Pre-Disaster Mitigation Plan

Webster County, Georgia
Towns of Preston and Weston
2007-2011

April, 2007

Pre-Disaster Mitigation Plan

Webster County, Georgia
Towns of Preston and Weston
2007-2011

Webster County

Dave S. Wills, Jr., Chairman
Melvin Crimes
Jack Holbrook
Jonah McCluster
David Scott

Debbie Willis, County Clerk

Town of Preston

Marie Hunter, Mayor
Billy W. Bearden
Donald E. Brown
Richard Hamlin
Angelyn West

Teresa Mantooth, Town Clerk

Town of Weston

Wayne Burks, Mayor
Tommy Ellington
Mrs. Tracy Holbrook
Jewell Nichols
Debbie Willis

Debbie Willis, Town Clerk

Assisted by:
Middle Flint Regional Development Center
229 West Lamar Street
Americus, Georgia 31709

SITE LOCATION MAP

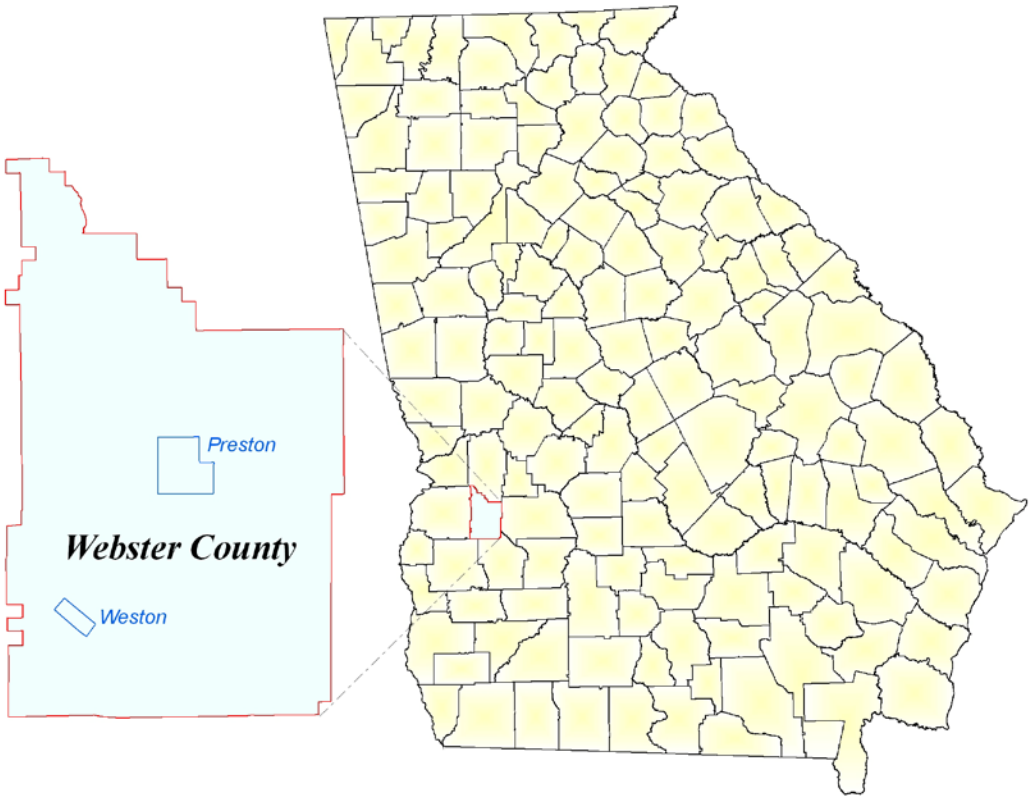


Table of Contents

Chapter 1 – Introduction

Section I	Problem Statement and Purpose	1
Section II	Methodology, Participants, Process	1
Section III	Organization	3
Section IV	Hazard Risk Vulnerability (HRV) Summary	4
Section V	Multi-Jurisdictional Considerations	5
Section VI	Adoption, Implementation, Monitoring and Evaluation	5
Section VII	History of Local Mitigation Activities	7
Section VIII	Community Data	7

Chapter 2 - Natural Hazard, Risk and Vulnerability (HRV) Summary

I	Tornado	1
II	Windstorm (Thunderstorm Winds)	6
III	Severe Winter Storm	10
IV	Hurricane (Tropical Storm)	15
V	Flood	20
VI	Drought	25
VII	Hailstorm	30
VIII	Dam Failure	34

Chapter 3 - Technological Hazard, Risk and Vulnerability (HRV) Summary

I	Transportation Accident	1

Chapter 4 – Natural Hazard Mitigation Goals and Objectives

Overall Community Mitigation Goals, Policies and Values 1

Specific Mitigation Goals, Policies and Values

I	Tornado	9
II	Windstorm (Thunderstorm Winds)	14
III	Severe Winter Storm	17
IVI	Hurricane (Tropical Storm)	20
V	Flood	23
VI	Drought	25
VII	Hailstorm	28
VIII	Dam Failure	31

Chapter 5 - Technological Hazard Mitigation Goals and Objectives

I Transportation Accident 1

Chapter 6 – Execution

I Implementation
- Administrative Actions 1
- Authority and Responsibility 1
- Prioritization 1
- Incorporation into other Plans/Planning Measures 2

II Evaluation
- Method 3
- Responsibility 3
- Timeframe 3
- Reporting 4

III Multi- Jurisdictional Strategy and Considerations 4

IV Plan Update and Maintenance
- Public Involvement 4
- Timeframe 5
- Reporting 5

Chapter 7 – Conclusion

Summary 1
References 1

APPENDICES

Appendix A

GEMA Worksheet # 1- Identify the Hazard 1
GEMA Worksheet # 2 - Profile Hazard Events 2
Natural Hazard Identification and Description 4
Technological or Man-Made Hazard Identification and Description 10
GEMA Worksheet # 3a – Inventory of Assets 11
OHS-GEMA Critical Facilities Report 13

Appendix B

Community Profile 1
Georgia Snapshot 2
Area Labor Profile 8

Appendix C

Executive Summary – Middle Flint Regional Plan 1

Appendix D

Hazard Frequency Table 1

Appendix E

Agenda/Minutes/Sign-in Sheets 1

Chapter 1 – Introduction

Section I	Problem Statement and Purpose	1
Section II	Methodology, Participants, Process	1
Section III	Organization	3
Section IV	Hazard Risk Vulnerability (HRV) Summary	4
Section V	Multi-Jurisdictional Considerations	5
Section VI	Adoption, Implementation, Monitoring and Evaluation	5
Section VII	History of Local Mitigation Activities	7
Section VIII	Community Data	7

Section 1 Problem Statement and Purpose

In an average year, weather-related disasters in the United States cause approximately 500 deaths and approximately $14 billion in property damage.[1] As the nation's communities continue to expand, carrying with them physical development farther across the landscape, the number of lives and value of property in the path of natural hazards increases significantly. Consequently, the loss of life and property has seemingly increased annually, and survivors of these calamities turn to government for redress, increasing the financial burden placed on the nation's taxpayers. In an effort to reduce such losses, communities are being prompted to identify how, where and why they are susceptible to disasters, and take measures to mitigate or eliminate exposure to them and the loss of life and property that so frequently occurs.

Preparation of this document is the response of Webster County, Georgia, and the Towns of Preston and Weston, to the Disaster Mitigation Act of 2000, an amendment to the Robert T. Stafford Disaster Relief and Emergency Assistance Act. This law authorizes release of federal financial assistance to communities that have experienced a disaster of such severity as to warrant a presidential disaster declaration. Simply stated, the referenced amendment establishes an additional eligibility requirement; after November 1, 2004, to be eligible for federal financial disaster assistance a community must not only have been declared a disaster area by the president of the United States, but must have prepared and adopted a federally approved pre-disaster mitigation plan.

The reader should not infer that mitigation is novel to this community. Local, episodic flooding has caused damage it took years to correct. The largest of these projects are identified herein (p.7).

This plan is not intended as a comprehensive identification and assessment of all potential hazards; only those considered to pose the greatest threat to the community. It is recognized the community could be assailed by a disaster not specifically addressed herein. Furthermore, the community lacks the financial resources necessary to implement virtually all of the structural improvements identified. Neither does it specifically address the local impacts which may result from a disaster occurring elsewhere, such as the burden placed on Webster County accommodating evacuees of distant communities.

Section II Methodology, Participants, Process

The Webster County Board of Commissioners directed the Emergency Management Director to oversee this planning effort. Residents of the community, some of whom had no previous experience in emergency response, preparedness or planning, served in task-oriented areas of greater personal interest or expertise.

[1] National Oceanic and Atmospheric Administration

Webster is one of Georgia's smallest counties. The 2000 Census credited the county with 2000 residents, all inclusive. Success in securing broad community participation among such a small population base was complicated by the fact that so many local decision-makers and people with information critical to plan preparation wear multiple vocational and civic "hats". Consequently, one very small group served in the following capacities:

> Critical Facilities Subcommittee – identified and compiled an exhaustive inventory of critical facilities and their characteristics; address, building size, contact information, etc.
>
> Identifying/Profiling Hazards Subcommittee – identified and described the natural disasters most likely to occur in the three participating jurisdictions.
>
> Assessing Vulnerability/Estimating Potential Losses Subcommittee – reviewed hazard event profiles and critical facilities information to assess community vulnerability to specific hazards and the potential loss from each.
>
> Mitigation Goals & Objectives Subcommittee – identified and developed mitigation goals, objectives, tasks and related action steps.

This group convened on an as-needed basis rather than on a regular schedule. Committee members represented the following entities.

Board of Commissioners	Georgia Forestry Commission
City of Preston	Georgia Power Company
City of Weston	Law Enforcement-Preston/Webster
Extension Service (UGA)	NRCS
Family and Children's Services	Public Works
Fire Departments	Regional Development Center

In absence of any direct committee participation, both municipalities were involved in review of the draft plan. There were not any active non-profits in the community to contribute to plan preparation. Neither is there a post-secondary educational institution in the county. The Middle Flint Regional Development Center assisted with data collection, research and analysis, facilitated committee meetings, advertised public meetings for plan review, and compiled the final written document.

Because of their responsibility for providing for the general public welfare and emergency response services, there was strong local government involvement in plan development.

Three existing planning documents were reviewed:

Webster County-Preston-Weston Joint Comprehensive Plan 2004
Webster County Emergency Operations Plan 2004
Middle Flint Regional Plan 2004

As is customary, the joint comprehensive and regional plans addressed community facilities; most, if not all, of which are identified in this document as critical facilities. With rare exception, existing plans do not address hazard mitigation. The recently completed joint comprehensive plan does; however, The emergency operations plan is, of course, the major exception to the general lack of reference to local mitigation, and portions of that plan were used in preparation of this document. Neither the local joint comprehensive plan, the county's emergency operations plan nor regional plan have executive summaries of relevance to this document. The executive summary that does exist is inserted in Appendix C.

Numerous other sources were used in plan preparation, including the Federal Emergency Management Agency, Office of Homeland Security-Georgia Emergency Management Agency, Georgia Department of Natural Resources, Georgia Extension Service, Georgia Forestry Commission, Georgia Department of Transportation, Georgia Tornado Database, The Tornado Project, National Climatic Data Center, National Weather Service, Stewart-Webster Journal, law enforcement and local interviews.

Two publicly advertised "hearings" were held during plan development. The first "hearing" was held Tuesday, August 4, 2005, to present the draft plan to the general public and invite public comment and input. The second hearing was held April 10, 2007, prior to formal adoption by the Webster County Board of Commissioners, and the Town Councils of Preston and Weston. The only attendance at the "hearings" consisted of committee members active in plan preparation.

Section III Organization

A detailed analysis of natural hazards is presented in Chapter 2. The analysis consists of a description of the hazard and the damage potential, historical frequency and probability of future occurrence, an inventory of assets exposed to the hazard and an estimate of potential loss, land use patterns as they relate to each hazard, and any aspects of hazards which may be unique to any of the jurisdictions. A detailed analysis of technological hazards is presented in Chapter 3. The analysis consists of a description of the hazard and the damage potential, historical frequency and probability of future occurrence, an inventory of assets exposed to the hazard and an estimate of potential loss, land use patterns as they relate to each hazard, and any aspects of hazards which may be unique to any of the jurisdictions. Presented in Chapter 4 is an itemized list of

goals, objectives, tasks and action steps which are proposed for implementation to mitigate likely adverse impacts of specific natural hazard events. Presented in Chapter 5 is an itemized list of goals, objectives, tasks and action steps which are proposed for implementation to mitigate likely adverse impacts of specific technological, or man-made, hazard events. Chapter 6 describes how the plan will be implemented, monitored and maintained. Chapter 7 consists of a concluding statement, followed by appendices.

Section IV Hazard Risk Vulnerability (HRV) Summary

This plan identifies and assesses community exposure to certain natural and technological (man-made) hazards (see below), and identifies how to reduce exposure to them. The assessment provides the factual basis for activities proposed to reduce losses, including a description of the type, location, and extent of natural and technological hazards deemed most likely to befall the community. Reference was made to the historical record to compile information on previous events and for use in estimating the probability of hazard recurrence.

Natural Hazards	Technological Hazards
Tornado	Transportation Accident
Thunderstorm Winds	
Severe Winter Storm	
Tropical Storm	
Drought	
Flood	
Hail Storm	
Dam Failure	

Vulnerability includes a summary of past events and their impacts. This is quantified by describing the types and numbers of existing and future buildings, infrastructure, and critical facilities located in identified hazard prone/susceptible areas. Estimates of the potential dollar losses that could reasonably be expected to result from a specified hazard event are also presented.

Land uses and development trends were reviewed for the purpose of identifying mitigation options that can be considered in future land use decisions to reduce each jurisdiction's specific risk.

Based on these assessments, a blueprint for reducing potential losses was developed, incorporating expansion and improvement on existing authorities, policies, programs and resources. The blueprint includes goals and objectives to reduce or avoid long-term vulnerabilities to hazards. Overall community goals include; (1) Protect public health and safety, (2) Reduce, and to the extent possible eliminate, community exposure to hazards, (3) Reduce loss and damage to private property and public infrastructure resulting from hazards, (4) Maintain continuity of public and private sector operations during and after

hazard events, and (5) Respond promptly, appropriately and efficiently in the event of disaster. The end product is a prioritized action plan with specific steps to achieve stated goals. This, in turn, is supplemented with a maintenance process to monitor, evaluate, and update the mitigation plan over a five-year timeframe.

Section V Multi-Jurisdictional Considerations

This document has been developed for unincorporated Webster County, and the Towns of Preston and Weston. The plan includes an identification and analysis of a comprehensive range of specific mitigation actions needed to reduce the adverse effects of specific hazards in each jurisdiction. With few exceptions, all three jurisdictions are susceptible to the same natural and technological hazards. Where applicable; however, specific mitigation actions have been identified for each jurisdiction.

Section VI Adoption, Implementation, Monitoring and Evaluation

The Webster County Pre-Disaster Mitigation Plan was formally adopted (see following page) by the Webster County Board of Commissioners, Preston Town Council and Weston Town Council after receiving notification from the Office of Homeland Security-Georgia Emergency Management Agency that the plan complied with applicable federal regulations.

Presented in Chapter 6 is a description of plan implementation, monitoring, evaluation, and update activities, public participation, and the process of incorporating mitigation into other planning and administrative functions of the three local governments. This section details the process that will ensure the Webster County Pre-Disaster Mitigation Plan becomes an integral part of local governance and life in the community.

RESOLUTION
ADOPTING WEBSTER COUNTY PRE-DISASTER MITIGATION PLAN

WHEREAS; to be eligible for federal disaster assistance in the event of a presidential disaster declaration made after November 1, 2004, local governments must have adopted a pre-disaster mitigation plan prepared in accordance with federal regulations promulgated pursuant to the Disaster Mitigation Act of 2000, and

WHEREAS; in 2004 the Board of Commissioners requested, and subsequently received from the Georgia Emergency Management Agency, a Hazard Mitigation Grant Program Planning Grant award, designated project number 17PDMC03015269, to fund preparation of a pre-disaster mitigation plan in accordance with federal regulations promulgated pursuant to the Disaster Mitigation Act of 2000, and

WHEREAS; the Webster County Pre-Disaster Mitigation Plan has been prepared as a multi-jurisdictional document to satisfy pre-disaster mitigation planning requirements for unincorporated Webster County and the incorporated communities of Preston and Weston, and

WHEREAS; the Georgia Emergency Management Agency has officially notified the Webster County Board of Commissioners, City of Preston and City of Weston that the Webster County Pre-Disaster Mitigation Plan satisfies applicable federal pre-disaster mitigation planning requirements.

BE IT THEREFORE RESOLVED that the Webster County Board of Commissioners, Mayor and Town Council of the Town of Preston, and the Mayor and Town Council of the Town of Weston, each meeting in regular session, adopt the Webster County Pre-Disaster Mitigation Plan 2007-2011.

Enacted in regular session this _____ day of _____, 2007, by the
WEBSTER COUNTY BOARD OF COMMISSIONERS

_____ _____
Chairman County Clerk

Enacted in regular session this _____ day of _____, 2007, by the
PRESTON TOWN COUNCIL

_____ _____
Mayor Town Clerk

Enacted in regular session this _____ day of _____, 2007, by the
WESTON TOWN COUNCIL

_____ _____
Mayor Town Clerk

Section VII History of Local Mitigation Activities

Completed Mitigation Projects			
Project	Where	Cost	Completed
Dam repair	Payne Pond Kennedy Pond Leverette Pond	$200K/$185K $600K $1.1M	1994/2003 1996 2000
Dam repair	Wilson Pond Gill Pond	$1.5M $1.8M	2004 2004
Box culvert/ guardrails	Slaughter Creek	$90K	1998/1999
Culvert replacement	Fox Creek Br	$15K	1998

Source: Webster County

Section VIII Community Data

Jurisdiction	2000 Population	2000 Per Capita Income
Webster County	2,390	$14,772
Preston	453	$14,779
Weston	75	$22,275

2000 Educational Attainment			
Educational Level	Webster	Preston	Weston
< 9^{th} grade	259	42	5
9^{th} -12^{th} grade (no diploma)	356	51	10
HS grad/GED	539	113	11
some college (no degree)	241	48	9
Associate degree	49	19	0
Bachelor's degree	110	19	9
Graduate/Prof degree	34	27	2

2000 Employment by Industry			
Industry	Webster	Preston	Weston
Agriculture	9.0%	10.4%	10.5%
Construction	5.3%	1.8%	5.3%
Manufacturing	26.5%	15.4%	10.5%
Wholesale Trade	3.5%	1.4%	5.3%
Retail Trade	8.2%	11.8%	31.6%
Transportation, warehousing, utilities	8.2%	8.1%	0%
Information	.7%	1.4%	0%
Finance, Insurance, & Real Estate	2.8%	3.6%	0%
Professional, scientific, management, administrative, waste management services	2.7%	5.4%	5.3%
Educational, health, social services	16.0%	19.0%	23.7%
Arts, entertainment, recreation, accommodation and food services	2.5%	1.8%	0%
Other Services	6.4%	5.4%	0%
Public Administration	8.0%	14.5%	7.9%

Chapter 2 - Natural Hazard, Risk and Vulnerability (HRV) Summary

I	Tornado	1
II	Windstorm (Thunderstorm Winds)	6
III	Severe Winter Storm	10
IV	Hurricane/Tropical Storm	15
V	Flood	20
VI	Drought	25
VII	Hailstorm	30
VIII	Dam Failure	34

I. Tornado

A. Hazard Identification

A tornado is a violently rotating column of air extending from a thunderstorm to the ground, usually spawned when the weather is warm, humid and unsettled; conditions common to the local area. Severe weather conditions, such as a thunderstorm or hurricane, can produce a tornado. Tremendous destruction can occur with the combined action of strong winds (some at speeds in excess of 250 mph) and the impact of wind-borne debris. Damage paths can be in excess of one mile wide and fifty miles long. Although the path may be erratic, storm movement is usually from southwest to northeast. Tornadoes most often occur between 3 p. m. and 8 p.m., but may occur at any time of day or night. The official tornado season lasts from March-August with a peak in March-May; but they can occur anywhere, any time of year. Advance planning and quick response are keys to surviving a tornado.

Fujita Tornado Damage Scale		
Category	Wind Speed*	Damage Description
F0	<73 mph	Light; some damage to chimneys, tree branches broken, shallow-rooted trees pushed over, sign boards damaged
F1	73-112 mph	Moderate; peels surface off roofs, mobile homes pushed off foundations/overturned, moving autos blown off road
F2	113-157 mph	Considerable; roofs torn off frame houses, mobile homes demolished, boxcars overturned, large trees uprooted, light-object missiles generated, cars lifted off ground
F3	158-206 mph	Severe; roofs and some walls torn off well-constructed houses, trains overturned, most forest trees uprooted, trees lifted and thrown
F4	207-260 mph	Devastating; well-constructed houses leveled, structure blown some distance from weak foundations, cars thrown as missiles
F5	261-318 mph	Incredible; strong frame houses lifted off foundations/swept away, auto sized missiles fly through the air in excess of 100 yards, trees debarked, incredible phenomena occur

* Wind speeds are estimates; have never been scientifically verified.
Source: National Climatic Data Center

B. Hazard Profile

All geographical areas of the county are susceptible to the randomness of tornadic activity. Although there have not been any such hazards of disastrous proportions to befall the community in recent history, small storms have nevertheless been present, and climatic conditions were conducive for others to occur as has been evidenced by the issuance of tornado warnings and watches. Information gleaned from available data bases revealed the following history of tornadic activity in the community.

Local Tornado Events				
Date	Death/Injury	Magnitude	Cost	Damage
12/5/1954	0/8	F2	$250K	Property
3/18/1981	0	F1	$25K	Property
3/01/07	0/5	EF3	$1.6M	Property

Source: National Climatic Data Center, local

Application of inflation to the property damage recorded in 1954 and 1981 yields current day values of $1.7M and $56,000, respectively. Based solely on the historic trend analysis of available data (Hazard Frequency Table-Appendix D, page 1), the community has a 5% chance of experiencing a tornado event any given year.

C. Community Exposure

The random, sudden and violent natures of the tornado place all residents and all physical development throughout the community at risk. This, of course, includes all critical infrastructure; 31 structures enumerated in Appendix A, pages 13-15. Aggregate value of the community's "non-critical" facilities has been estimated for use here; documentation is presented on page A-11.

D. Estimate of Potential Losses

Potential Losses were estimated by use of the OHS/GEMA web-based planning tool. Data input for the Assets Worksheet included the replacement value and structure content value of each critical facility identified. Because all areas of the community are exposed to the threat posed by this hazard, critical facilities distributed throughout the county are at risk. Thus, any percentage of total replacement and structure contents values is subject to loss. The combined total estimated structure replacement value ($73M) and total estimated contents value ($46M) is $119M. This information can be reviewed in detail in Appendix A, pages 13-15. Aggregate value of the community's "non-critical" facilities has been estimated for use here; documentation is presented on page A-11.

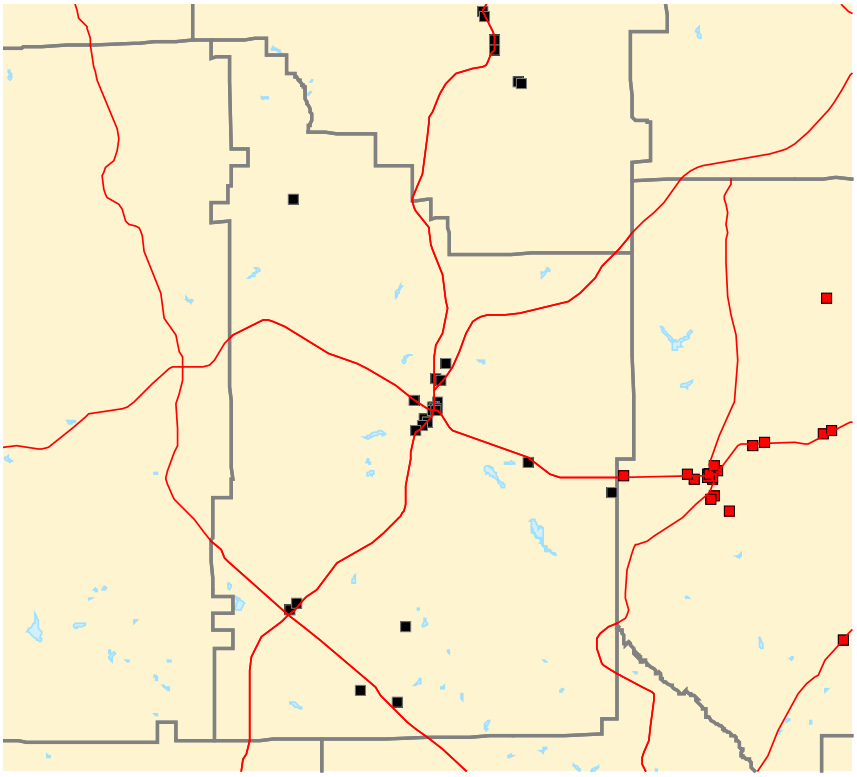
Population and other demographic data are presented in Appendix B, pages 1-13.

E. Land Use and Development Trends

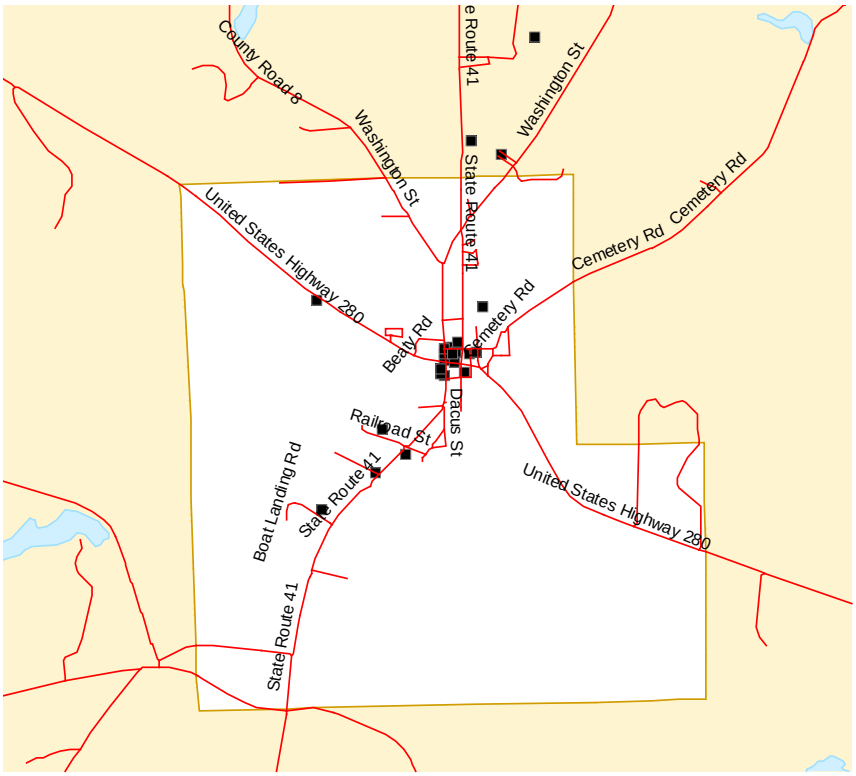
Because tornado strikes are so random, neither land use nor development trends influence exposure to this hazard. Land use conversion in the community is limited, and development is both sparse and limited.

F. Multi-Jurisdictional Differences

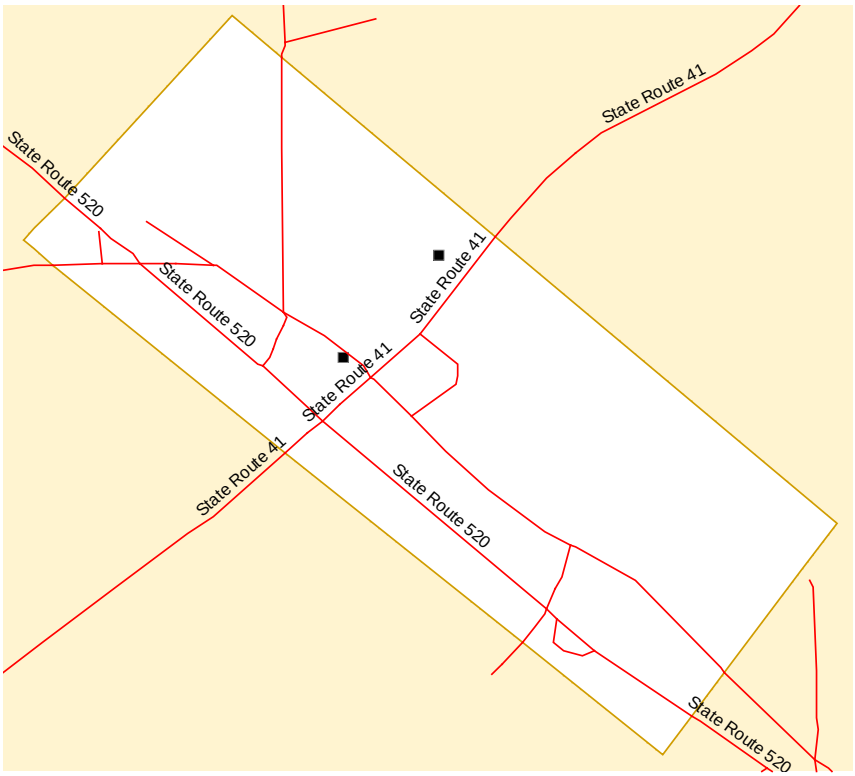
The assessment revealed no differences in the risk of a tornado occurring in any of the three jurisdictions. Pre-disaster mitigation measures relevant to tornadoes are applicable throughout the community. The following maps reveal the distribution of critical facilities throughout the community, with a concentration in the Town of Preston.



Webster County



Town of Preston



Town of Weston

G. Hazard, Risk and Vulnerability Summary

The community's greatest natural hazard loss to date has been the result of a tornado event (1954). Tornadoes can strike anywhere in the community, at any time of day and any time of year, with suddenness and with great intensity as a result of weather conditions common to the area. The community must prepare in advance, and be able to respond quickly and appropriately to such an event.

II. Windstorm (Thunderstorm Winds)

A. Hazard Identification

Thunderstorm winds are straight-line winds (as opposed to a tornado's rotating column of air), generally of short duration and gusts in excess of 50 mph. This hazard poses the greatest threat in areas of softwood trees, a feature common in the community, areas with exposed improvements and infrastructure, and above ground (electrical) utilities. These winds can cause power outages, transportation and economic disruptions, significant property damage and pose a high risk of injuries and loss of life.

