

APPENDIX D

WORKSHEETS
USED IN
PLANNING PROCESS

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

	Task A	Task B
Avalanche		
Coastal Erosion		
Coastal Storm	X	
Dam Failure	X	X
Drought	X	X
Earthquake	X	X
Expansive Soils		
Extreme Heat	X	X
Flood	X	X
Hailstorm	X	X
Hurricane	X	X
Land Subsidence		
Landslide		
Severe Winter Storm	X	X
Tornado	X	X
Tsunami		
Volcano		
Wildfire	X	X
Windstorm	X	X
Lightning	X	X
Tropical Storms	X	X
Thunderstorm	X	X
Winds		

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
Drought See Appendix A for complete information	USDA, NCEI, SHELDUS, The Augusta Chronicle, The Columbia News-Time, Palmer Index	Maps are available for the state as a whole from the Palmer Index See Appendix A	
Dam Failure See Appendix A for complete information	NCEI, SHELDUS, Local Data, County data	Maps are available in Appendix A	
Extreme Heat See Appendix A for complete information	NCEI, SHELDUS, Local Data, County data	Maps are available in Appendix A	
Earthquake See Appendix A for complete information	NCEI, SHELDUS, Local Data, County data	Maps are in Chapter 2	
Flood See Appendix A for this complete information	USGS, NCEI, SHELDUS, The Augusta Chronicle, The Columbia News-Time,	Flood Plain Maps are available See Appendix A	
Severe Winter Weather See Appendix A for this complete information	SERRC, NCEI, SHELDUS, The Augusta Chronicle, The Columbia News-Time,	Maps are available in Appendix A	
Hail See Appendix A for this complete information	NCEI, SHELDUS,	Maps are available in Appendix A	
Tornado See Appendix A for this complete information	NCEI, SHELDUS, The Augusta Chronicle, The Columbia News-Time,	Maps are available in Appendix A	
Lightning See Appendix A for this complete information	NCEI, SHELDUS, Local Data, County data	Maps are available in Appendix A	
Hurricane/Tropical Storms See Appendix A for this complete information	NCEI, SHELDUS,	Maps are available in Appendix A	
Thunderstorm Winds/High Winds See Appendix A for this complete information	NCEI, SHELDUS,	Map is available for wind zone	
Wildfire See Appendix A for this complete information	GFC	Map is available for fire danger zones	

**COLUMBIA COUNTY-WITH GROVETOWN AND HARLEM
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	20 year Historic Frequency % chance/year	Past 10 Year Record Frequency Per Year	Past 20 Year Record Frequency Per Year	Past 50 Year Record Frequency Per Year
Hurricane Surge - Cat 1						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 2						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 3						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 4						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 5						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Wind						#DIV/0!	#DIV/0!	0.00	0	0	0
Floods	42	70	10	31	42	1.67	60.00	155.00	1	1.55	0.84
Wildfire	62	2520	145	434	2,058	40.65	2.46	2170.00	14.5	21.7	41.16
Earthquake	26	208	9	17	18	8.00	12.50	85.00	0.9	0.85	0.36
Tornado	9	145	1	5	6	16.11	6.21	25.00	0.1	0.25	0.12
Thunderstorm Wind	170	70	85	139	169	0.41	242.86	695.00	8.5	6.95	3.38
Hail	90	70	26	59	90	0.78	128.57	295.00	2.6	2.95	1.8
Drought	19	95	3	8	13	5.00	20.00	40.00	0.3	0.4	0.26
Extreme Heat	14	90	2	2	9	6.43	15.56	10.00	0.2	0.1	0.18
Snow & Ice	36	70	4	11	25	1.94	51.43	55.00	0.4	0.55	0.5
Lightning	115	70	46	56	94	0.61	164.29	280.00	4.6	2.8	1.88
Dam Failure	0	0	0	0	0	#DIV/0!	#DIV/0!	0.00	0	0	0
Tropical Storm	11	139	2	2	7	12.64	7.91	10.00	0.2	0.1	0.14
HazMat Release (fixed)						#DIV/0!	#DIV/0!	0.00	0	0	0
HazMat Release (trans)						#DIV/0!	#DIV/0!	0.00	0	0	0
Radiological Release						#DIV/0!	#DIV/0!	0.00	0	0	0

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 (NCEM 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.

