Commissioners*

Georgia Forestry Commission

GEMA

It was decided to conduct community assessments on the basis of the individual fire districts in the county. The chiefs of the six fire departments in the county assessed their districts and reconvened in March 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 BACKGROUND AND EXISTING SITUATION

#### Background

Bacon County, in southeast Georgia, was named for U.S. senator Augustus Octavius Bacon, who served four terms and was president pro tempore of the Senate in 1912. The 285-square-mile county was created from portions of Appling, Pierce, and Ware counties in 1914. Because Bacon was the 151st county, an amendment was needed to override a previous limit of 145 counties set by Georgia voters in 1904.

The area, part of the wiregrass region, was first settled by Creek Indians and then by pioneer families from the Carolinas who sought more affordable land. Naval stores and turpentine were the key industries. The county seat, Alma, was incorporated in 1906. The courthouse, built in 1919, still serves residents and was placed on the National Register of Historic Places in 1980. Two stories exist about the origin of Alma's name. One, put forth in 1966 by Bernice McCullar in her book *This Is Your Georgia* and frequently repeated by local residents, is that each letter represents the first letter of four of Georgia's early state capitals, Augusta, Louisville, Milledgeville, and Atlanta. However, another story, recorded by Kenneth Krakow in *Georgia Place-Names* (1975), is that a Macon salesman, traveling through the unnamed town, offered his wife's name, Alma Sheridan. There are no other incorporated towns in the county, but other communities are Rockingham and Sessoms. The community of Rockingham was named for Rockingham, North Carolina, by settlers who hailed from there.

Most employment in Bacon County comes from the manufacturing sector, followed by service jobs and retailing. The county also supports a large blueberry industry. A satellite campus of Okefenokee Technical College opened in Alma in 1998.

In addition to the courthouse, two other Bacon County buildings are listed on the National Register of Historic Places: the Alma Depot and the Rabinowitz Building on West 11th Street. The depot, added to the register in 1983, is privately owned and used as a warehouse. Other buildings and places of interest include the Old Dixon Hotel and the Camp Ground Methodist Church, dating from the early 1800s.

Two wildlife management areas, the Bacon Area and Whitehead Creek Area, allow hunting and, with Bacon County's parks, provide visitors and residents ample opportunity for recreation. Annual events include the Georgia Farm Show in January, the Wild Game Festival in April, the Georgia Blueberry Festival in June, the Guysie Mule Roundup in October, the Lions Club Big Buck Contest in October, and the Christmas Parade.

According to the 2000 U.S. census, the population of Bacon County is 10,103 (81.5 percent white, 15.7 percent black, and 3.4 percent Hispanic).

(Courtesy *New Georgia Encyclopedia*)

## **Existing Situation**

While Bacon County has a significant agricultural presence, about 67% of the land area is still in woodland. With the exception of a few large blocks of industrial timberland in the northeastern portion of the county, there are homes scattered throughout the county. With significant tracts of woodlands intermixed with agriculture in the 285 square miles of land in the county, the risk from the wildland urban interface is fairly substantial and general throughout the county.

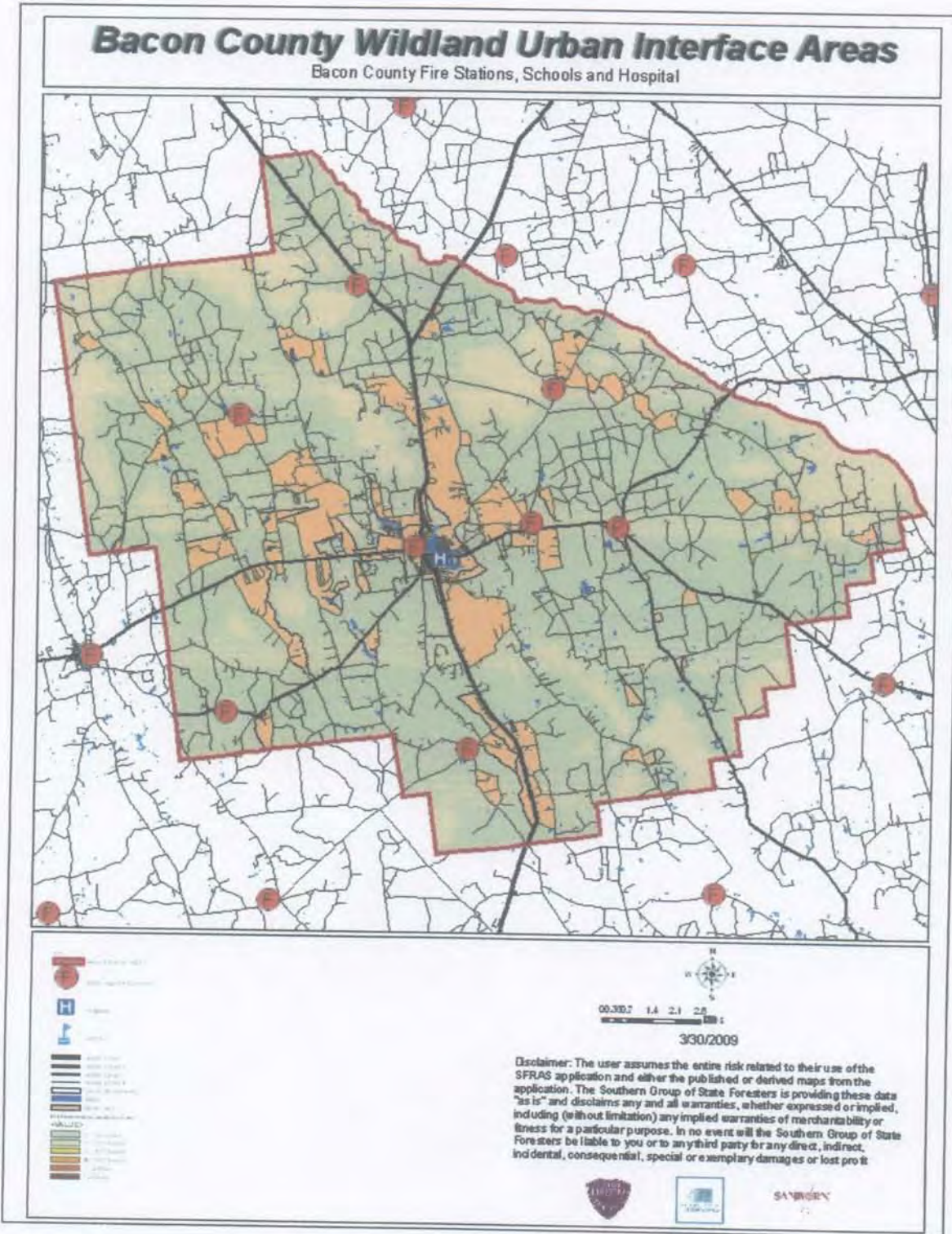
Alma and Bacon County are protected by the Alma - Bacon County Fire Department with the central station located in downtown Alma, with six rural departments well spaced throughout the county. The Georgia Forestry Commission maintains a county protection unit located just east of Alma to respond to wildland fires within the county. The city of Alma is serviced with a modern pressurized water system with hydrants throughout the city and in the industrial area just west of the city. The unincorporated areas have a well spaced system of 32 dry hydrants installed throughout the county.

Over the past fifty years, Bacon County has averaged 65 reported wildland fires per year and almost 55% of these have occurred during the months of December, January, February, March and April. These fires have burned an average of 403 acres annually. Of this annual acreage burned, 63% was lost during the months of February, March, April and May. Despite the advent of the outdoor burning permit law about 20 years ago, the numbers of fires have remained steady over the years as more residences have moved out of town into the Wildland Urban Interface.

The leading causes of these fires, was debris burning causing 44% of the fires and 40% of the acres burned. Incendiary or arson was the next leading cause with 21% of the fires and 24% of the acres lost. More detailed records over the past five years show that 50% of these debris fires originated from escapes from household or residential debris burning.

Georgia Forestry Commission wildfire records show that in the past five years, 109 homes have been lost or damaged by wildfire in Bacon County resulting in estimated losses of \$1,695,175 along with 20 outbuildings valued at \$19,100. According to reports during this period 66 homes have been directly or indirectly threatened by these fires. Additionally 54 vehicles valued at \$473,654 and 12 pieces of other mechanized equipment suffered damages estimated at \$884,200. This is a substantial loss of non timber property attributed to wildfires in Bacon County.

### IV. COMMUNITY BASE MAP



## 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.

(courtesy *Fire Ecology and Wildfire Mitigation in Florida* 2004)



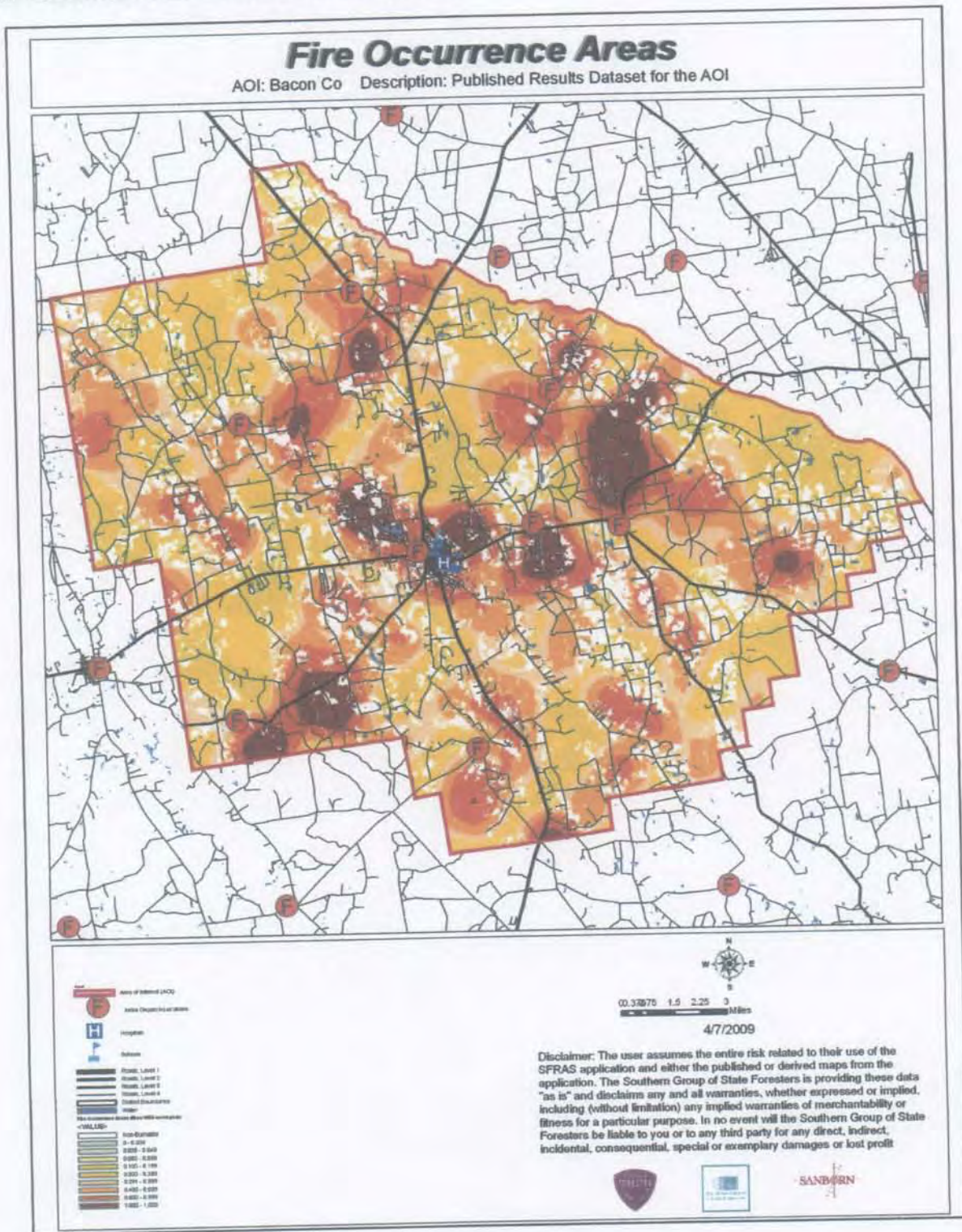
The wildland fire risk assessments conducted in 2009 by the Alma Bacon County Fire Department returned an average score of 136, placing Bacon County in the “high” hazard range. The risk assessment instrument used to evaluate wildfire hazards to Bacon County’s WUI was the Woodland Community Wildfire Hazard Risk Assessment Checklist. The instrument takes into consideration accessibility, vegetation (based on fuel models), topography, 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 Bacon 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 marked
- 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
- Undeveloped lots comprising half the total lots in many rural communities.
- High occurrence of wildfires in the several locations

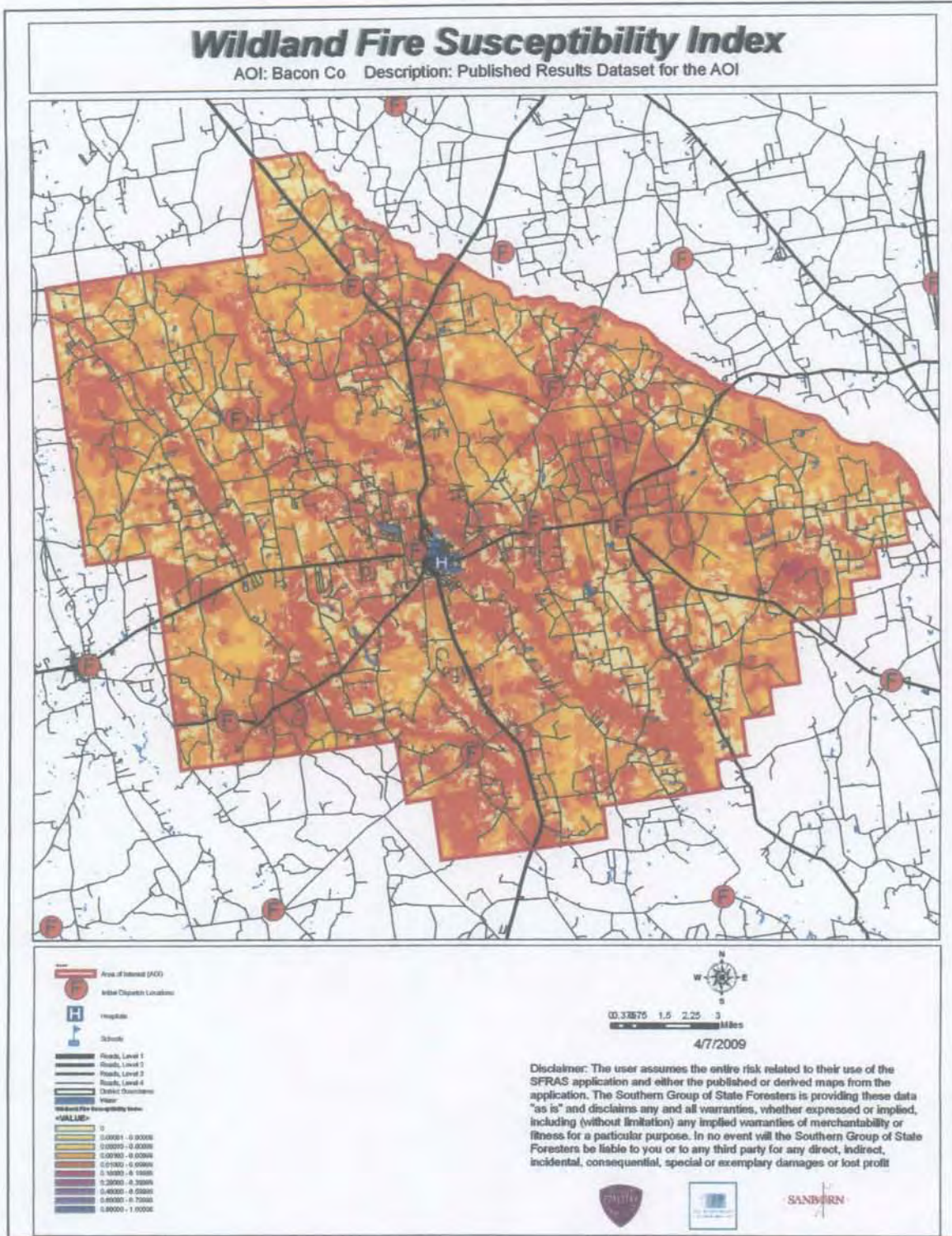
**Summary of Bacon County Assessment Ratings**

<b>Fire District</b>	<b>Access</b>	<b>Site Hazard</b>	<b>Bldg Hazard</b>	<b>Add Hazards</b>	<b>Total Score</b>	<b>Hazard Rating</b>
City of Alma	5	32	15	21	73	Low Risk
Bennett Still	10	54	20	36	120	Moderate Risk
Taylorstown	27	89	15	42	173	Extreme Risk
Ware	17	76	15	44	152	Extreme Risk
New Lacy	22	62	5	46	135	High Risk
Sessoms	19	71	18	48	156	Extreme Risk
Warnock	13	67	10	49	139	High Risk
<b>Average</b>	<b>16</b>	<b>64</b>	<b>15</b>	<b>41</b>	<b>137</b>	<b>High Risk</b>

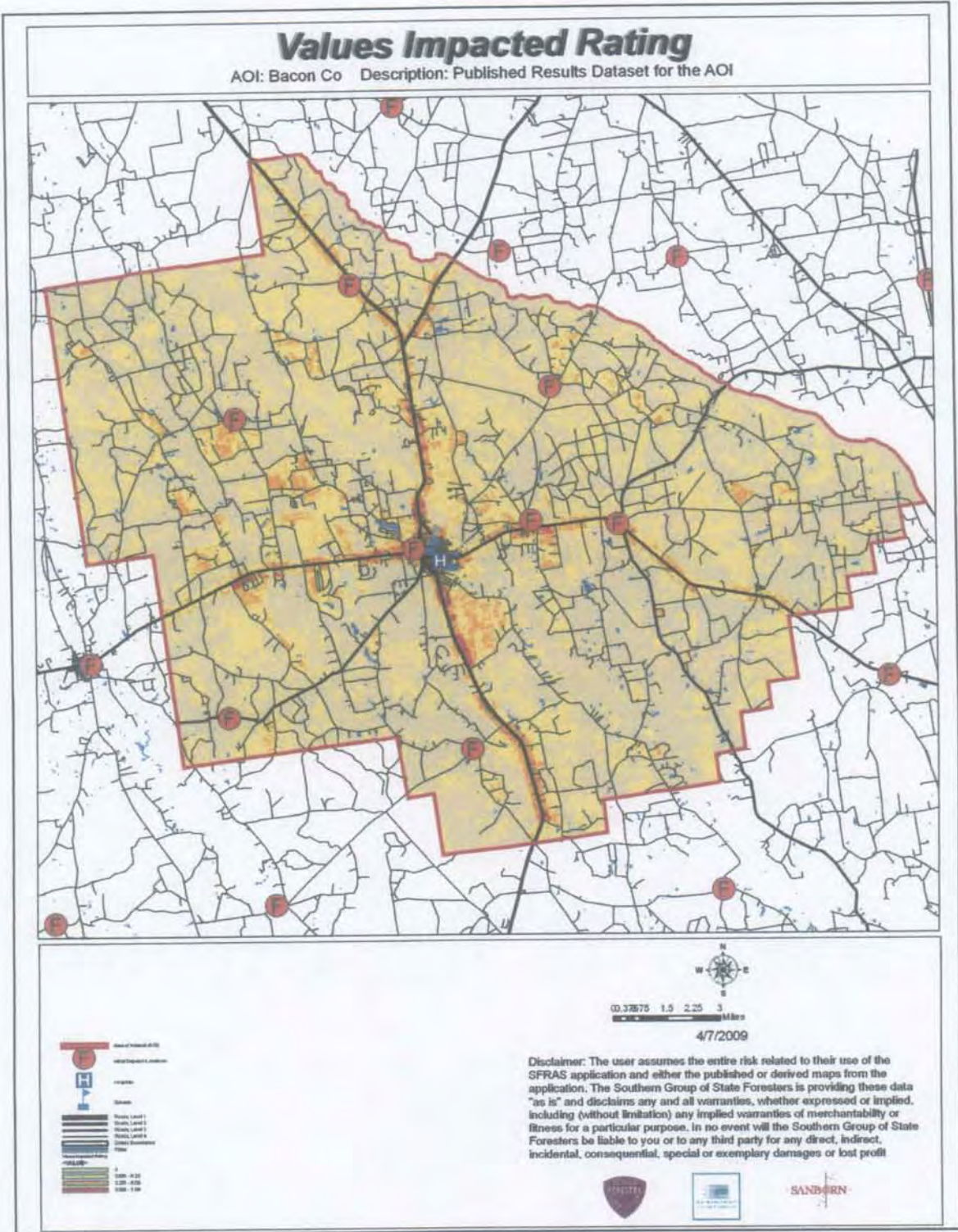
## VI. COMMUNITY HAZARDS MAPS













## VII. PRIORITIZED MITIGATION RECOMMENDATIONS

### Executive Summary

The following recommendations were developed by the Bacon 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 30-foot of defensible space**	Trim shrubs and vines to 30 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, replace pine straw and mulch around plantings with less flammable landscaping materials.
3. Community Clean-up Day	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.
6. Codes and Ordinances	Examine existing codes and ordinances.	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  At such time as the development of zoning, planning and subdivision ordinances become practical include fire department and emergency services input in the design of these.

<b>Proposed Community Wildland Fuel Reduction Priorities</b>		
<b>Treatment Area</b>	<b>Treatment Types</b>	<b>Treatment Method(s)</b>
1. Adjacent WUI Lands	Reduce hazardous fuels	Encourage prescribed burning for private landowners and industrial timberlands particularly adjacent to residential areas
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.
<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
2. Fire Stations	Water Tanks	Install elevated “drop tanks” with automatic cut-off valves for quick refilling of trucks
3. Fire Stations	Equipment	Wildland hand tools. Lightweight Wildland PPE Gear. Larger capacity hose. Investigate need for “brush” trucks.
4. Emergency infrastructure	Equipment	Obtain mobile generator to provide backup power where needed.
5. Water Sources	Drafting equipment	Investigate need for drafting fittings for area irrigation wells.
6. Personnel	Training	Obtain Wildland Fire Suppression training for Fire Personnel.
<b>**Actions to be taken by homeowners and community stakeholders</b>		

## Proposed Education and Outreach Priorities

### 1. Conduct "How to Have a Firewise Home" Workshop for Bacon County Residents

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.

Distribute materials promoting firewise practices and planning through local community and governmental meetings.

### 2. Conduct "Firewise" Workshop for Community Leaders

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.

### 3. Spring Clean-up Event

Conduct clean-up event every spring involving the Georgia Forestry Commission, Alma Bacon County Fire and Rescue 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 Alma Bacon Fire and Rescue discussing and commending the work accomplished.

### 4. Informational Packets

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

- Be Firewise Around Your Home
- Firewise Guide to Landscape and Construction
- Firewise Communities USA Bookmarks

**5. Wildfire Protection Display**

Create and exhibit a display for the general public at the Georgia Blueberry Festival. The Festival usually runs in June. Display can be independent or combined with the Georgia Forestry Commission display.

**6. Press**

Invite the Alma Times and the Waycross Journal Herald to community "Firewise" functions for news coverage and regularly submit press releases documenting wildfire risk improvements in Bacon County.

## VIII. ACTION PLAN

### Roles and Responsibilities

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

Role	Responsibility
<b>Hazardous Fuels and Structural Ignitability Reduction</b>	
<b>Bacon County WUI Fire Council</b>	Create this informal team or council comprised of residents, GFC officials, Alma Bacon Fire and Rescue officials, a representative from the city and county government and the EMA Director for Bacon 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.
<b>Key Messages to focus on</b>	<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> </ol>
<b>Communications objectives</b>	<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>
<b>Target Audiences</b>	<ol style="list-style-type: none"> <li>1 Homeowners</li> <li>2 Forest Landowners and users</li> <li>3 Civic Groups</li> <li>4 School Groups</li> </ol>
<b>Methods</b>	<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> </ol>



Spring Clean-up Day	
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, Alma Bacon Fire and Rescue, 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 30 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.
4. Spring Cleanup Day	Varies	Community Business Donations.
5. Fuel Reduction Activities	\$15 / acre	FEMA & USFS Grants

### POTENTIAL FUNDING SOURCES:

As funding is questionable in these times of tight government budgets and economic uncertainty, unconventional means should be identified whereby the need for funding can be reduced or eliminated.

#### Publications / Brochures –

- FIREWISE materials are available for cost of shipping only at [www.firewise.org](http://www.firewise.org).
- Another source of mitigation information can be found at [www.nfpa.org](http://www.nfpa.org).
- Access to reduced cost or free of charge copy services should be sought whereby publications can be reproduced.
- Free of charge public meeting areas should be identified where communities could gather to be educated regarding prevention and firewise principles.

#### Mitigation –

- Community Protection Grant:
  - USFS sponsored prescribed burn program. Communities with at risk properties that lie within 3 miles of the USFS border may apply with the GFC to have their forest land prescribed burned free of charge.
- FEMA Mitigation Policy MRR-2-08-01: through GEMA - Hazard Mitigation Grant Program (HMGP) and Pre Disaster Mitigation (PDM)
  - To provide technical and financial assistance to local governments to assist in the implementation of long term cost effective hazard mitigation measures.
  - 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 fuels reduction to protect life and property.
  - With a complete and registered plan (addendum to the State plan) counties can apply for pre-mitigation funding. They will also be eligible for HMGP if the county is declared under a wildfire disaster.
- GFC - Plowing and burning assistance can be provided through the Georgia Forestry Commission as a low cost option for mitigation efforts.
- Individual Homeowners –
  - In most cases of structural protection ultimately falls on the responsibility of the community and the homeowner. They will bear the cost; yet they will reap the benefit from properly implemented mitigation efforts.
  - GEMA Grant - PDM (See above)

Ultimately it is our goal to help the communities by identifying the communities threatened with a high risk to wildfire and educate those communities on methods to implement on reducing those risks.

### Assessment Strategy

To accurately assess progress and effectiveness for the action plan, the Alma Bacon 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 1 month and 6 months following workshop date.
- The Alma Bacon WUFP Team 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 Alma Bacon WUIFC 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

GEORGIA FORESTRY  
COMMISSION



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and Service Provider*

# **Appendix D**



BACON 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
Flood	9	66	2	9	9	7.33	13.64	0.2	0.45	0.18
Thunderstorm / Wind	70	66	27	49	67	0.94	106.06	2.7	2.45	1.34
Wildfire	3250	50	650	1300	3250	0.02	6500.00	65	65	65
Drought	508	16	308	508	508	0.03	3175.00	30.8	25.4	10.16
Tornado	18	66	3	11	15	3.67	27.27	0.3	0.55	0.3
Hurricane / Tropical Storm	4	66	4	4	4	16.50	6.06	0.4	0.2	0.08
Hail	28	66	8	27	28	2.36	42.42	0.8	1.35	0.56
Severe Winter Storm	8	66	8	8	8	8.25	12.12	0.8	0.4	0.16

**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 10-20 years.**

Date:

What kinds of natural hazards can affect you?

**Task A. List the hazards that may occur.**

1. Research newspapers and other historical records
2. Review existing plans and reports.
3. Talk to the experts in your community, state, or region.
4. Gather information on Internet Websites.
5. Next to the hazard list below, put a check mark in the Task A boxes beside all hazards that may occur in your community or state.

**Task B. Focus on the most prevalent hazard in your community or state.**

1. Go to hazard Websites.
2. Locate your community or state on the Website map.
3. Determine whether you are in a high-risk area. Get more localized information if necessary.
4. Next to the hazard list below, put a check mark in the Task B boxes beside all hazards that post a significant threat.