B. Hazard Profile

All four quadrants of the community have experienced thunderstorm winds. Although there have not been any such hazards of disastrous proportions locally, historically, it is the most common natural hazard to befall the community. Examples of local damages include forests, trees blown onto homes, commercial establishments and power lines, roofs torn from buildings, all typical of (local) Wind Zone 2 where gusts of 90-99 mph may occur. The historic record as compiled by the National Climatic Data Center documents twenty significant thunderstorm wind events between 1981 and 2003. No local deaths or injuries have been documented as a result of these events. Cumulative damages "documented" to date total $64,000. Extrapolating from twenty-five years of available data, the community has a 80% probability of experiencing thunderstorm winds any given year (Hazard Frequency Table-Appendix D, page 1).

Thunderstorm Winds			
Location	Date	Damage	
		Property	Crop
Webster	3/18/1981	0	0
Webster	4/5/1985	0	0
Webster	7/21/1986	0	0
Webster	11/15/1989	0	0
Webster	11/16/1989	0	0
Webster	2/9/1990	0	0
Webster	2/16/1990	0	0
Webster	4/10/1990	0	0
Webster	4/9/1991	0	0
Webster	4/9/1991	0	0
Webster	3/30/1992	0	0
Webster	7/13/1992	0	0
Preston	3/6/1996	0	0

Weston	4/27/1997	50K	0
Preston	7/27/1997	2K	0
Preston	11/21/1997	5K	0
Weston	5/22/2001	1K	0
Preston	11/25/2001	1K	0
Preston	3/13/2003	2K	0
Preston	5/2/2003	3K	0

Source: National Climatic Data Center

C. Community Exposure

The random, sudden and violent natures of thunderstorm winds place all residents and all physical development throughout the community at risk. This, of course, includes all the community's critical infrastructure; 31 structures enumerated in Appendix A, pages 13-15. Aggregate value of the community's "non-critical" facilities has been estimated for use here; documentation is presented on page A-11.

D. Estimate of Potential Losses

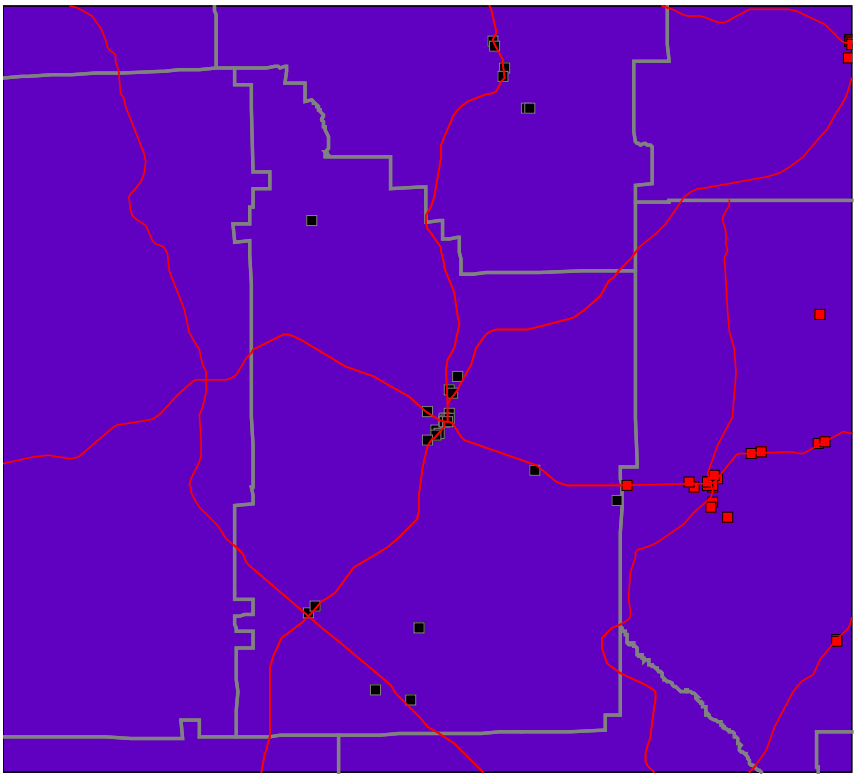
Potential Losses were estimated by use of the OHS/GEMA web-based planning tool. Data input for the Assets Worksheet included the replacement value and structure content values of each critical facility identified. Because all areas of the community are exposed to the threat posed by this hazard, critical facilities distributed throughout the community are at risk. Thus, any percentage of the total replacement and structure contents value is subject to loss. The combined total estimated structure replacement value ($73M) and total estimated contents value ($46M) is $119M. This information can be reviewed in detail in Appendix A, pages 13-15. Aggregate value of the community's "non-critical" facilities has been estimated for use here; documentation is presented on page A-11. Population and other demographic data are presented in Appendix B, pages 1-13.

E. Land Use and Development Trends

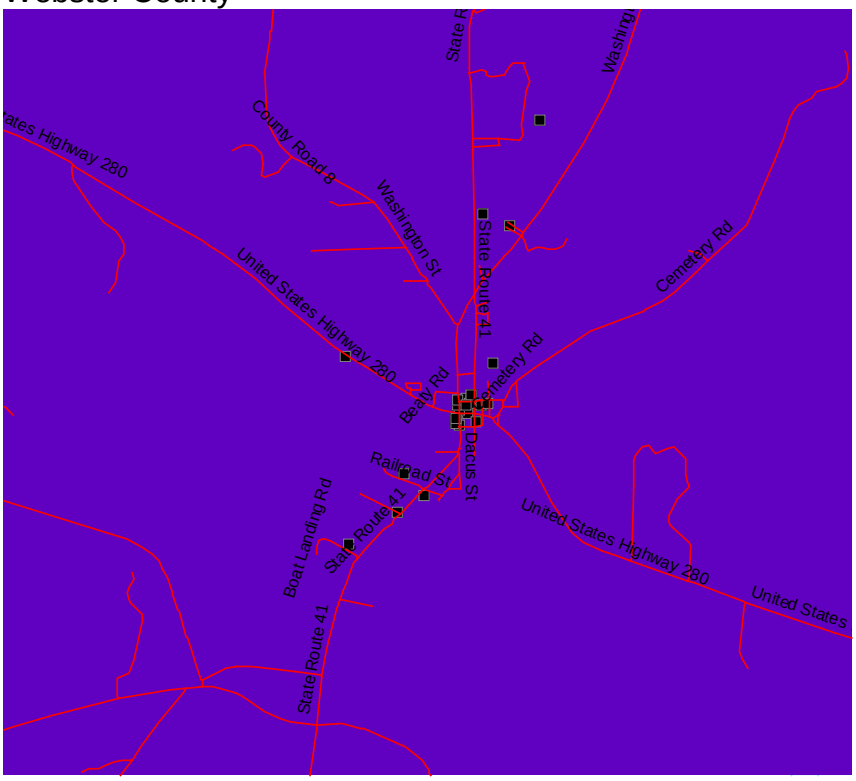
Because thunderstorm winds are so random, neither land use nor development trends influence exposure to this hazard. Land use conversion in the community is limited, and development is both sparse and limited.

F. Multi-Jurisdictional Differences

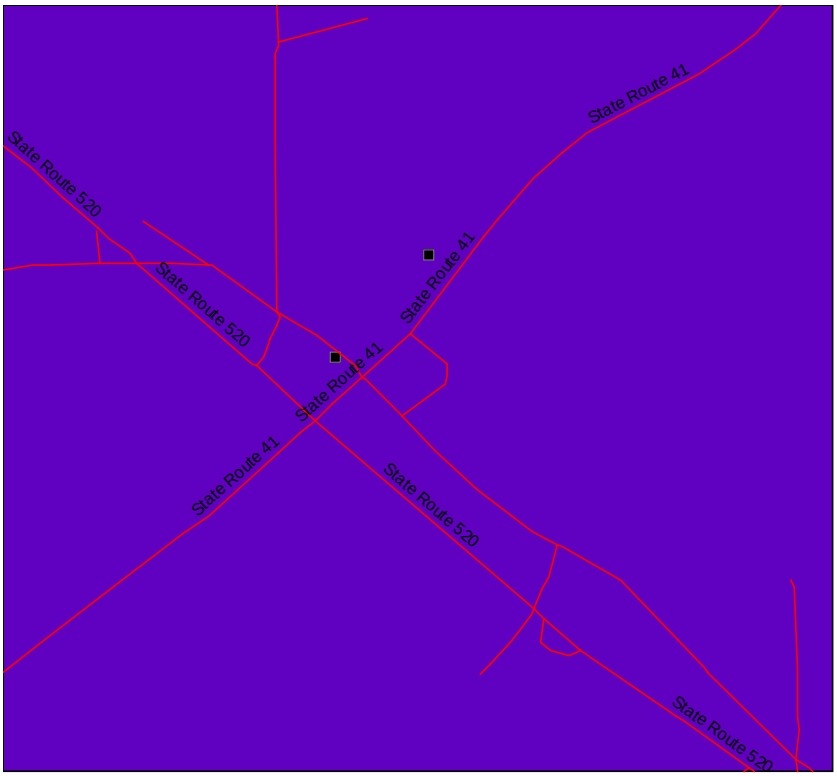
The assessment revealed no differences in the risk of thunderstorm winds occurring in any of the three jurisdictions. Pre-disaster mitigation measures relevant to thunderstorm winds are applicable throughout the community. The maps that follow reveal the distribution of critical facilities in the community, with a concentration in the Town of Preston.



Webster County



Town of Preston



Town of Weston

G. Summary

Thunderstorm winds are the community's most common natural hazard event, and have demonstrated the ability to strike anywhere at any time. The community must prepare in advance, and be able to respond quickly and intelligently to such an event.

III. Severe Winter Storm (Snow and Ice)

A. Hazard Identification

A severe winter storm is a widespread weather pattern affecting a much larger area than any single community. These hazards take the form of freezing temperatures, ice formation and snow accumulation. Low temperatures burst unprotected water pipes, and formation of ice on roads causes slick, dangerous and hazardous driving conditions. The weight of ice formation on trees breaks limbs which in turn fall on and break suspended electric power lines disrupting service. Snow accumulation also creates unsafe driving conditions for the public unfamiliar with potential hazards. Bridges are especially susceptible to freezing because of exposure to extreme temperatures from above and below the structure. Roads may have to be closed because of freezing conditions on bridges, which can in turn lead to business closures. Generally, these hazard events are threats primarily to residents and result in economic losses resulting from business and school closures. A poorly heated house in the winter can cause hypothermia in older residents, and the potential for this occurring is exacerbated during times of extreme cold. Although it is not unusual to experience some property damage, with the exception of electrical transmission lines, critical facilities are generally not seriously threatened.

B. Hazard Profile

The community has experienced winter storm events of both snow and ice. Because these events have historically been of short duration, damage has seldom been significant, with the occasional exception of crop damage. Extreme cold does not have to be of long duration to be harmful to crops. Local property damage would be much greater if severe weather lingered for longer periods of time. Seldom does the day-time high temperature immediately following extreme cold fail to reach a temperature above freezing, offering at least a brief reprieve from severe conditions. Three-to-four consecutive days of around-the-clock freezing temperatures would pose a significant hazard to the community, and could occur in virtually any winter season. A severe winter storm will pose the greatest threat to the very young, elderly, lower-income, and to those traveling because of the greater likelihood of traffic accidents which result from hazardous driving conditions. The available ten-year record documented four severe winter events. Review of this information suggests a 26% probability of the community experiencing a winter storm event any given year (Hazard Frequency Table-Appendix D, page1).

Winter Storm	Date	Type
Webster	1/20/1983	Extreme Cold
Webster	3/14/1993	Extreme Cold
23 Georgia Counties	2/3/1996	Extreme Cold
57 Georgia Counties	1/2/2002	Heavy Snow
60 Georgia Counties	2/26/2002	Extreme Cold
77 Georgia Counties	1/23/2003	Extreme Cold

*Includes Webster County
Sources: National Climatic Data Center, local newspaper

C. Community Exposure

Severe winter storm events of longer duration than the historic record documents could result in significant injury, death and property damage. Relative to the state, the community has disproportionately larger elderly (65+) and lower income populations; two segments of the general population more prone to weather-related illness and injury. The elderly are generally less able to resist cold weather stress, and lower income residents are more often inadequately housed. The more extreme the winter storm the greater the risk of house fires because of extra effort exerted to combat the cold. Although it is not unusual for some property to be damaged by severe winter storms, critical facilities are generally not seriously threatened. The greatest threat is to suspended electrical utility lines. Nevertheless, because this hazard is a threat to the entire community, all 31 critical structures are considered at risk. Aggregate value of the community's "non-critical" facilities has been estimated for use here; documentation is presented on page A-11.

D. Estimate of Potential Loss

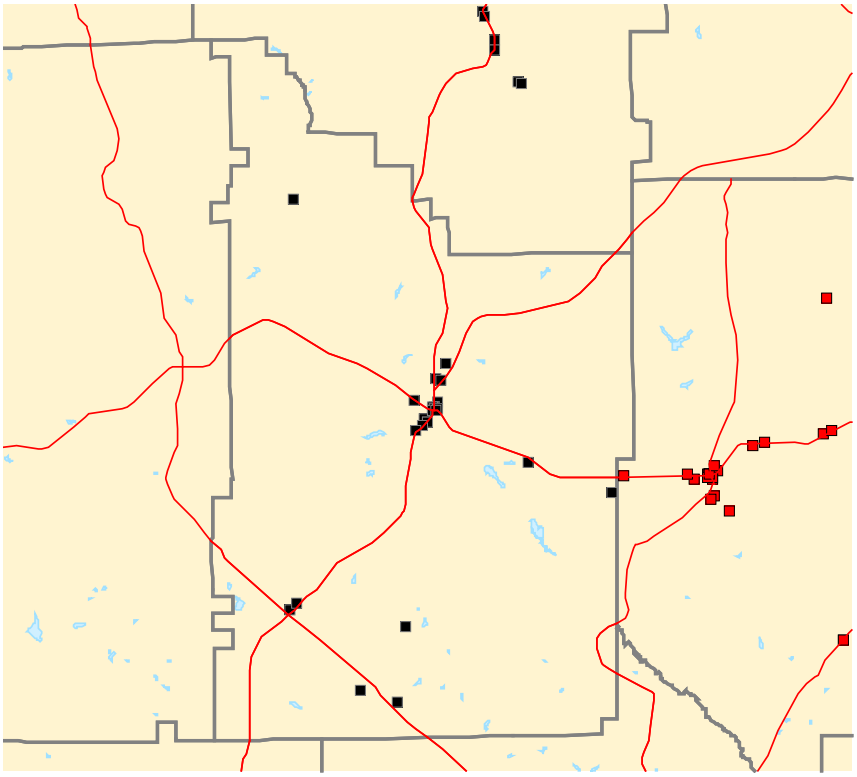
Winter storms are primarily a threat to residents, as critical facilities are not particularly susceptible. The potential for crop loss is difficult to estimate without knowing which of a number of variables to apply. A reliable estimation of deaths and injuries is impossible to develop in absence of specifying event conditions; primarily, the range of temperature extreme and duration of the event. Nevertheless, the estimated cost of critical facility replacement ($73M) and content value ($46M) amounts to a total of $119M (Appendix A, pages 13-15). Aggregate value of the community's "non-critical" facilities has been estimated for use here; documentation is presented on page A-11. Population and other demographic data are presented in Appendix B, pages 1-13.

E. Land Use and Development Trends

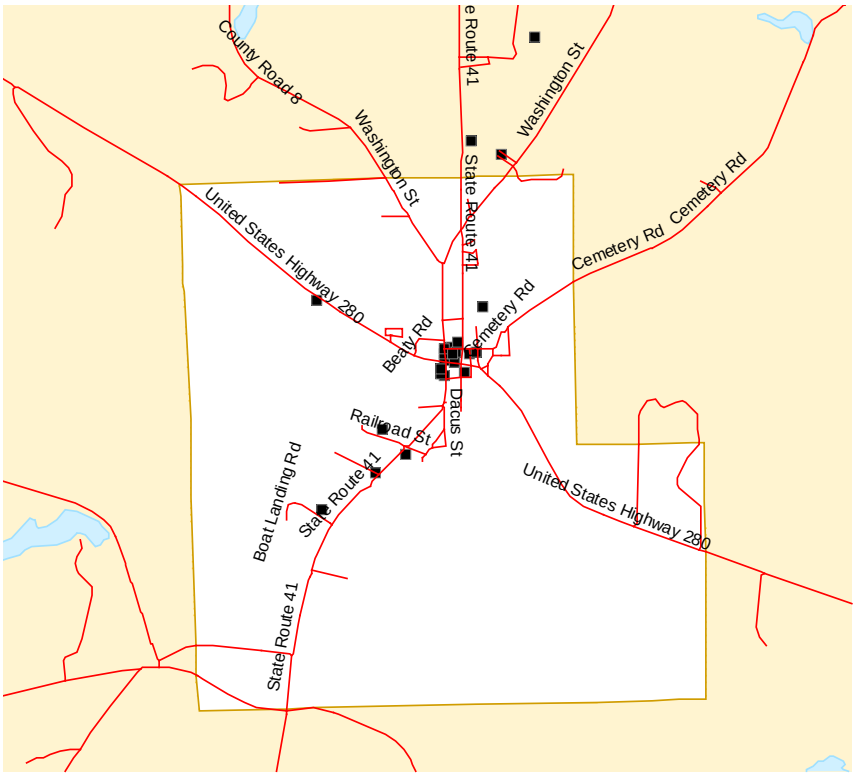
Local land use and development patterns do not influence community exposure to this hazard.

F. Multi-Jurisdictional Differences

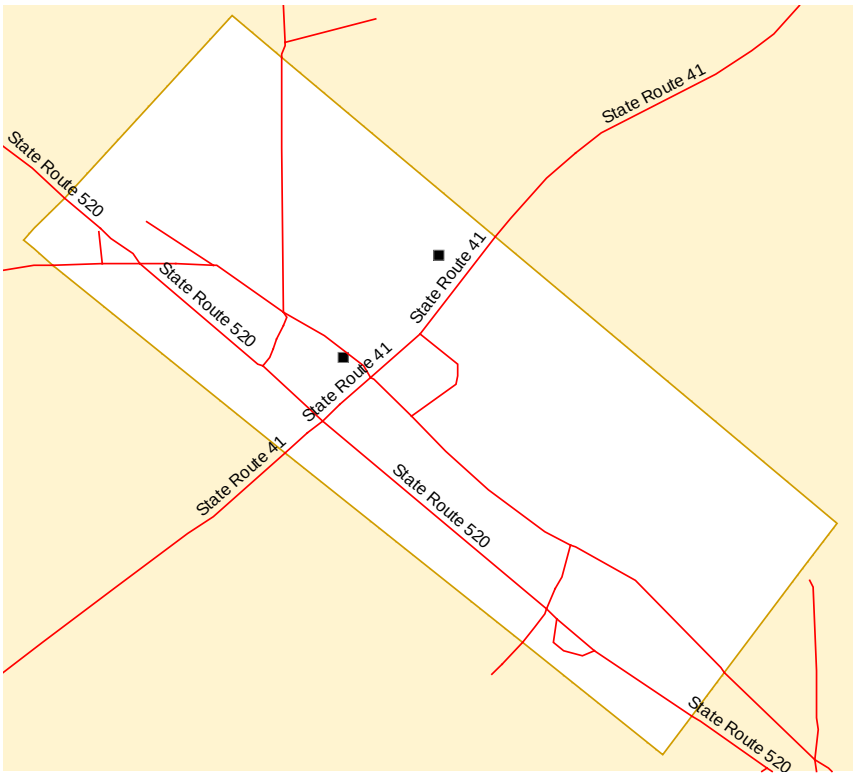
There are not any jurisdictional differences between exposure to or response to this hazard. The graphics that follow display the distribution of the community's critical facilities.



Webster County



Town of Preston



Town of Weston

G. Summary

The community has a number of conditions that increase the potential for loss in a significant winter storm event; disproportionately larger elderly and lower-income populations, complacency resulting from a history of events being relatively rare and of short duration. The general rarity of such events, their generally short duration and the brief period of intensive use of storm-related recovery equipment all serve to make it difficult for elected officials to justify purchase of such equipment operating in an environment of limited financial resources. Because winter storms are typically a widespread weather pattern, surrounding communities are likely to be affected by the same event. Transportation-related hazards during such events can complicate sharing of such equipment between jurisdictions. The best protection against future events is education and preparation.

IV. Hurricane/Tropical Storm

A. Hazard Identification

A tropical storm is a tropical cyclone with surface wind speeds ranging between 39 and 73 mph; above 73 mph the storm is classified as a hurricane (see table). In meteorology, a tropical cyclone is a type of low-pressure system which generally forms in the tropics. The convection in tropical storms is usually more concentrated near the center with outer rainfall organizing into distinct bands. While some, particularly those that make landfall in populated areas, are highly destructive, tropical cyclones are an important part of the atmospheric circulation system, which moves heat from the equatorial region toward the higher latitudes.

Saffir-Simpson Hurricane Scale			
Category	Wind Speed	Storm Surge	Cumulative Damage
1	74-95 mph	4-5 feet	Building damage limited primarily to unanchored mobile homes
2	96-110 mph	6-8 feet	Considerable damage to mobile homes
3	111-130 mph	9 -12 feet	Some structural damage to small residences and utility buildings. Mobile homes are destroyed
4	131-155 mph	13 -18 feet	Complete roof structure failures on some small residences. Complete destruction of mobile homes. Extensive damage to doors and windows
5	+155 mph	18+ feet	Complete roof failure on many residences and industrial buildings. Complete destruction of mobile homes. Severe and extensive window/door damage.

B. Hazard Profile

The historical record revealed eleven events, all of which affected much of the state. Local damages were credited to only one, Tropical Storm Alberto, which merited a fifty-five county presidential disaster declaration. Extrapolating from this documented record, there is a 92% probability of a tropical storm event any given year. (Hazard Frequency Table-Appendix D, page 1).

Hurricane (Tropical Storm) Events				
Location*	Date	Type	Death/Injury	Damage
55 Georgia Counties	7/5/1994	Tropical Storm	0	0
96 Georgia Counties	9/14/2002	Tropical Storm	0	0
96 Georgia Counties	7/01/2003	Tropical Depression	0	0
96 Georgia Counties	9/06/04	Tropical Storm	0	0
96 Georgia Counties	9/16/2004	Tropical Storm	0	0
96 Georgia Counties	9/26/2004	Tropical Storm	0	0
96 Georgia Counties	6/12/2005	Tropical Storm	0	0
77 Georgia Counties	7/06/2005	Tropical Storm	0	0
96 Georgia Counties	7/10/2005	Hurricane typhoon	0	0
96 Georgia Counties	8/29/2005	Hurricane typhoon	0	0
96 Georgia Counties	10/05/2005	Tropical Storm	0	0

*Includes Webster County
Source: National Climatic Data Center

C. Community Exposure

Because of proximity to the Atlantic and Gulf Coasts, the community will always be susceptible to tropical storms. Furthermore, meteorologists have predicted a long-term cyclical increase in the weather patterns generating tropical storms. The entire community is exposed to this threat. This, of course, includes all the community's critical infrastructure; 31 structures enumerated in Appendix A, pages 13-15. Aggregate value of the community's "non-critical" facilities has been estimated for use here; documentation is presented on page A-11.

D. Estimate of Potential Loss

Potential Losses were estimated by use of the OHS/GEMA web-based planning tool. Data input for the Assets Worksheet included the replacement value and structure content value of each critical facility identified. Because all areas of the community are exposed to the threat posed by this hazard, critical facilities distributed throughout the county are at risk. Thus, any percentage of the total replacement and structure content values is subject to loss. The

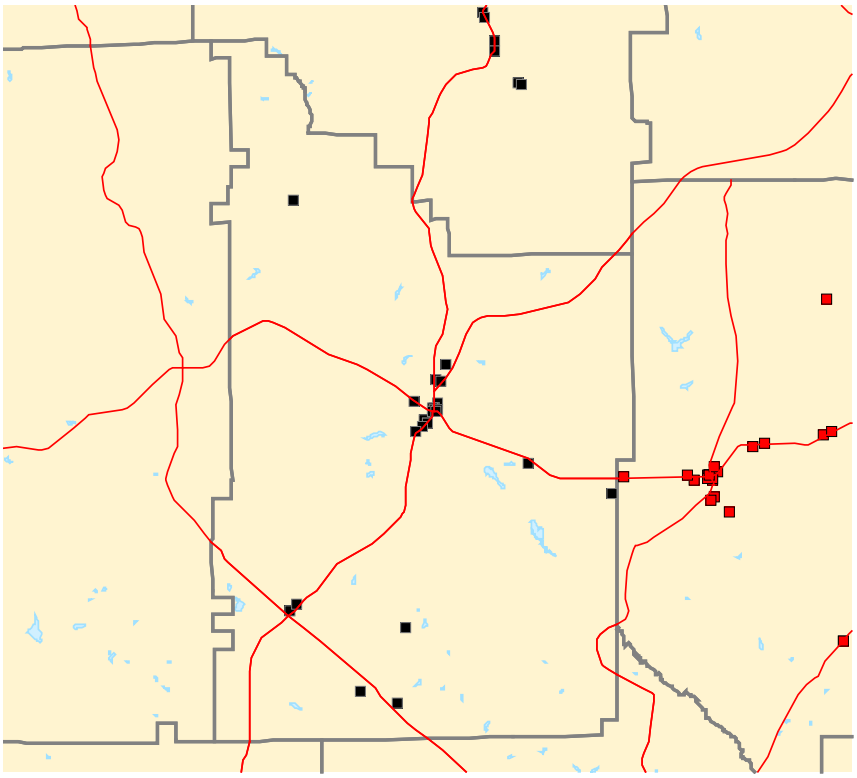
combined total estimated structure replacement value ($73M) and total estimated contents value ($46M) is $119M. This information can be reviewed in detail in Appendix A, pages 13-15. Aggregate value of the community's "non-critical" facilities has been estimated for use here; documentation is presented on page A-11. Population and other demographic data are presented in Appendix B, pages 1-13.

E. Land Use and Development Trends

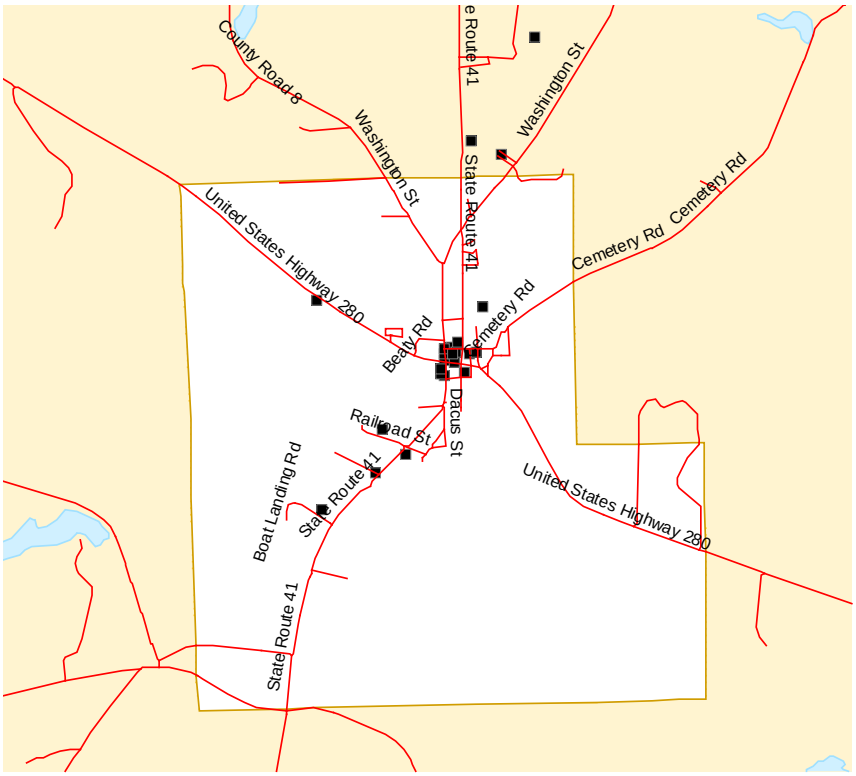
Land use conversion in the community is limited, and development is both sparse and limited. Because tropical storms typically affect large geographical areas, neither land use nor development trends influence exposure to this hazard.

F. Multi-Jurisdictional Differences

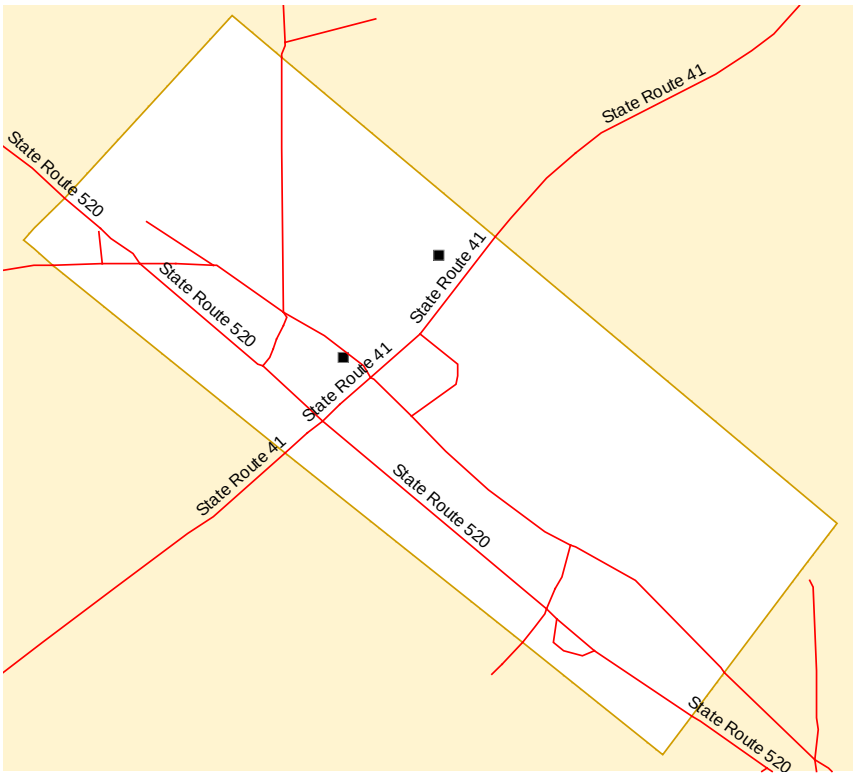
The assessment revealed no differences in the risk of a tropical storm occurring in any of the three jurisdictions. Pre-disaster mitigation measures relevant to this hazard are applicable throughout the community. The graphics that follow reveal the distribution of critical facilities throughout the community, with a concentration in the Town of Preston.



Webster County



Town of Preston



Town of Weston

G. Summary

Because of geographic location, proximity to both the Atlantic and Gulf coasts, the community will always be susceptible to the threat of tropical storms.