**COLUMBIA COUNTY UNINCORPORATED AREAS
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	20 year Historic Frequency % chance/ year	Past 10 Year Record Frequency Per Year	Past 20 Year Record Frequency Per Year	Past 50 Year Record Frequency Per Year
Hurricane Surge - Cat 1						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 2						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 3						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 4						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 5						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Wind						#DIV/0!	#DIV/0!	0.00	0	0	0
Floods	41	70	11	31	41	1.71	58.57	155.00	1.1	1.55	0.82
Wildfire	62	2520	145	434	2,058	40.65	2.46	2170.00	14.5	21.7	41.16
Earthquake	26	208	9	17	18	8.00	12.50	85.00	0.9	0.85	0.36
Tornado	9	145	1	5	6	16.11	6.21	25.00	0.1	0.25	0.12
Thunderstorm Wind	143	70	69	114	142	0.49	204.29	570.00	6.9	5.7	2.84
Hail	66	70	15	41	66	0.23	440.00	205.00	4.1	2.05	1.32
Drought	19	95	3	8	13	5.00	20.00	40.00	0.3	0.4	0.26
Extreme Heat	14	90	2	2	9	6.43	15.56	10.00	0.2	0.1	0.18
Snow & Ice	36	70	4	11	25	1.94	51.43	55.00	0.4	0.55	0.5
Lightning	114	70	45	55	93	0.61	162.86	275.00	4.5	2.75	1.86
Dam Failure	0	0	0	0	0	#DIV/0!	#DIV/0!	0.00	0	0	0
Tropical Storm	11	139	2	2	7	12.64	7.91	10.00	0.2	0.1	0.14
HazMat Release (fixed)						#DIV/0!	#DIV/0!	0.00	0	0	0
HazMat Release (trans)						#DIV/0!	#DIV/0!	0.00	0	0	0
Radiological Release						#DIV/0!	#DIV/0!	0.00	0	0	0

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.

**GROVETOWN
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	20 year Historic Frequency % chance/ year	Past 10 Year Record Frequency Per Year	Past 20 Year Record Frequency Per Year	Past 50 Year Record Frequency Per Year
Hurricane Surge - Cat 1						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 2						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 3						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 4						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 5						#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Wind						#DIV/0!	#DIV/0!	0.00	0	0	0
Floods	35	70	8	28	35	2.00	50.00	140.00	0.8	1.4	0.7
Wildfire						#DIV/0!	#DIV/0!	0.00	0	0	0
Earthquake	26	208	9	17	18	8.00	12.50	85.00	0.9	0.85	0.36
Tornado	1	145	0	1	1	0.00	0.69	5.00	0	0.05	0.02
Thunderstorm Wind	86	70	39	64	85	0.81	122.86	320.00	3.9	3.2	1.7
Hail	29	70	9	14	29	0.31	322.22	70.00	1.4	0.7	0.58
Drought	19	95	3	8	13	5.00	20.00	40.00	0.3	0.4	0.26
Extreme Heat	14	90	2	2	9	6.43	15.56	10.00	0.2	0.2	0.18
Snow & Ice	36	70	4	11	25	1.94	51.43	55.00	0.4	0.55	0.5
Lightning	18	70	0	2	9	3.89	25.71	10.00	0	0.2	0.18
Dam Failure	0	0	0	0	0	#DIV/0!	#DIV/0!	0.00	0	0	0
Tropical Storm	11	139	2	2	7	12.64	7.91	10.00	0.2	0.1	0.14
HazMat Release (fixed)						#DIV/0!	#DIV/0!	0.00	0	0	0
HazMat Release (trans)						#DIV/0!	#DIV/0!	0.00	0	0	0
Radiological Release						#DIV/0!	#DIV/0!	0.00	0	0	0

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.