**Task A**    **Task B**    Use this space to record information you find for each of the hazards you will be researching. Attach additional pages as necessary.

- Avalanche    \_\_\_    \_\_\_
- Coastal Erosion**    \_\_\_    \_\_\_
- Coastal Storm**    \_\_\_    \_\_\_
- Dam Failure**    \_\_\_    \_\_\_
- Drought      X        X
- Earthquake**    \_\_\_    \_\_\_
- Expansive Soils    \_\_\_    \_\_\_
- Extreme Heat    \_\_\_    \_\_\_
- Flood**      X        X
- Hailstorm      X        X
- Hurricane**      X        X
- Land Slide    \_\_\_    \_\_\_
- Severe Winter Storm      X        X
- Tornado**      X        X
- Tsunami**    \_\_\_    \_\_\_
- Volcano    \_\_\_    \_\_\_
- Wildfire**      X        X
- Windstorm    \_\_\_    \_\_\_
- Hazard Material    \_\_\_    \_\_\_
- Radiological    \_\_\_    \_\_\_
- Other: Thunderstorm/Wind    X    X
- Other \_\_\_\_\_    \_\_\_    \_\_\_
- Other \_\_\_\_\_    \_\_\_    \_\_\_

<b>Hazard or Event Description</b> (Type of hazard, date of event, number of injuries, cost and types of damage, etc.)	<b>Source of Information</b>	<b>Map Available for this Hazard?</b>	<b>Scale of Map</b>

Note: **Bolded** hazards are addressed in this How-to Guide.

# 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.
Avalanche	
Coastal Storm / Coastal Erosion <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>
Dam Failure	
Drought	
Earthquake <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>
Expansive Soils	
Extreme Heat	
Flood <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>
Hailstorm	
Hurricane	
Land Subsidence	
Landslide <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 thee 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>
Severe Winter Storm	
Tornado <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>
Tsunami	
Wildfire <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>
Other <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>

## 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.*

**Goal #1: Prevent or reduce damage caused by floods in Bacon County and the City of Alma.**

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







## 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).
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*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.*

**Goal #1: Prevent or reduce damage caused by thunderstorms and winds in Bacon County and the City of Alma.**

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

STAPLEE Criteria Considerations → for Alternative Actions ↓	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)				
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance / Operations	Political Support	Local Champton	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
Increase public awareness of weather radios, emergency procedures and the use of a local radio station as the emergency broadcast system station in Bacon County and the City of Alma through public safety announcements, publications, and other means	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Disseminate information to the public concerning wind ratings, champion new construction being built to those minimum wind standards, and champion the wind retrofitting of Critical Facilities and existing buildings in Bacon County	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Designate and annually update emergency shelter locations. Conduct a public information campaign to raise awareness of the shelters	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	

## 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.*

**Goal #1: Prevent or reduce damage caused by wildfire in Bacon County and the City of Alma.**

**Objective #1: Minimize losses to existing and future structures (especially Critical Facilities and Infrastructure) and woodlands due to wildfire.**





STAPLEE Criteria Considerations → for Alternative Actions ↓	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)				
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance / Operations	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
Acquire property for new Bacon County Volunteer Fire Stations and/or new additions to those existing stations, including the Scuffletown Fire District	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Plan to acquire property and build a new Bacon County Volunteer Fire Station at the Industrial Park	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Regularly update the fire master plan	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
In the City of Alma, replace the four-inch and smaller water lines with six-inch water lines and hydrants	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Encourage agencies and private property owners to trim tree lines and create fire buffers/breaks around Critical Facilities, new and existing homes, businesses, and utilities in Bacon County and the City of Alma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	

STAPLEE Criteria → for Alternative Actions ↓	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)			
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance / Operations	Political Support	Local Champaign	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
Create new ordinances and enforce existing ordinances for new and existing construction that will help in the pre-disaster mitigation of wildfire	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A
Work with developers and homeowners to pre-plan each building site and/or subdivision to help in pre-disaster mitigation of wildfire	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A
Apply for Haz Mat, FF 1 and FF 2 Training and purchase a media library for training purposes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A
Apply for and purchase 2 turbo drafts for wildfire usage	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A

## **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.*

**Goal #1: Prevent or reduce damage caused by wildfire in Bacon County and the City of Alma.**

**Objective #2: Obtain a FireWise Community Status by educating the Alma-Bacon County Fire Department personnel and the public on the hazards of wildfire and the pre-disaster mitigation thereof.**

STAPLEE Criteria → for Alternative Actions ↓	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)				
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance / Operations	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
Maintain good public relations between the citizens of Bacon County and the City of Alma and the Fire Department and plan to increase levels of awareness and resources during peak hazard conditions through the use of education sessions, community meetings, etc.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Order copies of NFPA-299 "Protection of Life and Property From Wildfire" and other publications for the use of Bacon County and the City of Alma and for public use	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Partner with the Georgia Forestry Commission to provide education to Bacon County and City of Alma communities and citizens on the pre-disaster mitigation of wildfire and use and develop grade school based programs to educate children	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Plan RFD meetings in Bacon County and the City of Alma and hold joint mock fire drills for all fire departments	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	



## 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.*

**Goal #1: Prevent or reduce damage caused by wildfire in Bacon County and the City of Alma.**

**Objective #3: Implement priorities, projects, and recommendations contained in GA Forestry Commission's "Community Wildfire Protection Plan".**

STAPLEE Criteria Considerations → for Alternative Actions ↓	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)				
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance / Operations	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
Create a minimum of 30 feet of defensible space around all governmental structures and recommend to homeowners and community stakeholders that they create same space through the trimming of shrubs, vines, and overhanging limbs, replacement of flammable plants with less flammable varieties, and removal of vegetation around chimneys	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Reduce structural ignitability by cleaning flammable vegetative materials from roofs and gutters, store firewood appropriately, install skirting around raised structures, store water hoses for easy access, and replace pine straw and mulch with less flammable landscaping materials around all governmental structures and recommend same to homeowners and community stakeholders	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	

STAPLEE Criteria Considerations → for Alternative Actions ↓	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)				
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance / Operations	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
Initiate Community Spring Clean Up Day and cut, prune, and mow vegetation in shared community spaces	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Ensure driveway access/right-of-way clearance by maintaining vertical and horizontal clearance for emergency equipment and seeing that adequate lengths of culverts are installed to allow emergency vehicle access	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Ensure road access by identifying needed road improvements, and as roads are upgraded, widen to minimum standards with at least 50-foot diameter cul-de-sacs or turnarounds	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	

STAPLEE Criteria Considerations → for Alternative Actions ↓	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)			
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance / Operations	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
Examine existing codes and ordinances and amend and enforce existing building codes as they relate to skirting, propane tank locations, public nuisances (trash/debris), property address marking standards, and other relevant concerns; at such time as the development of zoning, planning and subdivision ordinances become practical, include fire department and emergency services input into the design of these	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A
On adjacent WUI Lands, reduce hazardous fuels by encouraging prescribed burning (by permit) for private landowners and industrial timberlands, particularly adjacent to residential areas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A

STAPLEE Criteria Considerations → for Alternative Actions ↓	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)				
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance / Operations	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
Encourage railroads to better maintain their right-of-way, eliminating brush and grass through herbicide and mowing. Maintain firebreaks along right-of-way adjacent to residential areas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Improve existing fire lines/fire breaks by reducing hazardous fuels through the cleaning and re-harrowing of existing lines	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Inspect, maintain, and improve access to existing dry hydrants; add signage along roads to mark the hydrants	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Install elevated water tanks "drop tanks" with automatic cut-off valves for quick refilling of trucks	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	

STAPLEE Criteria → for Alternative Actions ↓	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)				
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance / Operations	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
Ensure all fire stations and firefighters are equipped with wildland hand tools and lightweight PPE gear (45 sets) and investigate need for brush trucks	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Maintain mobile generators to provide back-up power where needed	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Ensure that all personnel are trained in wildfire suppression	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Conduct "How to Have a Firewise Home" Workshop for Bacon County residents	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Conduct "Firewise" Workshop for Bacon County community leaders	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Develop and distribute Firewise informational packets to code enforcement, realtors and insurance agents	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	



STAPLEE Criteria Considerations → for Alternative Actions ↓	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)				
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance / Operations	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
Create and Exhibit a Wildfire Protection Display for the general public at the Blueberry Festival which usually runs in June. The display can be independent or combined with the GA Forestry Commission display	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Invite the Alma Times and Waycross Journal Herald to community "Firewise" functions for news coverage and regularly submit press releases documenting wildfire risk improvements in Bacon County	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	

## 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.

### Goal #1: Prevent or reduce damage caused by Drought in Bacon County and the City of Alma.

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

STAPLEE Criteria Considerations → for Alternative Actions ↓	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)				
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance / Operations	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
Maintain water and sewer lines and equipment prone to failure in unincorporated Bacon County and the City of Alma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Work with the County Extension Agent to distribute literature related to best management practices in Bacon County and the City of Alma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	

## 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.
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**Goal #1: Prevent or reduce damage caused by tornadoes in Bacon County and the City of Alma.**

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

STAPLEE Criteria Considerations → for Alternative Actions ↓	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)				
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance / Operations	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
Use building inspection program to inspect for adequate tie-downs on manufactured housing in Bacon County and the City of Alma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Plan for pre-disaster mitigation in tornado and other hazard seasons by preparing public service announcements, brochures and solicit business participation in distributing information	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Promote safe shelter rooms for residents in private facilities in Bacon County and the City of Alma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Educate the public and market hazardous weather alert systems such as sirens, weather radios, reverse call system, and Code Red in the City of Alma and in populated areas of Bacon County	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Develop grid pattern/address-based system to physically notify and check on high risk residents both before and after natural disaster events in the City of Alma and in populated areas of Bacon County	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	

## Worksheet #4 Evaluate Alternative Mitigation Actions

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**Goal #1: Prevent or reduce damage caused by hurricanes/tropical storms in Bacon County and the City of Alma.**

**Objective #1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, and the public, due to hurricanes/tropical storms.**

STAPLEE Criteria → for Alternative Actions ↓	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)				
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance / Operations	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
Assemble/supply a list of facilities that could be used as public shelters for emergency purposes and test current shelters for safety and effectiveness in Bacon County and the City of Alma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Work with GDOT to improve the designated SR-32 evacuation route, including 4-laning throughout Bacon County	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Seek funding for automated recorders and information line to educate and inform the public on hazardous weather information, closings, events, etc.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Cut made-to-fit plywood window covers and install construction materials necessary for use during hurricanes/tropical storms at Critical Facilities in Bacon County and the City of Alma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	



# Worksheet #4 Evaluate Alternative Mitigation Actions

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2. Fill in the alternative actions that address the specific objectives the planning team identified in Worksheet #1.
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## Goal #1: Prevent or reduce damage caused by hurricanes/tropical storms in Bacon County and the City of Alma.

### Objective #2: Advise the public of health and safety precautions and procedures necessary during hurricanes/tropical storms and other events, and on pre-disaster mitigation, in general, in Bacon County and the City of Alma.

STAPLEE Criteria Considerations → for Alternative Actions ↓	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)			
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance / Operations	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
Acquire and distribute literature from state agencies regarding disaster health and safety issues in Bacon County and the City of Alma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A
Distribute information concerning pre-disaster mitigation to area news markets and by speaking at schools and civic clubs in Bacon County and the City of Alma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A

## 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).
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**Goal #1: Prevent or reduce damage caused by hurricanes/tropical storms in Bacon County and the City of Alma.**

**Objective #3: Ensure reliable electrical power and communications efficiency at Critical Facilities and among agencies during hurricanes/tropical storms and other events in Bacon County and the City of Alma.**

STAPLEE Criteria Considerations → for Alternative Actions ↓	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)				
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance / Operations	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
Purchase portable generators and trailers for use at Critical Facilities including water plant [all 3,466 City of Alma residents], lift stations [all 3,466 City of Alma residents], school cafeteria and shelter [all 11,096 Bacon County residents], and nursing home [88 patients] and pre-wire Critical Facilities and gas pumps for generator use in Bacon County and the City of Alma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Purchase communications equipment (radios, pagers, batteries, and chargers) that have multi-channel capabilities. Store them at certain Critical Facilities in Bacon County and the City of Alma, including the area schools	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	

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## Goal #1: Prevent or reduce damage caused by hail in Bacon County and the City of Alma.

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

STAPLEE Criteria → for Alternative Actions ↓	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)				
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance / Operations	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
Install storm windows, or ballistic film, on new and existing Critical Facilities and promote their installation on new and existing private buildings in Bacon County and the City of Alma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Encourage public to include hail damage under insurance coverage and to store equipment and vehicles under shelters in Bacon County and the City of Alma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	

## 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.*

**Goal #1: Prevent or reduce damage caused by severe winter storms in Bacon County and the City of Alma.**

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

STAPLEE Criteria Considerations → for Alternative Actions ↓	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)				
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance / Operations	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
Continue the policy of wrapping exposed piping with insulation and installing new insulation layers at Critical Facilities in Bacon County and the City of Alma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Maintain temperatures above 32 degrees to prevent freezing in government-owned occupied and unoccupied structures in Bacon County and the City of Alma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	
Disseminate information to the public concerning severe winter storms, champion new construction being built to appropriate low temperature ratings, and champion existing buildings being retrofitted in Bacon County and the City of Alma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	



# **Appendix E**

# The Alma Times

## **PUBLIC NOTICE**

The Alma-Bacon Emergency Management Agency (EMA) invites the public to attend the Kick-off meeting for planning and updating our local Hazardous Mitigation Plan. This plan is renewed every five (5) years. We would welcome any input from our citizens and local business owners. Some of those who will be part of the planning group will be: Planning specialist from GEMA/HS (Georgia Emergency Management Agency/Homeland Security), County Commission Board, City Counsel, Mayor, City Manager, Fire/EMS, Sheriff, Police Chief, Hospital, Code Enforcement, Public Works, Forestry, School Board, Coastal Pines, and hopefully....you. The meeting will be for an hour on August 11, 2016 at 10:00 A.M. at the old High School Band Building located at 120 East 4<sup>th</sup> Street (New EOC/Training Building).

17906221291

# News Briefs

## Bacon EMA

### Public Hearing

The Bacon County Emergency Management Agency (EMA), in cooperation with the Southern Georgia Regional Commission (SGRC), invites the public to attend a Joint Public Hearing to review the Bacon County and City of Alma Hazard Mitigation Plan Update and provide an opportunity for public comment.

The plan update has been 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 will host a Public Hearing/Open House on Monday, November 6, 2017 at 6:00 p.m. at the meeting room at the Courthouse. Comments are being accepted by email at [agodwin@sgrc.us](mailto:agodwin@sgrc.us), by fax at 229-333-5312, or by mailing them to Bacon HMP, 327 W Savannah Ave., Valdosta, GA 31601.

The draft of the Plan is available on the SGRC website, [www.sgrc.us](http://www.sgrc.us). For more information please call Ariel Godwin, Regional Planner at 229-333-5277.

## Appling Junction Variety Show

The Appling County High School Choral Department announces upcoming performances of its popular country variety show — *Ap-*

*pling Junction*.

The shows will be on November 2 and 4 at 6:30 p.m. at the Appling County High School Fine Arts Center.

Advance tickets can be purchased by calling Karen Davis at 367-8610. Prices for advance tickets are \$5 for students and \$7 for adults. Pre-order sales end November 2 at 6 a.m. At the door, ticket prices will be \$7 for students and \$10 for adults.

## Bacon County Senior Adult Christmas Trip

The Bacon County Senior adults will take a Charleston Christmas Train Trip on December 9 for a day of lunch and shopping in historic downtown and the Charleston Christmas Show in the Charleston Theater. FMI call 632-8954.

## CPTC Golf Tournament

The annual CPTC golf tournament will be held Friday, October 20 at the Okefenokee Country Club. This event features teams playing a four-man scramble format. Sponsorships are available. Entry fees for the tourney are \$500 for a sponsored team and \$100 for a player. The fees include a golf cart and green fees, lunch, a snack/swag bag, a chance to win door prizes and a tee gift.

Registration on the day of the event begins at 11:00 a.m. at Okefenokee Country

Club with lunch served at 11:30 a.m. with a shotgun start at 12:30 p.m. Awards will immediately follow.

Awards will be given for top gross and net teams. Also, there will be prizes for the closest to the pin and the longest drive on certain holes.

Participants can register and pay online at <http://cptcfoundation.com/golf-tournament/>. Registrations can also be mailed to Coastal Pines Technical College Foundation, 1701 Carswell Avenue, Waycross, GA 31503. Attn: Melinda Laager

For further information on the tournament, call Melinda Laager at 912.424.3209 or email [mllaager@coastalpines.edu](mailto:mllaager@coastalpines.edu).

## Christmas in the Cross

The Okefenokee Heritage Center's Eighth Annual Christmas in the Cross Arts, Antiques, Crafts, and Collectibles Festival will be held December 2 and needs vendors for the event. To receive an application, please send an email to [christmasinthecross@gmail.com](mailto:christmasinthecross@gmail.com) or visit the OHC at 1460 N. August Avenue.

## Junior Naturalists

Environmental Specialist Kathi Murray invites young Okefenokee Swamp enthusiasts, ages 8-12, to join her on Saturday October 28 for unique, hands-on programs at the OSP. Programs introduce, enhance,

support and reinforce both public and home school instruction. Please call the OSP to register. \$20 per program.

## Historical Society

The Historical Society is open from 2 until 5 on Tuesdays. You may also call 632-5271 or 632-8450 to schedule a visit by request.

A new book, *Around Alma* by Michael Thompson is available for sale. This book produced by The Historical Society is a collection of articles written by Michael Thompson while he worked for The News Courier. They are all part of the history of this area and are available at The Historical Center and The Alma Times office for \$10 each.

## Taste of Christmas

Tickets for this much-anticipated annual event are on sale now. They are just \$20 and can be purchased at the Blueberry Barn and Cohen's of Alma. You may also email [awildes2012@gmail.com](mailto:awildes2012@gmail.com) or call (912) 288-0705 for more information.

The event, itself, will be held on Thursday, November 16, from 6 until 8:30 p.m. in the Staten Community Building, on Hwy. 32 East and Johnson Lake Road.

Food tasting, recipe book, craft demonstrations, door prizes and a silent auction will all be a part of the event. All proceeds go to South Georgia's Potters House for Women.

**Southern Georgia Regional Commission  
Bacon County Hazard Mitigation Plan Update**

Kick-off Meeting – August 11<sup>th</sup>, 2016

Name	Organization	Title	Email
Charley Medders	County Public Works	Supt.	Cmedders@baconcounty.org
Danny Turner	Bacon Co. EMA	Director	dturner@baconcounty.org
Shane Taylor	State Fire Marshal's Office	Investigator	staylor@sfm.ga.gov
Ariel Godwin	SGRC	Planner	agodwin@sgrc.us
June Medders	Alma Bacon Co EMA/ EMS/Fire Dept	Administrative Assistant	jmedders@baconcounty.org
HARVEY COLE JR	Alma Bacon Co FIRE/EMS	CAPTAIN	HCOLE@baconcounty.org
Scotty Boatright	Alma-Bacon Co. Fire/EMS	ASST. CHIEF	Sboatright@baconcounty.org
LEE A. HAGANS	BACON County COMMISSIONER	VICE-CHAIR	leeahagans@accessat.net
Shelley Harper	BC School System	A.P. BCPS	gladwin.harper@bcraiders.com
Mark Cochran	BC SO	Chief Deputy	mcochran@baconcounty.org

**Southern Georgia Regional Commission**  
**Bacon County Hazard Mitigation Plan Update**  
 Kick-off Meeting – August 11<sup>th</sup>, 2016

Name	Organization	Title	Email
Lonny Whitley	Satilla REMC	System Mgr.	LWhitley@satillaemc.com
Scott Taylor	Bacon BOE	Operations Dir.	scott.taylor@bcraiders.com
Bernard Cooks	Bacon Co. Sheriff's Office	Deputy Sheriff	bcooks@baconcounty.org
Al Crace	CITY OF ALMA CITY MANAGER	CITY MANAGER	AL.CRACE@ata.cc
Laine Reichert	BOE	Supt	laine.reichert@bcraiders.com
Carl Leggett	City of Alma	Public Works Dir.	carll@ata.cc
Dumondys	City of Alma	Mayor	almanager@ata.cc

**Southern Georgia Regional Commission**  
**Bacon County Hazard Mitigation Plan Update**  
 First Workshop – September 8<sup>th</sup>, 2016

<u>Name</u>	<u>Organization</u>	<u>Title</u>	<u>Email</u>
Shane Taylor	State Fire Marshal's Office	Investigator	staylor@baconcounty.org
Scotty Boatright	Alma-Bacon Co. Fire/EMS	Asst. chief	sboatright@baconcounty.org
Andy Hutto	Bacon Co. Commission	Chairman	andy@baconcounty.org
Luke Ayers	Bacon Co Sheriff's office	Chief Jailer	Will_Lukec@aol.com
Gary Taylor	City of Alma	Chief code enforcement <sup>office</sup>	GaryT@ATC.cc
Doug Miles	Bacon Co. Assessors	Chief Appraiser	Dmiles@BaconCounty.org
Pete Rawis	Ga Forestry Comm.	Chief Ranger	jprewis@gfc.state.ga.us
Chase Taylor	Fire/EMS	Firefighter	Chase Taylor1996.ct@gmail.com



**Southern Georgia Regional Commission  
Bacon County Hazard Mitigation Plan Update**

First Workshop – September 8<sup>th</sup>, 2016

Name	Organization	Title	Email
June Medders	EMA EMS & Fire	Admin Assist.	jmedders@baconcounty.org
Charley Medders	EMA / Road Dept	Deputy Director / Supt.	cmedders@baconcounty.org
Danny Turner	EMA	Director	dturner@baconcounty.org
MICHAEL TOOD	FIRE / EMS	LT. FF/P	MICHAELTOOD729@GMAIL.COM
Harlie Hall	E911	Interim Director	baconco911@gmail.com
Marylee Sweet	Bacon Co. Commissioners	County Clerk	marylee@baconcounty.org
Scott Taylor	Bacon Co. BOE	Ops Director	scott.taylor@beraiders.com
Kevin Ellis	Bacon Co Dev. Auth.	Director	kevinellis@atc.cc
Karen McCarty	Bacon Co Hospital	Eng. Mgmt Coord.	kmccarty@bchsi.org
Scott Manning	Alma P.D.	Detective/Lieutenant	smanning@accessatc.net



**Southern Georgia Regional Commission**  
**Bacon County Hazard Mitigation Plan Update**  
 First Workshop – September 8<sup>th</sup>, 2016

Name	Organization	Title	Email
Harvey Cole JR	ALMA BACON FIRE DEPT	CAPTAIN	HARVEYJR2003@YAHOO.COM
ANDY Smith	Alma Bacon Fire Dept	FF/Ems	
Bernard Cooks	Bacon Co. Sheriff's	Patrol Commander	bcooks@baconcounty.org

**Southern Georgia Regional Commission  
Bacon County Hazard Mitigation Plan Update**

Workshop #2 – October 13<sup>th</sup>, 2016

<u>Name</u>	<u>Organization</u>	<u>Title</u>	<u>Email</u>
Ariel Godwin	SGRC	Planner	agodwin@sgrc.us
Karen McCarty	Bacon Co. Hospital	Emergency COORDINATOR	kmccarty@bchsio.org
JOHN L. THORNTON	BACON CO COMM.	COMM. DIST 6	j.l.thornton44@y.ahen
Andy Hutto	Chairman - Bacon Co. Comm.	Chairman	andy@baconcounty.org
LEE A. HAGANS	VICE-CHAIR BACON CO. COMM.	Vice	leeahagans@accessate.net
Bradley Taylor	Fire Chief EMS Director	same	BTaylor@Baconcounty.org
Charley Mullens	Bacon public works EMA	Supt	Cmullens@baconcounty.org
Jerry Turvey	BACON CO COMM	COMM DIST 3	etwt@ATC.CC
Tim Ingram	Ingram & Assoc.	Engineer	tim@ingrameng.com



**Southern Georgia Regional Commission  
Bacon County Hazard Mitigation Plan Update**  
Workshop #3 – Nov. 10, 2016

Name	Organization	Title	Email
Roy King	Bacon County	Commissioner	
Kathleen King			
Chandy Matthews	Bacon County & EMB	Road Dept. <sup>EMB</sup> Deputy	Cmathews@baconcounty.org
Dannay Turner	EMA	Director	dturner@baconcounty.org
Kevin Ellis	Bacon Co Dev Auth	Director	kevinellis@etc.cc
LEE A. HAGANS	Bacon County Commissioner	Commissioner	leeahagans@accessetc.net
Andy Hutto	Chairman Bacon Co. Commission	Chairman	andy@baconcounty.org
Ardel Godwin	SGRC		
AL CRAIG	CITY of ALMA	CITY MANAGER	
JOHN THOMAS	DIST 6 Bacon Co. Comm 55100	Commissioner	jthomas460@yahoo.com
R. Dean Strickland	Alma-Bacon Co. Fire & EMS	Capt FF/Paramedic	
Amanda Towell	Alma-Bacon Co. Fire & EMS	FF / EMT-A	atowell85@yahoo.com
Clayton Adams	Alma-Bacon Co Fire & EMS	Student	





Southern Georgia Regional Commission  
 Bacon County and the City of Alma  
 Hazard Mitigation Plan Update – Workshop #4  
 January 12, 2017

Name	Organization	Title	Email
Ariel Godwin	SGRC	Planner	agodwin@sgrc.us
Billy Ray Oyst	maint FF		
Danny S-Turner	EMA	Director	dturner@bacon-county.org
<del>Walter Hagan</del>	<del>Bacon County Commission</del>	<del>Commissioner</del>	
Charley Medders	Road Dept. / EMA	Supt. / Det	Cmedders@baconcounty.org
Karen McCarty	Bacon Co. Hospital	SFT Eng COOR	kmcarty@bchs.org
Labe Wood	Bacon Co EMS / Fire	LT Param	medc8781@yahoo.com
Christopher Brady	Bacon Co EMS / Fire	FF / EMT	Chris.Brady1985@gmail.com
Andy Hutto	Bacon Co. Commission	Chairman	andy@baconcounty.org
Brent White	Fire & EMS	Asst Chief	Bwhite@Baconcounty.org
Shane Taylor	State Fire Marshal's Office	Investigation	staylor@sfm.ga.gov
Jimm Medders	EMA EMS Fire		jmedders@baconcounty.org





Southern Georgia Regional Commission  
 Bacon County and the City of Alma  
 Hazard Mitigation Plan Update – Workshop #5  
 February 9, 2017

Name	Organization	Title	Email
Karen McCarty	Bacon Co. Hospital	EMHP	kmccarty@bchsi.org
June Medders	EMA/EMS/Fire	Admin Assist	jmedders@baconcounty.org
Allana Taylor	EMS/Fire	Admin Assist	Ataylor@baconcounty.org
Ariel Godwin	SGRC	Planner	agodwin@sgrc.us
Garrett Altman	EMS/Fire	Asst. chief	galtman@baconcounty.org
Brent White	EMS/Fire	Asst Chief	Bwhite@baconcounty.org
Scotty Boatright	EMS/ Fire	CAPT FF-P	Sboatright@baconcounty.org
Cody Holland	ems/ fire	FF-P	baconfire80@yahoo.com
Darryl Turner	EMA Director	Director	dturner@baconcounty.org
Al Craver	City Manager	CITY of ALMA	
Charley Medders	EMA Deputy Director	Bacon County	cmedders@baconcounty.org
Marylee Swest	Bacon Co. Comm	County Clerk	marylee@baconcounty.org
Andy Hutto	Bacon Co. Comm.	Chairman	andy@baconcounty.org

**SIGN - IN SHEET**  
**Hazard Mitigation Plan Final Public Hearing**  
**Bacon County and City of Alma**  
**Monday, November 6, 2017**  
**6 PM**

NAME	ORGANIZATION	PHONE	E-MAIL
M. Deed Jones		912-548-7414	
Sammy Jones		288-9078	
J.R. Allen		632-5777	
Belinda		632-5777	
Priscilla		912-632-5852	
DANIEL GROSZKA	The News Courier	912 632 0085	
Loretta Hylton	SGRC	229-333-5277	lhylton@sgrc.us
Laura Crozier	The Alma Times	632-7201	editor@thealmatimes.com
Yvonne Staten	City of Alma	912-632-8072	
Rosie Williams	Council member	912-381-1566	
Jay St	Council member	912 332 2163	
Gov. Scott	Council member	912-632-4774	
Amanda Taylor		912-632-8072	
City Attorney	City Attorney		
Adrian	City Manager		
Sammy Murphy	City of Alma	912-218-3935	





# Board of Commissioners

502 West 12<sup>th</sup> Street, Suite 200

P.O. Box 356

Alma, Georgia 31510

Ph# 912-632-5214

Fax# 912-632-2757

<b>Chairman</b>	<b>Clerk</b>
Andy Hutto	Mary Lee Sweat
<b>Vice-Chairperson</b>	<b>Asst. Clerk</b>
John L. Thomas	Tasha Hill
<b>Board Members</b>	<b>Attorney</b>
Roy King	Jennifer E. Carver
Larry Smith	
Lee Hagans	
Jerry J. Turner	

Resolution no. \_\_\_\_\_

## RESOLUTION FOR ADOPTION OF BACON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, to be eligible for federal disaster assistance in the event of a presidentially declared disaster and mitigation assistance under the Hazard Mitigation Grant programs, local governments must have adopted or be actively developing a Hazard Mitigation Plan prepared in accordance with federal regulations promulgated pursuant to the Disaster Mitigation Act of 2000 ("the Act"); and

WHEREAS, Bacon County and the City of Alma, adopted the previous Bacon County Hazard Mitigation Plan Update in 2013; and

WHEREAS, the first plan was officially approved by GEMA and FEMA in 2008; and

WHEREAS, in accordance with the requirements of the Act, an updated plan is required to be submitted to FEMA through GEMA every five years; and

WHEREAS, the 2013 Plan Update will expire on December 11, 2018 and the new Hazard Mitigation Plan Update will become effective on December 12, 2018; and

WHEREAS, the Bacon County Emergency Management Agency, with the assistance of representatives from various other departments within Bacon County and the City of Alma, as well as volunteer and other non-governmental agencies, has developed an updated plan to meet these requirements; and

WHEREAS, the updated plan is titled the "Bacon County and City of Alma 2017 Hazard Mitigation Plan Update" (referred to hereafter as "the Plan"); and

WHEREAS, the Plan applies to unincorporated Bacon County and the City of Alma; and

WHEREAS, GEMA has notified the Bacon County Emergency Management Agency that the Plan satisfies the requirements of the Act;

BE IT THEREFORE RESOLVED that Bacon County, meeting in regular session, hereby adopts the Plan.

