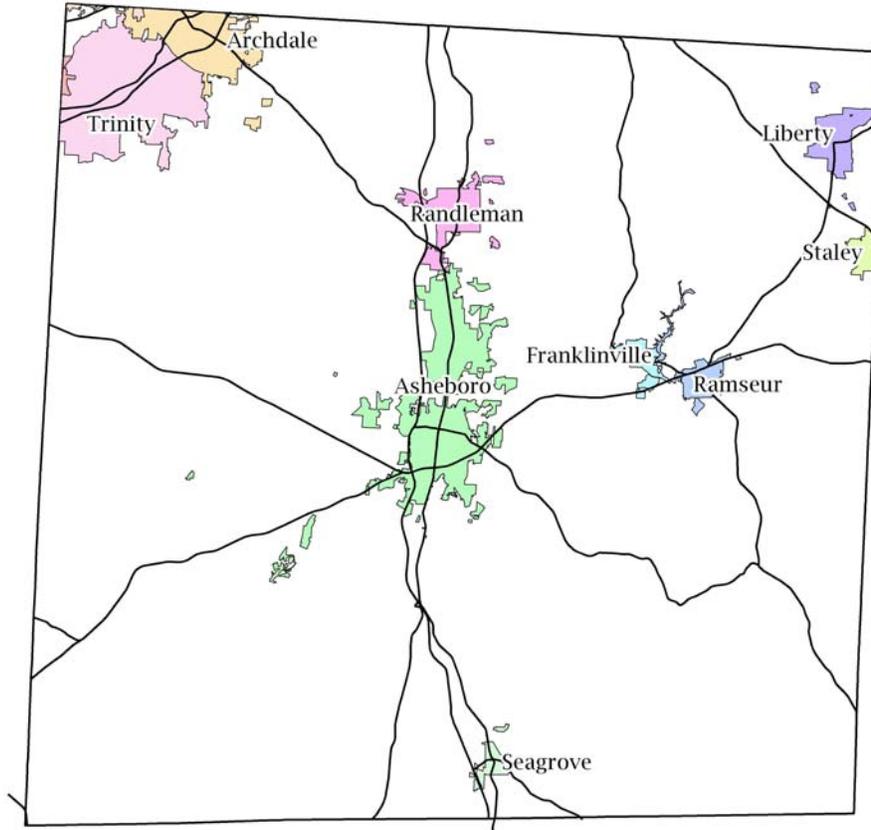


Randolph County



Multi-Jurisdictional Hazard Mitigation Plan

August 5, 2011

Developed and Submitted by:

**Randolph County
Emergency Management
152 North Fayetteville Street
Asheboro NC 27203**

**Randolph County
Planning and Development
204 East Academy Street
Asheboro NC 27203**

Randolph County

Multi-Jurisdictional Hazard Mitigation Plan

Randolph County
City of Archdale
City of Asheboro
Town of Franklinville
Town of Liberty
Town of Ramseur
City of Randleman
Town of Seagrove
Town of Staley
City of Trinity

**Randolph County
Multi-Jurisdictional Hazard Mitigation Plan**

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RANDOLPH COUNTY BOARD OF COMMISSIONERS

Randolph County Office Building ■ 725 McDowell Road ■ P. O. Box 4728
Asheboro, North Carolina 27204-4728 ■ Telephone: (336) 318-6300

Resolution Adopting the Randolph County Multi-Jurisdictional Hazard Mitigation Plan

WHEREAS, the citizens and property within RANDOLPH COUNTY are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the County are particularly vulnerable to dam failures, droughts, earthquakes, floods, hurricanes, tropical systems, extra-tropical systems, landslides, sinkholes, severe thunderstorms, tornados, heatwaves, wildfires, ice events and snow events; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has, in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300, effective July 1, 2001), states therein in Item (a) (2) "For a State of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five-year cycle; and

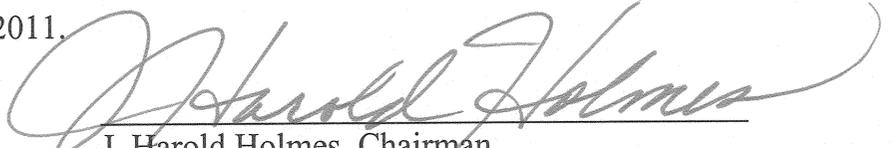
WHEREAS, RANDOLPH COUNTY has performed a comprehensive review and evaluation of each section of the previously approved Randolph County Multi-Jurisdictional Hazard Mitigation Plan and has updated the said Plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Board of Commissioners of Randolph County to fulfill this obligation in order that the County will be eligible for federal and State assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, THEREFORE, BE IT RESOLVED that the Board of Commissioners of Randolph County hereby:

1. Adopts the Randolph County Multi-Jurisdictional Hazard Mitigation Plan; and
2. Vests Donovan Davis, Emergency Services Director, with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Randolph County Department of Emergency Services to assure that the Randolph County Multi-Jurisdictional Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of Randolph County for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Randolph County Multi-Jurisdictional Hazard Mitigation Plan.

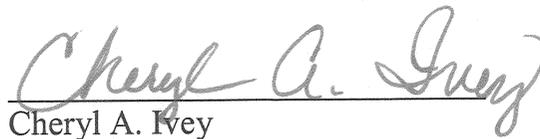
Adopted this the 2nd day of May, 2011.



J. Harold Holmes, Chairman
Randolph County Board of Commissioners

CERTIFICATE:

This is to certify that the foregoing resolution was duly adopted at a meeting held by the Randolph County Board of Commissioners on May 2, 2011.



Cheryl A. Ivey
Clerk to the Board



RESOLUTION ADOPTING THE RANDOLPH COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Randolph County are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to dam failures, droughts, earthquakes, floods, hurricanes, tropical systems, extra-tropical systems, landslides, sinkholes, severe thunderstorms, tornados, heat waves, wildfires, ice event and snow events; and

WHEREAS, the City of Archdale is located in Randolph County and is a participating jurisdiction in the Hazard Mitigation Plan; and

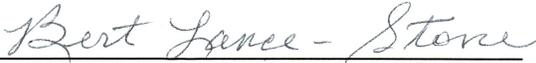
WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster related assistance funding and that said plan must be updated and adopted within a five year cycle; and

WHEREAS, the City of Archdale has participated in the comprehensive review, evaluation, and update of the previously approved Hazard Mitigation Plan; and

WHEREAS, it is the intent of the Archdale City Council to fulfill this obligation in order that the city will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the city; and

NOW, THEREFORE, BE IT RESOLVED that the Archdale City Council adopts the Randolph County Multi-Jurisdictional Hazard Mitigation Plan.

Adopted this the 28th day of June, 2011.


Bert Lance Stone, Mayor

ATTEST:


Susan T. Swaim, City Clerk



City of Asheboro

146 North Church Street
 P O Box 1106
 Asheboro, N. C. 27204-1106



Tel: 336-626-1201

Fax: 336-626-1218

Resolution Adopting the Randolph County Multi-Jurisdictional Hazard Mitigation Plan

WHEREAS, the citizens and property within the City of Asheboro are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the City are particularly vulnerable to dam failures, droughts, earthquakes, floods, hurricanes, tropical systems, extra-tropical systems, landslides, sinkholes, severe thunderstorms, tornados, heatwaves, wildfires, ice events and snow events; and

WHEREAS, the City desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 -- Senate Bill 300 effective July 1, 2001), States therein in Item (a) (2) "For a State of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

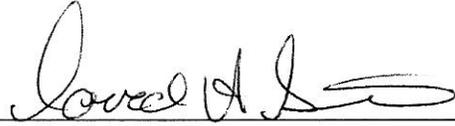
WHEREAS, the City of Asheboro has performed a comprehensive review and evaluation of each section of the previously approved Randolph County Multi-Jurisdictional Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the City of Asheboro City Council to fulfill this obligation in order that the City will be eligible for federal and State assistance in the event that a State of disaster is declared for a hazard event affecting the City;

NOW, THEREFORE, BE IT RESOLVED that the City of Asheboro City Council hereby:

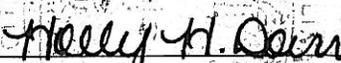
1. Adopts the Randolph County Multi-Jurisdictional Hazard Mitigation Plan; and
2. Vests the City of Asheboro Zoning Administrator with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the City of Asheboro Community Development Division to assure that the Randolph County Multi-Jurisdictional Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the City of Asheboro City Council for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Randolph County Multi-Jurisdictional Hazard Mitigation Plan.

Adopted this the 14th day of July, 2011.

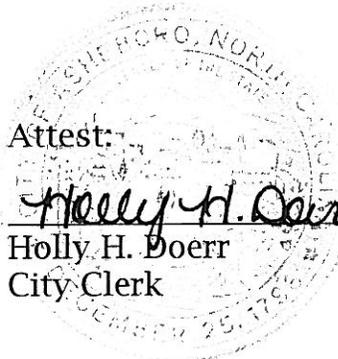


David H. Smith, Mayor

Attest:



Holly H. Doerr
City Clerk



Resolution of Adoption

Randolph County Multi-Jurisdictional Hazard Mitigation Plan

WHEREAS, the citizens and property within RANDOLPH COUNTY are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the County are particularly vulnerable to dam failures, droughts, earthquakes, floods, hurricanes, tropical systems, extra-tropical systems, landslides, sinkholes, severe thunderstorms, tornados, heat waves, wildfires, ice events and snow events; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 -- Senate Bill 300 effective July 1, 2001), States therein in Item (a) (2) "For a State of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 States that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, RANDOLPH COUNTY has performed a comprehensive review and evaluation of each section of the previously approved Randolph County Multi-Jurisdictional Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Board of Commissioners of Randolph County to fulfill this obligation in order that the County will be eligible for federal and

State assistance in the event that a State of disaster is declared for a hazard event affecting the County;

NOW, THEREFORE, BE IT RESOLVED that the Board of Commissioners of the Town of Franklinville hereby:

1. Adopts the Randolph County Multi-Jurisdictional Hazard Mitigation Plan; and
2. Vests Public Works Director Arnold Allred with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Public Works Director, Arnold Allred to assure that the Randolph County Multi-Jurisdictional Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of Randolph County for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Randolph County Multi-Jurisdictional Hazard Mitigation Plan.

Adopted on this day, Tuesday, August 9, 2011.

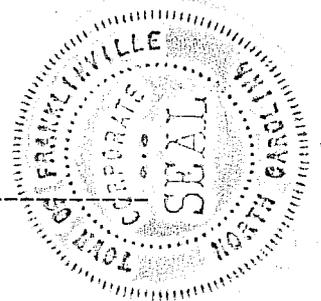
By: _____

Mayor J.L. Grazier

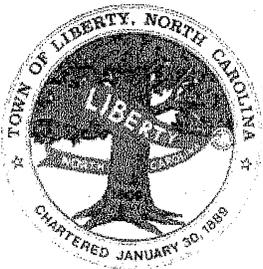
Certified by: _____

Town Clerk Shelia Vince

SEAL : _____



Date: Tuesday, August 9, 2011



TOWN OF LIBERTY

239 S. Fayetteville Street • PO Box 1006 • Liberty, NC 27298
Office (336) 622-4276 • Fax (366) 622-2665
www.Liberty-NC.com.

Resolution Adopting the Randolph County Multi-Jurisdictional Hazard Mitigation Plan

WHEREAS, the citizens and property within the Town of Liberty are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the Town are particularly vulnerable to dam failures, droughts, earthquakes, floods, hurricanes, tropical systems, extra-tropical systems, landslides, sinkholes, severe thunderstorms, tornados, heat waves, wildfires, ice events and snow events; and

WHEREAS, the Town of Liberty desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has, in Part 6, Article 21 of Chapter 143; Parts 3, 5 and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214---Senate Bill 300, effective July 1, 2001), states therein in Item (a) (2) "For a State of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act", and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five-year cycle; and

WHEREAS, the Town of Liberty has performed a comprehensive review and evaluation of each section of the previously approved Randolph County Multi-Jurisdictional Hazard Mitigation Plan and has updated the said Plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

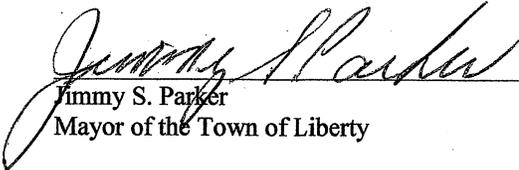
WHEREAS, it is the intent of the Town Council of the Town of Liberty to fulfill this obligation in order that the Town will be eligible for Federal and State assistance in the event that a state of disaster is declared for a hazard event affecting the Town;

NOW, THEREFORE, BE IT RESOLVED that the Town Council of the Town of Liberty hereby:

1. Adopts the Randolph County Multi-Jurisdiction Hazard Mitigation Plan; and
2. Vests Donovan Davis, Emergency Services Director, with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and Local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

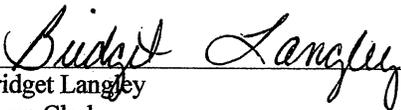
3. Appoints the Randolph County Department of Emergency Services to assure that the Randolph County Multi-Jurisdictional Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of Randolph County for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Randolph County Multi-Jurisdictional Hazard Mitigation Plan.

Adopted this the 25 day of July, 2011


Jimmy S. Parker
Mayor of the Town of Liberty

CERTIFICATE:

This is to certify that the foregoing resolution was duly adopted at a meeting held by the Town Council of the Town of Liberty on July 25, 2011.


Bridget Langley
Town Clerk

STATE OF NORTH CAROLINA
RAMSEUR, NORTH CAROLINA

I, FREIDA C. WAISNER, Town Clerk of the Town of Ramseur hereinafter described,
DO HEREBY CERTIFY as follows:

A regular meeting of the Board of Commissioners of the Town of Ramseur, a Town
Located in the County of Randolph, State of North Carolina, was duly held on July 11,
2011, and minute of said meeting have been duly recorded in the minute book kept by me
in accordance with law for the purpose of recording the minutes of said Board and such
minutes.

Town Administrator presented the Hazard Mitigation Plan to the Mayor and Board of
Commissioners and explained to the Board this plan and how the County and the local
Towns and Cities would address this plan in case of potential hazard occurs. Also that
this plan has been approved by the State and understand each district need to approve
according to State regulations.

I, FREIDA C. WAISNER , Town Clerk of the Town of Ramseur do hereby certify that
the Hazard Mitigation Plan for the Town of Ramseur was approved with a motion by
Commissioner Ray Isley and seconded by Commissioner Randy L. Brooks for approval
of this plan as presented and motion was carried. (see attached copy of plan)

Freida C. Waisner
Town Clerk



Dated this 25th day of July , 2011



CITY OF RANDLEMAN

101 Hilliary Street
Randleman, North Carolina 27317
(336) 495-7500 / Fax: (336) 495-7503
www.randleman.org/
ANTHONY V. LOWE, MAYOR

ALDERMEN

Melissa Blalock, Mayor Pro-Tempore
Bud Talley
Martha Hough
Michael L. Dawkins
Raymond K. Wall

Tony Sears, City Manager

Resolution

Adoption City of Randleman of the
Randolph County Multi-Jurisdictional Hazard Mitigation Plan
As Required by State Senate Bill 300 and in Order to
Remain Eligible for State and Federal Disaster Relief Funding

WHEREAS, Randolph County, the Cities of Archdale, Asheboro, Randleman and Trinity, and the Towns of Franklinville, Liberty, Ramseur, Seagrove and Staley desire to remain eligible for State and Federal Disaster Relief Funds in the event of a declared disaster in Randolph County; and

WHEREAS, the City of Randleman recognized the value of having a plan in place for identifying, prioritizing, and mitigating potential and real hazards that could affect the City; and

WHEREAS, Randolph County, the Cities of Archdale, Asheboro, Randleman and Trinity, and the Towns of Franklinville, Liberty, Ramseur, Seagrove and Staley have prepared a Multi-Jurisdictional Hazard Mitigation Plan and have revised the Plan as suggested by the North Carolina Division of Emergency Management after its submittal to the State and to County, City and Town Departments for review and comment; and

WHEREAS, the North Carolina Division of Emergency Management has endorsed the proposed Randolph County Multi-Jurisdictional Hazard Mitigation Plan; and

WHEREAS, the Federal Emergency Management Agency has endorsed the proposed Randolph County Multi-Jurisdictional Hazard Mitigation Plan;
NOW, THEREFORE BE IT RESOLVED by the City of Randleman that it adopts the Randolph County Multi-Jurisdictional Hazard Mitigation Plan.
BE IT FURTHER RESOLVED that the City of Randleman direct the City of Randleman Fire Marshal to annually review the plan and proposed revisions to Subsection S7 when new data and information become available, as mitigation measures are achieved, and as mitigation strategies evolve; and

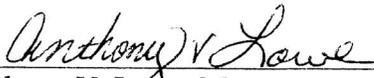
FURTHER, that the City of Randleman may update and revise the Hazard Mitigation Plan as it relates to any unincorporated area but does not affect any other jurisdiction. If any revision, update or amendment involves more than one jurisdiction, then the updates and revisions must be approved by all Commissioners and City and Town Councils of those jurisdictions which are affected. Copies of any revision, amendment or update to the plan by City of Randleman must be sent to each jurisdiction to be filed with the City or Town Clerk and added to the Randolph County Multi-Jurisdictional Hazard Mitigation Plan; and

FURTHER, that after every five year cycle, the hazard analysis, vulnerability assessment and local capability sections of the plan will be reviewed, revised and submitted to the respective County Board of Commissioners and City and Town Councils for its review prior to submission to the North Carolina Division of Emergency Management and the Federal Emergency Management Agency for approval.

FURTHER, that administrative changes, wording corrections, or insubstantial changes do not require additional action by the County Board of Commissioners and City and Town Councils. However, changes that may have a significant impact or significant expenditure of non-budgeted funds, may require action by the respective elected bodies.

Adopted by City of Randleman Board of Aldermen this the 20th day of June, 2011.

Attest:



Anthony V. Lowe, Mayor



Peggy Minshaw, City Clerk

Resolution of Adoption

Randolph County Multi-Jurisdictional Hazard Mitigation Plan

WHEREAS, the citizens and property within RANDOLPH COUNTY are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the County are particularly vulnerable to dam failures, droughts, earthquakes, floods, hurricanes, tropical systems, extra-tropical systems, landslides, sinkholes, severe thunderstorms, tornados, heatwaves, wildfires, ice events and snow events; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), States therein in Item (a) (2) "For a State of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 States that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, RANDOLPH COUNTY has performed a comprehensive review and evaluation of each section of the previously approved Randolph County Multi-Jurisdictional Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Board of Commissioners of Randolph County to fulfill this obligation in order that the County will be eligible for federal and State assistance in the event that a State of disaster is declared for a hazard event affecting the County;

NOW, THEREFORE, BE IT RESOLVED that the Board of Commissioners of Randolph County hereby:

1. Adopts the Randolph County Multi-Jurisdictional Hazard Mitigation Plan; and
2. Vests The Town of Seagrove Board of Commissioners with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Mayor to assure that the Randolph County Multi-Jurisdictional Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of Randolph County for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Randolph County Multi-Jurisdictional Hazard Mitigation Plan.

Adopted on this day, September 6, 2011

By: Town of Seagrove Board of Commissioners

Certified by: _____

Allen Hale, Mayor

SEAL: _____

Cathy G McCaskill, Town Clerk



Date: September 6, 2011

Resolution of Adoption

Town of Staley Multi-Jurisdictional Hazard Mitigation Plan

WHEREAS, the citizens and property within THE TOWN OF STALEY are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the County are particularly vulnerable to dam failures, droughts, earthquakes, floods, hurricanes, tropical systems, extra-tropical systems, landslides, sinkholes, severe thunderstorms, tornados, heatwaves, wildfires, ice events and snow events; and

WHEREAS, the TOWN OF STALEY desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 -- Senate Bill 300 effective July 1, 2001), States therein in Item (a) (2) "For a State of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 States that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the TOWN OF STALEY has performed a comprehensive review and evaluation of each section of the previously approved Randolph County Multi-Jurisdictional Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Board of Commissioners of the TOWN OF STALEY to fulfill this obligation in order that the County will be eligible for federal and State assistance in the event that a State of disaster is declared for a hazard event affecting the County;

NOW, THEREFORE, BE IT RESOLVED that the Board of Commissioners of the TOWN OF STALEY hereby:

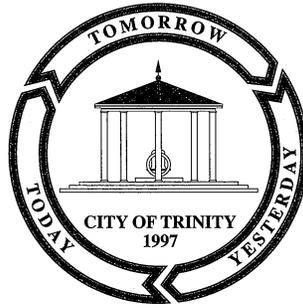
1. Adopts the Randolph County Multi-Jurisdictional Hazard Mitigation Plan; and
2. Vests the Mayor with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Mayor to assure that the Randolph County Multi-Jurisdictional Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of Randolph County for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the TOWN OF STALEY Multi-Jurisdictional Hazard Mitigation Plan.

Adopted on this day, July 12, 2011

By: The Town of Staley Board of Commissioners

Certified by: Lorna Hart SEAL : _____

Date: 7-12-11



**Resolution Adopting a Section of the Randolph County
Multi-Jurisdictional Hazard Mitigation Plan that pertains to City of Trinity**

- WHEREAS,** the citizens and property within Trinity are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the City are particularly vulnerable to dam failures, droughts, earthquakes, floods, hurricanes, tropical systems, extra-tropical systems, landslides, sinkholes severe thunderstorms, tornados, heat waves, wildfires, ice events and snow events; and
- WHEREAS,** the City of Trinity desires to seek ways to mitigate the impact of identified hazard risks within its jurisdiction; and
- WHEREAS,** the Legislature of the State of North Carolina has, in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and
- WHEREAS,** the legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214--- Senate Bill 300, effective July 1, 2001), states therein in Item (a) (2) "For a State of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and
- WHEREAS,** Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five-year cycle; and
- WHEREAS,** the City of Trinity has performed review and evaluation of its section of the previously approved Randolph County Multi-Jurisdictional Hazard Mitigation Plan and has updated said Plan as pertains to mitigation of

known hazards within its jurisdiction as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency

Management Agency and the North Carolina Division of Emergency Management; and

WHEREAS,

it is the intent of the City Council of Trinity to fulfill this obligation in order that the City will be eligible for Federal and State assistance in the event that a state of disaster is declared for a hazard event affecting its jurisdiction,

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Trinity hereby:

1. Adopts the section of the Randolph County Multi-Jurisdictional Hazard Mitigation Plan that pertains to the City of Trinity; and
2. Vests Donovan Davis, Emergency Services Director, with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and Local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Randolph County Department of Emergency Services to assure that the Randolph County Multi-Jurisdictional Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of Randolph County and all municipalities within the County for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Randolph County Multi-Jurisdictional Hazard Mitigation Plan.

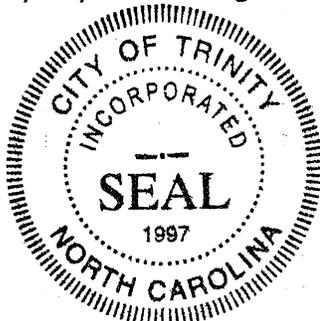
Adopted this the 16th day of August, 2011


Carlton Boyles, Mayor

CERTIFICATE:

This is to certify that the foregoing resolution was duly adopted at a meeting held by the Trinity City Council August 16, 2011


Debbie Hinson, City Clerk



Randolph County Multi-Jurisdictional Hazard Mitigation Plan

Introduction:

The Randolph County Multi-Jurisdictional Hazard Mitigation Plan, hereinafter referred to as the Plan, was originally developed in 2003 and 2004 as a collaboration between Randolph County Government and the municipalities within the boundaries of the County. The plan was developed as a result of changes made to Robert T Stafford Disaster and Emergency Assistance Act in 2000, Public Law 106-390, also known as the Disaster Mitigation Act of 2000. The interim final rules were adopted by the Federal Emergency Management Agency (FEMA) on February 26, 2002, as 44 CFR Parts 201 and 206.

The North Carolina General Assembly, through the Emergency Management Act of 1977, and as amended by Senate Bill 300 in 2001, also requires a hazard mitigation plan to be approved by North Carolina Emergency Management (NCEM), and FEMA. These plans were required to be adopted by November 2004.

As required by aforementioned laws and rules, Randolph County Government and the municipalities are required to update the Plan after a declared Presidential Disaster or every five years after the adoption of the current Plan. As a result of the required updates, Randolph County Emergency Management and Randolph County Planning Department were determined to be the lead agencies to oversee the update and coordinate meetings of the Hazard Mitigation Taskforce.

All meetings of the Hazard Mitigation Taskforce were open to the public. These meetings, which are documented in more detail later in this document, were held to inform the Taskforce members of the pending update and the need to begin work on reviewing goals, strategies and demographic data as needed. Since the work of the Taskforce was the update of the Plan, some of the steps involved with the development of the Plan were less complicated when compared to the process in 2003 and 2004. Each jurisdiction was responsible for conducting its own planning process, risk assessment, hazard identification, vulnerability assessment and the development of mitigation strategies.

Organization of Document:

Section I of the plan describes the participants, and the purpose of the plan. It also outlines key findings in the analysis of the hazard profile and vulnerability assessment. These findings provided the basis for choosing mitigation strategies specific to the County and each municipality.

The core of the plan is contained in Section II, Hazard Mitigation Strategies, which outlines the consensus goals developed by the County and the municipalities as well as the strategies that will be implemented by the County and each municipality to reduce or eliminate exposure to natural hazards. Strategies were developed for each municipality based on geographic hazards within their jurisdiction, vulnerability, and local capability. The comprehensive assessment conducted in Phase I provided that information.

Section II of the plan includes ten subsections, which includes the County and the nine municipalities, and describes the objectives and strategies for each individual jurisdiction. Many of the strategies included for unincorporated Randolph County will cover each municipality as well.

Each subsection will:

- Identify the jurisdiction;
- Briefly describe the major concerns for the jurisdiction;
- Identify mitigation objectives and strategies;
- Describe implementation;
- Describe the monitoring, evaluating and reporting process; and
- Include a provision to allow for revisions and updates within individual jurisdictions so long as such revisions and updates do not affect any other jurisdiction.

Purpose of the Plan:

The purpose of the Plan is to:

- Identify hazards;
- Develop a historic profile of natural disaster events;
- Assess County and municipal hazard risks and vulnerabilities; and
- Identify and promote mitigation efforts.

Mitigation efforts are sustained actions that will reduce or eliminate long-term risk to people and property from impacts of natural hazards or disasters. Any action taken before, during, or after a disaster event that makes structures, buildings, and communities resilient and minimizes the impact on the affected population community, built environment, and businesses can be a mitigating activity.

Statement of the Problem:

In order to reduce the cost to the Federal government of relief, recovery, and reconstruction after natural disasters, as well as to save lives, FEMA, through legislation of Congress, administers programs, such as the National Flood Insurance Program, to offset the rising costs of disaster relief and assistance. In addition, after a Presidential Disaster Declaration, federal loans and assistance in the form of Small Business Administration (SBA) Disaster Loans, US Department of Agriculture (USDA) disaster program grants and Housing and Urban Development (HUD) Community Development Block Grants (CDBG funds) are made available to local communities. The costs for federal disaster relief have been escalating as the federal government increasingly takes financial responsibility when state and local governments are unable to meet the needs of their communities in the event of a disaster. At times, disaster aid has been repeatedly applied to recovery and reconstruction of property and structures in the same manner and in the same hazardous location as they were before the disaster occurred.

Most of the losses from natural disaster events can be traced to changes in population behaviors and characteristics of development. As the population is exposed to hazards and the growing complexity of urban systems, there is more to lose in natural disaster events. FEMA continues to strongly promote hazard mitigation as the only sensible long-term solution toward building for a safer future. However, in many policy areas dealing with effective mitigation activities, it is the states and localities that have the constitutional authority to adopt and implement these mitigation tools. States and localities are responsible for land use planning, regulation of building codes and construction practices, protecting local water supplies, and ensuring street access in emergencies. In addition, local government better knows the needs of their community, its resources, and specific hazards they face.