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**HARLEM
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	20 Year Historic Frequency % chance/year	Past 10 Year Record Frequency Per Year	Past 20 Year Record Frequency Per Year	Past 50 Year Record Frequency Per Year
Hurricane Surge - Cat 1	0	0	0	0	0	#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 2	0	0	0	0	0	#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 3	0	0	0	0	0	#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 4	0	0	0	0	0	#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Surge - Cat 5	0	0	0	0	0	#DIV/0!	#DIV/0!	0.00	0	0	0
Hurricane Wind	0	0	0	0	0	#DIV/0!	#DIV/0!	0.00	0	0	0
Floods	34	70	7	24	34	2.06	48.57	120.00	0.7	1.2	0.68
Wildfire						#DIV/0!	#DIV/0!	0.00	0	0	0
Earthquake	26	208	9	17	18	8.00	12.50	85.00	0.9	0.85	0.36
Tornado	4	145	0	1	1	0.00	2.76	5.00	0	0.05	0.02
Thunderstorm Wind	73	70	27	51	72	0.96	104.29	255.00	2.7	2.55	1.44
Hail	17	70	2	4	17	0.12	850.00	20.00	0.4	0.2	0.34
Drought	19	95	3	8	13	5.00	20.00	40.00	0.3	0.4	0.26
Extreme Heat	14	90	2	2	9	6.43	15.56	10.00	0.2	0.2	0.18
Snow & Ice	36	70	4	11	25	1.94	51.43	55.00	0.4	0.55	0.5
Lightning	19	70	1	3	10	3.68	27.14	15.00	0.1	0.3	0.2
Dam Failure	0	0	0	0	0	#DIV/0!	#DIV/0!	0.00	0	0	0
Tropical Storm	11	139	2	2	7	12.64	7.91	10.00	0.2	0.1	0.14
HazMat Release (fixed)						#DIV/0!	#DIV/0!	0.00	0	0	0
HazMat Release (trans)						#DIV/0!	#DIV/0!	0.00	0	0	0
Radiological Release						#DIV/0!	#DIV/0!	0.00	0	0	0

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.

GEMA Worksheet #3a

Inventory of Assets

Jurisdiction: Columbia County

Hazard: Drought, Wildfire, Tornadoes, Hurricanes/Tropical Storms, Severe Thunderstorms, Lightning, Hail Winter Storm, Earthquake, Extreme Heat

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

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ in Community	\$ in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	323,678	323,678	100%	\$11,197,121,395	\$11,197,121,395	100%	150,075	150,075	100%
Commercial	31,206	31,206	100%	\$2,303,472,120	\$2,303,472,120	100%	150,075	150,075	100%
Industrial	730	730	100%	\$722,937,108	\$722,937,108	100%	6,251	6,251	100%
Agricultural/Forestry	11,884	11,884	100%	\$543,716,068	\$543,716,068	100%	540	540	100%
Religious/ Non-profit	2,108	2,108	100%	\$320,927,563	\$320,927,563	100%	150,075	150,075	100%
Government	2,189	2,189	100%	\$734,661,648	\$734,661,648	100%	6,209	6,209	100%
Education	889	889	100%	\$524,750,335	\$524,750,335	100%	35,894	35,894	100%
Utilities	30	30	100%	\$231,946,865	\$231,946,865	0%	150,075	150,075	100%
Total	372,714	372,714	100%	16,579,533,100	\$16,579,533,100	100%	150,075	150,075	100%

Note: Occupancy Class numbers are provided by the tax assessor's office which includes all structures/properties zoned residential, commercial, industrial, etc.

Note: Number of People for residential is based on county/city census data. It is assumed that everyone who lives in the county, shops, goes to church, etc. Industrial and Government populations are pulled from GA Department of Labor Data. Education Populations are pulled from the Board of Education.

Note: To sum the number of people column would more than quadruple the population which would provide a completely distorted and inaccurate population count.

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

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

GEMA Worksheet #3a

Inventory of Assets

Jurisdiction: Columbia County

Hazard: FLOOD

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	# in Hazard Area	% in Hazard Area	\$ in Community	\$ in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	322,441	3,848	1%	\$11,197,121,395	\$1,579,336,727	14%	150,075	8,750	6%
Commercial	31,206	51	0%	\$2,303,472,120	\$87,964,359	4%	150,075	3,258	2%
Industrial	730	102	14%	\$722,937,108	\$91,491,397	13%	6,251	144	2%
Agricultural/Forestry	11,884	1,968	17%	\$543,716,068	\$467,934,449	86%	540	125	23%
Religious/ Non-profit	2,108	55	3%	\$320,927,563	\$246,219,983	77%	150,075	185	0%
Government	2,189	20	1%	\$734,661,648	\$54,668,720	7%	6,209	462	7%
Education	889	0	0%	\$524,750,335	\$0	0%	35,894	0	0%
Utilities	30	0	0%	\$231,946,865	\$0	0%	150,075	0	0%
Total	371,477	6,044	2%	16,579,533,100	\$2,527,615,635	15%	150,075	12,924	9%