SO RESOLVED this 21<sup>st</sup> day of Nov., 2017.

By Andy Hutto  
Andy Hutto, County Commission Chair

Attest Mary Lee Sweat



**RESOLUTION FOR ADOPTION OF  
BACON COUNTY MULTI-JURISDICTIONAL  
HAZARD MITIGATION PLAN UPDATE**

WHEREAS, to be eligible for federal disaster assistance in the event of a presidentially declared disaster and mitigation assistance under the Hazard Mitigation Grant programs, local governments must have adopted or be actively developing a Hazard Mitigation Plan prepared in accordance with federal regulations promulgated pursuant to the Disaster Mitigation Act of 2000 ("the Act"); and

WHEREAS, Bacon County and the City of Alma, adopted the previous Bacon County Hazard Mitigation Plan Update in 2013; and

WHEREAS, the first plan was officially approved by GEMA and FEMA in 2008; and

WHEREAS, in accordance with the requirements of the Act, an updated plan is required to be submitted to FEMA through GEMA every five years; and

WHEREAS, the 2013 Plan Update will expire on December 11, 2018 and the new Hazard Mitigation Plan Update will become effective on December 12, 2018; and

WHEREAS, the Bacon County Emergency Management Agency, with the assistance of representatives from various other departments within Bacon County and the City of Alma, as well as volunteer and other non-governmental agencies, has developed an updated plan to meet these requirements; and

WHEREAS, the updated plan is titled the "Bacon County and City of Alma 2017 Hazard Mitigation Plan Update" (referred to hereafter as "the Plan"); and

WHEREAS, the Plan applies to unincorporated Bacon County and the City of Alma; and

WHEREAS, GEMA has notified the Bacon County Emergency Management Agency that the Plan satisfies the requirements of the Act;

BE IT THEREFORE RESOLVED that the City of Alma, meeting in regular session, hereby adopts the Plan.

SO RESOLVED this 6<sup>th</sup> day of Nov., 2017.

By   
Peggy Murphy  
Mayor

Attest 

# **Appendix F**

## Storm Events Database

### Search Results for Bacon County, Georgia

Event Types: [Flash Flood](#), [Flood](#)

Bacon county contains the following zones:

'[Bacon](#)'

8 events were reported between 01/01/1950 and 12/31/2016 (24472 days)

#### Summary Info:

Number of County/Zone areas affected:	2
Number of Days with Event:	8
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:	5
Number of Days with Event and Crop Damage:	0
Number of Event Types reported:	2

#### 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:  ▼

<u>Location</u>	<u>County/Zone</u>	<u>St.</u>	<u>Date</u>	<u>Time</u>	<u>I.Z.</u>	<u>Type</u>	<u>Mag</u>	<u>Dth</u>	<u>Inj</u>	<u>PrD</u>	<u>CrD</u>
Totals:								0	0	137.50K	0.00K
<a href="#">BACON (ZONE)</a>	BACON (ZONE)	GA	03/01/1998	00:01	EST	Flood		0	0	100.00K	0.00K
<a href="#">COUNTYWIDE</a>	BACON CO.	GA	03/08/1998	22:00	EST	Flash Flood		0	0	25.00K	0.00K
<a href="#">COUNTYWIDE</a>	BACON CO.	GA	09/29/1998	23:00	EST	Flash Flood		0	0	10.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	08/27/2002	15:20	EST	Flood		0	0	0.00K	0.00K
<a href="#">COUNTYWIDE</a>	BACON CO.	GA	03/07/2003	10:15	EST	Flash Flood		0	0	0.00K	0.00K
<a href="#">NORTH PORTION</a>	BACON CO.	GA	03/20/2003	16:00	EST	Flash Flood		0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	08/19/2013	23:30	EST-5	Flood		0	0	2.00K	0.00K
<a href="#">COFFEE</a>	BACON CO.	GA	06/10/2015	18:00	EST-5	Flood		0	0	0.50K	0.00K
Totals:								0	0	137.50K	0.00K



# Storm Events Database

## Search Results for Bacon County, Georgia

Event Types: [Thunderstorm Wind](#)

83 events were reported between 01/01/1967 and 12/31/2016 (18263 days)

### Summary Info:

Number of County/Zone areas affected:	1
Number of Days with Event:	67
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:	19
Number of Days with Event and Crop Damage:	1
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:

Sort By:

Location	County/Zone	St.	Date	Time	I.Z.	Type	Mag	Dth	Inj	PrD	CrD
Totals:								0	2	104.00K	1.50K
<a href="#">BACON CO.</a>	BACON CO.	GA	05/20/1969	18:00	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
<a href="#">BACON CO.</a>	BACON CO.	GA	08/04/1970	16:23	CST	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
<a href="#">BACON CO.</a>	BACON CO.	GA	01/15/1971	13:00	CST	Thunderstorm Wind	55 kts.	0	0	0.00K	0.00K
<a href="#">BACON CO.</a>	BACON CO.	GA	06/27/1972	14:22	CST	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
<a href="#">BACON CO.</a>	BACON CO.	GA	12/30/1973	13:30	CST	Thunderstorm Wind	55 kts.	0	0	0.00K	0.00K
<a href="#">BACON CO.</a>	BACON CO.	GA	05/03/1978	19:00	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
<a href="#">BACON CO.</a>	BACON CO.	GA	06/29/1978	16:00	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
<a href="#">BACON CO.</a>	BACON CO.	GA	07/06/1980	15:45	CST	Thunderstorm Wind	61 kts.	0	0	0.00K	0.00K
<a href="#">BACON CO.</a>	BACON CO.	GA	07/06/1980	16:15	CST	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
<a href="#">BACON CO.</a>	BACON CO.	GA	06/05/1981	18:58	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
<a href="#">BACON CO.</a>	BACON CO.	GA	06/16/1982	14:00	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
<a href="#">BACON CO.</a>	BACON CO.	GA	11/17/1986	12:45	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
<a href="#">BACON CO.</a>	BACON CO.	GA	05/23/1989	13:50	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
<a href="#">BACON CO.</a>	BACON CO.	GA	11/16/1989	00:35	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
<a href="#">BACON CO.</a>	BACON CO.	GA	11/16/1989	00:55	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
<a href="#">BACON CO.</a>	BACON CO.	GA	03/03/1991	05:00	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
<a href="#">BACON CO.</a>	BACON CO.	GA	03/03/1991	05:30	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
<a href="#">BACON CO.</a>	BACON CO.	GA	06/04/1991	19:00	CST	Thunderstorm Wind	0 kts.	0	2	0.00K	0.00K
<a href="#">Alma</a>	BACON CO.	GA	07/25/1995	17:32	EST	Thunderstorm Wind	0 kts.	0	0	0.50K	0.00K
<a href="#">BACON CO.</a>	BACON CO.	GA	11/07/1995	17:15	EST	Thunderstorm Wind	0 kts.	0	0	2.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	03/06/1996	16:00	EST	Thunderstorm Wind	60 kts.	0	0	0.00K	1.50K
<a href="#">ROCKINGHAM</a>	BACON CO.	GA	10/26/1997	16:00	EST	Thunderstorm Wind		0	0	2.50K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	02/28/1998	02:05	EST	Thunderstorm Wind		0	0	1.50K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	05/08/1998	13:30	EST	Thunderstorm Wind		0	0	2.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	06/05/1998	20:17	EST	Thunderstorm Wind		0	0	1.50K	0.00K
<a href="#">COFFEE</a>	BACON CO.	GA	06/27/1998	13:55	EST	Thunderstorm Wind		0	0	0.50K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	07/03/1998	18:49	EST	Thunderstorm Wind		0	0	1.50K	0.00K

<a href="#">ALMA</a>	BACON CO.	GA	08/24/1999	20:30	EST	Thunderstorm Wind		0	0	2.50K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	03/30/2000	07:28	EST	Thunderstorm Wind		0	0	1.50K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	06/21/2000	17:45	EST	Thunderstorm Wind		0	0	2.50K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	08/09/2000	16:30	EST	Thunderstorm Wind		0	0	1.50K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	08/09/2000	17:15	EST	Thunderstorm Wind		0	0	2.50K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	06/30/2001	15:45	EST	Thunderstorm Wind		0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	07/01/2001	15:00	EST	Thunderstorm Wind		0	0	3.50K	0.00K
<a href="#">COUNTYWIDE</a>	BACON CO.	GA	12/24/2002	10:40	EST	Thunderstorm Wind	58 kts. E	0	0	10.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	12/24/2002	10:50	EST	Thunderstorm Wind		0	0	50.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	12/24/2002	11:00	EST	Thunderstorm Wind		0	0	2.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	02/22/2003	11:30	EST	Thunderstorm Wind		0	0	10.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	05/02/2003	22:55	EST	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	05/11/2003	19:25	EST	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	07/29/2003	17:45	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	05/02/2004	16:11	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	07/15/2004	16:00	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	04/08/2006	15:30	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	05/10/2006	19:45	EST	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	06/28/2006	16:45	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	06/28/2006	16:49	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ROCKINGHAM</a>	BACON CO.	GA	02/25/2007	16:25	EST-5	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
<a href="#">ROCKINGHAM</a>	BACON CO.	GA	07/20/2007	17:30	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	08/11/2007	17:10	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	05/21/2008	03:20	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ROCKINGHAM</a>	BACON CO.	GA	07/05/2008	17:00	EST-5	Thunderstorm Wind	61 kts. EG	0	0	1.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	07/28/2008	15:48	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	07/28/2008	16:20	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	06/22/2009	16:45	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">NEW LACY</a>	BACON CO.	GA	12/02/2009	15:25	EST-5	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
<a href="#">(AMG)BACON CO ARPT A</a>	BACON CO.	GA	06/15/2010	20:10	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">(AMG)BACON CO ARPT A</a>	BACON CO.	GA	03/09/2011	15:53	EST-5	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	03/09/2011	16:22	EST-5	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
<a href="#">COFFEE</a>	BACON CO.	GA	05/27/2011	20:15	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">NEW LACY</a>	BACON CO.	GA	05/27/2011	20:15	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	02/24/2012	15:10	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">(AMG)BACON CO ARPT A</a>	BACON CO.	GA	02/24/2012	15:30	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ROCKINGHAM</a>	BACON CO.	GA	05/09/2012	15:50	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ROCKINGHAM</a>	BACON CO.	GA	07/10/2012	19:45	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ROCKINGHAM</a>	BACON CO.	GA	07/30/2012	20:30	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">NEW LACY</a>	BACON CO.	GA	07/30/2012	20:30	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">COFFEE</a>	BACON CO.	GA	06/25/2013	15:05	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	08/17/2013	19:05	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	06/22/2014	12:24	EST-5	Thunderstorm Wind	52 kts. MG	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	06/12/2015	15:55	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	06/12/2015	16:15	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ROCKINGHAM</a>	BACON CO.	GA	06/12/2015	16:15	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	06/17/2015	16:40	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	06/17/2015	16:45	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	07/02/2015	16:46	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">COFFEE</a>	BACON CO.	GA	07/02/2015	16:56	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	07/14/2015	14:55	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	08/28/2015	13:32	EST-5	Thunderstorm Wind	45 kts. EG	0	0	1.00K	0.00K
<a href="#">COFFEE</a>	BACON CO.	GA	02/16/2016	00:54	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">COFFEE</a>	BACON CO.	GA	04/01/2016	17:00	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	06/17/2016	19:28	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
<a href="#">ROCKINGHAM</a>	BACON CO.	GA	07/09/2016	18:00	EST-5	Thunderstorm Wind	45 kts. EG	0	0	2.00K	0.00K
Totals:								0	2	104.00K	1.50K

## Storm Events Database

### Search Results for Bacon County, Georgia

Event Types: [Wildfire](#)

Bacon county contains the following zones:

['Bacon'](#)

1 events were reported between 01/01/1997 and 11/21/2016 (7265 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:  ▼

<u>Location</u>	<u>County/Zone</u>	<u>St.</u>	<u>Date</u>	<u>Time</u>	<u>T.Z.</u>	<u>Type</u>	<u>Mag.</u>	<u>Dth</u>	<u>Inj</u>	<u>PrD</u>	<u>CrD</u>
Totals:								0	0	0.00K	0.00K
<a href="#">BACON (ZONE)</a>	BACON (ZONE)	GA	07/29/2014	14:00	EST-5	Wildfire		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

# Storm Events Database

## Search Results for Bacon County, Georgia

Event Types: [Drought](#)

Bacon county contains the following zones:

['Bacon'](#)

1 events were reported between 01/01/1997 and 12/31/2016 (7305 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:  ▼

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



# United States Drought Monitor

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## Tabular Data Archive

**Important Alert:** Due to a processing and dissemination error, an incorrect U.S. Drought Monitor map was posted this morning. A new map has posted and data and statistics are being updated all data will be posted by 10:30 CST. This new map posting at 9:30 CST supersedes the map posted this morning. We apologize for any inconvenience.

County:  Statistics type:  Legend

### Percent Area in U.S. Drought Monitor Categories

Show  entries

Search:

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2000-01-04	0.00	100.00	100.00	100.00	0.00	0.00
2000-01-11	0.00	100.00	100.00	100.00	0.00	0.00
2000-01-18	0.00	100.00	100.00	100.00	0.00	0.00
2000-01-25	0.00	100.00	100.00	100.00	0.00	0.00
2000-02-01	0.00	100.00	100.00	100.00	0.00	0.00
2000-02-08	0.00	100.00	100.00	100.00	0.00	0.00
2000-02-15	0.00	100.00	100.00	100.00	0.00	0.00
2000-02-22	0.00	100.00	100.00	100.00	0.00	0.00
2000-02-29	0.00	100.00	100.00	100.00	0.00	0.00
2000-03-07	0.00	100.00	100.00	100.00	0.00	0.00
2000-03-14	0.00	100.00	100.00	100.00	0.00	0.00
2000-03-21	0.00	100.00	100.00	100.00	0.00	0.00
2000-03-28	0.00	100.00	100.00	100.00	0.00	0.00
2000-04-04	0.00	100.00	100.00	100.00	0.00	0.00
2000-04-11	0.00	100.00	100.00	100.00	0.00	0.00
2000-04-18	0.00	100.00	100.00	100.00	0.00	0.00
2000-04-25	0.00	100.00	100.00	0.00	0.00	0.00
2000-05-02	0.00	100.00	100.00	0.00	0.00	0.00
2000-05-09	0.00	100.00	100.00	1.87	0.00	0.00
2000-05-16	0.00	100.00	100.00	100.00	0.00	0.00
2000-05-23	0.00	100.00	100.00	100.00	0.00	0.00
2000-05-30	0.00	100.00	100.00	100.00	0.00	0.00
2000-06-06	0.00	100.00	100.00	100.00	0.00	0.00
2000-06-13	0.00	100.00	100.00	100.00	100.00	7.40
2000-06-20	0.00	100.00	100.00	100.00	100.00	9.87
2000-06-27	0.00	100.00	100.00	100.00	100.00	9.85
2000-07-04	0.00	100.00	100.00	100.00	10.84	0.00
2000-07-11	0.00	100.00	100.00	100.00	100.00	0.00
2000-07-18	0.00	100.00	100.00	100.00	32.82	0.00
2000-07-25	0.00	100.00	100.00	100.00	0.00	0.00
2000-08-01	0.00	100.00	100.00	100.00	0.00	0.00
2000-08-08	0.00	100.00	100.00	0.00	0.00	0.00
2000-08-15	0.00	100.00	100.00	0.00	0.00	0.00
2000-08-22	0.00	100.00	83.68	0.00	0.00	0.00
2000-08-29	0.00	100.00	83.68	0.00	0.00	0.00
2000-09-05	0.00	100.00	83.68	0.00	0.00	0.00
2000-09-12	0.00	100.00	48.34	0.00	0.00	0.00
2000-09-19	44.33	55.67	0.00	0.00	0.00	0.00
2000-09-26	44.34	55.66	0.00	0.00	0.00	0.00



Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2000-10-03	44.34	55.66	0.00	0.00	0.00	0.00
2000-10-10	44.34	55.66	0.00	0.00	0.00	0.00
2000-10-17	31.39	68.61	0.00	0.00	0.00	0.00
2000-10-24	0.00	100.00	0.00	0.00	0.00	0.00
2000-10-31	0.00	100.00	77.11	0.00	0.00	0.00
2000-11-07	0.00	100.00	95.82	0.00	0.00	0.00
2000-11-14	0.00	100.00	95.82	0.00	0.00	0.00
2000-11-21	0.00	100.00	100.00	0.00	0.00	0.00
2000-11-28	0.00	100.00	99.21	0.00	0.00	0.00
2000-12-05	0.00	100.00	99.22	0.00	0.00	0.00
2000-12-12	0.00	100.00	99.19	0.00	0.00	0.00
2000-12-19	0.00	100.00	100.00	0.00	0.00	0.00
2000-12-26	0.00	100.00	100.00	0.00	0.00	0.00
2001-01-02	0.00	100.00	0.00	0.00	0.00	0.00
2001-01-09	0.00	100.00	0.00	0.00	0.00	0.00
2001-01-16	0.00	100.00	0.00	0.00	0.00	0.00
2001-01-23	0.00	100.00	0.00	0.00	0.00	0.00
2001-01-30	0.00	100.00	0.00	0.00	0.00	0.00
2001-02-06	0.00	100.00	0.00	0.00	0.00	0.00
2001-02-13	0.00	100.00	100.00	0.00	0.00	0.00
2001-02-20	0.00	100.00	100.00	0.00	0.00	0.00
2001-02-27	0.00	100.00	100.00	0.00	0.00	0.00
2001-03-06	0.00	100.00	100.00	0.00	0.00	0.00
2001-03-13	0.00	100.00	100.00	0.00	0.00	0.00
2001-03-20	0.00	100.00	100.00	0.00	0.00	0.00
2001-03-27	0.00	100.00	100.00	0.00	0.00	0.00
2001-04-03	0.00	100.00	100.00	0.00	0.00	0.00
2001-04-10	0.00	100.00	100.00	0.00	0.00	0.00
2001-04-17	0.00	100.00	100.00	0.00	0.00	0.00
2001-04-24	0.00	100.00	100.00	0.00	0.00	0.00
2001-05-01	0.00	100.00	100.00	0.00	0.00	0.00
2001-05-08	0.00	100.00	100.00	0.00	0.00	0.00
2001-05-15	0.00	100.00	100.00	100.00	0.00	0.00
2001-05-22	0.00	100.00	100.00	100.00	0.00	0.00
2001-05-29	0.00	100.00	100.00	100.00	0.00	0.00
2001-06-05	0.00	100.00	100.00	100.00	0.00	0.00
2001-06-12	0.00	100.00	100.00	0.00	0.00	0.00
2001-06-19	0.00	100.00	79.34	0.00	0.00	0.00
2001-06-26	0.00	100.00	79.34	0.00	0.00	0.00
2001-07-03	0.00	100.00	0.00	0.00	0.00	0.00
2001-07-10	97.68	2.32	0.00	0.00	0.00	0.00
2001-07-17	97.68	2.32	0.00	0.00	0.00	0.00
2001-07-24	97.67	2.33	0.00	0.00	0.00	0.00
2001-07-31	96.90	3.10	0.00	0.00	0.00	0.00
2001-08-07	100.00	0.00	0.00	0.00	0.00	0.00
2001-08-14	100.00	0.00	0.00	0.00	0.00	0.00
2001-08-21	100.00	0.00	0.00	0.00	0.00	0.00
2001-08-28	100.00	0.00	0.00	0.00	0.00	0.00
2001-09-04	100.00	0.00	0.00	0.00	0.00	0.00
2001-09-11	100.00	0.00	0.00	0.00	0.00	0.00
2001-09-18	100.00	0.00	0.00	0.00	0.00	0.00
2001-09-25	100.00	0.00	0.00	0.00	0.00	0.00
2001-10-02	100.00	0.00	0.00	0.00	0.00	0.00
2001-10-09	100.00	0.00	0.00	0.00	0.00	0.00
2001-10-16	100.00	0.00	0.00	0.00	0.00	0.00

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2001-10-23	57.64	42.36	0.00	0.00	0.00	0.00
2001-10-30	0.00	100.00	44.15	0.00	0.00	0.00
2001-11-06	0.00	100.00	80.25	0.00	0.00	0.00
2001-11-13	0.00	100.00	100.00	0.00	0.00	0.00
2001-11-20	0.00	100.00	100.00	0.00	0.00	0.00
2001-11-27	0.00	100.00	100.00	0.00	0.00	0.00
2001-12-04	0.00	100.00	100.00	0.00	0.00	0.00
2001-12-11	0.00	100.00	100.00	0.00	0.00	0.00
2001-12-18	0.00	100.00	100.00	0.00	0.00	0.00
2001-12-25	0.00	100.00	100.00	0.00	0.00	0.00
2002-01-01	0.00	100.00	100.00	100.00	0.00	0.00
2002-01-08	0.00	100.00	100.00	100.00	0.00	0.00
2002-01-15	0.00	100.00	100.00	3.98	0.00	0.00
2002-01-22	0.00	100.00	100.00	0.21	0.00	0.00
2002-01-29	0.00	100.00	100.00	4.83	0.00	0.00
2002-02-05	0.00	100.00	100.00	3.17	0.00	0.00
2002-02-12	0.00	100.00	100.00	100.00	0.00	0.00
2002-02-19	0.00	100.00	100.00	100.00	0.00	0.00
2002-02-26	0.00	100.00	100.00	100.00	0.00	0.00
2002-03-05	0.00	100.00	100.00	13.39	0.00	0.00
2002-03-12	0.00	100.00	100.00	19.24	0.00	0.00
2002-03-19	0.00	100.00	100.00	52.85	0.00	0.00
2002-03-26	0.00	100.00	100.00	99.23	0.00	0.00
2002-04-02	0.00	100.00	100.00	92.20	0.00	0.00
2002-04-09	0.00	100.00	100.00	91.29	0.00	0.00
2002-04-16	0.00	100.00	100.00	100.00	0.00	0.00
2002-04-23	0.00	100.00	100.00	100.00	0.00	0.00
2002-04-30	0.00	100.00	100.00	100.00	0.00	0.00
2002-05-07	0.00	100.00	100.00	100.00	0.00	0.00
2002-05-14	0.00	100.00	100.00	100.00	27.08	0.00
2002-05-21	0.00	100.00	100.00	100.00	98.48	0.00
2002-05-28	0.00	100.00	100.00	100.00	66.37	0.00
2002-06-04	0.00	100.00	100.00	100.00	85.69	0.00
2002-06-11	0.00	100.00	100.00	100.00	98.00	0.00
2002-06-18	0.00	100.00	100.00	100.00	88.07	0.00
2002-06-25	0.00	100.00	100.00	100.00	0.78	0.00
2002-07-02	0.00	100.00	100.00	100.00	0.66	0.00
2002-07-09	0.00	100.00	100.00	100.00	0.00	0.00
2002-07-16	0.00	100.00	100.00	100.00	2.36	0.00
2002-07-23	0.00	100.00	100.00	100.00	0.00	0.00
2002-07-30	0.00	100.00	100.00	0.00	0.00	0.00
2002-08-06	0.00	100.00	99.97	0.11	0.00	0.00
2002-08-13	0.00	100.00	100.00	2.07	0.00	0.00
2002-08-20	0.00	100.00	100.00	8.82	0.00	0.00
2002-08-27	0.00	100.00	100.00	3.97	0.00	0.00
2002-09-03	0.00	100.00	100.00	0.00	0.00	0.00
2002-09-10	0.00	100.00	100.00	0.12	0.00	0.00
2002-09-17	0.00	100.00	4.28	0.00	0.00	0.00
2002-09-24	0.00	100.00	0.00	0.00	0.00	0.00
2002-10-01	0.00	100.00	30.19	0.00	0.00	0.00
2002-10-08	0.00	100.00	100.00	0.00	0.00	0.00
2002-10-15	0.00	100.00	100.00	0.00	0.00	0.00
2002-10-22	0.00	100.00	100.00	0.00	0.00	0.00
2002-10-29	0.00	100.00	98.63	0.00	0.00	0.00
2002-11-05	0.00	100.00	99.72	0.00	0.00	0.00

