GEMA Worksheet #1 Identify the Hazard Step 1

Date: Ben Hill County
11/04

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 Wesbite 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
Avalanche	___	___
Costal Erosion	___	___
Costal Storm	___	___
Dam Failure	___	___
Drought	_x_	_x_
Earthquake	___	___
Expansive Soils	_x_	___
Extreme Heat	_x_	_x_
Flood	_x_	_x_
Hailstorm	_x_	___
Hurricane	_x_	_x_
Land Slide	___	___
Severe Winter Storm	_x_	___
Tornado	_x_	_x_
Tsunami	___	___
Volcano	___	___
Wildfire	_x_	_x_
Windstorm	_x_	___
Hazard Material	_x_	_x_
Radiological	___	___
Other_**Lightning** __	_x_	_x_
Other_____	___	___
Other_____	___	___

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

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

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

Region IV Disaster History

Georgia Disaster History

Year	Date	Disaster Types	Disaster Number
		Major Disaster Declarations	
2004	09/24	Tropical Storm	1560
2004	09/18	Hurricane	1554
2000	02/15	Tornado	1315
2000	01/28	Winter Storm	1311
1999	04/20	Tornado, Severe Storm	1271
1998	03/20	Flooding, Severe Storm, Tornado	1209
1995	12/20	Severe Storm, Tornado	1076
1995	10/10	Hurricane	1071
1994	10/19	Flooding, Heavy Rain, High Winds, Tornado	1042
1994	07/07	Heavy Rain, Tornado, Tropical Storm, Flooding	1033
1994	03/31	Flooding, Severe Storm, Tornado	1020
1993	03/04	Heavy Rain, High Winds, Tornado	980
1992	12/01	Heavy Rain, High Winds, Tornado	969
1991	03/15	Flooding, Severe Storm	897
1990	10/19	Flooding, Severe Storm	880
1990	02/23	Flooding, Severe Storm, Tornado	857
		Emergency Declarations	
1999	09/14	Hurricane	3144

NOAA Satellite and Information Service
National Environmental Satellite, Data, and Information Service (NESDIS)

National Climatic Data Center
U.S. Department of Commerce

DOC >NOAA >NESDIS >NCDC

Search Field: Search NCDC

Query Results

77 event(s) were reported in **Ben Hill County, Georgia** between **01/01/1950** and **12/31/2004** (**High Wind limited to speed greater than 0 knots**).

*Click on **Location or County** to display Details.*

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

Georgia

Location or County	Date	Time	Type	Mag	Dth	Inj	PrD	CrD
1 BEN HILL	04/21/1958	2000	Hail	2.00 in.	0	0	0	0
2 BEN HILL	05/09/1959	1300	Tstm Wind	0 kts.	0	0	0	0
3 BEN HILL	04/15/1961	0730	Tornado	F1	0	0	250K	0
4 BEN HILL	04/15/1961	0745	Tstm Wind	0 kts.	0	0	0	0
5 BEN HILL	05/20/1963	1500	Tstm Wind	0 kts.	0	0	0	0
6 BEN HILL	06/14/1963	1700	Tornado	F2	0	2	250K	0
7 BEN HILL	05/21/1964	1800	Tstm Wind	0 kts.	0	0	0	0
8 BEN HILL	07/10/1964	1530	Tstm Wind	0 kts.	0	0	0	0
9 BEN HILL	06/19/1967	1445	Tornado	F2	0	0	25K	0
10 BEN HILL	05/28/1968	0030	Tornado	F1	0	0	3K	0
11 BEN HILL	05/28/1968	0030	Tornado	F1	0	0	25K	0
12 BEN HILL	08/17/1970	1345	Tstm Wind	0 kts.	0	0	0	0
13 BEN HILL	01/15/1971	1230	Tornado	F1	0	0	25K	0

14 BEN HILL	07/06/1980	1710	Tstm Wind	0 kts.	0	0	0	0
15 BEN HILL	04/25/1982	1410	Tornado	F0	0	0	25K	0
16 BEN HILL	12/05/1982	1315	Tornado	F1	0	0	25K	0
17 BEN HILL	12/05/1982	1315	Tstm Wind	0 kts.	0	0	0	0
18 BEN HILL	02/22/1983	1445	Tornado	F1	0	0	250K	0
19 BEN HILL	05/16/1983	0800	Tornado	F1	0	0	250K	0
20 BEN HILL	03/05/1984	1645	Tstm Wind	0 kts.	0	0	0	0
21 BEN HILL	04/03/1984	2130	Tstm Wind	0 kts.	0	0	0	0
22 BEN HILL	04/03/1984	2200	Tstm Wind	0 kts.	0	0	0	0
23 BEN HILL	04/03/1984	2230	Tstm Wind	0 kts.	0	0	0	0
24 BEN HILL	05/03/1984	1441	Tstm Wind	0 kts.	0	0	0	0
25 BEN HILL	07/02/1984	0600	Tstm Wind	0 kts.	0	0	0	0
26 BEN HILL	08/23/1985	1230	Tstm Wind	0 kts.	0	0	0	0
27 BEN HILL	06/01/1986	1630	Hail	1.50 in.	0	0	0	0
28 BEN HILL	07/23/1986	1710	Tstm Wind	0 kts.	0	0	0	0
29 BEN HILL	07/29/1986	1425	Hail	0.75 in.	0	0	0	0
30 BEN HILL	07/25/1987	1500	Tstm Wind	0 kts.	0	0	0	0
31 BEN HILL	04/19/1988	0155	Tstm Wind	0 kts.	0	0	0	0
32 BEN HILL	04/25/1988	2045	Tstm Wind	0 kts.	0	0	0	0
33 BEN HILL	05/23/1988	1720	Hail	1.75 in.	0	0	0	0
34 BEN HILL	05/24/1988	1600	Hail	1.75 in.	0	0	0	0

35 BEN HILL	05/24/1988	1620	Hail	1.00 in.	0	0	0	0
36 BEN HILL	06/30/1988	1500	Tstm Wind	0 kts.	0	0	0	0
37 BEN HILL	06/30/1988	1515	Tstm Wind	0 kts.	0	0	0	0
38 BEN HILL	03/21/1989	1050	Tstm Wind	0 kts.	0	0	0	0
39 BEN HILL	08/23/1989	1345	Tstm Wind	0 kts.	0	0	0	0
40 BEN HILL	11/15/1989	2310	Tstm Wind	0 kts.	0	0	0	0
41 BEN HILL	02/10/1990	0630	Tstm Wind	0 kts.	0	0	0	0
42 BEN HILL	07/09/1990	1800	Tstm Wind	0 kts.	0	0	0	0
43 BEN HILL	07/09/1990	1835	Tstm Wind	0 kts.	0	0	0	0
44 BEN HILL	03/02/1991	0600	Tstm Wind	0 kts.	0	0	0	0
45 BEN HILL	07/01/1992	1145	Tstm Wind	0 kts.	0	0	0	0
46 BEN HILL	09/03/1992	1715	Tstm Wind	0 kts.	0	0	0	0
47 BEN HILL	09/03/1992	1740	Tstm Wind	0 kts.	0	0	0	0
48 BEN HILL	11/24/1992	1115	Tornado	F0	0	0	25K	0
49 Fitzgerald	01/12/1993	1528	Flash Flood	N/A	0	2	500K	0
50 Fitzgerald To	10/30/1993	0430	Thunderstorm Winds	N/A	0	4	5.0M	500K
51 Fitzgerald	03/27/1995	1945	Hail	1.50 in.	0	0	0	0
52 Fitzgerald	03/27/1995	1945	Thunderstorm Winds	N/A	0	0	300	0
53 Fitzgerald	05/15/1995	1855	Thunderstorm Winds	N/A	0	0	0	0
54 Fitzgerald	05/15/1995	1955	Thunderstorm Winds	N/A	0	0	0	0
55 Bowens Mill	05/19/1995	1340	Thunderstorm	N/A	0	0	0	0

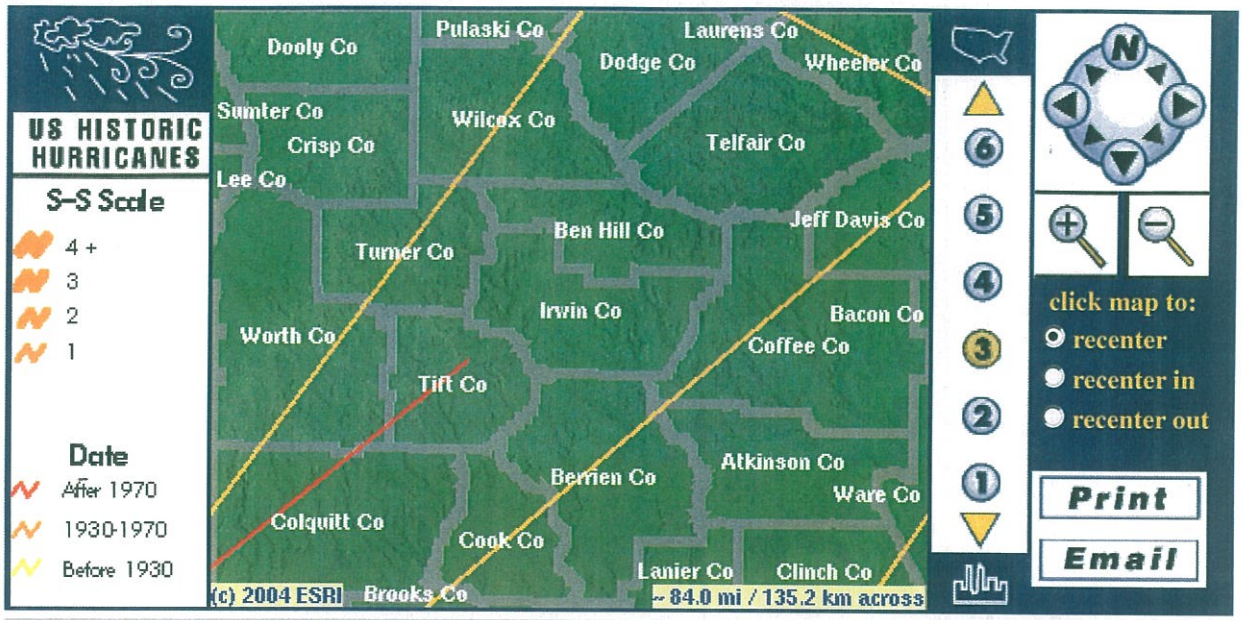
			Winds					
56 Southwest And South C	10/04/1995	0000	Hurricane Opal	N/A	0	0	0	0
57 Fitzgerald	03/06/1996	02:30 PM	Hail	1.50 in.	0	0	0	0
58 Countywide	04/29/1996	09:10 PM	Hail	0.75 in.	0	0	0	0
59 Fitzgerald	05/03/1997	12:40 PM	Tstm Wind	0 kts.	0	0	2K	1K
60 Fitzgerald	06/01/1997	05:10 PM	Hail	1.75 in.	0	0	0	0
61 GAZ121>131 - 142>148 - 155>161	09/01/1997	12:00 AM	Drought	N/A	0	0	0	46.5M
62 Fitzgerald	02/28/1998	01:05 AM	Hail	1.00 in.	0	0	0	0
63 GAZ121 - 123>127 - 130 - 142>147 - 155>156 - 158>160	03/08/1998	12:00 PM	Flood	N/A	1	1	161.0M	0
64 GAZ130>131	04/19/1998	12:00 PM	High Wind	0 kts.	0	0	70K	0
65 Countywide	06/05/1998	07:30 PM	Tstm Wind	0 kts.	0	0	5K	0
66 GAZ121 - 124>125 - 127 - 129>131 - 142>143 - 145 - 148 - 155>157 - 159>161	09/03/1998	12:00 AM	Tropical Storm	N/A	0	0	650K	0
67 Countywide	03/30/2000	07:00 AM	Flash Flood	N/A	0	0	250K	0
68 Countywide	04/03/2002	09:20 PM	Hail	1.75 in.	0	0	0	0
69 Fitzgerald	05/31/2002	01:15 PM	Hail	0.75 in.	0	0	0	0
70 Fitzgerald	06/03/2002	07:15 PM	Tstm Wind	0 kts.	0	0	3K	0
71 Countywide	12/24/2002	10:10 AM	Tstm Wind	50 kts.	0	0	10K	0

72 Fitzgerald	03/20/2003	06:00 AM	Tstm Wind	50 kts.	0	0	150K	0
73 Countywide	05/02/2003	10:10 PM	Tstm Wind	50 kts.	0	0	100K	0
74 Queensland	05/11/2003	06:20 PM	Tstm Wind	50 kts.	0	0	3K	0
75 GAZ130	06/16/2003	08:00 PM	Flood	N/A	0	0	15K	0
76 Fitzgerald	02/06/2004	03:06 PM	Tstm Wind	50 kts.	0	0	50K	0
77 GAZ125>127 - 129>131 - 143>148 - 156>161	09/26/2004	06:00 PM	Tropical Storm	N/A	0	0	2.2M	0
				TOTALS:	1	9	171.181M	47.001M

Top of Page

Privacy Policy HOW ARE WE DOING? A user survey FIRSTGOV The U.S. Government's Official Web Portal Disclaimer

This page dynamically generated 24 Oct 2007 from:
http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~storms
Please send questions or comments about this system to Stuart.Hinson@noaa.gov
Please see the NCDC Contact Page if you have questions or comments.



Map Notes: The historic hurricane data displayed on this site was collected by the **NOAA Coastal Services Center** The maps indicate the relative intensity of the historic hurricanes and tropical storms as measured on the **Saffir-Simpson Hurricane Scale**. For more information on hurricane hazards and how you can defend against them, please visit the **NOAA Hurricanes** Web site.