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

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

GEMA Worksheet #3a

Inventory of Assets

Jurisdiction: Columbia County

Hazard: DAM FAILURE

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	# in Hazard Area	% in Hazard Area	\$ in Community	\$ in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	322,441	5,512	2%	\$11,197,121,395	\$2,155,931,369	19%	150,075	15,219	10%
Commercial	31,206	3	0%	\$2,303,472,120	\$5,136,737	0%	150,075	75	0%
Industrial	730	3	0%	\$722,937,108	\$9,206,583	1%	6,251	150	2%
Agricultural/Forestry	11,884	265	2%	\$543,716,068	\$113,977,892	21%	540	12	2%
Religious/ Non-profit	2,108	14	1%	\$320,927,563	\$41,017,387	13%	150,075	350	0%
Government	2,189	0	0%	\$734,661,648	\$0	0%	6,209	0	0%
Education	889	0	0%	\$524,750,335	\$0	0%	35,894	0	0%
Utilities	30	0	0%	\$231,946,865	\$0	0%	150,075	0	0%
Total	371,477	5,797	2%	16,579,533,100	\$2,325,269,968	14%	150,075	18,635	12%

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

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

GEMA Worksheet #3a

Inventory of Assets

Jurisdiction: Grovetown

Hazard: Drought, Wildfire, Tornados, Hurricanes/Tropical Storms, Severe Thunderstorms, Lightning, Hail Winter Storm, Earthquake, Extreme Heat, Dam Failure

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	# in Hazard Area	% in Hazard Area	\$ in Community	\$ in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	25,880	25,880	100%	\$714,056,310	\$714,056,310	100%	14,053	14,053	100%
Commercial	1,732	1,732	100%	\$113,920,270	\$113,920,270	100%	14,053	14,053	100%
Industrial	5	5	100%	\$170,978	\$170,978	100%	43	43	100%
Agricultural/Forestry	17	17	100%	\$921,188	\$921,188	100%	3	3	100%
Religious/ Non-profit	86	86	100%	\$6,646,810	\$6,646,810	100%	14,053	14,053	100%
Government	251	251	100%	\$25,111,775	\$25,111,775	100%	712	712	100%
Education	47	47	100%	\$54,274,425	\$54,274,425	100%	4,215	4,215	100%
Utilities	6	6	100%	\$13,787,678	\$13,787,678	100%	14,053	14,053	100%
Total	28,024	28,024	100%	\$928,889,433	\$928,889,433	100%	14,053	14,053	100%

Note: Occupancy Class numbers are provided by the tax assessor's office which includes all structures/properties zoned residential, commercial, industrial, etc.

Note: Number of People for residential is based on county/city census data. It is assumed that everyone who lives in the county, shops, goes to church, etc. Industrial and Government populations are pulled from GA Department of Labor Data. Education Populations are pulled from the Board of Education.

Note: To sum the number of people column would more than quadruple the population which would provide a completely distorted and inaccurate population count.

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

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

GEMA Worksheet #3a
Jurisdiction: Grovetown
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	# in Hazard Area	% in Hazard Area	\$ in Community	\$ in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	25,880	124	0%	\$714,056,310	\$22,827,506	3%	14,053	347	2%
Commercial	1,732	0	0%	\$113,920,270	\$0	0%	14,053	0	0%
Industrial	5	0	0%	\$170,978	\$0	0%	43	0	0%
Agricultural/Forestry	17	6	35%	\$921,188	\$405,574	44%	3	4	133%
Religious/ Non-profit	86	0	0%	\$6,646,810	\$0	0%	14,053	0	0%
Government	251	15	6%	\$25,111,775	\$54,140,570	216%	712	10	0%
Education	47	0	0%	\$54,274,425	\$0	0%	4,215	0	0%
Utilities	6	0	0%	\$13,787,678	\$0	0%	14,053	0	0%
Total	28,024	145	1%	\$928,889,433	\$77,373,650	8%	14,053	361	3%