Finding a way to balance economic development objectives, as well as the need to protect the public, property and the environment, is difficult. The capacity and commitment of local government are major factors in whether or not mitigation tools will be effectively used. Local government capacity refers to the amount of resources and technical expertise available to the community. Commitment refers to the willingness of local officials and elected leaders to advocate for hazard mitigation. This multi-jurisdictional hazard mitigation plan is a first step in building local capacity for dealing with natural disasters and each jurisdictions continued compliance with the NFIP.

Acceptable Risk

Through careful analysis of these documents, the following natural hazards were determined to present minimal hazard risk and therefore have an acceptable risk:

- Landslide: possible, low impact, high occurrence confined to region designated as rural growth management area;
- Earthquake: epicenter likely in Charleston, South Carolina area. Fault may produce tremors in region up to 7.5 on Richter scale, however, likelihood of occurrence is low, although an occurrence could have significant impact on structural integrity of dams;
- Heat wave: likely, low impact; and
- Wildfire: highly likely, low impact.

Natural Hazards of Concern

Natural hazards of immediate concern in developing mitigation goals, objectives and strategies are for Randolph County and its municipal jurisdictions may include:

High Wind Hazards

- Countywide vulnerability;
- Signage, manufactured homes and modular classrooms are especially vulnerable;
- Includes tornadoes, all tropical and extra tropical cyclonic systems, and severe thunderstorms. (High winds are actually one element in these multi-hazard events characterized by wind, hail, lightning, rain and flood.);
- Wind speeds will most likely be between 38 to 90 mph. Wind speeds greater than 90 mph are possible especially with tornadoes, however, mitigation strategies will be aimed at reducing the impacts of wind speeds up to 90 mph;
- Multiple yearly occurrences are likely; and
- Damage to roofs, power lines, and trees with severe injury or death is possible.

Winter Storms

- Countywide vulnerability, including all municipalities;
- Countywide critical facilities could shut down for up to two weeks. (Major power outages to facilities that are service dependent upon electricity for operations.); and
- Ice storms produce most damage to trees, power lines, and buildings through snow loading and ice accumulation.

Flood

On January 1, 2008, new Digital Flood Insurance Rate Maps (DFIRMS) became effective for Randolph County and its municipalities. As of the current date, all jurisdictions in Randolph County, with the exception of Town of Seagrove and the Town of Staley, are members of the National Flood Insurance Program (NFIP). These new maps caused some dramatic changes in flood

plains and flood ways. Homes that were built prior to January 1, 2008, could have been located in a Class C flood plain on the 1981 maps; however with the new DFIRMS that same home could now be located in a Special Flood Hazard Area (SFHA). This change has caused significant concern since it has created potential changes in repetitive loss structures and those structures that are required to have flood insurance.

The 1981 Flood Maps indicated that approximately 25,178.50 acres in the County were in a Class A flood plain. As a result of the new 2008 DFIRMS, there is now approximately 505,116.91 acres located within SFHAs. Prior to the 2008 DFIRMS, the municipalities of Liberty, Seagrove and Staley contained no Class A flood plains; however, with the implementation of the 2008 DFIRMS, all municipalities, with the exception of Staley, contain SFHAs.

Based upon the new DFIRMS provided by the State, there are now 272 structures located within a SFHA with approximately 680 people exposed to the hazard. The total value of parcels and buildings in the SFHA is \$44,995,700. Overall there are 6,523 parcels in the County that contain SFHA anywhere on the parcel. The total value of parcels and any associated buildings on those 6,523 parcels is approximately \$1,105,088,900.

- **Priority vulnerable areas:** Archdale, Asheboro, Franklinville, Trinity, and portions of Northeast and northwest Randolph County.
 - **Northwest Randolph County:** 110 occupied units in flood zone at a structure value of \$13,982,170 million. 275 persons exposed to flood hazard.
 - **Northeast Randolph County:** 137 occupied units in floodplain at structure value of \$27,600,210 million. 343 persons exposed to flood hazard.
 - **Asheboro:** Policies in force as of 12/31/2002: 19 Insurance in force whole dollar: \$1.9 million.
 - **Archdale:** 26 policies in force as of November 30, 2008, with \$3,680,300.00 insurance in force.
 - **Trinity:** City joined NFIP March 16, 2004.
 - **Franklinville:** NFIP member with no policies in force.
 - **Randleman:** NFIP member with one policy in force.
 - **Ramseur:** NFIP member with no policies in force.

Currently all jurisdictions in the County, with the exception of the Towns of Seagrove and Staley, are members of the NFIP.

Dam Failure Hazard

- Randolph County has 204 dams scattered throughout the County. Of those dams 139 are classified as low hazard, 41 as intermediate hazard dams, and 24 high hazard dams. This classification is from the North

Carolina Department of Environment and Natural Resources, Dam Safety Office.

- While the likelihood of dam failure is low, a high hazard dam failure could cause catastrophic damage and result in death.
- **Priority vulnerable areas are:**
 - **Archdale:** Two high hazard dams with development downstream.
 - **Franklinville:** Ramseur Water Supply Dam and Randolph Mill Dam are in need of maintenance. These dams would directly impact the town of Franklinville and the structures located within the floodplains. Currently there is no emergency supply water source for Franklinville and Ramseur.
 - **Randleman:** The main concern is the Randleman Lake. Downstream development would be catastrophically impacted if the dam failed. Though the lake area is known, mapped and filled with water, floodplains surrounding the lake area have not been determined. Since the dam was under construction when the State undertook the Flood Map Modernization program in this area, no determination of flood plains was made. The flood plains for the lake area are to be updated during the map maintenance process. The buffer area around the lake is 200 feet.
 - **Ramseur:** The Ramseur Water supply dam is in need of maintenance. Dam failure would catastrophically impact the town of Franklinville and also disrupt all water supplies to Ramseur and Franklinville.
 - **Trinity:** There are three high hazard dams within City limits.

Sinkhole/Subsidence

Subsidence is the sudden (e.g., over two hours) or gradual downward movement of the ground surface (e.g., dropping by a few inches over a number of years.)

- The greatest potential for subsidence exists over abandoned underground mines, tunnels or shafts which includes gold mines. Tunnels and shafts may extend for hundreds of feet horizontally and vertically underground. There are several abandoned gold mines with underground workings scattered throughout the County. The *exact* location of the mines and the extent of underground workings are unknown. According to the Senior Geologist for the State of North Carolina, the location of these mines and information pertaining to their type are maintained by the North Carolina Geological Survey and US Bureau of Mines. The County has endeavored to place these mine locations and information in its GIS.
- Northwest Randolph County is a high concern area since it has multiple large mines scattered throughout the quadrant in areas designated as primary and secondary growth areas likely to be developed.

- Southwest Randolph County is becoming a high concern area due to the number of abandoned gold mines in that area. High levels of arsenic in groundwater have been detected in this area especially around the Loflin Hill Rd where the US Environmental Protection Agency (EPA) conducted superfund hazardous substance removal in 2004 and 2005. The EPA has established a limit of 0.01 parts per million (ppm) for arsenic in drinking water.¹ Some sites in this area have ppm counts as high as 100 ppm.² This area of the County is mainly served by private wells instead of a public water supply.

Repetitive Loss Structures:

Randolph County and its municipalities have three recorded repetitive loss structures.

Participants in the Planning Process

This Multi-jurisdictional Hazard Mitigation Plan was developed through the efforts of individuals representing the County and each municipality. The participants have included, but are not limited to, the following:

County Government participants have included:

- Richard Wells, County Manager;
- Will Massie, Deputy County Manager;
- Neal Allen, Director, Emergency Services (retired);
- Donovan Davis, Director, Emergency Services;
- Paxton Arthurs, Director, Building Inspections;
- Annette Crotts, Director, Information Technology (retired);
- Michael Rowland, Director, Information Technology;
- Debra Hill, Director, Tax Department;
- Amanda Varner, Deputy Clerk to the Board of Commissioners;
- Tim Mangum, Information Specialist, Planning Department;
- Terry VanVliet, Director, Veteran Services; and
- Martha Halsey, Public Health Preparedness, Health Department.

Randolph Community College participants have included:

- Tommy McNeill, Director of Safety, Randolph Community College;

¹ Environmental Protection Agency, *EPA Superfund Removal to Begin at the Loflin Gold Mine Site, Trinity Township, Randolph County, North Carolina*. Atlanta, GA, 2004

² Jim Bateson, Raleigh NC, to Henry C Royals, Jr.

- Ken Fields, Program Coordinator, Randolph Community College; and
- Bob Shackelford, President, Randolph Community College.

Asheboro City Schools participants have included:

- Diane Frost, Superintendent, Asheboro City Schools; and
- Brad Rice, Director of Special Programs, Asheboro City Schools.

Randolph County Schools participants have included:

- Marty Trotter, Assistant Superintendent of Operations, Randolph County Schools; and
- Ray Kiser, Director of Maintenance, Randolph County Schools.

Human Service Agencies participants have included:

- Larry Pugh, Chief, Ash-Rand Rescue and EMS; and
- Candie Rudzinski, Director, Senior Adults Association.

Public Utilities participants have included:

- Joy Sparks, Piedmont Triad Regional Water Authority.

State Agency participants have included:

- Pat Way, NC Zoo.

City of Asheboro participants have included:

- Reynolds Neely, Planning Director.

City of Archdale participants have included:

- Jeff Wells, Planning Director;
- Jerry Yarborough, City Manager;
- D J Señeres, Stormwater Program Manager;
- Gary Lewallen, Chief, Police Department; and
- Shannon Craddock, Police Department.

Town of Franklinville participants have included:

- Arnold Allred, Public Works Director; and
- Shelia Vince, City Clerk

Town of Liberty participants have included:

- J R Beard, Chief, Fire Department.

Town of Ramseur participants have included:

- Kevin Franklin, Town Administrator.

City of Trinity participants have included:

- Adam Stumb, Planning Director.

On September 23, 2008, the County Emergency Services Department invited representatives of County and Municipal Government, Boards of Educations, Community College, Piedmont Triad Regional Water Authority and Senior Adults Association to being the update process for the Hazard Mitigation Plan. Those attending were given a timeline showing when specific tasks had to be completed in order to file the updated plan with NC Emergency Management and FEMA on time. Attendees were given assignments to review their portion of the plan and begin reviewing the previous goals and strategies. A follow-up meeting would be held at a later date to update the information.

The attendees of the meeting on September 23, 2008, are as follows:

County Representatives

- Neal Allen, Director, Emergency Services (retired);
- Donovan Davis, Director, Emergency Services;
- Paxton Arthurs, Director, Building Inspections;
- Annette Crotts, Director, Information Technology;
- Debra Hill, Director, Tax Department;
- Amanda Varner, Deputy Clerk to the Board of Commissioners;
- Tim Mangum, Information Specialist, Planning Department;
- Terry VanVliet, Director, Veteran Services; and
- Martha Halsey, Public Heath Preparedness, Health Department.

Municipal Representatives

- Arnold Allred, Public Works Director, Town of Franklinville;
- Kevin Franklin, Town Administrator, Town of Ramseur;
- Jerry Yarborough, City Manager, City of Archdale;
- J R Beard, Chief, Town of Liberty Fire Department;
- Gary Lewallen, Chief, City of Archdale Police Department;
- Shannon Craddock, City of Archdale Police Department; and
- Reynolds Neely, Planning Director, City of Asheboro.

Educational Representatives

- Diane Frost, Superintendent, Asheboro City Schools;
- Tommy McNeill, Director of Safety, Randolph Community College;

- Brad Rice, Director of Special Programs, Asheboro City Schools;
- Bob Shackelford, President, Randolph Community College;
- Marty Trotter, Assistant Superintendent of Operations, Randolph County Schools;
- Ray Kiser, Director of Maintenance, Randolph County Schools; and
- Ken Fields, Program Coordinator, Randolph Community College.

Public Utilities

- Joy Sparks, Piedmont Triad Regional Water Authority.

Human Service Agencies

- Larry Pugh, Chief, Ash-Rand Rescue and EMS; and
- Candie Rudzinski, Director, Senior Adults Association.

State Agencies

- Pat Way, NC Zoological Park.

On January 13, 2009, the County Planning Team convened and reviewed the section of the plan that pertained to Unincorporated Randolph County. The Team reviewed each strategy and discussed strategies that have been completed, those yet to be completed and new strategies for the next five year process. Those decisions are documented in the next section of this plan.

The following County Staff was present for this meeting:

- Richard Wells, County Manager;
- Will Massie, Deputy County Manager;
- Donovan Davis, Director, Emergency Services;
- Paxton Arthurs, Director, Building Inspections;
- Annette Crotts, Director, Information Technology;
- Michael Rowland, Network and Security Manager, Information Technology;
- Debra Hill, Director, Tax Department;
- Amanda Varner, Deputy Clerk to the Board of Commissioners;
- Tim Mangum, Information Specialist, Planning Department;
- Terry VanVliet, Director, Veteran Services; and
- Martha Halsey, Public Health Preparedness, Health Department.

This Multi-Jurisdictional Hazard Mitigation Plan was developed through the efforts of individuals representing the County and each municipality.

The following list indicates the roles that the above individuals had in the revision of the 2004 Plan.

The County Planning Committee consisted of Donovan Davis, Hal Johnson, Jared Byrd and Tim Mangum. This Committee is responsible for the maintenance and update of the Plan as required by NCEM and FEMA guidelines. The Committee worked to update the entire Plan and encouraged all municipalities to submit update information in a timely manner. The Committee also coordinated all public meetings during the revision process.

Arnold Allred and Shelia Vince, Town of Franklinville, coordinated the review and update process for the Town. Information from the Town's review was forwarded to the County Planning Committee for inclusion in the Plan update.

Kevin Franklin, Town of Ramseur, coordinated the review and update process for the Town. Information from the Town's review was forwarded to the County Planning Committee for inclusion in the Plan update.

D J Señeres, City of Archdale, coordinated the review and update process for the City. Information from the City's review was forwarded to the County Planning Committee for inclusion in the Plan update.

Greg Patton, City of Randleman, coordinated the review and update process for the City. Information from the City's review was forwarded to the County Planning Committee for inclusion in the Plan update.

Karen Scotton, Town of Staley, coordinated the review and update process for the Town. Information from the Town's review was forwarded to the County Planning Committee for inclusion in the Plan update.

J R Beard, Town of Liberty, coordinated the review and update process for the Town. Information from the Town's review was forwarded to the County Planning Committee for inclusion in the Plan update.

Adam Stumb, City of Trinity, coordinated the review and update process for the City. Information from the City's review was forwarded to the County Planning Committee for inclusion in the Plan update.

There was no updated information provided by the City of Asheboro, except a Land Use Plan, and the Town of Seagrove despite numerous attempts by the County Planning Committee to encourage the update of the information. The methods used to contact these municipalities included telephone calls, first class mailed letters and e-mails to elected officials and administrative officers for the municipalities.

Description of the Planning Process

Phase I: September 2008 through January 2009

- Identify contacts for municipalities and other involved agencies to prepare for the Plan update.
- Meeting held on September 23, 2008, with identified contacts to being the update process. Attendees were given assignments to review their portion of the Plan and to review the previous goals and strategies. As part of that process each jurisdiction was tasked with the following:
 - Review the vulnerability assessment. Any changes to the assessments were to be reported to the County for inclusion in the 2009 Plan.
 - Review existing ordinances, regulations, studies, reports and land use plans for elements related to hazard mitigation.

Phase II: January 2009 through April 2009

- County Planning Team met on January 13, 2009, to review the section of the Plan pertaining to Unincorporated Randolph County.
- Municipalities met on January 15, 2009, to review the appropriate sections to the Plan. Each jurisdiction was advised to forward updated documents to the County for inclusion in the 2009 Plan update.
- Sections of the Plan that have been updated based upon information from the jurisdictions include:
 - County of Randolph (Subsection 1);
 - City of Archdale (Subsection 2);
 - Town of Franklinville (Subsection 4);
 - Town of Liberty (Subsection 5);
 - Town of Ramseur (Subsection 6);
 - City of Randleman (Subsection 7);
 - Town of Staley (Subsection 9); and
 - City of Trinity (Subsection 10).

All other municipalities not listed have not forwarded update information to the County.

First Public Meeting: May 14, 2009

The first public meeting was advertised in *The Courier-Tribune* and posted on the County website. Copies of the draft plan were available in the County Planning Department and on the County website.

The public meeting was held at 6:30 pm in the Board of Commissioners Meeting Room. No citizens attended the meeting. The County Emergency Services Department and the Planning Department were represented along with the City of Asheboro Planning Department.

Second Public Meeting: May 2, 2011

The next public meeting was advertised in *The Courier-Tribune* and posted on the County website. Copies of the draft plan were available in the County Planning Department and on the County website.

The public meeting was held at 7:13 pm in the Board of Commissioners Meeting Room. No citizens attended the meeting. The County Emergency Services Department and the Planning Department were represented at the meeting.

Multi-Jurisdictional Hazard Mitigation Plan

1. Plan Components

The following subsections contain the Hazard Mitigation Plans for each jurisdiction in Randolph County. The plans were designed to address the specific hazards or vulnerabilities of each jurisdiction. Each subsection will:

- Identify the jurisdiction;
- Briefly describe the community's profile;
- Briefly describe the major concerns for the jurisdiction;
- Identify mitigation goals, objectives and strategies;
- Describe implementation;
- Describe the monitoring, evaluating and reporting process; and
- Include a provision to allow for revisions and updates within individual jurisdictions as long as such revisions and updates do not affect any other jurisdiction.

2. Hazard Mitigation Goals

Goals are general guidelines that explain in a broad sense, what you want to achieve. Goals are usually expressed as broad policy statements. The goals stated in this hazard mitigation plan represent the desired long-term results sought by Randolph County and its municipalities. The objectives address problems and situations identified through analysis of the hazard profile, vulnerability assessment, and local government capability assessment and are specific to each jurisdiction.

1. To enhance local government capability to lessen the impacts of all natural hazards.
2. To identify and protect critical services, buildings, facilities and infrastructure that are at risk of damage due to natural hazards and to undertake cost-effective mitigation measures to minimize losses.

3. To develop an effective public awareness/education/outreach program for natural hazards the County and municipalities are most likely to experience.
4. To protect persons and property, as well as reduce damage and loss to existing community assets.
5. To ensure disaster resistant future development.

3. Hazard Mitigation Strategies

Mitigation tools are designed to reduce risk, eliminate risk, or share risk. Risk reduction refers to activities that reduce the impact of natural hazards and involves either structural or non-structural measures. Structural measures involve building or creating control structures that modify the hazard, such as dams, levees, and seawalls. Structural measures were widely used to control flooding throughout the United States. However, there are limits to the usefulness of structural measures. Most significant structural barriers have already been built and these structures in and of themselves constitute a hazard risk. In addition, there are long-term adverse impacts of structural controls on the environment. The ensuing destruction of ecosystems, far beyond the geographic area where the structure was built, makes this strategy much less desirable.

Non-structural risk reduction measures modify vulnerability or exposure **to** the hazards. These measures may include: setting building codes standards; enforcing building codes; conducting ongoing building inspections to ensure that structural integrity is maintained, building strengthening and retrofits to withstand winds or absorb the force of movement, as well as safe construction practices, such as securing the building to the foundation and using appropriate fastener to connect roofs to structures.

Risk reduction measures are generally effective. However, when land use planning for hazards is not incorporated into a hazard mitigation plan, risk reduction measures may also be used as a way to develop hazard prone areas for short-term economic gain instead of steering development to safer areas. Planning is the key to making mitigation a proactive rather than reactive process and to ensuring that land subject to hazards is identified and managed appropriately to reduce future exposure.

Through planning, individual mitigation projects and initiatives can be carried out in a cooperative manner so that all local activities are unified and consistent, and no single action or project detracts from the overall goal of creating a safer community.

Planning also plays an important part in generating community understanding of and support for hazard mitigation. The hazard mitigation planning process serves to publicize hazard information and create a forum for discussion of how best to balance the public interest and private property rights.

Risk sharing involves using financial instruments to spread the cost of the disaster event and moderate financial losses to business, individuals and community through insurance, tax incentives, and relief payments. The National Flood Insurance Program is the strongest example of a risk sharing measure, though there is criticism that such programs promote development in hazard prone (flood prone) areas.

All of these types of strategies were considered for each jurisdiction with a major emphasis on planning strategies. See Appendix H for master list of mitigation strategies under consideration by each jurisdiction.

4. Implementation of Hazard Mitigation Strategies

The Randolph County Multi-Jurisdictional Hazard Mitigation Plan will be implemented through the delegation of assignments specified within this Plan. In each jurisdictional plan an individual jurisdiction's mitigation actions are listed and assigned specific implementation measures which include the assignment of responsibilities to local government departments and/or specific staff, and a time frame for implementation for each proposed mitigation action. Strategies that will be incorporated into existing programs or activities are identified. When applicable, potential funding sources were also listed. Plan implementation will start from the time that it each plan is adopted.

5. Monitoring, Evaluating, and Reporting Progress

Each Plan identifies the persons or position responsible for routine monitoring of the plan. The evaluation form in Appendix D will be used by County staff to begin the evaluation process. The base year statistics used in calculating progress will be the year prior to each five-year cycle. This form will be completed and submitted to the County Hazard Mitigation Taskforce, as well as all City and Town Managers (where there is no Town Manager the form will be sent to the Town Clerk).

Using the evaluation form, each jurisdiction must create a progress report summarizing the progress of the Plan. The evaluation and progress report should consider the following questions.

- Have lead agencies participated as originally proposed?
- Have outcomes been adequate?
- What problems have occurred in the implementation process?
- Have members of the public been adequately involved?

The report will include:

- The status of benchmarks and indicators;
- Difficulties or impediments during implementation;
- Changes in County priorities; and
- Recommendations for changes, revisions, or amendments to the Plan.

6. Revisions and Updates

Each jurisdiction will produce a progress report with recommendations for updates and revision and bring it before their Commissioners or Councils. As updates occur, the date, reason and responsible party should be noted. Updates or revisions which affect the plan as a whole or impacts any other jurisdiction(s) will require a presentation of findings and recommendations be submitted to those jurisdictions' council members for adoption.

When changes to any part of this plan entail substantial budgetary considerations, the revisions or amended plan must be submitted to the NCDEM and FEMA for review.

At the end of every five-year cycle, the hazard mitigation taskforce will submit the hazard profile, vulnerability assessment and local capability section updates or revisions to FEMA and NCDEM for review. The updated plan will then be forwarded to each County, City and Town Manager (where there is no town manager, the town clerk) for review and subsequent adoption by the City/Town Council.

7. Continued Public Involvement

To facilitate continued public involvement in the planning process:

- The public will be invited to participate in the annual review of the plan;
- Copies of the plan will be kept on hand at all public libraries and at appropriate agencies through the County, Cities, and Towns. The plan will have a contact address, email address, and phone number of the

person responsible for keeping track of public comments on the plan;
and

- The plan will be available on the Randolph County Website, and will contain an email address and phone number the public can use for submitting comments and concerns about the plan.

Subsection 1

Hazard Mitigation Plan for Unincorporated Randolph County:

Community Profile: Randolph County is located in central North Carolina and covers 789.245 square miles, of which 246.585 square miles are located in watersheds and watershed critical areas. Of the 505,116.9-1-11 acres of land in the County, 311,657 acres are forestland. Of these, 300,407 forestland acres are privately owned property. The Uwharrie National Forest covers about 34,372 acres of land in southwestern Randolph County and of that total 4,140 acres are owned by the Federal Government. Current population of Randolph County, as determined by the 2000 Census, is 130,454, which is a 22.4% increase over the past ten years.

The top twenty-five employers as ranked by the Randolph County Economic Development Corporation are:

Table 1: Top 25 Employers in County

Employer	Number employed	Industry	Location
Randolph County School	2,898	Education	Entire County
Klaussner Furniture	1,121	Upholstered furniture	Asheboro
Randolph Hospital	1,086	Health care	Asheboro
Energizer Battery	867	Batteries	Asheboro
Acme-McCrary	782	Active-wear/intimates	Entire County
Wal-mart	777	Retail	Asheboro and Randleman
County of Randolph	712	County government	Entire County
Asheboro City Schools	653	Education	Asheboro
Sealy, Inc	507	Mattresses	Archdale
Teleflex, Inc.	512	Catheters	Randleman
Technimark	491	Plastic products	Asheboro
Dart Container	360	Plastic cups and lids	Randleman
United Furniture	360	Upholstered furniture	Trinity
Wells Hosiery	350	Hosiery	Asheboro
Goodyear Tire and Rubber	348	Wire cord	Asheboro
The Timken Company	345	Tapered bearings	Randleman
Prestige Fabricators	332	Foam products	Asheboro
Hughes Furniture	326	Furniture	Randleman
City of Asheboro	312	City government	Asheboro
Bossong Hosiery	300	Hosiery	Asheboro
NC Zoological Park	292	State zoo	County
Kayser-Roth	266	Hosiery	Asheboro
Oliver Rubber	266	Rubber products	Asheboro
Ultra Craft Company	235	Kitchen cabinets	Asheboro
Elastic Therapy	235	Medical hose	Asheboro

The type of residential growth occurring in Randolph County is described as rural sprawl and has been primarily medium to large lot single-family residential land subdivisions. Most of this development occurs outside of areas served by public infrastructure.

Randolph County has developed a Growth Management Plan and has identified Growth Management Areas within the County. Municipal Growth Areas are designated for high-density development. The Primary Growth Areas are located adjacent to municipal limits and extends along the major transportation corridors which transverse the County. These areas will be higher density areas likely to have access to infrastructure such as water and sewer. This area is zoned for mixed use that will include residential, commercial and industrial development.

Secondary Growth Areas are medium density areas without access to public infrastructure and predominantly residential.

The Rural Growth Areas are largely woodland, forest, and large undeveloped tracts of land predominantly agricultural and rural residential. These areas are part of the County's open space system.

1. Statement of the Problem:

NORHTWEST QUADRANT

The Northwest quadrant, which is the area west of US Highway 220 and north of US Highway 64, is an area of primary concern for Randolph County. Northwest Randolph has moderate to high flood prone areas. In addition, there is some risk of dam failure and mine subsidence due to the numerous abandoned underground mine workings. Unincorporated northwest Randolph County is predominantly designated as either Municipal Growth, Primary Growth or Secondary Growth Areas and has the highest population density in the County.

This area has approximately 110 occupied units in the SFHA zone with an estimated value of the structures at \$13,982,170 and 275 persons exposed to flood hazards. The Caraway Creek floodplain and Beard Lake Dam (especially in the area of Clover Drive) have numerous single-family dwellings located either directly downstream of the dam.

There are approximately eleven abandoned mines throughout the northwest County area. Of particular concern are abandoned gold mines which are generally underground mines with shafts that increase the likelihood of ground subsidence and contamination of water supplies by arsenic. According to the Senior Geologist for the State of North Carolina, the location of these mines and

information pertaining to their type are maintained by the North Carolina Geological Survey and US Bureau of Mines. The County has endeavored to place these mine locations and information in its GIS.

Another issue that confronts this section of the County is high hazard dams. There are approximately 78 dams in this section of the County with the following eleven dams being classified as high hazard dams by NC Department of Environment and Natural Resources Dam Safety Section:

- Asheboro Country Club Lake Dam;
- Beard Lake Dam;
- Bob Cat Acres Lake Dam;
- Colonial Country Club Dam Lower;
- Holly Ridge Golf Links Dam Number One;
- Ingold Dam;
- Joe Lambeth Dam;
- John Bunch Lake Dam;
- King Lake Dam; and
- McCrary Lake Dam.