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2002-11-12	0.00	100.00	50.18	0.00	0.00	0.00
2002-11-19	0.00	100.00	80.16	0.00	0.00	0.00
2002-11-26	0.00	100.00	48.95	0.00	0.00	0.00
2002-12-03	0.00	100.00	60.94	0.00	0.00	0.00
2002-12-10	0.00	100.00	55.49	0.00	0.00	0.00
2002-12-17	0.00	100.00	0.00	0.00	0.00	0.00
2002-12-24	0.00	100.00	0.00	0.00	0.00	0.00
2002-12-31	0.00	100.00	0.00	0.00	0.00	0.00
2003-01-07	0.00	100.00	0.00	0.00	0.00	0.00
2003-01-14	0.00	100.00	0.00	0.00	0.00	0.00
2003-01-21	0.00	100.00	0.00	0.00	0.00	0.00
2003-01-28	0.00	100.00	0.00	0.00	0.00	0.00
2003-02-04	0.00	100.00	0.00	0.00	0.00	0.00
2003-02-11	0.00	100.00	0.00	0.00	0.00	0.00
2003-02-18	0.00	100.00	0.00	0.00	0.00	0.00
2003-02-25	0.00	100.00	0.00	0.00	0.00	0.00
2003-03-04	0.00	100.00	0.00	0.00	0.00	0.00
2003-03-11	100.00	0.00	0.00	0.00	0.00	0.00
2003-03-18	100.00	0.00	0.00	0.00	0.00	0.00
2003-03-25	100.00	0.00	0.00	0.00	0.00	0.00
2003-04-01	100.00	0.00	0.00	0.00	0.00	0.00
2003-04-08	100.00	0.00	0.00	0.00	0.00	0.00
2003-04-15	100.00	0.00	0.00	0.00	0.00	0.00
2003-04-22	100.00	0.00	0.00	0.00	0.00	0.00
2003-04-29	100.00	0.00	0.00	0.00	0.00	0.00
2003-05-06	100.00	0.00	0.00	0.00	0.00	0.00
2003-05-13	100.00	0.00	0.00	0.00	0.00	0.00
2003-05-20	100.00	0.00	0.00	0.00	0.00	0.00
2003-05-27	100.00	0.00	0.00	0.00	0.00	0.00
2003-06-03	100.00	0.00	0.00	0.00	0.00	0.00
2003-06-10	100.00	0.00	0.00	0.00	0.00	0.00
2003-06-17	100.00	0.00	0.00	0.00	0.00	0.00
2003-06-24	100.00	0.00	0.00	0.00	0.00	0.00
2003-07-01	100.00	0.00	0.00	0.00	0.00	0.00
2003-07-08	100.00	0.00	0.00	0.00	0.00	0.00
2003-07-15	100.00	0.00	0.00	0.00	0.00	0.00
2003-07-22	100.00	0.00	0.00	0.00	0.00	0.00
2003-07-29	100.00	0.00	0.00	0.00	0.00	0.00
2003-08-05	100.00	0.00	0.00	0.00	0.00	0.00
2003-08-12	100.00	0.00	0.00	0.00	0.00	0.00
2003-08-19	100.00	0.00	0.00	0.00	0.00	0.00
2003-08-26	100.00	0.00	0.00	0.00	0.00	0.00
2003-09-02	100.00	0.00	0.00	0.00	0.00	0.00
2003-09-09	100.00	0.00	0.00	0.00	0.00	0.00
2003-09-16	100.00	0.00	0.00	0.00	0.00	0.00
2003-09-23	100.00	0.00	0.00	0.00	0.00	0.00
2003-09-30	100.00	0.00	0.00	0.00	0.00	0.00
2003-10-07	100.00	0.00	0.00	0.00	0.00	0.00
2003-10-14	100.00	0.00	0.00	0.00	0.00	0.00
2003-10-21	100.00	0.00	0.00	0.00	0.00	0.00
2003-10-28	100.00	0.00	0.00	0.00	0.00	0.00
2003-11-04	100.00	0.00	0.00	0.00	0.00	0.00
2003-11-11	100.00	0.00	0.00	0.00	0.00	0.00
2003-11-18	100.00	0.00	0.00	0.00	0.00	0.00
2003-11-25	100.00	0.00	0.00	0.00	0.00	0.00

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2003-12-02	100.00	0.00	0.00	0.00	0.00	0.00
2003-12-09	100.00	0.00	0.00	0.00	0.00	0.00
2003-12-16	100.00	0.00	0.00	0.00	0.00	0.00
2003-12-23	100.00	0.00	0.00	0.00	0.00	0.00
2003-12-30	100.00	0.00	0.00	0.00	0.00	0.00
2004-01-06	100.00	0.00	0.00	0.00	0.00	0.00
2004-01-13	100.00	0.00	0.00	0.00	0.00	0.00
2004-01-20	100.00	0.00	0.00	0.00	0.00	0.00
2004-01-27	100.00	0.00	0.00	0.00	0.00	0.00
2004-02-03	100.00	0.00	0.00	0.00	0.00	0.00
2004-02-10	100.00	0.00	0.00	0.00	0.00	0.00
2004-02-17	100.00	0.00	0.00	0.00	0.00	0.00
2004-02-24	100.00	0.00	0.00	0.00	0.00	0.00
2004-03-02	100.00	0.00	0.00	0.00	0.00	0.00
2004-03-09	100.00	0.00	0.00	0.00	0.00	0.00
2004-03-16	100.00	0.00	0.00	0.00	0.00	0.00
2004-03-23	0.00	100.00	0.00	0.00	0.00	0.00
2004-03-30	0.00	100.00	0.00	0.00	0.00	0.00
2004-04-06	0.00	100.00	0.00	0.00	0.00	0.00
2004-04-13	0.00	100.00	0.00	0.00	0.00	0.00
2004-04-20	0.00	100.00	0.00	0.00	0.00	0.00
2004-04-27	0.00	100.00	0.00	0.00	0.00	0.00
2004-05-04	0.00	100.00	0.00	0.00	0.00	0.00
2004-05-11	0.00	100.00	0.00	0.00	0.00	0.00
2004-05-18	0.00	100.00	0.00	0.00	0.00	0.00
2004-05-25	0.00	100.00	100.00	0.00	0.00	0.00
2004-06-01	0.00	100.00	100.00	0.00	0.00	0.00
2004-06-08	0.00	100.00	100.00	100.00	0.00	0.00
2004-06-15	0.00	100.00	100.00	21.29	0.00	0.00
2004-06-22	0.00	100.00	100.00	0.00	0.00	0.00
2004-06-29	0.00	100.00	0.00	0.00	0.00	0.00
2004-07-06	100.00	0.00	0.00	0.00	0.00	0.00
2004-07-13	100.00	0.00	0.00	0.00	0.00	0.00
2004-07-20	100.00	0.00	0.00	0.00	0.00	0.00
2004-07-27	100.00	0.00	0.00	0.00	0.00	0.00
2004-08-03	100.00	0.00	0.00	0.00	0.00	0.00
2004-08-10	0.00	100.00	0.00	0.00	0.00	0.00
2004-08-17	100.00	0.00	0.00	0.00	0.00	0.00
2004-08-24	100.00	0.00	0.00	0.00	0.00	0.00
2004-08-31	100.00	0.00	0.00	0.00	0.00	0.00
2004-09-07	100.00	0.00	0.00	0.00	0.00	0.00
2004-09-14	100.00	0.00	0.00	0.00	0.00	0.00
2004-09-21	100.00	0.00	0.00	0.00	0.00	0.00
2004-09-28	100.00	0.00	0.00	0.00	0.00	0.00
2004-10-05	100.00	0.00	0.00	0.00	0.00	0.00
2004-10-12	100.00	0.00	0.00	0.00	0.00	0.00
2004-10-19	100.00	0.00	0.00	0.00	0.00	0.00
2004-10-26	100.00	0.00	0.00	0.00	0.00	0.00
2004-11-02	100.00	0.00	0.00	0.00	0.00	0.00
2004-11-09	100.00	0.00	0.00	0.00	0.00	0.00
2004-11-16	100.00	0.00	0.00	0.00	0.00	0.00
2004-11-23	100.00	0.00	0.00	0.00	0.00	0.00
2004-11-30	100.00	0.00	0.00	0.00	0.00	0.00
2004-12-07	100.00	0.00	0.00	0.00	0.00	0.00
2004-12-14	100.00	0.00	0.00	0.00	0.00	0.00

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2004-12-21	100.00	0.00	0.00	0.00	0.00	0.00
2004-12-28	100.00	0.00	0.00	0.00	0.00	0.00
2005-01-04	100.00	0.00	0.00	0.00	0.00	0.00
2005-01-11	100.00	0.00	0.00	0.00	0.00	0.00
2005-01-18	100.00	0.00	0.00	0.00	0.00	0.00
2005-01-25	100.00	0.00	0.00	0.00	0.00	0.00
2005-02-01	100.00	0.00	0.00	0.00	0.00	0.00
2005-02-08	100.00	0.00	0.00	0.00	0.00	0.00
2005-02-15	100.00	0.00	0.00	0.00	0.00	0.00
2005-02-22	100.00	0.00	0.00	0.00	0.00	0.00
2005-03-01	100.00	0.00	0.00	0.00	0.00	0.00
2005-03-08	100.00	0.00	0.00	0.00	0.00	0.00
2005-03-15	100.00	0.00	0.00	0.00	0.00	0.00
2005-03-22	100.00	0.00	0.00	0.00	0.00	0.00
2005-03-29	100.00	0.00	0.00	0.00	0.00	0.00
2005-04-05	100.00	0.00	0.00	0.00	0.00	0.00
2005-04-12	100.00	0.00	0.00	0.00	0.00	0.00
2005-04-19	100.00	0.00	0.00	0.00	0.00	0.00
2005-04-26	100.00	0.00	0.00	0.00	0.00	0.00
2005-05-03	100.00	0.00	0.00	0.00	0.00	0.00
2005-05-10	100.00	0.00	0.00	0.00	0.00	0.00
2005-05-17	100.00	0.00	0.00	0.00	0.00	0.00
2005-05-24	100.00	0.00	0.00	0.00	0.00	0.00
2005-05-31	100.00	0.00	0.00	0.00	0.00	0.00
2005-06-07	100.00	0.00	0.00	0.00	0.00	0.00
2005-06-14	100.00	0.00	0.00	0.00	0.00	0.00
2005-06-21	100.00	0.00	0.00	0.00	0.00	0.00
2005-06-28	100.00	0.00	0.00	0.00	0.00	0.00
2005-07-05	100.00	0.00	0.00	0.00	0.00	0.00
2005-07-12	100.00	0.00	0.00	0.00	0.00	0.00
2005-07-19	100.00	0.00	0.00	0.00	0.00	0.00
2005-07-26	100.00	0.00	0.00	0.00	0.00	0.00
2005-08-02	100.00	0.00	0.00	0.00	0.00	0.00
2005-08-09	100.00	0.00	0.00	0.00	0.00	0.00
2005-08-16	100.00	0.00	0.00	0.00	0.00	0.00
2005-08-23	100.00	0.00	0.00	0.00	0.00	0.00
2005-08-30	100.00	0.00	0.00	0.00	0.00	0.00
2005-09-06	100.00	0.00	0.00	0.00	0.00	0.00
2005-09-13	100.00	0.00	0.00	0.00	0.00	0.00
2005-09-20	100.00	0.00	0.00	0.00	0.00	0.00
2005-09-27	100.00	0.00	0.00	0.00	0.00	0.00
2005-10-04	100.00	0.00	0.00	0.00	0.00	0.00
2005-10-11	100.00	0.00	0.00	0.00	0.00	0.00
2005-10-18	100.00	0.00	0.00	0.00	0.00	0.00
2005-10-25	100.00	0.00	0.00	0.00	0.00	0.00
2005-11-01	100.00	0.00	0.00	0.00	0.00	0.00
2005-11-08	100.00	0.00	0.00	0.00	0.00	0.00
2005-11-15	100.00	0.00	0.00	0.00	0.00	0.00
2005-11-22	100.00	0.00	0.00	0.00	0.00	0.00
2005-11-29	100.00	0.00	0.00	0.00	0.00	0.00
2005-12-06	100.00	0.00	0.00	0.00	0.00	0.00
2005-12-13	100.00	0.00	0.00	0.00	0.00	0.00
2005-12-20	100.00	0.00	0.00	0.00	0.00	0.00
2005-12-27	100.00	0.00	0.00	0.00	0.00	0.00
2006-01-03	100.00	0.00	0.00	0.00	0.00	0.00



Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2006-01-10	100.00	0.00	0.00	0.00	0.00	0.00
2006-01-17	100.00	0.00	0.00	0.00	0.00	0.00
2006-01-24	100.00	0.00	0.00	0.00	0.00	0.00
2006-01-31	100.00	0.00	0.00	0.00	0.00	0.00
2006-02-07	100.00	0.00	0.00	0.00	0.00	0.00
2006-02-14	100.00	0.00	0.00	0.00	0.00	0.00
2006-02-21	100.00	0.00	0.00	0.00	0.00	0.00
2006-02-28	100.00	0.00	0.00	0.00	0.00	0.00
2006-03-07	100.00	0.00	0.00	0.00	0.00	0.00
2006-03-14	100.00	0.00	0.00	0.00	0.00	0.00
2006-03-21	100.00	0.00	0.00	0.00	0.00	0.00
2006-03-28	100.00	0.00	0.00	0.00	0.00	0.00
2006-04-04	100.00	0.00	0.00	0.00	0.00	0.00
2006-04-11	100.00	0.00	0.00	0.00	0.00	0.00
2006-04-18	100.00	0.00	0.00	0.00	0.00	0.00
2006-04-25	100.00	0.00	0.00	0.00	0.00	0.00
2006-05-02	100.00	0.00	0.00	0.00	0.00	0.00
2006-05-09	100.00	0.00	0.00	0.00	0.00	0.00
2006-05-16	100.00	0.00	0.00	0.00	0.00	0.00
2006-05-23	100.00	0.00	0.00	0.00	0.00	0.00
2006-05-30	100.00	0.00	0.00	0.00	0.00	0.00
2006-06-06	16.20	83.80	0.00	0.00	0.00	0.00
2006-06-13	83.99	16.01	0.00	0.00	0.00	0.00
2006-06-20	83.99	16.01	0.00	0.00	0.00	0.00
2006-06-27	99.66	0.34	0.00	0.00	0.00	0.00
2006-07-04	100.00	0.00	0.00	0.00	0.00	0.00
2006-07-11	0.00	100.00	0.00	0.00	0.00	0.00
2006-07-18	0.00	100.00	0.00	0.00	0.00	0.00
2006-07-25	0.00	100.00	0.00	0.00	0.00	0.00
2006-08-01	0.00	100.00	0.00	0.00	0.00	0.00
2006-08-08	0.00	100.00	1.61	0.00	0.00	0.00
2006-08-15	0.00	100.00	0.00	0.00	0.00	0.00
2006-08-22	0.00	100.00	100.00	0.00	0.00	0.00
2006-08-29	0.00	100.00	65.53	0.00	0.00	0.00
2006-09-05	0.00	100.00	65.53	0.00	0.00	0.00
2006-09-12	0.00	100.00	0.00	0.00	0.00	0.00
2006-09-19	0.00	100.00	0.00	0.00	0.00	0.00
2006-09-26	0.00	100.00	0.00	0.00	0.00	0.00
2006-10-03	0.00	100.00	99.03	0.00	0.00	0.00
2006-10-10	0.00	100.00	100.00	0.00	0.00	0.00
2006-10-17	0.00	100.00	100.00	0.00	0.00	0.00
2006-10-24	0.00	100.00	100.00	0.00	0.00	0.00
2006-10-31	0.00	100.00	100.00	0.00	0.00	0.00
2006-11-07	0.00	100.00	100.00	0.00	0.00	0.00
2006-11-14	0.00	100.00	100.00	0.00	0.00	0.00
2006-11-21	0.00	100.00	27.87	0.00	0.00	0.00
2006-11-28	69.49	30.51	0.00	0.00	0.00	0.00
2006-12-05	3.04	96.96	0.00	0.00	0.00	0.00
2006-12-12	0.00	100.00	0.44	0.00	0.00	0.00
2006-12-19	0.00	100.00	0.44	0.00	0.00	0.00
2006-12-26	0.00	100.00	0.44	0.00	0.00	0.00
2007-01-02	0.00	100.00	0.00	0.00	0.00	0.00
2007-01-09	0.00	100.00	0.00	0.00	0.00	0.00
2007-01-16	0.00	100.00	0.00	0.00	0.00	0.00
2007-01-23	0.00	100.00	0.00	0.00	0.00	0.00

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2007-01-30	0.00	100.00	0.00	0.00	0.00	0.00
2007-02-06	41.75	58.25	0.00	0.00	0.00	0.00
2007-02-13	41.75	58.25	0.00	0.00	0.00	0.00
2007-02-20	41.75	58.25	0.00	0.00	0.00	0.00
2007-02-27	41.75	58.25	0.00	0.00	0.00	0.00
2007-03-06	89.32	10.68	0.00	0.00	0.00	0.00
2007-03-13	89.32	10.68	0.00	0.00	0.00	0.00
2007-03-20	0.00	100.00	0.00	0.00	0.00	0.00
2007-03-27	0.00	100.00	0.00	0.00	0.00	0.00
2007-04-03	0.00	100.00	100.00	0.00	0.00	0.00
2007-04-10	0.00	100.00	100.00	0.00	0.00	0.00
2007-04-17	0.00	100.00	100.00	44.01	0.00	0.00
2007-04-24	0.00	100.00	100.00	100.00	99.26	0.00
2007-05-01	0.00	100.00	100.00	100.00	100.00	0.00
2007-05-08	0.00	100.00	100.00	100.00	100.00	0.00
2007-05-15	0.00	100.00	100.00	100.00	100.00	0.00
2007-05-22	0.00	100.00	100.00	100.00	100.00	0.00
2007-05-29	0.00	100.00	100.00	100.00	100.00	0.00
2007-06-05	0.00	100.00	100.00	100.00	0.00	0.00
2007-06-12	0.00	100.00	100.00	100.00	0.00	0.00
2007-06-19	0.00	100.00	100.00	100.00	0.00	0.00
2007-06-26	0.00	100.00	100.00	100.00	0.00	0.00
2007-07-03	0.00	100.00	100.00	100.00	0.00	0.00
2007-07-10	0.00	100.00	100.00	100.00	0.00	0.00
2007-07-17	0.00	100.00	100.00	100.00	0.00	0.00
2007-07-24	0.00	100.00	100.00	100.00	0.00	0.00
2007-07-31	0.00	100.00	100.00	100.00	0.00	0.00
2007-08-07	0.00	100.00	100.00	0.00	0.00	0.00
2007-08-14	0.00	100.00	63.25	0.00	0.00	0.00
2007-08-21	0.00	100.00	66.86	0.00	0.00	0.00
2007-08-28	0.00	100.00	100.00	0.00	0.00	0.00
2007-09-04	22.23	77.77	0.00	0.00	0.00	0.00
2007-09-11	22.23	77.77	0.00	0.00	0.00	0.00
2007-09-18	42.89	57.11	0.00	0.00	0.00	0.00
2007-09-25	100.00	0.00	0.00	0.00	0.00	0.00
2007-10-02	100.00	0.00	0.00	0.00	0.00	0.00
2007-10-09	100.00	0.00	0.00	0.00	0.00	0.00
2007-10-16	100.00	0.00	0.00	0.00	0.00	0.00
2007-10-23	100.00	0.00	0.00	0.00	0.00	0.00
2007-10-30	100.00	0.00	0.00	0.00	0.00	0.00
2007-11-06	100.00	0.00	0.00	0.00	0.00	0.00
2007-11-13	0.00	100.00	0.00	0.00	0.00	0.00
2007-11-20	0.00	100.00	0.00	0.00	0.00	0.00
2007-11-27	0.00	100.00	0.00	0.00	0.00	0.00
2007-12-04	0.00	100.00	0.00	0.00	0.00	0.00
2007-12-11	0.00	100.00	0.00	0.00	0.00	0.00
2007-12-18	0.00	100.00	0.00	0.00	0.00	0.00
2007-12-25	0.00	100.00	0.00	0.00	0.00	0.00
2008-01-01	0.00	100.00	0.00	0.00	0.00	0.00
2008-01-08	0.00	100.00	0.00	0.00	0.00	0.00
2008-01-15	0.00	100.00	0.00	0.00	0.00	0.00
2008-01-22	0.00	100.00	0.00	0.00	0.00	0.00
2008-01-29	0.00	100.00	0.00	0.00	0.00	0.00
2008-02-05	0.00	100.00	0.00	0.00	0.00	0.00
2008-02-12	0.00	100.00	0.00	0.00	0.00	0.00

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2008-02-19	0.00	100.00	0.00	0.00	0.00	0.00
2008-02-26	100.00	0.00	0.00	0.00	0.00	0.00
2008-03-04	100.00	0.00	0.00	0.00	0.00	0.00
2008-03-11	100.00	0.00	0.00	0.00	0.00	0.00
2008-03-18	100.00	0.00	0.00	0.00	0.00	0.00
2008-03-25	100.00	0.00	0.00	0.00	0.00	0.00
2008-04-01	100.00	0.00	0.00	0.00	0.00	0.00
2008-04-08	100.00	0.00	0.00	0.00	0.00	0.00
2008-04-15	100.00	0.00	0.00	0.00	0.00	0.00
2008-04-22	71.96	28.04	0.00	0.00	0.00	0.00
2008-04-29	71.96	28.04	0.00	0.00	0.00	0.00
2008-05-06	71.96	28.04	0.00	0.00	0.00	0.00
2008-05-13	100.00	0.00	0.00	0.00	0.00	0.00
2008-05-20	60.03	39.97	0.00	0.00	0.00	0.00
2008-05-27	60.03	39.97	0.00	0.00	0.00	0.00
2008-06-03	89.92	10.08	0.00	0.00	0.00	0.00
2008-06-10	89.92	10.08	0.00	0.00	0.00	0.00
2008-06-17	89.93	10.07	0.00	0.00	0.00	0.00
2008-06-24	92.65	7.35	0.00	0.00	0.00	0.00
2008-07-01	92.65	7.35	0.00	0.00	0.00	0.00
2008-07-08	92.65	7.35	0.00	0.00	0.00	0.00
2008-07-15	0.00	100.00	0.00	0.00	0.00	0.00
2008-07-22	0.00	100.00	68.78	0.00	0.00	0.00
2008-07-29	0.00	100.00	68.78	0.00	0.00	0.00
2008-08-05	0.00	100.00	68.78	0.00	0.00	0.00
2008-08-12	0.00	100.00	100.00	73.62	0.00	0.00
2008-08-19	0.00	100.00	100.00	73.62	0.00	0.00
2008-08-26	0.00	100.00	7.28	0.00	0.00	0.00
2008-09-02	0.00	100.00	7.28	0.00	0.00	0.00
2008-09-09	0.00	100.00	7.28	0.00	0.00	0.00
2008-09-16	0.00	100.00	7.28	0.00	0.00	0.00
2008-09-23	0.00	100.00	7.28	0.00	0.00	0.00
2008-09-30	0.00	100.00	100.00	0.00	0.00	0.00
2008-10-07	0.00	100.00	100.00	0.00	0.00	0.00
2008-10-14	0.00	100.00	100.00	0.00	0.00	0.00
2008-10-21	0.00	100.00	100.00	0.00	0.00	0.00
2008-10-28	0.00	100.00	0.00	0.00	0.00	0.00
2008-11-04	0.00	100.00	0.00	0.00	0.00	0.00
2008-11-11	0.00	100.00	0.00	0.00	0.00	0.00
2008-11-18	0.00	100.00	0.00	0.00	0.00	0.00
2008-11-25	0.00	100.00	0.00	0.00	0.00	0.00
2008-12-02	100.00	0.00	0.00	0.00	0.00	0.00
2008-12-09	100.00	0.00	0.00	0.00	0.00	0.00
2008-12-16	100.00	0.00	0.00	0.00	0.00	0.00
2008-12-23	100.00	0.00	0.00	0.00	0.00	0.00
2008-12-30	100.00	0.00	0.00	0.00	0.00	0.00
2009-01-06	100.00	0.00	0.00	0.00	0.00	0.00
2009-01-13	100.00	0.00	0.00	0.00	0.00	0.00
2009-01-20	100.00	0.00	0.00	0.00	0.00	0.00
2009-01-27	100.00	0.00	0.00	0.00	0.00	0.00
2009-02-03	100.00	0.00	0.00	0.00	0.00	0.00
2009-02-10	0.00	100.00	0.00	0.00	0.00	0.00
2009-02-17	0.00	100.00	100.00	0.00	0.00	0.00
2009-02-24	0.00	100.00	100.00	0.00	0.00	0.00
2009-03-03	0.00	100.00	100.00	0.00	0.00	0.00

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2009-03-10	0.00	100.00	100.00	0.00	0.00	0.00
2009-03-17	0.00	100.00	100.00	0.00	0.00	0.00
2009-03-24	0.00	100.00	100.00	0.00	0.00	0.00
2009-03-31	0.00	100.00	21.97	0.00	0.00	0.00
2009-04-07	100.00	0.00	0.00	0.00	0.00	0.00
2009-04-14	100.00	0.00	0.00	0.00	0.00	0.00
2009-04-21	100.00	0.00	0.00	0.00	0.00	0.00
2009-04-28	100.00	0.00	0.00	0.00	0.00	0.00
2009-05-05	100.00	0.00	0.00	0.00	0.00	0.00
2009-05-12	100.00	0.00	0.00	0.00	0.00	0.00
2009-05-19	100.00	0.00	0.00	0.00	0.00	0.00
2009-05-26	100.00	0.00	0.00	0.00	0.00	0.00
2009-06-02	100.00	0.00	0.00	0.00	0.00	0.00
2009-06-09	100.00	0.00	0.00	0.00	0.00	0.00
2009-06-16	100.00	0.00	0.00	0.00	0.00	0.00
2009-06-23	100.00	0.00	0.00	0.00	0.00	0.00
2009-06-30	100.00	0.00	0.00	0.00	0.00	0.00
2009-07-07	100.00	0.00	0.00	0.00	0.00	0.00
2009-07-14	100.00	0.00	0.00	0.00	0.00	0.00
2009-07-21	100.00	0.00	0.00	0.00	0.00	0.00
2009-07-28	100.00	0.00	0.00	0.00	0.00	0.00
2009-08-04	100.00	0.00	0.00	0.00	0.00	0.00
2009-08-11	100.00	0.00	0.00	0.00	0.00	0.00
2009-08-18	100.00	0.00	0.00	0.00	0.00	0.00
2009-08-25	100.00	0.00	0.00	0.00	0.00	0.00
2009-09-01	100.00	0.00	0.00	0.00	0.00	0.00
2009-09-08	100.00	0.00	0.00	0.00	0.00	0.00
2009-09-15	100.00	0.00	0.00	0.00	0.00	0.00
2009-09-22	100.00	0.00	0.00	0.00	0.00	0.00
2009-09-29	100.00	0.00	0.00	0.00	0.00	0.00
2009-10-06	100.00	0.00	0.00	0.00	0.00	0.00
2009-10-13	100.00	0.00	0.00	0.00	0.00	0.00
2009-10-20	100.00	0.00	0.00	0.00	0.00	0.00
2009-10-27	100.00	0.00	0.00	0.00	0.00	0.00
2009-11-03	100.00	0.00	0.00	0.00	0.00	0.00
2009-11-10	100.00	0.00	0.00	0.00	0.00	0.00
2009-11-17	100.00	0.00	0.00	0.00	0.00	0.00
2009-11-24	100.00	0.00	0.00	0.00	0.00	0.00
2009-12-01	100.00	0.00	0.00	0.00	0.00	0.00
2009-12-08	100.00	0.00	0.00	0.00	0.00	0.00
2009-12-15	100.00	0.00	0.00	0.00	0.00	0.00
2009-12-22	100.00	0.00	0.00	0.00	0.00	0.00
2009-12-29	100.00	0.00	0.00	0.00	0.00	0.00
2010-01-05	100.00	0.00	0.00	0.00	0.00	0.00
2010-01-12	100.00	0.00	0.00	0.00	0.00	0.00
2010-01-19	100.00	0.00	0.00	0.00	0.00	0.00
2010-01-26	100.00	0.00	0.00	0.00	0.00	0.00
2010-02-02	100.00	0.00	0.00	0.00	0.00	0.00
2010-02-09	100.00	0.00	0.00	0.00	0.00	0.00
2010-02-16	100.00	0.00	0.00	0.00	0.00	0.00
2010-02-23	100.00	0.00	0.00	0.00	0.00	0.00
2010-03-02	100.00	0.00	0.00	0.00	0.00	0.00
2010-03-09	100.00	0.00	0.00	0.00	0.00	0.00
2010-03-16	100.00	0.00	0.00	0.00	0.00	0.00
2010-03-23	100.00	0.00	0.00	0.00	0.00	0.00