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

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

GEMA Worksheet #3a

Inventory of Assets

Jurisdiction: Harlem

Hazard: Drought, Wildfire, Tornados, Hurricanes/Tropical Storms, Severe Thunderstorms, Lightning, Hail Winter Storm, Earthquake, Extreme Heat, Dam Failure

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	# in Hazard Area	% in Hazard Area	\$ in Community	\$ in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	8,436	8,436	100%	\$162,140,050	\$162,140,050	100%	3,137	3,137	100%
Commercial	845	845	100%	\$28,501,220	\$28,501,220	100%	3,137	3,137	100%
Industrial	18	18	100%	\$2,553,653	\$2,553,653	100%	154	154	100%
Agricultural/Forestry	282	282	100%	\$10,362,710	\$10,362,710	100%	12	12	100%
Religious/ Non-profit	183	183	100%	\$11,315,790	\$11,315,790	100%	3,137	3,137	100%
Government	215	215	100%	\$12,376,825	\$12,376,825	100%	215	215	100%
Education	21	21	100%	\$2,721,830	\$2,721,830	100%	902	902	100%
Utilities	7	7	100%	\$4,820,380	\$4,820,380	100%	3,137	3,137	100%
Total	10,007	10,007	100%	\$234,792,458	\$234,792,458	100%	3,137	3,137	100%

Note: Occupancy Class numbers are provided by the tax assessor's office which includes all structures/properties zoned residential, commercial, industrial, etc.

Note: Number of People for residential is based on county/city census data. It is assumed that everyone who lives in the county, shops, goes to church, etc. Industrial and Government populations are pulled from GA Department of Labor Data. Education Populations are pulled from the Board of Education.

Note: To sum the number of people column would more than quadruple the population which would provide a completely distorted and inaccurate population count.

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

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

GEMA Worksheet #3a
Jurisdiction: Harlem
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	# in Hazard Area	% in Hazard Area	\$ in Community	\$ in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	8,436	55	1%	\$162,140,050	\$5,840,475	4%	3,137	146	5%
Commercial	845		0%	\$28,501,220	\$0	0%	3,137	0	0%
Industrial	18		0%	\$2,553,653	\$0	0%	154	0	0%
Agricultural/Forestry	282	17	6%	\$10,362,710	\$2,689,591	26%	12	10	83%
Religious/ Non-profit	183		0%	\$11,315,790	\$0	0%	3,137	0	0%
Government	215	5	2%	\$12,376,825	\$528,150	4%	215	15	7%
Education	21	0	0%	\$2,721,830	\$0	0%	902	0	0%
Utilities	7	0	0%	\$4,820,380	\$0	0%	3,137	0	0%
Total	10,007	77	1%	\$234,792,458	\$9,058,216	4%	3,137	171	5%

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

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

GEMA Worksheet #3a

Inventory of Assets

Jurisdiction: Unincorporated Columbia County

Hazard: Drought, Wildfire, Tornados, Hurricanes/Tropical Storms, Severe Thunderstorms, Lightning, Hail Winter Storm, Earthquake, Extreme Heat

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

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ in Community	\$ in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	289,362	289,362	100%	\$10,320,925,035	\$10,320,925,035	100%	132,885	132,885	100%
Commercial	28,629	28,629	100%	\$2,161,050,630	\$2,161,050,630	100%	132,885	132,885	100%
Industrial	707	707	100%	\$720,212,478	\$720,212,478	100%	6,054	6,054	100%
Agricultural/Forestry	11,585	11,585	100%	\$532,432,170	\$532,432,170	100%	525	525	100%
Religious/ Non-profit	1,839	1,839	100%	\$302,964,963	\$302,964,963	100%	132,885	132,885	100%
Government	1,723	1,723	100%	\$697,173,048	\$697,173,048	100%	5,282	5,282	100%
Education	821	821	100%	\$467,754,080	\$467,754,080	100%	30,777	30,777	100%
Utilities	17	17	100%	\$213,338,808	\$213,338,808	100%	132,885	132,885	100%
Total	334,683	334,683	100%	\$15,415,851,210	\$15,415,851,210	100%	132,885	132,885	100%

Note: Occupancy Class numbers are provided by the tax assessor's office which includes all structures/properties zoned residential, commercial, industrial, etc.

Note: Number of People for residential is based on county/city census data. It is assumed that everyone who lives in the county, shops, goes to church, etc. Industrial and Government populations are pulled from GA Department of Labor Data. Education Populations are pulled from the Board of Education.