V. Flood

A. Hazard Identification

The overflow of rivers and streams onto normally dry lands due to severe storms or torrential rains is often a secondary impact of tropical storms or hurricanes. Among the most common factors affecting the extent of flooding are: topography, ground saturation, rainfall intensity and duration, soil type, drainage patterns, basin size, vegetative cover and development density/impervious surfaces. Flooding may occur slowly as the result of an extended rain or storm event, or as the result of a flash flood, sometimes causing dam failure. As a result of flooding caused by Tropical Storm Alberto, a rainfall event of ±20" was recorded in Preston, with similar totals elsewhere in the county.

B. Hazard Profile

The community's largest flood event resulted from Tropical Storm Alberto in 1994 which, between July 3 and July 7, doused "semi-saturated" soils with ±20" of rainfall, almost half the community's total annual average. Streams of all sizes overflowed, farm pond dams burst resulting in damage/destruction to/of numerous roads and bridges. Webster was one of fifty-five Georgia counties included in the July 7, 1994, presidential disaster declaration. Based on the documented historical record presented below, there is a 58% probability of a flood event any given year. (Hazard Frequency Table-Appendix D, page 1). Impacts of such events are felt most frequently in the southern corporate limits of Preston and downstream of the confluence of the Lanahassee and Kinchafoonee Creeks.

Local Flood Events					
Location	Date	Death/Injury	Magnitude	Cost	Damage
County	7/05/'94	0/0	Flood	$2M	Rd & Br
124 Ga. Counties*	10/04/'95	0/0	Flash Flood	**	Property
40 Ga Counties*	3/08/'98	0/0	Flood	**	Property
County [1]	7/13/'03	0/0	Flash Flood	0	-
15 Ga. Counties*	3/27/'05	0/0	Flood	**	Property
39 Ga. Counties*	7/10/'05	0/0	Flood	**	Property
Preston	4/08/'06	0/0	Flood	$1K	Property

* includes Webster County
[1] south portion of the county
** damages were aggregated for affected counties; no local data available
Source: National Climatic Data Center, Local

C. Community Exposure

Because of proximity to the Atlantic and Gulf Coasts, the community will always be susceptible to the kind of tropical storms that caused widespread flooding in 1994. Fortunately, that was an extreme event. The community is diligent to maintain drainage channels to accommodate flash flood events. The county and Town of Preston adopted (NFIP approved) Flood Damage Prevention Ordinances in 2005, without benefit of mapped floodplains. Digital flood maps are needed to facilitate ordinance enforcement. Although development downstream of the numerous dams in the county is nominal, areas in these dam "shadows" have a potential risk of flooding when impounded waters breach these man-made reservoirs. Enforcement of Wetland Protection Ordinances in all three jurisdictions helps prevent destruction of these natural flood-prevention resources. Aggregate value of the community's "non-critical" facilities has been estimated for use here; documentation is presented on page A-12.

D. Estimate of Potential Loss

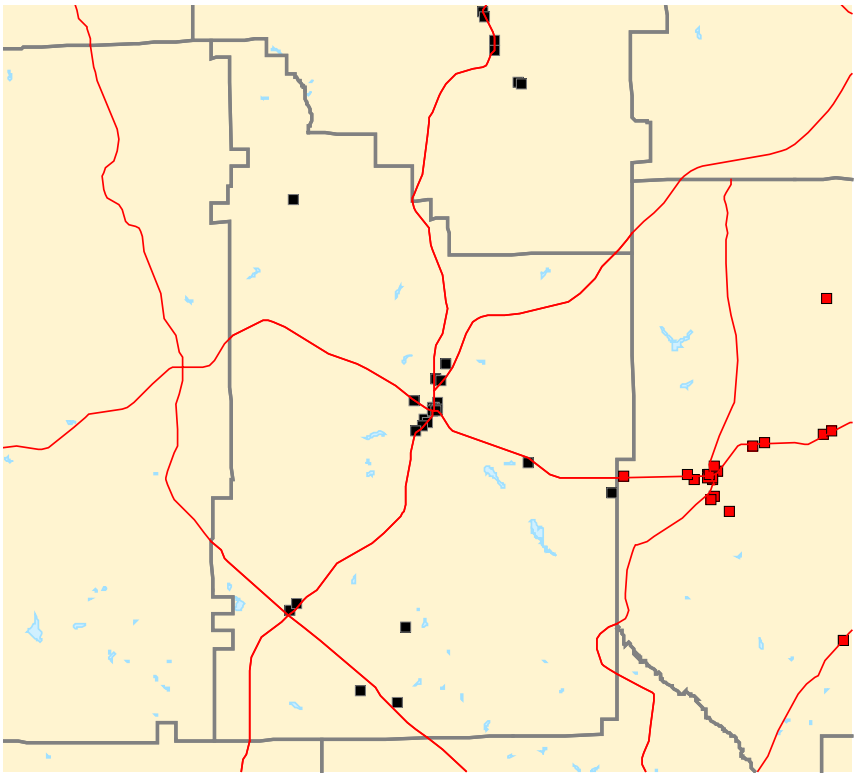
Because of the limited and sparse level of development in the community, the potential loss is considered to be relatively limited. None of the community's critical facilities are believed to be located in floodplains, but in absence of FEMA floodplain maps no such definitive statement can be made here. Hence, no reasonable estimate of potential loss can be made for present purposes. Nevertheless, the community's combined total estimated structure replacement value ($73M) and total estimated contents value ($46M) is $119M. This information can be reviewed in detail in Appendix A, pages 13-15. Aggregate value of the community's "non-critical" facilities has been estimated for use here; documentation is presented on page A-13. Population and other demographic data are presented in Appendix B, pages 1-13.

E. Land Use and Development Trends

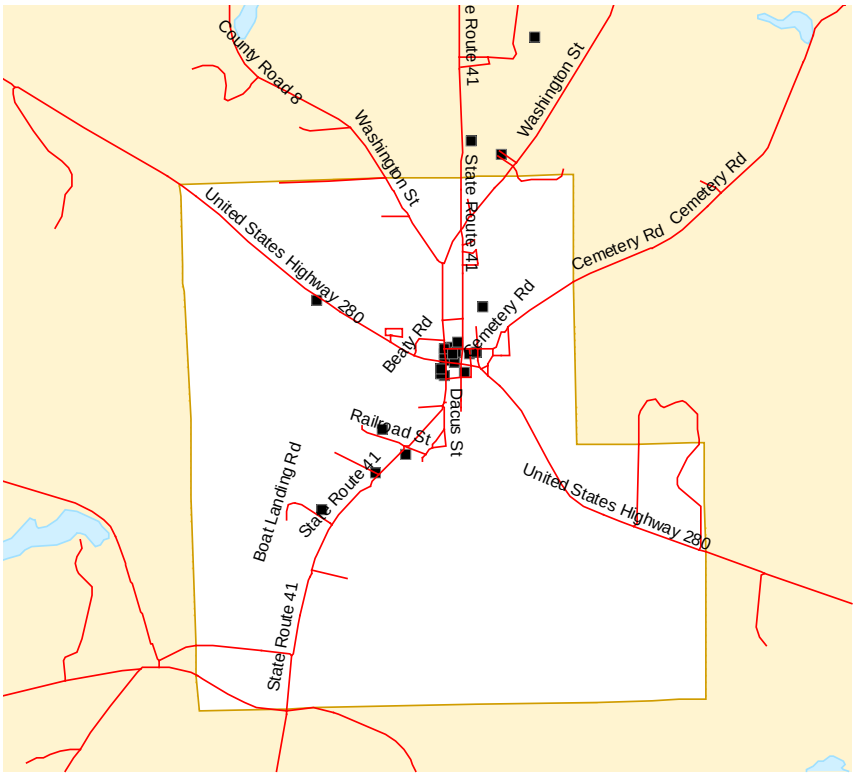
The community is very sparsely populated. The 2000 Census credited the community with 2,400 residents; a population density of only 11 persons per square mile. Ninety-five percent of the county is in either an agricultural or forest land use. Both incorporated areas also have extensive undeveloped acreage, with over three quarters of total area in agriculture or forest. Land use conversion is nominal, and no significant shifts in land use and/or development trends are foreseen in the next decade. While periodic flooding does occur, it is usually in undeveloped areas, most commonly downstream of the confluence of the Lanahassee and Kinchafoonee Creeks. Impacts are more aptly described as inconveniences than property damage.

F. Multi-Jurisdictional Differences

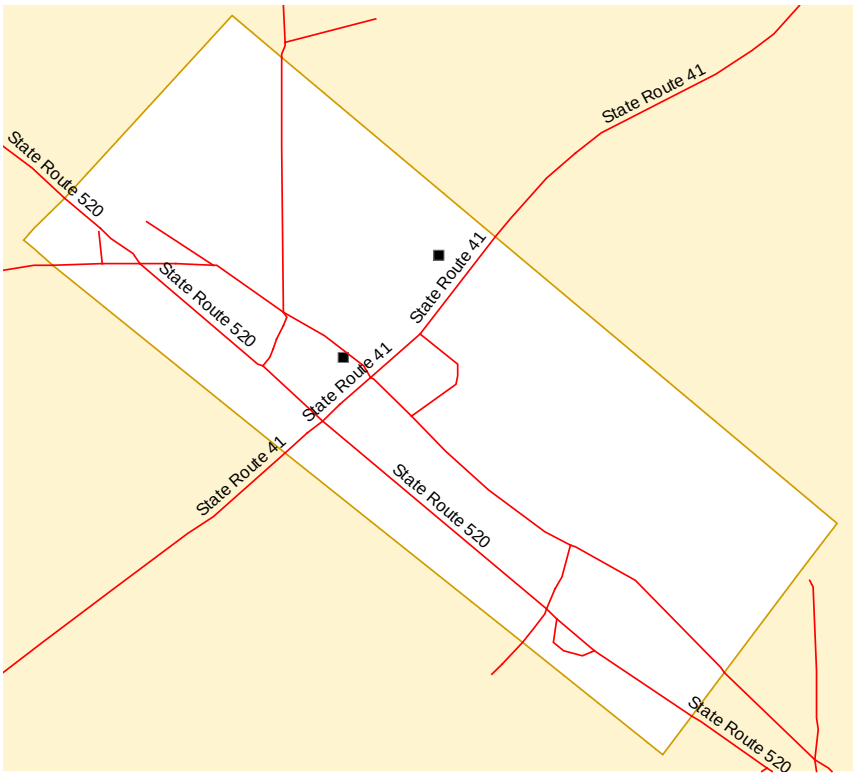
The potential for flooding is most significant in the unincorporated county and City of Preston, both of which are enforcing flood damage prevention ordinances. Enforcement will be facilitated when digital floodplain maps are made available, tentatively in 2009. To date, Weston has no documented record of flood-related damages, but will proceed toward adoption of a flood damage prevention ordinance.



Webster County



Town of Preston



Town of Weston

G. Summary

The community will always be at risk of flooding because of the wide, flat plains along creeks and from torrential rainfall caused by tropical storm activity. The community's most significant exposure to flooding is along Kinchafoonee Creek which impacts Preston and the unincorporated area of the community.

VI. Drought

A. Hazard Identification

A drought is a prolonged period without rain which progresses in stages. The first stage, meteorological drought, occurs when precipitation falls below normal levels and is usually expressed as a rainfall deficit, e.g., inches below normal. When meteorological drought occurs at a critical time of year it can result in water deficient topsoil, which may hinder germination and reduce crop yield. Stage two, agricultural drought, occurs when the amount of moisture in the soil no longer meets the needs of a particular crop. This type drought is usually measured in soil moisture levels and can be devastating to agricultural communities.

Hydrological drought is the third stage. This occurs when surface and subsurface (ground) water supplies fall below normal levels due to prolonged meteorological drought. Indicators include decreased stream flow rates, lake elevations and groundwater levels. Hydrological drought can be detrimental to the environment, upsetting the hydrologic cycle and impacting fish, wildlife and plant species. If this persists long enough, demand for water may exceed supply, leading to the fourth stage – socio-economic drought. This stage can take many months, or even years to develop, often with devastating social and economic consequences.

B. Hazard Profile

Drought is typically a widespread weather pattern affecting a much larger area than any single community. Critical facilities are not directly susceptible to adverse impacts of such an event. Generally, the population is not at risk from physical harm, except in the latter stages of a severe drought. Over the past decade the historical record documented eleven drought events. No supporting documentation could be located identifying previous known events. No deaths or injuries were recorded. Based on straight-line extrapolation from the historical record as documented herein, the community has a 100% chance of experiencing a drought in any given year (Hazard Frequency Table-Appendix D, page 1).

Drought Events*	Date	Damage	
		Property	Crop
29 Georgia Counties	9/1/1997	0	$20.0M
32 Georgia Counties	5/1/1999	0	0
35 Georgia Counties	8/1/1999	0	0
37 Georgia Counties	2/1/2000	0	0

38 Georgia Counties	4/1/2000	0	0
40 Georgia Counties	5/1/2000	0	0
41 Georgia Counties	6/1/2000	0	$306.7M
44 Georgia Counties	7/1/2000	0	0
45 Georgia Counties	10/1/2000	0	0
67 Georgia Counties	8/1/2002	0	0
69 Georgia Counties	3/1/2004	0	0

* All include Webster County; no local damage data available
Source: National Climatic Data Center

C. Community Exposure

The nature of drought is such that the entire community is affected, primarily economically. Generally, neither the population nor critical facilities (31 structures-Appendix A, pages 13-15) are at risk of physical damage, except in the latter stages of a severe drought. Under such conditions available water resources may not be sufficient for human needs, or water pressure may not be sufficient to fight fire, the risk of which increases in forested areas during periods of drought. The community's non-critical infrastructure is generally not susceptible to adverse effects of drought.

D. Estimate of Potential Loss

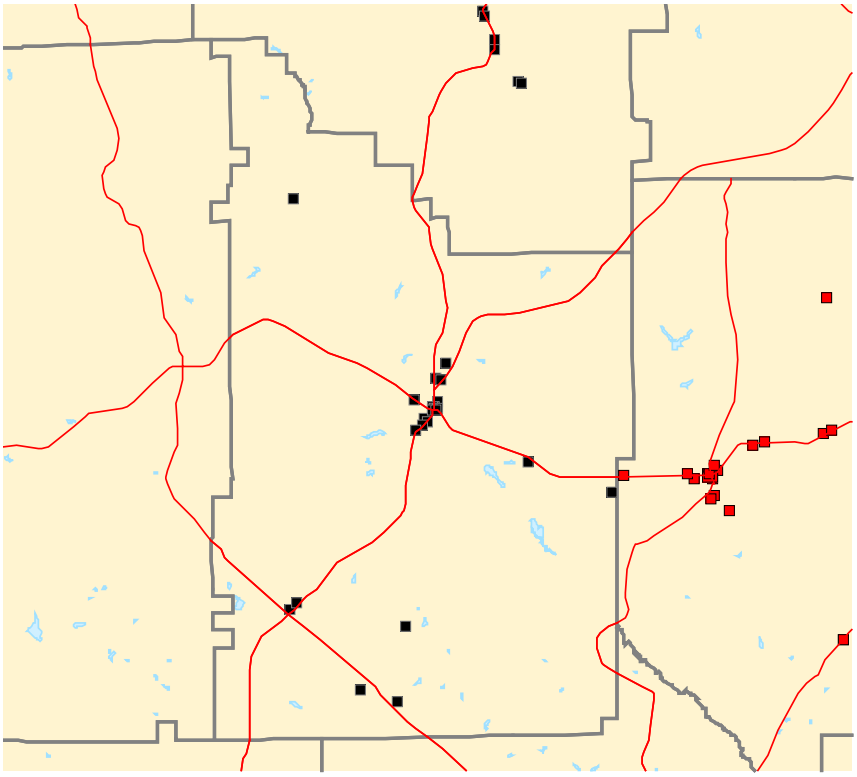
Crops are most directly affected by drought, and their loss can result in a significant economic burden on the local economy. In this sense, the local economy is at significant risk because of the relatively small percentage of farms in the county with irrigation systems. Generally, neither the population nor critical facilities are at risk of physical harm, except in the latter stages of a severe drought. Drought typically does not increase the risk of damage to critical facilities, the majority of which are concentrated in the cities and supplied by the deep water wells of the municipal system. These deep wells are generally not affected until the later or "critical" stages of drought. Nevertheless, the estimated cost of critical facility replacement ($73M) and content value ($46M) amounts to a total of $119M. (Appendix A, pages 13-15). The community's non-critical infrastructure is generally not susceptible to adverse effects of drought.

E. Land Use and Development Trends

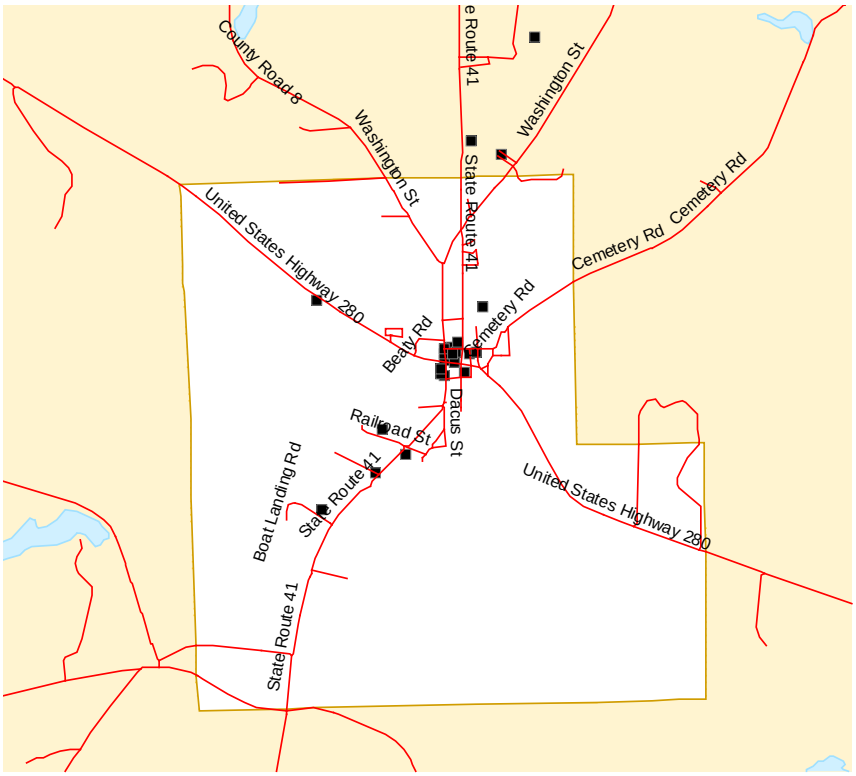
Drought conditions typically affect areas much larger than the local community. Land use and development trends do not influence the risk posed by this hazard.

F. Multi-Jurisdictional Differences

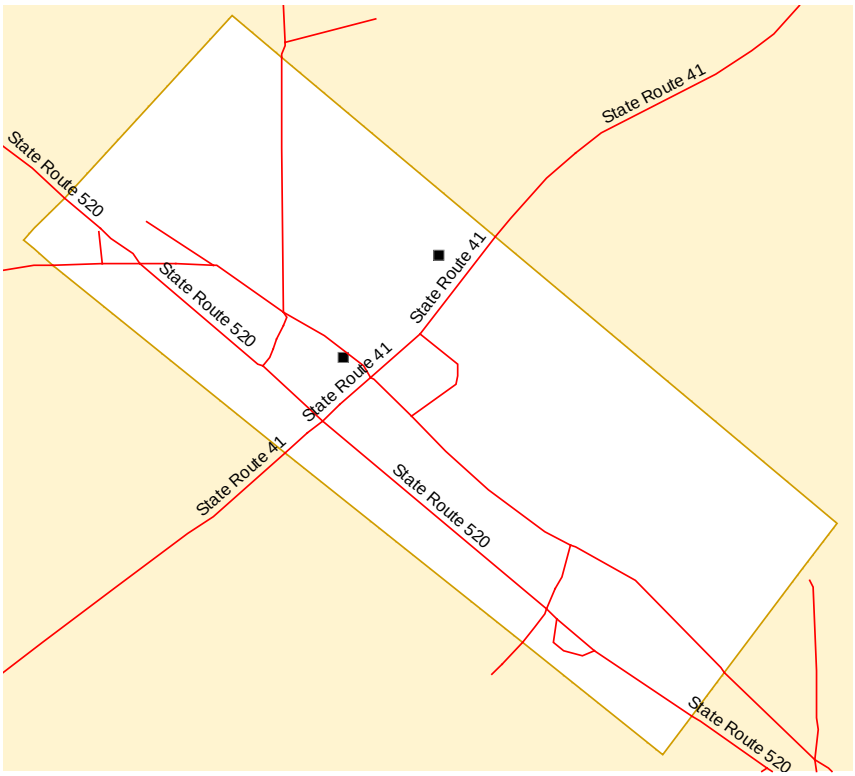
The physical impact of drought is most easily measured in the unincorporated area of the community because of agricultural production, but the resulting economic impact is felt community-wide. The greatest difference would be the need for agricultural irrigation in the unincorporated area, and the possible need for additional water supplies/resources for domestic consumption in the unincorporated area.



Webster County



Town of Preston



Town of Weston

G. Summary

Drought does not have the sudden, violent impact on a community characteristic of a storm. A significant reduction from normal rainfall levels will first be felt by the agricultural community, and because agriculture contributes significantly to the local economy, whatever affects agricultural production has a direct and immediate affect on the well-being of the community. Because conventional agriculture is so dependent on water, the community's front-line of defense against the adverse economic impacts of drought rests with the farmer. With a percentage return on economic investment among the lowest of any economic sector, the farmer is responding to high production costs by converting to moisture conservation practices, such as minimum-till and no-till production. This is helping to maximize the use of available water supplies.

VII. Hailstorm

A. Hazard Identification

Hail is a large, frozen raindrop produced by intense thunderstorms, where snow and rain coexist in the central updraft. As the snowflakes fall, liquid water freezes onto them forming ice pellets that continue to grow as more droplets are accumulated. Upon reaching the bottom of the cloud, some ice pellets are carried by the updraft back to the top of the storm. As the ice pellets once again fall through the cloud another layer of ice is added and the hailstone grows larger. The stronger the updraft, the more times a hailstone repeats this cycle and the larger it grows. Once the hailstone becomes too heavy to be supported by the updraft, it falls toward the earth's surface. The hailstone reaches the ground as ice since it is not in the warm air below the thunderstorm long enough to melt. Although it is not unusual to experience some property damage, critical facilities are generally not seriously threatened.

B. Hazard Profile

The community has experienced hailstorms in virtually all geographical areas, although the documented history reveals nominal property damage. These events are typically of short duration. Application of the documented record of eleven hailstorm events to the accompanying Hazard Frequency Table suggests a 44% probability of the community experiencing a hailstorm any given year (Hazard Frequency Table-Appendix D, page 1).

Hailstorm Events				
Location	Date	Magnitude	Damage	
			Property	Crop
Webster	3/18/1981	1.75 in.	0	0
Webster	4/25/1988	1.75 in.	0	0
Weston	1/8/1997	0.75 in.	0	0
Weston	5/13/1999	1.00 in.	0	0
Weston	6/25/2000	0.75 in.	0	0
Weston	7/6/2002	0.88 in.	0	0
Preston	4/25/2003	1.75 in.	0	0
Centerpoint	03/27/2005	.75 in	0	0
Preston	04/30/2005	.75 in	0	0
Preston	12/28/2005	1.75 in	$3K	0
Preston	01/02/2006	.75 in	0	0

Source: National Climatic Data Center

C. Community Exposure

The greatest threat is of damage to crops grown in the unincorporated area. Widespread hailstorms of significant duration with stones of significant size at critical times of the crop year could damage fruit/nuts and strip foliage to the extent the agricultural economy could be devastated. A storm of significant duration could also expose the community to transportation accidents as accumulations of icy precipitation pose driving hazards. Residents can seek shelter, and there is typically little risk to critical facilities.

D. Estimate of Potential Loss

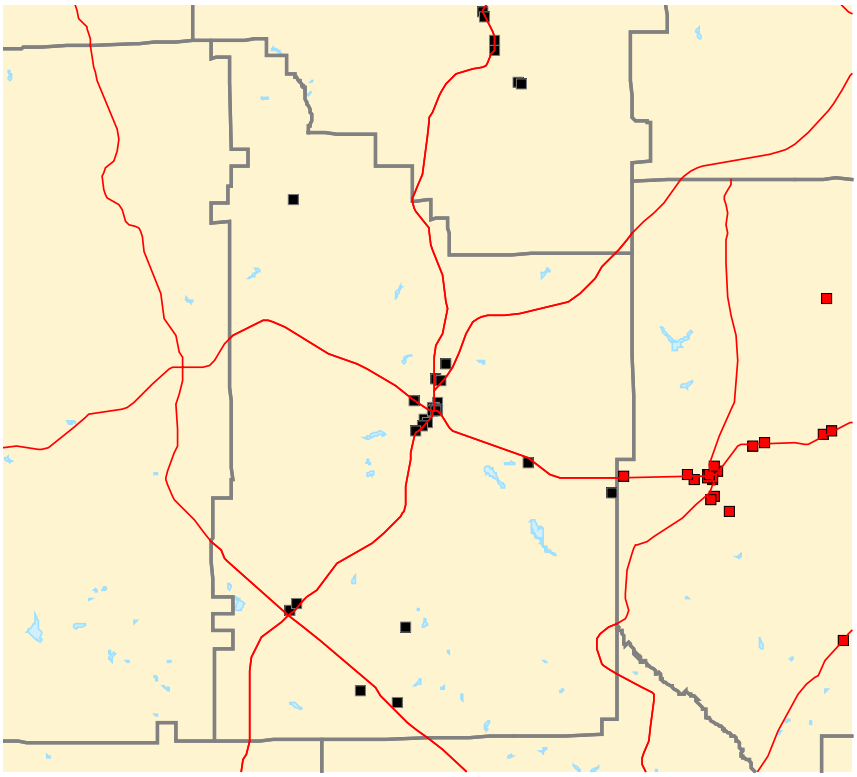
Hailstorms pose primarily a risk of crop damage; an economic threat to the community rather than a threat to the physical infrastructure. The vast number of interactive variables that would apply makes it impractical to estimate potential crop losses. Nevertheless, the estimated cost of critical facility replacement ($73M) and content value ($46M) amounts to a total of $119M. (Appendix A, pages 13-15). The community's non-critical infrastructure is generally not susceptible to adverse effects of hail.

E. Land Use and Development Trends

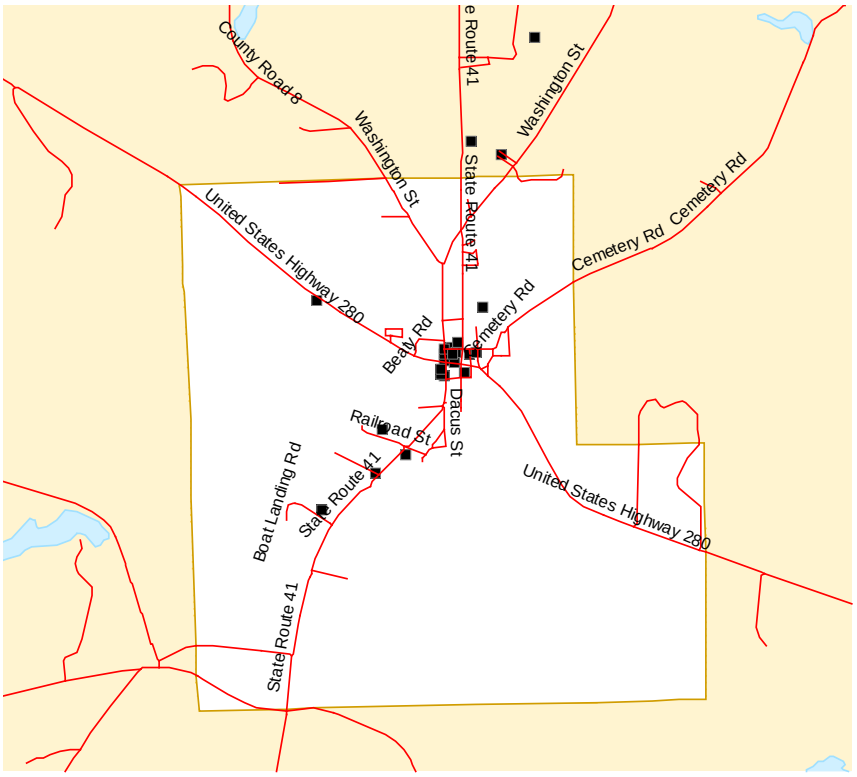
Because of direct and broad exposure to the natural elements, agricultural production constitutes the community's greatest exposure to this threat, which could result in significant, adverse, economic impact. No other land use and development patterns affect potential exposure to this hazard.

F. Multi-Jurisdictional Differences

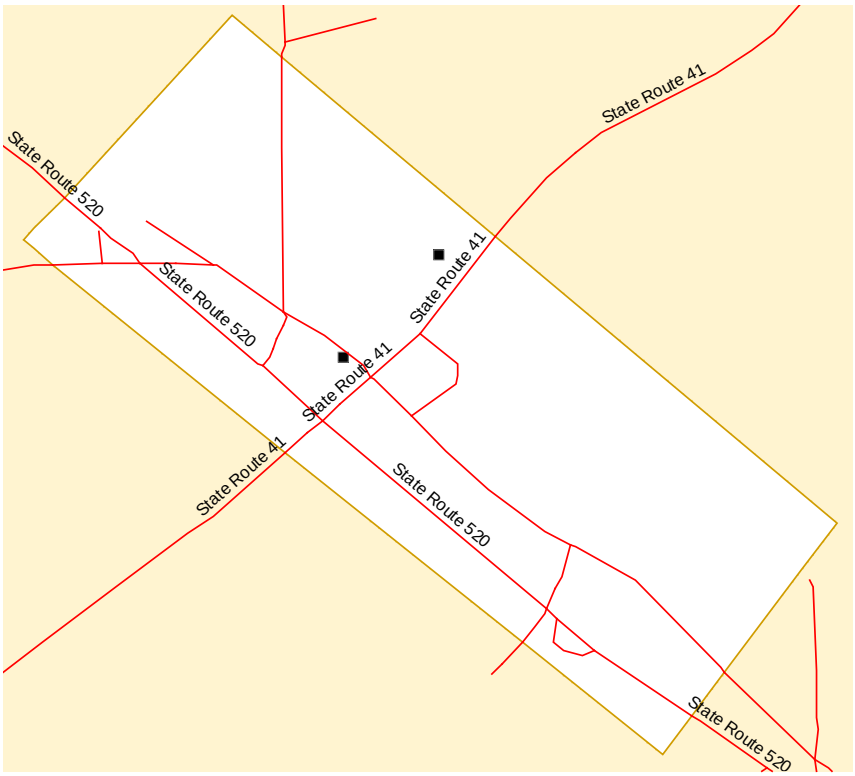
Although crop damage would be physically located in the unincorporated area, the economic impacts would be felt throughout the community. The following graphics reveal the distribution of critical facilities in the community.