Current Map View:

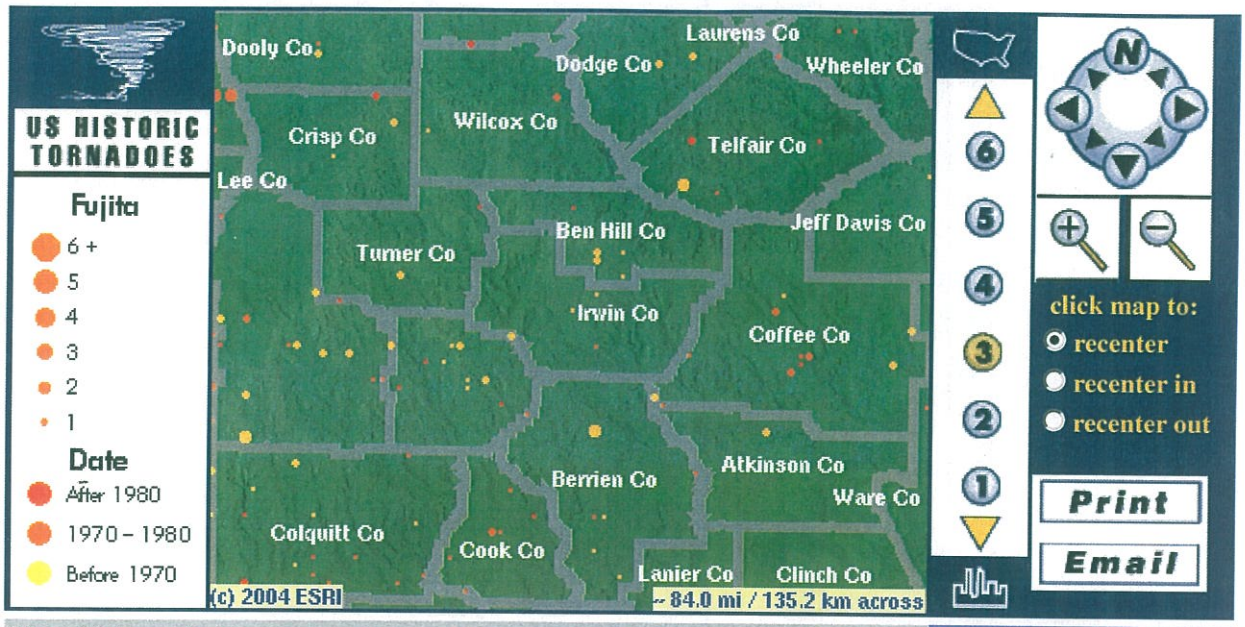
Historic Hurricanes

Change View

Make New Map

Return to Home Page

Copyright © Environmental Systems Research Institute, Inc.
Wed Nov 17 11:40:49 2004



Map Notes: The historic tornado touchdown data displayed on this site has been assembled by ESRI from various sources. The maps indicate the relative intensity of the historic tornadoes as measured on the **Fujita Scale**. This intensity data is not available for all tornadoes in the data set. For more information on tornado hazards and how you can defend against them, please visit the **National Weather Service** Web site.

Current Map View:

Historic Tornadoes

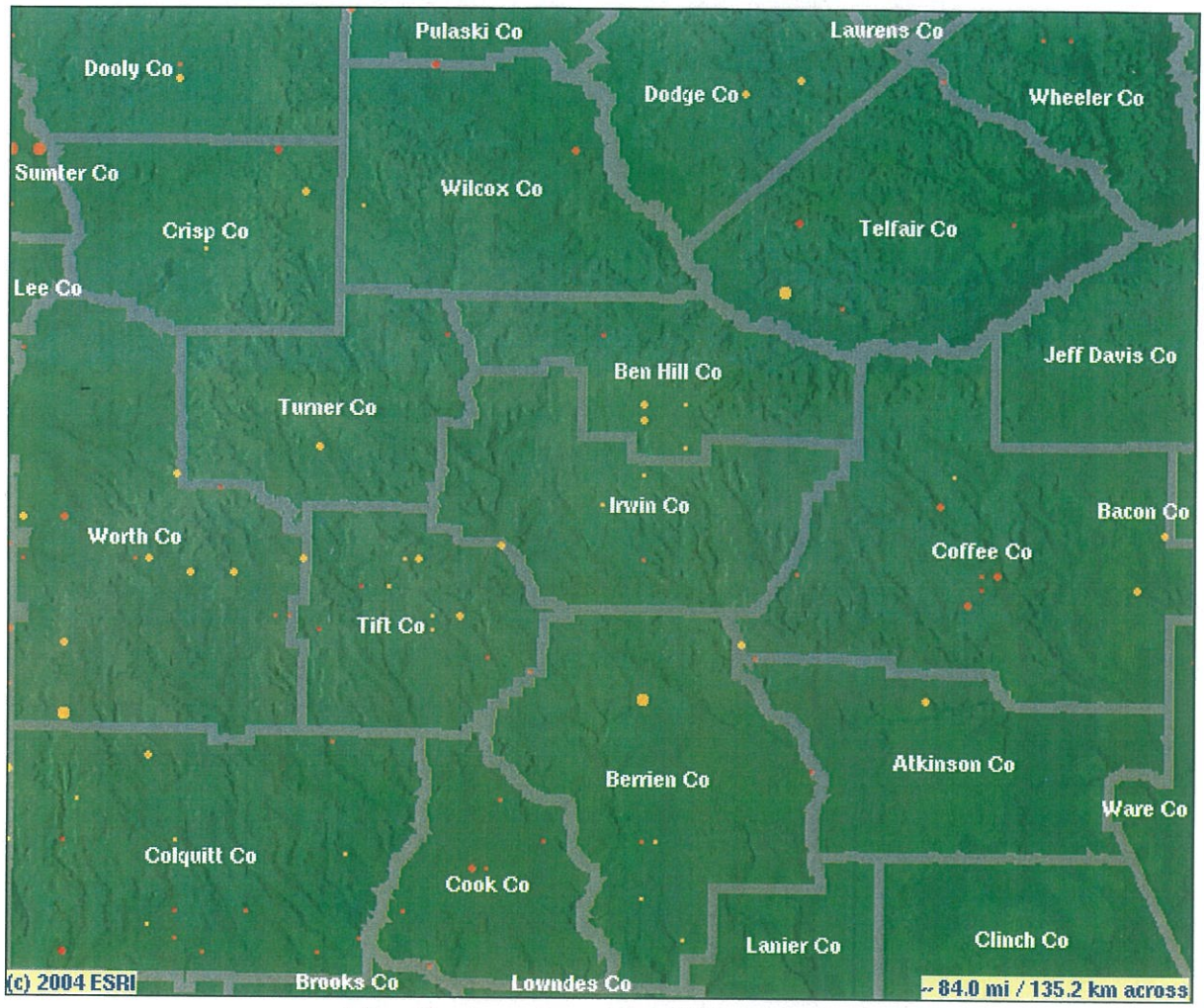
Change View

Make New Map

Return to Home Page

Copyright © Environmental Systems Research Institute, Inc.
Wed Nov 17 11:35:16 2004

Historic Tornado Touchdown Map



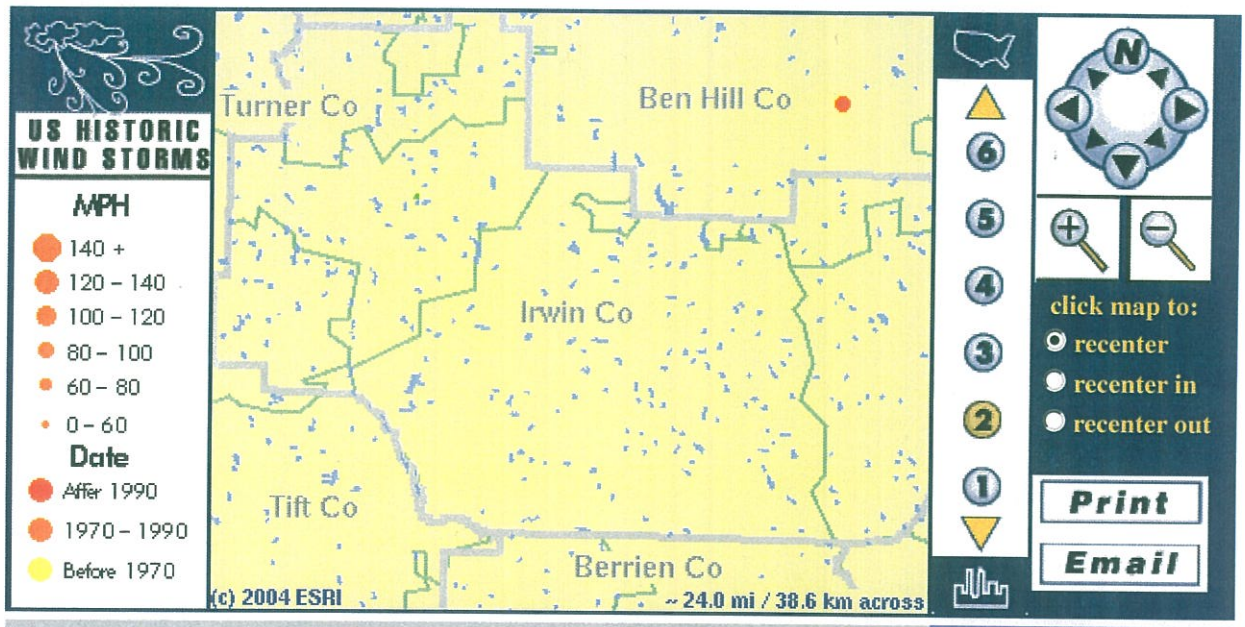
Map Centerpoint: -83.30000, 31.60000
Map Produced: Wed Nov 17 11:34:15 2004

ESRI/FEMA Project Impact
Hazard Information and Awareness Site
http://www.esri.com/hazards

ESRI and FEMA

do you know your RISKS?

Hazard Information and Awareness



Map Notes: The historic wind storm data displayed on this site was collected by the **National Weather Service**. The maps indicate the relative intensity of the historic wind storms as measured by miles per hour (MPH). For more information on the online hazard maps, please refer to the **Frequently Asked Questions** page.

Current Map View:

Historic Wind Storms

Change View

Make New Map

Return to Home Page

Copyright © Environmental Systems Research Institute, Inc.
Wed Nov 17 11:37:20 2004

NOAA Satellite and Information Service
National Environmental Satellite, Data, and Information Service (NESDIS)

National Climatic Data Center
U.S. Department of Commerce

DOC >NOAA >NESDIS >NCDC

Search Field: Search NCDC

Query Results

45 THUNDERSTORM & HIGH WINDS event(s) were reported in **Ben Hill County, Georgia** between **01/01/1950** and **12/31/2004**.

*Click on **Location or County** to display Details.*

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

Georgia

Location or County	Date	Time	Type	Mag	Dth	Inj	PrD	CrD
1 BEN HILL	05/09/1959	1300	Tstm Wind	0 kts.	0	0	0	0
2 BEN HILL	04/15/1961	0745	Tstm Wind	0 kts.	0	0	0	0
3 BEN HILL	05/20/1963	1500	Tstm Wind	0 kts.	0	0	0	0
4 BEN HILL	05/21/1964	1800	Tstm Wind	0 kts.	0	0	0	0
5 BEN HILL	07/10/1964	1530	Tstm Wind	0 kts.	0	0	0	0
6 BEN HILL	08/17/1970	1345	Tstm Wind	0 kts.	0	0	0	0
7 BEN HILL	07/06/1980	1710	Tstm Wind	0 kts.	0	0	0	0
8 BEN HILL	12/05/1982	1315	Tstm Wind	0 kts.	0	0	0	0
9 BEN HILL	03/05/1984	1645	Tstm Wind	0 kts.	0	0	0	0
10 BEN HILL	04/03/1984	2130	Tstm Wind	0 kts.	0	0	0	0
11 BEN HILL	04/03/1984	2200	Tstm Wind	0 kts.	0	0	0	0
12 BEN HILL	04/03/1984	2230	Tstm Wind	0 kts.	0	0	0	0
13 BEN HILL	05/03/1984	1441	Tstm Wind	0 kts.	0	0	0	0
14 BEN HILL	07/02/1984	0600	Tstm Wind	0 kts.	0	0	0	0
15 BEN HILL	08/23/1985	1230	Tstm Wind	0 kts.	0	0	0	0
16 BEN HILL	07/23/1986	1710	Tstm Wind	0 kts.	0	0	0	0
17 BEN HILL	07/25/1987	1500	Tstm Wind	0 kts.	0	0	0	0
18 BEN HILL	04/19/1988	0155	Tstm Wind	0 kts.	0	0	0	0

19 BEN HILL	04/25/1988	2045	Tstm Wind	0 kts.	0	0	0	0
20 BEN HILL	06/30/1988	1500	Tstm Wind	0 kts.	0	0	0	0
21 BEN HILL	06/30/1988	1515	Tstm Wind	0 kts.	0	0	0	0
22 BEN HILL	03/21/1989	1050	Tstm Wind	0 kts.	0	0	0	0
23 BEN HILL	08/23/1989	1345	Tstm Wind	0 kts.	0	0	0	0
24 BEN HILL	11/15/1989	2310	Tstm Wind	0 kts.	0	0	0	0
25 BEN HILL	02/10/1990	0630	Tstm Wind	0 kts.	0	0	0	0
26 BEN HILL	07/09/1990	1800	Tstm Wind	0 kts.	0	0	0	0
27 BEN HILL	07/09/1990	1835	Tstm Wind	0 kts.	0	0	0	0
28 BEN HILL	03/02/1991	0600	Tstm Wind	0 kts.	0	0	0	0
29 BEN HILL	07/01/1992	1145	Tstm Wind	0 kts.	0	0	0	0
30 BEN HILL	09/03/1992	1715	Tstm Wind	0 kts.	0	0	0	0
31 BEN HILL	09/03/1992	1740	Tstm Wind	0 kts.	0	0	0	0
32 Fitzgerald To	10/30/1993	0430	Thunderstorm Winds	N/A	0	4	5.0M	500K
33 Fitzgerald	03/27/1995	1945	Thunderstorm Winds	N/A	0	0	300	0
34 Fitzgerald	05/15/1995	1855	Thunderstorm Winds	N/A	0	0	0	0
35 Fitzgerald	05/15/1995	1955	Thunderstorm Winds	N/A	0	0	0	0
36 Bowens Mill	05/19/1995	1340	Thunderstorm Winds	N/A	0	0	0	0
37 Fitzgerald	05/03/1997	12:40 PM	Tstm Wind	0 kts.	0	0	2K	1K
38 GAZ130>131	04/19/1998	12:00 PM	High Wind	0 kts.	0	0	70K	0
39 Countywide	06/05/1998	07:30 PM	Tstm Wind	0 kts.	0	0	5K	0
40 Fitzgerald	06/03/2002	07:15 PM	Tstm Wind	0 kts.	0	0	3K	0
41 Countywide	12/24/2002	10:10 AM	Tstm Wind	50 kts.	0	0	10K	0
42 Fitzgerald	03/20/2003	06:00 AM	Tstm Wind	50 kts.	0	0	150K	0
43 Countywide	05/02/2003	10:10 PM	Tstm Wind	50 kts.	0	0	100K	0
44 Queensland	05/11/2003	06:20 PM	Tstm Wind	50 kts.	0	0	3K	0