NORTHEAST QUADRANT

The unincorporated territory in the northeast quadrant of the County has moderate to high flood prone areas. At risk for flooding is an exposed population of 345 persons with 137 occupied units within the special flood hazard area. These units are valued at an estimated \$27,600,210. There are approximately nine abandoned mines throughout the northeast County area. According to the Senior Geologist for the State of North Carolina, the location of these mines and information pertaining to their type are maintained by the North Carolina Geological Survey and US Bureau of Mines. The County has endeavored to place these mine locations and information in its GIS.

There are approximately 63 dams in this section of the County with the following eight dams being classified as high hazard dams by NC Department of Environment and Natural Resources Dam Safety Section:

- Bullins Lake Dam;
- Cox Lake Dam;
- Dodson Lake Dam;
- Overman Lake Dam;
- Ramseur Water Supply Dam;
- Randleman Lake Dam; and
- Randolph Mill Earth Dam.

AREAS OF ACCEPTABLE RISK

For the purposes of this plan, the unincorporated territory in southeast and southwest Randolph County is an area of acceptable risk.

According to USGS maps, the eastern portion of Randolph County has a high incidence of landslide, although there is no formal record or anecdotal memory of occurrences.

Approximately the same area of the landslide hazard risk is also within a 50-mile radius of the Shearon Harris Nuclear Facility in Raleigh. The Nuclear Regulatory Commission has designated the 50-mile zone around each nuclear power station as an "Ingestion Exposure Pathway Zone" which means that the main exposure in the event of a nuclear disaster is from ingestion of contaminated water, fish or other aquatic foods, as well as milk and fresh vegetables. While planning for the 50-mile zone is left to the State, cooperation from local governments, particularly at the County level is necessary. If an evacuation of the 10-mile emergency plan area was in effect, voluntary evacuations within a 50-mile area would likely occur. The Towns of Staley, Liberty, Ramseur and Franklinville and most of the western portion of rural Randolph County fall within this 50-mile zone. US Highway 64 West would be the main evacuation route.

Southwest Randolph County has approximately 17 abandoned mines, which reportedly have some deep vertical shafts. Most of this area is designated as a Rural Growth Management Area and could be developed on a limited basis.

2. Hazard Mitigation Goals

The goals serve as the basis for development of the more specific plan objectives and hazard mitigation activities. Randolph County has developed the following goals which are broad policy statements aimed at guiding and directing future County activity so that persons, property, government, and infrastructure are protected from the impacts of natural hazards:

1. To enhance local government capability to lessen the impacts of all natural hazards;
2. To identify and protect critical services, buildings, facilities and infrastructure that are at risk of damage due to natural hazards and to undertake cost-effective mitigation measures to minimize losses;
3. To develop an effective public awareness/education/outreach program for natural hazards the County and municipalities are most likely to experience;

4. To protect persons and property, as well as reduce damage and loss to existing community assets; and
5. To ensure disaster resistant future development.

To follow are the objectives and strategies related to these goals which Randolph County will use to mitigate natural hazard impacts on the county.

3. Hazard Mitigation Strategies for Unincorporated Randolph County

In the following pages, mitigation actions for unincorporated Randolph County are listed and assigned specific implementation measures which include the assignment of responsibilities to local government departments and/or specific staff, along with the time frame for completion for each proposed mitigation action. When applicable, potential funding sources were also listed.

GOAL 1: To enhance local government capability to lessen the impacts of all natural hazards.

Background: Randolph County government capability includes:

- Planning Department in place;
- Zoning Ordinance;
- Subdivision Ordinance;
- Flood Prevention Ordinance;
- Watershed Protection Ordinance;
- Growth Management Plan;
- Unified Development Ordinance;
- Land Use Plan;
- National Flood Insurance Program Member; and
- Strong GIS capability.

Randolph County Emergency Management currently collects hazard event information. To better enable the County to address specific geographically hazardous areas, this information will now be forwarded to the County Planning Department Information Specialist who will digitize the data. This information will provide a mechanism for monitoring and evaluation mitigation efforts.

Objectives:

- 1.1: *To increase data and information collection capability concerning impacts of natural hazards in Randolph County.*
- 1.2: *To provide a mechanism for monitoring and evaluating progress and effectiveness of hazard mitigation strategies for the County and its municipal jurisdictions.*

Strategies	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
1A	Planning and EM will coordinate the collection and storage of damage assessment information such as type of hazard, location of hazard occurrence, when it occurred, death or injury, property damages, in digitized form, and in one central location for easy retrieval. Information Planning Specialist is responsible for collection and maintenance of database.	Multi-hazard	Local	Planning Department/ Information Specialist Emergency Management	Ongoing
1B	EOP originally developed in 1994. Update Emergency Operations Plan.	Multi-hazard	NCEM	Emergency Management	Completed
1C	Develop recommendation for protecting command centers. Identify alternate command posts.	Multi-hazard	Need not anticipated	Emergency Management	Completed
1D	Develop plan for alternate communications in the event of loss of 9-1-1 communication system.	Multi-hazard	County	Emergency Management	New
1E	Investigate establishing a mobile command center in the event of loss of the 9-1-1 Center.	Multi-hazard	County	Emergency Management	New

STRATEGY 1A

In the 2004 Plan, a strategy was adopted to “coordinate the collection and storage of damage assessment information such as type of hazard, . . .” Randolph County Emergency Management now collects hazard event information and then forwards that information to the County Planning Department where the data is entered into the County GIS.

This process, which began in October, 2004, is very detailed and complex in its nature and design. The database allows for the capture of the following information:

- Date of event;
- Type of event;
- Event result of terrorism;
- Date of inspection;
- Time of inspection;
- Number of casualties;
- Number of deaths;
- Number of injuries;
- Extent of damages;
- Structure condemned;
- General comments; and
- Inspector that visited the site.

The County has in place the necessary procedures and forms to allow for the collection and compilation of data should a disaster occur. In times of extreme damage it is possible for the compilation of the data to be spread among various employees.

At that same time the County Planning Department also developed an Access database that assists in tracking any Federally Declared Disasters. The database allows for the capture of the following information:

- FEMA Code;
- Billing code;
- Declaration date;
- Closing date;
- Incident type;
- Type of assistance;
- Location of damage;
- Type of damage;
- Percentage of damage;
- Cause of damage;
- Dollar amount of damage; and
- Comments.

STRATEGY 1B

The next strategy in the plan to meet the goal of enhancing local government capability was that the Emergency Operations Plan (EOP), originally developed in 1994, would be updated. The EOP is no longer required to be updated.

STRATEGY 1C

The last strategy for this goal was to “develop recommendations for protecting command centers and identify alternate command posts.” At the time of the Plan adoption in August, 2004, these steps had already been completed as a result of the attacks of September 11, 2001. The alternate command post was identified during the original data collection for the 2004 Plan and has not changed since that time.

STRATEGY 1D

This strategy was added to the plan as a means to start the discussion and development of alternate communications system in case the primary and back-up antennae for 9-1-1 Communications is disabled or destroyed as part of a natural disaster.

STRATEGY 1E

This strategy was included in the Plan update to start the planning process for a mobile command center to use in the occurrence of a natural disaster at the location of the natural disaster.

GOAL 2: To identify and protect critical services, buildings, facilities and infrastructure that are at risk of damage due to natural hazards and to undertake cost-effective mitigation measures to minimize losses.

Background: Randolph County does not have any critical facilities located in a geographically hazardous area. However, alternative power sources are necessary when natural disasters result in large-scale power outages. Emergency Management, Emergency Operations Center, 9-1-1 Center, Fire and Rescue Stations have generators in case of power failure. The Command Center is adequately protected along with an alternate command post identified. Water is not supplied by the County in unincorporated Randolph County.

Objective:

2.1 To ensure a continuous power supply for critical facilities and services during and after an ice/snow storm.

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
2A	Procure generators and fuel for alternative sources of power for County School system (1) -at least preferably fixed and waste water treatment plants (4).	Ice/snow storm High wind events	County	County School Finance Director and Executive Director for Facilities & Construction through regular annual budget process. Public Works through annual budget process.	Completed
2B	Obtain and install transfer switches	Ice/snow storm High wind events	Homeland security grants available	Emergency Management	Completed

STRATEGY 2A

The 2004 Plan states that the County and its municipalities would “procure generators and fuel for alternative sources of power” for the County school system and the waste water treatment plants. Each entity was responsible for funding the purchase and installation for the necessary generators. At this time there have been 9 generators purchased and installed. It was also noted that the County does not have a *Water Resources* department therefore the reference to this department has been removed for purposes of clarification.

STRATEGY 2B

As a follow-up to Strategy 2A, the next strategy was to obtain and install transfer switches for the procured generators. At this time three transfer switches have been purchased and installed.

GOAL 3: To develop an effective public awareness/education/outreach program for natural hazards the County and municipalities are most likely to experience.

Background: Currently the County does not have a formal outreach program for hazard mitigation or hazard awareness. Properties in flood plains have been identified and mapped through GIS. The process by which this hazard mitigation plan has been developed, the elected official review process and subsequent adoption is the main vehicle for increasing the knowledge and awareness of the County decision makers and personnel.

Targeted areas: *All floodplains within the County jurisdiction*

Targeted populations: *Mobile home/manufactured home parks*

Objectives:

- 3.1 *Increase awareness and understanding of local government and general public of the need for hazard mitigation to protect persons and property from the impacts of natural hazards.*
- 3.2 *Provide flood protection information to property owners in high risk areas.*
- 3.3 *Increase public knowledge of importance of flood insurance.*

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
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Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
3A	<p>Educate and inform local government and elected officials (decision makers) of the need to consider hazard mitigation in policy and budgetary planning and decision-making processes. Outreach and Education is part of job descriptions for Planning and Emergency Management personnel. Staff will incorporate hazard mitigation education into existing programs. Education and outreach goals are written into the Emergency Management Departmental goals submitted to the State annually.</p>	Multi-hazard	Local	Emergency Management	Ongoing
3B	<p>Design a seasonal public information/education program targeted to mobile home/manufactured home residents through Central Permit process. Explaining hazards such as high wind events, flooding and alternative shelters in a storm/high wind event/flood. Will distribute information through existing in Central Permit process with standard permitting information.</p>	Flood	Local	<p>Planning Emergency Management</p>	Ongoing

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
3C	Disseminate information on the benefits of purchasing flood insurance to property owners in flood hazard areas (targeting Caraway Creek floodplain, Uwharrie River and Little Uwharrie River floodplains. (yearly)	Flood	Local	Emergency Management	Ongoing
3D	Hold yearly “Flood Hazard Awareness Week” Countywide - new program added to existing emergency management outreach education program.	Flood	Local	Planning Emergency Management	Ongoing

9-1-1

STRATEGY 3A

The various County Departments that deal with development issues have made a concerted effort to educate the elected officials and the public of taking necessary actions to mitigate damage to property. For example, the County Planning Department requires, as stated in Strategy 5A, to place utilities underground, where possible, to reduce the likelihood of branches falling on utility lines. The Department has also worked with developers and surveyors to see that this requirement is implemented. It was also noted that the County does not have a *Water Resources* department therefore the reference to this department has been removed for purposes of clarification. The sentences removed from this strategy are repeats of other points in the document.

STRATEGY 3B

Strategy 3B deals also with public education. Its desire is to have information and education programs that would explain the various events that may occur in the County. The Emergency Management Office has made presentations in various locations across the County covering the issues contained within this strategy. The high wind hazard was added as a hazard targeted since it is mentioned in the project or policy section of this strategy.

STRATEGY 3C

This strategy desires that the County, through its Central Permit process, is to distribute information regarding the benefits of purchasing flood insurance to property owners in the flood hazard areas. At the time of adoption of the Plan this goal was very important; however, after the adoption it was realized by Planning Department staff that the new Digital Flood Insurance Rate Maps (D-FIRMS) under development by the NC Department of Crime Control and Public Safety Division of Emergency Management and FEMA were being developed. After discussions the County Planning Staff felt that such a move to distribute the information that could subsequently change in a short period of time was a poor use of resources. The new D-FIRMS became official on January 1, 2008, for the entire County. It is the opinion of the County Planning Staff that this goal be retained for the updated Plan since there will likely be no wholesale changes to the flood maps in the near future.

STRATEGY 3D

The final strategy in this area requires that the County hold a yearly *Flood Hazard Awareness Week*. Once again, as above in Strategy 3C, the County Planning Staff felt that such a move would be a poor use of resources with the pending release of new D-FIRMS. This goal will remain in the updated Plan.

GOAL 4: To protect persons and property and reduce damage and loss to existing community assets including addressable structures, critical facilities, critical services and infrastructure due to natural hazards.

Background: Through hazard mitigation planning process and vulnerability assessment, Randolph County has identified geographic areas at high risk for flood, sinkholes, and dam failure.

9-1-1

Objectives:

- 4.1 To identify vulnerable populations and provide emergency shelter.
- 4.2 To protect and warn persons and existing development from flood damage, dam failure and other geographically specific hazard locations.

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
4A	Consider sign ordinances limiting height or size of signs in certain corridors.	High wind events	Local	Planning	Completed
4B	Identify and map mobile home parks by GIS and information specialist at the County level.	Multi-hazard	Local	Planning	Ongoing
4C	Review and revise location of emergency shelters throughout County and municipalities.	Multi-hazard	Local	Emergency Management	Ongoing
4D	Identify and designate at least one emergency shelter in each municipality.	Multi-hazard	Local	Emergency Management	Ongoing

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
4E	Put in place a Countywide 9-1-1 reverse call system for location specific warning to public of impending disaster. Will be implemented as part of Emergency Management ongoing program to improve efficiency and effectiveness of department.	Multi-hazard	Homeland Security Funds	Emergency Management	Completed
4F	Identify potential inundation areas downstream of high hazard dams.	Dam failure	Local	Planning Emergency Management	Ongoing
4G	Work with Dam Safety Officials to have emergency plans for high hazard dams filed with the local government.	Dam failure	Local	Emergency Management State Dam Safety Office in Winston-Salem	Ongoing
4H	Look into funding for and developing program to clear debris from culverts and storm drains in priority floodplains.	Flooding	Local; plus other funding to be identified	Public Works	Ongoing

STRATEGY 4A

One hazard that happened during high wind events is the signs often fall or the faces are blown out by the wind. When the current Plan was adopted, a goal was to consider sign ordinances that would limit the height and size of signs in certain corridors. The County Planning Department has had such regulations in place since the Zoning Ordinance was originally adopted in July, 1987.

STRATEGY 4B

This goal requires that the County, through its GIS, identify and map mobile home parks. At the time of adoption of the current Plan, this was already being done using GIS.

STRATEGY 4C

In the case of emergencies or disasters, citizens need to have places to go for shelter from the event. Strategy 4.C states that the County should “review and revise location of emergency shelters . . .” This process has now been completed as Emergency Management has reviewed all locations and identified alternate shelters throughout the County. For the purpose of this update, the *Status* has been set at ongoing due to the fact of population growth and changing population centers may require the shelter locations to be moved.

STRATEGY 4D

One aspect of sheltering citizens is having a shelter close to the population centers. This strategy required shelters be in each municipality. The Emergency Management Department has worked with the municipalities to identify these shelters. Most municipalities have shelters in place; however, there are a few municipalities without structures that meet the applicable building and fire codes to allow sheltering of citizens.

STRATEGY 4E

One way to alert citizens to pending events is through the use of a *Reverse 9-1-1 System*. Since the adoption of the Plan, the County Emergency Management Department has purchased and deployed the reverse 9-1-1 system through the use of Homeland Security grant funds.

STRATEGY 4F

On the surface, the strategy pertaining to the identification of inundation areas downstream of high hazard dams is an excellent strategy. Upon further review, this goal, with the current County staff, is unattainable. The County staff does not have the technical skills, knowledge nor necessary hardware and software to produce such information.

STRATEGY 4G

The next strategy involves working “with Dam Safety Officials to have emergency plans for high hazard dams” to be filed with the County. The County Emergency Management Department has worked with the NC Department of Environment and Natural Resources (NCDENR) Dam Safety Section to obtain these plans. The County Department has had no success working with the State to obtain these plans. The only emergency plan that is on file with the County is the Randleman Dam Emergency Action Plan.

STRATEGY 4H

This strategy would help to mitigate the damages from flood events. However, this strategy is better suited to areas inside municipal limits. The County does not have the means to clean culverts and storm drains since those areas are typically within the NC Department of Transportation (NCDOT) rights-of-way and it is generally understood that NCDOT has the responsibility to keep those areas clean of debris. It was also noted that the County does not have a *Water Resources* department therefore the reference to this department has been removed for purposes of clarification.

GOAL 5: To ensure disaster resistant future development.

Background: Randolph County has a Growth Management Plan and Unified Development Ordinance. Through the Growth Management Plan, primary, secondary, and rural growth areas are identified. County Unified Development Ordinance encourages street interconnectivity in all new subdivisions to allow multiple access points for emergency vehicles.

Objectives:

- 5.1 *To protect future development from the impacts of natural hazards.*
- 5.2 *Regulate future development to prevent damages and losses from natural hazard events.*

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
5A	Through existing subdivision regulations, encourage that power, cable and telephone lines be buried.	High wind, ice, snow	Local	Planning	Completed
5B	Strengthen flood plain regulation to current standards. (New model regulation.)	Flood	Local	Planning	Completed
5C	Adopt as Countywide policy as part of the Unified Development Ordinance: Wherever possible preserve natural wetlands, designate conservation corridors, especially along streams through acquisition or conservation easements.	Multi-hazard	Local	Planning	Ongoing

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
5D	Looking onto safe growth management strategies for development downstream of dams. Will incorporate into overall Countywide Growth Management Plan.	Multi-hazard	Local	Planning	Ongoing
5E	Create a GIS overlay of abandoned mine locations. When a mine is identified on a plat under review for development, the locations of the mine is noted and the mine is investigated to determine the extent of underground workings before the land is developed. (Completed)	Sinkhole, subsidence	n/a	Planning	Completed

STRATEGY 5A

This strategy has been very successful and easy to implement. As part of the development review process the County Planning Department ensures that the surveyor and developer places an easement on the plat for utilities to be placed underground for any new development.

STRATEGY 5B

As stated earlier, the County received new DFIRMs that became effective January 1, 2008. As part of that process, the County was required to update the Flood Damage Prevention Ordinance. This update ordinance, based upon the new State Model Regulations, was adopted by the Board of County Commissioners on December 7, 2007.

STRATEGY 5C

The County, as part of existing development regulations, provides for the preservation and protection of streams, both perennial and intermittent, and wetlands as identified in the County GIS. The current County Watershed Protection Ordinance requires a 50-ft undisturbed buffer around all streams and bodies of water. If that buffer is compromised as part of the development project it must go through remediation to restore the protection. The goal further states that the County would “designate conservation corridors, especially along streams through acquisition or conservation easements.”

The County is currently investigating and working on the creation of greenway trails along some of the larger bodies of water throughout the County. The actual acquisition or conservation easements have not been started due to financial issues.

STRATEGY 5D

As stated above in Strategy 4F, the County staff does not have the technical skills, knowledge nor necessary hardware and software to produce inundation areas downstream of high hazard dams. Without the necessary information as previously mentioned, the County Planning Committee does not see this goal as attainable unless the NCDENR Dam Safety Office has more success forwarding inundation and emergency plans to the County. Once the County obtains that data it is possible that this goal could be revisited. It should be noted, however, that as part of the review process for new development, existing dam locations are reviewed to identify potential areas of concern.

STRATEGY 5E

The final strategy was completed prior to the adoption and implementation of this Plan. This data was supplied to the County by the North Carolina Geological Survey.

4. Implementation

Implementation of the Hazard Mitigation Plan will start from the time that the required update is adopted. Work has already started on several of the mitigation strategies identified in the Mitigation Strategies section. Each County Department will be responsible for pursuing the development of policies, programs, ordinance revisions, and regulations as they are assigned.

Randolph County will create a process to incorporate requirements in this hazard mitigation plan into the floodplain ordinance, subdivision ordinance and zoning activities. During the planning process for all new and updated local planning documents, such as a land development plan, comprehensive plan, or capital improvement plan, the Planning Director will provide a copy of the hazard mitigation plan to each member of the planning team. The Planning Director will ensure that all goals and strategies of new and updated local planning documents are consistent with the hazard mitigation plan and will not contribute to increased hazards in the jurisdiction.

A process for prioritization of identified hazard mitigation strategies was performed. The hazard mitigation planning team used the following criteria for prioritization of strategies:

1. Cost-benefit review;
2. Results of vulnerability assessment;
3. Results of hazard identification and analysis;
4. Results of capability assessment; and
5. Effectiveness in meeting hazard mitigation goals.

The results of the capability assessment as well as the cost-benefit review were given special emphasis. To complete a cost-benefit review of actions listed in this plan, we utilized information from past projects that helped us determine an estimate of the probable cost of implementing any given strategy. This was supplemented by local knowledge of various personnel, Boards and historical data that helped us understand whether or not the benefits that would be incurred from such actions were greater than the costs. The prioritization of the strategies is designated through listing them as high, moderate or low priority. Time frames have been categorized as short-term and long-term. Short-term strategies are those that can be implemented within existing resources and authorities and should be completed within a time frame of 6 months to 2 years. Short-term activities are generally a higher priority and include those activities that should be implemented immediately following the adoption of this plan. Long-term strategies may require new or additional resources or authorities and should be organized to begin implementation within a timeframe of 3 - 5 years.

Table 2: Priority of Implementation

Priority	Strategy#	Amendment Completed Ongoing New	Ongoing (no end date)	Short Term (resources or authority available now)	Long Term (resources or authority currently not available)
High	1A	O	X		
High	1B	C		X	
Moderate	1C	C		X	
Moderate	1D	N			X
Moderate	1E	N			X
Moderate	2A	C			X
Low	2B	C			X
High	3A	O	X	X	
High	3B	O	X	X	
Moderate	3C	O	X	X	
Moderate	3D	O	X	X	
Low	4A	C		X	
Low	4B	O	X	X	
Moderate	4C	O		X	
Moderate	4D	O		X	
High	4E	N			X
Moderate	4F	O	X	X	
Low	4G	O	X	X	
Low	4H	O			X
Moderate	5A	C	X	X	
High	5B	C		X	

Priority	Strategy#	Amendment Completed Ongoing New	Ongoing (no end date)	Short Term (resources or authority available now)	Long Term (resources or authority currently not available)
High	5C	O		X	
High	5D	O			X
Moderate	5E	C	X	X	

5. Monitoring, Evaluating, Reporting Progress

Monitoring: It is the responsibility of the Director of Planning and the Emergency Management Director to continually monitor the progress of the strategies outlined in this plan.

Evaluation: The evaluation form in Appendix D will be used by County staff to begin the annual evaluation process. The base year statistics used in calculating progress will be the year prior to each five-year cycle. This form will be completed and submitted to the County Hazard Mitigation Taskforce, as well as all City and Town Managers (where there is no Town Manager the form will be sent to the Town Clerk).

The Hazard Mitigation Core Taskforce will include the County Planning Director, Emergency Management Director, and County Information Specialist. This core taskforce (and others at the discretion of the taskforce) will convene annually to review and evaluate the Plan’s effectiveness, and make recommendations for revision or amendment as necessary.

The Taskforce will then prepare an evaluation report summarizing the progress of the Plan. The evaluation and progress report should consider the following questions.

- Have lead agencies participated as originally proposed?
- Have outcomes been adequate?
- What problems have occurred in the implementation process?
- Have members of the public been adequately involved?

The report will include:

- The status of benchmarks and indicators;

- Difficulties or impediments during implementation;
- Changes in County priorities; and
- Recommendations for changes, revisions, or amendments to the plan.

In addition to the annual review, the Hazard Mitigation Taskforce will review and update the plan after any *presidential disaster declaration* for the County or any of its municipalities.

The Core Taskforce is also responsible for updating and revising the hazard profile, vulnerability assessment, and local capability sections for all jurisdictions at the end of every five-year cycle.

Reporting Progress: The Core Taskforce will review the annual evaluation report and *annually present all findings to the Randolph County Commissioners* along with any recommendations for updates or revision to Subsection 1: Unincorporated Randolph County Hazard Mitigation Plan. The County will also provide the annual evaluation report to all municipalities.

6. Revisions and Updates:

As revisions and updates occur, the date, reason and responsible party should be noted. Revisions and updates which affect the plan as a whole or impact any other jurisdiction(s) will require a presentation of findings and recommendations to, and ultimate adoption by, those jurisdictions' council members.

When changes to any part of this plan entail substantial budgetary considerations, the revisions or amended plan must be submitted to the NCDEM and FEMA for review.

At the end of every five-year cycle, the Randolph County Hazard Mitigation Taskforce will convene a Planning Committee with representatives from each jurisdiction in the County. The Committee will review and update the hazard profile, vulnerability assessment and local capability section and submit these to the County Manager and all City and Town Managers (where there is no town manager, the town clerk) for their review, and subsequent adoption by the County Commissioners and City/Town Councils.

7. Continued Public Involvement

To facilitate continued public involvement in the planning process:

- The public will be invited to participate in the annual review of the plan.

- Copies of the plan will be kept on hand at all public libraries and at appropriate agencies through the County. The plan will have a contact address, email address, and phone number of the person responsible for keeping track of public comments on the plan.
- The plan will be available on the Randolph County Website, and will contain an email address and phone number the public can use for submitting comments and concerns about the plan.

8. Plan Update Process for 2009 Plan Update

The County Planning Committee worked closely together following guidance from NCEM to complete the 2009 Update. The County staff worked to coordinate the clerical work of the Plan update as well as coordinate the various meetings required to complete the process. The Committee held numerous meetings to review the progress and review each of the goals and strategies. The County Staff updates information in various locations throughout the Plan such as the mapping and demographic data. The County Planning Committee also enlisted the help of a broad range of County departments to ensure that the Plan provided the County with the best Plan for the next five years.

The Planning Committee attended workshops conducted by NCEM to assist in the update process. The Committee also did extensive research to ensure that the most accurate data possible was being used for this update.

Once updated information was received from the County and its municipalities, these updates were compiled and prepared according to the directions from NCEM as the Committee understood the rules.

9. List of Changes made to Subsection 1 for 2009 Plan Update

Non-page specific changes:

- Correct capitalization of County since any reference to County in this document refers to Randolph County.
- Correct capitalization of State since any reference to State in this document refers to the State of North Carolina.
- Correct spacing at the end of sentences from two spaces to one space as is now common with desktop publishing.
- Corrected the capitalization of Growth Management Plan, and its subsequent Areas, since it refers to a specific Plan and Ordinance adopted by the Board of County Commissioners.
- Correct grammatical and punctuation errors from the original document.

- Where goals or strategies have been removed or added, the goals or strategies have been renumbered in the draft document to reflect the changes made.

Page S1.1:

- Corrected calculations of square mileage of County and area located in watershed areas due to updated calculations from the County GIS.
- Corrected number of acres in the County due to updated calculations from the County GIS.
- Corrected number of acres in the Uwharrie National Forest due to updated calculations from the County GIS.
- Updated the top twenty-five employers in the County to twenty-six based upon new information from Randolph County Economic Development Corporation. The lead sentence was changed to allow for attribution of the data.