Webster County



Town of Preston



Town of Weston

C. Summary

The critical infrastructure is generally not threatened by this hazard, and there is little of a pre-emptive nature the community can do for protection. In addition to crop insurance purchased by agricultural producers, the resident population should be educated of the hazards associated with driving during, and immediately after, a hailstorm event.

VIII. Dam Failure

A. Hazard Identification

Dam failure is typically the result of a physical weakness in dam structure, or inundation by flood waters which wash away earthen material flanking the dam housing flood gates used to regulate the upstream lake or pool area. The most common failure results from inundation (overflow) by flood waters. Flooding which precipitates dam failure can cause damage and destruction to properties fronting the lake, and breach of the dam can destroy downstream development and create economic hardship.

B. Hazard Profile

The community's largest flood event resulted from Tropical Storm Alberto in 1994 which, between July 3 and July 7, doused semi-saturated soils with approximately 20" of rain; almost half the community's annual average rainfall. Three farm pond dams were destroyed (Leverette, Kennedy and Payne) and another (Wilson) damaged as a result of that single event. Based on this historic profile, the community has an approximate 17% probability of dam failure any given year (Hazard Frequency Table-Appendix D, page 1).

Dam Failure		
Location	Date	Damage
County	1994	Roads and Bridges
County	1998	Roads and Bridges

Source: Local

C. Community Exposure

There are numerous earthen dams in the community, and the full limit of exposure cannot be determined because of the absence of mapping which could reveal the level of development in the dam "shadow". Such mapping would be useful in revealing the degree of community exposure.

D. Estimate of Potential Loss

In absence of an identifiable hazard area boundary, i.e. dam "shadow", estimation of the potential loss would be little more than a guess. None of the 31 critical facilities are believed to be located in what is assumed to be a dam "shadow". Nevertheless, the combined total estimated critical facilities structure replacement value ($73M) and total estimated contents value ($46M) communitywide is $119M (Appendix A, pages 13-15). Value of the community's "non-critical" facilities has not been determined for

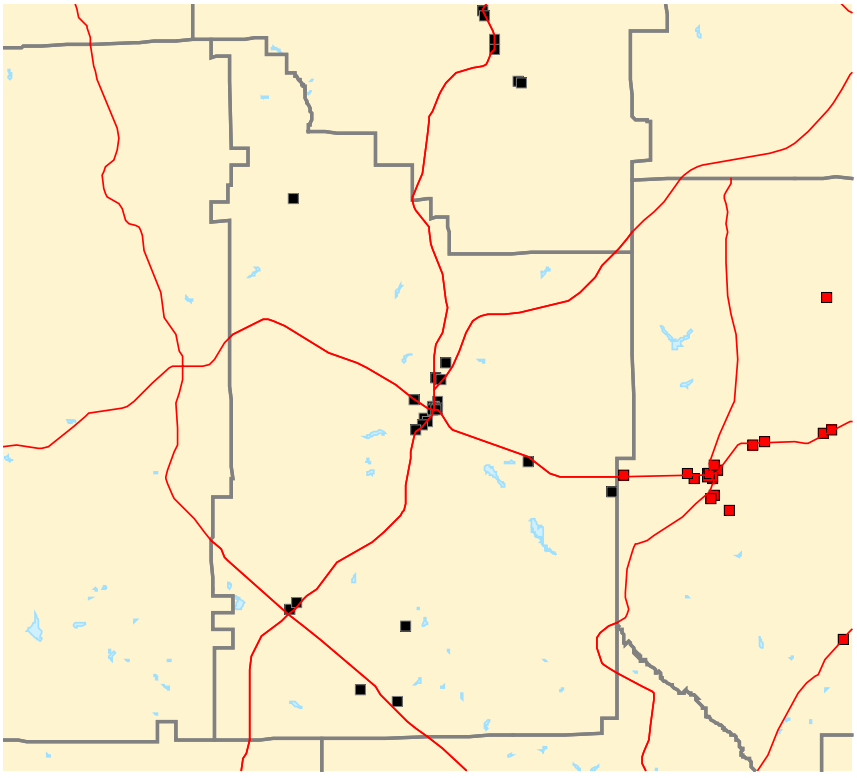
current purposes. There is not believed to be any significant private development downstream of local farm pond dams. To date, breaches of these structures have resulted in only road and bridge damage. Population and other demographic data are presented in Appendix B, pages 1-13.

E. Land Use and Development Trends

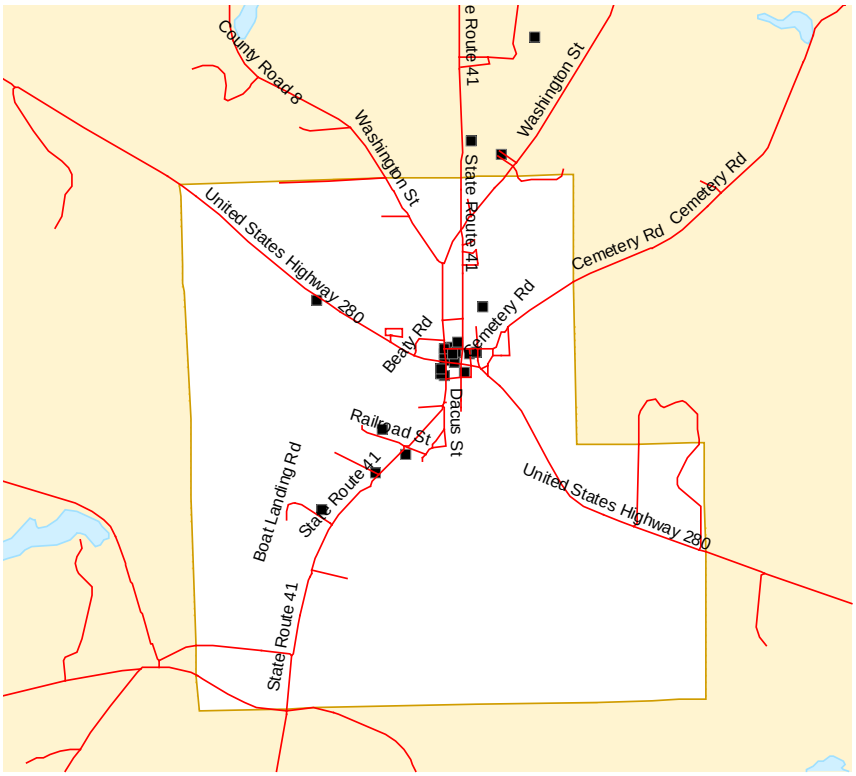
No current land use or development trend is influencing the community's exposure to this threat. Mapping of dam "shadows" can reveal the extent of existing development downstream and, hence, the extent to which land use affects community exposure to this threat. Mapping of dam "shadows" is important for managing the future level of development in these areas.

F. Multi-Jurisdictional Differences

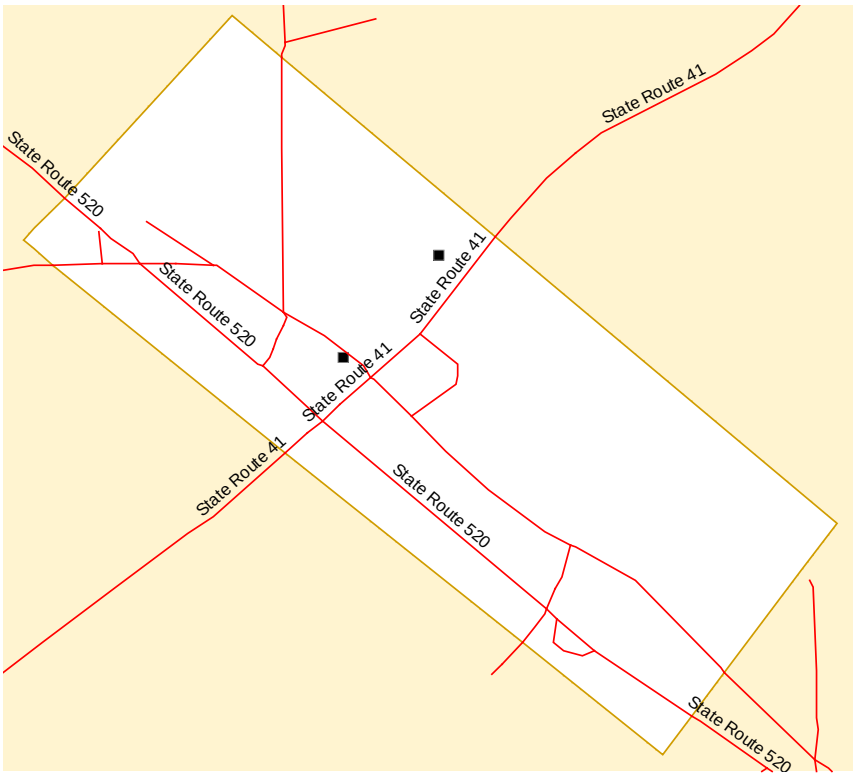
Dam failure is a threat to the unincorporated area only. Preston nor Weston has dams within its respective jurisdiction; nor is either municipality downstream of any of the dams in the unincorporated area.



Webster County



Town of Preston



Town of Weston

G. Summary

In absence of necessary mapping, dam failure is perceived to be one of the less serious threats to the community. These structures are in the rural, undeveloped areas of the community, distant from critical facilities. However, as development occurs, dam “shadows” need to be identified so development can be diverted from potential threats.

Chapter 2 - Natural Hazard, Risk and Vulnerability (HRV) Summary

I	Tornado	1
II	Windstorm (Thunderstorm Winds)	6
III	Severe Winter Storm	10
IV	Hurricane/Tropical Storm	15
V	Flood	20
VI	Drought	25
VII	Hailstorm	30
VIII	Dam Failure	34

I. Tornado

A. Hazard Identification

A tornado is a violently rotating column of air extending from a thunderstorm to the ground, usually spawned when the weather is warm, humid and unsettled; conditions common to the local area. Severe weather conditions, such as a thunderstorm or hurricane, can produce a tornado. Tremendous destruction can occur with the combined action of strong winds (some at speeds in excess of 250 mph) and the impact of wind-borne debris. Damage paths can be in excess of one mile wide and fifty miles long. Although the path may be erratic, storm movement is usually from southwest to northeast. Tornadoes most often occur between 3 p. m. and 8 p.m., but may occur at any time of day or night. The official tornado season lasts from March-August with a peak in March-May; but they can occur anywhere, any time of year. Advance planning and quick response are keys to surviving a tornado.

Fujita Tornado Damage Scale		
Category	Wind Speed*	Damage Description
F0	<73 mph	Light; some damage to chimneys, tree branches broken, shallow-rooted trees pushed over, sign boards damaged
F1	73-112 mph	Moderate; peels surface off roofs, mobile homes pushed off foundations/overturned, moving autos blown off road
F2	113-157 mph	Considerable; roofs torn off frame houses, mobile homes demolished, boxcars overturned, large trees uprooted, light-object missiles generated, cars lifted off ground
F3	158-206 mph	Severe; roofs and some walls torn off well-constructed houses, trains overturned, most forest trees uprooted, trees lifted and thrown
F4	207-260 mph	Devastating; well-constructed houses leveled, structure blown some distance from weak foundations, cars thrown as missiles
F5	261-318 mph	Incredible; strong frame houses lifted off foundations/swept away, auto sized missiles fly through the air in excess of 100 yards, trees debarked, incredible phenomena occur

* Wind speeds are estimates; have never been scientifically verified.
Source: National Climatic Data Center

B. Hazard Profile

All geographical areas of the county are susceptible to the randomness of tornadic activity. Although there have not been any such hazards of disastrous proportions to befall the community in recent history, small storms have nevertheless been present, and climatic conditions were conducive for others to occur as has been evidenced by the issuance of tornado warnings and watches. Information gleaned from available data bases revealed the following history of tornadic activity in the community.

Local Tornado Events				
Date	Death/Injury	Magnitude	Cost	Damage
12/5/1954	0/8	F2	$250K	Property
3/18/1981	0	F1	$25K	Property
3/01/07	0/5	EF3	$1.6M	Property

Source: National Climatic Data Center, local

Application of inflation to the property damage recorded in 1954 and 1981 yields current day values of $1.7M and $56,000, respectively. Based solely on the historic trend analysis of available data (Hazard Frequency Table-Appendix D, page 1), the community has a 5% chance of experiencing a tornado event any given year.

C. Community Exposure

The random, sudden and violent natures of the tornado place all residents and all physical development throughout the community at risk. This, of course, includes all critical infrastructure; 31 structures enumerated in Appendix A, pages 13-15. Aggregate value of the community's "non-critical" facilities has been estimated for use here; documentation is presented on page A-11.

D. Estimate of Potential Losses

Potential Losses were estimated by use of the OHS/GEMA web-based planning tool. Data input for the Assets Worksheet included the replacement value and structure content value of each critical facility identified. Because all areas of the community are exposed to the threat posed by this hazard, critical facilities distributed throughout the county are at risk. Thus, any percentage of total replacement and structure contents values is subject to loss. The combined total estimated structure replacement value ($73M) and total estimated contents value ($46M) is $119M. This information can be reviewed in detail in Appendix A, pages 13-15. Aggregate value of the community's "non-critical" facilities has been estimated for use here; documentation is presented on page A-11.

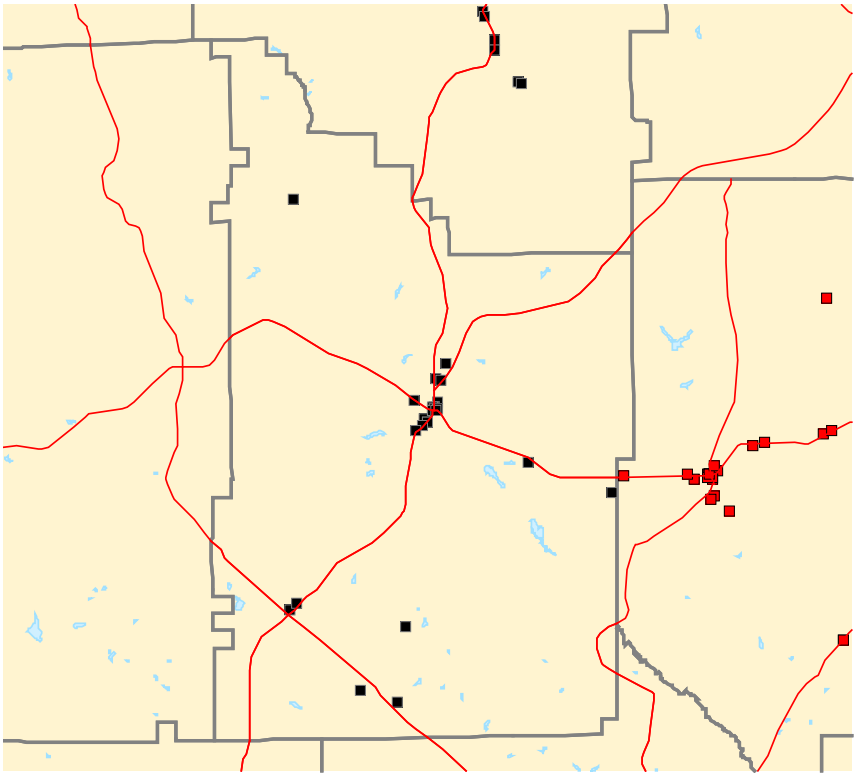
Population and other demographic data are presented in Appendix B, pages 1-13.

E. Land Use and Development Trends

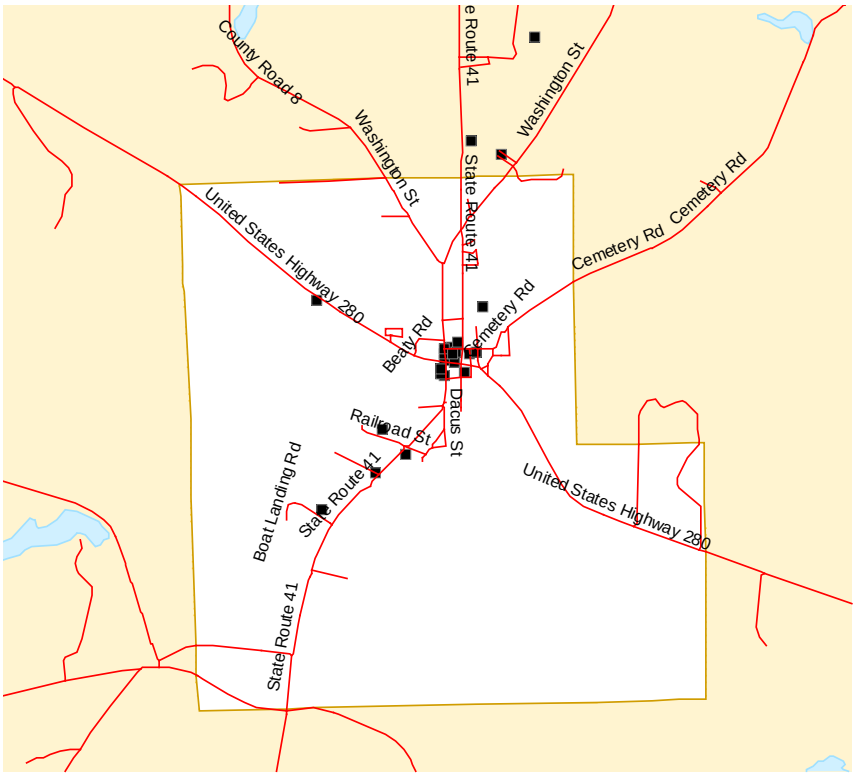
Because tornado strikes are so random, neither land use nor development trends influence exposure to this hazard. Land use conversion in the community is limited, and development is both sparse and limited.

F. Multi-Jurisdictional Differences

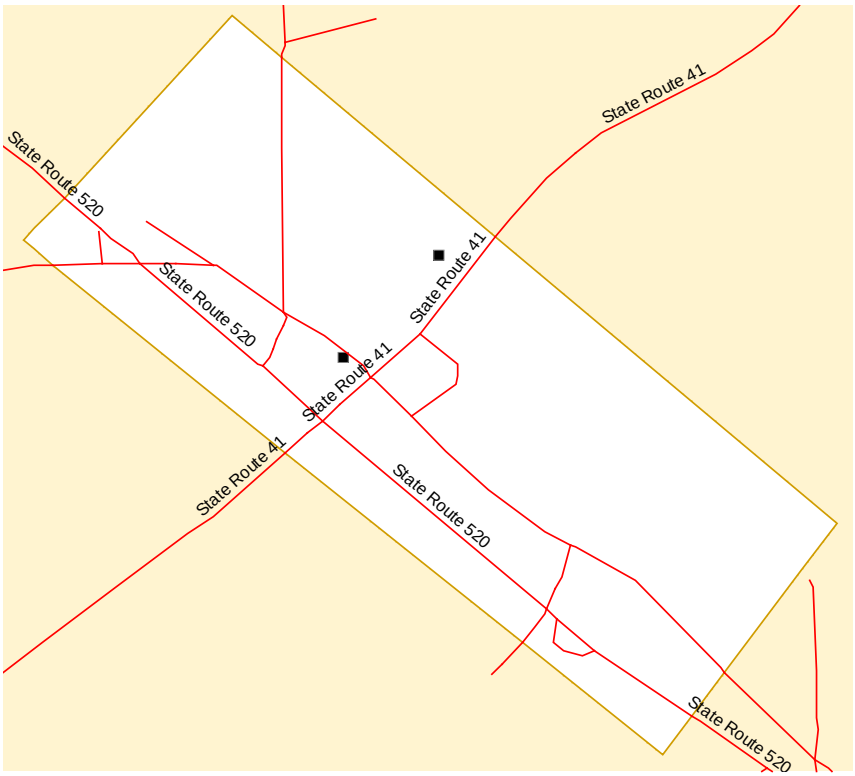
The assessment revealed no differences in the risk of a tornado occurring in any of the three jurisdictions. Pre-disaster mitigation measures relevant to tornadoes are applicable throughout the community. The following maps reveal the distribution of critical facilities throughout the community, with a concentration in the Town of Preston.



Webster County



Town of Preston



Town of Weston

G. Hazard, Risk and Vulnerability Summary

The community's greatest natural hazard loss to date has been the result of a tornado event (1954). Tornadoes can strike anywhere in the community, at any time of day and any time of year, with suddenness and with great intensity as a result of weather conditions common to the area. The community must prepare in advance, and be able to respond quickly and appropriately to such an event.

II. Windstorm (Thunderstorm Winds)

A. Hazard Identification

Thunderstorm winds are straight-line winds (as opposed to a tornado's rotating column of air), generally of short duration and gusts in excess of 50 mph. This hazard poses the greatest threat in areas of softwood trees, a feature common in the community, areas with exposed improvements and infrastructure, and above ground (electrical) utilities. These winds can cause power outages, transportation and economic disruptions, significant property damage and pose a high risk of injuries and loss of life.

B. Hazard Profile

All four quadrants of the community have experienced thunderstorm winds. Although there have not been any such hazards of disastrous proportions locally, historically, it is the most common natural hazard to befall the community. Examples of local damages include forests, trees blown onto homes, commercial establishments and power lines, roofs torn from buildings, all typical of (local) Wind Zone 2 where gusts of 90-99 mph may occur. The historic record as compiled by the National Climatic Data Center documents twenty significant thunderstorm wind events between 1981 and 2003. No local deaths or injuries have been documented as a result of these events. Cumulative damages "documented" to date total $64,000. Extrapolating from twenty-five years of available data, the community has a 80% probability of experiencing thunderstorm winds any given year (Hazard Frequency Table-Appendix D, page 1).

Thunderstorm Winds			
Location	Date	Damage	
		Property	Crop
Webster	3/18/1981	0	0
Webster	4/5/1985	0	0
Webster	7/21/1986	0	0
Webster	11/15/1989	0	0
Webster	11/16/1989	0	0
Webster	2/9/1990	0	0
Webster	2/16/1990	0	0
Webster	4/10/1990	0	0
Webster	4/9/1991	0	0
Webster	4/9/1991	0	0
Webster	3/30/1992	0	0
Webster	7/13/1992	0	0
Preston	3/6/1996	0	0

Weston	4/27/1997	50K	0
Preston	7/27/1997	2K	0
Preston	11/21/1997	5K	0
Weston	5/22/2001	1K	0
Preston	11/25/2001	1K	0
Preston	3/13/2003	2K	0
Preston	5/2/2003	3K	0

Source: National Climatic Data Center

C. Community Exposure

The random, sudden and violent natures of thunderstorm winds place all residents and all physical development throughout the community at risk. This, of course, includes all the community's critical infrastructure; 31 structures enumerated in Appendix A, pages 13-15. Aggregate value of the community's "non-critical" facilities has been estimated for use here; documentation is presented on page A-11.

D. Estimate of Potential Losses

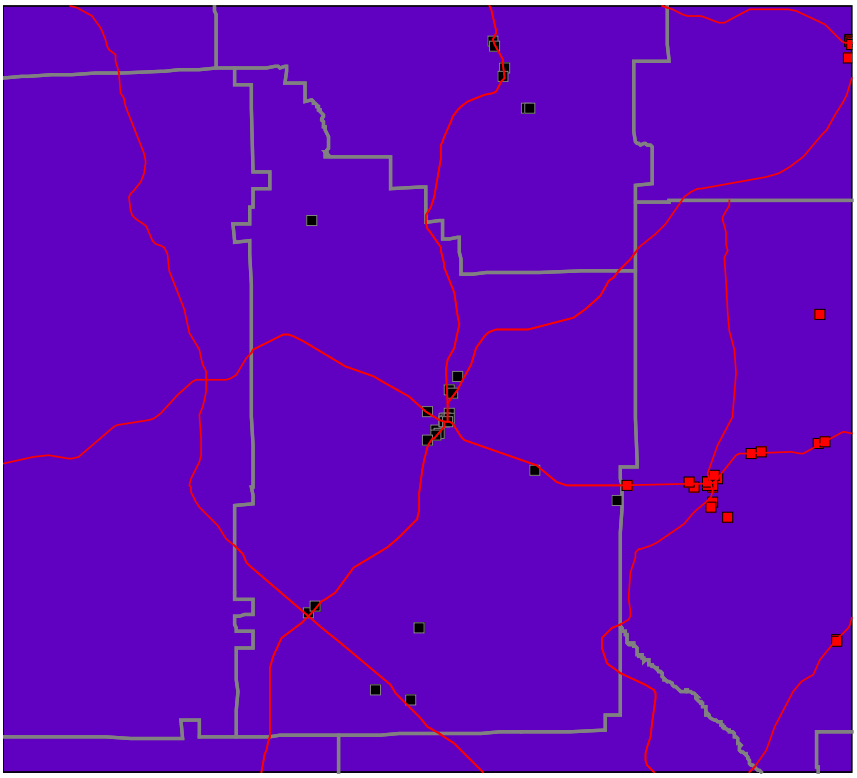
Potential Losses were estimated by use of the OHS/GEMA web-based planning tool. Data input for the Assets Worksheet included the replacement value and structure content values of each critical facility identified. Because all areas of the community are exposed to the threat posed by this hazard, critical facilities distributed throughout the community are at risk. Thus, any percentage of the total replacement and structure contents value is subject to loss. The combined total estimated structure replacement value ($73M) and total estimated contents value ($46M) is $119M. This information can be reviewed in detail in Appendix A, pages 13-15. Aggregate value of the community's "non-critical" facilities has been estimated for use here; documentation is presented on page A-11. Population and other demographic data are presented in Appendix B, pages 1-13.

E. Land Use and Development Trends

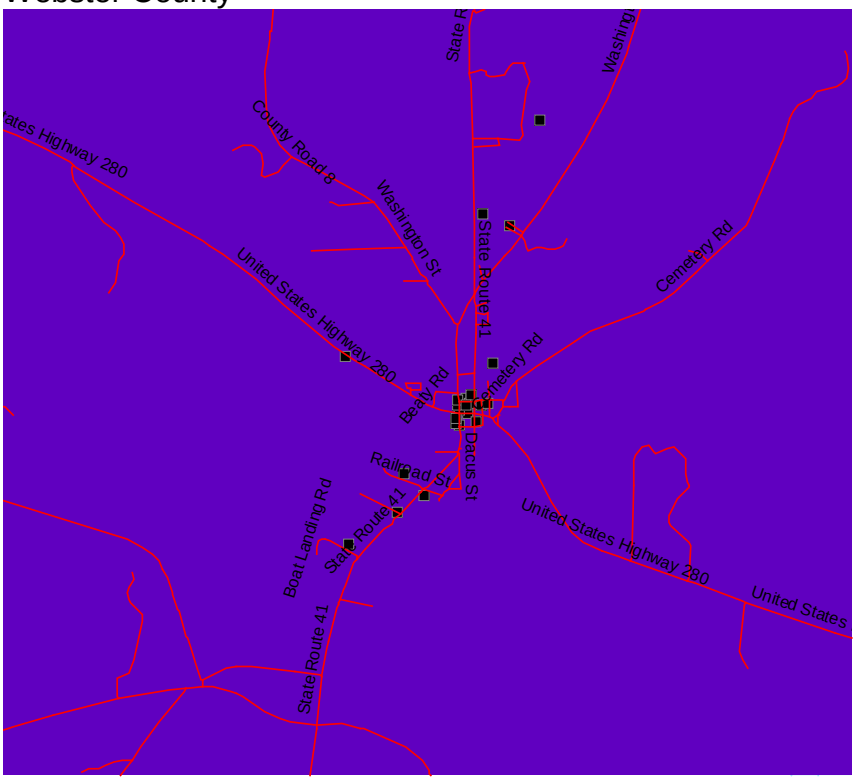
Because thunderstorm winds are so random, neither land use nor development trends influence exposure to this hazard. Land use conversion in the community is limited, and development is both sparse and limited.

F. Multi-Jurisdictional Differences

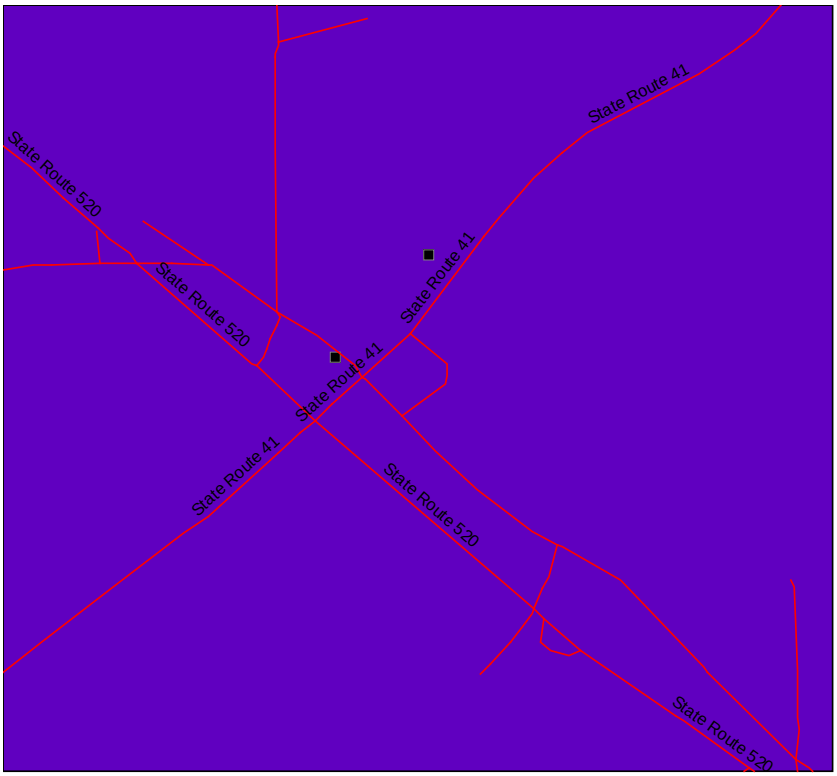
The assessment revealed no differences in the risk of thunderstorm winds occurring in any of the three jurisdictions. Pre-disaster mitigation measures relevant to thunderstorm winds are applicable throughout the community. The maps that follow reveal the distribution of critical facilities in the community, with a concentration in the Town of Preston.



Webster County



Town of Preston



Town of Weston

G. Summary

Thunderstorm winds are the community's most common natural hazard event, and have demonstrated the ability to strike anywhere at any time. The community must prepare in advance, and be able to respond quickly and intelligently to such an event.