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2010-03-30	100.00	0.00	0.00	0.00	0.00	0.00
2010-04-06	100.00	0.00	0.00	0.00	0.00	0.00
2010-04-13	100.00	0.00	0.00	0.00	0.00	0.00
2010-04-20	100.00	0.00	0.00	0.00	0.00	0.00
2010-04-27	100.00	0.00	0.00	0.00	0.00	0.00
2010-05-04	100.00	0.00	0.00	0.00	0.00	0.00
2010-05-11	100.00	0.00	0.00	0.00	0.00	0.00
2010-05-18	100.00	0.00	0.00	0.00	0.00	0.00
2010-05-25	100.00	0.00	0.00	0.00	0.00	0.00
2010-06-01	100.00	0.00	0.00	0.00	0.00	0.00
2010-06-08	100.00	0.00	0.00	0.00	0.00	0.00
2010-06-15	100.00	0.00	0.00	0.00	0.00	0.00
2010-06-22	100.00	0.00	0.00	0.00	0.00	0.00
2010-06-29	100.00	0.00	0.00	0.00	0.00	0.00
2010-07-06	100.00	0.00	0.00	0.00	0.00	0.00
2010-07-13	100.00	0.00	0.00	0.00	0.00	0.00
2010-07-20	100.00	0.00	0.00	0.00	0.00	0.00
2010-07-27	100.00	0.00	0.00	0.00	0.00	0.00
2010-08-03	100.00	0.00	0.00	0.00	0.00	0.00
2010-08-10	100.00	0.00	0.00	0.00	0.00	0.00
2010-08-17	0.00	100.00	0.00	0.00	0.00	0.00
2010-08-24	0.00	100.00	0.00	0.00	0.00	0.00
2010-08-31	0.00	100.00	0.00	0.00	0.00	0.00
2010-09-07	0.00	100.00	0.00	0.00	0.00	0.00
2010-09-14	0.00	100.00	100.00	0.00	0.00	0.00
2010-09-21	0.00	100.00	100.00	0.00	0.00	0.00
2010-09-28	0.00	100.00	100.00	74.46	0.00	0.00
2010-10-05	0.00	100.00	100.00	74.20	0.00	0.00
2010-10-12	0.00	100.00	100.00	74.20	0.00	0.00
2010-10-19	0.00	100.00	100.00	74.20	0.00	0.00
2010-10-26	0.00	100.00	100.00	76.72	0.00	0.00
2010-11-02	0.00	100.00	100.00	76.86	0.00	0.00
2010-11-09	0.00	100.00	100.00	76.86	0.00	0.00
2010-11-16	0.00	100.00	100.00	43.70	0.00	0.00
2010-11-23	0.00	100.00	100.00	100.00	0.00	0.00
2010-11-30	0.00	100.00	100.00	100.00	0.00	0.00
2010-12-07	0.00	100.00	100.00	100.00	0.00	0.00
2010-12-14	0.00	100.00	100.00	100.00	0.00	0.00
2010-12-21	0.00	100.00	100.00	100.00	0.00	0.00
2010-12-28	0.00	100.00	100.00	100.00	0.00	0.00
2011-01-04	0.00	100.00	100.00	100.00	0.00	0.00
2011-01-11	0.00	100.00	100.00	100.00	0.00	0.00
2011-01-18	0.00	100.00	100.00	100.00	0.00	0.00
2011-01-25	0.00	100.00	100.00	100.00	0.00	0.00
2011-02-01	0.00	100.00	100.00	100.00	0.00	0.00
2011-02-08	0.00	100.00	100.00	100.00	0.00	0.00
2011-02-15	0.00	100.00	100.00	100.00	0.00	0.00
2011-02-22	0.00	100.00	100.00	100.00	0.00	0.00
2011-03-01	0.00	100.00	100.00	100.00	0.00	0.00
2011-03-08	0.00	100.00	100.00	100.00	0.00	0.00
2011-03-15	0.00	100.00	100.00	100.00	0.00	0.00
2011-03-22	0.00	100.00	100.00	100.00	0.00	0.00
2011-03-29	0.00	100.00	100.00	100.00	5.77	0.00
2011-04-05	0.00	100.00	100.00	100.00	0.00	0.00
2011-04-12	0.00	100.00	100.00	100.00	0.00	0.00



Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2011-04-19	0.00	100.00	100.00	100.00	0.00	0.00
2011-04-26	0.00	100.00	100.00	100.00	0.00	0.00
2011-05-03	0.00	100.00	100.00	100.00	0.00	0.00
2011-05-10	0.00	100.00	100.00	100.00	10.51	0.00
2011-05-17	0.00	100.00	100.00	100.00	10.51	0.00
2011-05-24	0.00	100.00	100.00	100.00	10.51	0.00
2011-05-31	0.00	100.00	100.00	100.00	100.00	0.00
2011-06-07	0.00	100.00	100.00	100.00	100.00	0.00
2011-06-14	0.00	100.00	100.00	100.00	100.00	0.00
2011-06-21	0.00	100.00	100.00	100.00	100.00	6.72
2011-06-28	0.00	100.00	100.00	100.00	100.00	6.72
2011-07-05	0.00	100.00	100.00	100.00	100.00	6.72
2011-07-12	0.00	100.00	100.00	100.00	100.00	25.66
2011-07-19	0.00	100.00	100.00	100.00	100.00	15.11
2011-07-26	0.00	100.00	100.00	100.00	100.00	15.11
2011-08-02	0.00	100.00	100.00	100.00	100.00	0.00
2011-08-09	0.00	100.00	100.00	100.00	100.00	0.00
2011-08-16	0.00	100.00	100.00	100.00	100.00	0.00
2011-08-23	0.00	100.00	100.00	100.00	100.00	0.00
2011-08-30	0.00	100.00	100.00	100.00	100.00	0.00
2011-09-06	0.00	100.00	100.00	100.00	100.00	0.00
2011-09-13	0.00	100.00	100.00	100.00	100.00	0.00
2011-09-20	0.00	100.00	100.00	100.00	100.00	0.00
2011-09-27	0.00	100.00	100.00	100.00	100.00	0.00
2011-10-04	0.00	100.00	100.00	100.00	100.00	0.00
2011-10-11	0.00	100.00	100.00	100.00	100.00	0.00
2011-10-18	0.00	100.00	100.00	100.00	81.80	0.00
2011-10-25	0.00	100.00	100.00	100.00	81.80	0.00
2011-11-01	0.00	100.00	100.00	100.00	81.80	0.00
2011-11-08	0.00	100.00	100.00	100.00	81.80	0.00
2011-11-15	0.00	100.00	100.00	100.00	84.81	0.00
2011-11-22	0.00	100.00	100.00	100.00	84.81	0.00
2011-11-29	0.00	100.00	100.00	100.00	84.81	0.00
2011-12-06	0.00	100.00	100.00	100.00	84.81	0.00
2011-12-13	0.00	100.00	100.00	100.00	84.81	0.00
2011-12-20	0.00	100.00	100.00	100.00	100.00	0.00
2011-12-27	0.00	100.00	100.00	100.00	100.00	0.00
2012-01-03	0.00	100.00	100.00	100.00	100.00	0.00
2012-01-10	0.00	100.00	100.00	100.00	100.00	0.00
2012-01-17	0.00	100.00	100.00	100.00	100.00	0.00
2012-01-24	0.00	100.00	100.00	100.00	100.00	0.00
2012-01-31	0.00	100.00	100.00	100.00	100.00	100.00
2012-02-07	0.00	100.00	100.00	100.00	100.00	100.00
2012-02-14	0.00	100.00	100.00	100.00	100.00	100.00
2012-02-21	0.00	100.00	100.00	100.00	100.00	100.00
2012-02-28	0.00	100.00	100.00	100.00	100.00	100.00
2012-03-06	0.00	100.00	100.00	100.00	100.00	0.00
2012-03-13	0.00	100.00	100.00	100.00	100.00	0.00
2012-03-20	0.00	100.00	100.00	100.00	100.00	0.00
2012-03-27	0.00	100.00	100.00	100.00	100.00	0.00
2012-04-03	0.00	100.00	100.00	100.00	100.00	0.00
2012-04-10	0.00	100.00	100.00	100.00	100.00	0.00
2012-04-17	0.00	100.00	100.00	100.00	100.00	0.00
2012-04-24	0.00	100.00	100.00	100.00	100.00	0.00
2012-05-01	0.00	100.00	100.00	100.00	100.00	0.00

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2012-05-08	0.00	100.00	100.00	100.00	100.00	0.00
2012-05-15	0.00	100.00	100.00	100.00	100.00	0.00
2012-05-22	0.00	100.00	100.00	100.00	100.00	0.00
2012-05-29	0.00	100.00	100.00	100.00	16.22	0.00
2012-06-05	0.00	100.00	100.00	43.87	0.00	0.00
2012-06-12	0.00	100.00	94.50	27.81	0.00	0.00
2012-06-19	0.00	100.00	14.12	0.00	0.00	0.00
2012-06-26	92.36	7.64	0.20	0.00	0.00	0.00
2012-07-03	93.94	6.06	0.00	0.00	0.00	0.00
2012-07-10	73.46	26.54	0.00	0.00	0.00	0.00
2012-07-17	99.97	0.03	0.00	0.00	0.00	0.00
2012-07-24	99.97	0.03	0.00	0.00	0.00	0.00
2012-07-31	99.97	0.03	0.00	0.00	0.00	0.00
2012-08-07	99.97	0.03	0.00	0.00	0.00	0.00
2012-08-14	100.00	0.00	0.00	0.00	0.00	0.00
2012-08-21	100.00	0.00	0.00	0.00	0.00	0.00
2012-08-28	100.00	0.00	0.00	0.00	0.00	0.00
2012-09-04	100.00	0.00	0.00	0.00	0.00	0.00
2012-09-11	100.00	0.00	0.00	0.00	0.00	0.00
2012-09-18	100.00	0.00	0.00	0.00	0.00	0.00
2012-09-25	100.00	0.00	0.00	0.00	0.00	0.00
2012-10-02	100.00	0.00	0.00	0.00	0.00	0.00
2012-10-09	100.00	0.00	0.00	0.00	0.00	0.00
2012-10-16	100.00	0.00	0.00	0.00	0.00	0.00
2012-10-23	100.00	0.00	0.00	0.00	0.00	0.00
2012-10-30	0.00	100.00	0.00	0.00	0.00	0.00
2012-11-06	0.00	100.00	0.00	0.00	0.00	0.00
2012-11-13	0.00	100.00	0.00	0.00	0.00	0.00
2012-11-20	0.00	100.00	0.00	0.00	0.00	0.00
2012-11-27	0.00	100.00	100.00	0.00	0.00	0.00
2012-12-04	0.00	100.00	100.00	0.00	0.00	0.00
2012-12-11	0.00	100.00	100.00	0.00	0.00	0.00
2012-12-18	0.00	100.00	100.00	0.00	0.00	0.00
2012-12-25	0.00	100.00	100.00	0.00	0.00	0.00
2013-01-01	0.00	100.00	100.00	0.00	0.00	0.00
2013-01-08	0.00	100.00	100.00	0.00	0.00	0.00
2013-01-15	0.00	100.00	100.00	0.00	0.00	0.00
2013-01-22	0.00	100.00	100.00	0.00	0.00	0.00
2013-01-29	0.00	100.00	100.00	100.00	0.00	0.00
2013-02-05	0.00	100.00	100.00	100.00	0.00	0.00
2013-02-12	0.00	100.00	100.00	100.00	0.00	0.00
2013-02-19	0.00	100.00	100.00	65.57	0.00	0.00
2013-02-26	0.00	100.00	1.23	0.00	0.00	0.00
2013-03-05	0.00	100.00	0.00	0.00	0.00	0.00
2013-03-12	0.00	100.00	0.00	0.00	0.00	0.00
2013-03-19	0.00	100.00	0.00	0.00	0.00	0.00
2013-03-26	100.00	0.00	0.00	0.00	0.00	0.00
2013-04-02	100.00	0.00	0.00	0.00	0.00	0.00
2013-04-09	100.00	0.00	0.00	0.00	0.00	0.00
2013-04-16	100.00	0.00	0.00	0.00	0.00	0.00
2013-04-23	100.00	0.00	0.00	0.00	0.00	0.00
2013-04-30	100.00	0.00	0.00	0.00	0.00	0.00
2013-05-07	100.00	0.00	0.00	0.00	0.00	0.00
2013-05-14	100.00	0.00	0.00	0.00	0.00	0.00
2013-05-21	100.00	0.00	0.00	0.00	0.00	0.00

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2013-05-28	100.00	0.00	0.00	0.00	0.00	0.00
2013-06-04	100.00	0.00	0.00	0.00	0.00	0.00
2013-06-11	100.00	0.00	0.00	0.00	0.00	0.00
2013-06-18	100.00	0.00	0.00	0.00	0.00	0.00
2013-06-25	100.00	0.00	0.00	0.00	0.00	0.00
2013-07-02	100.00	0.00	0.00	0.00	0.00	0.00
2013-07-09	100.00	0.00	0.00	0.00	0.00	0.00
2013-07-16	100.00	0.00	0.00	0.00	0.00	0.00
2013-07-23	100.00	0.00	0.00	0.00	0.00	0.00
2013-07-30	100.00	0.00	0.00	0.00	0.00	0.00
2013-08-06	100.00	0.00	0.00	0.00	0.00	0.00
2013-08-13	100.00	0.00	0.00	0.00	0.00	0.00
2013-08-20	100.00	0.00	0.00	0.00	0.00	0.00
2013-08-27	100.00	0.00	0.00	0.00	0.00	0.00
2013-09-03	100.00	0.00	0.00	0.00	0.00	0.00
2013-09-10	100.00	0.00	0.00	0.00	0.00	0.00
2013-09-17	100.00	0.00	0.00	0.00	0.00	0.00
2013-09-24	100.00	0.00	0.00	0.00	0.00	0.00
2013-10-01	100.00	0.00	0.00	0.00	0.00	0.00
2013-10-08	100.00	0.00	0.00	0.00	0.00	0.00
2013-10-15	100.00	0.00	0.00	0.00	0.00	0.00
2013-10-22	99.83	0.17	0.00	0.00	0.00	0.00
2013-10-29	68.78	31.22	0.00	0.00	0.00	0.00
2013-11-05	68.78	31.22	0.00	0.00	0.00	0.00
2013-11-12	68.78	31.22	0.00	0.00	0.00	0.00
2013-11-19	68.78	31.22	0.00	0.00	0.00	0.00
2013-11-26	68.78	31.22	0.00	0.00	0.00	0.00
2013-12-03	68.78	31.22	0.00	0.00	0.00	0.00
2013-12-10	68.78	31.22	0.00	0.00	0.00	0.00
2013-12-17	68.78	31.22	0.00	0.00	0.00	0.00
2013-12-24	68.78	31.22	0.00	0.00	0.00	0.00
2013-12-31	100.00	0.00	0.00	0.00	0.00	0.00
2014-01-07	100.00	0.00	0.00	0.00	0.00	0.00
2014-01-14	100.00	0.00	0.00	0.00	0.00	0.00
2014-01-21	100.00	0.00	0.00	0.00	0.00	0.00
2014-01-28	100.00	0.00	0.00	0.00	0.00	0.00
2014-02-04	100.00	0.00	0.00	0.00	0.00	0.00
2014-02-11	100.00	0.00	0.00	0.00	0.00	0.00
2014-02-18	100.00	0.00	0.00	0.00	0.00	0.00
2014-02-25	100.00	0.00	0.00	0.00	0.00	0.00
2014-03-04	100.00	0.00	0.00	0.00	0.00	0.00
2014-03-11	54.64	45.36	0.00	0.00	0.00	0.00
2014-03-18	54.40	45.60	0.00	0.00	0.00	0.00
2014-03-25	54.40	45.60	0.00	0.00	0.00	0.00
2014-04-01	54.40	45.60	0.00	0.00	0.00	0.00
2014-04-08	100.00	0.00	0.00	0.00	0.00	0.00
2014-04-15	100.00	0.00	0.00	0.00	0.00	0.00
2014-04-22	100.00	0.00	0.00	0.00	0.00	0.00
2014-04-29	100.00	0.00	0.00	0.00	0.00	0.00
2014-05-06	100.00	0.00	0.00	0.00	0.00	0.00
2014-05-13	100.00	0.00	0.00	0.00	0.00	0.00
2014-05-20	100.00	0.00	0.00	0.00	0.00	0.00
2014-05-27	100.00	0.00	0.00	0.00	0.00	0.00
2014-06-03	100.00	0.00	0.00	0.00	0.00	0.00
2014-06-10	100.00	0.00	0.00	0.00	0.00	0.00

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2014-06-17	100.00	0.00	0.00	0.00	0.00	0.00
2014-06-24	100.00	0.00	0.00	0.00	0.00	0.00
2014-07-01	100.00	0.00	0.00	0.00	0.00	0.00
2014-07-08	100.00	0.00	0.00	0.00	0.00	0.00
2014-07-15	94.31	5.69	0.00	0.00	0.00	0.00
2014-07-22	20.01	79.99	0.00	0.00	0.00	0.00
2014-07-29	0.00	100.00	0.00	0.00	0.00	0.00
2014-08-05	0.00	100.00	0.00	0.00	0.00	0.00
2014-08-12	0.00	100.00	0.00	0.00	0.00	0.00
2014-08-19	0.00	100.00	52.63	0.00	0.00	0.00
2014-08-26	0.00	100.00	55.36	0.00	0.00	0.00
2014-09-02	0.00	100.00	63.06	0.00	0.00	0.00
2014-09-09	0.00	100.00	30.80	0.00	0.00	0.00
2014-09-16	0.00	100.00	30.80	0.00	0.00	0.00
2014-09-23	0.00	100.00	4.07	0.00	0.00	0.00
2014-09-30	82.47	17.53	0.00	0.00	0.00	0.00
2014-10-07	85.30	14.70	0.00	0.00	0.00	0.00
2014-10-14	85.86	14.14	0.00	0.00	0.00	0.00
2014-10-21	33.81	66.19	0.00	0.00	0.00	0.00
2014-10-28	33.81	66.19	0.00	0.00	0.00	0.00
2014-11-04	30.51	69.49	0.00	0.00	0.00	0.00
2014-11-11	30.51	69.49	0.00	0.00	0.00	0.00
2014-11-18	0.00	100.00	0.00	0.00	0.00	0.00
2014-11-25	100.00	0.00	0.00	0.00	0.00	0.00
2014-12-02	100.00	0.00	0.00	0.00	0.00	0.00
2014-12-09	100.00	0.00	0.00	0.00	0.00	0.00
2014-12-16	100.00	0.00	0.00	0.00	0.00	0.00
2014-12-23	100.00	0.00	0.00	0.00	0.00	0.00
2014-12-30	100.00	0.00	0.00	0.00	0.00	0.00
2015-01-06	100.00	0.00	0.00	0.00	0.00	0.00
2015-01-13	100.00	0.00	0.00	0.00	0.00	0.00
2015-01-20	100.00	0.00	0.00	0.00	0.00	0.00
2015-01-27	100.00	0.00	0.00	0.00	0.00	0.00
2015-02-03	100.00	0.00	0.00	0.00	0.00	0.00
2015-02-10	100.00	0.00	0.00	0.00	0.00	0.00
2015-02-17	100.00	0.00	0.00	0.00	0.00	0.00
2015-02-24	100.00	0.00	0.00	0.00	0.00	0.00
2015-03-03	100.00	0.00	0.00	0.00	0.00	0.00
2015-03-10	100.00	0.00	0.00	0.00	0.00	0.00
2015-03-17	100.00	0.00	0.00	0.00	0.00	0.00
2015-03-24	100.00	0.00	0.00	0.00	0.00	0.00
2015-03-31	100.00	0.00	0.00	0.00	0.00	0.00
2015-04-07	100.00	0.00	0.00	0.00	0.00	0.00
2015-04-14	100.00	0.00	0.00	0.00	0.00	0.00
2015-04-21	100.00	0.00	0.00	0.00	0.00	0.00
2015-04-28	58.17	41.83	0.00	0.00	0.00	0.00
2015-05-05	58.17	41.83	0.00	0.00	0.00	0.00
2015-05-12	58.17	41.83	0.00	0.00	0.00	0.00
2015-05-19	58.17	41.83	0.00	0.00	0.00	0.00
2015-05-26	62.87	37.13	0.00	0.00	0.00	0.00
2015-06-02	83.75	16.25	0.00	0.00	0.00	0.00
2015-06-09	99.59	0.41	0.00	0.00	0.00	0.00
2015-06-16	99.59	0.41	0.00	0.00	0.00	0.00
2015-06-23	99.59	0.41	0.00	0.00	0.00	0.00
2015-06-30	99.59	0.41	0.00	0.00	0.00	0.00

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2015-07-07	99.59	0.41	0.00	0.00	0.00	0.00
2015-07-14	99.59	0.41	0.00	0.00	0.00	0.00
2015-07-21	99.59	0.41	0.00	0.00	0.00	0.00
2015-07-28	99.59	0.41	0.00	0.00	0.00	0.00
2015-08-04	99.97	0.03	0.00	0.00	0.00	0.00
2015-08-11	99.97	0.03	0.00	0.00	0.00	0.00
2015-08-18	4.28	95.72	0.00	0.00	0.00	0.00
2015-08-25	4.27	95.73	0.00	0.00	0.00	0.00
2015-09-01	0.00	100.00	0.00	0.00	0.00	0.00
2015-09-08	40.71	59.29	0.00	0.00	0.00	0.00
2015-09-15	34.93	65.07	0.00	0.00	0.00	0.00
2015-09-22	34.93	65.07	0.00	0.00	0.00	0.00
2015-09-29	34.55	65.45	0.00	0.00	0.00	0.00
2015-10-06	34.55	65.45	0.00	0.00	0.00	0.00
2015-10-13	25.82	74.18	2.33	0.00	0.00	0.00
2015-10-20	25.82	74.18	3.96	0.00	0.00	0.00
2015-10-27	25.82	74.18	3.96	0.00	0.00	0.00
2015-11-03	25.81	74.19	3.96	0.00	0.00	0.00
2015-11-10	98.02	1.98	0.00	0.00	0.00	0.00
2015-11-17	98.02	1.98	0.00	0.00	0.00	0.00
2015-11-24	98.02	1.98	0.00	0.00	0.00	0.00
2015-12-01	97.31	2.69	0.00	0.00	0.00	0.00
2015-12-08	6.04	93.96	0.00	0.00	0.00	0.00
2015-12-15	6.04	93.96	0.00	0.00	0.00	0.00
2015-12-22	44.54	55.46	0.00	0.00	0.00	0.00
2015-12-29	77.89	22.11	0.00	0.00	0.00	0.00
2016-01-05	77.89	22.11	0.00	0.00	0.00	0.00
2016-01-12	77.89	22.11	0.00	0.00	0.00	0.00
2016-01-19	77.89	22.11	0.00	0.00	0.00	0.00
2016-01-26	77.89	22.11	0.00	0.00	0.00	0.00
2016-02-02	81.44	18.56	0.00	0.00	0.00	0.00
2016-02-09	100.00	0.00	0.00	0.00	0.00	0.00
2016-02-16	100.00	0.00	0.00	0.00	0.00	0.00
2016-02-23	100.00	0.00	0.00	0.00	0.00	0.00
2016-03-01	100.00	0.00	0.00	0.00	0.00	0.00
2016-03-08	100.00	0.00	0.00	0.00	0.00	0.00
2016-03-15	100.00	0.00	0.00	0.00	0.00	0.00
2016-03-22	100.00	0.00	0.00	0.00	0.00	0.00
2016-03-29	100.00	0.00	0.00	0.00	0.00	0.00
2016-04-05	100.00	0.00	0.00	0.00	0.00	0.00
2016-04-12	100.00	0.00	0.00	0.00	0.00	0.00
2016-04-19	100.00	0.00	0.00	0.00	0.00	0.00
2016-04-26	100.00	0.00	0.00	0.00	0.00	0.00
2016-05-03	100.00	0.00	0.00	0.00	0.00	0.00
2016-05-10	100.00	0.00	0.00	0.00	0.00	0.00
2016-05-17	100.00	0.00	0.00	0.00	0.00	0.00
2016-05-24	100.00	0.00	0.00	0.00	0.00	0.00
2016-05-31	100.00	0.00	0.00	0.00	0.00	0.00
2016-06-07	100.00	0.00	0.00	0.00	0.00	0.00
2016-06-14	100.00	0.00	0.00	0.00	0.00	0.00
2016-06-21	100.00	0.00	0.00	0.00	0.00	0.00
2016-06-28	100.00	0.00	0.00	0.00	0.00	0.00
2016-07-05	100.00	0.00	0.00	0.00	0.00	0.00
2016-07-12	100.00	0.00	0.00	0.00	0.00	0.00
2016-07-19	100.00	0.00	0.00	0.00	0.00	0.00

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2016-07-26	100.00	0.00	0.00	0.00	0.00	0.00
2016-08-02	22.26	77.74	0.00	0.00	0.00	0.00
2016-08-09	22.57	77.43	0.00	0.00	0.00	0.00
2016-08-16	22.57	77.43	0.00	0.00	0.00	0.00
2016-08-23	100.00	0.00	0.00	0.00	0.00	0.00
2016-08-30	22.72	77.28	0.00	0.00	0.00	0.00
2016-09-06	100.00	0.00	0.00	0.00	0.00	0.00
2016-09-13	100.00	0.00	0.00	0.00	0.00	0.00
2016-09-20	100.00	0.00	0.00	0.00	0.00	0.00
2016-09-27	100.00	0.00	0.00	0.00	0.00	0.00
2016-10-04	100.00	0.00	0.00	0.00	0.00	0.00
2016-10-11	100.00	0.00	0.00	0.00	0.00	0.00
2016-10-18	100.00	0.00	0.00	0.00	0.00	0.00
2016-10-25	100.00	0.00	0.00	0.00	0.00	0.00
2016-11-01	100.00	0.00	0.00	0.00	0.00	0.00
2016-11-08	35.93	64.07	0.00	0.00	0.00	0.00
2016-11-15	35.93	64.07	0.00	0.00	0.00	0.00
2016-11-22	0.00	100.00	0.00	0.00	0.00	0.00
2016-11-29	0.00	100.00	100.00	0.00	0.00	0.00
2016-12-06	0.00	100.00	100.00	0.00	0.00	0.00
2016-12-13	0.00	100.00	26.41	0.00	0.00	0.00
2016-12-20	0.00	100.00	26.41	0.00	0.00	0.00
2016-12-27	0.00	100.00	26.41	0.00	0.00	0.00
2017-01-03	0.00	100.00	26.41	0.00	0.00	0.00
2017-01-10	0.00	100.00	22.83	0.00	0.00	0.00
2017-01-17	0.00	100.00	22.83	0.00	0.00	0.00
2017-01-24	100.00	0.00	0.00	0.00	0.00	0.00
2017-01-31	100.00	0.00	0.00	0.00	0.00	0.00
2017-02-07	100.00	0.00	0.00	0.00	0.00	0.00
2017-02-14	100.00	0.00	0.00	0.00	0.00	0.00
2017-02-21	100.00	0.00	0.00	0.00	0.00	0.00
2017-02-28	100.00	0.00	0.00	0.00	0.00	0.00
2017-03-07	100.00	0.00	0.00	0.00	0.00	0.00
2017-03-14	100.00	0.00	0.00	0.00	0.00	0.00
2017-03-21	100.00	0.00	0.00	0.00	0.00	0.00
2017-03-28	0.00	100.00	0.00	0.00	0.00	0.00
2017-04-04	0.00	100.00	0.00	0.00	0.00	0.00

Showing 1 to 901 of 901 entries

First Previous 1 Next Last

The National Drought Mitigation Center | University of Nebraska-Lincoln  
 3310 Holdrege Street | P.O. Box 830988 | Lincoln, NE 68583-0988  
 phone: (402) 472-6707 | fax: (402) 472-2946 | [Contact Us](#) | [Web Policy](#)





# Storm Events Database

## Search Results for Bacon County, Georgia

Event Types: [Funnel Cloud](#), [Tornado](#)

11 events were reported between 01/01/1997 and 12/31/2016 (7305 days)

Summary Info:

Number of County/Zone areas affected:	1
Number of Days with Event:	9
Number of Days with Event and Death:	0
Number of Days with Event and Death or Injury:	2
Number of Days with Event and Property Damage:	6
Number of Days with Event and Crop Damage:	0
Number of Event Types reported:	2

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:

Sort By:

<u>Location</u>	<u>County/Zone</u>	<u>St.</u>	<u>Date</u>	<u>Time</u>	<u>I.Z.</u>	<u>Type</u>	<u>Mag</u>	<u>Dth</u>	<u>Inj</u>	<u>PrD</u>	<u>CrD</u>
Totals:								0	5	3.575M	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	10/26/1997	16:45	EST	Tornado	F2	0	1	200.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	03/30/2000	07:37	EST	Tornado	F0	0	0	25.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	11/12/2002	08:20	EST	Tornado	F0	0	0	100.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	12/24/2002	10:55	EST	Tornado	F0	0	0	40.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	12/24/2002	10:55	EST	Tornado	F0	0	0	10.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	03/20/2003	13:25	EST	Tornado	F0	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	07/29/2003	17:45	EST	Funnel Cloud		0	0	0.00K	0.00K
<a href="#">ALMA BACON CO ARPT</a>	BACON CO.	GA	12/28/2005	19:45	EST	Tornado	F0	0	0	200.00K	0.00K
<a href="#">SESSOMS STATION</a>	BACON CO.	GA	12/02/2009	14:45	EST-5	Tornado	EF1	0	0	3.000M	0.00K
<a href="#">ROCKINGHAM</a>	BACON CO.	GA	01/04/2015	13:03	EST-5	Tornado	EF1	0	2	0.00K	0.00K
<a href="#">ROCKINGHAM</a>	BACON CO.	GA	01/04/2015	13:05	EST-5	Funnel Cloud		0	2	0.00K	0.00K
Totals:								0	5	3.575M	0.00K

## Storm Events Database

### Search Results for Bacon County, Georgia

Event Types: [Tropical Storm](#)

Bacon county contains the following zones:

'Bacon'

4 events were reported between 01/01/1950 and 12/31/2016 (24472 days)

#### Summary Info:

Number of County/Zone areas affected:	1
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:  ▼

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

## Storm Events Database

### Search Results for Bacon County, Georgia

Event Types: [Hail](#)

28 events were reported between 01/01/1950 and 12/31/2016 (24472 days)

#### Summary Info:

Number of County/Zone areas affected:	1
Number of Days with Event:	19
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.