45 Fitzgerald	02/06/2004	03:06 PM	Tstm Wind	50 kts.	0	0	50K	0
				TOTALS:	0	4	5.393M	501K

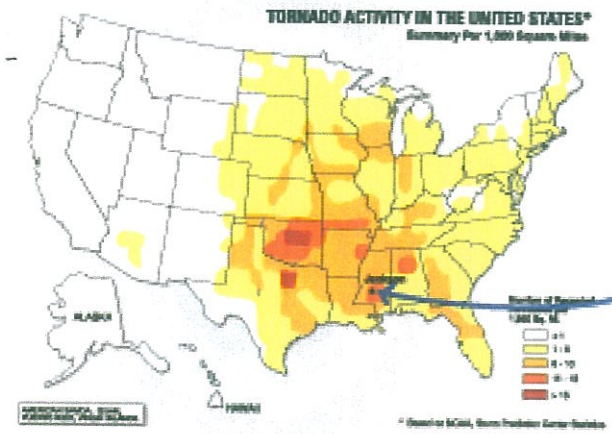
Top of Page

Privacy Policy HOW ARE WE DOING? A user survey FIRSTGOV Disclaimer

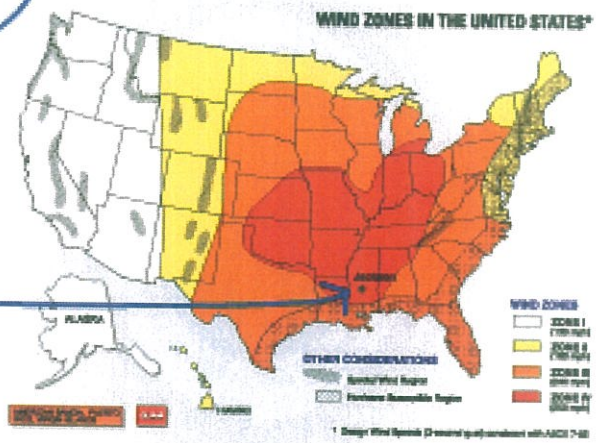
This page dynamically generated 24 Oct 2007 from:
http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~storms
Please send questions or comments about this system to Stuart.Hinson@noaa.gov
Please see the NCDC Contact Page if you have questions or comments.

Homeowner's Worksheet: Assessing Your Risk

To complete the worksheet on the back of this page, refer to the tornado and wind zone maps on pages 3 and 6 (Figures I.1 and I.2). Using the map on page 3, note how many tornadoes were recorded per 1,000 square miles for the area where you live. Find the row on the worksheet that matches that number. Next, look at the map on page 6 and note the wind zone (I, II, III, or IV) in which you live. Find the matching column on the worksheet. Finally, find the box inside the worksheet that lines up with both the number of tornadoes per 1,000 square miles in your area and your wind zone. The color of that box tells you the level of your risk from extreme winds and helps you decide whether to build a shelter.



For example, if you live in Jackson, Mississippi, you would see that Jackson is in an area shaded medium orange on the map on page 3. So according to the map key, the number of tornadoes per 1,000 square miles in the Jackson area is 11 – 15.



On the map on page 6, Jackson appears within the red-shaded area. The map key tells you that Jackson is in Wind Zone IV.

The box where the 11-15 row and the Zone IV column meet is shaded dark blue, which shows that you live in an area of high risk. A shelter is the preferred method of wind protection in high-risk areas. Note that some areas of low or moderate risk, shown as pale blue or medium blue in the worksheet, are within the region of the United States that is subject to hurricanes (see Figure I.2). If you live in this hurricane-susceptible region, your risk is considered high, even if the worksheet indicates only a moderate or low risk.

NUMBER OF TORNADOES PER 1,000 SQUARE MILES (See Figure I.1)	WIND ZONE (See Figure I.2) I	II	III	IV
<1	LOW RISK	LOW RISK ★	LOW RISK ★	MODERATE RISK
1 - 5	LOW RISK	MODERATE RISK ★	HIGH RISK	HIGH RISK
6 - 10	LOW RISK	MODERATE RISK ★	HIGH RISK	HIGH RISK
11 - 15	HIGH RISK	HIGH RISK	HIGH RISK	HIGH RISK
>15	HIGH RISK	HIGH RISK	HIGH RISK	HIGH RISK