III. Severe Winter Storm (Snow and Ice)

A. Hazard Identification

A severe winter storm is a widespread weather pattern affecting a much larger area than any single community. These hazards take the form of freezing temperatures, ice formation and snow accumulation. Low temperatures burst unprotected water pipes, and formation of ice on roads causes slick, dangerous and hazardous driving conditions. The weight of ice formation on trees breaks limbs which in turn fall on and break suspended electric power lines disrupting service. Snow accumulation also creates unsafe driving conditions for the public unfamiliar with potential hazards. Bridges are especially susceptible to freezing because of exposure to extreme temperatures from above and below the structure. Roads may have to be closed because of freezing conditions on bridges, which can in turn lead to business closures. Generally, these hazard events are threats primarily to residents and result in economic losses resulting from business and school closures. A poorly heated house in the winter can cause hypothermia in older residents, and the potential for this occurring is exacerbated during times of extreme cold. Although it is not unusual to experience some property damage, with the exception of electrical transmission lines, critical facilities are generally not seriously threatened.

B. Hazard Profile

The community has experienced winter storm events of both snow and ice. Because these events have historically been of short duration, damage has seldom been significant, with the occasional exception of crop damage. Extreme cold does not have to be of long duration to be harmful to crops. Local property damage would be much greater if severe weather lingered for longer periods of time. Seldom does the day-time high temperature immediately following extreme cold fail to reach a temperature above freezing, offering at least a brief reprieve from severe conditions. Three-to-four consecutive days of around-the-clock freezing temperatures would pose a significant hazard to the community, and could occur in virtually any winter season. A severe winter storm will pose the greatest threat to the very young, elderly, lower-income, and to those traveling because of the greater likelihood of traffic accidents which result from hazardous driving conditions. The available ten-year record documented four severe winter events. Review of this information suggests a 26% probability of the community experiencing a winter storm event any given year (Hazard Frequency Table-Appendix D, page1).

Winter Storm	Date	Type
Webster	1/20/1983	Extreme Cold
Webster	3/14/1993	Extreme Cold
23 Georgia Counties	2/3/1996	Extreme Cold
57 Georgia Counties	1/2/2002	Heavy Snow
60 Georgia Counties	2/26/2002	Extreme Cold
77 Georgia Counties	1/23/2003	Extreme Cold

*Includes Webster County
Sources: National Climatic Data Center, local newspaper

C. Community Exposure

Severe winter storm events of longer duration than the historic record documents could result in significant injury, death and property damage. Relative to the state, the community has disproportionately larger elderly (65+) and lower income populations; two segments of the general population more prone to weather-related illness and injury. The elderly are generally less able to resist cold weather stress, and lower income residents are more often inadequately housed. The more extreme the winter storm the greater the risk of house fires because of extra effort exerted to combat the cold. Although it is not unusual for some property to be damaged by severe winter storms, critical facilities are generally not seriously threatened. The greatest threat is to suspended electrical utility lines. Nevertheless, because this hazard is a threat to the entire community, all 31 critical structures are considered at risk. Aggregate value of the community's "non-critical" facilities has been estimated for use here; documentation is presented on page A-11.

D. Estimate of Potential Loss

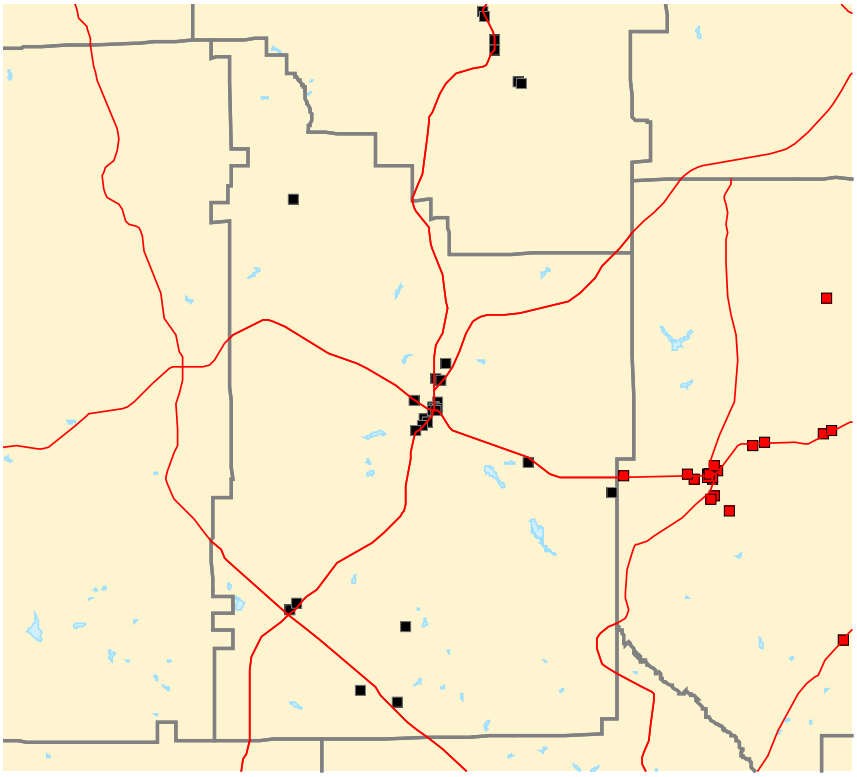
Winter storms are primarily a threat to residents, as critical facilities are not particularly susceptible. The potential for crop loss is difficult to estimate without knowing which of a number of variables to apply. A reliable estimation of deaths and injuries is impossible to develop in absence of specifying event conditions; primarily, the range of temperature extreme and duration of the event. Nevertheless, the estimated cost of critical facility replacement ($73M) and content value ($46M) amounts to a total of $119M (Appendix A, pages 13-15). Aggregate value of the community's "non-critical" facilities has been estimated for use here; documentation is presented on page A-11. Population and other demographic data are presented in Appendix B, pages 1-13.

E. Land Use and Development Trends

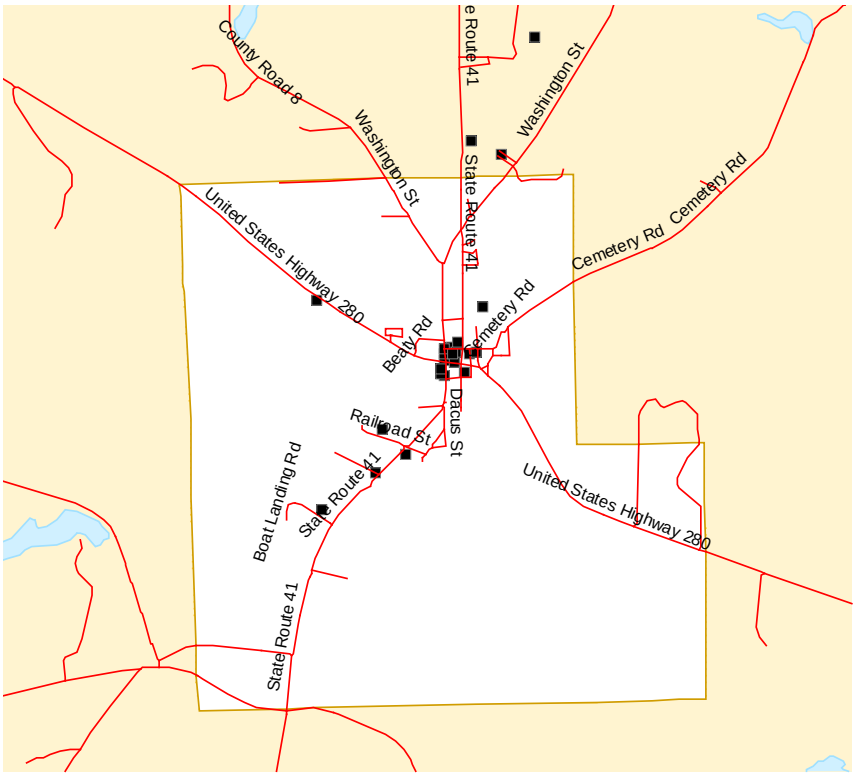
Local land use and development patterns do not influence community exposure to this hazard.

F. Multi-Jurisdictional Differences

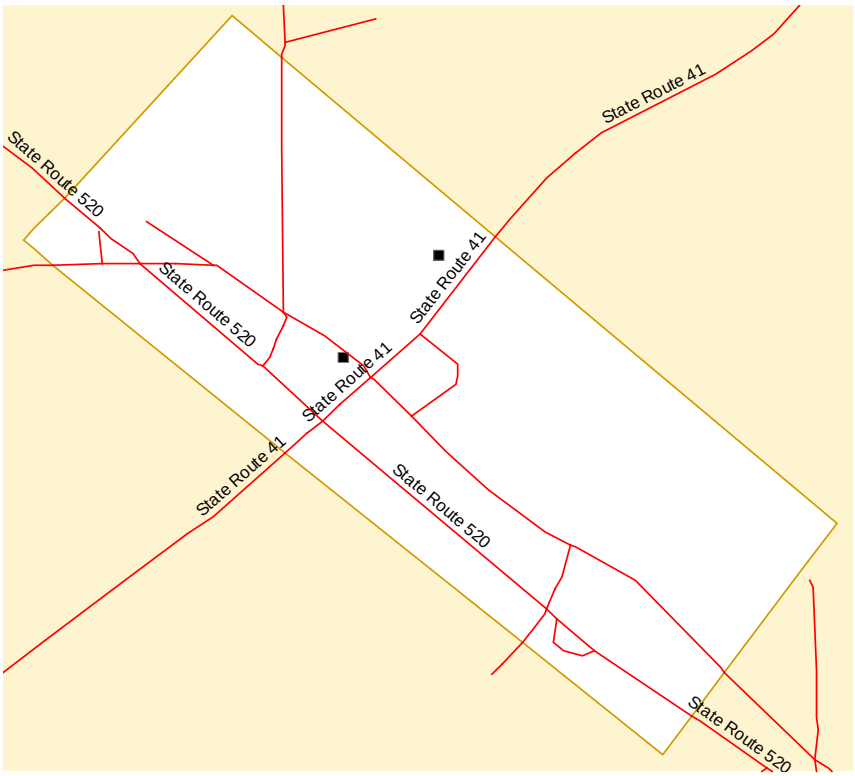
There are not any jurisdictional differences between exposure to or response to this hazard. The graphics that follow display the distribution of the community's critical facilities.



Webster County



Town of Preston



Town of Weston

G. Summary

The community has a number of conditions that increase the potential for loss in a significant winter storm event; disproportionately larger elderly and lower-income populations, complacency resulting from a history of events being relatively rare and of short duration. The general rarity of such events, their generally short duration and the brief period of intensive use of storm-related recovery equipment all serve to make it difficult for elected officials to justify purchase of such equipment operating in an environment of limited financial resources. Because winter storms are typically a widespread weather pattern, surrounding communities are likely to be affected by the same event. Transportation-related hazards during such events can complicate sharing of such equipment between jurisdictions. The best protection against future events is education and preparation.

IV. Hurricane/Tropical Storm

A. Hazard Identification

A tropical storm is a tropical cyclone with surface wind speeds ranging between 39 and 73 mph; above 73 mph the storm is classified as a hurricane (see table). In meteorology, a tropical cyclone is a type of low-pressure system which generally forms in the tropics. The convection in tropical storms is usually more concentrated near the center with outer rainfall organizing into distinct bands. While some, particularly those that make landfall in populated areas, are highly destructive, tropical cyclones are an important part of the atmospheric circulation system, which moves heat from the equatorial region toward the higher latitudes.

Saffir-Simpson Hurricane Scale			
Category	Wind Speed	Storm Surge	Cumulative Damage
1	74-95 mph	4-5 feet	Building damage limited primarily to unanchored mobile homes
2	96-110 mph	6-8 feet	Considerable damage to mobile homes
3	111-130 mph	9 -12 feet	Some structural damage to small residences and utility buildings. Mobile homes are destroyed
4	131-155 mph	13 -18 feet	Complete roof structure failures on some small residences. Complete destruction of mobile homes. Extensive damage to doors and windows
5	+155 mph	18+ feet	Complete roof failure on many residences and industrial buildings. Complete destruction of mobile homes. Severe and extensive window/door damage.

B. Hazard Profile

The historical record revealed eleven events, all of which affected much of the state. Local damages were credited to only one, Tropical Storm Alberto, which merited a fifty-five county presidential disaster declaration. Extrapolating from this documented record, there is a 92% probability of a tropical storm event any given year. (Hazard Frequency Table-Appendix D, page 1).

Hurricane (Tropical Storm) Events				
Location*	Date	Type	Death/Injury	Damage
55 Georgia Counties	7/5/1994	Tropical Storm	0	0
96 Georgia Counties	9/14/2002	Tropical Storm	0	0
96 Georgia Counties	7/01/2003	Tropical Depression	0	0
96 Georgia Counties	9/06/04	Tropical Storm	0	0
96 Georgia Counties	9/16/2004	Tropical Storm	0	0
96 Georgia Counties	9/26/2004	Tropical Storm	0	0
96 Georgia Counties	6/12/2005	Tropical Storm	0	0
77 Georgia Counties	7/06/2005	Tropical Storm	0	0
96 Georgia Counties	7/10/2005	Hurricane typhoon	0	0
96 Georgia Counties	8/29/2005	Hurricane typhoon	0	0
96 Georgia Counties	10/05/2005	Tropical Storm	0	0

*Includes Webster County
Source: National Climatic Data Center

C. Community Exposure

Because of proximity to the Atlantic and Gulf Coasts, the community will always be susceptible to tropical storms. Furthermore, meteorologists have predicted a long-term cyclical increase in the weather patterns generating tropical storms. The entire community is exposed to this threat. This, of course, includes all the community's critical infrastructure; 31 structures enumerated in Appendix A, pages 13-15. Aggregate value of the community's "non-critical" facilities has been estimated for use here; documentation is presented on page A-11.

D. Estimate of Potential Loss

Potential Losses were estimated by use of the OHS/GEMA web-based planning tool. Data input for the Assets Worksheet included the replacement value and structure content value of each critical facility identified. Because all areas of the community are exposed to the threat posed by this hazard, critical facilities distributed throughout the county are at risk. Thus, any percentage of the total replacement and structure content values is subject to loss. The

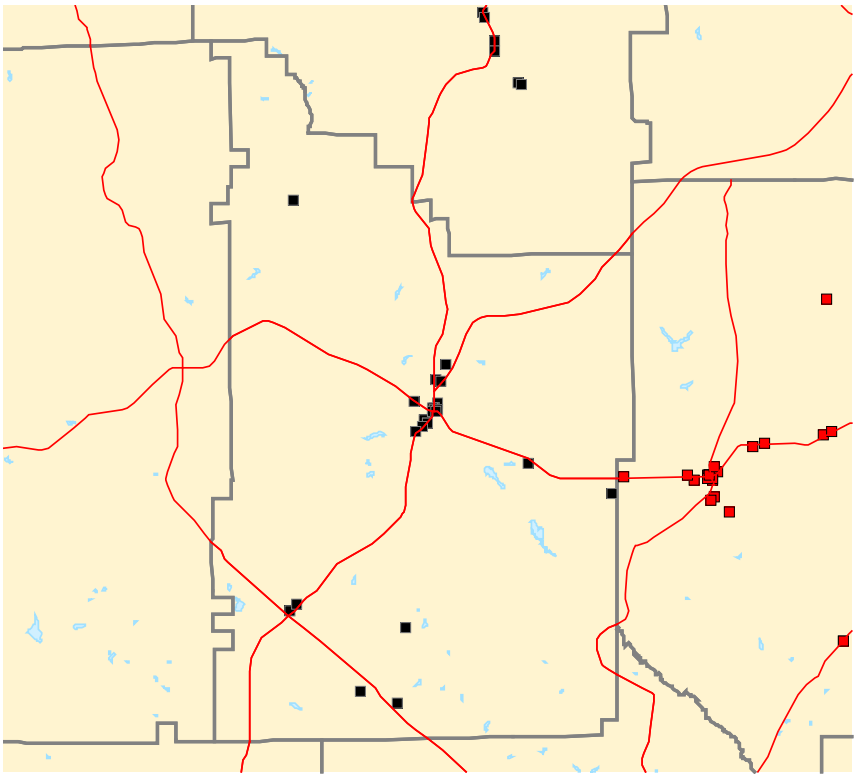
combined total estimated structure replacement value ($73M) and total estimated contents value ($46M) is $119M. This information can be reviewed in detail in Appendix A, pages 13-15. Aggregate value of the community's "non-critical" facilities has been estimated for use here; documentation is presented on page A-11. Population and other demographic data are presented in Appendix B, pages 1-13.

E. Land Use and Development Trends

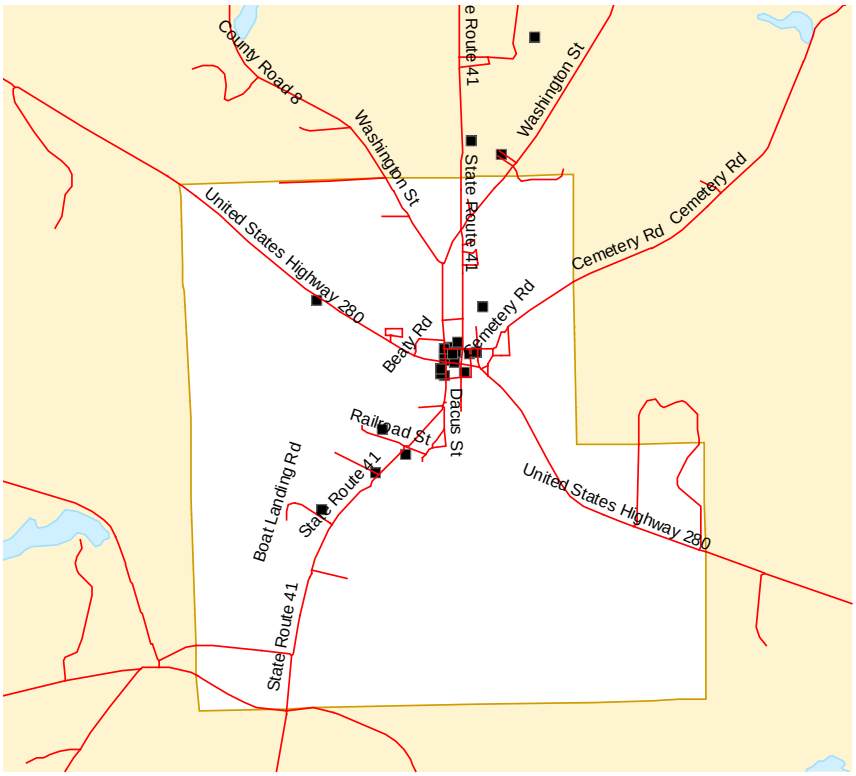
Land use conversion in the community is limited, and development is both sparse and limited. Because tropical storms typically affect large geographical areas, neither land use nor development trends influence exposure to this hazard.

F. Multi-Jurisdictional Differences

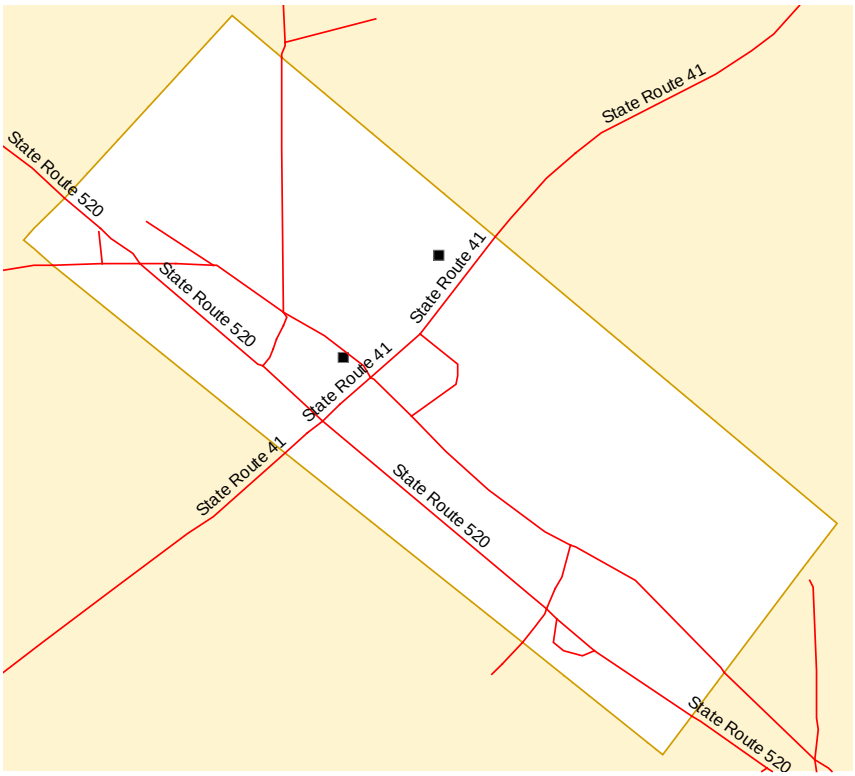
The assessment revealed no differences in the risk of a tropical storm occurring in any of the three jurisdictions. Pre-disaster mitigation measures relevant to this hazard are applicable throughout the community. The graphics that follow reveal the distribution of critical facilities throughout the community, with a concentration in the Town of Preston.



Webster County



Town of Preston



Town of Weston

G. Summary

Because of geographic location, proximity to both the Atlantic and Gulf coasts, the community will always be susceptible to the threat of tropical storms.

V. Flood

A. Hazard Identification

The overflow of rivers and streams onto normally dry lands due to severe storms or torrential rains is often a secondary impact of tropical storms or hurricanes. Among the most common factors affecting the extent of flooding are: topography, ground saturation, rainfall intensity and duration, soil type, drainage patterns, basin size, vegetative cover and development density/impervious surfaces. Flooding may occur slowly as the result of an extended rain or storm event, or as the result of a flash flood, sometimes causing dam failure. As a result of flooding caused by Tropical Storm Alberto, a rainfall event of ±20" was recorded in Preston, with similar totals elsewhere in the county.

B. Hazard Profile

The community's largest flood event resulted from Tropical Storm Alberto in 1994 which, between July 3 and July 7, doused "semi-saturated" soils with ±20" of rainfall, almost half the community's total annual average. Streams of all sizes overflowed, farm pond dams burst resulting in damage/destruction to/of numerous roads and bridges. Webster was one of fifty-five Georgia counties included in the July 7, 1994, presidential disaster declaration. Based on the documented historical record presented below, there is a 58% probability of a flood event any given year. (Hazard Frequency Table-Appendix D, page 1). Impacts of such events are felt most frequently in the southern corporate limits of Preston and downstream of the confluence of the Lanahassee and Kinchafoonee Creeks.

Local Flood Events					
Location	Date	Death/Injury	Magnitude	Cost	Damage
County	7/05/'94	0/0	Flood	$2M	Rd & Br
124 Ga. Counties*	10/04/'95	0/0	Flash Flood	**	Property
40 Ga Counties*	3/08/'98	0/0	Flood	**	Property
County [1]	7/13/'03	0/0	Flash Flood	0	-
15 Ga. Counties*	3/27/'05	0/0	Flood	**	Property
39 Ga. Counties*	7/10/'05	0/0	Flood	**	Property
Preston	4/08/'06	0/0	Flood	$1K	Property

* includes Webster County
[1] south portion of the county
** damages were aggregated for affected counties; no local data available
Source: National Climatic Data Center, Local

C. Community Exposure

Because of proximity to the Atlantic and Gulf Coasts, the community will always be susceptible to the kind of tropical storms that caused widespread flooding in 1994. Fortunately, that was an extreme event. The community is diligent to maintain drainage channels to accommodate flash flood events. The county and Town of Preston adopted (NFIP approved) Flood Damage Prevention Ordinances in 2005, without benefit of mapped floodplains. Digital flood maps are needed to facilitate ordinance enforcement. Although development downstream of the numerous dams in the county is nominal, areas in these dam "shadows" have a potential risk of flooding when impounded waters breach these man-made reservoirs. Enforcement of Wetland Protection Ordinances in all three jurisdictions helps prevent destruction of these natural flood-prevention resources. Aggregate value of the community's "non-critical" facilities has been estimated for use here; documentation is presented on page A-12.

D. Estimate of Potential Loss

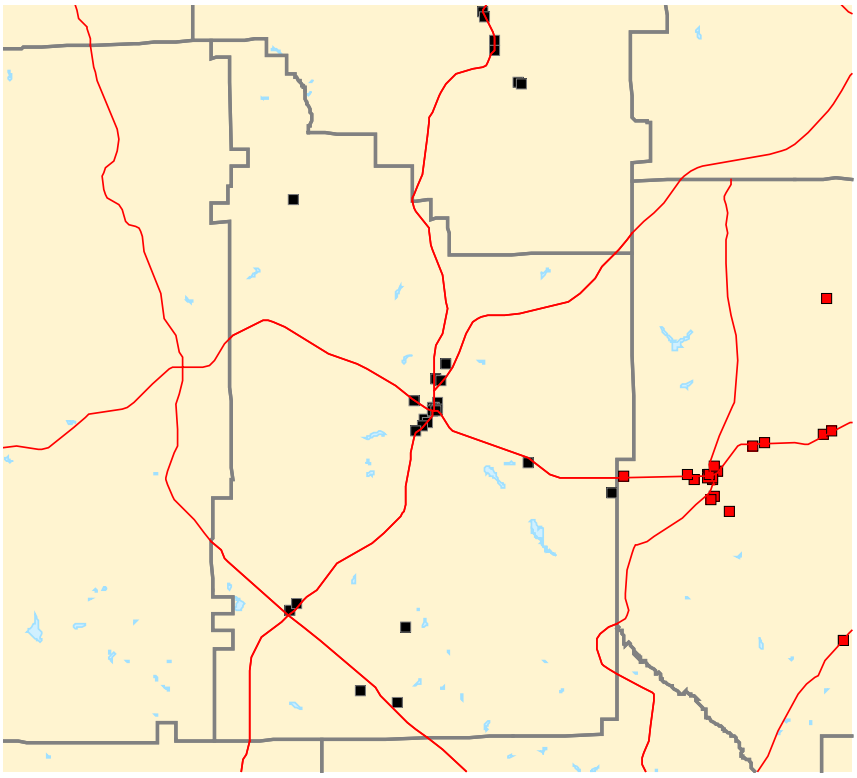
Because of the limited and sparse level of development in the community, the potential loss is considered to be relatively limited. None of the community's critical facilities are believed to be located in floodplains, but in absence of FEMA floodplain maps no such definitive statement can be made here. Hence, no reasonable estimate of potential loss can be made for present purposes. Nevertheless, the community's combined total estimated structure replacement value ($73M) and total estimated contents value ($46M) is $119M. This information can be reviewed in detail in Appendix A, pages 13-15. Aggregate value of the community's "non-critical" facilities has been estimated for use here; documentation is presented on page A-13. Population and other demographic data are presented in Appendix B, pages 1-13.

E. Land Use and Development Trends

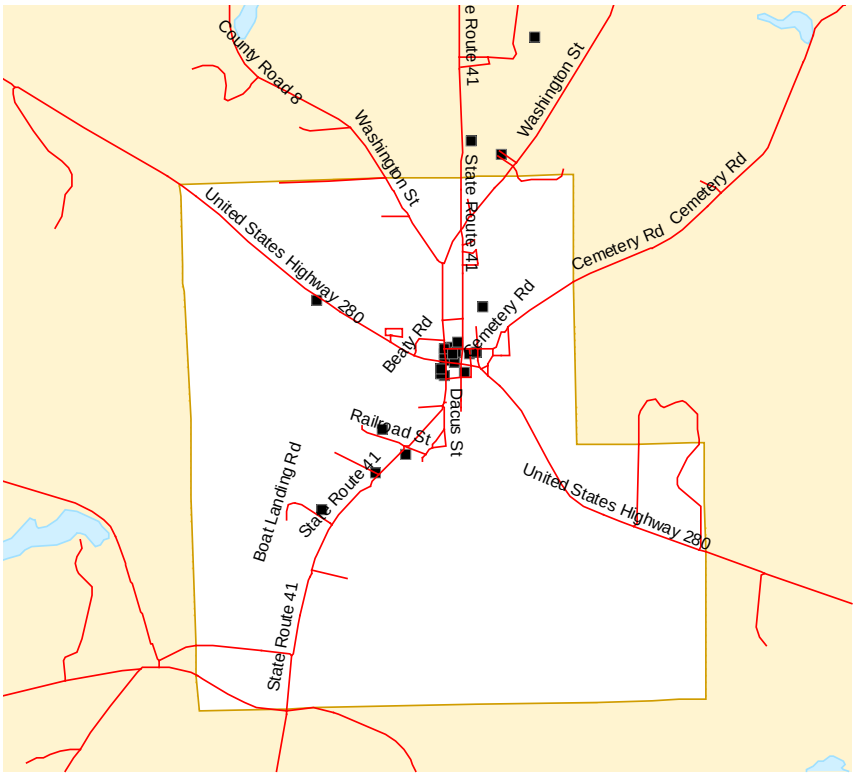
The community is very sparsely populated. The 2000 Census credited the community with 2,400 residents; a population density of only 11 persons per square mile. Ninety-five percent of the county is in either an agricultural or forest land use. Both incorporated areas also have extensive undeveloped acreage, with over three quarters of total area in agriculture or forest. Land use conversion is nominal, and no significant shifts in land use and/or development trends are foreseen in the next decade. While periodic flooding does occur, it is usually in undeveloped areas, most commonly downstream of the confluence of the Lanahassee and Kinchafoonee Creeks. Impacts are more aptly described as inconveniences than property damage.