Select:

Sort By:

<u>Location</u>	<u>County/Zone</u>	<u>St.</u>	<u>Date</u>	<u>Time</u>	<u>I.Z.</u>	<u>Type</u>	<u>Mag</u>	<u>Dth</u>	<u>Inj</u>	<u>PrD</u>	<u>CrD</u>
Totals:								0	0	1.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	03/06/1996	16:05	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	05/27/1997	13:20	EST	Hail	0.88 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	05/03/1998	12:30	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">SESSOMS STATION</a>	BACON CO.	GA	05/04/1998	16:00	EST	Hail	1.00 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	05/04/1998	16:35	EST	Hail	1.00 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	03/30/2000	08:30	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	08/10/2001	14:41	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	03/20/2003	13:30	EST	Hail	2.75 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	03/20/2003	14:30	EST	Hail	1.00 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	05/11/2003	19:25	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	05/18/2003	14:50	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	07/29/2003	17:45	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	07/15/2004	14:00	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	03/22/2005	15:10	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	03/22/2005	15:16	EST	Hail	1.75 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	03/22/2005	15:24	EST	Hail	1.75 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	03/25/2005	06:20	EST	Hail	1.75 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	04/22/2006	17:45	EST	Hail	1.75 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	04/22/2006	17:55	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	04/22/2006	18:15	EST	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	05/11/2008	08:45	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	05/11/2008	12:20	EST-5	Hail	0.75 in.	0	0	1.00K	0.00K
<a href="#">ROCKINGHAM</a>	BACON CO.	GA	07/05/2008	17:00	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	07/28/2008	15:48	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	10/09/2008	12:12	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	10/09/2008	12:15	EST-5	Hail	1.75 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	10/09/2008	12:20	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
<a href="#">ALMA</a>	BACON CO.	GA	03/23/2013	11:10	EST-5	Hail	1.75 in.	0	0	0.00K	0.00K
Totals:								0	0	1.00K	0.00K

## Storm Events Database

### Search Results for Bacon County, Georgia

Event Types: [Blizzard](#), [Cold/Wind Chill](#), [Extreme Cold/Wind Chill](#), [Frost/Freeze](#), [Heavy Snow](#), [Ice Storm](#), [Sleet](#), [Winter Storm](#), [Winter Weather](#)

Bacon county contains the following zones:

'Bacon'

4 events were reported between 01/01/1997 and 12/31/2016 (7305 days)

#### Summary Info:

Number of County/Zone areas affected:	1
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:	4

#### 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:  ▼

<u>Location</u>	<u>County/Zone</u>	<u>St.</u>	<u>Date</u>	<u>Time</u>	<u>T.Z.</u>	<u>Type</u>	<u>Mag</u>	<u>Dth</u>	<u>Inj</u>	<u>PrD</u>	<u>CrD</u>
Totals:								0	0	0.00K	0.00K
<a href="#">BACON (ZONE)</a>	BACON (ZONE)	GA	04/07/2007	21:00	EST-5	Cold/wind Chill		0	0	0.00K	0.00K
<a href="#">BACON (ZONE)</a>	BACON (ZONE)	GA	02/12/2010	18:17	EST-5	Winter Storm		0	0	0.00K	0.00K
<a href="#">BACON (ZONE)</a>	BACON (ZONE)	GA	01/01/2011	09:00	EST-5	Winter Weather		0	0	0.00K	0.00K
<a href="#">BACON (ZONE)</a>	BACON (ZONE)	GA	01/29/2014	06:00	EST-5	Sleet		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

## Critical Facilities Inventory 02-11-2017

Id	Name	Jurisdiction	Address	Latitude	Longitude	Area	Building Value	Valuation Year	Contents Value
<b>Bacon County Government Facilities</b>									
3632	Bacon County Courthouse	Alma City	502 W 12th St, Alma GA 31510	31.541610	-82.469076	29402	\$8,820,600	2012	\$406,600
3627	Bacon County Sheriff/Civil Defense/Jail/Fire Dept	Alma City	307 S Dixon St, Alma GA 31510	31.541000	-82.469597	0	\$1,786,251	2016	
28031	EOC Building		120 East 4th Street, Alma GA 31510	31.547416	-82.459939		\$50,000	2016	\$50,000
10880	Bacon County Shop	Alma City	150 Carribean Road, Alma GA 31510	31.548070	-82.507680	6250	\$1,875,000	2012	\$404,000
21981	Voter Registration Office	Alma City	232 W 12th St, Alma GA 31510	31.541383	-82.465087	11657	\$1,230,582	2012	\$50,000
10842	Bacon County Health Dept.	Alma City	101 North Wayne Street, Alma GA 31510	31.541150	-82.458900	5758	\$1,727,400	2012	
10837	Bacon County DFACS	Alma City	417 South Dixon Street, Alma GA 31510	31.537810	-82.468280	8710	\$2,613,000	2012	
21290	Bacon County Senior Center	Alma City	504 North Pierce Street, Alma GA 31510	31.544799	-82.462417	21244	\$6,373,200	2012	
21572	Bacon County/City of Alma Radio Tower & Building	Bacon County	200 Swamp Road, Alma GA 31510	31.568400	-82.472400	1375	\$40,630	2012	\$15,000
1199	Bacon County Transfer Station	Bacon County	175 Carribean Road, Alma, GA 31510, Alma GA 31510	31.573724	-82.488440	1000	\$300,000	2012	
10832	Bacon County Airport	Alma City	142 Airport Loop, Alma GA 31510	31.541474	-82.508880	30223	\$9,066,900	2012	\$5,000
10824	Alma-Bacon County Hist. Soc.	Alma City	406 Mercer Street, Alma GA 31510	31.545970	-82.467600	1500	\$450,000	2012	\$17,000
3655	Alma-Bacon County Public Library	Alma City	201 North Pierce Street, Alma GA 31510	31.542293	-82.461431	7436	\$2,230,800	2012	\$233,000
14557	Alma-Bacon VFD Bennett Still	Bacon County	Bennett Still Road @ Big Creek Church Road, Alma GA 31510	31.601600	-82.392910	1440	\$432,000	2012	\$4,000
10819	Alma-Bacon VFD New Lacey	Bacon County	758 Ga Hwy #32, Alma GA 31510	31.541510	-82.373079	1476	\$442,800	2012	
10820	Alma-Bacon VFD Sessoms	Bacon County	271 White Pine Hwy, Alma GA 31510	31.486440	-82.572684	1440	\$432,000	2012	
10821	Alma-Bacon VFD Taylor Town	Bacon County	1005 Old Dixie Lake Road, Alma GA 31510	31.608290	-82.546666	2251	\$675,300	2012	\$4,000
10822	Alma-Bacon VFD Ware	Bacon County	329 Beach Hwy, Alma GA 31510	31.458740	-82.459553	1200	\$360,000	2012	
10823	Alma-Bacon VFD Warnock	Bacon County	2803 US Hwy #23 North, Alma GA 31510	31.650880	-82.477450	1440	\$432,000	2012	

## Critical Facilities Inventory 02-11-2017

Bacon County Board of Education Facilities									
21291	Bacon County BOE Offices	Alma City	102 East 4th Street, Alma GA 31510	31.547204	-82.459634	7780	\$2,334,000	2012	\$246,000
21293	Bacon County BOE Annex A&B	Alma City	102 East 4th Street, Alma GA 31510	31.547204	-82.459634	8586	\$2,575,800	2012	\$100,000
21292	Bacon County BOE Bus Barn	Alma City	102 West 4th Street, Alma GA 31510	31.545690	-82.463793	7007	\$2,102,100	2012	\$44,000
1189	Bacon County High School	Alma City	1190 Hwy 1 South, Alma GA 31510	31.522182	-82.459542	80630	\$24,189,000	2016	\$2,188,100
10867	Bacon County High School Gym	Alma City	1190 Hwy 1 South, Alma GA 31510	31.548217	-82.460777	17400	\$5,220,000	2012	\$20,700
10874	Bacon County Middle School	Alma City	1188 Hwy 1 South, Alma GA 31510	31.522629	-82.458714	0	\$23,738,821	2016	
3	Bacon County Elementary School	Alma City	523 East 16th Street, Alma GA	31.538230	-82.455070	38893	\$11,667,900	2012	\$964,200
10876	Bacon County Primary School	Alma City	251 Cumberland Road, Alma GA 31510	31.558820	-82.478940	79347	\$23,804,100	2012	\$1,160,500
Bacon County Hospital Facilities									
3659	Bacon County Hospital	Alma City	302 South Wayne Street, Alma GA 31510	31.539521	-82.459547	84019	\$25,205,700	2012	\$11,605,000
14558	Bacon County Hospital Physical & Occupational Therapy/Cardio	Alma City	303 South Wayne Street, Alma GA 31510	31.539470	-82.459540	3374	\$1,012,200	2012	\$24,457
14556	Bacon County Hospital Storage	Alma City	East 14th Street, Alma GA 31510	31.540510	-82.461800	3240	\$972,000	2012	
14554	Bacon County Family Medical	Alma City	204 East 15th Street, Alma GA 31510	31.539620	-82.460030	9766	\$2,929,800	2012	
10904	Twin Oaks Convalescent Home & Addition	Alma City	301 South Baker Street, Alma GA 31510	31.539190	-82.457290	22227	\$2,440,514	2012	\$469,283
28032	Sleep Study Center	Alma City	113 West 15th Street	31.540489	-82.464217		\$177,569	2016	
14555	Bacon County Physician Office	Alma City	203-5 S. Wayne , Alma GA 31510	31.539930	-82.459510	4042	\$1,212,600	2012	\$387,652
28033	Physicians Office (Dr. Deen's Office)	Alma City	143 GA HWY 32 Bypass	31.541577	-82.474192		\$306,631	2016	
10815	ABC Daycare Center	Alma City	305 South Baker Street, Alma GA 31510	31.538870	-82.456800	9750	\$2,925,000	2012	



## Critical Facilities Inventory 02-11-2017

Community Health Facilities									
10875	Bacon County MR Service Center (Unison)	Alma City	1835 West 12th Street, Alma GA 31510	31.542870	-82.480130	12550	\$3,765,000	2012	
10834	Bacon County Community Care	Alma City	204 East 15th Street, Alma GA 31510	31.539610	-82.460320	1678	\$503,400	2012	
10893	In Home Respiratory Care	Alma City	335 West 12th Street, Alma GA 31510	31.540730	-82.470074		\$1,786,251	2016	
10896	New Beginnings Personal Care Home	Alma City	519 East 15th Street, Alma GA 31510	31.538680	-82.454350	1820	\$546,000	2012	
10903	Visiting Nurses Services	Alma City	205 East 16th Street, Alma GA 31510	31.538790	-82.460420	1680	\$504,000	2012	
10860	Bacon County Home Care Svc.	Alma City	213 East 16th Street, Alma GA 31510	31.538680	-82.460160	31420	\$9,426,000	2012	
1190	Bacon County Developmental Services	Alma City	1835 West 12th St., Alma GA	31.544210	-82.508631	11544	\$3,463,200	2012	\$126,000
22000	Dialysis Facility Of Alma	Alma City	415 S. Dixon St., Alma GA 31510	31.538503	-82.468712	4320	\$226,563	2012	
21574	Cypress Hill Group Home	Bacon County	123 Quart Douglas Road, Alma GA 31510	31.553881	-82.536583	3000	\$900,000	2012	
28034	Alma Family Vision Care	Alma City	131 GA HWY 32 Bypass, Alma GA 31510	31.540837	-82.471796		\$61,600	2016	
21573	Aerolite Eye	Alma City	S.R. #32 West, Alma GA 31510	31.544240	-82.507794	13250	\$3,975,000	2012	
28035	We Care Family Practice	Alma City	204 S Dixon Street, Alma GA 31510	31.541039	-82.468768		\$102,843	2016	
28016	Alma Discount Pharmacy Inc	Alma City	442 W 12th St, Alma GA 31510	31.541852	-82.468588		\$100,738	2016	
28036	Rite Aid Pharmacy	Alma City	701 S Pierce St, Alma GA 31510	31.536655	-82.463790		\$574,089	2016	
28037	Lamar's Pharmacy	Alma City	905 S Pierce St, Alma GA 31510	31.533675	-82.464083		\$479,213	2016	

## Critical Facilities Inventory 02-11-2017

Alma City Government Facilities									
21294	Alma City Hall	Alma City	502 West 12th Street, Alma GA 31510	31.541469	-82.469599	11657	\$3,497,100	2012	\$70,000
3560	Alma Police Department	Alma City	102 S Thomas St, Alma GA 31510	31.541360	-82.465370	0	\$43,882	2016	\$64,817
28014	Bacon Theater	Alma City	332 W 12th St, Alma GA 31510	31.541788	-82.466485		\$87,291	2016	
21571	City Of Alma Equipment Storage Building	Alma City	208 W. 14th Street, Alma GA 31510	31.540836	-82.464830	8700	\$266,863	2012	\$17,700
10826	Alma City Shop& Complex	Alma City	308 West 14th Street, Alma GA 31510	31.541060	-82.465860	3000	\$27,086	2012	\$10,000
14553	Alma Waterline System	Alma City	City - Wide	31.540946	-82.465409	0	\$25,000,000	2012	
10830	Alma Water Well #1 & Tank	Alma City	306 W. 14th Street, Alma GA 31510	31.540946	-82.465409	1800	\$1,000,000	2012	
21516	Alma Water Well #2	Alma City	601 N. Church Street, Alma GA 31510	31.544217	-82.466092	1800	\$500,000	2012	
21517	Alma Water Well #3 & Tank	Alma City	1107 W. 12th Street, Alma GA 31510	31.544217	-82.483933	1800	\$1,500,000	2012	
14552	Alma Sewerline System	Alma City	City - Wide	31.522461	-82.434000	0	\$25,000,000	2012	
3673	Alma WPCP	Alma City	884 Radio Station Rd., Alma GA 31510	31.522461	-82.434000	2450	\$2,343,630	2012	\$105,000
28038	Alma LAS Treatment Facility (Land Application System)	Alma City	Carnation Road, Alma, GA 31510	31.523764	-82.426779		\$403,389	2016	
21499	Alma Sewer Lift Station # 1 - Lake Lure	Alma City	172 Lake Lure Drive, Alma GA 31510	31.556192	-82.483731	80	\$20,315	2012	\$76,000
21500	Alma Sewer Lift Station # 2 - D.L. Lee	Alma City	927 S.R. 32 East, Alma GA 31510	31.535714	-82.441633	80	\$30,086	2012	\$76,000
21501	Alma Sewer Lift Station # 3 - Satilla REA	Alma City	928 S.R. 32 East, Alma GA 31510	31.540281	-82.443692	80	\$17,000	2012	\$76,000
21502	Alma Sewer Lift Station # 4 - Hall's Club	Alma City	122 N. Bead Street, Alma GA 31510	31.541442	-82.450708	80	\$43,023	2012	\$76,000
21503	Alma Sewer Lift Station # 5 - U.S. 1 North	Alma City	114 Pine Street, Alma GA 31510	31.550619	-82.464014	80	\$23,023	2012	\$76,000
21504	Alma Sewer Lift Station # 6 - Smallee Street	Alma City	830 Smallee Street, Alma GA 31510	31.551847	-82.471061	80	\$11,647	2012	\$76,000
21505	Alma Sewer Lift Station # 7 - Log Cabin	Alma City	1007 W. 12th Street, Alma GA 31510	31.543172	-82.480397	80	\$23,023	2012	\$76,000
21506	Alma Sewer Lift Station # 8 - Boatwrights	Alma City	1323 W. 12th Street, Alma GA 31510	31.543510	-82.492069	80	\$23,023	2012	\$76,000

## Critical Facilities Inventory 02-11-2017

Alma City Government Facilities									
21507	Alma Sewer Lift Station # 9 - Church	Alma City	1517 W. 12th Street, Alma GA 31510	31.543764	-82.500058	80	\$23,023	2012	\$76,000
21508	Alma Sewer Lift Station # 10 - MR Center	Alma City	1903 W. 12th Street, Alma GA 31510	31.544014	-82.509444	80	\$23,023	2012	\$76,000
21509	Alma Sewer Lift Station # 11 - Fleetwood Plant #2	Alma City	146 Business Blvd., Alma GA 31510	31.549547	-82.516636	80	\$10,835	2012	\$76,000
21510	Alma Sewer Lift Station # 12 - Exchange Club Rd.	Alma City	185 Pineview Road, Alma GA 31510	31.537197	-82.513817	80	\$23,023	2012	\$76,000
21511	Alma Sewer Lift Station # 13 - Golf Course Bathrooms	Bacon County	133 Candlewood Drive, Alma GA 31510	31.538083	-82.502572	80	\$23,023	2012	\$76,000
21512	Alma Sewer Lift Station # 14 - Golf Course Maintenance	Bacon County	176 Ironwood Circle, Alma GA 31510	31.538525	-82.493761	80	\$10,000	2012	\$76,000
21513	Alma Sewer Lift Station # 15 - S.R. 32 Bypass	Alma City	143 S.R. 32 Bypass, Alma GA 31510	31.542142	-82.475228	80	\$23,023	2012	\$76,000
21514	Alma Sewer Lift Station # 16 - Blueberry Haven	Alma City	122 Briteblue Drive, Alma GA 31510	31.530408	-82.478961	80	\$14,898	2012	\$76,000
21515	Alma Sewer Lift Station # 17 - U.S. 1 South(Little Debbie House)	Alma City	1177 S. Pierce Street, Alma GA 31510	31.521336	-82.462492	80	\$12,866	2012	\$76,000
28040	Alma Sewer Lift Station # 18 - High School	Alma City	US 1, South, Alma GA 31510	31.520501	-82.461435	80	\$20,000		\$76,000
28041	Alma Sewer Lift Station # 19 - MBG/Naturipe	Alma City	US 1, South, Alma GA 31510	31.511410	-82.460572	80	\$20,000		\$76,000



## Critical Facilities Inventory 02-11-2017

State & Federal Facilities									
28010	Coastal Pines TC, Adult Education Center	Alma City	101 W 17th St., Alma GA 31510	31.538927	-82.463130		\$4,146,988	2016	
10816	Coastal Pines TC, Education Center	Alma City	332 West 12th Street, Alma GA 31510	31.541580	-82.468080	7770	\$2,331,000	2012	
21983	GA DOC- Bacon County Probation Detention Center	Alma City	165 Eastside Industrial Blvd., Alma GA 31510	31.533083	-82.449493	25920	\$3,149,963	2012	\$500,000
10890	GA Forestry Commission	Bacon County	1238 Hwy #32 East, Alma GA 31510	31.545490	-82.416590	3360	\$1,008,000	2012	
10891	GA Motor Vehicle Safety	Alma City	502 West 12th Street, Alma GA 31510	31.540730	-82.470074	0	\$1,786,251	2016	
28012	UGA Post Harvest/Vegetable	Bacon County	244 Pineview Rd., Alma GA 31510	31.522275	-82.510901		\$485,816	2016	
10900	USPO-Alma	Alma City	523 West 12th Street, Alma GA 31510	31.542240	-82.469610	4185	\$1,255,500	2012	
10901	USDA Farm Svc. Center/Soil	Alma City	203 S. Dixon Street, Alma GA 31510	31.541222	-82.469320	7833	\$2,349,900	2012	\$124,300
10886	FAA Perpheral Facility	Bacon County	165 James Lee Road, Alma GA 31510	31.586140	-82.512510	600	\$180,000	2012	\$10,000,000
Other Community Facilities									
10840	Bacon County Family Connection	Alma City	1190 Hwy 1 South, Alma GA 31510	31.548697	-82.460024	1400	\$420,000	2012	
10884	Concerted Services Inc.	Alma City	502 West 12th Street, Alma GA 31510	31.540730	-82.470074	1000	\$300,000	2012	
10905	The Potter's House	Bacon County	129 Morris Drive, Alma GA 31551	31.545556	-82.475809	2268	\$680,400	2012	

## Critical Facilities Inventory 02-11-2017

Business, Commercial & Utilities Facilities									
22124	Pineland Bank - Main Branch	Alma City	501 W. 12th Street, Alma GA 31510	31.542295	-82.468895	12800	\$936,096	2012	
22125	Pineland Bank - Drive Through	Alma City	505 S. Pierce Street, Alma GA 31510	31.538007	-82.463268	510	\$29,651	2012	
22123	FNB South Bank	Alma City	423 West 12th Street, Alma GA 31510	31.542167	-82.467956	21080	\$1,341,927	2012	
28015	Alma Telephone Company, Inc (ATC)	Alma City	405 W 11th St, Alma GA 31510	31.542620	-82.466560		\$119,624	2016	
14561	Satilla REA - Main Office	Alma City	928 GA Highway #32 East, Alma GA 31510	31.542010	-82.442250	117879	\$35,363,700	2012	
21998	GA Power Radio Tower	Bacon County	Swamp Road, Alma GA 31510	31.568335	-82.471889	400	\$125,000	2012	
10841	Bacon County Farm Bureau	Alma City	422 South Dixon Street, Alma GA 31510	31.537950	-82.467570	1396	\$418,800	2012	
10898	Padgett Veterinary Service	Alma City	419 Market Street, Alma GA 31510	31.538330	-82.469560	1758	\$527,400	2012	
28013	Crosby Funeral Home	Alma City	207 W 12th St, Alma GA 31510	31.541863	-82.464132		\$546,499	2016	
28042	Jay's IGA Grocery	Alma City	1022 S Pierce St, Alma GA 31510	31.530291	-82.462887		\$1,141,527	2016	
28043	Harvey's Grocery	Alma City	1108 S Pierce St, Alma GA 31510	31.527205	-82.461054		\$1,566,441	2016	



## Critical Facilities Inventory 02-11-2017

Industrial Facilities									
21519	D.L. Lee Meats	Alma City	927 S.R. #32 East, Alma GA 31510	31.537845	-82.440487	150000	\$45,000,000	2012	
21982	Milliken	Bacon County	2410 W. GA #32, Alma GA 31510	31.538925	-82.554705	355740	\$3,251,125	2012	
21984	Richmond Baking	Alma City	135 Industrial Blvd., Alma GA 31510	31.546607	-82.509951	87072	\$809,650	2012	
28044	Titan Modular, LLC	Alma City	162 Industrial Drive, Alma, GA 31510	31.547963	-82.513082		\$1,560,989	2016	
21575	Farmer John's LLC	Alma City	190 Industrial Drive, Alma GA 31510	31.551228	-82.513598	187731	\$320,560	2011	
21576	Dixie Pipeline	Bacon County	Old Dixie School Road, Alma GA 31510	31.547940	-82.535453	0	\$750,000	2012	
1200	Barber's Recycling	Bacon County	360 Friendship Church Rd., Alma GA 31510	31.573723	-82.488441	1800	\$540,000	2012	
10899	Recovered Materials Inc	Bacon County	129 RMI Drive, Alma GA 31510	31.484360	-82.451360	936	\$280,800	2012	
28030	Michigan Blueberry Growers/ Naturipe # 1	Alma City	1326 S US HWY 1, Alma, GA 31510	31.511599	-82.459303		\$4,196,521	2016	
28045	Michigan Blueberry Growers/ Naturipe # 2	Alma City	202 Cherry St, Alma, GA 31510	31.525086	-82.469459		\$308,348	2016	
28046	Mid-South	Alma City	403 S Market St, Alma, GA 31510	31.539779	-82.468976		\$989,723	2016	
14379	Alma Pak	Alma City	237 Pineview Rd., Alma GA 31510	31.520690	-82.513790	2880	\$864,000	2012	\$365,698
28047	Industrial Forge	Bacon County	1725 S US HWY 1, Alma, GA 31510	31.482936	-82.453518		\$304,321	2016	
28048	Beach Timber	Bacon County	128 Beach Timber Rd, Alma, GA 31510	31.577265	-82.459415		\$741,420	2016	



# **Appendix G**



# Hazard Risk Analyses Supplement to the Bacon County Joint Hazard 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, which may include 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 created 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 2017, the Georgia Department of Emergency Management partnered with Carl Vinson Institute of Government and Southern Georgia Regional Commission to develop a detailed risk assessment focused on defining hurricane, riverine flood and tornado in Bacon County, 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.