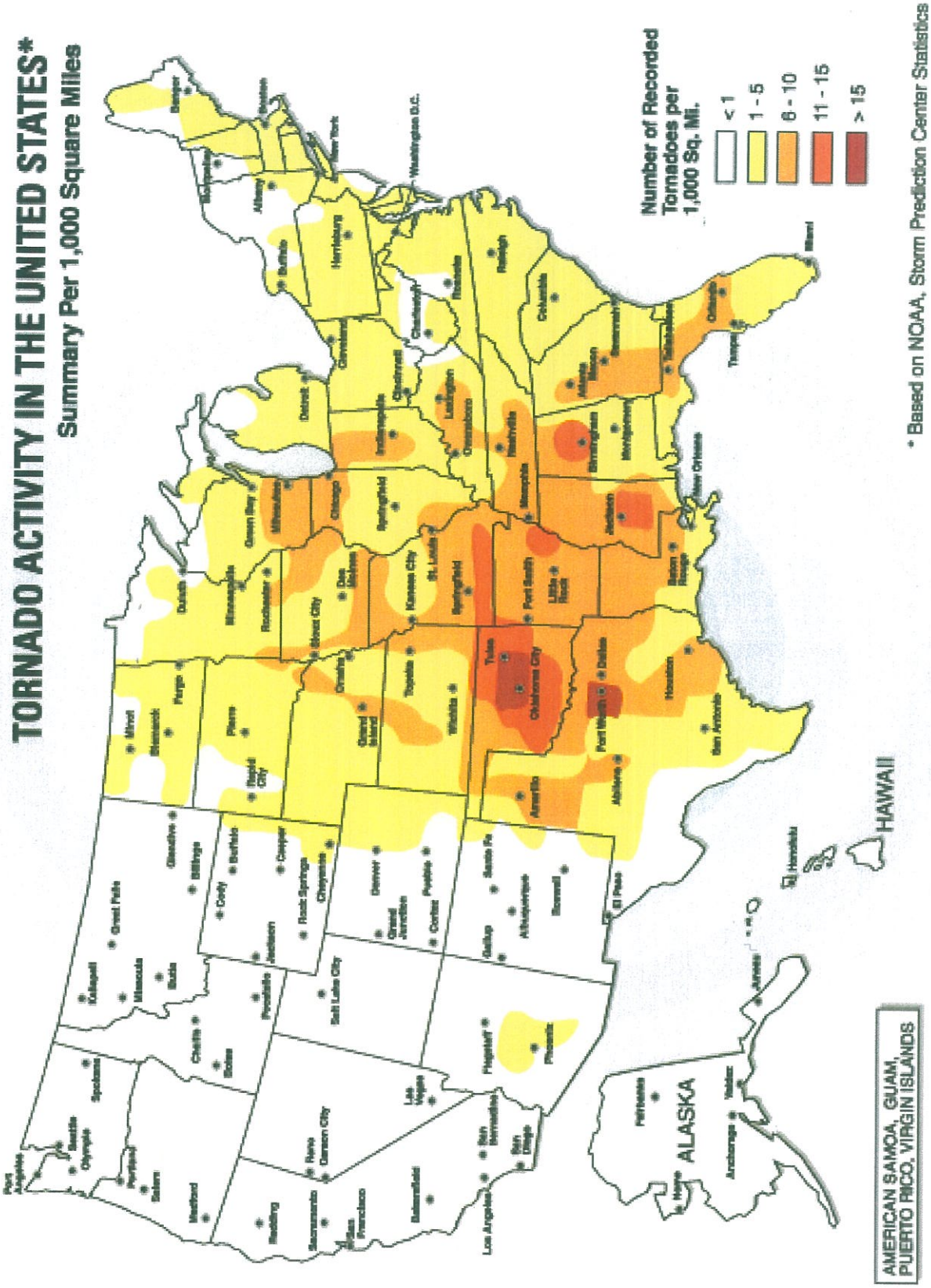


Figure I.1 The number of tornadoes recorded per 1,000 square miles

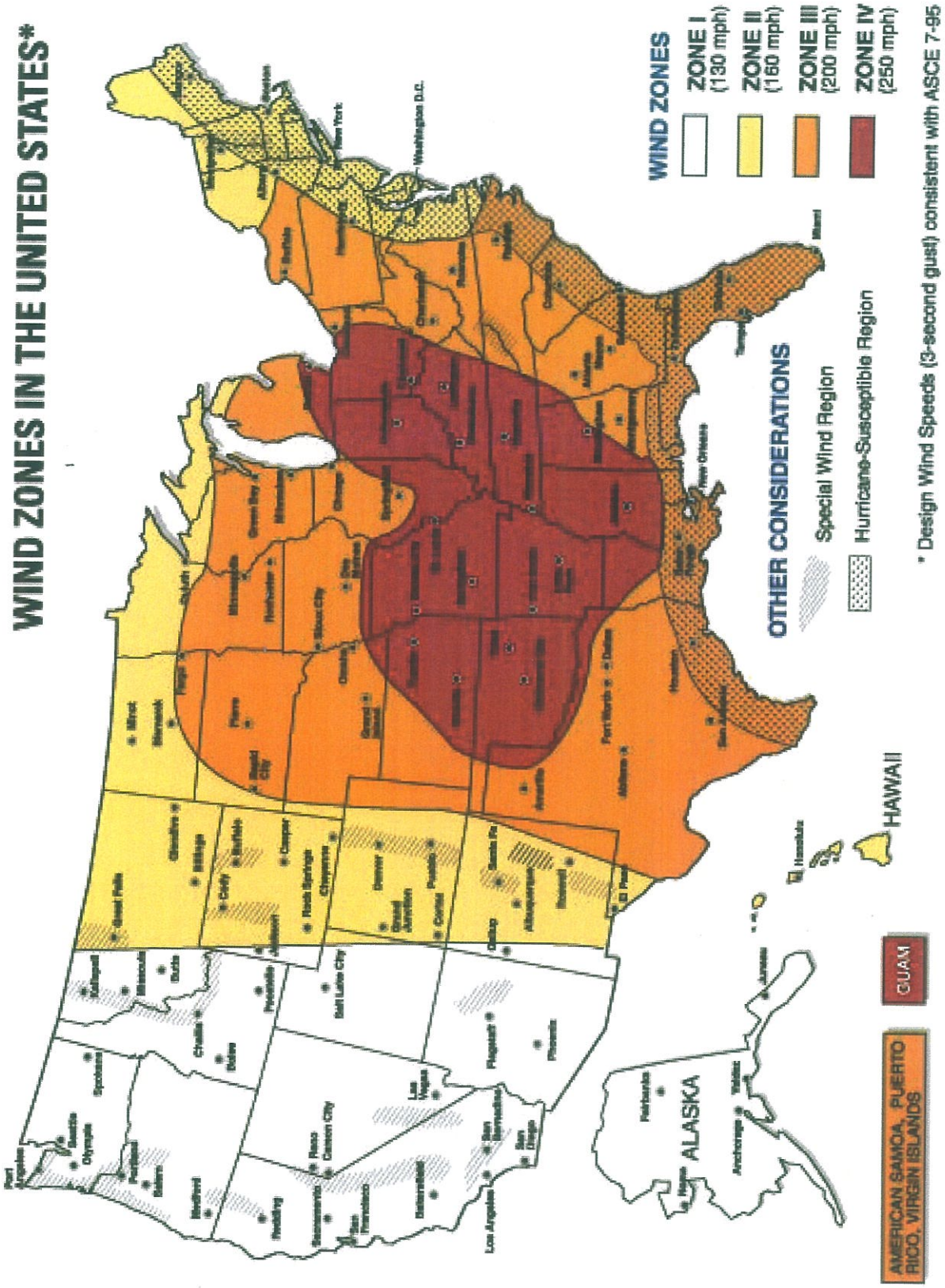


Figure I.2 Wind zones in the United States

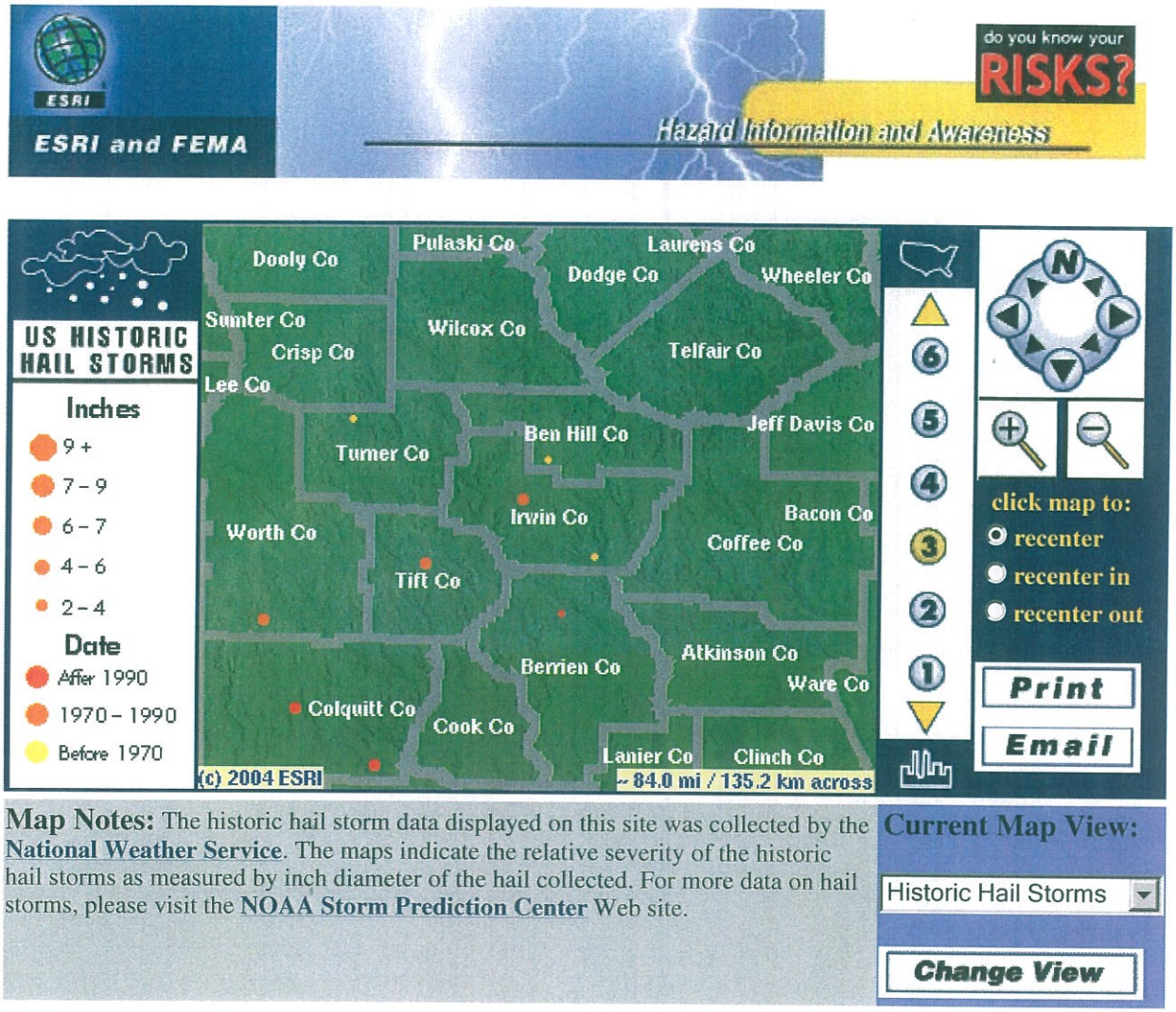
NUMBER OF TORNADOES PER 1,000 SQUARE MILES (See Figure I.1)	WIND ZONE (See Figure I.2) I	II	III	IV
<1	LOW RISK	LOW RISK ★	LOW RISK ★	MODERATE RISK
1 - 5	LOW RISK	MODERATE RISK ★	HIGH RISK	HIGH RISK
6 - 10	LOW RISK	MODERATE RISK ★	HIGH RISK	HIGH RISK
11 - 15	HIGH RISK	HIGH RISK	HIGH RISK	HIGH RISK
>15	HIGH RISK	HIGH RISK	HIGH RISK	HIGH RISK

LOW RISK
Need for high-wind shelter is a matter of homeowner preference

MODERATE RISK
Shelter should be considered for protection from high winds

HIGH RISK
Shelter is preferred method of protection from high winds

★ Shelter is preferred method of protection from high winds if house is in hurricane-susceptible region



Map Notes: The historic hail storm data displayed on this site was collected by the **National Weather Service**. The maps indicate the relative severity of the historic hail storms as measured by inch diameter of the hail collected. For more data on hail storms, please visit the **NOAA Storm Prediction Center** Web site.

Current Map View:

Historic Hail Storms

Change View

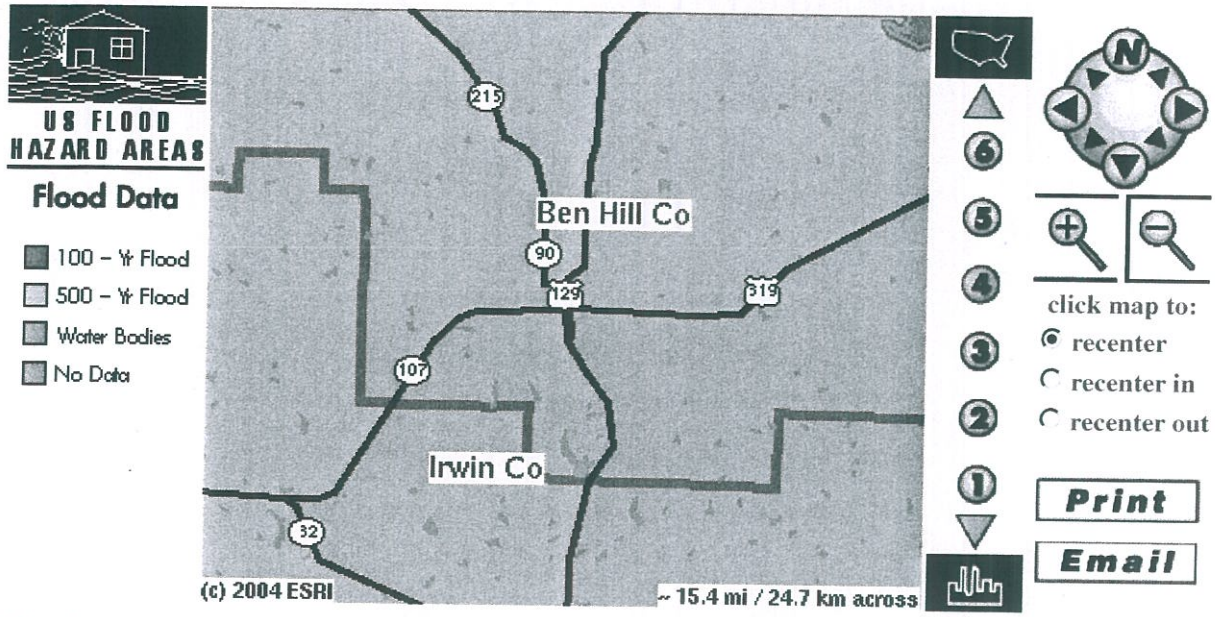
Make New Map

Return to Home Page

Copyright © Environmental Systems Research Institute, Inc.
Wed Nov 17 11:58:27 2004

Ben Hill County - Hail

Location or County	Date	Time	Type	Mag	Dth	Inj	PrD	CrD
BEN HILL	04/21/1958	2000	Hail	2.00 in.	0	0	0	0
BEN HILL	06/01/1986	1630	Hail	1.50 in.	0	0	0	0
BEN HILL	07/29/1986	1425	Hail	0.75 in.	0	0	0	0
BEN HILL	05/23/1988	1720	Hail	1.75 in.	0	0	0	0
BEN HILL	05/24/1988	1600	Hail	1.75 in.	0	0	0	0
BEN HILL	05/24/1988	1620	Hail	1.00 in.	0	0	0	0
Fitzgerald	03/27/1995	1945	Hail	1.50 in.	0	0	0	0
Fitzgerald	03/06/1996	02:30 PM	Hail	1.50 in.	0	0	0	0
Countywide	04/29/1996	09:10 PM	Hail	0.75 in.	0	0	0	0
Fitzgerald	06/01/1997	05:10 PM	Hail	1.75 in.	0	0	0	0
Fitzgerald	02/28/1998	01:05 AM	Hail	1.00 in.	0	0	0	0
Countywide	04/03/2002	09:20 PM	Hail	1.75 in.	0	0	0	0
Fitzgerald	05/31/2002	01:15 PM	Hail	0.75 in.	0	0	0	0



Map Notes: The **FEMA Digital Q3 Flood Data** displayed on this Web site is developed by scanning the existing Flood Insurance Rate Map (FIRM) hardcopy and capturing a thematic overlay of flood risks. Digital Q3 Flood Data files contain only certain features from the FIRM hardcopy in effect at the time of scanning and do not replace the existing FIRM hardcopy maps. The Q3 Flood Data is being displayed here with basemap data from the GDT Dynamap/2000 data set. The Q3 Flood Data is currently available for approximately **1,200 counties** across the United States.

Current Map View:

Flood Hazard Areas

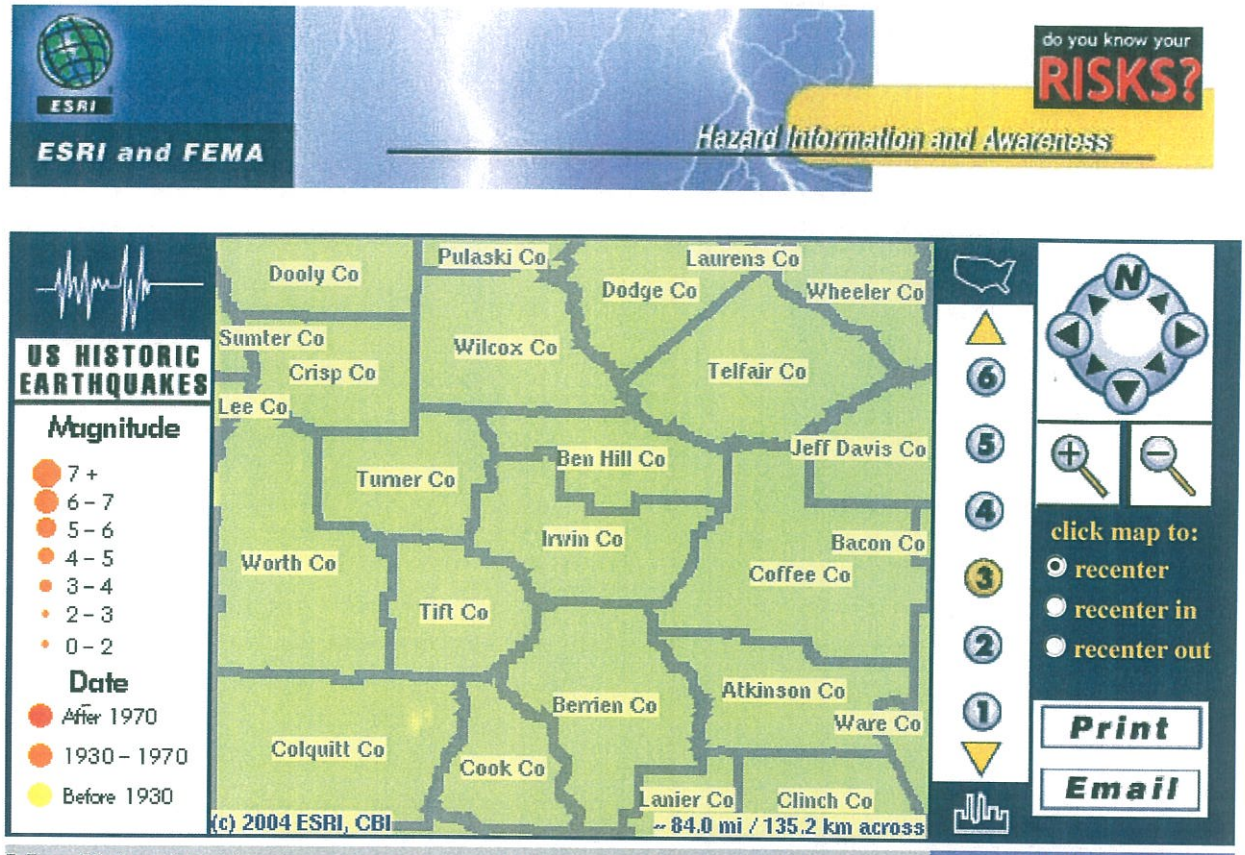
Change View

The maps displayed on this site should be considered an **advisory tool** for general hazard awareness, education, and flood plain management. The flood hazard maps displayed on this site are **not the legal document** to be used when making a single site flood hazard determination. For more information on these maps, please refer to the **Frequently Asked Questions** page.

Make New Map

Return to Home Page

Copyright © Environmental Systems Research Institute, Inc.
Tue Nov 16 09:26:33 2004



Map Notes: The historic earthquake event data displayed on this site is drawn from ESRI's **ArcAtlas: Our Earth** data set. The data has been overlayed on topographic maps, fault lines, and earthquake risk zones compiled from several sources, including the USGS. The earthquake risk zones indicate areas of ground motion caused by an earthquake event. If you would like detailed information on earthquake activity and seismology, you can visit the USGS National Earthquake Information Center.