F. Multi-Jurisdictional Differences

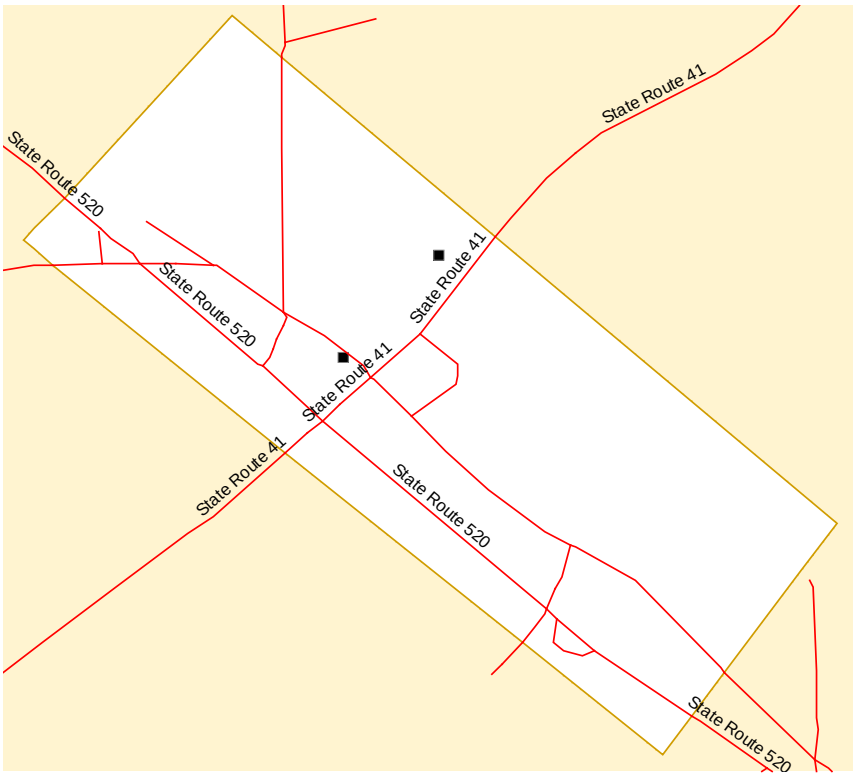
The potential for flooding is most significant in the unincorporated county and City of Preston, both of which are enforcing flood damage prevention ordinances. Enforcement will be facilitated when digital floodplain maps are made available, tentatively in 2009. To date, Weston has no documented record of flood-related damages, but will proceed toward adoption of a flood damage prevention ordinance.



Webster County



Town of Preston



Town of Weston

G. Summary

The community will always be at risk of flooding because of the wide, flat plains along creeks and from torrential rainfall caused by tropical storm activity. The community's most significant exposure to flooding is along Kinchafoonee Creek which impacts Preston and the unincorporated area of the community.

VI. Drought

A. Hazard Identification

A drought is a prolonged period without rain which progresses in stages. The first stage, meteorological drought, occurs when precipitation falls below normal levels and is usually expressed as a rainfall deficit, e.g., inches below normal. When meteorological drought occurs at a critical time of year it can result in water deficient topsoil, which may hinder germination and reduce crop yield. Stage two, agricultural drought, occurs when the amount of moisture in the soil no longer meets the needs of a particular crop. This type drought is usually measured in soil moisture levels and can be devastating to agricultural communities.

Hydrological drought is the third stage. This occurs when surface and subsurface (ground) water supplies fall below normal levels due to prolonged meteorological drought. Indicators include decreased stream flow rates, lake elevations and groundwater levels. Hydrological drought can be detrimental to the environment, upsetting the hydrologic cycle and impacting fish, wildlife and plant species. If this persists long enough, demand for water may exceed supply, leading to the fourth stage – socio-economic drought. This stage can take many months, or even years to develop, often with devastating social and economic consequences.

B. Hazard Profile

Drought is typically a widespread weather pattern affecting a much larger area than any single community. Critical facilities are not directly susceptible to adverse impacts of such an event. Generally, the population is not at risk from physical harm, except in the latter stages of a severe drought. Over the past decade the historical record documented eleven drought events. No supporting documentation could be located identifying previous known events. No deaths or injuries were recorded. Based on straight-line extrapolation from the historical record as documented herein, the community has a 100% chance of experiencing a drought in any given year (Hazard Frequency Table-Appendix D, page 1).

Drought Events*	Date	Damage	
		Property	Crop
29 Georgia Counties	9/1/1997	0	$20.0M
32 Georgia Counties	5/1/1999	0	0
35 Georgia Counties	8/1/1999	0	0
37 Georgia Counties	2/1/2000	0	0

38 Georgia Counties	4/1/2000	0	0
40 Georgia Counties	5/1/2000	0	0
41 Georgia Counties	6/1/2000	0	$306.7M
44 Georgia Counties	7/1/2000	0	0
45 Georgia Counties	10/1/2000	0	0
67 Georgia Counties	8/1/2002	0	0
69 Georgia Counties	3/1/2004	0	0

* All include Webster County; no local damage data available
Source: National Climatic Data Center

C. Community Exposure

The nature of drought is such that the entire community is affected, primarily economically. Generally, neither the population nor critical facilities (31 structures-Appendix A, pages 13-15) are at risk of physical damage, except in the latter stages of a severe drought. Under such conditions available water resources may not be sufficient for human needs, or water pressure may not be sufficient to fight fire, the risk of which increases in forested areas during periods of drought. The community's non-critical infrastructure is generally not susceptible to adverse effects of drought.

D. Estimate of Potential Loss

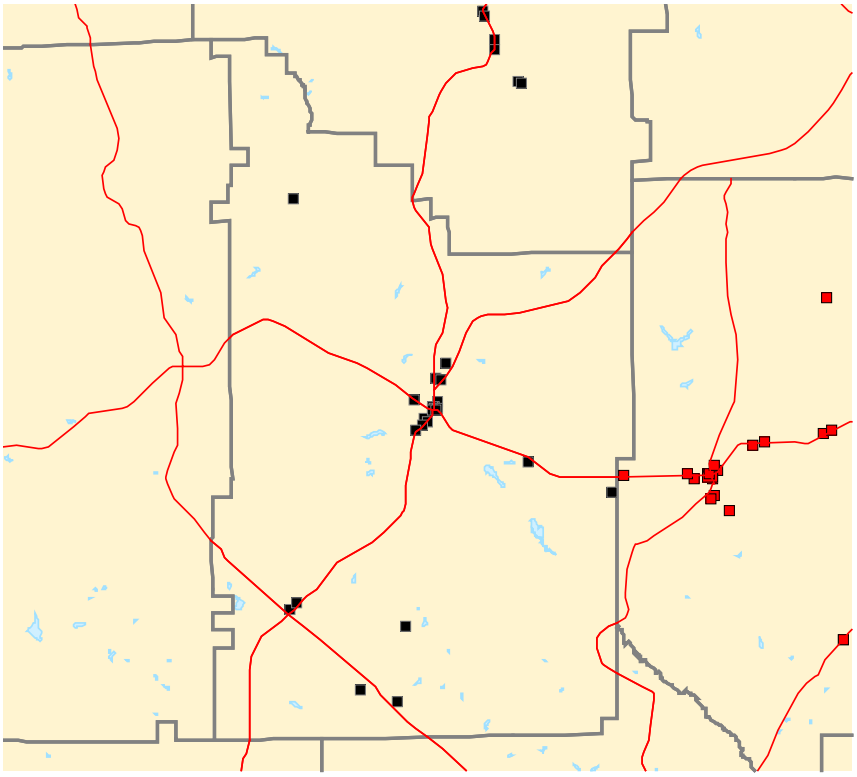
Crops are most directly affected by drought, and their loss can result in a significant economic burden on the local economy. In this sense, the local economy is at significant risk because of the relatively small percentage of farms in the county with irrigation systems. Generally, neither the population nor critical facilities are at risk of physical harm, except in the latter stages of a severe drought. Drought typically does not increase the risk of damage to critical facilities, the majority of which are concentrated in the cities and supplied by the deep water wells of the municipal system. These deep wells are generally not affected until the later or "critical" stages of drought. Nevertheless, the estimated cost of critical facility replacement ($73M) and content value ($46M) amounts to a total of $119M. (Appendix A, pages 13-15). The community's non-critical infrastructure is generally not susceptible to adverse effects of drought.

E. Land Use and Development Trends

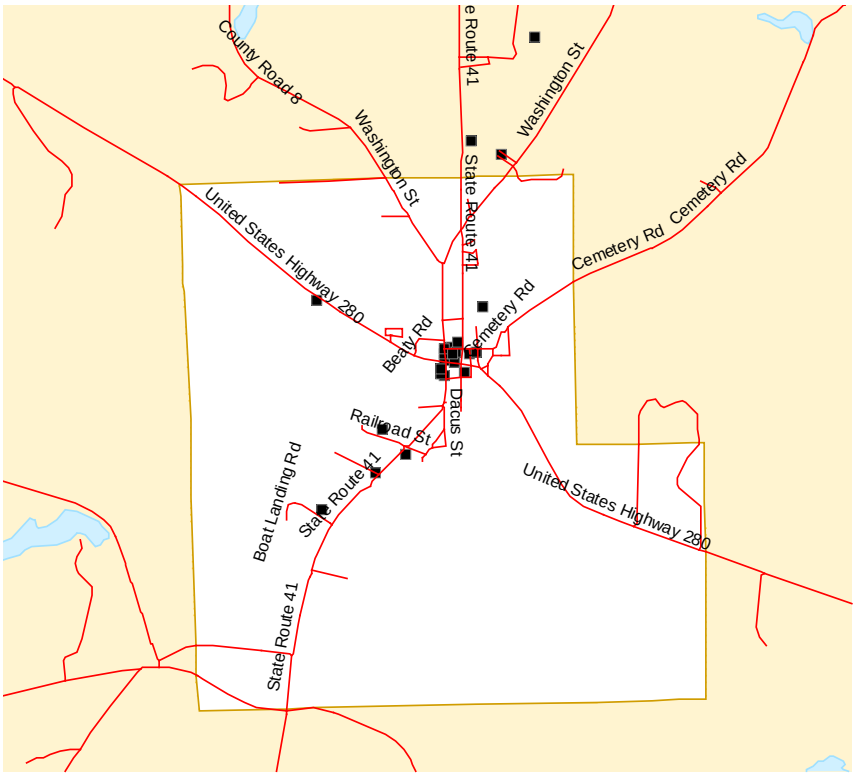
Drought conditions typically affect areas much larger than the local community. Land use and development trends do not influence the risk posed by this hazard.

F. Multi-Jurisdictional Differences

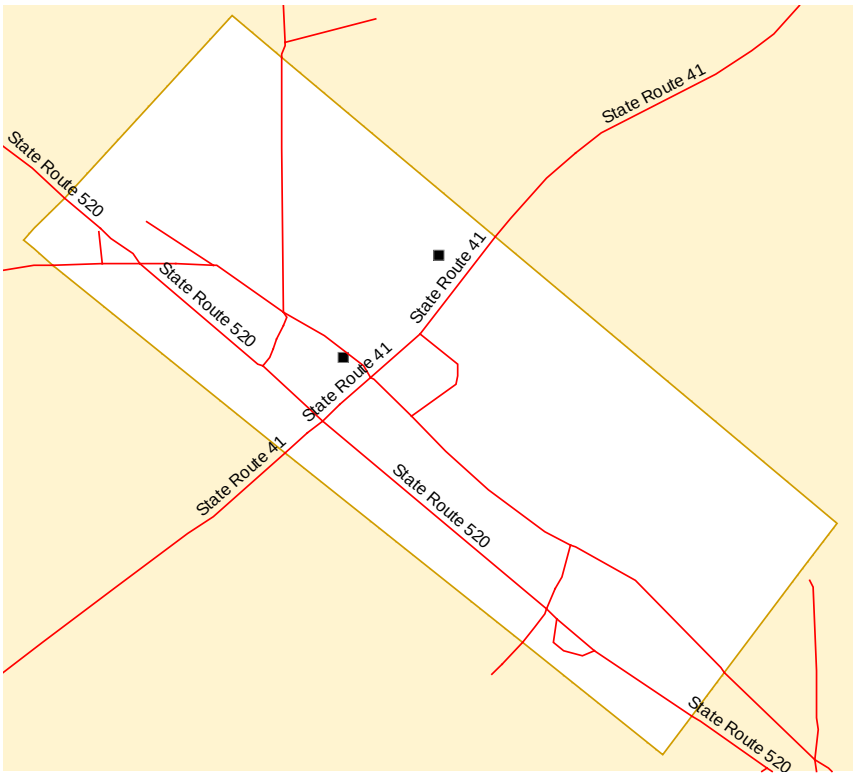
The physical impact of drought is most easily measured in the unincorporated area of the community because of agricultural production, but the resulting economic impact is felt community-wide. The greatest difference would be the need for agricultural irrigation in the unincorporated area, and the possible need for additional water supplies/resources for domestic consumption in the unincorporated area.



Webster County



Town of Preston



Town of Weston

G. Summary

Drought does not have the sudden, violent impact on a community characteristic of a storm. A significant reduction from normal rainfall levels will first be felt by the agricultural community, and because agriculture contributes significantly to the local economy, whatever affects agricultural production has a direct and immediate affect on the well-being of the community. Because conventional agriculture is so dependent on water, the community's front-line of defense against the adverse economic impacts of drought rests with the farmer. With a percentage return on economic investment among the lowest of any economic sector, the farmer is responding to high production costs by converting to moisture conservation practices, such as minimum-till and no-till production. This is helping to maximize the use of available water supplies.

VII. Hailstorm

A. Hazard Identification

Hail is a large, frozen raindrop produced by intense thunderstorms, where snow and rain coexist in the central updraft. As the snowflakes fall, liquid water freezes onto them forming ice pellets that continue to grow as more droplets are accumulated. Upon reaching the bottom of the cloud, some ice pellets are carried by the updraft back to the top of the storm. As the ice pellets once again fall through the cloud another layer of ice is added and the hailstone grows larger. The stronger the updraft, the more times a hailstone repeats this cycle and the larger it grows. Once the hailstone becomes too heavy to be supported by the updraft, it falls toward the earth's surface. The hailstone reaches the ground as ice since it is not in the warm air below the thunderstorm long enough to melt. Although it is not unusual to experience some property damage, critical facilities are generally not seriously threatened.

B. Hazard Profile

The community has experienced hailstorms in virtually all geographical areas, although the documented history reveals nominal property damage. These events are typically of short duration. Application of the documented record of eleven hailstorm events to the accompanying Hazard Frequency Table suggests a 44% probability of the community experiencing a hailstorm any given year (Hazard Frequency Table-Appendix D, page 1).

Hailstorm Events				
Location	Date	Magnitude	Damage	
			Property	Crop
Webster	3/18/1981	1.75 in.	0	0
Webster	4/25/1988	1.75 in.	0	0
Weston	1/8/1997	0.75 in.	0	0
Weston	5/13/1999	1.00 in.	0	0
Weston	6/25/2000	0.75 in.	0	0
Weston	7/6/2002	0.88 in.	0	0
Preston	4/25/2003	1.75 in.	0	0
Centerpoint	03/27/2005	.75 in	0	0
Preston	04/30/2005	.75 in	0	0
Preston	12/28/2005	1.75 in	$3K	0
Preston	01/02/2006	.75 in	0	0

Source: National Climatic Data Center

C. Community Exposure

The greatest threat is of damage to crops grown in the unincorporated area. Widespread hailstorms of significant duration with stones of significant size at critical times of the crop year could damage fruit/nuts and strip foliage to the extent the agricultural economy could be devastated. A storm of significant duration could also expose the community to transportation accidents as accumulations of icy precipitation pose driving hazards. Residents can seek shelter, and there is typically little risk to critical facilities.

D. Estimate of Potential Loss

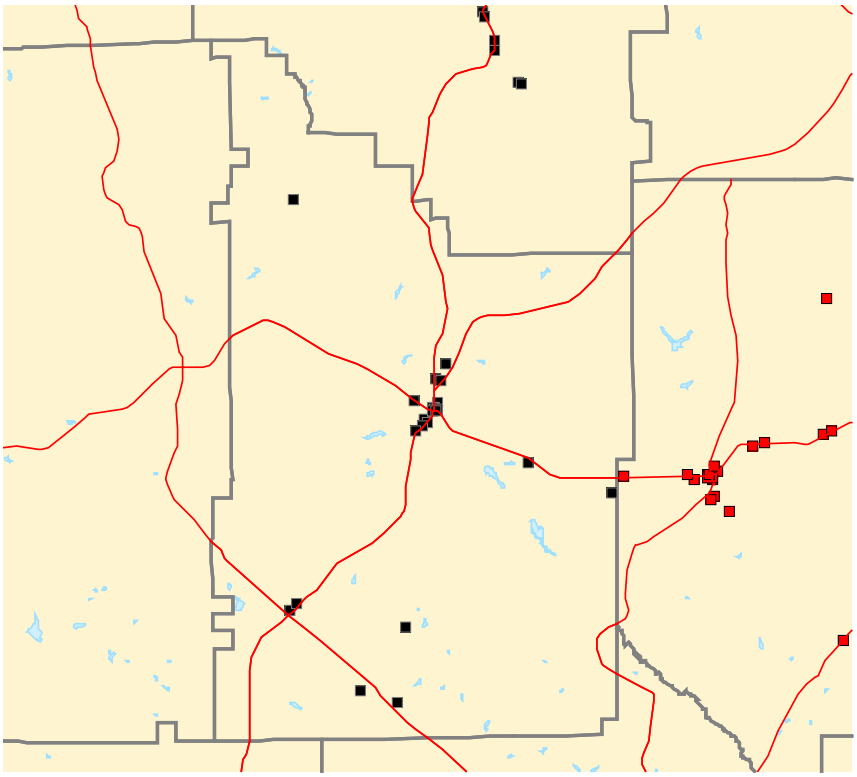
Hailstorms pose primarily a risk of crop damage; an economic threat to the community rather than a threat to the physical infrastructure. The vast number of interactive variables that would apply makes it impractical to estimate potential crop losses. Nevertheless, the estimated cost of critical facility replacement ($73M) and content value ($46M) amounts to a total of $119M. (Appendix A, pages 13-15). The community's non-critical infrastructure is generally not susceptible to adverse effects of hail.

E. Land Use and Development Trends

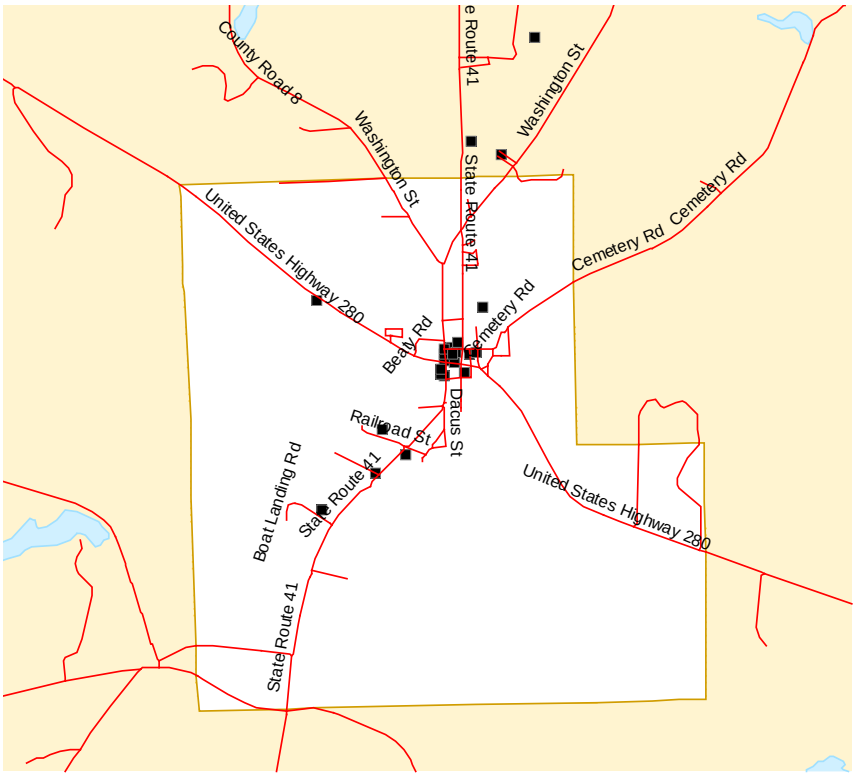
Because of direct and broad exposure to the natural elements, agricultural production constitutes the community's greatest exposure to this threat, which could result in significant, adverse, economic impact. No other land use and development patterns affect potential exposure to this hazard.

F. Multi-Jurisdictional Differences

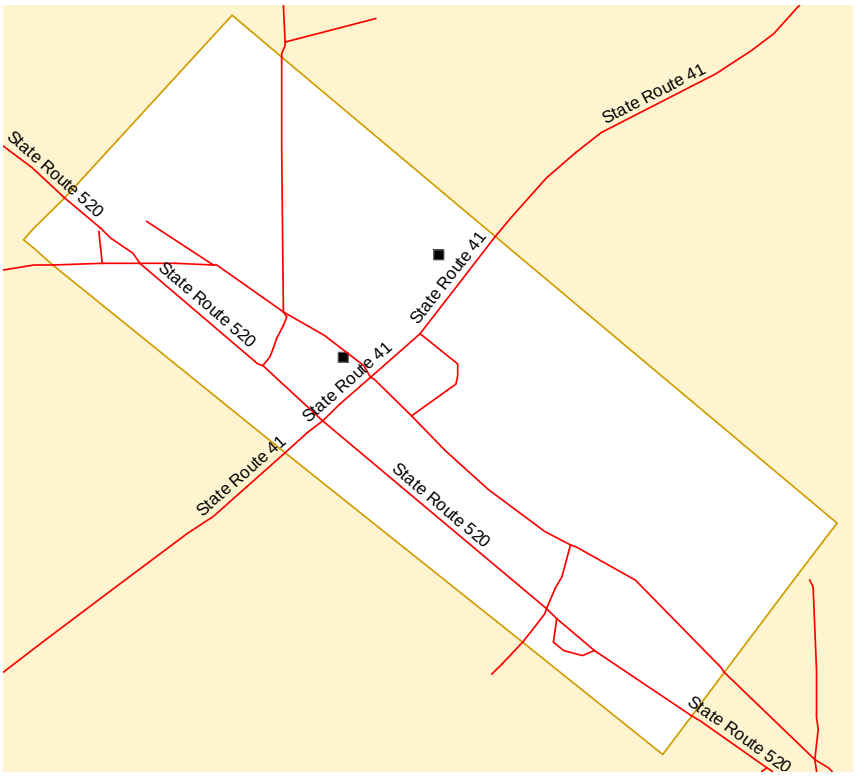
Although crop damage would be physically located in the unincorporated area, the economic impacts would be felt throughout the community. The following graphics reveal the distribution of critical facilities in the community.



Webster County



Town of Preston



Town of Weston

C. Summary

The critical infrastructure is generally not threatened by this hazard, and there is little of a pre-emptive nature the community can do for protection. In addition to crop insurance purchased by agricultural producers, the resident population should be educated of the hazards associated with driving during, and immediately after, a hailstorm event.

VIII. Dam Failure

A. Hazard Identification

Dam failure is typically the result of a physical weakness in dam structure, or inundation by flood waters which wash away earthen material flanking the dam housing flood gates used to regulate the upstream lake or pool area. The most common failure results from inundation (overflow) by flood waters. Flooding which precipitates dam failure can cause damage and destruction to properties fronting the lake, and breach of the dam can destroy downstream development and create economic hardship.

B. Hazard Profile

The community's largest flood event resulted from Tropical Storm Alberto in 1994 which, between July 3 and July 7, doused semi-saturated soils with approximately 20" of rain; almost half the community's annual average rainfall. Three farm pond dams were destroyed (Leverette, Kennedy and Payne) and another (Wilson) damaged as a result of that single event. Based on this historic profile, the community has an approximate 17% probability of dam failure any given year (Hazard Frequency Table-Appendix D, page 1).

Dam Failure		
Location	Date	Damage
County	1994	Roads and Bridges
County	1998	Roads and Bridges

Source: Local

C. Community Exposure

There are numerous earthen dams in the community, and the full limit of exposure cannot be determined because of the absence of mapping which could reveal the level of development in the dam "shadow". Such mapping would be useful in revealing the degree of community exposure.

D. Estimate of Potential Loss

In absence of an identifiable hazard area boundary, i.e. dam "shadow", estimation of the potential loss would be little more than a guess. None of the 31 critical facilities are believed to be located in what is assumed to be a dam "shadow". Nevertheless, the combined total estimated critical facilities structure replacement value ($73M) and total estimated contents value ($46M) communitywide is $119M (Appendix A, pages 13-15). Value of the community's "non-critical" facilities has not been determined for

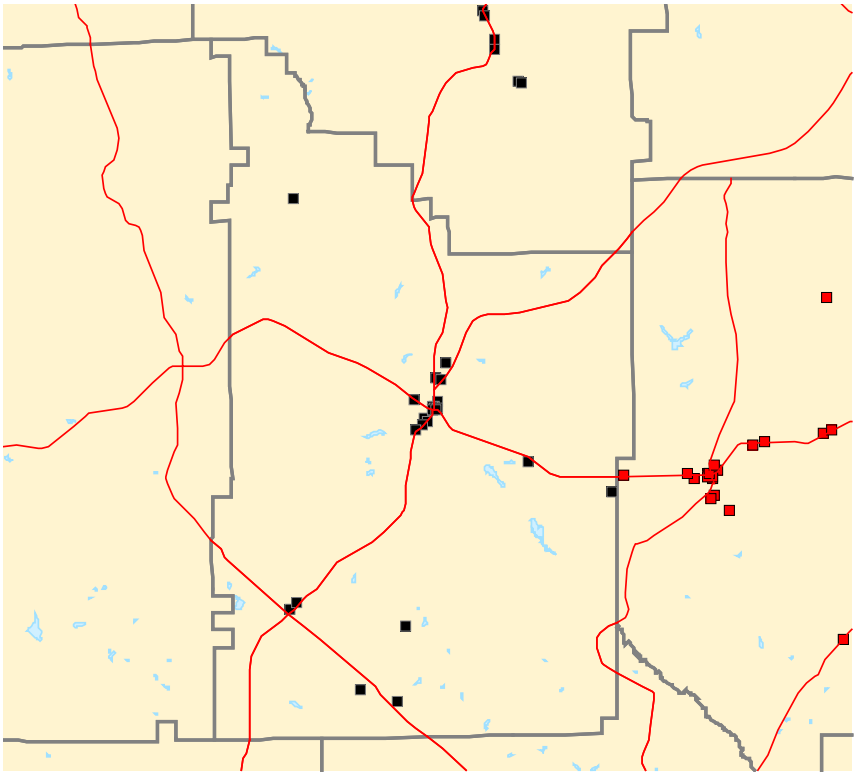
current purposes. There is not believed to be any significant private development downstream of local farm pond dams. To date, breaches of these structures have resulted in only road and bridge damage. Population and other demographic data are presented in Appendix B, pages 1-13.

E. Land Use and Development Trends

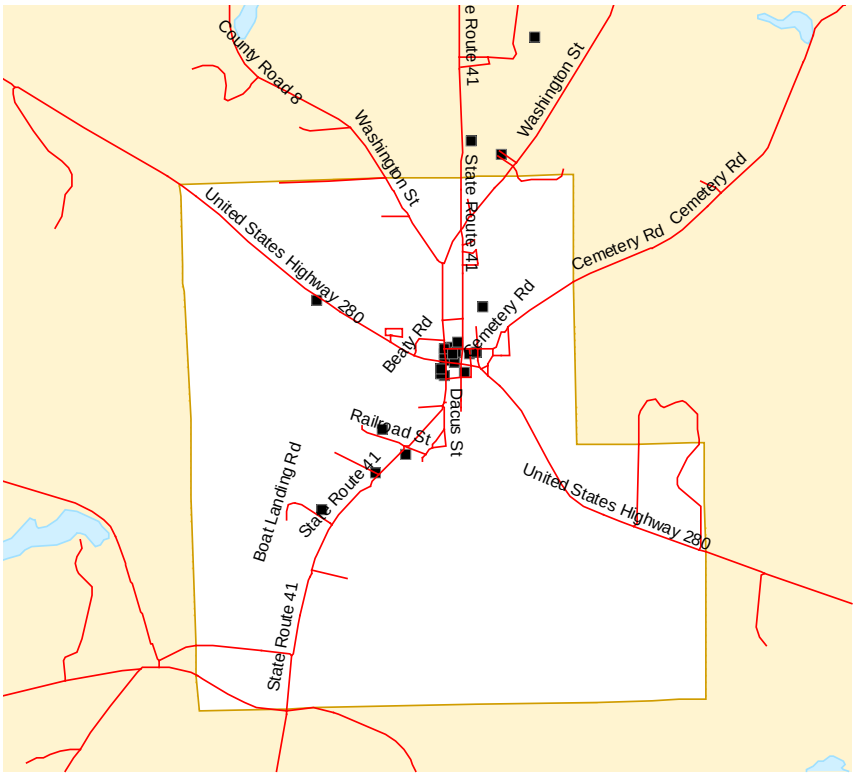
No current land use or development trend is influencing the community's exposure to this threat. Mapping of dam "shadows" can reveal the extent of existing development downstream and, hence, the extent to which land use affects community exposure to this threat. Mapping of dam "shadows" is important for managing the future level of development in these areas.

F. Multi-Jurisdictional Differences

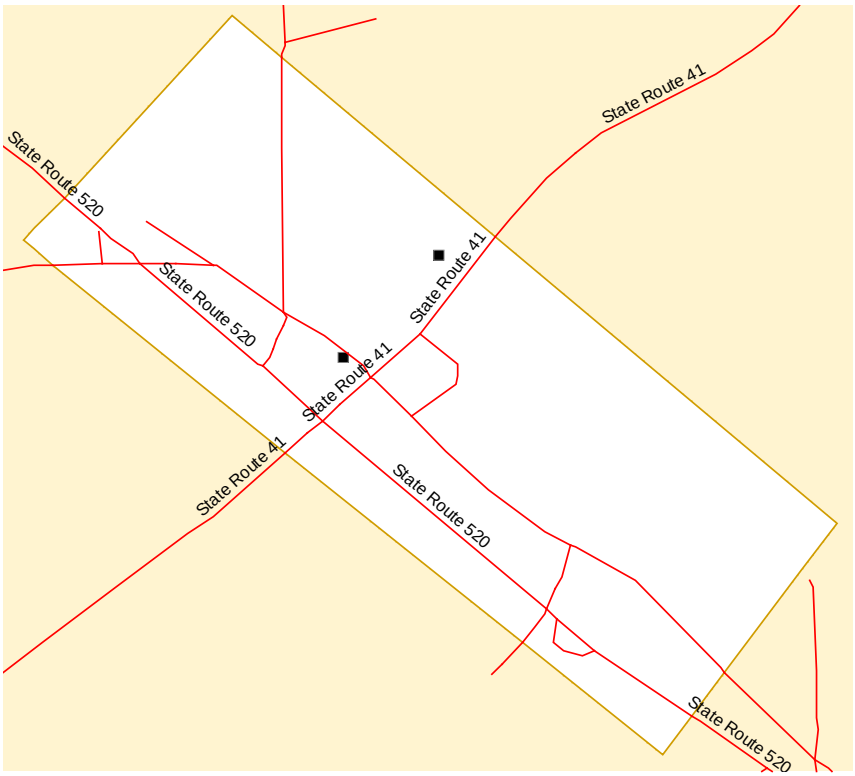
Dam failure is a threat to the unincorporated area only. Preston nor Weston has dams within its respective jurisdiction; nor is either municipality downstream of any of the dams in the unincorporated area.



Webster County



Town of Preston



Town of Weston

G. Summary

In absence of necessary mapping, dam failure is perceived to be one of the less serious threats to the community. These structures are in the rural, undeveloped areas of the community, distant from critical facilities. However, as development occurs, dam “shadows” need to be identified so development can be diverted from potential threats.