Note: To sum the number of people column would more than quadruple the population which would provide a completely distorted and inaccurate population count.

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

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

GEMA Worksheet #3a

Inventory of Assets

Jurisdiction: Unincorporated Columbia County

Hazard: FLOOD

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	# in Hazard Area	% in Hazard Area	\$ in Community	\$ in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	289,362	3,669	1%	\$10,320,925,035	\$1,550,668,746	15%	132,885	8,257	6%
Commercial	28,629	51	0%	\$2,161,050,630	\$87,964,359	4%	132,885	3,258	2%
Industrial	707	102	14%	\$720,212,478	\$91,491,397	13%	6,054	144	2%
Agricultural/Forestry	11,585	1,945	17%	\$532,432,170	\$464,839,284	87%	525	111	21%
Religious/ Non-profit	1,839	55	3%	\$302,964,963	\$246,219,983	81%	132,885	185	0%
Government	1,723	0	0%	\$697,173,048	\$0	0%	5,282	437	8%
Education	821	0	0%	\$467,754,080	\$0	0%	30,777	0	0%
Utilities	17	0	0%	\$213,338,808	\$0	0%	132,885	0	0%
Total	334,683	5,823	2%	15,415,851,210	\$2,441,183,769	16%	132,885	12,392	9%

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

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

GEMA Worksheet #3a

Inventory of Assets

Jurisdiction: Unincorporated Columbia County

Hazard: DAM FAILURE

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	# in Hazard Area	% in Hazard Area	\$ in Community	\$ in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	289,362	5,512	2%	\$10,320,925,035	\$2,155,931,369	21%	132,885	15,219	11%
Commercial	28,629	3	0%	\$2,161,050,630	\$5,136,737	0%	132,885	950	11%
Industrial	707	3	0%	\$720,212,478	\$9,206,583	1%	6,054	150	11%
Agricultural/Forestry	11,585	265	2%	\$532,432,170	\$113,977,892	21%	525	12	2%
Religious/ Non-profit	1,839	14	1%	\$302,964,963	\$41,017,387	14%	132,885	204	2%
Government	1,723	0	0%	\$697,173,048	\$0	0%	5,282	0	0%
Education	821	0	0%	\$467,754,080	\$0	0%	30,777	2,100	2%
Utilities	17	0	0%	\$213,338,808	\$0	0%	132,885	0	0%
Total	334,683	5,797	2%	15,415,851,210	\$2,325,269,968	15%	132,885	18,635	2%

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

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

Facility Name

Location

Longitude

Latitude

Location Method:

Geocode GPS
 GPS-closed GPS - dnr
 Manual add

Address 1:

Address 2:
(PO BOX)

City:

Zip:

Jurisdiction:

Daytime Occupancy:

Night Occupancy:

Building Value

Number of Stories:

Functional Use Value:

Year Constructed:

Displacement Cost Per Day:

Area Sq Ft:

Contents Value:

Bldg Value:

Contents Value Year:

Valuation Year:

Contents Description:

Building Valuation Type:

0 = Unknown

1 = Market Value

2 = Assessed Value

3 = Replacement Value

99 = Other

*Mark any or all that apply. See back of page for details.

- Essential Facility
 - Transportation Facility
 - Lifeline System
 - High Potential Loss
 - HazMat Facility
 - Important Facility
 - Vulnerable Population
 - Economic Asset
 - Special Consideration
 - Historical Consideration
 - Other Facility
- Other Details:

See back of page for codes.

Building Type Code:

Occupancy Code:

*Choose Only One Facility Type

Facility Type:

- Pre-kindergarten
- Kindergarten
- Primary School
- Elementary School
- Middle School
- Middle/High School
- High School, Public
- Private School
- Other School
- Airport
- City Hall
- City Jail
- County Correctional Institution
- County Jail
- Courthouse
- Federal Penitentiary
- Fire Station
- Wastewater Treatment Plant
- Water System
- C and D Construction and Demolition Landfill
- L (Dry Trash) Landfill
- MSWL (Municipal Solid Waste Landfill)
- SL (Sanitary Waste) Landfill
- Recycling Center
- Transfer Station
- Hospital, Admissions Entrance
- Hospital, Emergency Entrance
- Library
- Marshals Office
- Police Station
- Sheriffs Office
- Emergency Services
- State Prison
- Other