Current Map View:

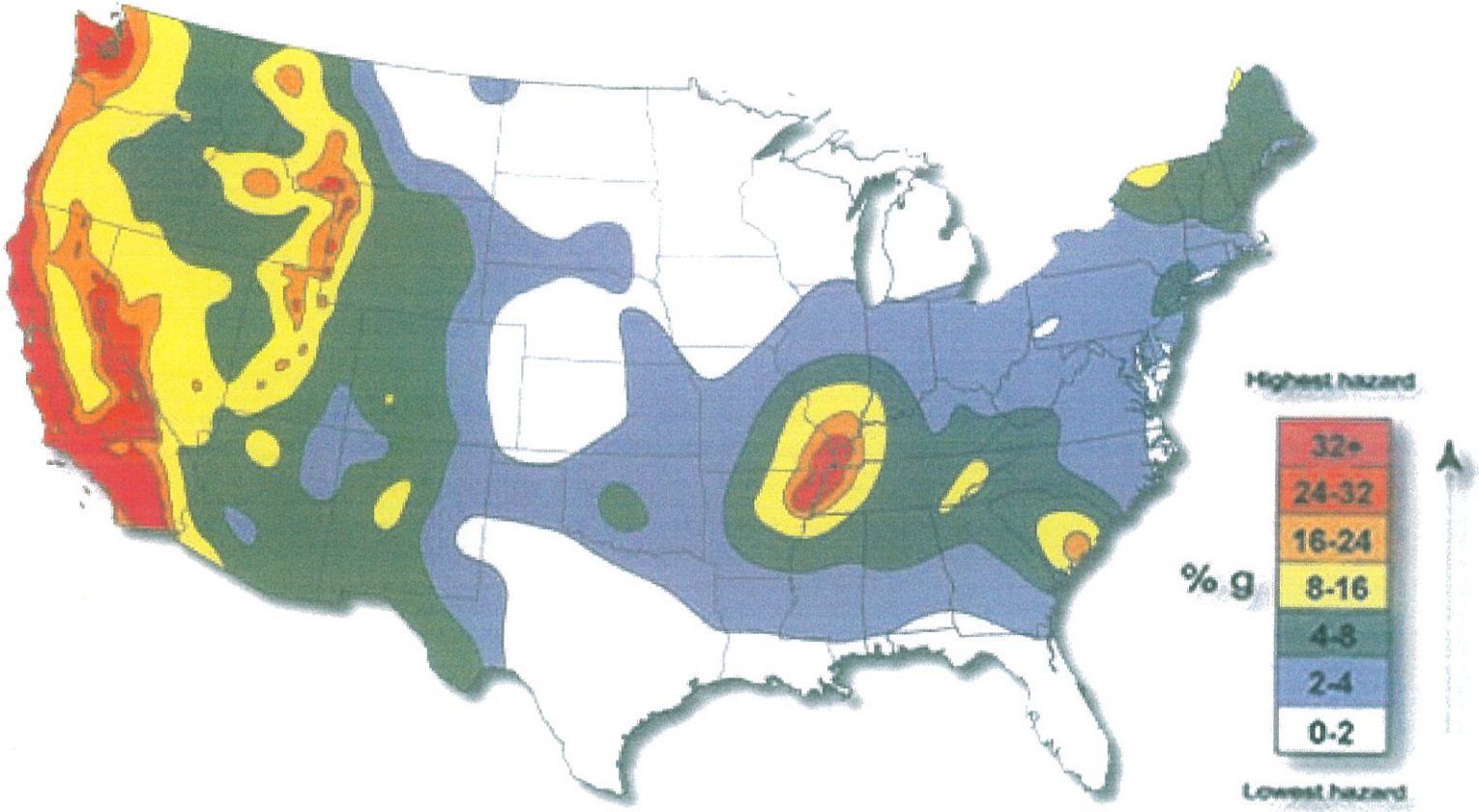
Historic Earthquakes

Change View

Make New Map

Return to Home Page

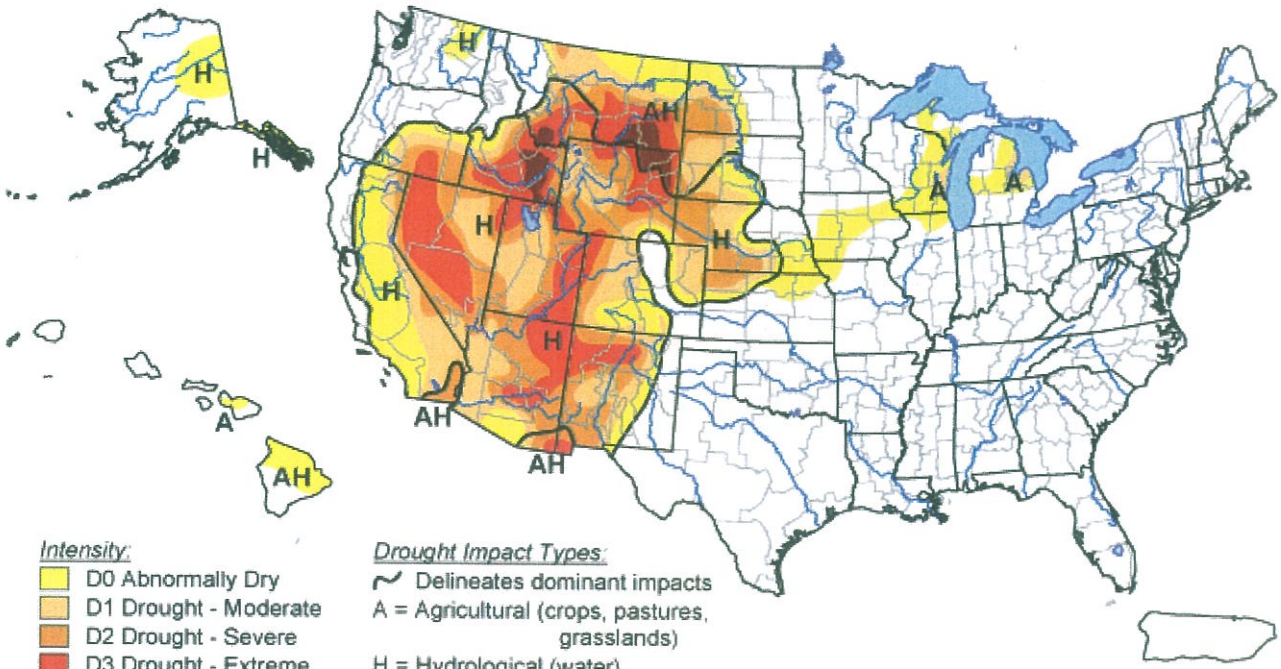
Copyright © Environmental Systems Research Institute, Inc.
Wed Nov 17 11:36:20 2004


Highest hazard
32+
24-32
16-24
8-16
4-8
2-4
0-2
% g
Lowest hazard

The data cutoff for Drought Monitor maps is Tuesday at 7 a.m. Eastern Daylight Time. The maps, which are based on analysis of the data, are released each Thursday at 8:30 a.m. Eastern Time.

U.S. Drought Monitor

November 9, 2004
Valid 7 a.m. EST



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

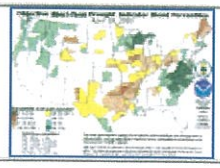
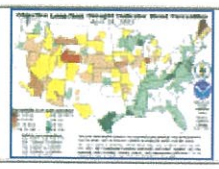
Drought Impact Types:
- Delineates dominant impacts
- A = Agricultural (crops, pastures, grasslands)
- H = Hydrological (water)
- (No type = Both impacts)

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

http://drought.unl.edu/dm

USDA | National Drought Mitigation Center

Released Thursday, November 11, 2004
Author: David Miskus, JAWF/CPC/NOAA

6-week animation	12-week animation	experimental short-term blends	experimental long-term blends
			

For annual animations of the Drought Monitor click here.

For more information on the above experimental drought blends, see http://www.cpc.ncep.noaa.gov/products/predictions/experimental/edb/droughtblend-access-page.html#exp.

The drought indicators that are synthesized into the Drought Monitor map are on this website, under Forecasts and Current Conditions.

This summary map is based on a multi-index drought classification scheme.

For local details and impacts, please contact your State Climatologist or Regional Climate Center.

Free Online Sources of Historical Weather Data

GEMA Worksheet #2 Profile Hazard Events Step 2

County: Ben Hill Date: 10/04

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. See attached

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*

Attachment- GEMA Worksheet #2

1) Ben-Hill County and the municipality participate in the regional GIS program.

2) All local Comprehensive Plans utilize the mapping capabilities of the GIS program.

3) All GIS maps can be provided in digital format.

4) Yes, Regional GIS

5) RGIS is administered by the South Georgia Regional Development Center; Chris Strom, Program Manager

6) RGIS is an on going mapping program.

7) Local mapping needs resulted in the Valor program being developed, RGIS has been an excellent tool for the region for mapping needs.

8) Very confident.

Task B. Obtain a hazard event profile.	Task C. Record your hazard event profile information.
Avalanche	
Coastal Storm / Coastal Erosion 1. Get a copy of your FIRM. _____ 2. Verify that the FIRM is up-to-date and complete. _____ 3. Determine the annual rate of coastal erosion. _____ 4. Find your design wind speed. _____	1. Transfer the boundaries of your coastal storm hazard areas onto your base map. 2. Transfer the BFEs onto your base map. 3. Record the erosion rates on your base map: _____ 4. Record the design wind speed here and on your base map: _____
Dam Failure	
Drought	
Earthquake 1. Go to the http://geohazards.cr.usgs.gov Website. 2. Locate your planning area on the map. 3. Determine your PGA.	1. Record your PGA: _____ 2. If you have more than one PGA print, download or order your PGA map.
Expansive Soils	
Extreme Heat	
Flood 1. Get a copy of your FIRM. _____ 2. Verify the FIRM is up-to-date and complete. _____	1. Transfer the boundaries from your firm onto your base map (floodway, 100-yr flood, 500-yr flood). 2. Transfer the BFEs onto your base map.
Hailstorm	
Hurricane	
Land Subsidence	
Landslide 1. Map location of previous landslides. _____ 2. Map the topography. _____ 3. Map the geology. _____ 4. Identify thee high-hazard areas on your map. _____	1. Mark the areas susceptible to landslides onto your base map.
Severe Winter Storm	
Tornado 1. Find your design wind speed. _____	1. Record your design wind speed: _____ 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.
Tsunami	
Wildfire 1. Map the fuel models located within the urban-wildland interface areas. _____ 2. Map the topography. _____ 3. Determine your critical fire weather frequency. _____ 4. Determine your fire hazard severity. _____	1. Draw the boundaries of your wildfire hazard areas onto your base map.
Other 1. Map the hazard. _____	1. Record hazard event info on your base map.

GEMA Worksheet #3a — Inventory of Assets

Hazard: All

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.

Vulnerable Structures and Population - Hurricane or Tropical Storm at the County-Wide Scale

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community or 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	8,314	8,314	100.000%	280,625,946	280,625,946	100.000%	17,484	17,484	100%
Commercial	663	663	100.000%	96,302,424	96,302,424	100.000%	N/A	N/A	N/A
Industrial	36	36	100.000%	27,538,551	27,538,551	100.000%	N/A	N/A	N/A
Agricultural	1,280	1,280	100.000%	39,530,540	39,530,540	100.000%	N/A	N/A	N/A
Religious/ Non-profit	192	192	100.000%	19,163,249	19,163,249	100.000%	N/A	N/A	N/A
Government	275	275	100.000%	62,309,250	62,309,250	100.000%	N/A	N/A	N/A
Education	76	76	100.000%	18,288,389	18,288,389	100.000%	N/A	N/A	N/A
Utilities	194	194	100.000%	383,268,401	383,268,401	100.000%	N/A	N/A	N/A
Total	11,030	11,030	100.000%	927,026,750	927,026,750	100.000%	17,484	17,484	100%

The term "structure" is assumed as meaning primary dwellings, places of business, warehouses, etc. and does not include such features as power poles, fire hydrants, drainage ways, roadways, signage, lighting, etc..
For structure count and value calculations, tax parcel GIS information was used.
Estimates were based upon the assumption that one primary structure exists per parcel in each of the above categories.
The term "utilities" is assumed as meaning those facilities where water/waste water is withdrawn, stored or treated or properties owned by gas, power, sewer, and electrical companies.
Structures such as hydrants, drainage pipes, etc are excluded from this utlities category.
Per direction of GEMA "number of people" total does not include employees, travelers, guests, etc. and is not required to be categorized further.
This total population is based upon information as provided by Census Bureau (census 2000).

Vulnerable Structures and Population - Tornado Strike(s) at the County-Wide Scale

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community or 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	8,314	8,314	100.000%	280,625,946	280,625,946	100.000%	17,484	17,484	100%
Commercial	663	663	100.000%	96,302,424	96,302,424	100.000%	N/A	N/A	N/A
Industrial	36	36	100.000%	27,538,551	27,538,551	100.000%	N/A	N/A	N/A
Agricultural	1,280	1,280	100.000%	39,530,540	39,530,540	100.000%	N/A	N/A	N/A
Religious/ Non-profit	192	192	100.000%	19,163,249	19,163,249	100.000%	N/A	N/A	N/A
Government	275	275	100.000%	62,309,250	62,309,250	100.000%	N/A	N/A	N/A
Education	76	76	100.000%	18,288,389	18,288,389	100.000%	N/A	N/A	N/A
Utilities	194	194	100.000%	383,268,401	383,268,401	100.000%	N/A	N/A	N/A
Total	11,030	11,030	100.000%	927,026,750	927,026,750	100.000%	17,484	17,484	100%

The term "structure" is assumed as meaning primary dwellings, places of business, warehouses, etc. and does not include such features as power poles, fire hydrants, drainage ways, roadways, signage, lighting, etc..
For structure count and value calculations, tax parcel GIS information was used.
Estimates were based upon the assumption that one primary structure exists per parcel in each of the above categories.
The term "utilities" is assumed as meaning those facilities where water/waste water is withdrawn, stored or treated or properties owned by gas, water, sewer, and electrical companies.
Structures such as hydrants, drainage pipes, etc are excluded from the utlities category.
Per direction of GEMA "number of people" total does not include employees, travelers, guests, etc. and is not required to be categorized further.
This total population is based upon information as provided by Census Bureau (census 2000).