Chapter 3 - Technological Hazard, Risk and Vulnerability (HRV) Summary

Transportation Accident 1

I. Transportation Accident

A. Hazard Identification

An accident involving an airplane, train, bus or other vehicle is transportation-related. The risks of such disasters occurring are increasing because of increasing traffic volumes, location along a major east-west U.S. route through the state, location along a four-lane state route, presence of two trucking companies, the tendency of the general public to travel at higher speeds, and the transport of increasing volumes of unidentified hazardous chemicals, including along a short segment of railroad. The community has approximately 50 miles of state routes and 210 miles of local roads and streets.

B. Hazard Profile

The most heavily traveled local highway is four-lane, east-west, state route 520 crossing the southwest corner of the county. This route has five junctions and three intersections with state and local routes; the largest traffic volume is at state route 41 in Weston. The highway runs parallel to a railroad along the full length of the local segment, sharing mutual right-of-way boundary along the majority of the route, and intersects with another rail line near the west county line. The following table presents the documented record of local transportation-related incidents involving hazardous materials.

Transportation Accidents			
Location	Date	Death/Injury	Material
GA 520 (mp 6)	4/22/95	0	Mathanearsonate
N/A	4/05/96	0	Diesel
Preston, Ga. 41	9/24/96	0	Diesel
GA 520 (mp 5)	1/23/03	0	Gasoline

mp – mile post
Source: Georgia DNR, Emergency Response Team-Incident Query System, local newspaper

Application of these incidents to the hazard frequency table yields a better than 33% chance of recurrence any given year (Appendix D, page 1).

C. Community Exposure

The incidents reported above occurred on the community's most heavily traveled route. However, a similar traffic volume passes through Preston, the seat of county government, and within a mile of three-quarters of the community's critical facilities. There is no history of critical facility damage resulting from a transportation accident, and they are generally considered not to be at risk.

D. Estimate of Potential Loss

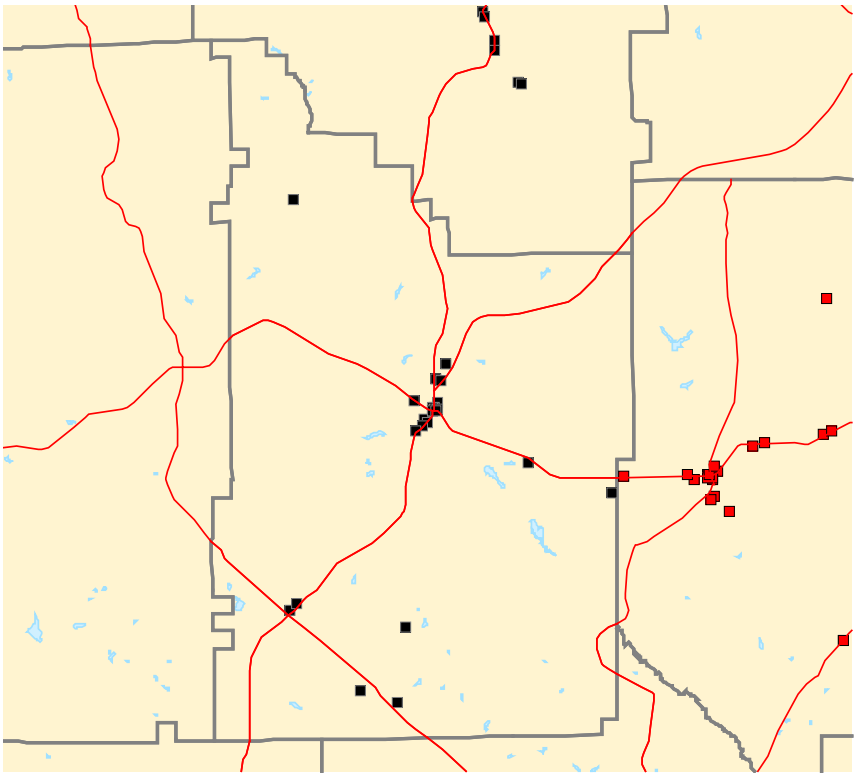
Potential Losses were estimated by use of the OHS/GEMA web-based planning tool. Data input for the Assets Worksheet included the replacement value and structure content value of each critical facility identified. Because all areas of the community are, theoretically, exposed to the threat posed by this hazard, all critical facilities are at risk, though presumably not all as the result of a single transportation accident. The combined total estimated structure replacement value ($73M) and total estimated contents value ($46M) of the community's critical infrastructure is $119M. This information can be reviewed in detail in Appendix A, pages 13-15. Aggregate value of the community's "non-critical" facilities has been estimated for use here; documentation is presented on page A-11. There is no history of critical facility or "non-critical" facility damage resulting from a transportation accident, and they are generally considered not to be at risk. Population and other demographic data are presented in Appendix B, pages 1-13.

E. Land Use and Development Trends

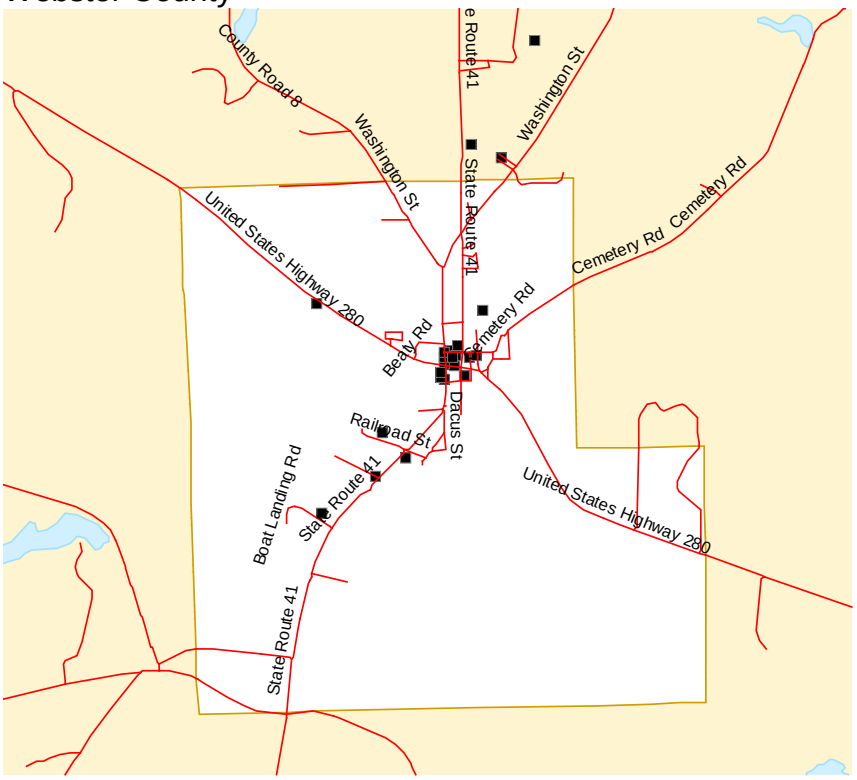
Other than the presence of two small trucking companies, which bring more heavy truck traffic through the community than would otherwise occur, current land uses are not significantly impacting the risk of transportation accidents. There are not any current development trends which would increase the community's exposure to this hazard.

F. Multi-Jurisdictional Differences

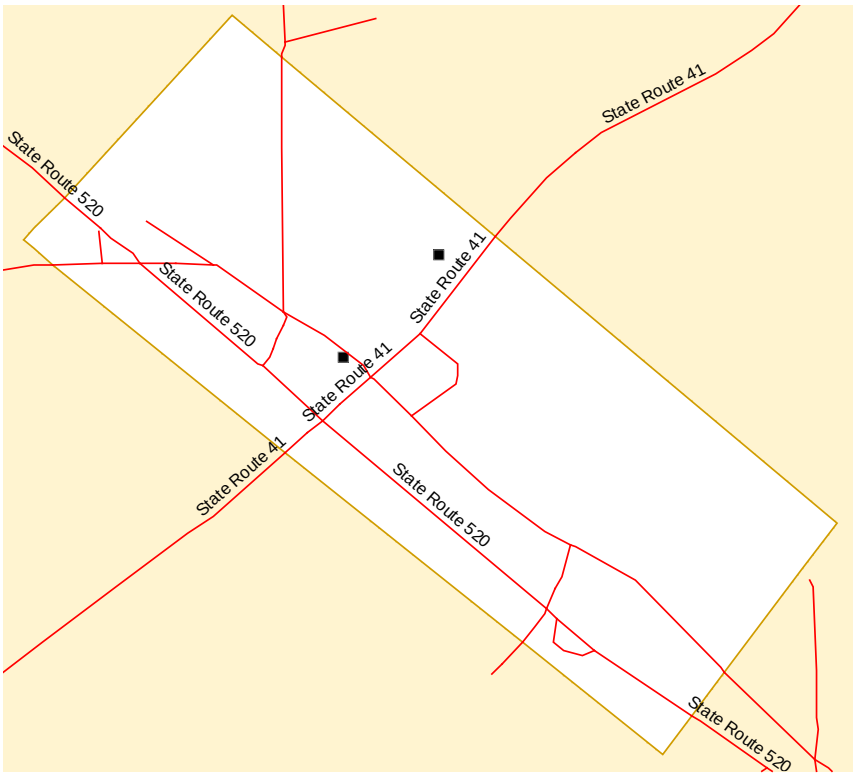
There is little, if any, difference in the risks among the three jurisdictions. The most heavily traveled routes in the community are found in all three jurisdictions.



Webster County



Town of Preston



Town of Weston

G. Summary

The community's current level of exposure to transportation accidents involving hazardous chemicals is expected to increase as a result of location and increased traffic volumes along major highways.

Chapter 4 – Natural Hazard Mitigation Goals and Objectives

Overall Community Mitigation Goals, Policies and Values 1

Hazard-Specific Mitigation Goals, Policies and Values

I	Tornado	9
II	Windstorm (Thunderstorm Winds)	14
III	Severe Winter Storm	17
IV	Hurricane (Tropical Storm)	20
V	Flood	23
VI	Drought	25
VII	Hail Storm	28
VIII	Dam Failure	31

Overall Community Mitigation Goals, Policies and Values

Five, general, pre-disaster mitigation goals have been established. Implementation of these non-structural measures will have positive impacts on mitigation irrespective of the type hazard which may befall the community in the future. Presentation here eliminates the need to duplicate them among the goals and objectives of the numerous hazards enumerated later. Nevertheless; a careful read of the rest of the document will reveal some are repeated among the goals and objectives listed with specific hazards.

Non-structural measures have the benefits of being less expensive to implement, do not require expensive maintenance and upkeep, and are more adaptable to specific needs than structural measures. These general goals and their related objectives, tasks and action steps are as follows:

GOAL 1 Protect the public health and safety

GOAL 2 Reduce, and to the extent possible eliminate, community exposure to natural (and man-made) hazard events

GOAL 3 Reduce loss and damage to private property and public infrastructure resulting from natural (or man-made) hazards

GOAL 4 Maintain continuity of public and private sector operations during and after hazard events

GOAL 5 Respond promptly, appropriately and efficiently in the event of natural (or man-made) hazards

OBJECTIVE 1 Increase coordination between local public and private sectors in pre-disaster planning

Task 1.1 Facilitate communications between emergency response agencies and private sector

Action Step 1.1.1

Continue regular meetings among emergency response personnel concerning services, regulations, capabilities, personnel, equipment, needs, limitations, etc.

Responsible Org:	EMA
Coordinating Org:	Emergency Responders
Timeline:	’07 - ‘11
Cost:	Staff Time
Funding Source:	Operating Budgets
Jurisdiction:	Webster (Communitywide EMA)
Benefit:	All Residents-2,400

Action Step 1.1.2

Incorporate private sector participation at meetings of emergency response personnel

Responsible Org: EMA
Coordinating Org: Business Community
Timeline: '07 - '11
Cost: Staff Time
Funding Source: Operating Budget
Jurisdiction: Webster (Communitywide EMA)
Benefit: All Residents-2,400

Action Step 1.1.3

Develop a database of local business emergency contact information

Responsible Org: EMA
Coordinating Org: Business Community
Timeline: 2007
Cost: Staff Time
Funding Source: Operating Budgets
Jurisdiction: Webster (Communitywide EMA)
Benefit: All Residents-2,400

OBJECTIVE 2 Increase resident awareness of the community's greatest disaster threats

Task 2.1 Disseminate information to public on most significant hazards, their mitigation/prevention, and proper response

Action Step 2.1.1

Secure relevant literature from GEMA, FEMA and other sources for local distribution

Responsible Org: EMA
Coordinating Org: Board of Commissioners
Timeline: '07 – '11
Cost: Staff Time
Funding Source: Operating Budget
Jurisdiction: Webster (Communitywide EMA)
Benefit: All Residents-2,400

Action Step 2.1.2

Promote development of family disaster plans and supply kits

Responsible Org: EMA
Coordinating Org: Board of Commissioners
Timeline: '07 – '11

Cost: Staff Time
Funding Source: Operating Budget
Jurisdiction: Webster (Communitywide EMA)
Benefit: All Residents-2,400

OBJECTIVE 3 Adopt and enforce appropriate codes

Task 3.1 Identify which, if any, additional codes/ordinances are needed to afford the community reasonable levels of protection from disaster threats

Action Step 3.1.1
Investigate the appropriateness of a zoning (or alternative) ordinance in Preston
Responsible Org: Preston Town Council
Coordinating Org: Preston Town Council
Timeline: '07 – '09
Cost: ±$1K
Funding Source: Operating Budget
Jurisdiction: Preston
Benefit: 450 Preston residents

Action Step 3.1.2
Investigate the appropriateness of a zoning (or alternative) ordinance in the County
Responsible Org: Board of Commissioners
Coordinating Org: Board of Commissioners
Timeline: '07 – '09
Cost: ±$1K
Funding Source: Operating Budget
Jurisdiction: County
Benefit: 1800 rural residents

OBJECTIVE 4 Increase general public awareness of hazard mitigation

Task 4.1 Continue public education programs through print and broadcast media

Action Step 4.1.1
Provide media with information of local mitigation efforts and emergency response preparedness
Responsible Org: EMA
Coordinating Org: Board of Commissioners
Timeline: '07 – '11
Cost: Staff Time

Funding Source: Operating Budget
Jurisdiction: Webster (Communitywide EMA)
Benefit: All Residents-2,400

Action Step 4.1.2

Secure from GEMA/FEMA examples of successful mitigation efforts elsewhere that have local application, provide to media in a format "ready for print"

Responsible Org: EMA
Coordinating Org: Board of Commissioners
Timeline: '07 – '11
Cost: Staff Time
Funding Source: Operating Budget
Jurisdiction: Webster (Communitywide EMA)
Benefit: All Residents-2,400

OBJECTIVE 5 Institutionalize hazard mitigation in governmental decision-making

Task 5.1 Incorporate hazard mitigation into capital improvement budgeting

Action Step 5.1.1

Inform chief administrative officers and elected officials of long-term benefits of incorporating hazard mitigation into capital budgeting/purchasing

Responsible Org: Elected Bodies
Coordinating Org: EMA
Timeline: '07 - '11
Cost: Staff Time
Funding Source: Operating Budget
Jurisdiction: Webster-Preston-Weston
Benefit: All Residents-2,400

Task 5.2 Duplicate and safely store vital public sector records off-site

Action Step 5.2.1

Local government and constitutional officers adopt policy of; (1) duplicating existing, essential records, (2) duplicating essential records annually thereafter, and (3) designating a secure, off-site depository for copies of essential public records

Responsible Org: Courthouse Officials, Weston Town Council, Board of Ed., Health Dept., DFCS
Coordinating Org: Courthouse Officials, Weston Town Council, Board of Ed., Health Dept., DFCS
Timeline: '07 - '11
Cost: Undetermined
Funding Source: Local
Jurisdiction: Webster-Weston
Benefit: 1800 -75 residents, respectively

Task 5.3 Promote duplication and safe storage of vital private sector records off-site

Action Step 5.3.1

Secure from GEMA and the Economic Development Administration information which can be used to educate the business community of the need to have duplicate copies of essential records securely stored off-site

Responsible Org: EMA
Coordinating Org: Business Community
Timeline: '07-'08
Cost: Staff Time
Funding Source: Local
Jurisdiction: Business Community
Benefit: 450 employees

OBJECTIVE 6 Improve the comprehensive mitigation strategy

Task 6.1 Monitor plan implementation annually

Action Step 6.1.1

Dedicate one of the quarterly meetings to formal, annual review of mitigation strategy implementation

Responsible Org: EMA
Coordinating Org: Emergency Response Agencies
Timeline: '07 - '11
Cost: Staff Time
Funding Source: Operating Budget
Jurisdiction: Webster (Communitywide EMA)
Benefit: All Residents-2,400

Task 6.2 Post-disaster assessment of preparation for, and response to, hazard event

Action Step 6.2.1

As soon as practical after a disaster event, perform a detailed, in-house review of local preparations and response

Responsible Org: EMA
Coordinating Org: Emergency Response Agencies
Timeline: As needed
Cost: Staff Time
Funding Source: Operating Budget
Jurisdiction: Webster (Communitywide EMA)
Benefit: All Residents-2,400

Objective 7 Maintain as much continuity of public and private operations (community life) as possible during and immediately after a disaster event

Task 7.1 Maintain high level of communication and cooperation between critical agencies

Action Step 7.1.1

Continue regular meetings among representatives of elected bodies, health departments, DFCS, emergency response agencies, etc.

Responsible Org: EMA
Coordinating Org: Board of Commissioners
Timeline: '07 - '11
Cost: Staff Time
Funding Source: Operating Budget
Jurisdiction: Webster (Communitywide EMA)
Benefit: All Residents-2,400

Action Step 7.1.2

Request the Webster County Board of Commissioners to make an appeal to the Middle Flint Regional E-911 Authority to acquire and store off-site in a "hardened" facility, a self-propelled, mobile, communications vehicle for emergency use by Webster and other member jurisdictions.

Responsible Org: EMA
Coordinating Org: Board of Commissioners
Timeline: 2007
Cost: Appeal - Staff Time
Vehicle - $375K-$400K

Funding Source: GEMA/FEMA
Jurisdiction: Webster (Communitywide EMA)
Benefit: All Residents-2,400

Task 7.2 Educate owners/managers of (public and private) critical facilities of steps that can be taken to help maintain delivery of essential services during and after disaster events

Action Step 7.2.1

Secure and distribute literature which identifies actions that can be taken to help achieve public and private sector continuity of operations

Responsible Org: EMA
Coordinating Org: EMA
Timeline: '07 - '11
Cost: Staff Time
Funding Source: Operating Budget
Jurisdiction: Webster (Communitywide EMA)
Benefit: All Residents-2,400

Action Step 7.2.2

Initiate periodic drills to test ability of critical facilities to maintain continuity of operations

Responsible Org: EMA
Coordinating Org: Emergency Response Agencies, Private Sector
Timeline: '07 - '09
Cost: Staff Time
Funding Source: Operating Budget
Jurisdiction: Webster (Communitywide EMA)
Benefit: All Residents-2,400

Task 7.3 Obtain backup generators for water and sanitary sewer systems and communications

Action Step 7.3.1

Determine critical backup generator needs and identify sources of financial assistance to help make purchases

Responsible Org: EMA
Coordinating Org: Elected Bodies
Timeline: 2007
Cost: Staff Time; Purchase-$25-$35K
Funding Source: FEMA/GEMA
Jurisdiction: Webster-Preston-Weston

Benefit: All Residents-2,400

Task 7.4 Incorporate reverse dial feature into the Middle Flint Regional E-911 system

Action Step 7.4.1

Petition E-911 Authority to identify source and seek funds to enable purchase of necessary hardware/software for reverse dial feature

Responsible Org: Board of Commissioners
Coordinating Org: EMA
Timeline: ’07-‘08
Cost: Staff Time
Funding Source: FEMA/GEMA
Jurisdiction: Webster (Communitywide EMA)
Benefit: All Residents-2,400

I. Tornado

A. Mitigation Goals - A tornado inflicted greater loss on the community than any other natural hazard. The general public fails to appreciate how little time there is to respond to a tornado strike, and how important it is that all parties be prepared at all times to respond properly. Although thunderstorm winds do not reach the speed of tornadoes, there are many similarities in the damage caused by the two hazards. Consequently, virtually all goals, objectives, tasks and action steps of the two hazards are interchangeable.

B. Range of Mitigation Options

1. Structural v Non-structural – Identified goals address both options. Residents and developers undertaking new construction or renovation will be encouraged to construct in compliance with the state building codes, and to consider making safe-room additions to the structure. Other, non-structural options include a determination of the most appropriate warning system and public education.

2. Existing Policies, Regulations, Ordinances and Land Use – Currently, there is not any applicable (building) code enforcement in the community.

3. Community Values, Historic and Special Considerations – Project implementation will serve to protect a potential district in Preston and historic resources dispersed throughout the unincorporated area. No other special considerations were identified.

4. New Buildings and Infrastructure - Implementation of overall community objective #5 (Institutionalize hazard mitigation) will serve to reduce susceptibility of future public-owned infrastructure because mitigation will be included in planning and capital expenditure decisions. Residents and developers undertaking new construction or renovation will be encouraged to construct in compliance with the state building codes. Adoption and enforcement of housing/environmental codes will serve to protect future development by reducing the size of the debris field sensitive to tornadic winds.

5. Existing Buildings and Infrastructure - Adoption and enforcement of housing/environmental codes will serve to protect existing development by reducing the scale of the debris field sensitive to tornadic winds. This, in conjunction with the absence of loss of life and serious property damage in the past half century tends to negate the cost-

effectiveness of retrofitting structures to meet construction codes as protection against tornadoes. Furthermore, confronted with limited financial resources, the community would not support this type expenditure as a matter of public policy.

C. Mitigation Strategy and Recommendations

Goal 1 Reduce the potential for loss of life and damage to property which commonly results from tornados

Objective 1.1 Reduce the risk of personal injury during a tornado event

Task 1.1.1 Encourage compliance with state building codes

Action Step 1.1.1.1
Distribute relevant literature with issuance of building permits

Responsible Org:	Bd of Commissioners
Coordinating Org:	Preston-Weston
Timeline:	'07 - '11
Cost:	Staff Time
Funding Source:	Operating Budget
Jurisdiction:	Webster (cmtywide EMA)
Benefit:	All Residents-2,400

Task 1.1.2 Promote safe room construction

Action Step 1.1.2.1
Distribute relevant literature with issuance of building permits

Responsible Org:	Bd of Commissioners
Coordinating Org:	Preston-Weston
Timeline:	'07 - '11
Cost:	Staff Time
Funding Source:	Operating Budget
Jurisdiction:	Webster (cmtywide EMA)
Benefit:	All Residents-2,400

Task 1.1.3 Assess and implement the more advantageous warning system; public weather sirens v. "universal" weather radios

Action Step 1.1.3.1
Confer with appropriate GEMA representatives and vendors for direct

comparison of pros and cons of each warning method
Responsible Org: EMA
Coordinating Org: Elected Bodies
Timeline: '07 - '08
Cost: Staff Time
Funding Source: Investigation-Local "System"- GEMA/FEMA
Jurisdiction: Webster (cmtywide EMA)
Benefit: All Residents-2,400

Task 1.1.4 Reduce size of potential debris field

Action Step 1.1.4.1
Adopt environmental/housing code
Responsible Org: Elected Bodies
Coordinating Org: Elected Bodies
Timeline: '08 - '10
Cost: Staff Time
Funding Source: Operating Budget
Jurisdiction: Webster (cmtywide EMA)
Benefit: All Residents-2,400

Objective 1.2 Educate the citizenry on tornado threat and safety issues

Task 1.2.1 Compile comprehensive information data base on tornado safety

Action Step 1.2.1.1
Continue providing media with public service announcements and "print ready" articles on tornado safety
Responsible Org: EMA
Coordinating Org: EMA
Timeline: '07 - '11
Cost: Staff Time
Funding Source: Operating Budget
Jurisdiction: Webster (cmtywide EMA)
Benefit: All Residents-2,400

Action Step 1.2.1.2
Promote regular tornado drills at industrial sites
Responsible Org: Business/Industry
Coordinating Org: EMA

Timeline: '07 - '11
Cost: Staff Time
Funding Source: Local
Jurisdiction: Webster (cmtywide EMA)
Benefit: 150 employees

Goal 2 Enhance local government's ability to respond efficiently to emergency needs both during and after tornado event

Objective 2.1 Provide emergency facilities, equipment and mutual aid agreements to facilitate prompt and appropriate response

Task 2.1.1 Determine "retro" needs of critical facilities for protection against tornadoes

Action Step 2.1.1.1
Survey critical facilities to identify deficiencies which need to be addressed to "harden" against the risk of damage from tornadic winds
Responsible Org: EMA
Coordinating Org: EMA
Timeline: '07 -'09
Cost: Staff Time
Funding Source: Local
Jurisdiction: Webster(cmtywide EMA)
Benefit: All Residents-2,400

Task 2.1.2 Maintain fortified emergency operations command center (EOC)

Action Step 2.1.2.1
Determine EOC and communication needs, prepare plans, and pursue funding, for any necessary improvements
Responsible Org: EMA
Coordinating Org: Bd. of Commissioners
Timeline: '07
Cost: Staff Time
Funding Source: Local
Jurisdiction: Webster(Cmtywide EMA)
Benefit: All Residents-2,400

Task 2.1.3 Provide storage of emergency response vehicles (including public works equipment/vehicles) secure from exposure to potential hazards

Action Step 2.1.3.1
Determine facility needs (size, location), identify and pursue outside source(s) of funding with which to construct the necessary hardened facility(ies)

Responsible Org:	EMA
Coordinating Org:	Bd. of Commissioners
Timeline:	'07-'11
Cost:	±$400K Construction
Funding Source:	Local, GEMA
Jurisdiction:	Webster(Cmtywide EMA)
Benefit:	All Residents-2,400

Task 2.1.4 Keep intra- and interjurisdictional mutual aid agreements current

Action Step 2.1.4.1
Perform annual review of all intra- and interjurisdictional mutual aid agreements

Responsible Org:	EMA
Coordinating Org:	Elected Bodies
Timeline:	annually
Cost:	Staff Time
Funding Source:	Local
Jurisdiction:	Webster(Cmtywide EMA)
Benefit:	All Residents-2,400

D. Special Multi-Jurisdictional Strategy – All activities are applicable communitywide.

E. Public Information and Awareness – Will be accomplished through broadcast of public service announcements, promotion of tornado drills and use of weather radios.

II. Windstorm (Thunderstorm Winds)

A. Mitigation Goals – Thunderstorm winds are the most common local natural hazard, and have made their presence known in all areas of the community. Although these storms do not reach the wind speed of tornadoes, there are many similarities in the damage caused by the two hazards. Consequently, virtually all goals, objectives, tasks and action steps are interchangeable.

B. Range of Mitigation Option

1. Structural v Non-structural – Structural improvements needed to withstand thunderstorm winds are the responsibility of the property owner. This effort will utilize public education as a non-structural supplement to property owner's responsibilities.

2. Existing Policies, Regulations, Ordinances and Land Use – Currently, there are not any local regulatory measures or land uses impacting the threats posed by this hazard.

3. Community Values, Historic and Special Considerations - Project implementation will serve to protect a potential historic district in Preston, and historic resources dispersed throughout the unincorporated county. No other special considerations were identified.

4. New Buildings and Infrastructure – Developers will be informed/reminded of the applicability of state building codes in the community. Adoption and enforcement of housing/environmental codes will serve to protect future development by reducing the size of the potential debris field sensitive to thunderstorm winds. In light of the improved quality of construction achieved through state building code compliance, the proportion of structures which do not meet building code standards will be gradually reduced.

5. Existing Buildings and Infrastructure – Adoption and enforcement of housing/environmental codes will serve to protect existing buildings by reducing the size of the potential debris field sensitive to thunderstorm winds. After surveying "retro" needs of the critical infrastructure, the nature of each individual need must be assessed within the context of funds available for corrective action.

C. Mitigation Strategy and Recommendations

Goal 1: Reduce the potential for loss of life and damage to property which commonly results from thunderstorm winds

Objective 1.1 Reduce the risk of property damage resulting from thunderstorm winds

Task 1.1.1 Encourage compliance with state building codes

Action Step 1.1.1.1
Distribute relevant literature with issuance of building permits

Responsible Org: Bd of Commissioners
Coordinating Org: Preston-Weston
Timeline: '07 - '11
Cost: Staff Time
Funding Source: Operating Budget
Jurisdiction: Webster (cmtywide EMA)
Benefit: All Residents-2,400

Task 1.2.1 Determine "retro" needs of critical facilities for protection against thunderstorm winds

Action Step 1.2.1.1
Survey critical facilities to identify deficiencies which need to be addressed to "harden" against the risk of damage from thunderstorm winds

Responsible Org: EMA
Coordinating Org: EMA
Timeline: '07 -'09
Cost: Staff Time
Funding Source: Local
Jurisdiction: Webster(cmtywide EMA)
Benefit: All Residents-2,400

Task 1.3.1 Reduce the presence of debris from the community which could become lethal projectiles during a thunderstorm event

Action Step 1.3.1.1
Adopt environmental/housing ordinances

Responsible Org: City Elected Bodies
Coordinating Org: City Elected Bodies
Timeline: '08 -'09
Cost: Staff Time
Funding Source: Local

Jurisdiction:	Preston-Weston
Benefit:	450-75; respectively

D. Special Multi-Jurisdictional Strategy – Each of the action steps identified above is applicable communitywide.

E. Public Information and Awareness - News of this activity will be the subject of articles in the local weekly newspaper.

III. Severe Winter Storm

A. Mitigation Goals – Residents are generally complacent about the potential for damage which can result from a winter storm because of the historically short duration of freezing weather. This component stresses to residents the consequences of not being prepared for longer-duration winter storms.

B. Range of Mitigation Options

1. Structural v Non-structural – This goal addresses non-structural measures; public education measures and continuation of best management practices (emergency vehicle service).

2. Existing Policies, Regulations, Ordinances and Land Use – The need for local policies governing designation and operation of emergency shelters is being addressed herein.

3. Community Values, Historic and Special Considerations – No specific concerns were identified.

4. New Buildings and Infrastructure - Implementation of overall community objective #5 (Institutionalize hazard mitigation) will serve to reduce susceptibility of future public-owned infrastructure because mitigation will be included in planning and capital expenditure decisions.

5. Existing Buildings and Infrastructure - The absence of loss of life and serious property damage in the historic record tends to negate the cost-effectiveness of retrofitting structures as protection against severe winter storms. Furthermore, confronted with limited financial resources, the community would not support this type expenditure as a matter of public policy.