Page S1.2:

- Removed the word *area* in the sentence, “Municipal growth areas are areas designated . . .” to make the sentence more readable, clearer and to avoid the use of the term *area* to define the Municipal Growth Area.
- The sentence, “As a matter of policy . . . secondary growth areas.” was removed from the update since that statement is incorrect.
- Included the heading “NORTHWEST QUADRANT” and “NORTHEAST QUADRANT” as a means to clearly define areas of concern to the County.
- Change the word *left* to the standard direction of west.
- Included the word *Highway* in descriptions for major roads more accurately reflecting their adopted name.
- The calculations regarding units in the SFHA were updated due to the new Digital Flood Insurance Rate Maps (DFIRMS) that were adopted and made official on January 1, 2008.
- The phrase *or within the floodplain* was removed since there are not structures in the area that the paragraph references.
- The count of abandoned mines in the northwest quadrant was updated due to calculations from the County GIS.
- The sentences that start, “Their exact locations . . .” and ending with “. . . with numerous smaller shafts nearby.” Were removed and replaced with updated information reflecting the fact that the County has worked to collect data on the mine locations.
- Information is added to reflect the count of high hazard dams within the County.
- Information is added to list the high hazard dams in the northwest quadrant of the County since this information was omitted from the original plan.

Page S1.3:

- The calculations regarding units in the SFHA were updated due to the new Digital Flood Insurance Rate Maps (DFIRMS) that were adopted and made official on January 1, 2008.
- The sentences that start, “Their exact locations . . .” and ending with “ . . . with numerous smaller shafts nearby.” were removed and replaced with updated information reflecting the fact that the County has worked to collect data on the mine locations.
- Information is added to reflect the count of high hazard dams within the County.
- Corrected the name of the nuclear power facility in Raleigh from Shearon Nuclear Facility to Shearon Harris Nuclear Facility.

Page S1.4:

- Included the word *Highway* in descriptions for major roads more accurately reflecting their adopted name.
- Changed the phrase “ . . . and will not likely be developed.” to more accurately reflect the true nature of the Growth Management Plan and to acknowledge the fact that development has been approved in these areas.

Page S1.6:

- Goal 2 Background was updated to correct grammar issues.
- Issues were also addressed in the strategy table to make them consistent with other tables in the Plan.

Page S1.7:

- Goal 3 Background has been revised to clarify the paragraph. It was also amended to delete the information regarding the reverse 9-1-1 system that has been implemented by County Emergency Management.
- Strategies for Goal 3 were updated.

Page S1.8:

- Strategies for Goal 4 were updated.
- Strategies for Goal 5 were updated.

Page S1.9:

- The sentence, “Plan implementation will start from the time that it is adopted.” was changed to clarify the sentence.

- The priority table was updated to reflect the changes in the strategies removed and added during the review process.

Subsection 2

Hazard Mitigation Plan for the City of Archdale:

Community Profile: Archdale has more than 9,700 residents and is the second largest city in Randolph County. Growth in the 1990's was the highest in the history of the City of Archdale with a 30% growth rate between 1990 and 2000, mostly on the eastern and southern sides of the City. Less than 10% of the growth has been due to annexation. Major employers for the City include Sealy, Inc. and Hafele.

Archdale has experienced considerable growth over the last decade, and it is anticipated that the City will continue to experience steady growth through the next decade. A majority of Archdale's land area lies within the Randleman Lake watershed or the Lake Reese Watershed. Watershed regulations and NPDES Phase II regulations will help protect the City's water quality but should not limit development density. Archdale is governed by a Mayor and six council members. Administrative officials employed by the City are the City Manager, City Attorney, Finance Director, Planning Director, Public Works Director, Registered Professional Engineer, Police Chief, and Parks and Recreation Director. Guil-Rand Fire Department is a voluntary fire district that serves the City.

1. Statement of the Problem:

Archdale is vulnerable to high wind events such as those associated with severe thunderstorms, tropical and extra tropical systems, snow and ice events, river and stream flooding, flashflooding, and drought.

High wind events are highly likely to bring winds of between 38 and 73 miles per hour with winds of 74 to 100 mph possible. Tornadoes are possible with a probable intensity of F1 and F2 on the Fujita Pearson scale, which means wind speeds of 73-157 miles per hour. Hurricanes are possible with a probable intensity of Category 1 and 2 hurricane winds on the Saffir Simpson scale, which means wind speeds of 74-110 miles per hour. Additionally, these high wind events are likely to carry with them the high probability of flash flooding and/or river and stream flooding, as well as lightning and hail.

Vulnerability to ice and snow storms are Countywide and will result in continued wide spread power outages, downed trees and limbs, as well as potential structure and building damage from falling trees and branches, or accumulation of snow on rooftops not designed to handle the snow load.

Repetitive Loss Structures:

Currently, three locations have been listed in the City of Archdale as repetitive loss structures with payments totaling approximately \$68,650.00 associated with building damage (10) between July 16, 1981 and June 25, 2006. An additional \$18,100.00 associated with contents (6) damage during the same period. A total claim of \$86,750.00 associated with (16) claims.

The following table covers January 1, 1978, through November 30, 2008:

Table 1: Repetitive loss structures

Total losses	Closed losses	Open losses	CWOP losses	Total payments
9	7	0	2	\$26,321.72

Table 2: Insurance policies in force

Policies in force	Insurance in force (whole \$)	Written premium in force
26	\$3,680,300.00	\$15,000.00

Flood Hazard

Archdale has 82 occupied units located in a flood plain with approximately 205 persons exposed to flood hazards. Estimate value of all existing structures within Archdale City limits, which are located in the Muddy Creek flood plain exceeds \$12,000,000.00. No critical facilities, government buildings or schools are located within the flood plains and it does not appear that emergency access is compromised due to road flooding.

2. Hazard Mitigation Goals

The goals serve as the basis for development of the more specific plan objectives and hazard mitigation activities. The multi-jurisdictional planning group has developed the following goals which are broad policy statements aimed at guiding and directing future activity so that persons, property, government, and infrastructure are protected from the impacts of natural hazards. The goals are:

1. To enhance local government capability to lessen the impacts of all natural hazards
2. To identify and protect critical services, buildings, facilities and infrastructure at risk of damage due to natural hazards.

3. To develop an effective public awareness/education/outreach program for natural hazard mitigation.
4. To protect persons and property, as well as reduce damage and loss to existing community assets.
5. To ensure disaster resistant future development

3. Hazard Mitigation Strategies for Archdale

In the following pages, mitigation actions for Archdale are listed and assigned specific implementation measures which include the assignment of responsibilities to local government departments and/or specific staff, along with the time frame for completion for each proposed mitigation action. When applicable, potential funding sources were also listed.

GOAL 1: To enhance local government capability to lessen the impacts of all natural hazards.

Background: The City of Archdale planning department has access to and uses the Randolph County GIS system for planning purposes. Archdale also maintains its own GIS system. The City of Archdale government capability includes:

- Planning department in place/Stormwater part of Planning department
- Flood prevention ordinance
- Zoning ordinance
- National Flood Insurance Program Member
- Subdivision ordinance
- Watershed protection ordinance
- Comprehensive Planning

Objective:

1.1 To increase capacity to mitigate natural disasters through developing Archdale’s land use planning tools.

Strategies	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
1 A	Develop stormwater management program as part of required NPDES Phase II.	Flood	Local	Planning Department	Completed
1 B	Identify emergency water supply through existing local water supply planning process.	Multi-hazard	Local	Manager	Completed

Strategies	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
1 C	Develop a comprehensive policy regarding drought management and response as part of existing local water supply planning process.	Drought	Local	Public Works Manager	Completed
1 D	Maintain stormwater management program as part of required NPDES Phase II.	Flood	Local	Planning and Stormwater Management	Ongoing
1 E	Maintain emergency water supply through existing local water supply planning process. (Davidson Water & City of High Point)	Multi-hazard	Local	City Manager	Ongoing
1 F	Maintain comprehensive policy regarding drought management and response as part of existing local water supply planning process.	Drought	Local	Public Works City Manager	Ongoing

CHANGES TO GOAL 1 AND STRATEGIES

The update process has required the background information on Goal 1 to reflect implementation of Stormwater Management Program and other changes made within the City.

The City changed *Develop* to *Maintain* since the Stormwater Management Program has been implemented along with the emergency water supply plan.

The City also updated the position title from Manager to City Manager to reflect the correct position title.

GOAL 2: To identify and protect critical services, buildings, facilities and infrastructure that is at risk of damage due to natural hazards.

Background: City of Archdale does not appear to have any critical facilities located in a flood zone.

Objective:

2.1 *To identify and protect critical services and facilities.*

Strategies	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
2 A	Define and identify all “critical facilities” if any	Multi-hazard	Local	Planning and Stormwater Management	Ongoing
2 B	Fully assess the vulnerability of each identified critical facility to natural hazards	Multi-hazard	Local	Planning and Stormwater Management	Ongoing

CHANGES TO GOAL 2 AND STRATEGIES

The City changed the lead department to reflect the establishment of the Stormwater Management Program. Most of these strategies have been completed and now require maintenance as per information provided by the City Planning Committee.

GOAL 3: To develop an effective public awareness/education/outreach program for natural hazards the County and municipalities are most likely to experience.

Background: Currently the City does not have a formal outreach program for hazard mitigation or hazard awareness. Properties in flood plains have been identified and mapped through GIS.

Objectives:

- 3.1 *Increase awareness and understanding of local government and general public of the need for hazard mitigation to protect persons and property from the impacts of natural hazards.*
- 3.2 *Increase availability of flood protection information to property owners in high risk areas*
- 3.3 *Increase public knowledge of importance of flood insurance.*

Strategies	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
3 A	Educate and inform local government and elected officials (decision makers) of the need to consider hazard mitigation in policy and budgetary planning and decision making processes.	Multi-hazard	Local	Planning Emergency Management Public Works	Completed

Strategies	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
3 B	Design a seasonal public information/education program targeted to mobile home/manufactured home residents through Central Permit Process explaining hazards such as high wind events, flooding and alternative shelters in a storm/high wind event/flood. Pamphlets to be inserted in regular mailings to residents.	Flood	Local	County Planning Department (covers Archdale)	Ongoing
3 C	Disseminate information on the benefits of purchasing flood insurance.	Flood	Local	Planning and Stormwater Management	Ongoing
3 D	Educate and inform citizens (children and adult) of environmental issues at the Archdale Library through education seminars done on a six week basis.	Multi-hazard	Local	Planning and Stormwater Management	New
3 E	Provide flood insurance awareness through existing stormwater outreach program and permitting process.	Flood	Local	Planning and Stormwater Management	New

STRATEGY 3 C

The strategy was amended to reflect the establishment of the Stormwater Management and outreach Program.

STRATEGY 3 D

Strategy 3 D was added as a new strategy for the next five year cycle.

STRATEGY 3 E

Strategy 3 E was added as a new strategy for the next five year cycle.

GOAL 4: To protect persons and property and reduce damage and loss to existing community assets.

Background: Through hazard mitigation planning process and vulnerability assessment, City of Archdale has identified geographic areas at high risk for flood, sinkholes, and dam failure.

Objectives:

4.1 To identify vulnerable populations and provide emergency shelter.

4.2 To protect and warn persons and existing development from flood damage, dam failure and other geographically specific hazard locations.

Strategies	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
4A	Maintain maps of mobile home parks as part of ongoing planning activities.	Multi-hazard	Local	Planning and Stormwater Management	Ongoing
4 B	Identify additional emergency shelter in Archdale.	Multi-hazard	Local	Planning and Management	Ongoing
4 C	Put in place a Countywide 9-1-1 reverse call system for location specific warning to public of impending disaster.	Multi-hazard	Homeland Security funds	County Emergency Management	Completed
4 D	Maintain program for clearing debris from culverts and storm drains in priority areas as part of NPDES Phase II stormwater control standards.	Multi-hazard	Local	Planning and Stormwater Management	Ongoing
4 E	Identify sites for temporary storage of debris.	Flood	Local	Public Works and Stormwater Management	New
4 F	Create a mobilization plan for response to an emergency.	Multi-hazard	Local	All Departments	New

Strategies	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
4 G	Establish predefined street detour plans and disbursement of MUTCD (Manual on Uniform Traffic Control Devices) measures in response to an emergency.	Multi-hazard	Local	Public Works	New

STRATEGY 4 A

Strategy 4 A has been updated to reflect the completion of the identification and mapping of the mobile home parks. Its status has been classified as *Ongoing* since this must be maintained for the foreseeable future. The Stormwater Management department has also been added as a lead department since it was created since 2004.

STRATEGY 4 B

Strategy 4 B has been updated to reflect the identification of an emergency shelter in Archdale and the ongoing need to indentify another location in the City. The Stormwater Management department has also been added as a lead department since it was created since 2004.

STRATEGY 4 C

One way to alert citizens to pending events is through the use of a *Reverse 9-1-1 System*. Since the adoption of the Plan, the County Emergency Management Department has purchased and deployed the reverse 9-1-1 system through the use of Homeland Security grant funds.

STRATEGY 4 D

This goal has been amended to reflect that this program has now entered the maintenance phase since the program has started since 2004. The Stormwater Management department has also been added as a lead department since it was created since 2004.

STRATEGY 4 E

This strategy has been added to the Plan to reflect the fact that after the City cleans the culverts and storm drains there must be a location to place this debris to prevent further clogging of the system.

STRATEGY 4 F

This goal has been added by the City to reflect the need to be able to move the necessary resources into a disaster area in a short span of time. By having a plan in place prior to a disaster the deployments of resources would be much smoother and accomplished in a timely manner.

STRATEGY 4 G

The goal of establishing predefined street detour plans prior to a disaster has been added as a way to allow the City to better prepare for a potential disaster by ensuring the flow of traffic through and around the site of a disaster.

GOAL 5: To ensure disaster resistant future development.

Background: City of Archdale updated their comprehensive plan in 2006.

Objectives:

5.1 To protect future development from the impacts of natural hazards.

5.2 Regulate future development to prevent damages and losses from natural hazard events.

Strategies	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
5 A	Through existing subdivision regulations, encourage that power, cable and telephone lines be buried.	Multi-hazard	Local	Planning	Completed
5 B	Maintain current floodplain regulation standards.	Flood	Local	Planning and Stormwater Management	Ongoing
5 C	In land use plans and development plans: Wherever possible preserve natural wetlands, designate conservation corridors, and protect streams by requiring buffering standards or through acquisition of conservation easements. (Stormwater and Watershed Ordinance provide effective standards for continuing maintenance)	Multi-hazard	Local	Planning and Stormwater Management	Ongoing

STRATEGY 5 A

During the past five years the City has amended the Land Management Plan and as a part of the Land Management Plan the requirement for utilities to be buried was incorporated.

STRATEGY 5 B

This strategy has been updated to reflect that the City has adopted the current floodplain regulation standards and their intention to maintain their regulations to the current standards.

STRATEGY 5 C

The status of this goal is ongoing since development will take place for years to come and it will be important for future generations that natural wetlands, streams and conservation corridors be recognized and maintained to keep the quality of life at standards citizens have come to expect.

4. Implementation

Implementation of the Hazard Mitigation Plan will start from the time that the required update is adopted. Work has already started on several of the mitigation strategies identified in the Mitigation Strategies section. Each City Department will be responsible for pursuing the development of policies, programs, ordinance revisions, and regulations as they are assigned.

The City of Archdale will create a process to incorporate requirements in this hazard mitigation plan into the floodplain ordinance, subdivision ordinance and zoning activities. During the planning process for all new and updated local planning documents, such as a land development plan, comprehensive plan, or capital improvement plan, the City Planner will provide a copy of the hazard mitigation plan to each member of the planning team. The City Planner will ensure that all goals and strategies of new and updated local planning documents are consistent with the hazard mitigation plan and will not contribute to increased hazards in the jurisdiction.

A process for prioritization of identified hazard mitigation strategies was performed. The hazard mitigation planning team used the following criteria for prioritization of strategies:

1. Cost-benefit review;
2. Results of vulnerability assessment;
3. Results of hazard identification and analysis;
4. Results of capability assessment; and
5. Effectiveness in meeting hazard mitigation goals.

The results of the capability assessment as well as the cost-benefit review were given special emphasis. To complete a cost-benefit review of actions listed in this plan, we utilized information from past projects that helped us determine an estimate of the probable cost of implementing any given strategy. This was supplemented by local knowledge of various personnel, Boards and historical data that helped us understand whether or not the benefits that would be incurred from such actions were greater than the costs. The prioritization of the strategies is designated through listing them as high, moderate or low priority. Time frames have been categorized as short-term and long-term. Short-term strategies are those that can be implemented within existing resources and authorities and should be completed within a time frame of 6 months to 2 years. Short-term activities are generally a higher priority and include those activities that should be implemented immediately following the adoption of this plan. Long-term strategies may require new or additional resources or authorities and should be organized to begin implementation within a timeframe of 3 - 5 years.

Table 3: Priority of Implementation

Priority	Strategy#	Amendment Completed Ongoing New	Ongoing (no end date)	Short Term (resources, and authority available now)	Long Term (resources or authority currently not available)
High	1A	C	X		
High	1B	C	X		
High	1C	C	X		
High	1D	N	X		
High	1E	N	X		
High	1F	N	X		
Moderate	2A	O	X		
Moderate	2B	O	X		
High	3A	C	X		
High	3B	O	X		
High	3C	O		X	
High	3D	N		X	
High	3E	N	X		
Low	4A	O	X		
High	4B	O	X		
High	4C	C		X	
High	4D	O	X		
High	4E	N		X	
High	4F	N		X	
High	4G	N		X	
Moderate	5A	C	X		
High	5B	O	X		

Priority	Strategy#	Amendment Completed Ongoing New	Ongoing (no end date)	Short Term (resources, and authority available now)	Long Term (resources or authority currently not available)
High	5C	O	X		

5. Monitoring, Evaluating, and Reporting Progress

The evaluation form in Appendix D will be used by County staff to begin the annual evaluation process. The base year statistics used in calculating progress will be the year prior to each five-year cycle. This form will be completed and submitted to the County Hazard Mitigation Taskforce, as well as all City and Town Managers (where there is no Town Manager the form will be sent to the Town Clerk).

The Archdale Hazard Mitigation Taskforce will include the City Manager, Planning Director, and Stormwater Manager (and others at the discretion of the Taskforce.) The Taskforce will convene annually to review the County evaluation form, evaluate the Plan’s effectiveness, and make recommendations for revision or amendment as necessary.

The Taskforce will then prepare an evaluation report summarizing the progress of the Plan. The evaluation and progress report should consider the following questions.

- Have lead agencies participated as originally proposed?
- Have outcomes been adequate?
- What problems have occurred in the implementation process?
- Have members of the public been adequately involved?

The report will include:

- The status of benchmarks and indicators,
- Difficulties or impediments during implementation,
- Changes in County priorities,
- Recommendations for changes, revisions, or amendments to the plan.

In addition to the annual review, the Archdale Hazard Mitigation Taskforce will review and update the plan after any *presidential disaster declaration* for the City.

6. Revisions and Updates:

The City Manager will review the evaluation report and present the findings with recommendations for updates and revision to the City Council for amendment to Subsection 2: City of Archdale Hazard Mitigation Plan. As updates occur, the date, reason and responsible party should be noted. Updates or revisions which affect the plan as a whole or impacts any other jurisdiction(s) will require a presentation of findings and recommendations to, and ultimate adoption by, those jurisdictions' commissioners or council members.

When changes to any part of this plan entail substantial budgetary considerations, the revisions or amended plan must be submitted to the NCDEM and FEMA for review.

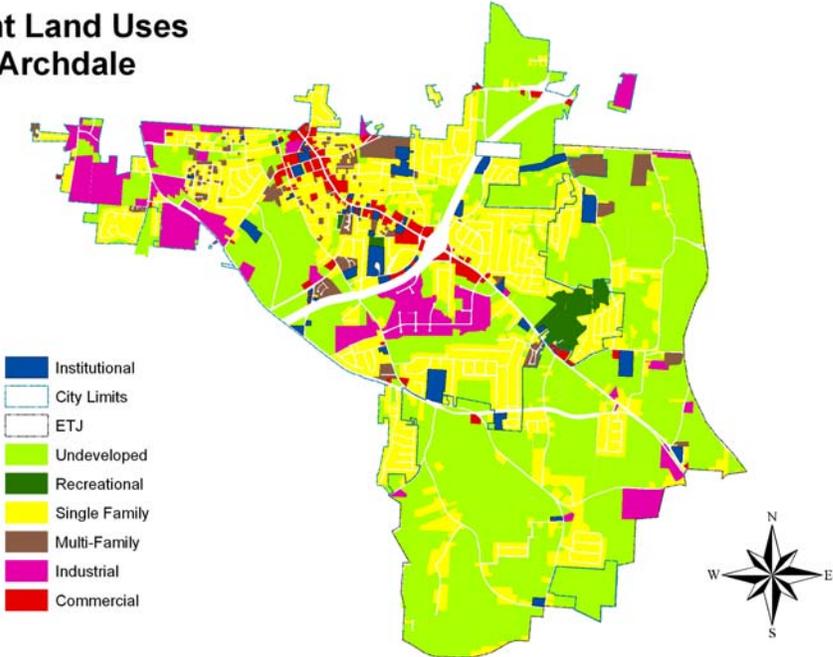
At the end of every five-year cycle, the Randolph County Hazard Mitigation Taskforce will convene a planning committee with representatives from each jurisdiction in the County. The committee will review and update the hazard profile, vulnerability assessment and local capability section and submit these to the County Manager and all City and Town Managers (where there is no town manager, the town clerk) for their review, and subsequent adoption by the County Commissioners and City/Town Councils.

7. Continued Public Involvement

To facilitate continued public involvement in the planning process:

- The public will be invited to participate in the annual review of the plan.
- Copies of the plan will be kept on hand at the Archdale public library and at appropriate agencies throughout the City. The plan will have a contact address, email address, and phone number of the person responsible for keeping track of public comments on the plan.
- The plan will be available on the Randolph County Website, and will contain an e-mail address and phone number the public can use for submitting comments and concerns about the plan.

**Current Land Uses
in Archdale**



8. List of Changes made to Subsection 2 for 2009 Plan Update

Non-page specific changes:

- Correct capitalization of City since any reference to City in this document refers to the City of Archdale.
- Correct capitalization of State since any reference to State in this document refers to the State of North Carolina.
- Correct spacing at the end of sentences from two spaces to one space as is now common with desktop publishing.
- Correct grammatical and punctuation errors from the original document.
- Where goals or strategies have been removed or added, the goals or strategies have been renumbered in the draft document to reflect the changes made.

Page S2.1:

- Changed population of City to reflect new data.
- Added Häfele of America since they now qualify as a major employer.
- Update Community Profile to reflect implementation of the Stormwater Management program.
- Modified number of Council members to reflect the current number of member.
- Added the position of Registered Professional Engineer due to the new position created by the City.
- Clarified sentence regarding tornados.

Page S2.2:

- Updated section on Repetitive Loss Structures due to updated information obtained by the City.
- Updated section on Flood Hazard due to new information received after analysis of new Digital Flood Insurance Rate Maps.

Page S2.4:

- Change *Develop* to *Maintain* for the drought management policy since it has been implemented.

Page S2.8:

- Updated the Priority Table to reflect the updated priorities and strategies.

Page S2.9:

- Change the Archdale Hazard Mitigation Taskforce to reflect the establishment of the Stormwater Management Program.

Page S2.11:

- Included current Land Use Plan.

Subsection 3

Hazard Mitigation Plan for City of Asheboro:

Community Profile: The City of Asheboro is located in the center of Randolph County and with a population of 21,672 it is the largest municipality in the County. At an elevation of 800 feet, Asheboro covers 17.9 square miles of land area. The median house value is below state average while the population of Asheboro has almost doubled over the past 25 years. The densest areas of development are within the middle section of the City (block group 30401) and to the east. Asheboro's population is predominantly white with a minority population of less than 15%. Approximately 57% of the population owns their homes. The City of Asheboro State Development zones include census block groups 301.01, 303.02, and 304.01. The percentage of the population below poverty level in these areas is approximately 20.47%.

Asheboro City government is equipped with a planning and zoning department, police and fire service, and public works department. Public housing within Randolph County is also located within the Asheboro City limits. Asheboro water system serves both Asheboro and the Town of Seagrove.

Major employers in the area are Klaussner Furniture employing 1,121 persons; Randolph Hospital employing 1,086 persons; Energizer Battery employing 867 persons; Randolph County employing 712 persons and Asheboro City schools with 653 persons.

1. Statement of the Problem:

Asheboro is most vulnerable to flooding, high wind events such as those associated with severe thunderstorms, tropical and extra tropical systems as well as snow and ice events.

High wind events are highly likely to bring winds of between 38 and 73 miles per hour with winds of 74 to 100 mph possible. Tornadoes are possible with a probable intensity of F1 on the Fujita Pearson scale, which means wind speeds of 73-110 miles per hour (Category 1 hurricane winds on the Saffir Simpson scale.) Additionally, these high wind events are likely to carry with them the high probability of flash flooding and/or river and stream flooding, as well as lightning and hail.

Vulnerability to ice and snow storms are Countywide and will result in continued wide spread power outages, downed trees and limbs, as well as potential structure and building damage from falling trees and branches, or accumulation of snow on rooftops not designed to handle the snow load.

Flood Hazard

Asheboro has a moderate amount of occupied units in flood plains areas. Approximately 247.5 persons in 99 occupied housing units are exposed to flood hazard throughout the City of Asheboro. The structures are valued at around \$19,441,180.

The geographic area census block group 304001 is of primary concern with 7.7% of occupied housing units within the SFHA, numerous EHS facilities (two are located within flood plain and watershed area) high population density, vulnerable populations, as well as one abandoned gold mine in the area. This is developed municipal area with an estimated 25 occupied housing units, including mobile homes, in the SFHA exposing over 62.5 persons to a flood hazard. The approximate value of the structures in the flood plain is \$2,720,180.

Another area of primary concern is the Pennwood Branch floodplain which has public housing located within the floodplain exposing a highly vulnerable population to flood hazards.

Fourteen of the 24 extremely hazardous substance facilities as identified by the NC Division of Emergency Management are located within Asheboro, most are located in north Asheboro

There are two abandoned mines in Asheboro area. The exact location of these mines is unknown. The Scarlett mine is located approximately 2.4 miles north of Asheboro, in the town of Balfour. The mineshafts depths are 60 foot to 120 foot long and extend over 500 feet.

Repetitive Loss Structures:

The City of Asheboro has no recorded repetitive loss structures.

2. Hazard Mitigation Goals

The goals serve as the basis for development of the more specific plan objectives and hazard mitigation activities. The multi-jurisdictional planning group has developed the following goals which are broad policy statements aimed at guiding and directing future activity so that persons, property, government, and infrastructure are protected from the impacts of natural hazards.

1. To enhance local government capability to lessen the impacts of all natural hazards

2. To identify and protect critical services, buildings, facilities and infrastructure at risk of damage due to natural hazards.
3. To develop an effective public awareness/education/outreach program for natural hazards the County and municipalities are most likely to experience.
4. To protect persons and property, as well as reduce damage and loss to existing community assets.
5. To ensure disaster resistant future development

3. Hazard Mitigation Strategies for Asheboro

In the following pages, mitigation actions for Asheboro are listed and assigned specific implementation measures which include the assignment of responsibilities to local government departments and/or specific staff, along with the time frame for completion for each proposed mitigation action. When applicable, potential funding sources were also listed.

GOAL 1: To enhance local government capability to lessen the impacts of all natural hazards

Background: City of Asheboro government capability includes:

- Planning department
- Zoning ordinance
- Subdivision ordinance
- Flood prevention ordinance
- Drought management plan
- Land use plan
- National Flood Insurance Program Member
- Watershed protection ordinance

Objective:

1.1 To build hazard mitigation capability through developing land use planning tools.

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
1A	Build in house GIS capability	Multi-hazard	Local	Planning	
1B	Develop municipal Emergency Operations Plan	Multi-hazard	Local	City Manager	
1C	To require retention/detention ponds or other storm water measure for any planned building groups (residential or commercial); will build into existing zoning ordinance	Flood	Local	Planning	

GOAL 2: To identify and protect critical services, buildings, facilities and infrastructure.

Background: City of Asheboro does not have any critical facilities located in a geographically hazardous area. However, alternative power sources are necessary when natural disasters result in large-scale power outages.