Vulnerable Structures and Population - Flooding in Designated Hazard Zones

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community or 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	8,314	1,061	12.762%	280,625,946	33,320,192	11.874%	17,484	4,585	26%
Commercial	663	132	19.910%	96,302,424	20,741,365	21.538%	N/A	N/A	N/A
Industrial	36	12	33.333%	27,538,551	10,480,329	38.057%	N/A	N/A	N/A
Agricultural	1,280	57	4.453%	39,530,540	928,586	2.349%	N/A	N/A	N/A
Religious/ Non-profit	192	52	27.083%	19,163,249	6,186,901	32.285%	N/A	N/A	N/A
Government	275	96	34.909%	62,309,250	7,794,267	12.509%	N/A	N/A	N/A
Education	76	62	81.579%	18,288,389	11,754,118	64.271%	N/A	N/A	N/A
Utilities	194	5	2.577%	383,268,401	3,006,849	0.785%	N/A	N/A	N/A
Total	11,030	1,477	13.391%	927,026,750	94,212,607	10.163%	17,484	4,585	26%

The term "structure" is assumed as meaning primary dwellings, places of business, warehouses, etc. and does not include such features as power poles, fire hydrants, drainage ways, roadways, signage, lighting, etc..
For structure count and value calculations, tax parcel GIS information was used.
FEMA Digital Flood Hazard Information (Q3 Flood Data) was utilized to identify areas of possible flooding.
Estimates were based upon the assumption that one primary structure exists per parcel in each of the above categories.
The term "utilities" is assumed as meaning those facilities where water/waste water is withdrawn, stored or treated or properties owned by gas, water, sewer, and electrical companies.
Structures such as hydrants, drainage pipes, etc are excluded from this utlities category.
Per direction of GEMA "number of people" total does not include employees, travelers, guests, etc. and is not required to be categorized further.
This total population is based upon information as provided by Census Bureau (census 2000).

Vulnerable Structures and Population - Flooding in Designated Hazard Zones - Unincorporated Ben Hill County

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community or 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	4,491	127	2.828%	147,475,175	3,514,419	2.383%	8,049	755	9%
Commercial	176	44	25.000%	19,837,030	4,036,263	20.347%	N/A	N/A	N/A
Industrial	18	6	33.333%	20,976,243	7,308,576	34.842%	N/A	N/A	N/A
Agricultural	1,266	54	4.265%	39,359,221	928,586	2.359%	N/A	N/A	N/A
Religious/ Non-profit	76	3	3.947%	4,177,459	342,188	8.191%	N/A	N/A	N/A
Government	38	4	10.526%	7,130,348	4,478,560	62.810%	N/A	N/A	N/A
Education	3	0	0.000%	5,259,440	0	0.000%	N/A	N/A	N/A
Utilities	15	1	6.667%	26,656,005	0	0.000%	N/A	N/A	N/A
Total	6,083	239	3.929%	270,870,921	20,608,592	7.608%	8,049	755	9%

The term "structure" is assumed as meaning primary dwellings, places of business, warehouses, etc. and does not include such features as power poles, fire hydrants, drainage ways, roadways, signage, lighting, etc..
For structure count and value calculations, tax parcel GIS information was used.
FEMA Digital Flood Hazard Information (Q3 Flood Data) was utilized to identify areas of possible flooding.
Estimates were based upon the assumption that one primary structure exists per parcel in each of the above categories.
The term "utilities" is assumed as meaning those facilities where water/waste water is withdrawn, stored or treated or properties owned by gas, water, sewer, and electrical companies.
Structures such as hydrants, drainage pipes, etc are excluded from this utlities category.
Per direction of GEMA "number of people" total does not include employees, travelers, guests, etc. and is not required to be categorized further.
This total population is based upon information as provided by Census Bureau (census 2000).

Vulnerable Structures and Population - Flooding in Designated Hazard Zones - City of Fitzgerald

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community or 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	3,823	904	23.646%	133,150,771	29,805,773	22.385%	9,434	3,830	41%
Commercial	487	88	18.070%	76,465,394	16,705,102	21.847%	N/A	N/A	N/A
Industrial	18	6	33.333%	6,562,308	3,171,753	48.333%	N/A	N/A	N/A
Agricultural	14	3	21.429%	171,319	0	0.000%	N/A	N/A	N/A
Religious/ Non-profit	116	49	42.241%	14,985,790	5,844,713	39.002%	N/A	N/A	N/A
Government	237	92	38.819%	55,178,902	3,315,707	6.009%	N/A	N/A	N/A
Education	73	62	84.932%	13,028,949	11,754,118	90.215%	N/A	N/A	N/A
Utilities	179	4	2.235%	356,612,396	3,006,849	0.843%	N/A	N/A	N/A
Total	4,947	1,208	24.419%	656,155,829	73,604,015	11.217%	9,434	3,830	41%

The term "structure" is assumed as meaning primary dwellings, places of business, warehouses, etc. and does not include such features as power poles, fire hydrants, drainage ways, roadways, signage, lighting, etc..
For structure count and value calculations, tax parcel GIS information was used.
FEMA Digital Flood Hazard Information (Q3 Flood Data) was utilized to identify areas of possible flooding.
Estimates were based upon the assumption that one primary structure exists per parcel in each of the above categories.
The term "utilities" is assumed as meaning those facilities where water/waste water is withdrawn, stored or treated or properties owned by gas, water, sewer, and electrical companies.
Structures such as hydrants, drainage pipes, etc are excluded from this utlities category.
Per direction of GEMA "number of people" total does not include employees, travelers, guests, etc. and is not required to be categorized further.
This total population is based upon information as provided by Census Bureau (census 2000).

Vulnerable Structures and Population - Lightning Strikes at the County-Wide Scale

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community or 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	8,314	8,314	100.000%	280,625,946	280,625,946	100.000%	17,484	17,484	100%
Commercial	663	663	100.000%	96,302,424	96,302,424	100.000%	N/A	N/A	N/A
Industrial	36	36	100.000%	27,538,551	27,538,551	100.000%	N/A	N/A	N/A
Agricultural	1,280	1,280	100.000%	39,530,540	39,530,540	100.000%	N/A	N/A	N/A
Religious/ Non-profit	192	192	100.000%	19,163,249	19,163,249	100.000%	N/A	N/A	N/A
Government	275	275	100.000%	62,309,250	62,309,250	100.000%	N/A	N/A	N/A
Education	76	76	100.000%	18,288,389	18,288,389	100.000%	N/A	N/A	N/A
Utilities	194	194	100.000%	383,268,401	383,268,401	100.000%	N/A	N/A	N/A
Total	11,030	11,030	100.000%	927,026,750	927,026,750	100.000%	17,484	17,484	100%

The term "structure" is assumed as meaning primary dwellings, places of business, warehouses, etc. and does not include such features as power poles, fire hydrants, drainage ways, roadways, signage, lighting, etc..
For these calculations, tax parcel GIS information was used.
Estimates were based upon the assumption that one primary structure exists per parcel in each of the above categories.
The term "utilities" is assumed as meaning those facilities where water/waste water is withdrawn, stored or treated or properties owned by by gas, power, sewer, and electrical companies.
Structures such as hydrants, drainage pipes, etc are excluded from this utlities category.
Per direction of GEMA "number of people" total does not include employees, travelers, guests, etc. and is not required to be categorized further.
This total population is based upon information as provided by Census Bureau (census 2000).

Vulnerable Structures and Population - Wildfire in rural and urban/rural interface areas

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community or 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	8,314	3,548	42.675%	280,625,946	122,747,968	43.741%	17,484	9,422	54%
Commercial	663	102	15.385%	96,302,424	25,367,737	26.342%	N/A	N/A	N/A
Industrial	36	19	52.778%	27,538,551	19,501,399	70.815%	N/A	N/A	N/A
Agricultural	1,280	1,280	100.000%	39,530,540	39,530,540	100.000%	N/A	N/A	N/A
Religious/ Non-profit	192	71	36.979%	19,163,249	4,079,244	21.287%	N/A	N/A	N/A
Government	275	67	24.364%	62,309,250	35,573,365	57.092%	N/A	N/A	N/A
Education	76	47	61.842%	18,288,389	11,574,880	63.291%	N/A	N/A	N/A
Utilities	194	12	6.186%	383,268,401	18,354,275	4.789%	N/A	N/A	N/A
Total	11,030	5,146	46.655%	927,026,750	276,729,408	29.851%	17,484	9,422	54%

The term "structure" is assumed as meaning primary dwellings, places of business, warehouses, etc. and does not include such features as power poles, fire hydrants, drainage ways, roadways, signage, lighting, etc..
For structure count and value calculations, tax parcel GIS information was used.
Agricultural / Forested lands were the primary consideration in these calculations.
Parcels with land uses other than ag/forested were only included if located within 500 feet of a parcel with an ag/forested classification.
Estimates were based upon the assumption that one primary structure exists per parcel in each of the above categories.
The term "utilities" is assumed as meaning those facilities where water/waste water is withdrawn, stored or treated or properties owned by gas, power, water, and sewer companies.
Structures such as hydrants, drainage pipes, etc are excluded from this utlities category.
Per direction of GEMA "number of people" total does not include employees, travelers, guests, etc. and is not required to be categorized further.
This total population is based upon information as provided by Census Bureau (census 2000).

Vulnerable Structures and Population - Wildfire in rural and urban/rural interface areas - Unincorporated Ben Hill Count

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community or 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	4,491	3,034	67.557%	147,475,175	100,557,601	68.186%	8,049	7,211	90%
Commercial	176	79	44.886%	19,837,030	11,486,889	57.906%	N/A	N/A	N/A
Industrial	18	11	61.111%	20,976,243	16,261,602	77.524%	N/A	N/A	N/A
Agricultural	1,266	1,266	100.000%	39,359,221	39,359,221	100.000%	N/A	N/A	N/A
Religious/ Non-profit	76	60	78.947%	4,177,459	3,267,069	78.207%	N/A	N/A	N/A
Government	38	30	78.947%	7,130,348	7,123,882	99.909%	N/A	N/A	N/A
Education	3	3	100.000%	5,259,440	5,259,440	100.000%	N/A	N/A	N/A
Utilities	15	11	73.333%	26,656,005	18,354,275	68.856%	N/A	N/A	N/A
Total	6,083	4,494	73.878%	270,870,921	201,669,979	74.452%	8,049	7,211	90%

The term "structure" is assumed as meaning primary dwellings, places of business, warehouses, etc. and does not include such features as power poles, fire hydrants, drainage ways, roadways, signage, lighting, etc..
For structure count and value calculations, tax parcel GIS information was used.
Agricultural / Forested lands were the primary consideration in these calculations.
Parcels with land uses other than ag/forested were only included if located within 500 feet of a parcel with an ag/forested classification.
Estimates were based upon the assumption that one primary structure exists per parcel in each of the above categories.
The term "utilities" is assumed as meaning those facilities where water/waste water is withdrawn, stored or treated or properties owned by gas, power, water, and sewer companies.
Structures such as hydrants, drainage pipes, etc are excluded from this utlities category.
Per direction of GEMA "number of people" total does not include employees, travelers, guests, etc. and is not required to be categorized further.
This total population is based upon information as provided by Census Bureau (census 2000).

Vulnerable Structures and Population - Wildfire in rural and urban/rural interface areas - City of Fitzgerald

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community or 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	3,823	514	13.445%	133,150,771	22,190,367	16.666%	9,435	2,211	23%
Commercial	487	23	4.723%	76,465,394	13,880,848	18.153%	N/A	N/A	N/A
Industrial	18	8	44.444%	6,562,308	3,239,797	49.370%	N/A	N/A	N/A
Agricultural	14	14	100.000%	171,319	171,319	100.000%	N/A	N/A	N/A
Religious/ Non-profit	116	11	9.483%	14,985,790	812,175	5.420%	N/A	N/A	N/A
Government	237	37	15.612%	55,178,902	28,449,483	51.559%	N/A	N/A	N/A
Education	73	44	60.274%	13,028,949	6,315,440	48.472%	N/A	N/A	N/A
Utilities	179	1	0.559%	356,612,396	0	0.000%	N/A	N/A	N/A
Total	4,947	652	13.180%	656,155,829	75,059,429	11.439%	9,435	2,211	23%

The term "structure" is assumed as meaning primary dwellings, places of business, warehouses, etc. and does not include such features as power poles, fire hydrants, drainage ways, roadways, signage, lighting, etc..
For structure count and value calculations, tax parcel GIS information was used.
Agricultural / Forested lands were the primary consideration in these calculations.
Parcels with land uses other than ag/forested were only included if located within 500 feet of a parcel with an ag/forested classification.
Estimates were based upon the assumption that one primary structure exists per parcel in each of the above categories.
The term "utilities" is assumed as meaning those facilities where water/waste water is withdrawn, stored or treated or properties owned by gas, power, water, and sewer companies.
Structures such as hydrants, drainage pipes, etc are excluded from this utlities category.
Per direction of GEMA "number of people" total does not include employees, travelers, guests, etc. and is not required to be categorized further.
This total population is based upon information as provided by Census Bureau (census 2000).

Vulnerable Population - Extreme Heat at the County-Wide Scale

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community or 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	N/A	N/A	N/A	N/A	N/A	N/A	17,484	17,484	100%
Commercial	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Industrial	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Agricultural	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Religious/ Non-profit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Government	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Education	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Utilities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total							17,484	17,484	100%

Per direction of GEMA "number of people" total does not include employees, travelers, guests, etc. and is not required to be categorized further.
This total population is based upon information as provided by Census Bureau (census 2000).

Vulnerable Population - Severe Drought Conditions at the County-Wide Scale

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community or 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	N/A	N/A	N/A	N/A	N/A	N/A	17,484	17,484	100%
Commercial	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Industrial	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Agricultural	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Religious/ Non-profit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Government	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Education	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Utilities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	N/A	N/A	N/A	N/A	N/A	N/A	17,484	17,484	100%

Per direction of GEMA "number of people" total does not include employees, travelers, guests, etc. and is not required to be categorized further.
This total population is based upon information as provided by Census Bureau (census 2000).