C. Mitigation Strategy and Recommendations

Goal 1 Minimize, and to the extent possible prevent, winter weather-related injuries and deaths

Objective 1.1 Have emergency shelter ready and available to meet the needs of potential winter weather victims who are inadequately housed

Task 1.1.1 Designate an emergency shelter

Action Step 1.1.1.1

Convene representatives from appropriate organizations (local governments, Red Cross, health department, DFCS) to recommend emergency center site(s), identify managing entity, establish operating policies and procedures, and identify equipment and facility needs and sources

Responsible Org: DFCS, Red Cross
Coordinating Org: EMA
Timeline: '07
Cost: Staff Time
Funding Source: Local
Jurisdiction: Webster-Pres-Wes
Benefit: All residents-2,400

Goal 2 Minimize, and to the extent possible prevent, the dangers and damages caused by accumulations of snow and ice

Objective 2.1 Implement proactive measures to prevent injury to residents and damage to property

Task 2.1.1 Encourage compliance with state building codes

Action Step 2.1.1.1

Distribute relevant literature with issuance of building permits

Responsible Org: Bd of Commissioners
Coordinating Org: Preston-Weston
Timeline: '07 - '11
Cost: Staff Time
Funding Source: Operating Budget
Jurisdiction: Webster (cmtywide EMA)
Benefit: All Residents-2,400

Task 2.2.1 Educate citizens about winter storm safety

Action Step 2.2.1.1

Compile a library of information and public service announcements ready for print, broadcast or other distribution

Responsible Org: EMA

Coordinating Org: EMA
Timeline: '07 - '08
Cost: Staff Time
Funding Source: Operating Budget
Jurisdiction: Webster(cmtywide EMA)
Benefit: 2,400

Task 2.3.1 Implement/maintain measures to protect emergency vehicles from winter weather

Action Step 2.3.1.1
Winterize all emergency vehicles
Responsible Org: Public Works Depts
Coordinating Org: Public Works Depts
Timeline: '07 - '11
Cost: <$250
Funding Source: Local
Jurisdiction: Webster(cmtywide EMA)
Benefit: 2,400

D. Special Multi-Jurisdictional Strategy – These action steps are applicable community wide.

E. Public Information and Awareness – News of these activities will be the subject of articles in the local weekly newspaper.

IV. Hurricane (Tropical Storm)

A. Mitigation Goals – Tropical storms are either downgraded versions of hurricanes, or winds which never get strong enough (wind speed) to be classified as a hurricane. Tropical storms lose wind speed, and destructive ability, as they make their paths across land. However, if they should linger in any location (TS Alberto-1994) significant damage can occur. Because of proximity to both the Atlantic and Gulf Coasts, Webster County will always be at risk of experiencing such events. Meteorologists are predicting a multi-year cycle of increased hurricane activity for the United States. These events can expose the community to high winds and heavy rain, sometimes resulting in flooding outside identified floodplains.

B. Range of Mitigation Options

1. Structural v Non-structural – Structural improvements needed for tropical storm winds are the responsibility of the property owner. The community will utilize non-structural options; encouraging building code compliance, expand public broadcast of weather warnings, and public education to supplement property owner's structural options.

2. Existing Policies, Regulations, Ordinances and Land Use – The only previous action taken has been adoption of flood damage prevention ordinances by the county and City of Preston related to the flooding aspect of tropical storms.

3. Community Values, Historic and Special Considerations – No specific community concerns were identified.

4. New Buildings and Infrastructure – Compliance with state building codes will reduce adverse impacts of future occurrences of this hazard because new development will be better able to withstand tropical storm generated winds. Implementation of overall community objective #5 (Institutionalize hazard mitigation) will serve to reduce susceptibility of future public-owned infrastructure because mitigation will be included in planning and capital expenditure decisions. The flood prevention component will be enhanced by the (requested) availability of digital floodplain maps (see Flood). Merger (or overlay) of geo-referenced critical facilities and geo-referenced floodplains will enable the delineation of lands located within the environmentally sensitive area. With this information developers will be better able to determine the costs/benefits associated with building within a floodplain in compliance with the local flood damage prevention ordinance, or

developing a property which is not located in a “clearly discernible” floodplain.

5. Existing Buildings and Infrastructure - The flood prevention component will be enhanced by the (requested) availability of digital floodplain maps (see Flood). Merger (or overlay) of geo-referenced critical facilities and geo-referenced floodplains will enable the delineation of development located within the environmentally sensitive area. This information will make it easier to determine which property improvements are in need of “floodproofing” and/or other possible flood protection measures.

C. Mitigation Strategy and Recommendations

Goal 1: Reduce the potential for loss of life and damage to property which commonly results from tropical storm winds

Objective 1.1 Reduce the risk of property damage resulting from tropical storm winds

Task 1.1.1 Determine “retro” needs of critical facilities for protection against tropical storm winds

Action Step 1.1.1.1
Survey critical facilities to identify deficiencies which need to be addressed to “harden” against the risk of damage from tropical storm winds

Responsible Org:	EMA
Coordinating Org:	EMA
Timeline:	‘07 -‘09
Cost:	Staff Time
Funding Source:	Local
Jurisdiction:	Webster (Communitywide EMA)
Benefit:	All Residents-2,400

Goal 2 Remove conflicts between development and flood prone areas

Objective 2.1 Ensure that future development is outside the 100-year flood plain

Task 2.1.1 Adopt flood damage prevention ordinance

Action Step 2.1.1.1

Adopt (NFIP compliant) flood damage prevention ordinance

Responsible Org:	Weston Council
Coordinating Org:	Weston Council
Timeline:	2009
Cost:	Staff Time
Funding Source:	Local
Jurisdiction:	Weston
Benefit:	75 residents

E. Special Multi-Jurisdictional Strategy – An assessment of the need to retrofit critical facilities has applicability community-wide. Weston is the only participating jurisdiction lacking a flood damage prevention ordinance.

F. Public Information and Awareness – News of this activity will be the subject of articles in the local weekly newspaper.

V. Flood

A. Mitigation Goals – In light of the limited level of development, the focus is on precluding increased exposure to this hazard through floodplain protection.

B. Range of Mitigation Options

1. Structural v Non-structural – The community proposes to employ regulations (non-structural) to prevent development from occurring in floodplains, or stipulate how future development can be made safe in such sensitive areas.

2. Existing Policies, Regulations, Ordinances and Land Use – Webster County and the Town of Preston enacted NFIP-compliant flood damage prevention ordinances in 2005 without benefit of floodplain maps. The county diligently maintains roadway drainage infrastructure in the unincorporated area to prevent/limit damage which could result from flash flooding.

3. Community Values, Historic and Special Considerations – Preston's potential historic district is not at risk of this hazard. Some individual historic structures distributed throughout the unincorporated area may be exposed. No other special considerations were identified.

4. New Buildings and Infrastructure - The only flood-related goal provides for limiting the potential for conflicts between future development and flood-prone areas. Digital floodplain maps will facilitate identification of floodplains for the purpose of controlling development in such environmentally sensitive areas. With this information developers will be better able to determine the costs/benefits associated with building within a floodplain in compliance with local flood damage prevention ordinances, versus developing a property which is not located in a floodplain.

5. Existing Buildings and Infrastructure - The only flood-related goal provides for removing the potential for conflicts between future development and flood prone areas. Provision of requested digital floodplain mapping will facilitate delineation of floodplain boundaries making it possible to merge (overlay) geo-referenced development (existing critical and non-critical facilities) and geo-referenced floodplains to determine which existing development(s) may be in need of "floodproofing" and/or other possible flood protection measures.

C. Mitigation Strategy and Recommendations

Goal 1 Remove conflicts between development and flood prone areas

Objective 1.1 Ensure that future development is outside the 100-year flood plain

Task 1.1.1 Adopt flood damage prevention ordinance

Action Step 1.1.1.1
Enforce NFIP compliant flood damage prevention ordinance

Responsible Org:	Weston Council
Coordinating Org:	Weston Council
Timeline:	2009
Cost:	Staff Time
Funding Source:	Local
Jurisdiction:	Weston
Benefit:	75 residents

Task 1.2.1 Develop digital orthophotography for use in preparing digital floodplain maps

Action Step 1.2.1.1
Create digital flood insurance rate maps

Responsible Org:	GEMA/FEMA
Coordinating Org:	Bd of Commissioners
Timeline:	'08 – '09
Cost:	FEMA funded
Funding Source:	FEMA
Jurisdiction:	Webster-Pres-West
Benefit:	2,400 residents

D. Special Multi-Jurisdictional Strategy – Webster and the City of Preston will continue enforcing their flood damage prevention ordinances. Weston will adopt such an ordinance and likely contract with the county for enforcement.

E. Public Information and Awareness Strategy – Developers and residents are made aware of floodplain protection ordinance requirements in the county and Preston. With adoption of an ordinance in Weston the public there will be exposed to the requirements and benefits of the regulation.

VI. Drought

A. Mitigation Goals - The vitality of the local economy fluctuates with conditions in agriculture which, in turn, is driven by timely applications of adequate supplies of water. A shortage of this essential commodity at a critical time can have a severely negative impact on the economy. This effort complements previous activities with a concentration on supplementing the availability of water. The community must also enhance its ability to protect resources against drought-induced risks of fire.

B. Range of Mitigation Options-

1. Structural v Non-structural – Structural options have been selected to complement non-structural activities initiated previously. The current effort strives to enhance infrastructure to increase the local supply of available water. Additional physical improvements are also needed to enhance the community's ability to protect the community from the threat of drought-induced fire risks.

2. Existing Policies, Regulations, Ordinances and Land Use – The community enforces water restriction ordinances as mandated by the state, and the state issues permits for daily withdrawals of at least 100K gallons of water, primarily applicable to the 25% of land area in agricultural production.

3. Community Values, Historic and Special Considerations - There were not any specific community values or other considerations identified.

4. New Buildings and Infrastructure – The singular condition of drought rarely affects physical infrastructure. However, the plan provides for improved fire-fighting capabilities in the event other conditions occur simultaneously so as to threaten critical facilities.

5. Existing Buildings and Infrastructure - The singular condition of drought rarely affects physical infrastructure. However, the plan provides for improved fire-fighting capabilities in the event other conditions occur simultaneously so as to threaten critical facilities.

C. Mitigation Strategy and Recommendations

Goal 1 Maintain economic stability and growth during periods of drought

Objective 1.1 Maintain the essential services agriculture needs so as to minimize drought-related losses

Task 1.1.1 Facilitate dissemination of information

Action Step 1.1.1.1

Continue activity within agriculture community to pursue additional irrigation, reservoir development, lowering well intakes where appropriate, and low interest financing to enable such improvements

Responsible Org: NRCS-FSA
Coordinating Org: Extension Service
Timeline: '07 - '11
Cost: Staff Time
Funding Source: Operating Budget
Jurisdiction: Webster(cmtywide EMA)
Benefit: All Residents-2,400

Action Step 1.1.1.2

Pursue funding for reservoir development

Responsible Org: Bd. of Commissioners
Coordinating Org: NRCS
Timeline: '07 – '11
Cost: Staff Time
Funding Source: USDA
Jurisdiction: Webster (cmtywide)
Benefit: All residents-2,400

Objective 2.1 Maintain fire fighting capabilities in time of drought

Task 2.1.1 Develop and maintain resources needed for rural fire fighting

Action Step 2.1.1.1

Maintain fire breaks

Responsible Org: Forest Owners
Coordinating Org: GFC
Timeline: '07 - '11
Cost: $75/hr
Funding Source: Forest Owners
Jurisdiction: Webster
Benefit: 1,800 residents

Action Step 2.1.1.2

Identify appropriate sites and place dry hydrants

Responsible Org:	Bd of Commissioners
Coordinating Org:	NRCS/Landowners
Timeline:	'07 - '11
Cost:	± $7,500
Funding Source:	Local/NRCS
Jurisdiction:	Webster
Benefit:	1,800 residents

D. Special Multi-Jurisdictional Strategy – Although all three jurisdictions are affected, primary emphasis of this goal is placed on the unincorporated area where agricultural production occurs. The economic study will be directed toward the best interests of all three jurisdictions.

E. Public Information and Awareness – Information concerning these activities will be included in the information programs presented at numerous venues. Public participation will be solicited.

VII. Hail Storm

A. Mitigation Goals – The community is susceptible to hail storms any time of year. The best protection from this hazard is public education.

B. Range of Mitigation Options

1. Structural v Non-structural – This goal addresses non-structural measures that have community-wide impact.

2. Existing Policies, Regulations, Ordinances and Land Use – No existing policies, regulations, ordinances or land uses were found to be relevant to this hazard.

3. Community Values, Historic and Special Considerations – No specific community concerns were identified.

4. New Buildings and Infrastructure – Historically, buildings and other local infrastructure have been little scathed by this hazard. The focus here is placed on educating the resident population how to be prepared in the event of recurrence, including encouraging agricultural producers to purchase crop insurance.

5. Existing Buildings and Infrastructure - Historically, buildings and other local infrastructure have been little scathed by this hazard. The focus here is placed on educating the resident population how to be prepared in the event of recurrence, including encouraging agricultural producers to purchase crop insurance.

C. Mitigation Strategy and Recommendations

Goal 1 Reduce the potential for injury (and possible loss of life) and damage to property which commonly results from hail storms

Objective 1.1 Reduce the risk of personal injury during hail storm events

Task 1.1.1 Prompt proactive measures among the general public

Action Step 1.1.1.1
Continue encouraging the general public to purchase weather radios
Responsible Org: EMA
Coordinating Org: EMA
Timeline: ‘07 -‘11

Cost: Staff Time
Funding Source: Local
Jurisdiction: Webster (cmtywide EMA)
Benefit: All Residents-2,400

Action Step 1.1.1.2

Educate citizens about the importance of (1) monitoring weather information, (2) using weather radios in the home and workplace and (3) heeding public weather warnings

Responsible Org: EMA
Coordinating Org: EMA
Timeline: '07 -'11
Cost: Staff Time
Funding Source: Local
Jurisdiction: Webster (cmtywide EMA)
Benefit: All Residents-2,400

Objective 1.2 Protect the community's agricultural base

Task 1.2.1 Increase agricultural producer participation in crop insurance programs

Action Step 1.2.1.1

Disseminate information through farm programs of the value of crop insurance participation

Responsible Org: FSA
Coordinating Org: County Extension
Timeline: '07 -'11
Cost: Staff Time
Funding Source: Local
Jurisdiction: Webster
Benefit: 1,800 rural residents

D. Special Multi-Jurisdictional Strategy – Promotion of (1) general public purchase of weather-alert radios, and (2) monitoring and heeding weather warnings apply in all three jurisdictions. The latter two action steps have application in the unincorporated area of the community; areas without sirens and where crop insurance is needed.

E. Public Information and Awareness – Information concerning these action steps will be included in the mitigation awareness activities,

public service announcements, civic club presentations, etc., as an example of the importance of mitigation.

VIII. Dam Failure

A. Mitigation Goals – The county is dotted with many, small, man-made reservoirs. The purpose of this goal is to identify which developments may be downstream of these sites, and manage future development so as to reduce the threat to life and property that can result from dam failure.

B. Range of Mitigation Options

1. Structural v Non-structural – The specific activities proposed herein are non-structural. Appropriate follow-up to plan implementation; however, could result in structural improvements.

2. Existing Policies, Regulations, Ordinances and Land Use – At this writing there are not any local existing policies, regulations, ordinances or land use controls applicable to the proposed mitigation activities.

3. Community Values, Historic and Special Considerations – There are not any known community values, historic and/or special considerations applicable to this mitigation action.

4. New Buildings and Infrastructure – Goal implementation will enable identification of sites downstream of dams and, hence, subject to flooding in the event of dam failure. This would be useful information in some areas where such exposure is not obvious, and could affect siting of future development.

5. Existing Buildings and Infrastructure - Goal implementation will enable identification of developed sites downstream of dams and, hence, subject to flooding in the event of dam failure. With this information property owners can be forewarned of the need for mitigation

C. Mitigation Strategy and Recommendations

Goal 1 Protect lives and property downstream of the community's largest local dams

Objective 1.1 Identify properties at risk down stream of dams

Task 1.1.1 Identify source of funding to map dam "shadows"

Action Step 1.1.1.1

Map topography of dam “shadows” and layer new information with map of existing development

Responsible Org:	Board of Comm
Coordinating Org:	RDC
Timeline:	’08-‘09
Cost:	$2K-$5K
Funding Source:	OHS/GEMA
Jurisdiction:	Webster
Benefit:	±1,800 current rural residents

D. Special Multi-Jurisdictional Strategy – Investigation and mapping of dam “shadows” will be limited to the unincorporated area.

E. Public Information and Awareness – News of these activities will be the subject of articles in the local weekly newspaper.

Chapter 5 - Local Technological Hazard Mitigation Goals and Objectives

I Transportation Accident 1

I. Transportation Accident

A. Mitigation Goals – Much of the mitigation technology and equipment employed in response to transportation accidents involving hazardous materials is cost prohibitive for small communities. Consequently, it is important that the community not only develop local capacity to the extent possible, but also coordinate capacity-building with other communities to share the associated expenses across a larger user base.

B. Range of Mitigation Options

1. Structural v Non-structural – Although structural and non-structural options are available, the former measures are primarily private sector options while the latter constitute the public sector's primary option. The private sector is the source of hazardous materials incidents, and the public sector has limited regulatory control over how the private sector conducts business, with the primary exceptions of protecting the health and safety of workers and transport of chemicals. Consequently, most measures available to the public sector classify as non-structural.

2. Existing Policies, Regulations, Ordinances and Land Use – Very little in the way of existing local policies, regulations, ordinances and land use could be identified which affects the transport of hazardous materials through the community. The community does, of course, have traffic laws which, when rigidly enforced, are a mitigation tool.

3. Community Values, Historic and Special Considerations – Maintaining a desirable quality of life is a primary concern of residents, and the threats posed by the presence of hazardous materials and their passage through the community, compromise, and if serious enough, jeopardize, the quality of life.

4. New Buildings and Infrastructure – New buildings and other infrastructure will typically not be affected by transportation accidents. The goal and objectives are focused on training and preparing emergency responders to react appropriately at any of the infinite number of sites in the community where a transportation accident can occur.

5. Existing Buildings and Infrastructure – Buildings and other infrastructure are typically not affected by transportation accidents. The goal and objectives are focused on training and

preparing emergency responders to react appropriately at any of the infinite number of sites in the community where a transportation accident can occur.

C. Mitigation Strategy and Recommendations

Goal 1 Protect the community from potential disasters caused by hazardous materials spills resulting from transportation accidents

Objective 1.1 Be current with risks and appropriate mitigation measures associated with hazardous materials

Task 1.1.1 Secure and maintain active membership(s), and participate in applicable emergency response training and education associations/ organizations

Action Step 1.1.1.1
Establish line item in annual EMA budget for associational and organizational membership(s)

Responsible Org:	EMA
Coordinating Org:	Bd. of Commissioners
Timeline:	'07 -'11
Cost:	<$1000/yr
Funding Source:	Local
Jurisdiction:	Webster (communitywide EMA)
Benefit:	All Residents-2,400

Action Step 1.1.1.2
Network with emergency response personnel/staff at local, state and federal levels

Responsible Org:	EMA
Coordinating Org:	EMA
Timeline:	'07 -'11
Cost:	Staff Time
Funding Source:	Local
Jurisdiction:	Webster (cmtywide EMA)
Benefit:	All Residents-2,400

Objective 1.2 Empower all emergency responders to, when and where appropriate, initiate mitigation actions unilaterally

Task 1.2.1 Obtain legal authority for all emergency responders to issue cease and desist orders and other appropriate directives

Action Step 1.2.1.1
Instruct legal counsel to investigate options and make recommendations for local action

Responsible Org: Governing Bodies
Coordinating Org: EMA
Timeline: '07 -'08
Cost: ±$500
Funding Source: Local
Jurisdiction: Webster-Preston-Weston
Benefit: All Residents-2,400

Action Step 1.2.1.2
Enhance traffic law enforcement

Responsible Org: Webster-Preston-Weston
Coordinating Org: Law Enforcement
Timeline: '07 -'11
Cost: Staff Time
Funding Source: Local
Jurisdiction: Webster-Preston-Weston
Benefit: All Residents-2,400

Objective 1.3 Maintain safe roadways

Task 1.3.1 Budget appropriately for roadway maintenance

Action Step 1.3.1.1
Monitor roadway/railroad intersections for condition and visibility, signage, and vegetation along roadways for necessary maintenance

Responsible Org: Public Works Depts.
Coordinating Org: Elected Bodies
Timeline: '06 -'10
Cost: Staff Time
Funding Source: Operating Budget
Jurisdiction: Webster-Preston-Weston
Benefit: All Residents-2,400

D. Special Multi-Jurisdictional Strategy – All three local jurisdictions are affected similarly by this threat. Consequently, the implementation strategy will apply communitywide.

E. Public Information and Awareness – News of this activity will be included in public service announcements and mitigation programs presented to local civic clubs as an example of mitigation activities and their importance to the well-being of the community.

Chapter 6 – Execution

I Implementation
- A Administrative Actions 1
- B Authority and Responsibility 1
- C Prioritization 1
- D Incorporation into other Plans/Planning Measures 2

II Evaluation
- A Method 3
- B Responsibility 3
- C Timeframe 3
- D Reporting 4

III Multi- Jurisdictional Strategy and Considerations 4

IV Plan Update and Maintenance
- A Public Involvement 4
- B Timeframe 5
- C Reporting 5

I. Implementation

A. Administrative Actions

The chief elected and/or appointed officials of the three local jurisdictions and the EMA Director will serve as a pre-disaster mitigation executive committee. These officials are responsible for day-to-day administrative personnel and operations of their respective local governments, mitigation activities proposed herein, and their respective jurisdiction's responsibilities for plan implementation. It is these individuals who will present and recommend to the governing body policy changes, ordinance adoption, or initiate revisions in administrative procedures necessary to accomplish goals of this mitigation plan. These individuals are responsible for ensuring that action steps specific to their jurisdiction are implemented. The EMA Director is responsible for coordinating and supporting plan activities, and generally overseeing implementation of the five-year plan.

B. Authority and Responsibility

The responsibility and oversight for implementation of this plan is vested in the office of Emergency Management Director.

C. Prioritization

1. Among the strongest findings gleaned from plan preparation is the lack of information-sharing and coordination between elected and appointed officials, and between emergency responders and private sector individuals/organizations with assigned emergency responsibilities. Because information is not only fundamental but essential to success in virtually any endeavor, priority in development of this plan has been placed on compiling and disseminating pertinent information, and coordinating the activities of partners in mitigation. Webster EMA will develop a library of mitigation materials and serve as a clearinghouse of information to be presented to the general public in numerous settings and forums, applied to local government activities and shared between local emergency response agencies. This activity is a non-structural mitigation measure; consisting of action steps less expensive to implement, with broader application irrespective of the type hazard, less expensive to maintain, and more adaptable for application to specific needs than structural measures. Since this is a non-structural measure and there is a wealth of information available on the subjects identified herein, the greatest expense associated with this activity is expected to consist of staff time. As stated in chapter 1, page 1, and documented on page 7, the

community has experience implementing emergency preparedness activities. The balance of plan action steps either supplement or complete previous and current mitigation measures, or are best management practices.

More specifically, priorities were established as functions of time and cost. In large part because of the lack of funds needed to implement the plan unilaterally, actions which were deemed less costly and less time-consuming to implement were given higher priority. These activities also tended generally to impact the greatest proportion of the community. Those of greater expense and requiring more time for implementation were rated lower. As previously mentioned, the vast majority of actions identified will be incorporated into the daily activities of existing (or added) staff.

2. Use of cost benefit – Of the action steps included in this plan, the overwhelming majority involve compilation and/or dissemination of disaster-related information. A major benefit of such non-structural measures is their cost effectiveness; they are generally inexpensive to implement and maintain, have broad applicability and have a lower cost per person. The balance of activity generally either supplements or completes preparedness measures initiated previously by the community, or are best management practices. The “larger ticket” actions which generally have a lower public benefit level and require longer periods of time to implement appear later in the list of priorities

3. Use of other calculations – No other calculations were utilized

4. Use of other review structure – No other review structure was utilized.

D. Incorporation of Pre-Disaster Mitigation into other Plans/Planning Measures

Pursuant to Georgia law, local governments must prepare and adopt a comprehensive plan to maintain eligibility for state grants, loans and/or permits. All three local jurisdictions are diligent in maintaining their “Qualified Local Government” status. Although the chief elected official of the jurisdiction is accountable for ensuring these plans are prepared in accordance with stringent state planning and procedural standards, and formally adopted,

responsibility for ensuring this is accomplished is commonly deferred to the chief administrative official. The chief elected and/or appointed officials of the three local jurisdictions and the EMA Director serve on the pre-disaster mitigation plan executive committee. Annual review and evaluation of this mitigation plan will serve to facilitate incorporation of mitigation measures into daily management functions (budgeting, permit issuance) of the local governments as well as the joint comprehensive plan of the three communities, scheduled to be updated in 2014. The Middle Flint Regional Development Center has helped not only with preparation of this pre-disaster mitigation plan, but has also assisted all three jurisdictions maintain compliance with state mandated comprehensive and other planning requirements.

II. Evaluation

A. Method

An evaluation handbook will be developed using the goals, objectives, tasks and action steps of Chapters 4 and 5 as the format. This document will be used to record the name and contact information of the individual assigned responsibility for overseeing implementation of each action step included in the plan. These assignments will be made at the “organizational” meeting held after formal plan adoption. This handbook will be used by the executive committee to maintain a current, written record of progress made with plan implementation. With the record of project information recorded during the course of the year(s), it will be useful for the end-of-year evaluation (and five-year update).

B. Responsibility

The chief elected and/or appointed officials of the three local jurisdictions and the EMA Director will serve on the pre-disaster mitigation plan executive committee. Annual meetings of the executive committee will be used as the reporting mechanism. Presentations by the various responsible parties to this committee will not only update the EMA Director, but keep the executive committee abreast of plan progress and any shortcomings in plan implementation. This time will be used to adjust or supplement the plan in the event of significant problems or difficulties, and will help maintain responsibility and accountability among the participants.

C. Timeframe

Upon formal plan adoption the EMA Director will convene the executive committee to organize and assign specific responsibilities for plan implementation. The committee shall reconvene twice yearly thereafter to assess progress, and where necessary develop

plan revisions or adjustments. The committee shall perform a progress evaluation of annual progress in December. Based on the results of this evaluation appropriate steps will be taken to facilitate implementation during the subsequent year.

D. Reporting

Annual meetings of the executive committee will be used as the reporting mechanism. Presentations by the various responsible parties to this committee will not only update the EMA Director, but keep the executive committee abreast of plan progress and any shortcomings in plan implementation. This time will be used to adjust or supplement the plan in the event of significant problems or difficulties, and will help maintain responsibility and accountability among the participants. The chairman of the executive committee will make periodic reports to the Webster County Board of Commissioners and the Mayors and Town Councils of Preston and Weston concerning implementation progress. As members of the executive committee, the chief elected/administrative officers of the three local governments may report progress made in plan implementation to their respective governing bodies.

III. Multi-Jurisdictional Strategy and considerations

The chief elected and/or appointed officials of the three local jurisdictions well serve as members of the executive committee. These officials are responsible for the administrative personnel and day-to-day operations of their respective local governments, mitigation activities proposed in the plan, and their respective jurisdiction's responsibilities for plan implementation. It is these individuals who will present and recommend to the governing body policy changes, ordinance adoption, or initiate revisions in administrative procedures necessary to accomplish goals of the mitigation plan. These three individuals have responsibility for ensuring that action steps specific to their respective jurisdictions are implemented.

IV Plan update and maintenance

A. Public involvement

Many of the action steps identified in this plan require direct interaction with the general public. These occasions will be used not only to share critical information needed by the public, but to inform residents of local mitigation activities and to solicit public participation throughout the year. As an official creation of the county, meetings of the executive committee will be public. Consequently, all such meetings will be posted in advance of the meeting date, and the local print media will receive notification

directly. The projected 2011 update of this document is expected to bear little resemblance to the current document. For that reason, and because it is an official plan of all three local jurisdictions, a publicly advertised hearing will be held near the beginning of the update process to inform the public and to solicit public participation. A second hearing will be held near the end of the update process for public comment on the draft document.

B. Timeframe

It is not presently known what planning standards will apply to the projected 2011 plan update. Consequently, it is difficult to accurately predict the specific timetable which will be needed. The comprehensive plans of all three local jurisdictions must again be prepared, go through regional and state reviews and adopted in 2014. Based on current assumptions of future mitigation planning standards, a committee structure and plan preparation process similar to that described in the introduction is proposed. The first of two publicly advertised hearings will be held in the beginning of the update process to inform the general public and solicit public participation. A second hearing will be held near the end of the update process for public comment prior to adoption by local governing bodies.

C. Reporting

The annual meetings of the executive committee will be used as the reporting mechanism. Presentations to this committee by the various responsible plan implementation participants will not only update the EMA Director, but keep the full executive committee abreast of plan progress and any shortcomings in plan implementation. This time will be used to adjust, maintain or supplement the plan in response to significant problems, difficulties and success. This reporting method will help maintain responsibility and accountability. The EMA Director will make annual reports to the Webster County Board of Commissioners and the Mayors and Town Councils of Preston and Weston concerning implementation progress. The chief elected and/or chief administrative officer of all three local governments serves on the executive committee. These individuals will also report progress made in plan implementation to their respective elected governing bodies.

Chapter 7 – Conclusion

I. Summary

Local government adoption of this mitigation plan completes the third of four important steps. Resources have been organized to address the issues associated with hazard mitigation. Residents have identified the natural hazards most likely to affect the community and assessed the level of risk associated with each hazard. Included in this document are the numerous steps which must yet be taken to reduce community exposure to the natural hazards most likely to occur. The fourth step remains to be completed. It is believed that implementation of the action steps identified herein will make the community much safer in the event a disaster should occur. The community can capitalize on past successes in emergency preparedness to continue its efforts to provide for the health, safety and general well-being of the resident population.

II. References

A. Publications: Stewart-Webster Journal

B. Web Sites:
http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~storms
morgan@westegg.com
http:www.esri.com/hazards
http://www.epa.gov/enviro/html/em/index.html
http://www.disastercenter.com/abrgoals.htm#Preparing%20for
http://www.esri.com/hazards/makemap.html

C. Other:
Georgia Department of Natural Resources-ERT, IRS
Georgia Forestry Commission
Georgia Tornado Database
Middle Flint Regional Plan 2004
National Climatic Data Center Database
National Weather Service
Newspaper articles
Webster County-Preston-Weston Comprehensive Plan 2004
Webster County Emergency Operations Plan 2004
1998-2000 Georgia Drought Report
Interviews