Objective:

2.1 To ensure a continuous power supply for critical facilities and services

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
2A	Procure generators and fuel for alternative sources of power for <ul style="list-style-type: none"> • All City schools • Water plant • Water pump Will incorporate into annual budget process over next three years.	Multi-hazard	Local	City School Supt/ Public Works/ Water resources/ Finance	

GOAL 3: To develop an effective public awareness/education/outreach program for natural hazards the County and municipalities are most likely to experience.

Background: Currently the City does not have a formal outreach program for hazard mitigation or hazard awareness. Targeted areas: Pennwood Branch; Public Housing Authority; North Asheboro.

Objectives:

- 3.1 Increase awareness and understanding of local government and general public of the need for hazard mitigation to protect persons and property from the impacts of natural hazards.
- 3.2 Provide flood protection information to property owners in high risk areas

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
3A	Educate and inform local government and elected officials (decision makers) of the need to consider hazard mitigation in policy and budgetary planning and decision making processes, through ongoing hazard mitigation planning five year cycle	Multi-hazard	Local	City Manager/Planning with assistance form PTCOG	
3B	Disseminate information on the benefits of purchasing flood insurance	Flood	Local	Planning	

GOAL 4: To protect persons and property and reduce damage and loss to *existing* community assets

Background: Through hazard mitigation planning process and vulnerability assessment, City of Asheboro has identified geographic areas at high risk for flood, sinkholes, and dam failure. Since there are existing structures in identified hazardous locations, the County will pursue a 9-1-1 reverse call system for warning specific areas under threat from especially from dam failure and flooding.

Objectives:

- 4.1 To identify vulnerable populations and provide emergency shelter.
- 4.2 To protect and warn persons and existing development from flood damage, dam failure and other geographically specific hazard locations.

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
4 A	Identify and map mobile home parks	Multi-hazard	Local	Planning	
4 B	Identify and designate at least one emergency shelter in each municipality	Multi-hazard	Local	City Manager and County EM	
4 C	Put in place a Countywide 9-1-1 reverse call system for location specific warning to public of impending disaster	Multi-hazard	Homeland security funds	County Emergency Management	
4 D	Look into funding for and developing program to clear debris from culverts and storm drains in priority floodplains.	Flood	Local; plus other funding to be identified	Water resources Public Works	

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
4 E	Existing zoning ordinance to be modified to require ice damage resistant trees along buffers and screens	Ice event	Local	Planning	
4 F	Consult with Asheboro Housing Authority to create evacuation plans for those units in flood plains	Flood	Local	City Manager/Planning	
4 G	Consult with Asheboro Housing Authority to consider buyout and relocation for public housing in flood plains	Flood	Federal funding	City Manager/Planning	

GOAL 5: To ensure disaster resistant future development

Objectives:

- 5.1 To protect future development from the impacts of natural hazards.
- 5.2 Regulate future development to prevent damages and losses from natural hazard events.

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
5A	Through existing subdivision regulations, encourage that power, cable and telephone lines be buried	Multi-hazard	Local	Planning	
5B	Strengthen floodplain regulation to current standards. (New model regulation)	Flood	Local	Planning	
5C	In land use plans and development plans, adopt as City policy: Wherever possible preserve natural wetlands, designate conservation corridors, especially along streams through acquisition or conservation easements.	Multi-hazard	Local	Planning	
5D	Develop a program to clear debris from culverts and storm drains in priority floodplains.	Flood	Local	Public works	

4. Implementation

Plan implementation will start from the time that it is adopted. Work has already started on several of the mitigation strategies identified in the Mitigation Strategies section. Each City Department will be responsible for pursuing the development of policies, programs, ordinance revisions, and regulations as they are assigned

The City of Asheboro will create a process to incorporate requirements in this hazard mitigation plan into the floodplain ordinance, subdivision ordinance and zoning activities. During the planning process for all new and updated local planning documents, such as a land development plan, comprehensive plan, or capital improvement plan, the City Planner will provide a copy of the hazard mitigation plan to each member of the planning team. The City Planner will ensure that all goals and strategies of new and updated local planning documents are consistent with the hazard mitigation plan and will not contribute to increased hazards in the jurisdiction.

A process for prioritization of identified hazard mitigation strategies was performed. The hazard mitigation planning team used the following criteria for prioritization of strategies:

1. Cost-benefit review
2. Results of vulnerability assessment
3. Results of hazard identification and analysis
4. Results of capability assessment.
5. Effectiveness in meeting hazard mitigation goals.

The results of the capability assessment as well as the cost-benefit review were given special emphasis. To complete a cost-benefit review of actions listed in this plan, we utilized information from past projects that helped us determine an estimate of the probable cost of implementing any given strategy. This was supplemented by local knowledge of various personnel, Boards and historical data that helped us understand whether or not the benefits that would be incurred from such actions were greater than the costs. The prioritization of the strategies is designated through listing them as high, moderate or low priority. Time frames have been categorized as short-term and long-term. Short-term strategies are those that can be implemented within existing resources and authorities and should be completed within a time frame of 6 months to 2 years. Short-term activities are generally a higher priority and include those activities that should be implemented immediately following the adoption of this plan. Long-term strategies may require new or additional resources or

authorities and should be organized to begin implementation within a timeframe of 3 - 5 years.

Table 1: Priority of Implementation

Priority	Strategy#	New (N) Continuation (C) Amendment (A)	Ongoing (no end date)	Short Term (resources, and authority available now)	Long Term (resources or authority currently not available)
High	1A	N	X		
High	1B	A		X	
Moderate	1C	N		X	
Moderate	2A	C			X
Low	2B	N			X
High	3A	C	X	X	
High	3B	N	X	X	
Moderate	3C	C	X	X	
Moderate	3D	N	X	X	
Low	4A	A		X	
Low	4B	C	X	X	
Moderate	4C	C		X	
Moderate	4D	N		X	
High	4E	N			X
Moderate	4F	C	X	X	
Low	4G	N	X	X	
Low	4H	N			X
Moderate	5A	C	X	X	
High	5B	A		X	
High	5C	C		X	
High	5D	N			X

Priority	Strategy#	New (N) Continuation (C) Amendment (A)	Ongoing (no end date)	Short Term (resources, and authority available now)	Long Term (resources or authority currently not available)
Moderate	5E	N	X	X	

5. Monitoring, Evaluating, and Reporting Progress

The evaluation form in Appendix D will be used by County staff to begin the evaluation process. The base year statistics used in calculating progress will be the year prior to each five-year cycle. This form will be completed and submitted to the County Hazard Mitigation Taskforce, as well as all City and Town Managers (where there is no Town Manager the form will be sent to the Town Clerk).

The City of Asheboro Hazard Mitigation Taskforce will include the City Manager, Planning Director, Fire Chief, City Engineer and Public Works Director. This core taskforce (and others at the discretion of the taskforce) will convene annually to review the County evaluation form, evaluate the Plan’s effectiveness, and make recommendations for revision or amendment as necessary.

The task force will then prepare an evaluation report summarizing the progress of the Plan. The evaluation and progress report should consider the following questions.

- Have lead agencies participated as originally proposed?
- Have outcomes been adequate?
- What problems have occurred in the implementation process?
- Have members of the public been adequately involved?

The report will include:

- The status of benchmarks and indicators,
- Difficulties or impediments during implementation;
- Changes in County priorities
- Recommendations for changes, revisions, or amendments to the plan.

In addition to the annual review, the Asheboro City Hazard Mitigation Taskforce will review and update the plan after any *presidential disaster declaration* for the City of Asheboro.

6. Revisions and Updates:

After completion of the evaluation report the taskforce will present the findings with recommendations for updates and revision to the City Council for amendment to Subsection I: City of Asheboro Hazard Mitigation Plan. As updates occur, the date, reason and responsible party should be noted. Updates or revisions which affect the plan as a whole or impacts any other jurisdiction(s) will require a presentation of findings and recommendations to, and ultimate adoption by, those jurisdictions' council members.

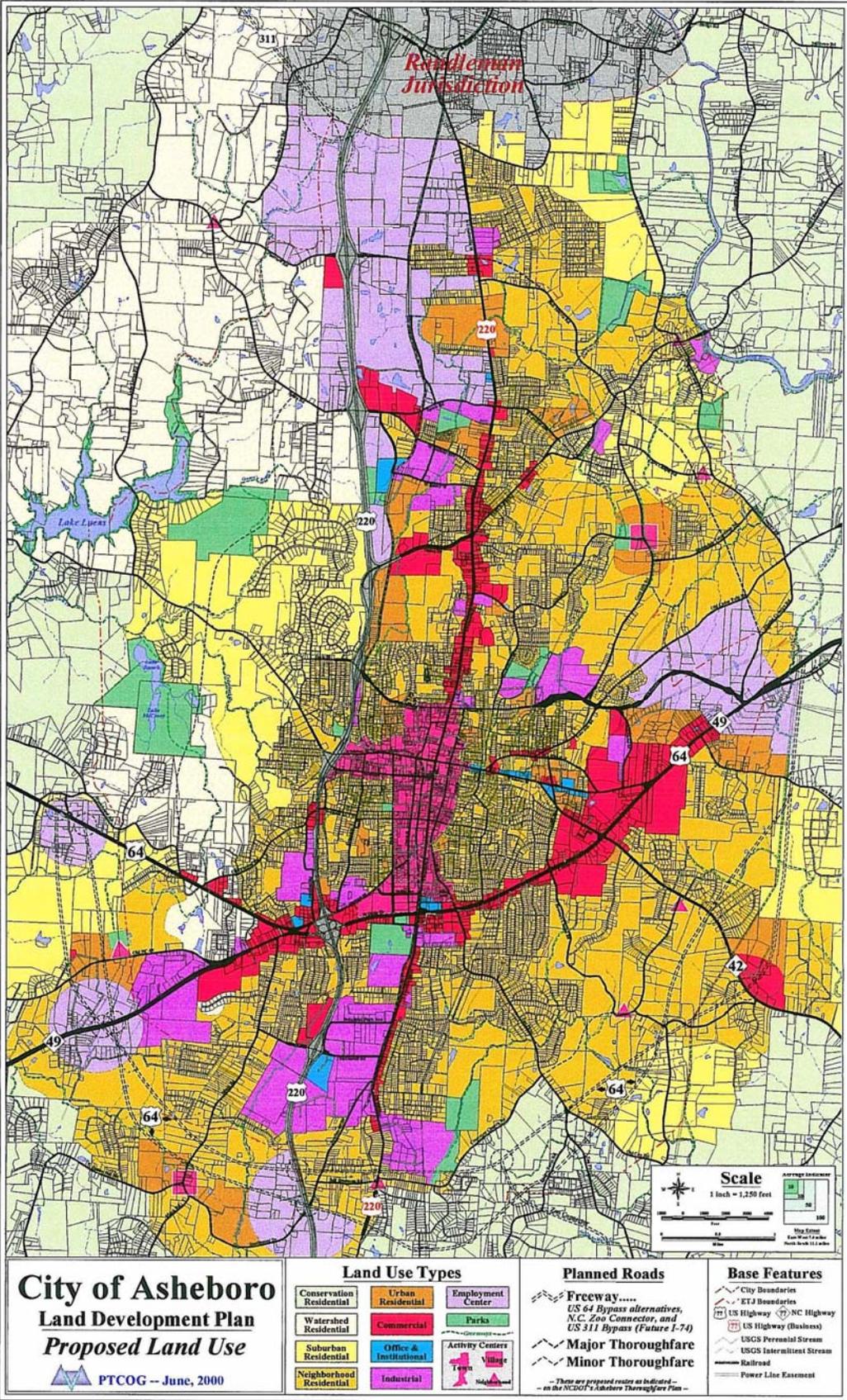
When changes to any part of this plan entail substantial budgetary considerations, the revisions or amended plan must be submitted to the NCDEM and FEMA for review.

At the end of every five-year cycle, the Randolph County Hazard Mitigation Taskforce will convene a planning committee with representatives from each jurisdiction in the County. The committee will review and update the hazard profile, vulnerability assessment and local capability section and submit these to the County Manager and all City and Town Managers (where there is no town manager, the town clerk) for their review, and subsequent adoption by the County Commissioners and City/Town Councils.

7. Continued Public Involvement

To facilitate continued public involvement in the planning process:

- The public will be invited to participate in the annual review of the plan.
- Copies of the plan will be kept on hand at the public library and at the City Hall. The plan will have a contact address, email address, and phone number of the person responsible for keeping track of public comments on the plan.
- The plan will be available on the Randolph County Website, and will contain an email address and phone number the public can use for submitting comments and concerns about the plan.



8. List of Changes made to Subsection 3 for 2009 Plan Update

Non-page specific changes:

- Correct capitalization of City since any reference to City in this document refers to the City of Asheboro.
- Correct capitalization of State since any reference to State in this document refers to the State of North Carolina.
- Correct spacing at the end of sentences from two spaces to one space as is now common with desktop publishing.
- Correct grammatical and punctuation errors from the original document.
- Where goals or strategies have been removed or added, the goals or strategies have been renumbered in the draft document to reflect the changes made.

Page S3.1:

- Changed population of City to reflect new data.

Page S3.2:

- Updated information regarding structures in flood plain along with the appraised value.

Page S3.11:

- Included current Land Use Plan.

Subsection 4

Hazard Mitigation Plan for the Town of Franklinville:

Community Profile: The Town of Franklinville is located east of Asheboro, two miles off US Highway 64 on NC Highway 22 and has a population of approximately 1,380 persons. Franklinville has very limited capability to mitigate against natural hazards. Law enforcement is provided by the Randolph County Sheriff's department. Franklinville government consists of a Mayor, Town Council, Town Clerk, Finance Officer, Planning Board Administrator and Public Works Director. The major employer is Deep River Fabricators. Franklinville purchases its drinking water from the Town of Ramseur.

1. Statement of the Problem:

Franklinville is vulnerable to flooding, dam failure, high wind events such as those associated with severe thunderstorms, tropical and extra tropical systems, and snow and ice events.

High wind events are highly likely to bring winds of between 38 and 73 miles per hour with winds of 74 to 100 mph possible. Tornadoes are possible with a probable intensity of F1 on the Fujita Pearson scale, which means wind speeds of 73-110 miles per hour (Category 1 hurricane winds on the Saffir Simpson scale.) Additionally, these high wind events are likely to carry with them the high probability of flash flooding and/or river and stream flooding, as well as lightning and hail.

Vulnerability to ice and snow storms are Countywide and will result in continued wide spread power outages, downed trees and limbs, as well as potential structure and building damage from falling trees and branches, or accumulation of snow on rooftops not designed to handle the snow load.

Flood and Dam Failure

Franklinville is highly vulnerable to floods and dam failure which would likely severely impact the Town. While there is no critical facility located in a flood plain, government buildings such as Town Hall and the fire station in the Town of Franklinville are located between flood zones that could result in blocked road access to East and West Main Street and compromise response times in the event of an emergency. Rose Street is the only alternative route. In addition, though not technically in a flood plain, Town Hall does experience nuisance flooding during heavy rains.

Mobile home parks and individual mobile homes are located in the Special Flood Hazard Area (SFHA). Roads impacted by the SFHA include, but are not limited to, Ogles Creek Road and Faith Rock Road.

The Ramseur Water Supply Dam is located within the SFHA which increases the risk of dam failure. Reportedly, there is a transverse crack in the concrete on the upstream and downstream face of the dam. A crack monitor has been placed to check movement. Dam Safety officials have recommended repairs be made on a depression near the left top abutment and no record of repair has been completed to address this issue. The old Ramseur filtration plant is 1,000 feet downstream. The new Ramseur filtration plant is 2,700 feet downstream. Also at risk are the Town of Franklinville, US Highway 64, numerous dwellings, buildings, roads and utilities downstream.

There are two dams upstream, the Upper Dam and Cox Dam that could increase the risk of dam failure.

Repetitive Loss Structures:

The Town of Franklinville has no recorded repetitive loss structures.

Local Government Capability:

Franklinville does not have a Planning Department or employ a planner. The Town of Franklinville has a Land Development Ordinance that regulates the development of land. Franklinville is part of the Randolph County Watershed Interlocal Agreements which limits the development density of land in an effort to reduce the degradation of drinking water supplies

2. Hazard Mitigation Goals

The goals serve as the basis for development of the more specific plan objectives and hazard mitigation activities. The multi-jurisdictional planning group has developed the following goals which are broad policy statements aimed at guiding and directing future activity so that persons, property, government, and infrastructure are protected from the impacts of natural hazards:

1. To enhance local government capability to lessen the impacts of all natural hazards;
2. To identify and protect critical services, buildings, facilities and infrastructure at risk of damage due to natural hazards;

3. To develop an effective public awareness/education/outreach program for natural hazards the County and municipalities are most likely to experience;
4. To protect persons and property, as well as reduce damage and loss to existing community assets; and
5. To ensure disaster resistant future development.

3. Hazard Mitigation Strategies for Franklinville

In the following pages, mitigation actions for Franklinville are listed and assigned specific implementation measures which include the assignment of responsibilities to local government departments and/or specific staff, along with the time frame for completion for each proposed mitigation action. When applicable, potential funding sources are also listed.

GOAL 1: To enhance local government capability to lessen the impacts of all natural hazards.

Background: Franklinville does not have a planning department or employ a planner. One major ordinance regulates the development of land:

- The Land Development Ordinance.

Objectives:

- 1.1 *Build local capacity for land use planning.*
- 1.2 *Build local capacity for emergency water supplies.*

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
1A	Update flood prevention ordinance	Flood	Local	Town Clerk	Completed
1B	Develop procedure for recording damage assessment information such as type of hazard, location of hazard occurrence, when it occurred, death or injury, property damaged, narrative description of damage, not just dollar amount, for local use in hazard mitigation and land use planning.	Multi-hazard	Local	County Planning County Emergency Management	Ongoing

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
1C	Working with Ramseur in regular water supply planning process, develop emergency water supply capability.	Multi-hazard	Local	Town Clerk and Town Council	Ongoing

STRATEGY 1A

Prior to the implementation of the new DFRIM on January 1, 2008, the Town was required to update its flood prevention ordinance in order to get in good standing with FEAM and the Flood Insurance Rate programs.

STRATEGY 1B

This strategy is actually being performed by the County Planning and the County Emergency Management Departments. Since disasters can happen at anytime its status has remained as an ongoing project.

STRATEGY 1C

The Town is still in negotiations with the Town of Ramseur to develop the emergency water supply capability should the need arise.

GOAL 2: To identify and protect critical services, buildings, facilities and infrastructure.

Background: The Town of Franklinville does not have critical facilities in floodplains. However; it is possible that emergency access could be severely compromised in the event of a flood. The town hall building experiences occasional nuisance flooding.

Objectives:

- 2.1 To ensure a continuous power supply for critical facilities and services during and after an ice/snow storm.
- 2.2 To protect critical facilities, services and documents from flood damage.

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
2A	Evaluate generators and fuel for alternative sources of power.	Multi-hazard	Local	Public Works Emergency Services	Ongoing
2B	Strengthen mobile home/manufactured home anchoring requirements	Multi-hazard	Local	Town Clerk	Ongoing
2C	Purchase flood insurance for Franklinville Town Hall	Flood	Local	Town Clerk	Completed
2D	Store important documents and materials on upper floors of Town Hall	Flood	Local	Town Clerk	Ongoing

STRATEGY 2A

This strategy has been identified as having an ongoing status since the need for generators and power sources is constantly changing due to the changing community.

STRATEGY 2B

Strategy 2B is classified as an ongoing policy since mobile homes are being placed within the Town and also due to the fact that the NC Building Code is constantly changing. The strategy has also been updated to reflect that the Town has a Town Clerk instead of a Town Manager.

STRATEGY 2C

The Town has purchased flood insurance for the Town Hall and, as such, this goal is now deemed to be completed.

STRATEGY 2D

It is the desire of the Town to store important documents and materials on the upper levels of the Town Hall. Since documents and materials are produced almost every day, this need will be ongoing.

GOAL 3: To develop an effective public awareness/education/outreach program for natural hazards the County and municipalities are most likely to experience.

Background: Currently the Town does not have a formal outreach program for hazard mitigation or hazard awareness.

Objectives:

3.1 Increase awareness and understanding of local government and general public of the need for hazard mitigation to protect persons and property from the impacts of natural hazards.

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
3A	Educate and inform local government and elected officials (decision makers) of the need to consider hazard mitigation in policy and budgetary planning and decision making processes.	Multi-hazard	Local	Town Clerk	Ongoing

STRATEGY 3A

This strategy has been assigned a status of ongoing since membership among the local government and elected officials is usually changing from one election to the next.

GOAL 4: To protect persons and property and reduce damage and loss to existing community assets including addressable structures, critical facilities, critical services and infrastructure due to natural hazards.

Background: Through the hazard mitigation planning process and vulnerability assessment, Franklinville has identified geographic areas at high risk for flood and dam failure.

Objectives:

- 4.1 *Identify vulnerable populations and provide emergency shelter.*
- 4.2 *To protect and warn persons and existing development from flood damage, dam failure and other geographically specific hazard locations.*

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
4A	Identify and designate at least one emergency shelter in Town	Multi-hazard	Local	Town Clerk with assistance from PTCOG /County EM	Ongoing
4B	Put in place a Countywide 9-1-1 reverse call system for location specific warning to public of impending disaster.	Multi-hazard	Homeland Security funds	County Emergency Management	Completed
4C	Develop program to clear debris from culverts and storm drains in priority floodplains.	Flood	Local	Public Works	Ongoing

STRATEGY 4A

Strategy 4A has been continued to reflect the need to indentify a shelter within the Town.

STRATEGY 4B

This strategy was completed by the County Emergency Management Department during the previous five year cycle.

STRATEGY 4C

This strategy remains in the plan since the need to clear debris from the culverts and storm drains is a project that needs constant monitoring.

GOAL 5: To ensure disaster-resistant future development.

Background: The Town of Franklinville is building capacity for land use planning.

Objectives:

5.1 *To protect future development from the impacts of natural hazards*

5.2 *Regulate future development to prevent damages and losses from natural hazard events*

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
5A	Through existing subdivision regulations, encourage that power, cable and telephone lines be buried	Multi-hazard	Local	Planning	Ongoing
5B	Included in land use and development plans as Town policy: Wherever possible preserve natural wetlands, designate conservation corridors, especially along streams through acquisition or conservation easements.	Multi-hazard	Local	Planning	Ongoing
5C	Included in land use and development plans: Will encourage street interconnectivity in all new subdivisions to allow multiple exit points.	Multi-hazard	Local	Planning	Ongoing

STRATEGIES 5A-5C

These strategies are categorized as ongoing since they will be a continual process to enforce.

4. Implementation

Implementation of the Hazard Mitigation Plan will start from the time the required update is adopted. Work has already started on several of the mitigation strategies identified in the Mitigation Strategies section. Each City Department will be responsible for pursuing the development of policies, programs, ordinance revisions, and regulations as they are assigned.

Franklinville will create a process to incorporate requirements in this hazard mitigation plan into the Land Development ordinance. During the planning process for all new and updated local planning documents, such as a land development plan, comprehensive plan, or capital improvement plan, the Town Clerk will provide a copy of the hazard mitigation plan to each member of the planning team. The Town Clerk will ensure that all goals and strategies of new and updated local planning documents are consistent with the hazard mitigation plan and will not contribute to increased hazards in the jurisdiction.

A process for prioritization of identified hazard mitigation strategies was performed. The hazard mitigation planning team used the following criteria for prioritization of strategies:

1. Cost-benefit review;
2. Results of vulnerability assessment;
3. Results of hazard identification and analysis;
4. Results of capability assessment; and
5. Effectiveness in meeting hazard mitigation goals.

The results of the capability assessment as well as the cost-benefit review were given special emphasis. To complete a cost-benefit review of actions listed in this plan, we utilized information from past projects that helped us determine an estimate of the probable cost of implementing any given strategy. This was supplemented by local knowledge of various personnel, Boards and historical data that helped us understand whether or not the benefits that would be incurred from such actions were greater than the costs. The prioritization of the strategies is designated through listing them as high, moderate or low priority. Time frames have been categorized as short-term and long-term. Short-term strategies are those that can be implemented within existing resources and authorities and should be completed within a time frame of 6 months to 2 years. Short-term activities are generally a higher priority and include those activities that should be implemented immediately following the adoption of this plan. Long-term strategies may require new or additional resources or authorities and should be organized to begin implementation within a timeframe of 3 - 5 years.

Table 1: Priority of Implementation

Priority	Strategy#	Amendment Completed Ongoing New	Ongoing (no end date)	Short Term (resources, and authority available now)	Long Term (resources or authority currently not available)
High	1A	C		X	
High	1B	O	X		X
High	1C	O			
Moderate	2A	O	X	X	
Moderate	2B	O		X	
High	2C	C		X	
High	2D	O			
High	3A	O	X	X	
Moderate	4A	C			X
High	4B	C			X
High	4C	O			
Moderate	5A	O	X		X
High	5B	O	X		X
High	5C	O	X		X

5. Monitoring, Evaluating, and Reporting Progress

The evaluation form in Appendix D will be used by County staff to begin the evaluation process. The base year statistics used in calculating progress will be the year prior to each five-year cycle. This form will be completed and submitted to the County Hazard Mitigation Taskforce, as well as all City and Town Managers (where there is no Town Manager the form will be sent to the Town Clerk).

The Town of Franklinville Hazard Mitigation Taskforce will include the Town Clerk, local Fire Chief, Public Works Director, School Official, and a member of the Public Safety Committee. This core taskforce (and others at the discretion of the taskforce) will convene annually to review the County evaluation form, evaluate Subsection 4: Town of Franklinville of the plan for effectiveness, and make recommendations for revision or amendment as necessary.

The Taskforce will then prepare an evaluation report summarizing the progress of the plan. The evaluation and progress report should consider the following questions.

- Have lead agencies participated as originally proposed?
- Have outcomes been adequate?
- What problems have occurred in the implementation process?
- Have members of the public been adequately involved?

The report will include:

- The status of benchmarks and indicators;
- Difficulties or impediments during implementation;
- Changes in Town & County priorities; and
- Recommendations for changes, revisions, or amendments to the plan.

In addition to the annual review, the Town of Franklinville Hazard Mitigation Taskforce will review and update the plan after any *presidential disaster declaration* for the Town of Franklinville.

6. Revisions and Updates:

After completion of the evaluation report the Taskforce will present the findings with recommendations for updates and revision to the City Council for amendment to Subsection 4: Town of Franklinville Hazard Mitigation Plan. As updates occur, the date, reason and responsible party should be noted. Updates or revisions which affect the plan as a whole or impacts any other jurisdiction(s) will require a presentation of findings and recommendations to, and ultimate adoption by, those jurisdictions' commissioners or council members.