Vulnerable Structures and Population - Hazardous Material Spills Along Major Transportation Routes

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community or 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	8,314	7,261	87.335%	280,625,946	245,959,940	87.647%	17,484	16,561	95%
Commercial	663	655	98.793%	96,302,424	96,005,431	99.692%	N/A	N/A	N/A
Industrial	36	36	100.000%	27,538,551	27,538,551	100.000%	N/A	N/A	N/A
Agricultural	1,280	699	54.609%	39,530,540	23,416,843	59.237%	N/A	N/A	N/A
Religious/ Non-profit	192	168	87.500%	19,163,249	18,166,667	94.800%	N/A	N/A	N/A
Government	275	262	95.273%	62,309,250	62,130,880	99.714%	N/A	N/A	N/A
Education	76	76	100.000%	18,288,389	18,288,389	100.000%	N/A	N/A	N/A
Utilities	194	193	99.485%	383,268,401	380,670,251	99.322%	N/A	N/A	N/A
Total	11,030	9,350	84.769%	927,026,750	872,176,952	94.083%	17,484	16,561	95%

The term "structure" is assumed as meaning primary dwellings, places of business, warehouses, etc. and does not include such features as power poles, fire hydrants, drainage ways, roadways, signage, lighting, etc..
For structure count and value calculations, tax parcel GIS information was used.
Estimates were based upon the assumption that one primary structure exists per parcel in each of the above categories.
The term "utilities" is assumed as meaning those facilities where water/waste water is withdrawn, stored or treated or properties owned by gas, power, water, and electric companies.
Structures such as hydrants, drainage pipes, etc are excluded from this utlities category.
Per direction of GEMA "number of people" total does not include employees, travelers, guests, etc. and is not required to be categorized further.
This total population is based upon information as provided by Census Bureau (census 2000).

Vulnerable Structures and Population - Hazardous Material Spills Along Major Transportation Routes - Unincorporated Ben Hill County

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community or 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	4,491	3,455	76.932%	147,475,175	114,519,859	77.654%	8,049	7,128	89%
Commercial	176	168	95.455%	19,837,030	19,540,037	98.503%	N/A	N/A	N/A
Industrial	18	18	100.000%	20,976,243	20,976,243	100.000%	N/A	N/A	N/A
Agricultural	1,266	685	54.107%	39,359,221	23,245,524	59.060%	N/A	N/A	N/A
Religious/ Non-profit	76	52	68.421%	4,177,459	3,180,877	76.144%	N/A	N/A	N/A
Government	38	25	65.789%	7,130,348	6,951,978	97.498%	N/A	N/A	N/A
Education	3	3	100.000%	5,259,440	5,259,440	100.000%	N/A	N/A	N/A
Utilities	15	14	93.333%	26,656,005	24,057,855	90.253%	N/A	N/A	N/A
Total	6,083	4,420	72.662%	270,870,921	217,731,813	80.382%	8,049	7,128	89%

The term "structure" is assumed as meaning primary dwellings, places of business, warehouses, etc. and does not include such features as power poles, fire hydrants, drainage ways, roadways, signage, lighting, etc..
For structure count and value calculations, tax parcel GIS information was used.
Estimates were based upon the assumption that one primary structure exists per parcel in each of the above categories.
The term "utilities" is assumed as meaning those facilities where water/waste water is withdrawn, stored or treated or properties owned by gas, power, water, and electric companies.
Structures such as hydrants, drainage pipes, etc are excluded from this utlities category.
Per direction of GEMA "number of people" total does not include employees, travelers, guests, etc. and is not required to be categorized further.
This total population is based upon information as provided by Census Bureau (census 2000).

Vulnerable Structures and Population - Hazardous Material Spills Along Major Transportation Routes - City of Fitzgeral

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community or 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	3,823	3,806	99.555%	133,150,771	131,440,081	98.715%	9,435	9,433	100%
Commercial	487	487	100.000%	76,465,394	76,465,394	100.000%	N/A	N/A	N/A
Industrial	18	18	100.000%	6,562,308	6,562,308	100.000%	N/A	N/A	N/A
Agricultural	14	14	100.000%	171,319	171,319	100.000%	N/A	N/A	N/A
Religious/ Non-profit	116	116	100.000%	14,985,790	14,985,790	100.000%	N/A	N/A	N/A
Government	237	237	100.000%	55,178,902	55,178,902	100.000%	N/A	N/A	N/A
Education	73	73	100.000%	13,028,949	13,028,949	100.000%	N/A	N/A	N/A
Utilities	179	179	100.000%	356,612,396	356,612,396	100.000%	N/A	N/A	N/A
Total	4,947	4,930	99.656%	656,155,829	654,445,139	99.739%	9,435	9,433	100%

The term "structure" is assumed as meaning primary dwellings, places of business, warehouses, etc. and does not include such features as power poles, fire hydrants, drainage ways, roadways, signage, lighting, etc..
For structure count and value calculations, tax parcel GIS information was used.
Estimates were based upon the assumption that one primary structure exists per parcel in each of the above categories.
The term "utilities" is assumed as meaning those facilities where water/waste water is withdrawn, stored or treated or properties owned by gas, power, water, and electric companies.
Structures such as hydrants, drainage pipes, etc are excluded from this utlities category.
Per direction of GEMA "number of people" total does not include employees, travelers, guests, etc. and is not required to be categorized further.
This total population is based upon information as provided by Census Bureau (census 2000).

Worksheet #3a cont.

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? Additional research on heat stress and river flooding is required.		X
2. Do you know whether your critical facilities will be operational after a hazard event? It is assumed so, but the plan will include action steps designed to ensure operations.		X
3. Is there enough data to determine which assets are subject to the greatest potential damages? ITOS is mapping critical facilities by hazard, and GIS data will be used to determine vulnerability of non-critical assets.	X	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards? The plan will address vulnerability of special needs citizens.	X	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? None have been identified.	X	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence? All hazards to be addressed in the plan are of concern.		X
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives? Sufficient data exists for hurricanes/tropical storms, tornadoes, localized flooding, lightning, and wildfires. Additional data is needed to more precisely determine the risks of extreme heat and river flooding.	X	

Instructions for Using the Plan Review Crosswalk for Review of Local Mitigation Plans

Attached is a Plan Review Crosswalk based on the ***Multi-Hazard Mitigation Planning Guidance Under the Disaster Mitigation Act of 2000***, published by FEMA, dated March 2004. This Plan Review Crosswalk is consistent with the *Disaster Mitigation Act of 2000* (P.L. 106-390), enacted October 30, 2000 and *44 CFR Part 201 – Mitigation Planning, Interim Final Rule* (the Rule), published February 26, 2002.

SCORING SYSTEM

N – Needs Improvement: The plan does not meet the minimum for the requirement. Reviewer's comments must be provided.

S – Satisfactory: The plan meets the minimum for the requirement. Reviewer's comments are encouraged, but not required.

Each requirement includes separate elements. All elements of a requirement must be rated "Satisfactory" in order for the requirement to be fulfilled and receive a summary score of "Satisfactory." A "Needs Improvement" score on elements shaded in gray (recommended but not required) will not preclude the plan from passing.

When reviewing single jurisdiction plans, reviewers may want to put an N/A in the boxes for multi-jurisdictional plan requirements. When reviewing multi-jurisdictional plans, reviewers may want to put an N/A in the prerequisite box for single jurisdiction plans.

States that have additional requirements can add them in the appropriate sections of the *Multi-Hazard Mitigation Planning Guidance* or create a new section and modify this Plan Review Crosswalk to record the score for those requirements.

This Local Hazard Mitigation Plan Review Crosswalk must be completed for every plan submitted for review and any subsequent re-submittals following revisions. The GEMA Hazard Mitigation Staff has used a labeling structure of **L1 – L37** for easy reference to page 8851 of the 2/26/2002 Federal Register (DMA2K Interim Rule). The **L1 – L37** labeling structure is used to help insure the requirements of the Disaster Mitigation Act of 2000 are fully met. These references should assist planners in documenting where each aspect of the DMA2K Interim Rule is located in the Plan.

Local Mitigation Plan Review and Approval Status

Jurisdiction: Ben Hill County	**Title of Plan:** Ben Hill County Pre-Disaster Mitigation Plan	**Date of Plan:** June, 2005
Local Point of Contact: John Bishop	**Address:** 402 E. Pine Street Fitzgerald, GA 31750	
Title: Director		
Agency: Ben Hill County EMA		
Phone Number: (229) 426-5161	**E-Mail:** bhs017@mchsi.com	

State Reviewer:	**Title:** Hazard Mitigation Planner	**Date:**

FEMA Reviewer:	**Title:**	**Date:**
Date Received in FEMA Region [Insert #]		
Plan Not Approved		
Plan Approved		
Date Approved		

Jurisdiction:	**NFIP Status***			
	Y	**N**	**N/A**	**CRS Class**
1. Ben Hill County				
2. Fitzgerald				
3.				
4.				
5.				

*** Notes:** **Y = Participating** **N = Not Participating** **N/A = Not Mapped**

LOCAL MITIGATION PLAN REVIEW SUMMARY

The plan cannot be approved if the plan has not been formally adopted.

Each requirement includes separate elements. All elements of the requirement must be rated "Satisfactory" in order for the requirement to be fulfilled and receive a score of "Satisfactory." Elements of each requirement are listed on the following pages of the Plan Review Crosswalk. A "Needs Improvement" score on elements shaded in gray (recommended but not required) will not preclude the plan from passing. Reviewer's comments must be provided for requirements receiving a **"Needs Improvement"** score.

SCORING SYSTEM

Please check one of the following for each requirement.

N – Needs Improvement: The plan does not meet the minimum for the requirement. Reviewer's comments must be provided.

S – Satisfactory: The plan meets the minimum for the requirement. Reviewer's comments are encouraged, but not required.

Prerequisite(s) (Check Applicable Box)		NOT MET	MET
Adoption by the Local Governing Body: §201.6(c)(5) **OR**			
Multi-Jurisdictional Plan Adoption: §201.6(c)(5) **AND**	L1, L2, L3		
Multi-Jurisdictional Planning Participation: §201.6(a)(3)	L4		

Planning Process		N	S
Documentation of the Planning Process: §201.6(b) and §201.6(c)(1)	L5, L6, L7, L8, L9, L10		

Risk Assessment		N	S
Identifying Hazards: §201.6(c)(2)(i)	L11		
Profiling Hazards: §201.6(c)(2)(i)	L12, L13, L14, L15		
Assessing Vulnerability: Overview: §201.6(c)(2)(ii)	L16, L17		
Assessing Vulnerability: Identifying Structures: §201.6(c)(2)(ii)(A)	L18, L19		
Assessing Vulnerability: Estimating Potential Losses: §201.6(c)(2)(ii)(B)	L20, L21		
Assessing Vulnerability: Analyzing Development Trends: §201.6(c)(2)(ii)(C)	L22		
Multi-Jurisdictional Risk Assessment: §201.6(c)(2)(iii)	L23		

Mitigation Strategy		N	S
Local Hazard Mitigation Goals: §201.6(c)(3)(i)	L24		
Identification and Analysis of Mitigation Actions: §201.6(c)(3)(ii)	L25, L26, L27		
Implementation of Mitigation Actions: §201.6(c)(3)(iii)	L28, L29, L30		
Multi-Jurisdictional Mitigation Actions: §201.6(c)(3)(iv)	L31		

Plan Maintenance Process		N	S
Monitoring, Evaluating, and Updating the Plan: §201.6(c)(4)(i)	L32, L33, L34		
Incorporation into Existing Planning Mechanisms: §201.6(c)(4)(ii)	L35, L36		
Continued Public Involvement: §201.6(c)(4)(iii)	L37		

Additional State Requirements	N	S
Planning Grant administrative requirements up to date per Grantee/Sub-Grantee Agreement		
Followed the GEMA Local Plan Template.		
Critical Facility Inventory completed on-line		
Critical Facility Inventory reports and maps included in the Plan		
County and City participation documentation (ie: sign-in sheets, meeting agendas/minutes, etc)		
Full documentation of providing opportunities for participation, comment and incorporation (neighboring, regional, business, public)		
Roles, responsibilities and timeline clearly stated in Mitigation Strategy (goals, objectives, actions steps and tasks)		
Roles, responsibilities and timeline clearly stated in monitoring, evaluating and updating the plan		
Submitted Plan and Appendix materials in hard copy and digital formats.		