Building Type Code:

- C1 = Concrete Moment Frame
- C2 = Concrete Shear Walls
- C3 = Concrete Frame with Unreinforced Masonry Infill Walls
- MH = Manufactured Housings
- O = Other Building Type
- P1 = Precast Concrete Tilt-Up Walls
- P2 = Precast Concrete Frames with Cast-in-Place Concrete Shear Walls
- RM1 = Reinforced Masonry Bearing Walls with Wood or Metal Deck Diaphragms
- RM2 = Reinforced Masonry Bearing Walls with Precast Concrete Diaphragms
- S1 = Steel Moment Frame
- S2 = Steel Braced Frame
- S3 = Steel Light Frame
- S4 = Steel Frame with Cast-in-Place Concrete Shear Walls
- S5 = Steel Frame with Unreinforced Masonry Infill Walls
- URM = Unreinforced Masonry Bearing Walls
- UNK = Unknown Building Type

Occupancy Code:

- AGR1 = Agriculture Facilities and Offices
- COM1 = Retail Trade
- COM2 = Wholesale Trade
- COM3 = Personal and Repair Services
- COM4 = Professional/Technical Services
- COM5 = Banks
- COM6 = Hospital
- COM7 = Medical Office and Clinic
- COM8 = Entertainment, Recreation
- COM9 = Theaters
- COM10 = Parking Garages
- EDU1 = Grade Schools and Admin. Offices
- EDU2 = Colleges and Universities
- GOV1 = Government - General Services
- GOV2 = Government - Emergency Response
- UNK = Unknown
- IND1 = Heavy Industrial
- IND2 = Light Industrial
- IND3 = Food/Drugs/Chemicals
- IND4 = Metals/Minerals Processing
- IND5 = High Technology
- IND6 = Construction Facilities and Offices
- REL1 = Churches and Non-Profit Organizations
- RES1 = Single Family Dwellings
- RES2 = Manufactured Housing
- RES3A = Duplex
- RES3B = 3 to 4 Units
- RES3C = 5 to 9 Units
- RES3D = 10 to 19 Units
- RES3E = 20 to 49 Units
- RES3F = > 50 Units
- RES4 = Temporary Lodging
- RES5 = Institutional Dormitories
- RES6 = Nursing Homes

Definitions:

Essential Facility
An essential facility is a critical facility that is essential to the health and welfare of the population. The potential consequences of losing functions or services from this type of facility are higher than any other type of structures. Interruption or loss of function from these types of facilities would jeopardize human life and public safety. Essential facilities include: hospitals and other medical facilities, police and fire stations, emergency operations centers, evacuation shelters and schools, and other structures that house first responder equipment or personnel.

Transportation Systems
Transportation infrastructure or facilities. Examples include: Airways: airports, heliports, Highways: bridges, tunnels, roadbeds, overpasses, transfer stations. Railways: tracks, tunnels, bridges, rail yards, depots, switching stations. Waterways: canals, locks, ports, ferries, dry-docks, piers.

Lifeline System
Corridors of flow for equipment, supplies and services. Transportation systems can also be Lifeline Systems. The best physical example of a lifeline would be a bridge and right-of-way that could include utilities and communication. Examples include: potable water, wastewater, oil, natural gas, electric power, and communication.

High Potential Loss Facility

Facilities that would have a high human loss associated with their damage or failure. Examples include: nuclear power plants, dams and military installations.

Hazardous Materials Facility

Facilities that produce or house industrial/hazardous materials, such as corrosives, explosives, flammable materials, radioactive materials, and toxins. Check to see if your county has a Local Emergency Planning Committee (LEPC) and an existing Hazardous Material listing.

Important Facility

These types of facilities are vital for overall day to day community functions, and ensure full recovery in the wake of a hazard or disaster event. Examples include: government buildings and functions, major employers in the area, bank and financial institutions, non-nuclear power generators, certain commercial establishments such as grocery stores, hardware stores and gas stations, technical schools, colleges, and universities.

Vulnerable Population

Is there a vulnerable human population that occupies the structure that would need special assistance, medical care or other actions before, during or after a hazard event or disaster? Examples include: elderly people, jail populations, people with mental, physical or mobility problems, and non-English speaking populations.