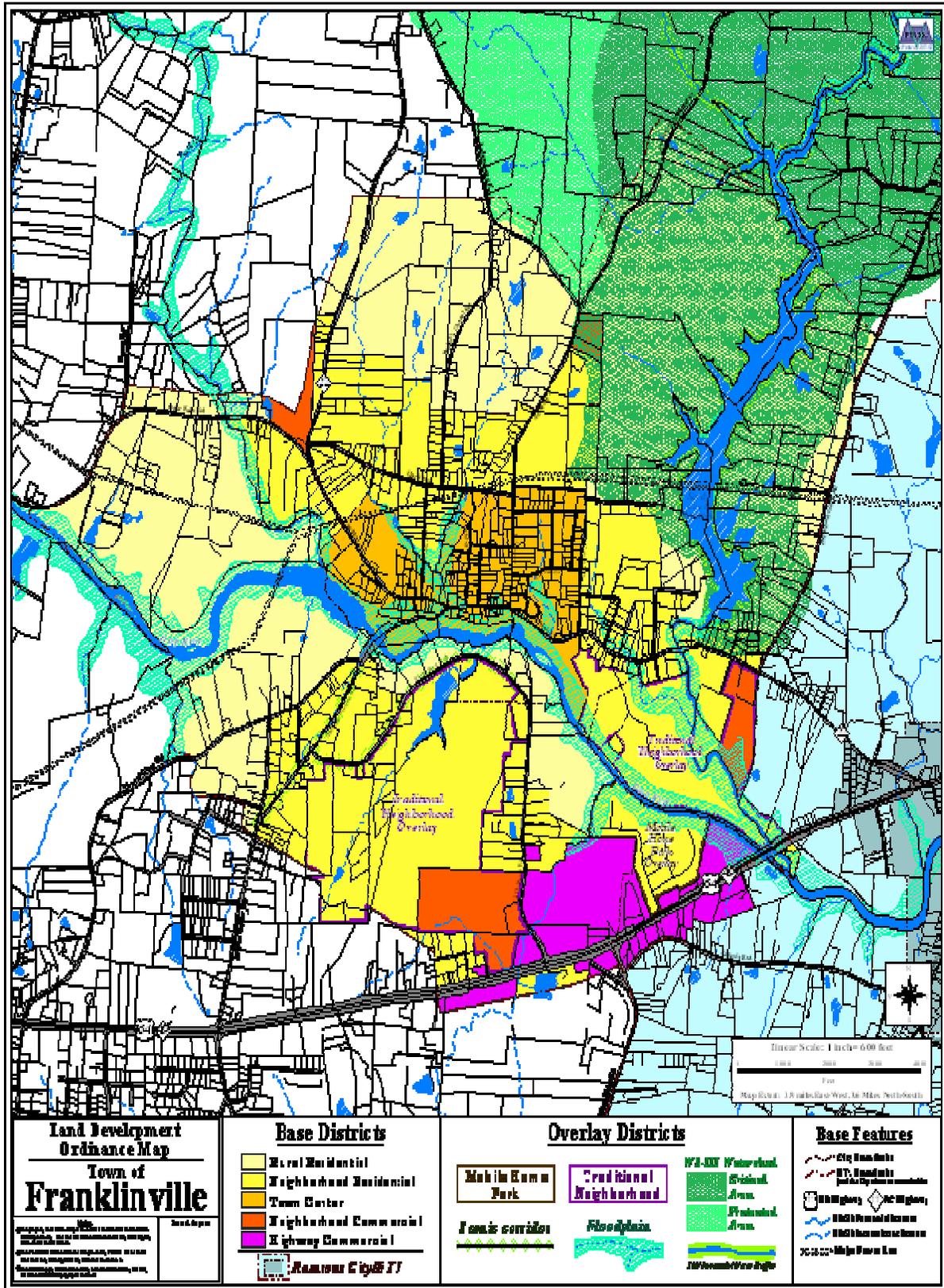
When changes to any part of this plan entail substantial budgetary considerations, the revisions or amended plan must be submitted to the NCDEM and FEMA for review.

At the end of every five-year cycle, the Randolph County Hazard Mitigation Taskforce will convene a planning committee with representatives from each jurisdiction in the County. The committee will review and update the hazard profile, vulnerability assessment and local capability section and submit these to the County Manager and all City and Town Managers (where there is no town manager, the town clerk) for their review, and subsequent adoption by the County Commissioners and City/Town Councils.

7. Continued Public Involvement

To facilitate continued public involvement in the planning process:

- The public will be invited to participate in the annual review of the plan.
- Copies of the plan will be kept on hand at the public library and at the Town Hall. The plan will have a contact address, email address, and phone number of the person responsible for keeping track of public comments on the plan.
- The plan will be available on the Randolph County Website, and will contain an email address and phone number the public can use for submitting comments and concerns about the plan.



8. Plan Update Process for 2009 Plan Update

The Town held a meeting on February 10, 2009, with Public Works Director Arnold Allred, Town Clerk Shelia Vince, Planning and Zoning Representative Commissioner Perry Conner, Fire Chief Kyle Dixon and Franklinville Elementary School Principal Jeff Ulenburg were present for the meeting.

Arnold Allred opened the Hazard Mitigation meeting.

Mr. Allred said the previous plan was adopted in 2004 and must be reviewed or updated if necessary every five years. Mr. Allred explained the purpose of the meeting was to make any necessary changes to the current plan. The County will review the changes provided by the Town of Franklinville and hold a Countywide meeting for public comment. Commissioner Conner suggested some changes as did Fire Chief Dixon which will be submitted on Hazard Mitigation Plan to Donavon Davis. Changes include adding the "Upper Dam" and the "Cox Dam" to the plan. It is recommended that important documents be moved to a higher level to prevent water damage in case of flooding. Fire Chief Dixon recommended assigning an emergency shelter for the Franklinville area in the event of emergencies. This item was discussed and Mr. Ulenburg recommended that the Town submit the request in writing to Mr. Ulenburg so he could forward it to the proper authorities for a decision. Commissioner Conner recommended including the Public Safety Committee in the Monitoring and Evaluation section. Fire Chief Dixon recommended including the school principal in that listing as well.

Having reviewed and updated the Hazard Mitigation Plan for the Franklinville area the meeting was adjourned. Once the updates were made, the information was provided to the County for the 2009 Plan.

9. List of Changes made to Subsection 4 for 2009 Plan Update

Non-page specific changes:

- Correct capitalization of County since any reference to County in this document refers to Randolph County.
- Correct capitalization of State since any reference to State in this document refers to the State of North Carolina.
- Correct capitalization of Town since any reference to Town in this document refers to the Town of Franklinville.
- Correct spacing at the end of sentences from two spaces to one space as is now common with desktop publishing.
- Correct grammatical and punctuation errors from the original document.
- Where goals or strategies have been removed or added, the goals or strategies have been renumbered to reflect the changes made.

Page S4.1:

- Corrected the location of the Town.
- Corrected population of Town due to updated Census data.
- Corrected the major employer due to updated information.

Page S4.2:

- Removed the information regarding the Randolph Mill Earthen Dam since the repairs have been completed.
- Added information regarding the two upstream dams that increase exposure.
- The Town now has a Land Development Ordinance that incorporates the zoning ordinance, subdivision regulations and watershed ordinance.

Page S4.3:

- The background for Goal 1 was changed to reflect the changes made by the Town regarding the Land Development Ordinance.
- Objectives were added for Goal 1 since they were absent from the previously approved Plan.

Page S4.4:

- The background information for Goal 3 was updated to remove references to the Town of Liberty.

Page S4.7:

- The priority table was updated to show the changes made by the Town based upon the revision of their goals and strategies.

Page S4.8:

- The Hazard Mitigation Taskforce for the Town was changed to place the Public Works Director, a member of the Town Safety Committee and an official from the local school on the Taskforce.

Page S4.10:

- Included current Land Use Plan.

Subsection 5

Hazard Mitigation Plan for the Town of Liberty:

Community Profile: Liberty is located on the northeast border of the County and has a population of approximately 2,808 persons. The Town of Liberty is served by eight wells and reportedly, demand will reach 65% by 2020. Liberty has no known geographically hazardous areas within its jurisdiction. Liberty employs a City Manager, Fire Chief, Police Chief, Public Works Director and Town Attorney. It does not have a planning department or GIS capability. The major employer for the Town is Ultracraft. The Town of Liberty is within the 50-mile ingestion zone of the Shearon Harris Nuclear Facility. The facility is not mandated to have an evacuation plan for an area beyond 10 miles of the plant.

1. Statement of the Problem:

Liberty is vulnerable to high wind events such as those associated with severe thunderstorms, tropical and extra tropical systems, snow and ice events, river and stream flooding, flash flooding, and drought.

High wind events are highly likely to bring winds of between 38 and 73 miles per hour with winds of 74 to 100 mph possible. Tornadoes are possible with a probable intensity of F1 on the Fujita Pearson scale, which means wind speeds of 73-110 miles per hour (Category 1 hurricane winds on the Saffir Simpson scale.) Additionally, these high wind events are likely to carry with them the high probability of flash flooding and/or river and stream flooding, as well as lightning and hail.

Vulnerability to ice and snow storms are Countywide and will result in continued wide spread power outages, downed trees and limbs, as well as potential structure and building damage from falling trees and branches, or accumulation of snow on rooftops not designed to handle the snow load.

Repetitive Loss Structures:

The Town of Liberty has no recorded repetitive loss structures.

Local Government Capability:

Liberty does not have a planning department or employ a planner. The Town of Liberty has four major ordinances that regulate the development of land: the zoning ordinance, subdivision regulations, watershed ordinance and flood plain ordinance. The watershed regulations are

included within the zoning ordinance and limit the development density of land in an effort to reduce the degradation of drinking water supplies

2. Hazard Mitigation Goals

The goals serve as the basis for development of the more specific plan objectives and hazard mitigation activities. The multi-jurisdictional planning group has developed the following goals which are broad policy statements aimed at guiding and directing future activity so that persons, property, government, and infrastructure are protected from the impacts of Natural Hazards.

1. To enhance local government capability to lessen the impacts of all natural hazards
2. To identify and protect critical services, buildings, facilities and infrastructure that is at risk of damage due to natural hazards.
3. To develop an effective public awareness/education/outreach program for natural hazards the County and municipalities are most likely to experience.
4. To protect persons and property, as well as reduce damage and loss to existing community assets.
5. To ensure disaster resistant future development

3. Hazard Mitigation Strategies for Liberty

In the following pages, mitigation actions for Liberty are listed and assigned specific implementation measures which include the assignment of responsibilities to local government departments and/or specific staff, along with the time frame for completion for each proposed mitigation action. When applicable, potential funding sources were also listed.

GOAL 1: To enhance local government capability to lessen the impacts of all natural hazards

Background: Liberty does not have a planning department or employ a planner. The Town of Liberty has four major ordinances that regulate the development of land: the zoning ordinance, subdivision regulations, watershed ordinance and flood plain ordinance. The watershed regulations are included within the zoning ordinance and limit the development density of land in an effort to reduce the degradation of drinking water supplies.

- Zoning ordinance
- Subdivision ordinance
- Watershed protection ordinance
- Flood plain ordinance

Objective:

1.1 To increase local capacity to mitigate the impacts of natural disasters.

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
1A	Employ a planner.	Multi-hazard	Local	Town Manager	Ongoing
1B	Create planning department.	Multi-hazard	Local	Town Manager	Ongoing
1C	Adopt flood prevention ordinance.	Flood	Local	Town Manager	Completed
1D	Update existing Emergency Operations Plan.	Multi-hazard	Local	Town Manager	Completed

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
1E	Review and amend existing capital improvement plan to ensure capital improvement support mitigating activities and are not counter to hazard mitigation.	Multi-hazard	Local	Town Manager	Completed
1F	Become National Flood Insurance Program member.	Flood	Local	Town Manager	Completed
1G	Develop procedure for recording damage assessment information such as type of hazard, location of hazard occurrence, when it occurred, death or injury, property damaged, narrative description of damage, not just dollar value, for local use in hazard mitigation and land use planning.	Multi-hazard	Local	County Planning County Emergency Management	Ongoing
1H	Develop emergency water supply capability as part of local water supply planning process.	Multi-hazard	Local	Town Manager	Ongoing
1I	Develop and adopt a drought management/water shortage (conservation) ordinance as part of local water supply planning process.	Drought	Local	Town Manager	Completed

STRATEGIES 1A and 1B

The strategies of employing a Planner and creating a Planning Department for the Town of Liberty has not been accomplished in the previous five year cycle due to budgetary constraints. It is remaining in the Plan as it is still a goal for the Town.

STRATEGIES 1C, 1D, 1E, 1F and 1I

The strategies have been deemed as completed since the Town has completed all of these items by adoption of the relative items by the Town Council

STRATEGY 1G

This strategy is ongoing at this time. The database has been completed and is in use by the County. It is classified as an ongoing strategy since disasters can happen at anytime and technology is changing at a rapid pace causing the need to constant changed to the database.

STRATEGY 1H

This is an ongoing strategy due to the fact to the Town is experiencing growth. Water supply capability at all times, not just in times of emergency, is important to the Town.

GOAL 2: To identify and protect critical services, buildings, facilities and infrastructure

Background: The Town of Liberty does not have any critical facilities located in a geographically hazardous area. However, alternative power sources are necessary when natural disasters result in large-scale power outages.

Objective:

2.1 To ensure a continuous power supply for critical facilities and services during and after an ice/snow storm.

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
2A	Evaluate generators and fuel for alternative sources of power for critical facilities.	Multi-hazard	Local	Town Manager /Finance Officer	Completed
2B	Strengthen mobile home/manufactured home anchoring requirements.	High wind events	Local	Town Manager	Completed

STRATEGY 2A

During the previous five year cycle this project was completed by the Town with the support of the Town Council.

STRATEGY 2B

This strategy was actually accomplished through the efforts of the County Building Inspections Department since they are responsible for enforcing the Building Code as mandated by the State. As the State changed the Building Code, the County responded by enforcing the code requirements.

GOAL 3: To develop an effective public awareness/education/outreach program for natural hazards the County and municipalities are most likely to experience.

Background: Currently the Town does not have a formal outreach program for hazard mitigation or hazard awareness. Liberty has no flood plains or other geographically hazardous area within Town limits or ETJ.

Objective:

3.1 *Increase awareness and understanding of local government and general public of the need for hazard mitigation to protect persons and property from the impacts of natural hazards.*

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department	Status
3A	Educate and inform local government and elected officials (decision makers) of the need to consider hazard mitigation in policy and budgetary planning and decision making processes.	Multi-hazard	Local	Town Manager with assistance from PTCOG	Ongoing
3B	Design a seasonal public information/education program targeted to mobile home/manufactured home residents through Central Permit Process - explaining hazards such as high wind events, flooding and alternative shelters in a storm/high wind event/flood through Central Permit Process already in place.	Multi-hazard	Local	County Planning County Emergency Management	Completed

STRATEGY 3A

This strategy has been targeted as an ongoing project since local government and elected leaders for the Town can change at any election.

STRATEGY 3B

This strategy has been given the status of completed. This project is actually handles by the County Emergency Management and Planning Departments.

GOAL 4: To protect persons and property and reduce damage and loss to *existing* community assets including addressable structures, critical facilities, critical services and infrastructure due to natural hazards

Background: Liberty has no known hazard risks associated with its geography. The County will pursue a 9-1-1 reverse call system for warning specific areas under threat from natural hazards.

Objectives:

- 4.1 To identify vulnerable populations and provide emergency shelter.
- 4.2 To protect and warn persons and existing development from flood damage, dam failure and other geographically specific hazard locations.

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department	Status
4A	Identify and map mobile home parks	Multi-hazard	Local	Town Manager with County assistance	Completed
4B	Identify and designate at least one emergency shelter in each municipality.	Multi-hazard	Local	Town Manager/County Emergency Management	Completed
4C	Put in place a Countywide 9-1-1 reverse call system for location specific warning to public of impending disaster.	Multi-hazard	Homeland Security fund	Countywide Emergency Management	Completed
4D	Develop program to clear debris from culverts and storm drains in priority floodplains.	Flooding	Local	Public Works	Completed

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department	Status
4E	Adopt tree planning ordinances or programs and landscaping practices that encourage planting trees which are less susceptible to damage from ice storms.	Ice events	Urban & Community Forestry Grant Program	Town Manager	Completed
4F	Consider Urban Forestry Services development	Ice and wind events	Urban & Community Forestry Grant Program	Town Manager	Ongoing

STRATEGY 4A

This strategy was actually completed by the County prior to the implementation of the 2004 Plan. It has been given a status of completed.

STRATEGY 4B

This strategy has been completed since a shelter has now been located in the Town.

STRATEGY 4C

One way to alert citizens to pending events is through the use of a *Reverse 9-1-1 System*. Since the adoption of the Plan, the County Emergency Management Department has purchased and deployed the reverse 9-1-1 system through the use of Homeland Security grant funds.

STRATEGY 4D

A program has been designed for the Public Works Department of the Town to clear storm debris for all storm drains in the Town.

STRATEGY 4E

The Town has adopted a Land Use Ordinance which includes many of the items in this strategy. It has been given a status of completed by the Town.

STRATEGY 4F

This strategy is still under review by the Town, and as such, is classified as having an ongoing status.

GOAL 5: To ensure disaster resistant future development

Background: The Town of Liberty does not have a land use plan, however it plans to build local planning capability.

Objectives:

- 5.1 *To protect future development from the impacts of natural hazards*
- 5.2 *Regulate future development to prevent damages and losses from natural hazard events*

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department	Status
5A	Through amendments to existing subdivision regulations, encourage that power, cable and telephone lines be buried	Multi-hazard	Local	Town Manager Planner	Completed
5B	Include in existing land development plans, adopt as Town policy: Wherever possible preserve natural wetlands, designate conservation corridors, especially along streams through acquisition or conservation easements.	Multi-hazard	Local	Town Manager Planner	Completed
5C	Include in existing land development plans, where feasible will encourage street interconnectivity in all new subdivisions to allow multiple access points.	Multi-hazard	Local	Town Manager Planner	Completed
5D	Include in existing land development plans, wherever possible preserve natural wetlands, designate conservation corridors, especially along streams through acquisition or conservation easements.	Multi-hazard	Local	Town Manager Planner	Completed

STRATEGIES 5A, 5B, 5C and 5D

All of these strategies are classified as completed since these have been included in the Town's ordinances.

4. Implementation

Implementation of the Hazard Mitigation Plan will start from the time that the required update is adopted. Work has already started on several of the mitigation strategies identified in the Mitigation Strategies section. Each City Department will be responsible for pursuing the development of policies, programs, ordinance revisions, and regulations as they are assigned.

The Town of Liberty will create a process to incorporate requirements in this hazard mitigation plan into the floodplain ordinance, subdivision ordinance and zoning activities. During the planning process for all new and updated local planning documents, such as a land development plan, comprehensive plan, or capital improvement plan, the Town Manager will provide a copy of the hazard mitigation plan to each member of the planning team. The Town Manager will ensure that all goals and strategies of new and updated local planning documents are consistent with the hazard mitigation plan and will not contribute to increased hazards in the jurisdiction.

A process for prioritization of identified hazard mitigation strategies was performed. The hazard mitigation planning team used the following criteria for prioritization of strategies:

1. Cost-benefit review
2. Results of vulnerability assessment
3. Results of hazard identification and analysis
4. Results of capability assessment.
5. Effectiveness in meeting hazard mitigation goals.

The results of the capability assessment as well as the cost-benefit review were given special emphasis. To complete a cost-benefit review of actions listed in this plan, we utilized information from past projects that helped us determine an estimate of the probable cost of implementing any given strategy. This was supplemented by local knowledge of various personnel, Boards and historical data that helped us understand whether or not the benefits that would be incurred from such actions were greater than the costs. The prioritization of the strategies is designated through listing them as high, moderate or low priority. Time frames have been categorized as short-term and long-term. Short-term strategies are those that can be implemented within existing resources and authorities and should be completed within a time frame of 6 months to 2 years. Short-term activities are generally a higher priority and include those activities that should be implemented immediately following the adoption of this plan. Long-term strategies may require new or additional resources or

authorities and should be organized to begin implementation within a timeframe of 3 - 5 years.

Table 1: Priority of Implementation

Priority	Strategy#	Amendment Completed Ongoing New	Ongoing (no end date)	Short Term (resources, and authority available now)	Long Term (resources or authority currently not available)
High	1A	O		X	
High	1B	O			X
High	1C	C		X	
Moderate	1D	C	X	X	
Low	1E	C			
High	1F	C			
High	1G	O			
Moderate	1H	O			
High	1I	C	X	X	
High	2A	C	X	X	
Low	2B	C			
Moderate	3A	O	X	X	
High	3B	C		X	
Moderate	4A	C	X		X
High	4B	C	X		X
Low	4C	C	X		X
High	4D	C	X		X
Low	4E	C			
Low	4F	O			
Moderate	5A	C			
High	5B	C			
Low	5C	C			
High	5D	C			

5. Monitoring, Evaluating, and Reporting Progress

The evaluation form in Appendix D will be used by County staff to begin the evaluation process. The base year statistics used in calculating progress will be the year prior to each five-year cycle. This form will be completed and submitted to the County Hazard Mitigation Taskforce, as well as all City and Town Managers (where there is no Town Manager the form will be sent to the Town Clerk).

The Town of Liberty Hazard Mitigation Taskforce will include the Town Manager, Fire and Public Works Director. This core taskforce (and others at the discretion of the taskforce) will convene annually to review the County evaluation form, evaluate the Plan's effectiveness, and make recommendations for revision or amendment as necessary.

The task force will then prepare an evaluation report summarizing the progress of the Plan. The evaluation and progress report should consider the following questions.

- Have lead agencies participated as originally proposed?
- Have outcomes been adequate?
- What problems have occurred in the implementation process?
- Have members of the public been adequately involved?

The report will include:

- The status of benchmarks and indicators,
- Difficulties or impediments during implementation;
- Changes in County priorities
- Recommendations for changes, revisions, or amendments to the plan.

In addition to the annual review, the Town of Liberty Hazard Mitigation Taskforce will review and update the plan after any *presidential disaster declaration* for the Town of Liberty

6. Revisions and Updates:

After completion of the evaluation report the taskforce will present the findings with recommendations for updates and revision to the City Council for amendment to Subsection 5: Town of Liberty Hazard Mitigation Plan. As updates occur, the date, reason and responsible party should be noted. Updates or revisions which affect the plan as a whole or impacts any other jurisdiction(s) will require a presentation of findings

and recommendations to, and ultimate adoption by, those jurisdictions' council members.

When changes to any part of this plan entail substantial budgetary considerations, the revisions or amended plan must be submitted to the NCDEM and FEMA for review.

At the end of every five-year cycle, the Randolph County Hazard Mitigation Taskforce will convene a planning committee with representatives from each jurisdiction in the County. The committee will review and update the hazard profile, vulnerability assessment and local capability section and submit these to the County Manager and all City and Town Managers (where there is no Town manager, the Town clerk) for their review, and subsequent adoption by the County Commissioners and City/Town Councils.

7. Continued Public Involvement

To facilitate continued public involvement in the planning process:

- The public will be invited to participate in the annual review of the plan.
- Copies of the plan will be kept on hand at the public library and at the Town Hall. The plan will have a contact address, email address, and phone number of the person responsible for keeping track of public comments on the plan.
- The plan will be available on the Randolph County Website, and will contain an email address and phone number the public can use for submitting comments and concerns about the plan.

8. List of Changes made to Subsection 5 for 2009 Plan Update

Non-page specific changes:

- Correct capitalization of Town since any reference to Town in this document refers to the Town of Liberty.
- Correct capitalization of State since any reference to State in this document refers to the State of North Carolina.
- Correct spacing at the end of sentences from two spaces to one space as is now common with desktop publishing.
- Correct grammatical and punctuation errors from the original document.

- Where goals or strategies have been removed or added, the goals or strategies have been renumbered in the draft document to reflect the changes made.

Page S5.1:

- Updated the population of the Town to reflect current data.
- Update the number of ordinances that the Town currently has to reflect the adoption of the Flood Plain Ordinance.

Page S5.3:

- Updated the list of ordinances to reflect the adoption of the Flood Plain Ordinance.

Page S5.7:

- Table 1 was updated to reflect changes made to the goals and strategies for the 2009 Plan update.

Subsection 6

Hazard Mitigation Plan for the Town of Ramseur:

Community Profile: The Town of Ramseur is located east of Asheboro, along US Highway 64 and has a population of approximately 1,708 persons. Ramseur government consists of a Town Mayor, five Commissioners, Town Administrator, Town Clerk, Town Attorney, and Public Works Director. Law enforcement and public safety services are carried out through the Ramseur Police Department and Fire Department.

1. Statement of the Problem:

Ramseur is vulnerable to flooding, dam failure, high wind events such as those associated with severe thunderstorms, tropical and extra tropical systems, and snow and ice events.

High wind events are highly likely to bring winds of between 38 and 73 miles per hour with winds of 74 to 100 mph possible. Tornadoes are possible with a probable intensity of F1 on the Fujita Pearson scale, which means wind speeds of 73-110 miles per hour (Category 1 hurricane winds on the Saffir Simpson scale.) Additionally, these high wind events are likely to carry with them the high probability of flash flooding and/or river and stream flooding, as well as lightning and hail.

Vulnerability to ice and snow storms are Countywide and will result in continued wide spread power outages, downed trees and limbs, as well as potential structure and building damage from falling trees and branches, or accumulation of snow on rooftops not designed to handle the snow load.

Flood and Dam Failure

Ramseur is vulnerable to floods and Ramseur Water Supply Dam failure would severely impact the town since this is the main water supply. Ramseur water is supplied by Sandy Creek Reservoir and Ramseur Water Supply Dam. Ramseur Water Supply Dam is located within the SFHA which increases the risk of dam failure. A crack on the right side of the downstream slope is leaking and water can be heard moving inside the dam. Dam Safety officials have directed that remedial measures be taken. An engineering study is under way to determine the appropriate remedial measures. Ramseur filtration plant is 1,000 feet downstream; the new Ramseur filtration plant is 2,700 feet downstream. Also at risk are parts of Franklinville, US Highway 64, numerous dwellings, buildings, roads and utilities downstream. An Emergency Action Plan has been developed to address potential emergencies associated with the dam.

Repetitive Loss Structures:

The Town of Ramseur has no recorded repetitive loss structures.

Local Government Capability:

Ramseur does not have a planning department or employ a planner. The Town of Ramseur has three major ordinances that regulate the development of land: the zoning ordinance, subdivision regulations, and flood damage prevention ordinance. Ramseur is part of the Randolph County Watershed Interlocal agreements which limits the development density of land in an effort to reduce the degradation of drinking water supplies

2. Hazard Mitigation Goals

The goals serve as the basis for development of the more specific plan objectives and hazard mitigation activities. The multi-jurisdictional planning group has developed the following goals which are broad policy statements aimed at guiding and directing future activity so that persons, property, government, and infrastructure are protected from the impacts of natural hazards:

1. To enhance local government capability to lessen the impacts of all natural hazards;
2. To identify and protect critical services, buildings, facilities and infrastructure at risk of damage due to natural hazards;
3. To develop an effective public awareness/education/outreach program for natural hazards the County and municipalities are most likely to experience;
4. To protect persons and property, as well as reduce damage and loss to existing community assets; and
5. To ensure disaster resistant future development.

3. Hazard Mitigation Strategies for Ramseur

In the following pages, mitigation actions for Ramseur are listed and assigned specific implementation measures which include the assignment of responsibilities to local government departments and/or specific staff, along

with the time frame for completion for each proposed mitigation action. When applicable, potential funding sources were also listed.

Plan implementation will start from the time that it is adopted. Work has already started on several of the mitigation strategies identified in the Mitigation Strategies section. Each City Department will be responsible for pursuing the development of policies, programs, ordinance revisions, and regulations as they are assigned.

GOAL 1: To enhance local government capability to lessen the impacts of all natural hazards.

Background: Ramseur does not have a planning department or employ a planner. Three major ordinances regulate the development of land: the zoning ordinance, subdivision regulations, and flood damage prevention ordinance. Ramseur is under the Randolph County Watershed Interlocal Agreement.

Objective:

1.1 Build local capacity for land use planning

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
1A	Update flood prevention ordinance	Flood	Local	Administration	Ongoing
1B	Develop procedure for recording damage assessment information such as type of hazard, location of hazard occurrence, when it occurred, death or injury, property damaged, narrative description of damage, not just dollar value, for local use in hazard mitigation and land use planning.	Multi-hazard	Local	County Emergency Management County Planning Department	Ongoing
1C	Develop emergency water supply capability	Multi-hazard	Local	Administration/ Town Council	Ongoing

STRATEGY 1A

The Town updated the Flood Protection Ordinance in January 2008. The Town has decided to retain this strategy since the need to have an updated flood ordinance is ongoing. The lead department for this strategy has changed to the Town Administration to reflect the change in management style

STRATEGY 1B

The strategy is actually managed by the County Planning and Emergency Management Departments for the entire County. Since the chance for disasters is always present, the Town has declared the need for this program to be ongoing.