## Risk Assessment Process Overview

Hazus-MH Version 2.2 SP1 was used to perform the analyses for Bacon 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. Bacon 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 Bacon County were replaced with data derived from parcel and property assessment data obtained from Bacon County. The county provided property assessment data was current as of December 2016 and the parcel data current as of April 2016. 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 Bacon County is 98.6%. 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	48	4	\$10,240,000	\$15,900,000
Commercial	265	340	\$164,321,000	\$404,781,000
Education	13	13	\$8,266,000	\$24,369,000
Government	7	20	\$2,313,000	\$28,785,000
Industrial	48	27	\$62,049,000	\$196,094,000
Religious	27	52	\$22,177,000	\$58,707,000
Residential	4,641	5,011	\$657,997,000	\$553,520,000
<b>Total</b>	<b>5,049</b>	<b>5,467</b>	<b>\$927,363,000</b>	<b>\$1,282,156,000</b>

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

For Bacon 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.

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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.

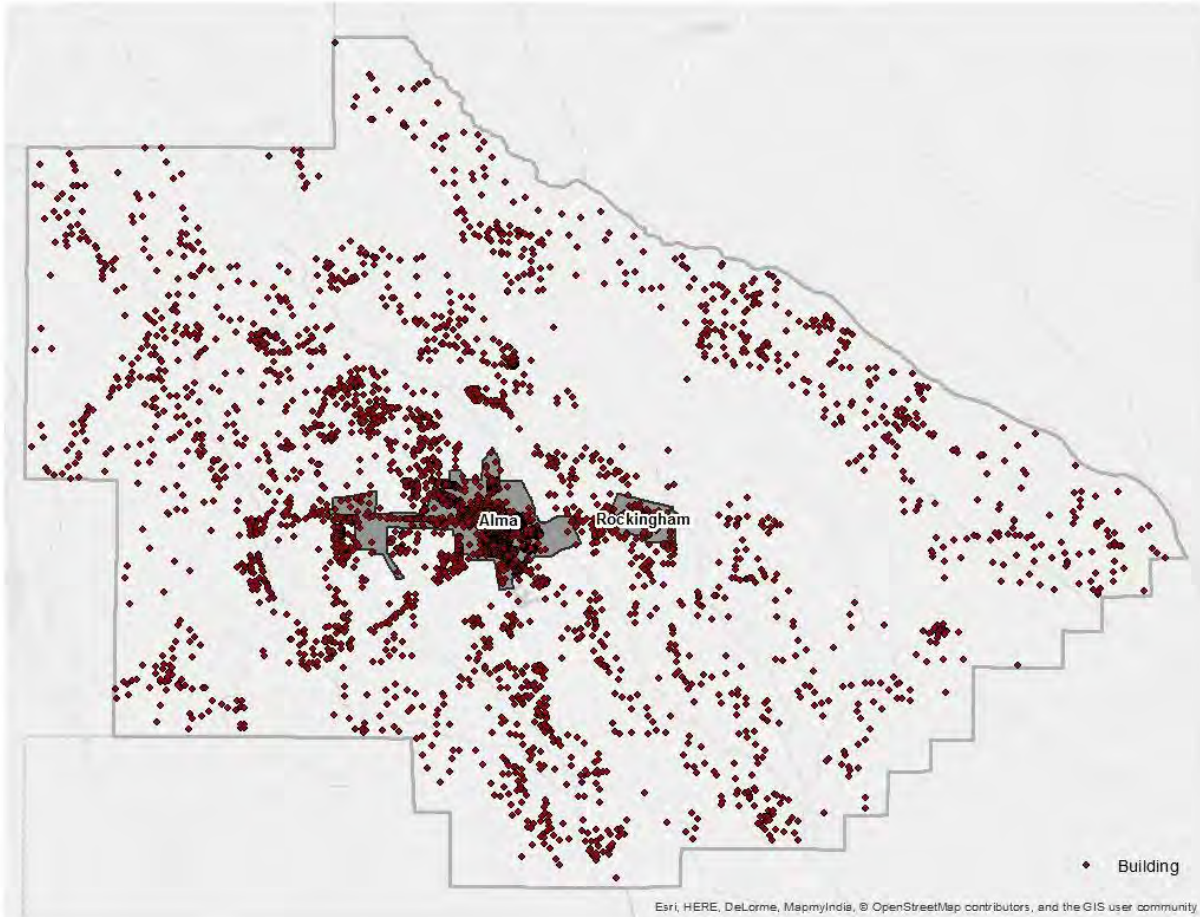


Figure 1: Bacon County Overview

## Essential Facility Updates

The default Hazus-MH essential facility data was updated to reflect improved information available in the Georgia Mitigation Information System (GMIS) as of May 2017. 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
<b>Bacon County</b>		
EOC	1	\$8,000
Care	12	\$39,027,000
Fire	8	\$4,599,000
Police	4	\$13,262,000
School	13	\$140,575,000
<b>Total</b>	<b>38</b>	<b>\$197,471,000</b>

## Assumptions and Exceptions

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

- The Bacon 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.
- 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.
- Georgia statute requires that the Assessor’s Office assign a code to all of the buildings on a parcel based on the buildings primary use. If there is a residential or a commercial structure on a parcel and there are also agricultural buildings on the same parcel Hazus-MH looks at the residential and commercial “primary” structures first and then combines the value of all secondary structures on that parcel with the value of the primary structure. The values and building counts are still accurate but secondary structures are accounted for under the same classification as the primary structure. Because of this workflow, the only time that a parcel would show a value for an agricultural building is when there are no residential or commercial structures on the parcel thus making the agricultural building the primary structure. This is the reason that agricultural building counts and total values seem low or are nonexistent.

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.

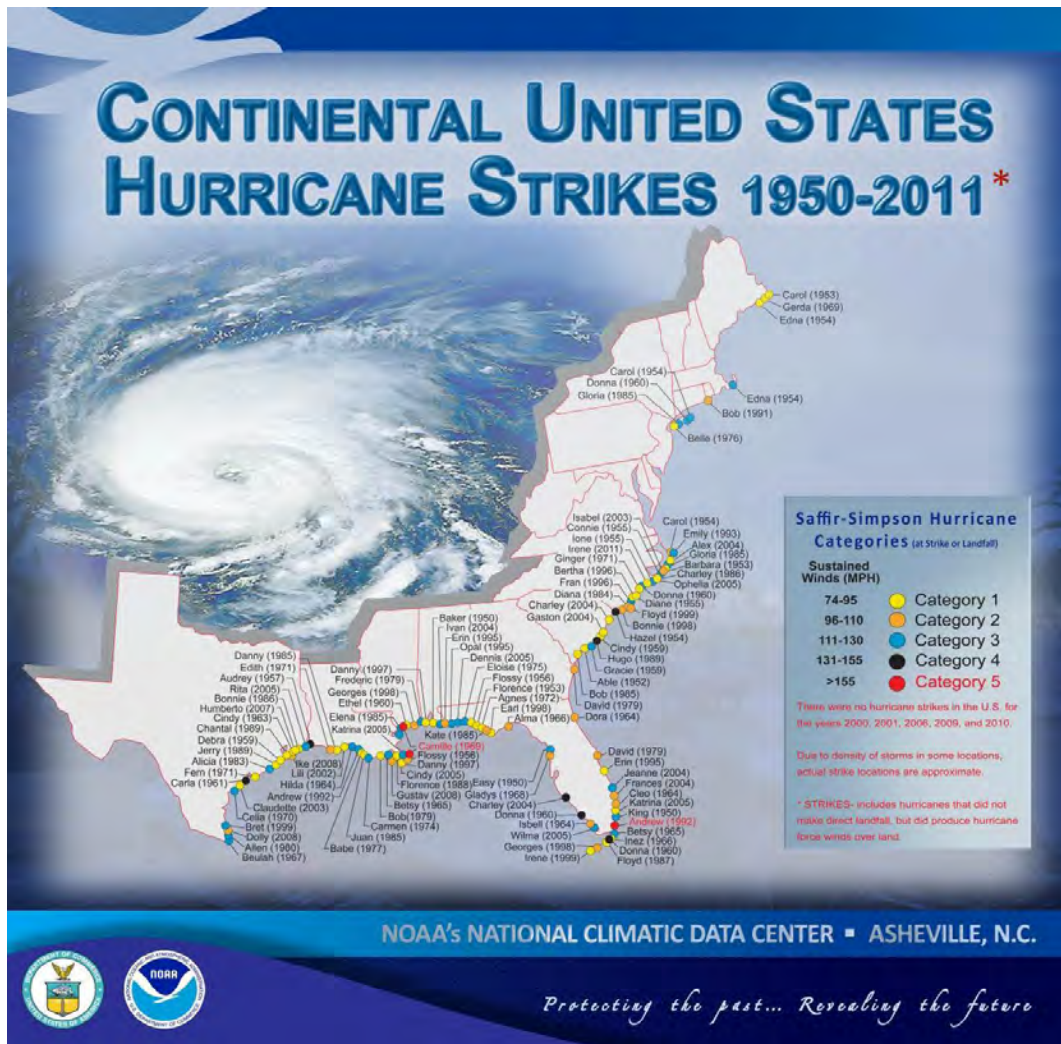


Figure 2: Continental United States Hurricane Strikes: 1950 to 2011<sup>3</sup>

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

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

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.

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 Bacon County by creating a 20-mile buffer around the county to include storms that didn't make direct landfall in Bacon County but impacted the county. Since 1851, Bacon County has had 13 tropical systems within 20 miles of its county borders (Table 4).

Table 4: Tropical Systems affecting Bacon County<sup>4</sup>

Year	Month	Day	Name	Wind (Knots)	Category
1871	October	6	UNNAMED	40	TS
1885	October	12	UNNAMED	50	TS
1898	October	2	UNNAMED	90	CAT_2
1907	September	29	UNNAMED	40	TS
1912	September	6	UNNAMED	30	TD
1912	September	6	UNNAMED	25	TD
1915	August	2	UNNAMED	40	TS
1916	October	4	UNNAMED	50	TS
1924	September	30	UNNAMED	55	E
1953	September	27	FLORENCE	50	E
1957	June	9	UNNAMED	35	TS

<sup>4</sup> Atlantic Oceanic and Meteorological Laboratory (2015). "Data Center." National Oceanic and Atmospheric Administration. [http://www.aoml.noaa.gov/hrd/data\\_sub/re\\_anal.html](http://www.aoml.noaa.gov/hrd/data_sub/re_anal.html). Retrieved 12-2-2015.

1987	August	17	UNNAMED	10	TD
2006	June	15	TAMMY	35	TS

Category Definitions:  
 TS – Tropical storm  
 TD – Tropical depression  
 CAT\_1 – Category 1 (same format for 2, 3, and 4)  
 E – Extra-tropical cyclone

# Probabilistic Hurricane Scenario

The following probabilistic wind damage risk assessment modeled a Category 1 storm with maximum winds of 83 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.

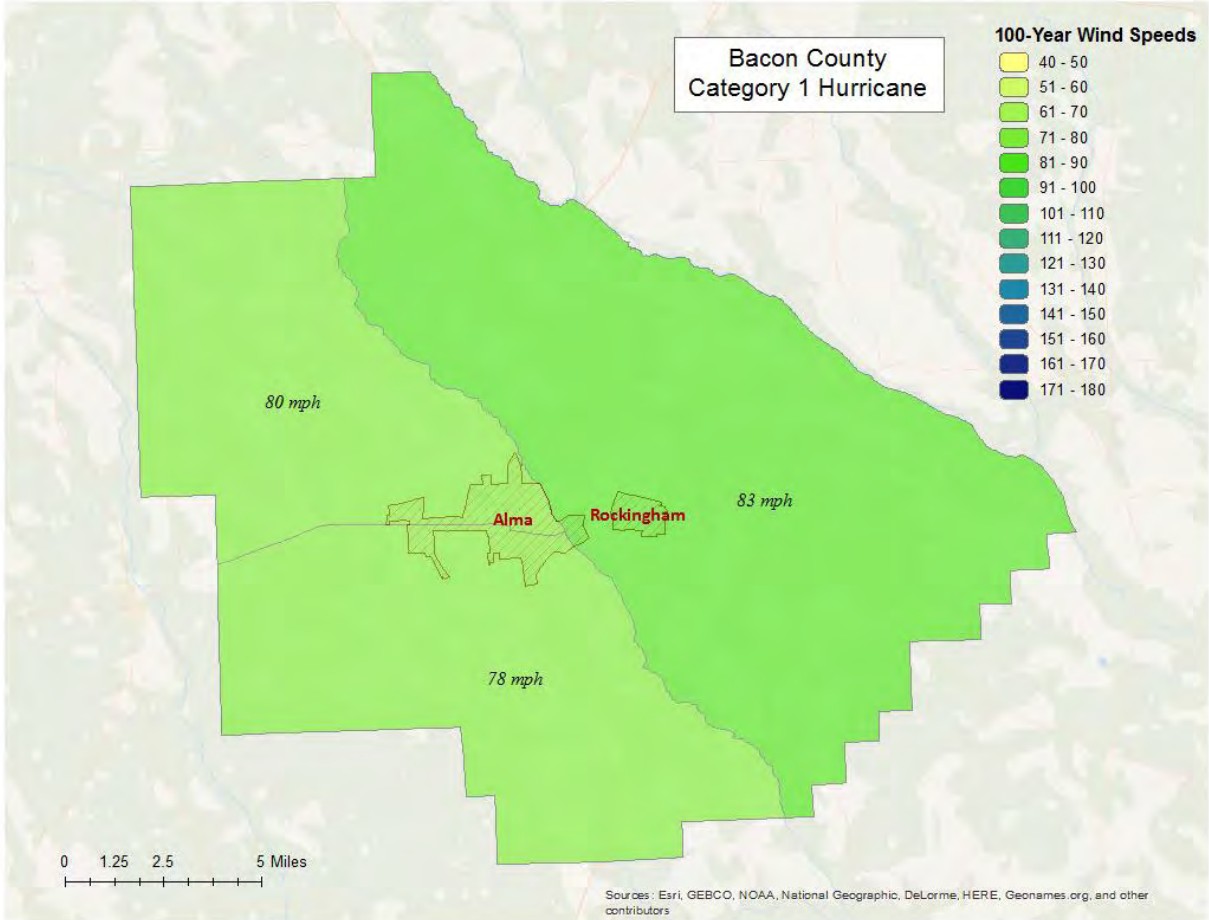


Figure 3: Wind Speeds by Storm Category

## Wind-Related Building Damages

Buildings in Bacon 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 Bacon 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.

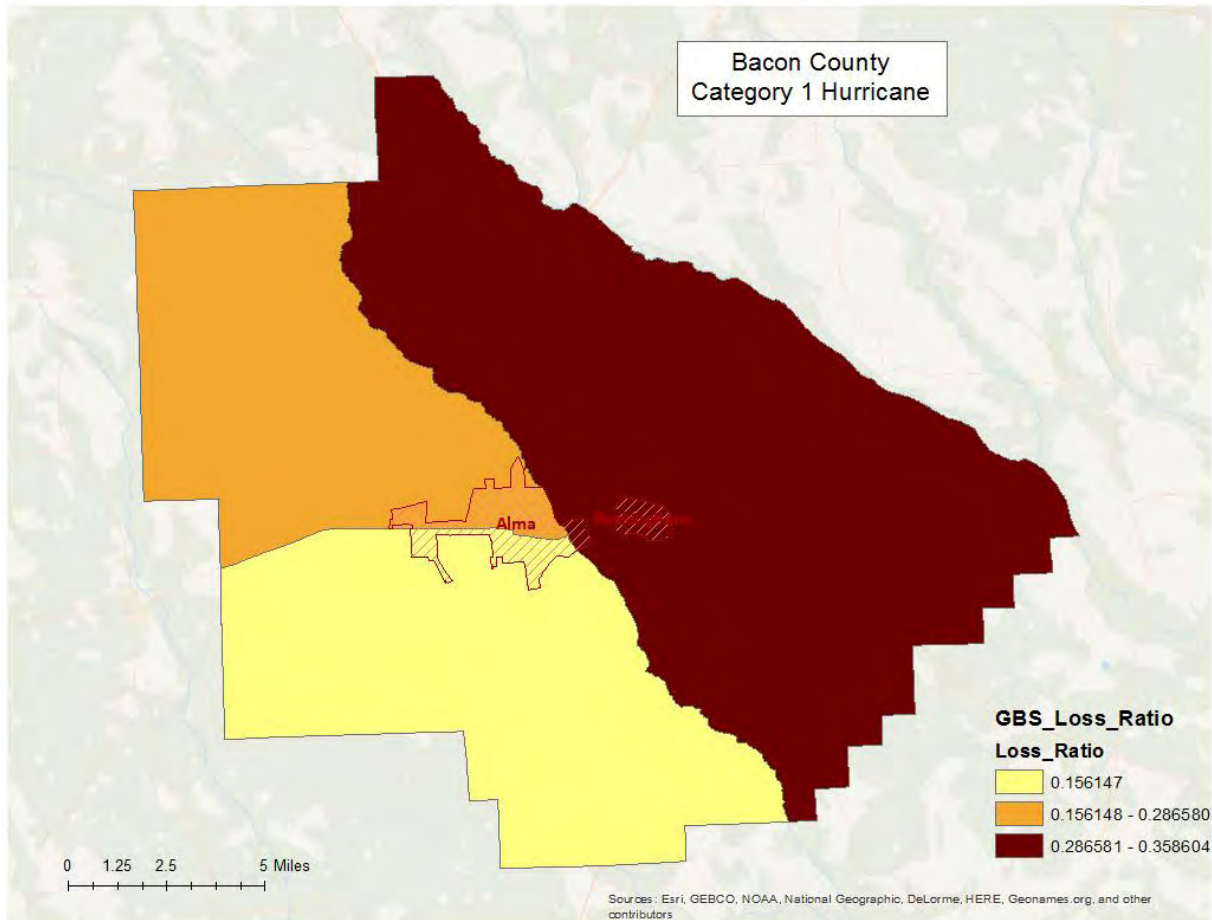


Figure 4: Hurricane Wind GBS Loss Ratios

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	86	\$4,448,730	\$4,982,410	0.26

## 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 38 essential facilities in Bacon County.

Classification	Number
EOCs	1
Fire Stations	8
Care Facilities	12
Police Stations	4
Schools	13

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	35

## 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. There were no shelter requirements resulting from the current scenario.

## 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 7. 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 7: Wind-Related Debris Weight (Tons)

Storm Classification	Brick, Wood, and Other	Reinforced Concrete/Steel	Tree Debris	Other Tree Debris	Total
Category 1	289	0	3,107	61,235	64,631

Figure 5 shows the distribution of all wind related debris resulting from a Category 1 hurricane. Each dot represents 11.7595 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.



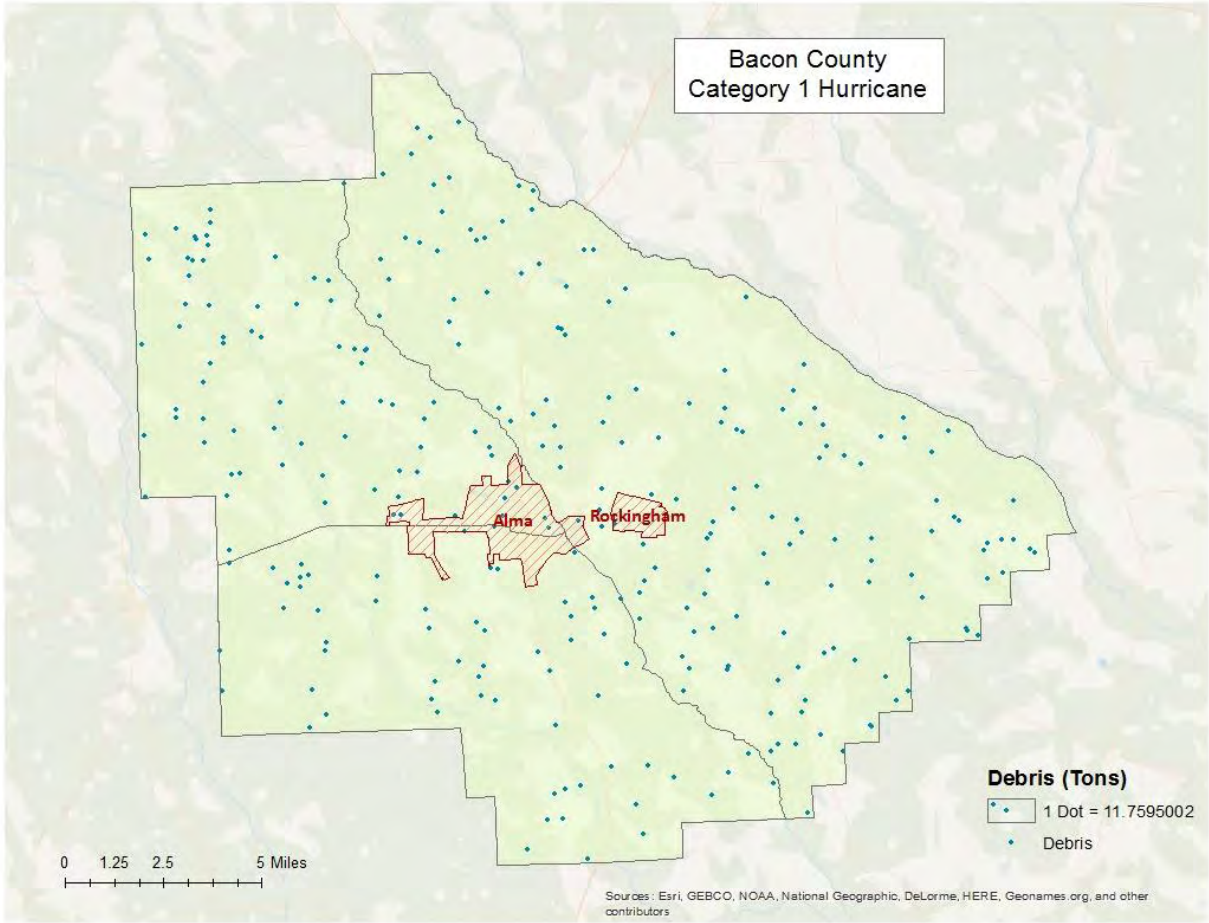


Figure 5: Wind-Related Debris Weight (Tons)



# 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 Bacon 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 servicer.

The following probabilistic risk assessment involves an analysis of a 1% annual chance riverine flood event (100-Year Flood).

## Riverine 1% Flood Scenario

Riverine losses were determined from the 1% flood boundaries downloaded from the FEMA Flood Map Service Center in May 2017. 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 6 illustrates the riverine inundation boundary associated with the 1% annual chance.

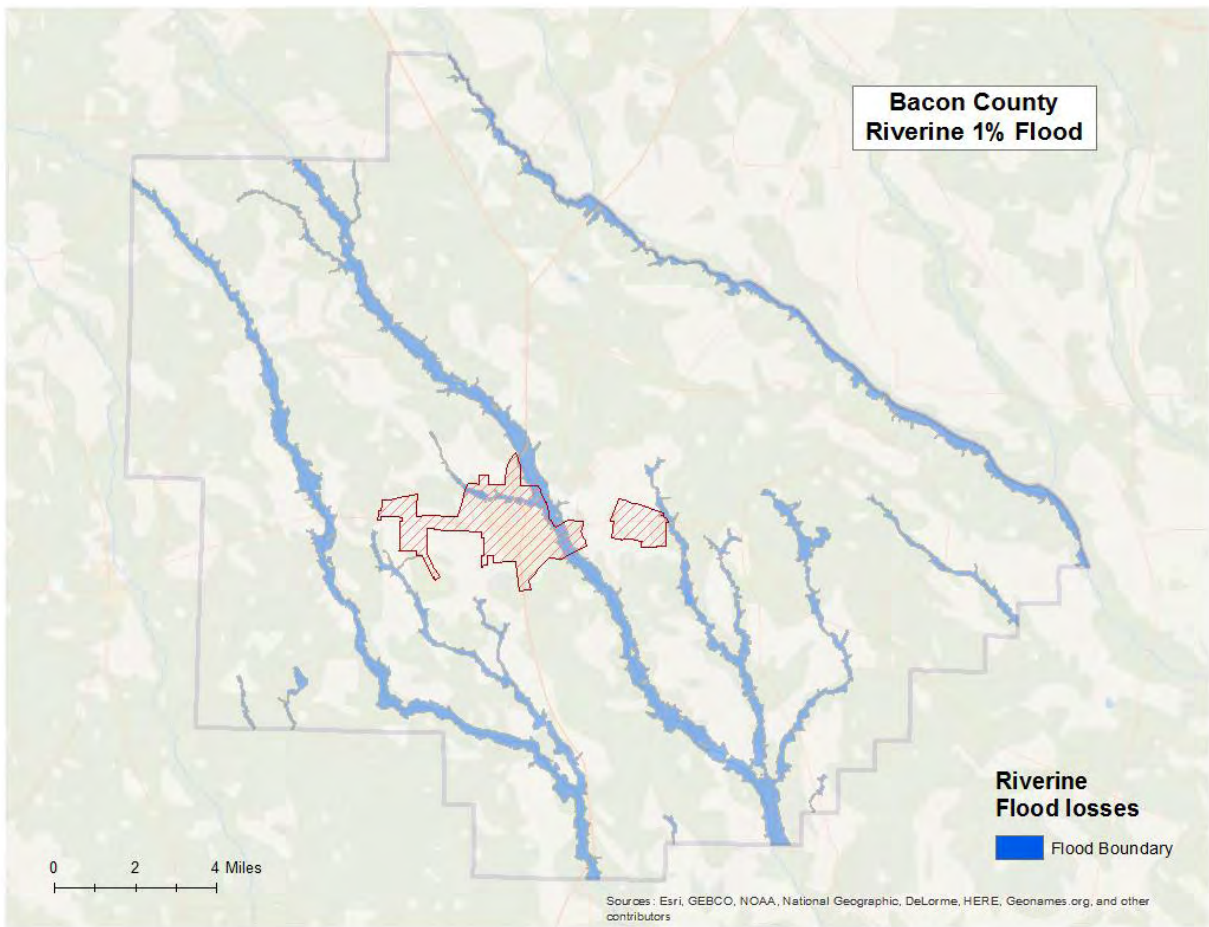


Figure 6: Riverine 1% Flood Inundation

## Riverine 1% Flood Building Damages

Buildings in Bacon 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 8 provides a summary of the potential flood-related building damage in Bacon County by jurisdiction that might be experienced from the 1% flood. Figure 7 maps the potential loss ratios of total building exposure to losses sustained to buildings from the 1% flood by 2010 census block and Figure 8 illustrates the relationship of building locations to the 1% flood inundation boundary.