Economic Assets

Larger economic assets that are vital to the prosperity of the community. Examples include major employers and financial centers in your community or area that impact the local or regional economy if significantly disrupted.

Special Considerations

High-density areas (residential or commercial development), if damaged or impacted in a hazard event or disaster, could result in high death tolls or injury rates. Examples include: larger factories or industries, large vertical apartment or housing complexes.

Historic Considerations

Historic, cultural or natural resources, including structures and areas that are identified and protected under state or federal law. Examples include: state parks, federal parks, museums and historic districts.

Other Facilities

Any other significant locally identified facility that does not fit into another category of those listed above.

Comments:

COLUMBIA COUNTY HAZARD MITIGATION PLAN UPDATE

Documentation of Labor Match

NAME (Please Print): _____

ORGANIZATION: _____

DATE(S): _____

EVENT: Hazard Mitigation Plan Update

HOURLY SALARY: _____

BENEFITS PER HOUR: _____

HOURS CONTRIBUTED (Include travel time): _____

TOTAL LABOR MATCH: _____

(Hourly Salary + Benefits Per Hour) X Hours Contributed = Total Labor Match

SIGNATURE: _____

(FORM IS NOT VALID WITHOUT SIGNATURE)

"I authorize GEMA/HS to use the value identified for federal costs sharing matching purposes and do not otherwise believe that I am currently paid with federal funds or that my salary is being used to satisfy any other federal costs sharing obligation."

For use by Committee Members (e.g. EMA Director, County Engineer ...)

EDUCATION EVENTS HELD BY WATER UTILITY

25-Jan-18	Science Night	River Ridge Elementary
30-Jan-18	STEM Night	Blue Ridge Elementary
23-Feb-18	Career Fair	Augusta University
27-Feb-18	Career Fair	Augusta Christian School
9-Mar-18	Career Day	South Columbia Elementary
22-Mar-18	Health Fair	Patriot's Park/Employees
28-Mar-18	Career Fair	USC Aiken
4-May-18	Job Fair	Georgia Military College
8-Oct-18	Plant Tour/Home Schoolers	Little River Plant
10-Oct-18	Science Class	Greenbrier High School
10-Nov-18	Canal Fest	Augusta Canal
17-Nov-18	Adoption Event	Animal Services
8-Dec-18	Adoption Event	Animal Services
12-Jan-19	Adoption Event	Animal Services
24-Jan-19	STEM Night	River Ridge Elementary
8-Feb-19	Career Fair	Augusta University
9-Feb-19	Adoption Event	Animal Services
21-Feb-19	Math and Science Night	Garrett Elementary
28-Feb-19	Career Day	Augusta Christian
8-Mar-19	Home School Presentation	Augusta Forest School
9-Mar-19	Adoption Event	Animal Services
12-Mar-19	College and Career Expo	Exhibition Center
21-Mar-19	Health Expo	Patriot's Park/Employees
17-Apr-19	Career Fair	South Columbia Elementary
20-Apr-19	Adoption Event	Animal Services
11-May-19	Adoption Event	Animal Services/Harley Davidson
8-Jun-19	Adoption Event	Animal Services
19-Jun-19	Community Discussion	Evans Library
13-Jul-19	Adoption Event	Animal Services
17-Aug-19	Adoption Event	Animal Services
14-Sep-19	Adoption Event	Animal Services
26-Sep-19	Water Talk	Lakeside High School
12-Oct-19	Adoption Event	Animal Services
9-Nov-19	Adoption Event	Animal Services
13-Nov-19	Career Fair	Augusta Tech
20-Nov-19	Field Trip/Warren Cty gifted	Little River/Pt Comfort
22-Nov-19	Career Day	River Ridge Elementary
7-Dec-19	Adoption Event	Animal Services
11-Jan-20	Adoption Event	Animal Services
23-Jan-20	Science Night	River Ridge Elementary
8-Feb-20	Adoption Event	Animal Services
14-Feb-20	Career Fair	Augusta University
19-Feb-20	Career Fair	USC Aiken

EDUCATION EVENTS HELD BY WATER UTILITY		
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20-Feb-20	Science Night	Garrett Elementary
10-Mar-20	College and Career Expo	Exhibition Center
14-Mar-20	Adoption Event	Animal Services