STRATEGY 1C

As the Town grows and experiences development pressures, the need for reliable water supplies, especially in emergency situations, is ongoing. The Town will continue to work on this strategy in the next five year cycle.

GOAL 2: To identify and protect critical services, buildings, facilities and infrastructure.

Background: The Town of Ramseur does not have critical facilities in floodplains.

Objective:

2.1 *To ensure a continuous power supply for critical facilities and services during and after an ice/snow storm.*

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
2A	Evaluate generators and fuel for alternative sources of power.	Multi-hazard	Local	Public Works	Ongoing
2B	Install hookups for portable generators at sewer lift stations which do not currently have hookups.	Multi-hazard	Local	Public Works	New

STRATEGY 2A

This strategy has remained in the 2009 Update due to the fact the generators and fuel sources can be needed on short notice, and as such, the Town needs to always be ready to provide these resources.

STRATEGY 2B

This strategy has been added to the 2009 Update to encourage the Town to continue to work to install hookups for the generators at sewer lift stations that currently do not have the hookups to allow quick response to power outages.

GOAL 3: To develop an effective public awareness/education/outreach program for natural hazards the County and municipalities are most likely to experience.

Background: Currently the Town does not have a formal outreach program for hazard mitigation or hazard awareness.

Objective:

3.1 *Increase awareness and understanding of local government and general public of the need for hazard mitigation to protect persons and property from the impacts of natural hazards.*

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
3A	Educate and inform local government and elected officials (decision makers) of the need to consider hazard mitigation in policy and budgetary planning and decision making processes	Multi-hazard	Local	Administration	Ongoing
3B	Educate and inform residents of the need for and means of hazard mitigation to more effectively protect persons and property from the impacts of natural hazards.	Multi-hazard	Local	Administration	New

STRATEGY 3A

This strategy has been classified as ongoing since all decision makers can change with the outcome of one election. Budgetary implications also played a part in the need to retain this strategy.

STRATEGY 3B

This strategy has been added to allow the Town to work on educational opportunities to its citizens so they can more effectively protect themselves and their property.

GOAL 4: To protect persons and property and reduce damage and loss to existing community assets including addressable structures, critical facilities, critical services and infrastructure due to natural hazards.

Background: Through hazard mitigation planning process and vulnerability assessment, Ramseur has identified geographic areas at high risk for flood and dam failure.

Objectives:

- 4.1 To identify vulnerable populations and provide emergency shelter.
- 4.2 To protect and warn persons and existing development from flood damage, dam failure and other geographically specific hazard locations.

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
4A	Identify and designate at least one emergency shelter in Town	Multi-hazard	Local	Administration/ County Emergency Management	Ongoing
4B	Put in place a Countywide 9-1-1 reverse call system for location specific warning to public of impending disaster.	Multi-hazard	Homeland Security funds	County Emergency Management	Completed
4C	Develop program to clear debris from culverts and storm drains in priority floodplains.	Flood	Local	Public Works	Ongoing
4D	Strengthen mobile home/manufactured home anchoring requirements	High wind events	Local	Town Clerk	Ongoing

STRATEGY 4A

This strategy has been classified as ongoing due to the fact that the Town is constantly growing the population center of the Town is moving. With the growth and moving populations, the need to locate a shelter in the Town will be ongoing.

STRATEGY 4B

One way to alert citizens to pending events is through the use of a *Reverse 9-1-1 System*. Since the adoption of the Plan, the County Emergency Management Department has purchased and deployed the reverse 9-1-1 system through the use of Homeland Security grant funds.

STRATEGY 4C

Removing debris from storm drains will remain an ongoing strategy for the Town as this debris will continue to collect over time and its removal will prevent flooding issues for the Town.

STRATEGY 4D

This strategy was actually accomplished through the efforts of the County Building Inspections Department since they are responsible for enforcing the Building Code as mandated by the State. As the State changed the Building Code, the County responded by enforcing the code requirements.

GOAL 5: To ensure disaster resistant future development.

Background: The Town of Ramseur is building capacity for land use planning.

Objectives:

5.1 To protect future development from the impacts of natural hazards.

5.2 Regulate future development to prevent damages and losses from natural hazard events.

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
5A	Through existing subdivision regulations, encourage that power, cable and telephone lines be buried.	Multi-hazard	Local	Planning	Completed
5B	Adopt as Town policy and incorporate into land use plans that wherever possible preserve natural wetlands, designate conservation corridors, especially along streams through acquisition or conservation easements.	Multi-hazard	Local	Planning	Completed
5C	In land use planning documents, where feasible, will encourage street interconnectivity in all new subdivisions to allow multiple access points.	Multi-hazard	Local	Planning	Completed

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
5D	Update flood damage prevention ordinance to limit and/or restrict future development in the flood plain.	Flood	Local	Administration	New

STRATEGIES 5A, 5B and 5C

These three strategies were all completed during the previous five year cycle as the Town Commissioners adopted these guidelines as part of the update Land Use Ordinance.

STRATEGIES 5D

This strategy has been added to the Plan update since the Town has recognized that development is taking place that can alter the existing floodplains as delineated by the State. One way to mitigate these changes is to ensure that the Town has the most up-to-date flood damage prevention ordinance to limit the amount and type of development in the floodplains.

4. Implementation

Implementation of the Hazard Mitigation Plan will start from the time that the required update is adopted. Work has already started on several of the mitigation strategies identified in the Mitigation Strategies section. Each City Department will be responsible for pursuing the development of policies, programs, ordinance revisions, and regulations as they are assigned.

Ramseur will create a process to incorporate requirements in this hazard mitigation plan into the flood damage prevention ordinance, subdivision ordinance and zoning activities. During the planning process for all new and updated local planning documents, such as a land development plan, comprehensive plan, or capital improvement plan, the Town Administrator will provide a copy of the hazard mitigation plan to each member of the planning team. The Town Administrator will ensure that all goals and strategies of new and updated local planning documents are consistent with the hazard mitigation plan and will not contribute to increased hazards in the jurisdiction.

A process for prioritization of identified hazard mitigation strategies was performed. The hazard mitigation planning team used the following criteria for prioritization of strategies:

1. Cost-benefit review;
2. Results of vulnerability assessment;
3. Results of hazard identification and analysis;
4. Results of capability assessment; and
5. Effectiveness in meeting hazard mitigation goals.

The results of the capability assessment as well as the cost-benefit review were given special emphasis. To complete a cost-benefit review of actions listed in this plan, we utilized information from past projects that helped us determine an estimate of the probable cost of implementing any given strategy. This was supplemented by local knowledge of various personnel, Boards and historical data that helped us understand whether or not the benefits that would be incurred from such actions were greater than the costs. The prioritization of the strategies is designated through listing them as high, moderate or low priority. Time frames have been categorized as short-term and long-term. Short-term strategies are those that can be implemented within existing resources and authorities and should be completed within a time frame of 6 months to 2 years. Short-term activities are generally a higher priority and include those activities that should be implemented immediately following the adoption of this plan. Long-term strategies may require new or additional resources or authorities and should be organized to begin implementation within a timeframe of 3 - 5 years.

Table 1: Priority of Implementation

Priority	Strategy#	Amendment Completed Ongoing New	Ongoing (no end date)	Short Term (resources, and authority available now)	Long Term (resources or authority currently not available)
High	1A	O		X	
High	1B	O	X		X
High	1C	O	X		
Moderate	2A	O	X	X	
Moderate	2B	N			X
High	3A	O	X	X	
High	3B	N	X	X	
Moderate	4A	C		X	
High	4B	C			
High	4C	O			
Moderate	4D	O			
Low	5A	C	X		X
Low	5B	C			
Low	5C	C			
Low	5D	N			

5. Monitoring, Evaluating, and Reporting Progress

The evaluation form in Appendix D will be used by County staff to begin the evaluation process. The base year statistics used in calculating progress will be the year prior to each five-year cycle. This form will be completed and submitted to the County Hazard Mitigation Taskforce, as well as all City and Town Managers (where there is no Town Manager the form will be sent to the Town Clerk).

The Town Clerk (and others at the discretion of the Town Council) will convene annually to review the County evaluation form, evaluate Subsection 6: Town of Ramseur of the plan for effectiveness, and make recommendations for revision or amendment as necessary.

The Taskforce will then prepare an evaluation report summarizing the progress of the plan. The evaluation and progress report should consider the following questions.

- Have lead agencies participated as originally proposed?
- Have outcomes been adequate?
- What problems have occurred in the implementation process?
- Have members of the public been adequately involved?

The report will include:

- The status of benchmarks and indicators;
- Difficulties or impediments during implementation;
- Changes in County priorities; and
- Recommendations for changes, revisions, or amendments to the plan.

In addition to the annual review, the Town Clerk (and others at the discretion of the Town Council) will review and update the plan after any *presidential disaster declaration* for the Town of Ramseur.

6. Revisions and Updates:

After completion of the evaluation report the Taskforce will present the findings with recommendations for updates and revision to the Town Council for amendment to Subsection 6: Town of Ramseur Hazard Mitigation Plan. As updates occur, the date, reason and responsible party should be noted. Updates or revisions which affect the plan as a whole or impact any other jurisdiction(s) will require a presentation of findings and recommendations to, and ultimate adoption by, those jurisdictions' commissioners or council members.

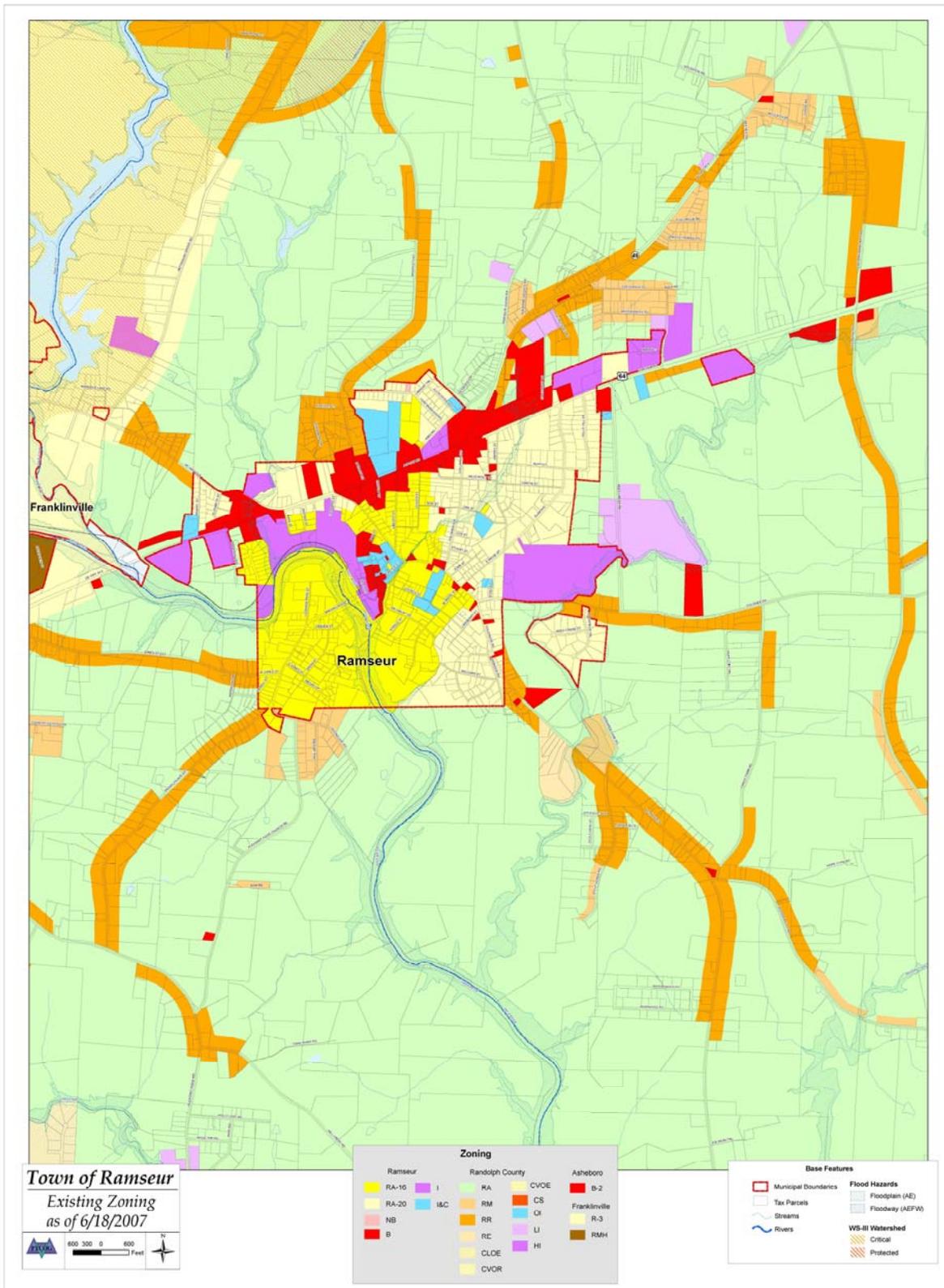
When changes to any part of this plan entail substantial budgetary considerations, the revisions or amended plan must be submitted to the NCDEM and FEMA for review.

At the end of every five-year cycle, the Randolph County Hazard Mitigation Taskforce will convene a planning committee with representatives from each jurisdiction in the County. The committee will review and update the hazard profile, vulnerability assessment and local capability section and submit these to the County Manager and all City and Town Managers (where there is no town manager, the town clerk) for their review, and subsequent adoption by the County Commissioners and City/Town Councils.

7. Continued Public Involvement

To facilitate continued public involvement in the planning process:

- The public will be invited to participate in the annual review of the plan.
- Copies of the plan will be kept on hand at the public library and at the Town Hall. The plan will have a contact address, email address, and phone number of the person responsible for keeping track of public comments on the plan.
- The plan will be available on the Randolph County Website, and will contain an email address and phone number the public can use for submitting comments and concerns about the plan.



8. List of Changes made to Subsection 6 for 2009 Plan Update

Non-page specific changes:

- Correct capitalization of County since any reference to County in this document refers to Randolph County.
- Correct capitalization of State since any reference to State in this document refers to the State of North Carolina.
- Correct spacing at the end of sentences from two spaces to one space as is now common with desktop publishing.
- Correct grammatical and punctuation errors from the original document.
- Added the position of Town Administrator that was created after adoption of the prior Plan. (In some instances, the Town Administrator has replaced the Town Clerk as the leader of the project.)
- Where goals or strategies have been removed or added, the goals or strategies have been renumbered to reflect the changes made.

Page S6.1:

- Included the word *Highway* in descriptions for major roads more accurately reflecting their adopted name.
- Corrected population of Town due to updated Census data from the NC Rural Center website.
- Corrected the number of Town Commissioners.
- The position of Zoning Enforcement Officer was removed from the update since the Town Administrator also serves in this position.
- Information added about the crack in the Water Supply Dam.
- Information regarding an adopted Emergency Action Plan for the dam has been included in the Plan revision.

Page S6.2:

- Corrected the ordinances for the Town by removing the Watershed Protection Ordinance and replacing it with the Flood Damage Prevention Ordinance.

Page S6.3:

- Goal 1 background was changed to reflect the correct ordinances for the Town as referenced above in the section titled Page S6.2.

Page S6.6:

- The priority table was updated to show the changes made by the Town based upon the revision of their goals and strategies.

Page S6.9:

- Included current Land Use Plan.

Subsection 7

Hazard Mitigation Plan for City of Randleman:

Community Profile: The City of Randleman has a population of 3,727 and is located directly north of the City of Asheboro in the center of the County. The City of Randleman is governed by a Mayor and City Alderman. It employs a City Manager, City Attorney, Finance Director, and Planning and Zoning Director. Law enforcement and fire services are provided by the City. Hughes Furniture Industries is the major employer within the City limits. Water for the City of Randleman is drawn from the Polecat Reservoir. Randleman is part of the Randleman Dam Project and the new Randleman Dam is located at the north end of the City.

1. Statement of the Problem:

As with the entire County, Randleman is vulnerable to high wind events such as those associated with severe thunderstorms, tropical and extra tropical systems, snow and ice events, river and stream flooding, flash flooding, and drought.

High wind events are highly likely to bring winds of between 38 and 73 miles per hour with winds of 74 to 100 mph possible. Tornadoes are possible with a probable intensity of F1 on the Fujita Pearson scale, which means wind speeds of 73-110 miles per hour (Category 1 hurricane winds on the Saffir Simpson scale.) Additionally, these high wind events are likely to carry with them the high probability of flash flooding and/or river and stream flooding, as well as lightning and hail.

Vulnerability to ice and snow storms are Countywide and will result in continued wide spread power outages, downed trees and limbs, as well as potential structure and building damage from falling trees and branches, or accumulation of snow on rooftops not designed to handle the snow load.

Flood and Dam Failure

Randleman is vulnerable to flood hazards. While there is no critical facility located within the SFHA, there are approximately 30 occupied housing units valued at over \$2,000,000 in the SFHA. An estimated 73 persons are exposed to flood hazards. The location and number of persons in floodplains will possibly change over the next five years as the Randleman Lake Project nears completion. There are reported cracks in the dam in unexpected areas. Emergency Plans have been developed and are on file with the State and County Emergency Management. Though

the lake area is known and mapped, floodplains surrounding the lake area have not been determined and will not be determined until the DFIRMs enter the maintenance phase. The buffer area around the lake is to be 200 feet. The hazard mitigation plan will need to be revised and updated as more becomes known about the condition of the dam and as the project moves forward.

One extremely hazardous substance facility is located within the Lake Reese Watershed balance area. In addition, the location of the middle school and high school is in or near the Randleman Lake flood zone which may result in compromised road access.

In addition, water is supplied to Randleman by Polecat Creek Reservoir and Randleman City Lake Dam located east of the City. This high hazard dam is located within the SFHA which increases the likelihood or possibility of dam failure. Dam safety officials report seepage on abutments and wetness at the base of the dam with cracks on both sides and holes on right side and the floodgates are inoperable. Dam failure would result in loss of water supply, would fail Worthville dam, and cause considerable property damage.

Repetitive Loss Structures:

The City of Randleman has no recorded repetitive loss structures.

Local Government Capability:

Randleman has a planning and zoning department, has a flood plain ordinance and is a member of the National Flood Insurance Program. The planning department is in the process of developing an in house GIS capability.

2. Hazard Mitigation Goals

The goals serve as the basis for development of the more specific plan objectives and hazard mitigation activities. The multi-jurisdictional planning group has developed the following goals which are broad policy statements aimed at guiding and directing future activity so that persons, property, government, and infrastructure are protected from the impacts of Natural Hazards.

1. To enhance local government capability to lessen the impacts of all natural hazards

2. To identify and protect critical services, buildings, facilities and infrastructure that are at risk of damage due to natural hazards.
3. To develop an effective public awareness/education/outreach program for natural hazards the County and municipalities are most likely to experience.
4. To protect persons and property, as well as reduce damage and loss to existing community assets.
5. To ensure disaster resistant future development

3. Hazard Mitigation Strategies for Randleman

In the following pages, mitigation actions for Randleman are listed and assigned specific implementation measures which include the assignment of responsibilities to local government departments and/or specific staff, along with the time frame for completion for each proposed mitigation action. When applicable, potential funding sources were also listed.

GOAL 1: To enhance local government capability to lessen the impacts of all natural hazards

Background: City of Randleman recently updated their emergency operations plan (2003). Emergency water supply is through connection with Asheboro water system and will be maintained after water supply change from Polecat Creek to Randleman Lake. Local government capability includes:

- Planning department in place
- Zoning ordinance
- Subdivision ordinance
- GIS in house capability
- Emergency operations plan (2003)
- Flood prevention ordinance
- National Flood Insurance Program Member
- Watershed protection ordinance
- Drought policy in place (voluntary and mandatory restrictions, when necessary)

Objective:

1.1 To increase local government capability

Strategy	Policy or Project	Hazard Targeted	Funding	Lead Department	Status
1A	Update flood prevention ordinance to latest model standard	Flood	Local	Planning	Completed
1B	Look into Stormwater Management Planning	Flood	Local	Planning Public Works	Ongoing
1C	Review capital improvement plan to ensure capital improvements support or consider mitigating activities and are not counter to hazard mitigation.	Multi-hazard	Local	City Manager	Ongoing

Strategy	Policy or Project	Hazard Targeted	Funding	Lead Department	Status
1D	Continue to develop GIS capability.	Multi-hazard	Local	Planning	Ongoing
1E	County recording damage assessment information for Randleman, such as type of hazard, location of hazard occurrence, when it occurred, death or injury, property damaged, for local use in hazard mitigation and land use planning	Multi-hazard	County	County Emergency Management County Planning	Ongoing
1F	Develop and adopt a drought management/water shortage (conservation) ordinance as part of the regular Local Water Supply Planning process.	Drought	Local	City Manager, Water Resources	Completed

STRATEGY 1A

With the adoption of the 2008 DFIRMs produced by the State, the City adopted the current flood prevention ordinance making the status of the strategy as completed.

STRATEGY 1B

As required by the General Statutes, the City has created a Stormwater Management Plan and will revise the plan as needed. It is being classified as an ongoing strategy.

STRATEGY 1C

Since budgets are adopted on an annual basis the need to review capital improvement plans will be ongoing to ensure that the improvements support the goals of the Hazard Mitigation Plan.

STRATEGY 1D

It is the desire of the City to continue to develop the GIS capability for the City. Budgetary constraints have not allowed this strategy to be full implemented but will remain as an ongoing goal for the next five year cycle.

STRATEGY 1E

This strategy is ongoing at this time. The database has been completed and is in use by the County. It is classified as an ongoing strategy since disasters can happen at anytime and technology is changing at a rapid pace causing the need to constant changed to the database.

STRATEGY 1F

During the previous five year cycle, the City developed water restrictions for use during times of drought.

GOAL 2: To identify and protect critical services, buildings, facilities and infrastructure that are at risk of damage due to natural hazards and to undertake cost-effective mitigation measures to minimize losses

Background: City of Randleman does not have any critical facilities located in a geographically hazardous area. However, alternative power sources are necessary when natural disasters result in large-scale power outages. Emergency management, Emergency Operations Center, 9-1-1 center, Fire and Rescue have generators in case of power failure. Command center adequately protected. Alternate command post identified.

Objective:

2.1 To ensure a continuous power supply for critical facilities and services during and after an ice/snow storm

Strategy	Policy or Project	Hazard Targeted	Funding	Lead Department	Status
2A	Evaluate current capacity of critical services to deal with power outages.	Multi-hazard	Local	City Manager	Ongoing
2B	Procure generators and fuel for alternative sources of power for lift stations and boost stations (12) and emergency shelter.	Multi-hazard	Incremental - in each budget year over the next 5 years.	City Manager, Finance Officer	Ongoing
2C	Track floodplain changes impacting the City during infill of Randleman Lake.	Flood	Local	Planning	Ongoing

STRATEGY 2A

The City is currently working to procure generators for the wastewater treatment plant and sewer pump stations so this strategy is ongoing.

STRATEGY 2B

The City currently has purchased three generators for use at any of the lift stations, boost stations or the emergency shelter. The City will continue to purchase generators as funding allows.

STRATEGY 2C

With the implementation of the DFIRMS of 2008 the State did not include the Randleman Lake project on the new maps—even though the dam was under construction as early as 2004. Once the State enters the maintenance phase of the flood maps for this river basin the City will then be able to complete this strategy.

GOAL 3: To develop an effective public awareness/education/outreach program for natural hazards the County and municipalities are most likely to experience.

Background: Currently the City does not have a formal outreach program for hazard mitigation or hazard awareness. Properties in flood plains have been identified and mapped through GIS.

Objectives:

- 3.1 *Increase awareness and understanding of local government and general public of the need for hazard mitigation to protect persons and property from the impacts of natural hazards.*
- 3.2 *Provide flood protection information to property owners in high risk areas.*

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department	Status
3A	Educate and inform local government and elected officials (decision makers) of the need to consider hazard mitigation in policy and budgetary planning and decision making processes.	Multi-hazard	Local	City Manager/ Planning with assistance from PTCOG	Ongoing
3B	Disseminate information on the benefits of purchasing flood insurance to property owners in flood hazard areas.	Flood	Local	Planning	Ongoing

STRATEGY 3A

This strategy has been classified as ongoing since officials can change as the result of an election requiring educating new officials.

STRATEGY 3B

As the City continues to grow it will remain important to educate the citizens on the benefits of purchasing flood insurance, thereby, making this an ongoing strategy.

GOAL 4: To protect persons and property and reduce damage and loss to *existing* community assets

Background: Through hazard mitigation planning process and vulnerability assessment, City of Randleman has identified geographic areas at high risk for flood, and dam failure. Since there are existing structures in identified hazardous locations, the County’s pursuit of a 9-1-1 reverse call system for warning specific areas under threat will benefit Randleman.

Objectives:

- 4.1 To identify vulnerable populations and provide emergency shelter.
- 4.2 To protect and warn persons and existing development from flood damage, dam failure and other geographically specific hazard locations.

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department	Status
4A	Consider amending sign ordinances limiting height or size of signs.	High wind events	Local	Planning	Ongoing
4B	Identify and designate at least one emergency shelter in each municipality.	Multi-hazard	Local	Emergency Management	Ongoing
4C	Put in place a Countywide 9-1-1 reverse call system for location specific warning to public of impending disaster.	Multi-hazard	Homeland Security funds	County Emergency Management	Completed
4D	Identify potential inundation areas downstream of high hazard dams.	Dam Failure	Local	Planning/County EM	Ongoing
4E	Develop program to clear debris from culverts and storm drains in priority floodplains.	Flood	Local	Water resources Public Works	Ongoing

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department	Status
4F	Adopt tree planning ordinances or programs and landscaping practices that encourage planting trees less susceptible to damage.	Ice damage	Urban and Community Forestry Grant Program	Planning	Completed
4G	Remove Polecat Creek Dam after water supply system change to Randleman Lake.	Flood/dam failure	Outside funding to be identified	City Manager	Ongoing

STRATEGY 4A

This strategy is ongoing as there have been several revisions to the Land Use Ordinances for the City. This item is still under consideration at this time.

STRATEGY 4B

This strategy is still ongoing due to the fact that the City is undergoing development and new centers of population are emerging. There will be a need for new shelters to be located in the City as this expansion takes place.

STRATEGY 4C

One way to alert citizens to pending events is through the use of a *Reverse 9-1-1 System*. Since the adoption of the Plan, the County Emergency Management Department has purchased and deployed the reverse 9-1-1 system through the use of Homeland Security grant funds.

STRATEGY 4D

This strategy has been classified as ongoing as no one in the City government has the expertise to determine the inundation areas that would be impacted by a dam breach.

STRATEGY 4E

The City is currently clearing sewer rights-of-way and culverts needed.

STRATEGY 4F

This strategy was completed with the adoption of the new subdivision ordinance in August 2008.

STRATEGY 4G

This strategy is ongoing as the water treatment plant for the new Randleman Lake is currently under construction. Once the City switches to this water system, the City will proceed with this strategy.