Plan Approval Status	N	Y	Date
Plan Approved by State of Georgia			
Plan Approval by FEMA			

PREREQUISITE(S)

Adoption by the Local Governing Body

Requirement §201.6(c)(5): *[The local hazard mitigation plan **shall** include] documentation that the plan has been formally adopted* **L2** *by the governing body of the jurisdiction requesting approval of the plan (e.g., City Council, County Commissioner, Tribal Council).* **L3**

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE NOT MET	SCORE MET
A. Has the local governing body adopted the plan?	Ch 1, S VII, P6-7			
B. Is supporting documentation, such as a resolution, included?	Ch 1, S VII, P7			
		SUMMARY SCORE		

Multi-Jurisdictional Plan Adoption

Requirement §201.6(c)(5): *For multi-jurisdictional plans, each jurisdiction requesting approval of the plan **must** document that it has been formally adopted.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE NOT MET	SCORE MET
A. Does the plan indicate the specific jurisdictions represented in the plan? **L3**	Ch 1, S 1, P1			
B. For each jurisdiction, has the local governing body adopted the plan? **L2**	Ch 1, S 1, P5			
C. Is supporting documentation, such as a resolution, included for each participating jurisdiction? **L1**	Ch 1, S 1, P7			
		SUMMARY SCORE		

Multi-Jurisdictional Planning Participation

Requirement §201.6(a)(3): *Multi-jurisdictional plans (e.g., watershed plans) may be accepted, as appropriate, as long as each jurisdiction has participated in the process ... Statewide plans will not be accepted as multi-jurisdictional plans.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE NOT MET	SCORE MET
A. Does the plan describe **how** each jurisdiction participated in the plan's development? **L4**	Ch 1, S II, P2-4			
		SUMMARY SCORE		
State of Georgia Requirements: County and City participation documentation and narration (ie: sign-in sheets, meeting agendas & minutes, etc)	Appendix E			

PLANNING PROCESS: *§201.6(b): An open public involvement process is essential to the development of an effective plan.*

Documentation of the Planning Process

Requirement §201.6(b): *In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process* ***shall*** *include:*
(1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;
(2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process; and
(3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

Requirement §201.6(c)(1): *[The plan* ***shall*** *document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the plan provide a narrative description of the process followed to prepare the plan? **L5**	Ch 1, S II, P2-4			
B. Does the plan indicate who was involved in the planning process? (For example, who led the development at the staff level and were there any external contributors such as contractors? Who participated on the plan committee, provided information, reviewed drafts, etc.?) **L6, L7**	Ch 1, S II, P4			
C. Does the plan indicate how the public was involved? (Was the public provided an opportunity to comment on the plan during the drafting stage and prior to the plan approval?) **L8**	Ch 1, S II, P2-4			
D. Was there an opportunity for neighboring communities, agencies, businesses, academia, nonprofits, and other interested parties to be involved in the planning process? **L9**	Ch 1, S II, P2-4			
E. Does the planning process describe the review and incorporation, if appropriate, of existing plans, studies, reports, and technical information? **L10**	Ch 1, S II, P3			
		SUMMARY SCORE		
State of Georgia Requirements: Full documentation of providing opportunities for participation, comment and incorporation (neighboring, regional, business, public)	Appendix E			

RISK ASSESSMENT: *§201.6(c)(2): The plan shall include a risk assessment that provides the factual basis for activities proposed in the strategy to reduce losses from identified hazards. Local risk assessments must provide sufficient information to enable the jurisdiction to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards.*

Identifying Hazards

Requirement §201.6(c)(2)(i): *[The risk assessment **shall** include a] description of the type ... of all natural hazards that can affect the jurisdiction.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the plan include **a description** of the types of **all natural hazards** that affect the jurisdiction? **L11** If the hazard identification omits (without explanation) any hazards commonly recognized as threats to the jurisdiction, this part of the plan cannot receive a Satisfactory score. Consult with the State Hazard Mitigation Planner to identify applicable hazards that may occur in the planning area.	Ch 2, P1			
		SUMMARY SCORE		

Profiling Hazards

Requirement §201.6(c)(2)(i): *[The risk assessment **shall** include a] description of the ... location and extent of all natural hazards that can affect the jurisdiction. The plan **shall** include information on previous occurrences of hazard events and on the probability of future hazard events.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the risk assessment identify the **location** (i.e., geographic area affected) of each natural hazard addressed in the plan? **L12 (ONLINE MAP PRINTOUT)**	Ch 2, P9-33			
B. Does the risk assessment identify the **extent** (i.e., magnitude or severity) of each hazard addressed in the plan? **L13 (ONLINE MAP PRINTOUT)**	Ch 2, P9-33			
C. Does the plan provide information on **previous occurrences** of each hazard addressed in the plan? **L14 (FREQUENCY TABLE INCLUDED)**	Ch 2, S B, P9-33 and Appendix F			
D. Does the plan include the **probability of future events** (i.e., chance of occurrence) for each hazard addressed in the plan? **L15 (FREQUENCY TABLE INCLUDED)**	Ch 2, S B, P9-33 and Appendix F			

SUMMARY SCORE		

Assessing Vulnerability: Overview

Requirement §201.6(c)(2)(ii): *[The risk assessment **shall** include a] description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description **shall** include an overall summary of each hazard and its impact on the community.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the plan include an **overall summary** description of the jurisdiction's **vulnerability** to each hazard? **L16**	Ch 2, S G, P9-33			
B. Does the plan address the **impact** of each hazard on the jurisdiction? **L17**	Ch 2, S B, C, D, F, P9-33			
		SUMMARY SCORE		
State of Georgia Requirement: Critical Facility Inventory completed on-line	√			
State of Georgia Requirements: Critical Facility Inventory reports and maps included in the Plan	Ch 2, Appendix A, I-IX			

Assessing Vulnerability: Identifying Structures

Requirement §201.6(c)(2)(ii)(A): *The plan **should** describe vulnerability in terms of the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard area … .*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the plan describe vulnerability in terms of the **types and numbers** of **existing** buildings, infrastructure, and critical facilities located in the identified hazard areas? **L18**	Ch 2, S C, D, F, P9-33	***Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.***		
B. Does the plan describe vulnerability in terms of the **types and numbers** of **future** buildings, infrastructure, and critical facilities located in the identified hazard areas? **L19**	Ch 2, S C, D, F, P9-33	***Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.***		
		SUMMARY SCORE		

Assessing Vulnerability: Estimating Potential Losses

Requirement §201.6(c)(2)(ii)(B): *[The plan **should** describe vulnerability in terms of an] estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(i)(A) of this section and a description of the methodology used to prepare the estimate … .*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the plan estimate **potential dollar losses** to vulnerable structures? **L20**	Ch 2, S D, P9-33	***Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.***		
B. Does the plan describe the **methodology** used to prepare the estimate? **L21**	Ch 2, S C, P9-33	***Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.***		
		SUMMARY SCORE		

Assessing Vulnerability: Analyzing Development Trends

Requirement §201.6(c)(2)(ii)(C): *[The plan **should** describe vulnerability in terms of] providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the plan describe land uses and development trends? **L22**	Ch 2, S E, P9-33	***Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.***		
		SUMMARY SCORE		

Multi-Jurisdictional Risk Assessment

Requirement §201.6(c)(2)(iii): *For multi-jurisdictional plans, the risk assessment **must** assess each jurisdiction's risks where they vary from the risks facing the entire planning area.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the plan include a risk assessment for each participating jurisdiction as needed to reflect unique or varied risks? **L23 (ONLINE MAP PRINTOUT)**	Ch 2, S F, P9-33			
		SUMMARY SCORE		

MITIGATION STRATEGY: *§201.6(c)(3): The plan shall include a mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.*

Local Hazard Mitigation Goals

Requirement §201.6(c)(3)(i): *[The hazard mitigation strategy **shall** include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A Does the plan include a description of mitigation **goals** to reduce or avoid long-term vulnerabilities to the identified hazards? (**GOALS** are long-term; represent what the community wants to achieve, such as "eliminate flood damage"; and are based on the risk assessment findings.) **L24**	Ch 4, P1 and S C, P37-56			
		SUMMARY SCORE		

Identification and Analysis of Mitigation Actions

Requirement §201.6(c)(3)(ii): *[The mitigation strategy **shall** include a] section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the plan identify and analyze a **comprehensive range** of specific mitigation actions and projects for each hazard? **L25**	Ch 4, S C, P37-56			
B Do the identified actions and projects address reducing the effects of hazards on **new** buildings and infrastructure? **L26**	Ch 4, S B-4, P37-56			
C. Do the identified actions and projects address reducing the effects of hazards on **existing** buildings and infrastructure? **L27**	Ch 4, S B-5, P37-56			
		SUMMARY SCORE		

Implementation of Mitigation Actions

Requirement: §201.6(c)(3)(iii): *[The mitigation strategy section **shall** include] an action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization **shall** include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the mitigation strategy include how the actions are **prioritized**? (For example, is there a discussion of the process and criteria used?) **L28**	Ch 4, P37-38 and Ch 6, S I-C, P61-62			
B. Does the mitigation strategy address how the actions will be **implemented and administered**? (For example, does it identify the responsible department, existing and potential resources, and timeframe?) **L29 (ROLES, RESPONSIBILITY, TIMELINE)**	Ch 6, S I-A, B, C, P61			
C. Does the prioritization process include an emphasis on the use of a **cost-benefit review** (see page 3-36 of *Multi-Hazard Mitigation Planning Guidance*) to maximize benefits? **L30**	Ch 6, S I-C-2, P62			
		SUMMARY SCORE		

Multi-Jurisdictional Mitigation Actions

Requirement §201.6(c)(3)(iv): *For multi-jurisdictional plans, there **must** be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A Does the plan include at least one identifiable **action item** for each jurisdiction requesting FEMA approval of the plan? **L31 (ROLES, RESPONSIBILITY, TIMELINE)**	Ch 4, S C-D, P37-56			
		SUMMARY SCORE		

PLAN MAINTENANCE PROCESS

Monitoring, Evaluating, and Updating the Plan

Requirement §201.6(c)(4)(i): *[The plan maintenance process **shall** include a] section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the plan describe the method and schedule for **monitoring** the plan? (For example, does it identify the party responsible for monitoring and include a schedule for reports, site visits, phone calls, and meetings?) **L32 (ROLES, RESPONSIBILITY, TIMELINE)**	Ch 6, S I, P61			
B. Does the plan describe the method and schedule for **evaluating** the plan? (For example, does it identify the party responsible for evaluating the plan and include the criteria used to evaluate the plan?) **L33 (ROLES, RESPONSIBILITY, TIMELINE)**	Ch 6, S II, P63			
C. Does the plan describe the method and schedule for **updating** the plan within the five-year cycle? **L34 (ROLES, RESPONSIBILITY, TIMELINE)**	Ch 6, S IV, P63-64			
		SUMMARY SCORE		

Incorporation into Existing Planning Mechanisms

Requirement §201.6(c)(4)(ii): *[The plan **shall** include a] process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the plan identify other local planning mechanisms available for incorporating the requirements of the mitigation plan? **L35**	Ch 6, S I-D, P62			
B. Does the plan include a process by which the local government will incorporate the requirements in other plans, when appropriate? **L36**	Ch 6, S I-D, P62			
		SUMMARY SCORE		
State of Georgia Requirements: Full documentation of providing opportunities for participation, comment and incorporation (neighboring, regional, business, public)	Appendix E			

Continued Public Involvement

Requirement §201.6(c)(4)(iii): *[The plan maintenance process **shall** include a] discussion on how the community will continue public participation in the plan maintenance process.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE N	SCORE S
A. Does the plan explain how **continued public participation** will be obtained? (For example, will there be public notices, an on-going mitigation plan committee, or annual review meetings with stakeholders?) **L37**	Ch 6, S IV, P63-64			
		SUMMARY SCORE		
State of Georgia Requirements: Full documentation of providing opportunities for participation, comment and incorporation (neighboring, regional, business, public)	Appendix E			

GEMA Worksheet #3a Inventory of Assets

Hazard:

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.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# 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	0	0	#DIV/0!	0	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!
Commercial	0	0	#DIV/0!	0	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!
Industrial	0	0	#DIV/0!	0	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!
Agricultural	0	0	#DIV/0!	0	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!
Religious/ Non-profit	0	0	#DIV/0!	0	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!
Government	0	0	#DIV/0!	0	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!
Education	0	0	#DIV/0!	0	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!
Utilities	0	0	#DIV/0!	0	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!
Total	0	0	#DIV/0!	0	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!

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?

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

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

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

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

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

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

NOTE: N/A- All inventory data to be provided by ITOS Critical Facility Inventory Database.*

GEMA Worksheet #1 Identify the Hazard Step 1

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 Wesbite 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.*

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

	Task A	Task B
Avalanche	___	___
Costal Erosion	___	___
Costal Storm	___	___
Dam Failure	___	___
Drought	___	___
Earthquake	___	___
Expansive Soils	___	___
Extreme Heat	___	___
Flood	___	___
Hailstorm	___	___
Hurricane	___	___
Land Slide	___	___
Severe Winter Storm	___	___
Tornado	___	___
Tsunami	___	___
Volcano	___	___
Wildfire	___	___
Windstorm	___	___
Hazard Material	___	___
Radiological	___	___
Other_____	___	___
Other_____	___	___
Other_____	___	___

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

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

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 1. Get a copy of your FIRM. _____ 2. Verify that the FIRM is up-to-date and complete. _____ 3. Determine the annual rate of coastal erosion. _____ 4. Find your design wind speed. _____	1. Transfer the boundaries of your coastal storm hazard areas onto your base map. 2. Transfer the BFEs onto your base map. 3. Record the erosion rates on your base map: _____ 4. Record the design wind speed here and on your base map: _____
Dam Failure	
Drought	
Earthquake 1. Go to the http://geohazards.cr.usgs.gov Website. 2. Locate your planning area on the map. 3. Determine your PGA.	1. Record your PGA: _____ 2. If you have more than one PGA print, download or order your PGA map.
Expansive Soils	
Extreme Heat	
Flood 1. Get a copy of your FIRM. _____ 2. Verify the FIRM is up-to-date and complete. _____	1. Transfer the boundaries from your firm onto your base map (floodway, 100-yr flood, 500-yr flood). 2. Transfer the BFEs onto your base map.
Hailstorm	
Hurricane	
Land Subsidence	
Landslide 1. Map location of previous landslides. _____ 2. Map the topography. _____ 3. Map the geology. _____ 4. Identify thee high-hazard areas on your map. _____	1. Mark the areas susceptible to landslides onto your base map.
Severe Winter Storm	
Tornado 1. Find your design wind speed. _____	1. Record your design wind speed: _____ 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.
Tsunami	
Wildfire 1. Map the fuel models located within the urban-wildland interface areas. _____ 2. Map the topography. _____ 3. Determine your critical fire weather frequency. _____ 4. Determine your fire hazard severity. _____	1. Draw the boundaries of your wildfire hazard areas onto your base map.
Other 1. Map the hazard. _____	1. Record hazard event info on your base map.

GEMA Worksheet #3a Inventory of Assets

Hazard:

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.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# 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	0	0	#DIV/0!	0	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!
Commercial	0	0	#DIV/0!	0	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!
Industrial	0	0	#DIV/0!	0	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!
Agricultural	0	0	#DIV/0!	0	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!
Religious/ Non-profit	0	0	#DIV/0!	0	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!
Government	0	0	#DIV/0!	0	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!
Education	0	0	#DIV/0!	0	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!
Utilities	0	0	#DIV/0!	0	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!
Total	0	0	#DIV/0!	0	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!

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?

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

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

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

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

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

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