Table 8: Bacon 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>Bacon County</b>					
Residential	4,912	22	\$544,151,871	\$616,941	0.20%

Commercial	67	1	\$106,966,882	\$75,743	0.07%
<b>County Total</b>					
<b>Total</b>	<b>4,979</b>	<b>23</b>	<b>\$651,118,752</b>	<b>\$692,684</b>	

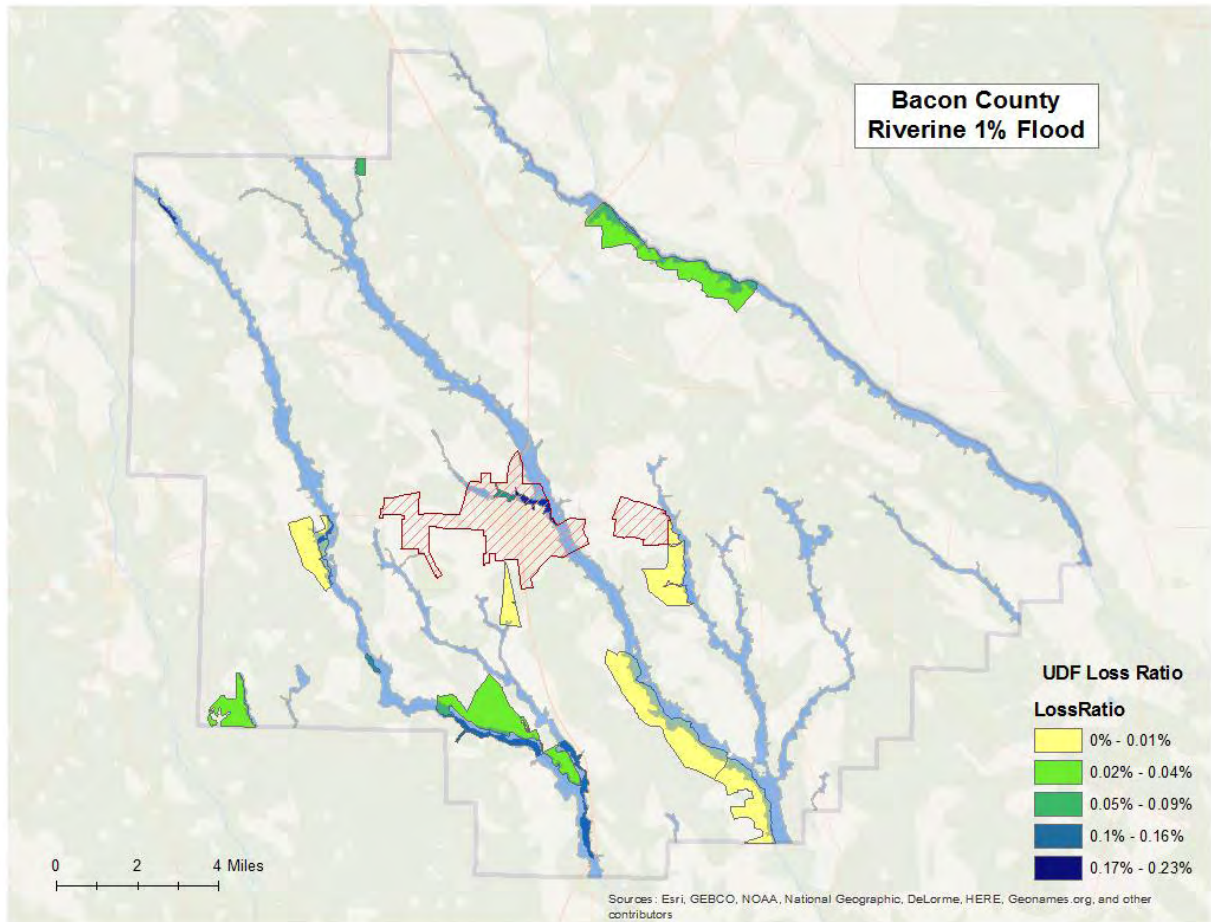


Figure 7: Potential UDF Loss Ratios from the 1% Riverine Flood

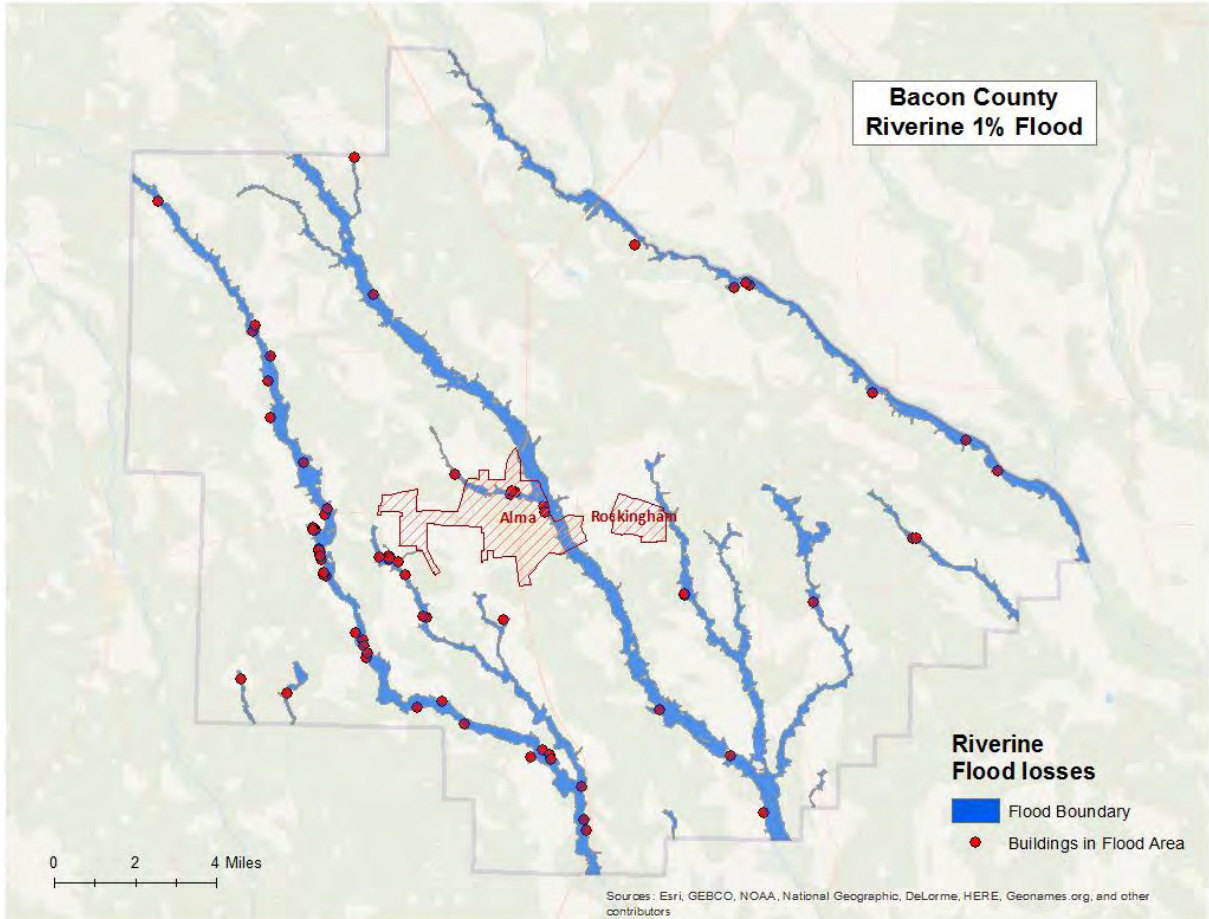


Figure 8: Damaged Buildings in 1% Riverine Flood

## 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 did not identify any essential facilities that were subject to damage in the Bacon County riverine 1% probability floodplain.

## 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 129 households might be displaced due to the flood. Displacement includes households evacuated within or very near to the inundated area. Displaced households represent 388 individuals, of which 91 may require short term publicly provided shelter. The results are mapped in Figure 9.



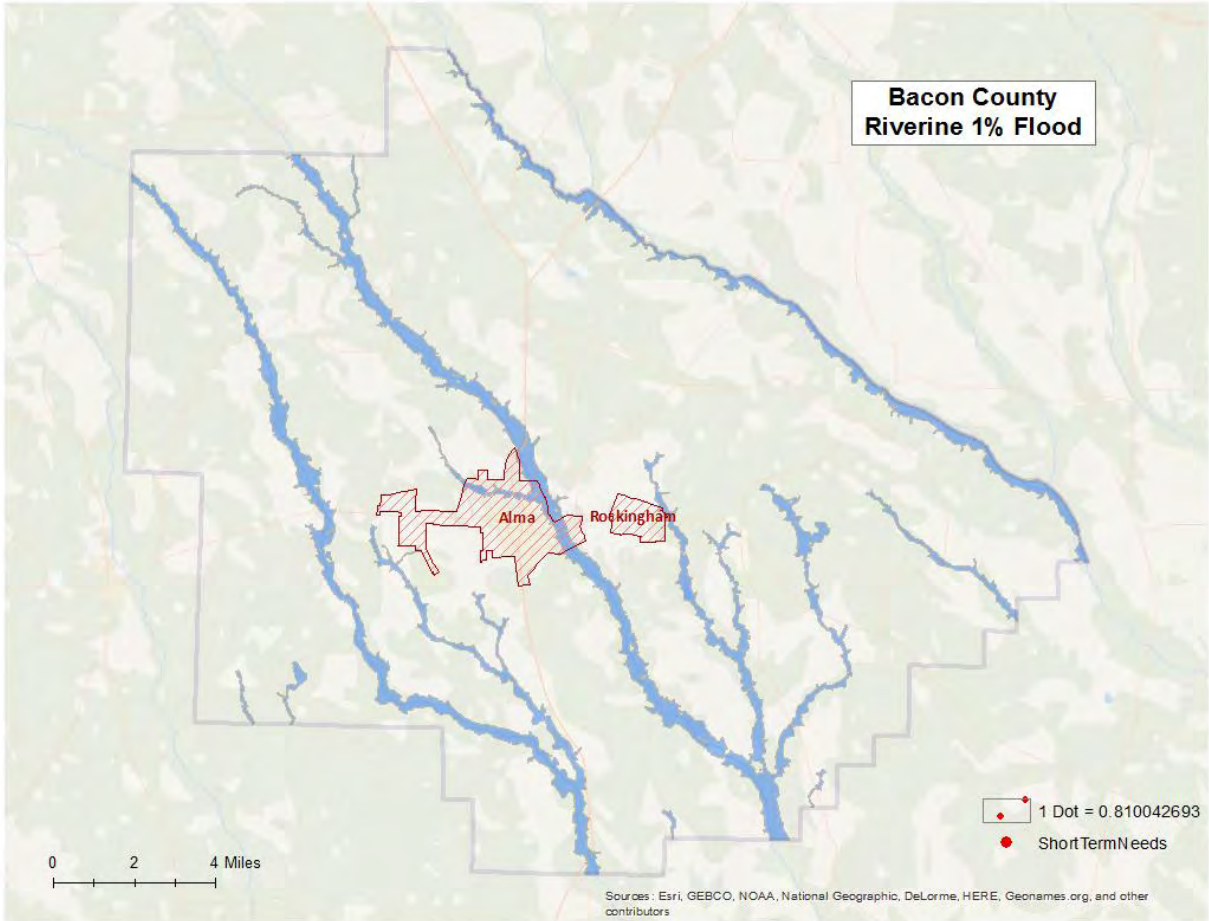


Figure 9: Estimated Flood Shelter Requirements in 1% Riverine Flood

## 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 1590 tons of debris might be generated: 1) Finishes - 682 tons; 2) Structural - 278 tons; and 3) Foundations- 630 tons. The results are mapped in Figure 10.

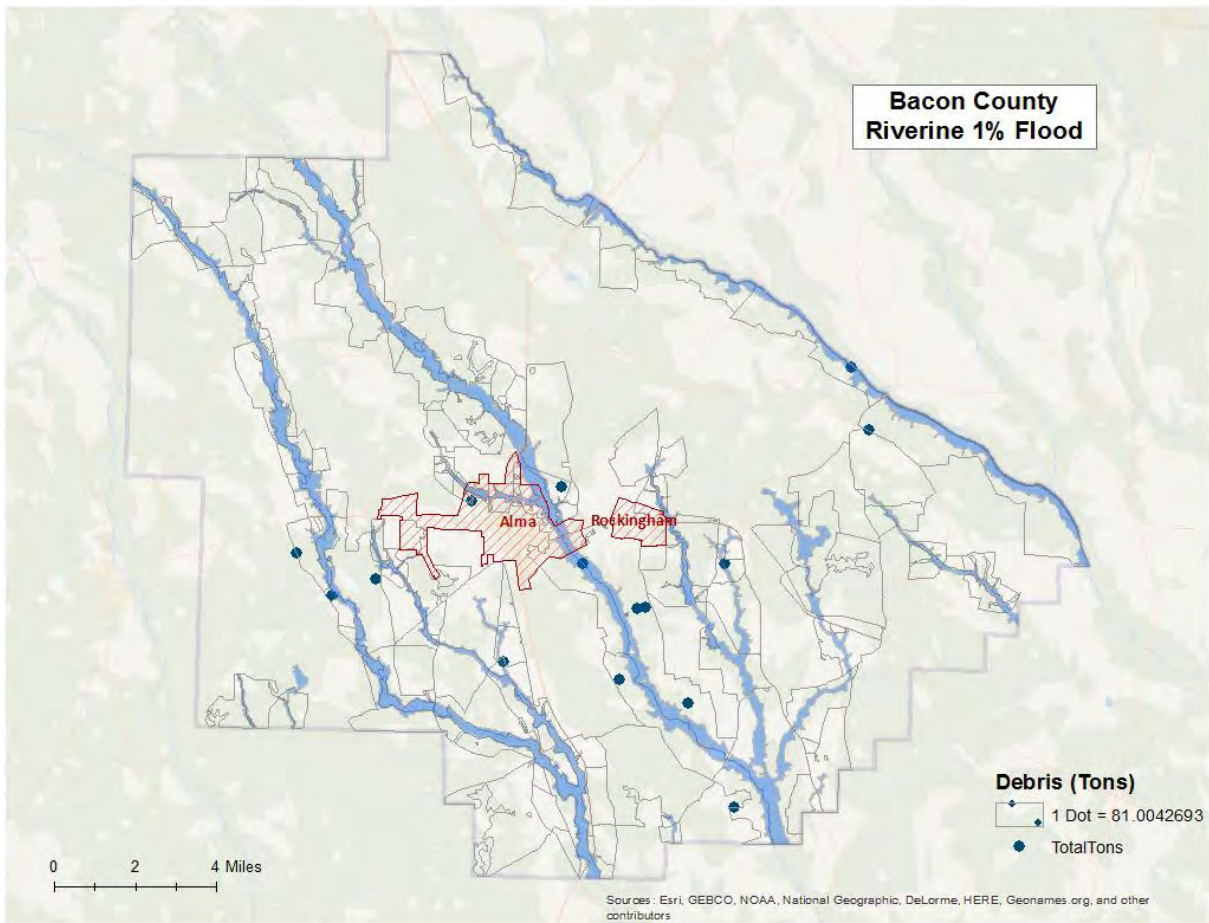


Figure 10: Flood Debris Weight (Tons) in 1% Riverine Flood



# 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 9.

Table 9: Enhanced Fujita Tornado Rating

<b>Fujita Number</b>	<b>Estimated Wind Speed</b>	<b>Path Width</b>	<b>Path Length</b>	<b>Description of Destruction</b>
<b>EF0</b> <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.
<b>EF1</b> <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.
<b>EF2</b> <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.
<b>EF3</b> <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.
<b>EF4</b> <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.
<b>EF5</b> <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 tornados (southeast to northwest). The tornado path was placed to travel through Alma. 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 10 depicts tornado path widths and expected damage.

Table 10: 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 11 describes the zone analysis.

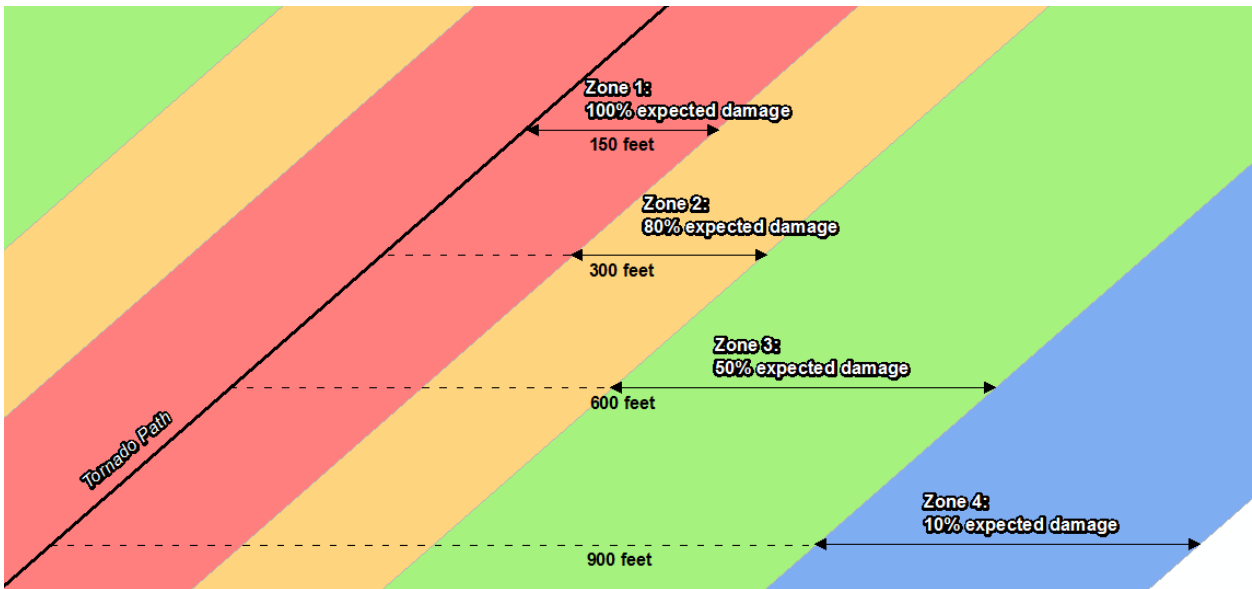


Figure 11: EF Scale Tornado Zones

An EF3 tornado has four damage zones, depicted in Table 11. 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 12 and the damage curve buffer zones are shown in Figure 13.

Table 11: 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%

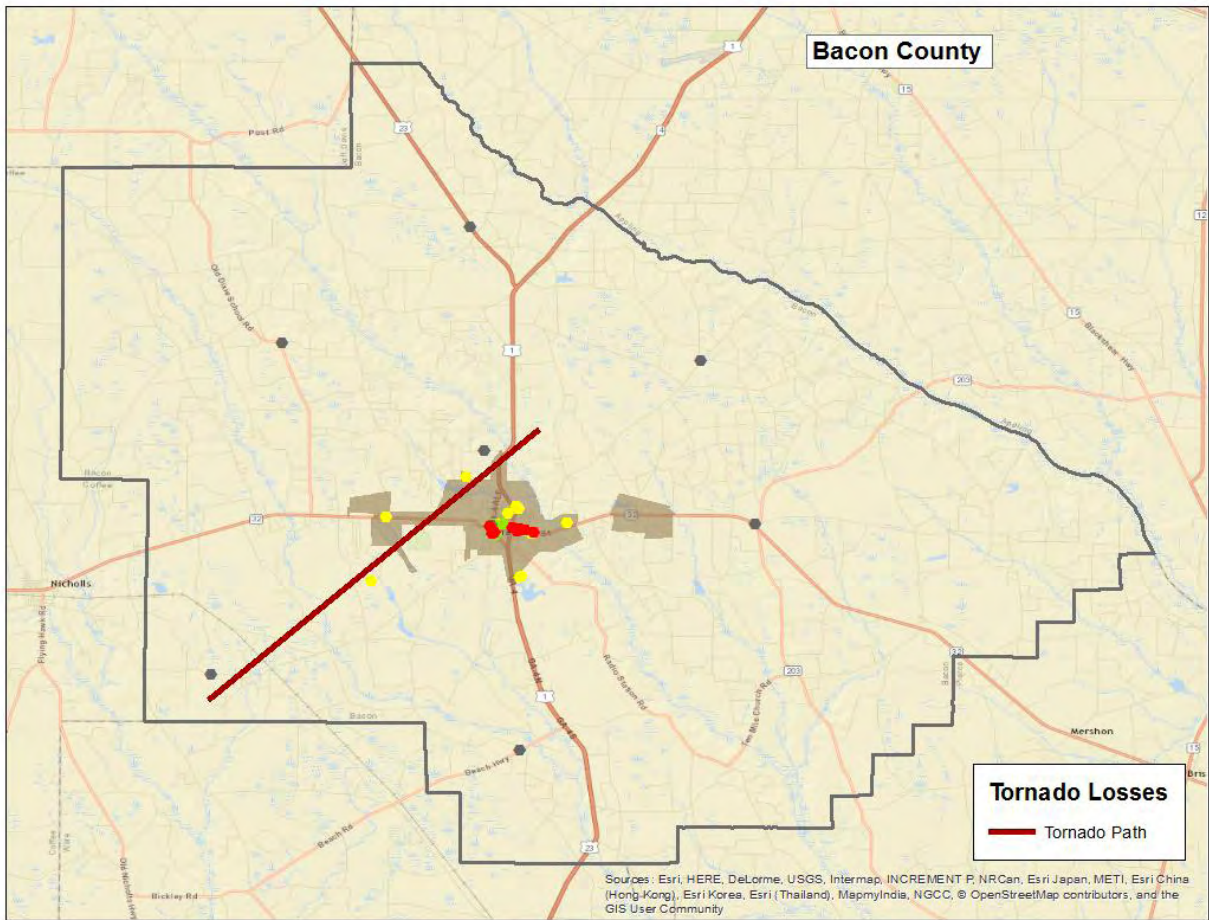


Figure 12: Hypothetical EF3 Tornado Path

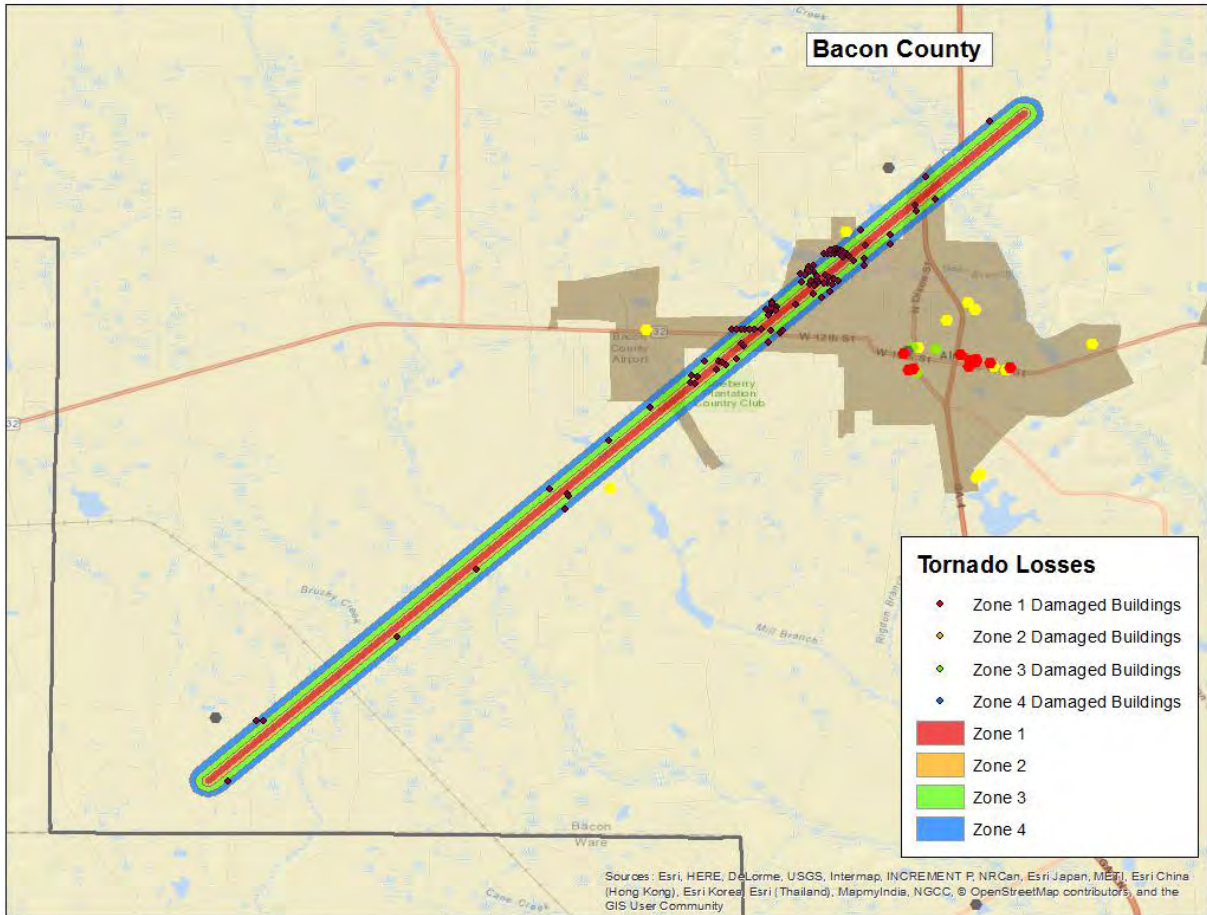


Figure 13: Modeled EF3 Tornado Damage Buffers

## EF3 Tornado Building Damages

The analysis estimated that approximately 137 buildings could be damaged, with estimated building losses of \$3.8 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 Bacon 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 12.

Table 12: Estimated Building Losses by Occupancy Type

Occupancy Classification	Buildings Damaged	Building Losses
Residential	104	\$6,484,799
Commercial	3	\$0
Industrial	2	\$159,312
<b>Total</b>	<b>137</b>	<b>\$3,776,588</b>

## EF3 Tornado Essential Facility Damage

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

# Exceptions Report

Hazus Version 2.2 SP1 was used to perform the loss estimates for Bacon 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 named PDM\_GA\_Workflow.doc.

## Statewide Inventory Changes

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

Statewide facility data were supplied by GEMA through the GMIS in May 2017. These updates were applied by The Southern Georgia Regional Commission. Table 13 summarizes the difference between the original Hazus-MH default data and the updated data for Bacon County.

Table 13: Essential Facility Updates

Occupancy Classification	Default Replacement Cost	Default Count	Updated Replacement Cost	Updated Count
Care	\$25,994,075	1	\$39,027,000	12
EOC	\$880,000	1	\$8,000	1
Fire	NA	1	\$4,599,000	8
Police	\$3,696,000	3	\$13,262,000	4
School	\$24,927,583	4	\$140,575,000	13



# County Inventory Changes

The GBS records for Bacon County were replaced with data derived from parcel and property assessment data obtained from Bacon County. The county provided property assessment data was current as of December 2016 and the parcel data current as of April 2016.

## General Building Stock Updates

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Southern Georgia Regional Commission obtained the parcel boundaries and assessor records from Bacon County. Records without improvements were deleted. The parcel boundaries were converted to parcel points located in the centroids of each parcel boundary. 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 Bacon County was 98.6%.

Adjustments were made to records when primary fields did not have a value. In these cases, default values were applied to the fields. Table 14 outlines the adjustments made to Bacon County records.

Table 14: Building Inventory Default Adjustment Rates

Type of Adjustment	Building Count	Percentage
Area Unknown	850	10 %
Construction Unknown	3,319	38%
Condition Unknown	858	10%
Foundation Unknown	955	11%
Year Built Unknown	346	4%

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 Bacon 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

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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 15 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 15: Building Count and Exposure for County and Riverine Flood Area

<b>Feature</b>	<b>Counts</b>	<b>Exposure</b>
Total buildings in the County	5,467	\$1,282,182,197
Total buildings inside the 1% Annual Chance Riverine Flood Area	33	\$1,412,664

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
  - Content Cost was calculated from Building Cost