GOAL 5: To ensure disaster resistant future development

Objectives:

5.1 To protect future development from the impacts of natural hazards.

5.2 To regulate future development to prevent damages and losses from natural hazard events..

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department	Status
5A	Through existing subdivision regulations, encourage that power, cable and telephone lines be buried	Multi-hazard	Local	Planning	Completed
5B	Strengthen floodplain regulation to current standards.	Flood	Local	Planning	Completed
5C	Adopt as City policy through Land Development Plans that wherever possible preserve natural wetlands, designate conservation corridors, especially along streams through acquisition or conservation easements.	Multi-hazard	Local	Planning	Completed
5D	Looking into safe growth management strategies for development downstream of dams and incorporate into Land Use Plans.	Multi-hazard	Local	Planning	Completed

STRATEGIES 5A, 5B, 5C and 5D

All of these strategies have been completed as the City Adopted new ordinances in 2008 that addresses each of these concerns.

4. Implementation

Implementation of the Hazard Mitigation Plan will start from the time that the required update is adopted. Work has already started on several of the mitigation strategies identified in the Mitigation Strategies section. Each City Department will be responsible for pursuing the development of policies, programs, ordinance revisions, and regulations as they are assigned.

The City of Randleman will create a process to incorporate requirements in this hazard mitigation plan into the floodplain ordinance, subdivision ordinance and zoning activities. During the planning process for all new and updated local planning documents, such as a land development plan, comprehensive plan, or capital improvement plan, the City Planner will provide a copy of the hazard mitigation plan to each member of the planning team. The City Planner will ensure that all goals and strategies of new and updated local planning documents are consistent with the hazard mitigation plan and will not contribute to increased hazards in the jurisdiction.

A process for prioritization of identified hazard mitigation strategies was performed. The hazard mitigation planning team used the following criteria for prioritization of strategies:

1. Cost-benefit review
2. Results of vulnerability assessment
3. Results of hazard identification and analysis
4. Results of capability assessment.
5. Effectiveness in meeting hazard mitigation goals.

The results of the capability assessment as well as the cost-benefit review were given special emphasis. To complete a cost-benefit review of actions listed in this plan, we utilized information from past projects that helped us determine an estimate of the probable cost of implementing any given strategy. This was supplemented by local knowledge of various personnel, Boards and historical data that helped us understand whether or not the benefits that would be incurred from such actions were greater than the costs. The prioritization of the strategies is designated through listing them as high, moderate or low priority. Time frames have been categorized as short-term and long-term. Short-term strategies are those that can be implemented within existing resources and authorities and should be completed within a time frame of 6 months to 2 years. Short-term activities are generally a higher priority and include those activities that should be implemented immediately following the adoption of this plan. Long-term strategies may require new or additional resources or

authorities and should be organized to begin implementation within a timeframe of 3 - 5 years.

Table 1: Priority of Implementation

Priority	Strategy#	Amendment Completed Ongoing New	Ongoing (no end date)	Short Term (resources, and authority available now)	Long Term (resources or authority currently not available)
High	1A	C			X
Low	1B	O	X	X	
Moderate	1C	O	X	X	
High	1D	O	X	X	
Moderate	1E	O			
High	1F	C			
Moderate	2A	O		X	
High	2B	O			X
Moderate	2C	O			X
High	3A	O	X	X	
Moderate	3B	O	X	X	
Moderate	4A	O		X	
Moderate	4B	O		X	
High	4C	C			X
Moderate	4D	O			X
High	4E	O	X	X	
Low	4F	O			
Moderate	4G	O	X		X
Moderate	5A	C			

Priority	Strategy#	Amendment Completed Ongoing New	Ongoing (no end date)	Short Term (resources, and authority available now)	Long Term (resources or authority currently not available)
High	5B	C			
Moderate	5C	C			
Moderate	5D	C			

5. Monitoring, Evaluating, and Reporting Progress

The evaluation form in Appendix D will be used by County staff to begin the evaluation process. The base year statistics used in calculating progress will be the year prior to each five-year cycle. This form will be completed and submitted to the County Hazard Mitigation Taskforce, as well as all City and Town Managers (where there is no Town Manager the form will be sent to the Town Clerk).

The Randleman Hazard Mitigation Task Force consist of the City Manager and Planning Director (and others at the discretion of the Manager) and will convene annually to review the County evaluation form, evaluate the Plan’s effectiveness, and make recommendations for revision or amendment as necessary.

The task force will then prepare an evaluation report summarizing the progress of the Plan. The evaluation and progress report should consider the following questions.

- Have lead agencies participated as originally proposed?
- Have outcomes been adequate?
- What problems have occurred in the implementation process?
- Have members of the public been adequately involved?

The report will include:

- The status of benchmarks and indicators,
- Difficulties or impediments during implementation;
- Changes in County priorities

- Recommendations for changes, revisions, or amendments to the plan.

In addition to the annual review, the taskforce will review and update the plan after any *presidential disaster declaration* for the City of Randleman and ETJ.

6. Revisions and Updates:

Upon completion of the evaluation report, findings will be presented to the City Council with recommendations for updates and revision to amend Subsection 7: City of Randleman Hazard Mitigation Plan. As updates occur, the date, reason and responsible party should be noted. Updates or revisions which affect the plan as a whole or impacts any other jurisdiction(s) will require a presentation of findings and recommendations to, and ultimate adoption by, those jurisdictions' council members.

When changes to any part of this plan entail substantial budgetary considerations, the revisions or amended plan must be submitted to the NCDEM and FEMA for review.

At the end of every five-year cycle, the Randolph County Hazard Mitigation Taskforce will convene a planning committee with representatives from each jurisdiction in the County. The committee will review and update the hazard profile, vulnerability assessment and local capability section and submit these to the County Manager and all City and Town Managers (where there is no town manager, the town clerk) for their review, and subsequent adoption by the County Commissioners and City/Town Councils.

7. Continued Public Involvement

To facilitate continued public involvement in the planning process:

- The public will be invited to participate in the annual review of the plan.
- Copies of the plan will be kept on hand at the public library and at the City Hall. The plan will have a contact address, email address, and phone number of the person responsible for keeping track of public comments on the plan.

- The plan will be available on the Randolph County Website, and will contain an email address and phone number the public can use for submitting comments and concerns about the plan.

8. List of Changes made to Subsection 7 for 2009 Plan Update

Non-page specific changes:

- Correct capitalization of City since any reference to City in this document refers to the City of Randleman.
- Correct capitalization of State since any reference to State in this document refers to the State of North Carolina.
- Correct spacing at the end of sentences from two spaces to one space as is now common with desktop publishing.
- Correct grammatical and punctuation errors from the original document.
- Where goals or strategies have been removed or added, the goals or strategies have been renumbered in the draft document to reflect the changes made.

Page S7.1:

- Updated information regarding structures in flood plain along with the appraised value.

Subsection 8

Hazard Mitigation Plan for the Town of Seagrove:

Community Profile: The Town of Seagrove is located south of the City of Asheboro along US Highway Business 220 South and has a population of 246 persons. At an elevation of 750 feet, Seagrove's total land area is .7 square miles. The median household income is approximately \$31,250 with a median house value of \$63,300. Seagrove water is supplied by the City of Asheboro; it does not maintain its own water system. Seagrove is governed by a Mayor and City Council with four council members. The Town clerk is its only employee. Seagrove law enforcement services are provided by Randolph County Sheriff's department. Fire services are provided by a local volunteer fire department. Seagrove has very limited capability to mitigate against natural hazards. There are no identified hazardous geographical areas within the Town limits or its extraterritorial jurisdiction.

1. Statement of the Problem:

The Town of Seagrove is vulnerable to countywide hazards such as high wind events (e.g., severe thunderstorms, tropical and extra tropical systems), and snow and ice events. High wind events are highly likely to bring winds of between 38 and 73 miles per hour with winds of 74 to 100 mph possible. Tornados are possible with a probable intensity of F1 on the Fujita Pearson scale, which means wind speeds of 73-110 miles per hour (Category 1 hurricane winds on the Saffir Simpson scale.) Additionally, these high wind events are likely to carry with them the high probability of flash flooding, as well as lightning and hail.

Vulnerability to ice and snow storms are countywide and will result in continued wide spread power outages, downed trees and limbs, as well as potential structure and building damage from falling trees and branches, or accumulation of snow on rooftops not designed to handle the snow load.

Repetitive Loss Structures:

The Town of Seagrove has no recorded repetitive loss structures.

Local Government Capability:

Seagrove does not have a planning department or employ a planner and has a **very limited** technical and financial capability to mitigate against natural hazards.

2. Hazard Mitigation Goals

The goals serve as the basis for development of the more specific plan objectives and hazard mitigation activities. The Town of Seagrove has adopted the following goals which are broad policy statements aimed at guiding and directing future activity so that persons, property, government, and infrastructure are protected from the impacts of natural hazards. The goals are:

1. To enhance local government capability to lessen the impacts of all natural hazards
2. To identify and protect critical services, buildings, facilities and infrastructure at risk of damage due to natural hazards.
3. To develop an effective public awareness/education/outreach program for natural hazards the county and municipalities are most likely to experience.
4. To protect persons and property, as well as reduce damage and loss to existing community assets.
5. To ensure disaster resistant future development

3. Hazard Mitigation Strategies for Seagrove

In the following pages, mitigation actions for Seagrove are listed and assigned specific implementation measures which include the assignment of responsibilities to local government departments and/or specific staff, along with the time frame for completion for each proposed mitigation action. When applicable, potential funding sources were also listed.

GOAL 1: To enhance local government capability to lessen the impacts of all natural hazards

Background: Seagrove has a very limited capacity for hazard mitigation.

Objective:

1.1 Build local capacity for land use planning

Strategies	Project or Policy	Hazard Targeted	Funding	Lead Department	Status
1A	Adopt a flood prevention ordinance	Flood	Local	Town Clerk	
1B	Develop procedure for recording damage assessment information such as type of hazard, location of hazard occurrence, when it occurred, death or injury, property damaged, narrative description of damage (not just \$value) for local use in hazard mitigation and land use planning.	Multi-hazard	Local	County EM and County Planning (covers all municipalities)	
1C	Become an NFIP member	Flood	Local	Town Clerk/Town Council	

GOAL 2: To identify and protect critical services, buildings, facilities and infrastructure.

Background: The Town of Seagrove does not have critical facilities in hazard prone areas.

Objective:

2.1 To ensure a continuous power supply for critical facilities and services during and after an ice/snow storm.

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department	Status
2A	Evaluate generators and fuel needs and supply alternative sources of power	Ice/high wind	Local	Town Clerk	

GOAL 3: To develop an effective public awareness/education/outreach program for natural hazards the county and municipalities are most likely to experience.

Background: Currently the Town does not have a formal outreach program for hazard mitigation or hazard awareness.

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department	Status
3A	Educate and inform local government and elected officials (decision makers) of the need to consider hazard mitigation in policy and budgetary planning and decision-making processes.	Multi-hazard	Local	Town Clerk/PTCOG through hazard mitigation planning process/Randolph County	

GOAL 4: To protect persons and property and reduce damage and loss to existing community assets.

Background: Seagrove will benefit from the county 9-1-1 reverse call system for warning specific areas under threat from a natural hazard.

Objective:

4.1 To identify vulnerable populations and provide emergency shelter.

Strategies	Project or Policy	Hazard Targeted	Funding	Lead Department	Status
4A	Identify and designate at least one emergency shelter in each municipality	Multi-hazard	Local	Town Clerk /County Emergency Management	
4B	Put in place a Countywide 9-1-1 reverse call system for location specific warning to public of impending disaster	Multi-hazard	Homeland security funds	Countywide /Emergency Management	
4C	Develop program to clear debris from culverts and storm drains in priority floodplains.	Flood	Local	Public Works	
4D	Strengthen mobile home/manufactured home anchoring requirements	High wind events	Local	Town Clerk	

GOAL 5: To ensure disaster resistant future development

Background: The Town of Seagrove is building capacity for land use planning.

Objectives:

5.1 *To protect future development from the impacts of natural hazards*

5.2 *To regulate future development to prevent damages and losses from natural hazard events*

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department	Status
5A	Adopt as Town policy: Wherever possible preserve natural wetlands, designate conservation corridors, especially along streams through acquisition or conservation easements.	Multi-hazard	Local	Town Clerk/City Council	

4. Implementation

Plan implementation will start from the time that it is adopted. Work has already started on several of the mitigation strategies identified in the Mitigation Strategies section. Each Town Department will be responsible for pursuing the development of policies, programs, ordinance revisions, and regulations as they are assigned.

The Town of Seagrove will create a process to incorporate requirements in this hazard mitigation plan into the floodplain ordinance, subdivision ordinance and zoning activities. During the planning process for all new and updated local planning documents, such as a land development plan, comprehensive plan, or capital improvement plan, the Town Clerk will provide a copy of the hazard mitigation plan to each member of the planning team. The Town Clerk will ensure that all goals and strategies of new and updated local planning documents are consistent with the hazard mitigation plan and will not contribute to increased hazards in the jurisdiction.

A process for prioritization of identified hazard mitigation strategies was performed. The hazard mitigation planning team used the following criteria for prioritization of strategies:

1. Cost-benefit review
2. Results of vulnerability assessment
3. Results of hazard identification and analysis
4. Results of capability assessment.
5. Effectiveness in meeting hazard mitigation goals.

The results of the capability assessment as well as the cost-benefit review were given special emphasis. To complete a cost-benefit review of actions listed in this plan, we utilized information from past projects that helped us determine an estimate of the probable cost of implementing any given strategy. This was supplemented by local knowledge of various personnel, Boards and historical data that helped us understand whether or not the benefits that would be incurred from such actions were greater than the costs. The prioritization of the strategies is designated through listing them as high, moderate or low priority. Time frames have been categorized as short-term and long-term. Short-term strategies are those that can be implemented within existing resources and authorities and should be completed within a time frame of 6 months to 2 years. Short-term activities are generally a higher priority and include those activities that should be implemented immediately following the adoption of this plan. Long-term strategies may require new or additional resources or authorities and should be organized to begin implementation within a timeframe of 3 - 5 years.

Table 1: Priority of Implementation

Priority	Strategy#	New (N) Continuation (C) Amendment (A)	Ongoing (no end date)	Short Term (resources, and authority available now)	Long Term (resources or authority currently not available)
High	1A	N		X	
High	1B	N	X	X	
High	1C	N	X	X	
Moderate	2A	C	X	X	
High	3A	N	X	X	
High	4A	C		X	
High	4B	N		X	X
Low	4C	N	X		X
Low	4D	A		X	
Low	5A	N	X		X
Low	5B	N	X		X

5. Monitoring, Evaluating, and Reporting Progress

The evaluation form in Appendix D will be used by County staff to begin the evaluation process. The base year statistics used in calculating progress will be the year prior to each five-year cycle. This form will be completed and submitted to the County Hazard Mitigation Taskforce, as well as all City and Town Managers (where there is no Town Manager the form will be sent to the Town Clerk).

The Town Clerk (and others at the discretion of the Town Council) will convene annually to review the County evaluation form, evaluate Subsection 8: Hazard Mitigation Plan for the Town of Seagrove of the plan for effectiveness, and make recommendations for revision or amendment as necessary.

The task force will then prepare an evaluation report summarizing the progress of the plan. The evaluation and progress report should consider the following questions.

- Have lead agencies participated as originally proposed?
- Have outcomes been adequate?
- What problems have occurred in the implementation process?
- Have members of the public been adequately involved?

The report will include:

- The status of benchmarks and indicators,
- Difficulties or impediments during implementation;
- Changes in County priorities
- Recommendations for changes, revisions, or amendments to the plan.

In addition to the annual review, the Town Clerk (and others at the discretion of the Town Council) will review and update the plan after any *presidential disaster declaration* for the Town of Seagrove.

6. Revisions and Updates:

After completion of the evaluation report the taskforce will present the findings with recommendations for updates and revision to the City Council for amendment to Subsection 8: Town of Seagrove Hazard Mitigation Plan. As updates occur, the date, reason and responsible party should be noted. Updates or revisions which affect the plan as a whole or impacts any other jurisdiction(s) will require a presentation of findings and recommendations to, and ultimate adoption by, those jurisdictions' commissioners or council members.

When changes to any part of this plan entail substantial budgetary considerations, the revisions or amended plan must be submitted to the NCDEM and FEMA for review.

At the end of every five-year cycle, the Randolph County Hazard Mitigation Taskforce will convene a planning committee with representatives from each jurisdiction in the county. The committee will review and update the hazard profile, vulnerability assessment and local capability section and submit these to the County Manager and all City and Town Managers (where there is no Town manager, the Town clerk) for their review, and subsequent adoption by the County Commissioners and City/Town Councils.

7. Continued Public Involvement

To facilitate continued public involvement in the planning process:

- The public will be invited to participate in the annual review of the plan.
- Copies of the plan will be kept on hand at the public library and at the Town Hall. The plan will have a contact address, email address, and phone number of the person responsible for keeping track of public comments on the plan.

- The plan will be available on the Randolph County Website, and will contain an email address and phone number the public can use for submitting comments and concerns about the plan.

8. List of Changes made to Subsection 8 for 2009 Plan Update

Non-page specific changes:

- Correct capitalization of County since any reference to County in this document refers to Randolph County.
- Correct capitalization of State since any reference to State in this document refers to the State of North Carolina.
- Correct capitalization of Town since any reference to Town in this document refers to the Town of Seagrove.
- Correct spacing at the end of sentences from two spaces to one space as is now common with desktop publishing.
- Correct grammatical and punctuation errors from the original document.
- Where goals or strategies have been removed or added, the goals or strategies have been renumbered to reflect the changes made.

Page 8.1:

- Updated road name of road through Seagrove to reflect the official name of the road.

Subsection 9

Hazard Mitigation Plan for the Town of Staley:

Community Profile: The Town of Staley is located at the western edge of the County and has a population of 353 persons. It has more than doubled its size in the last ten years, but is not considered a potential high growth area. The Town of Staley has very limited capability to mitigate against natural disasters. Staley does have a Planning and Zoning Board which utilizes consultants for enforcement. Police, fire and rescue services for the Town are provided by Randolph County government. Staley does not have a water supply system. Residents' water and wastewater needs depend on individual wells and septic systems. The median house value is below the state average. Residents of Staley are largely homeowners. The population density of Staley is significantly below state average.

1. Statement of the Problem:

There are no hazardous geographical areas within the Town limits.

The Town of Staley is vulnerable to Countywide hazards such as high wind events (e.g., severe thunderstorms, tropical and extra tropical systems), and snow and ice events.

High wind events are highly likely to bring winds of between 38 and 73 miles per hour with winds of 74 to 100 mph possible. Tornadoes are possible with a probable intensity of F1 on the Fujita Pearson scale, which means wind speeds of 73-110 miles per hour (Category 1 hurricane winds on the Saffir Simpson scale.) Additionally, these high wind events are likely to carry with them the high probability of flash flooding, as well as lightning and hail.

Vulnerability to ice and snow storms are Countywide and will result in continued wide spread power outages, downed trees and limbs, as well as potential structure and building damage from falling trees and branches, or accumulation of snow on rooftops not designed to handle the snow load.

Repetitive Loss Structures:

The Town of Staley has no recorded repetitive loss structures.

Local Government Capability:

The Town of Staley has developed a zoning ordinance and has a Planning and Zoning Board which utilizes consultants for enforcement. Staley does not employ a planner.

2. Hazard Mitigation Goals

The goals serve as the basis for development of the more specific plan objectives and hazard mitigation activities. The Town of Staley has adopted the following goals which are broad policy statements aimed at guiding and directing future activity so that persons, property, government, and infrastructure are protected from the impacts of natural hazards:

1. To enhance local government capability to lessen the impacts of all natural hazards;
2. To identify and protect critical services, buildings, facilities and infrastructure at risk of damage due to natural hazards;
3. To develop an effective public awareness/education/outreach program for natural hazards the County and municipalities are most likely to experience;
4. To protect persons and property, as well as reduce damage and loss to existing community assets; and
5. To ensure disaster resistant future development.

3. Hazard Mitigation Strategies for Staley

In the following pages, mitigation actions for Staley are listed and assigned specific implementation measures which include the assignment of responsibilities to local government departments and/or specific staff, along with the time frame for completion for each proposed mitigation action. When applicable, potential funding sources were also listed.

GOAL 1: To enhance local government capability to lessen the impacts of all natural hazards.

Background: Staley has a planning board and has a zoning ordinance in place for the town.

Objective:

1.1 *Build local capacity for land use planning.*

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
1A	Adopt a flood prevention ordinance	Flood	Local	Town Council	Ongoing
1B	Develop procedure for recording damage assessment information such as type of hazard, location of hazard occurrence, when it occurred, death or injury, property damaged, narrative description of damage, not just dollar value, for local use in hazard mitigation and land use planning	Multi-hazard	Local	County Emergency Management Planning Department	Ongoing
1C	Become an NFIP member.	Flood	Local	Town Clerk Town Council	Ongoing

STRATEGY 1A and 1C

These strategies are classified as ongoing. The Town itself currently has no flood prone areas; however, if this changes in the future, the Town will adopt the necessary ordinances and join the NFIP.

STRATEGY 1B

This strategy is ongoing at this time. The database has been completed and is in use by the County. It is classified as an ongoing strategy since disasters can happen at anytime and technology is changing at a rapid pace causing the need to constant changed to the database.

GOAL 2: To identify and protect critical services, buildings, facilities and infrastructure.

Background: The Town of Staley does not have critical facilities in hazard prone areas.

Objective:

2.1 *To ensure a continuous power supply for critical facilities and services during and after an ice/snow storm.*

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
2A	Evaluate generators and fuel needs to supply alternative sources of power	Multi-hazard	Local	Town Council	Ongoing

STRATEGY 2A

This strategy is currently being classified as ongoing since the Town has entered into a contract with a local fire department for the use of their generator should the need arise. If this contract changes, the Town would still work to procure generators and fuel supplies.

GOAL 3: To develop an effective public awareness/education/outreach program for natural hazards the County and municipalities are most likely to experience.

Background:

Currently the Town does not have a formal outreach program for hazard mitigation or hazard awareness.

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
3A	Educate and inform local government and elected officials (decision makers) of the need to consider hazard mitigation in policy and budgetary planning and decision making processes.	Multi-hazard	Local	Town Council	Ongoing

STRATEGY 3A

This strategy has been classified as ongoing since officials can change as the result of an election requiring educating new officials. Three Town Council members have completed ICS-402 and are currently certified.

GOAL 4: To protect persons and property and reduce damage and loss to existing community assets.

Background: Staley will benefit from the County 9-1-1 reverse call system for warning specific areas under threat from a natural hazard.

Objective:

4.1 To identify vulnerable populations and provide emergency shelter.

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
4A	Identify and designate at least one emergency shelter in each municipality	Multi-hazard	Local	Town Council/ County EM	Ongoing
4B	Put in place a Countywide 9-1-1 reverse call system for location specific warning to public of impending disaster.	Multi-hazard	Homeland Security funds	County Emergency Management	Completed
4C	Develop program to clear debris from culverts and storm drains in priority floodplains.	Flood	Local	Contract with Volunteer Fire Department	Ongoing
4D	Strengthen mobile home/manufactured home anchoring requirements	High wind events	Local	Planning and Zoning Ordinance	Completed

STRATEGY 4A

This strategy is still ongoing as the need to designate a shelter, or an additional shelter, could be needed at anytime.

STRATEGY 4B

One way to alert citizens to pending events is through the use of a *Reverse 9-1-1 System*. Since the adoption of the Plan, the County Emergency Management Department has purchased and deployed the reverse 9-1-1 system through the use of Homeland Security grant funds.

STRATEGY 4C

This strategy is in an ongoing status due to the fact that the Town currently has a contract with a volunteer fire department for the clearing of debris.

STRATEGY 4D

This strategy has been completed since the Town Council amended the Planning and Zoning Ordinance to cover the areas of concern.

GOAL 5: To ensure disaster resistant future development

Background: The Town of Staley is building capacity for land use planning.

Objectives:

5.1 To protect future development from the impacts of natural hazards

5.2 To regulate future development to prevent damages and losses from natural hazard events

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
5A	Wherever possible preserve natural wetlands, designate conservation corridors, especially along streams through acquisition or conservation easements.	Multi-hazard	Local	Planning and Zoning Ordinance	Ongoing

STRATEGY 5B

The strategy is currently ongoing as the Town Council tries to encourage the goal of protection of water features.

4. Implementation

Implementation of the Hazard Mitigation Plan will start from the time that the required update is adopted. Work has already started on several of the mitigation strategies identified in the Mitigation Strategies section. Each Town Department will be responsible for pursuing the development of policies, programs, ordinance revisions, and regulations as they are assigned.

The Town of Staley will create a process to incorporate requirements in this hazard mitigation plan into the floodplain ordinance, subdivision ordinance and zoning activities. During the planning process for all new and updated local planning documents, such as a land development plan, comprehensive plan, or capital improvement plan, the Town Clerk will provide a copy of the hazard mitigation plan to each member of the planning team. The Town Clerk will ensure that all goals and strategies of new and updated local planning documents are consistent with the hazard mitigation plan and will not contribute to increased hazards in the jurisdiction.

A process for prioritization of identified hazard mitigation strategies was performed. The hazard mitigation planning team used the following criteria for prioritization of strategies:

1. Cost-benefit review;
2. Results of vulnerability assessment;
3. Results of hazard identification and analysis;
4. Results of capability assessment; and
5. Effectiveness in meeting hazard mitigation goals.

The results of the capability assessment as well as the cost-benefit review were given special emphasis. The prioritization of the strategies is designated through listing them as high, moderate or low priority. Time frames have been categorized as short-term and long-term. Short-term strategies are those that can be implemented within existing resources and authorities and should be completed within a time frame of 6 months to 2 years. Short-term activities are generally a higher priority and include those activities that should be implemented immediately following the adoption of this plan. Long-term strategies may require new or additional resources or authorities and should be organized to begin implementation within a timeframe of 3 - 5 years.

Table 1: Priority of Implementation

Priority	Strategy#	Amendment Completed Ongoing New	Ongoing (no end date)	Short Term (resources, and authority available now)	Long Term (resources or authority currently not available)
High	1A	O	X		
High	1B	O			
High	1C	O			
Moderate	2A	O	X	X	
High	3A	O	X	X	
High	4A	O	X	X	
High	4B	C	X	X	
Low	4C	O	X	X	
Low	4D	C			
Low	5A	O	X	X	

5. Monitoring, Evaluating, and Reporting Progress

The evaluation form in Appendix D will be used by County staff to begin the evaluation process. The base year statistics used in calculating progress will be the year prior to each five-year cycle. This form will be completed and submitted to the County Hazard Mitigation Taskforce, as well as all City and Town Managers (where there is no Town Manager the form will be sent to the Town Clerk).

The Town Clerk (and others at the discretion of the Town Council) will convene annually to review the County evaluation form, evaluate Subsection 9: Town of Staley of the plan for effectiveness, and make recommendations for revision or amendment as necessary.

The Taskforce will then prepare an evaluation report summarizing the progress of the plan. The evaluation and progress report should consider the following questions.

- Have lead agencies participated as originally proposed?
- Have outcomes been adequate?
- What problems have occurred in the implementation process?
- Have members of the public been adequately involved?

The report will include:

- The status of benchmarks and indicators;

- Difficulties or impediments during implementation;
- Changes in County priorities; and
- Recommendations for changes, revisions, or amendments to the plan.

In addition to the annual review, the Town Clerk (and others at the discretion of the Town Council) will review and update the plan after any *presidential disaster declaration* for the Town of Staley.

6. Revisions and Updates:

After completion of the evaluation report the Taskforce will present the findings with recommendations for updates and revision to the City Council for amendment to Subsection 9: Hazard Mitigation Plan for the Town of Staley. As updates occur, the date, reason and responsible party should be noted. Updates or revisions which affect the plan as a whole or impacts any other jurisdiction(s) will require a presentation of findings and recommendations to, and ultimate adoption by, those jurisdictions' commissioners or council members.

When changes to any part of this plan entail substantial budgetary considerations, the revisions or amended plan must be submitted to the NCDEM and FEMA for review.

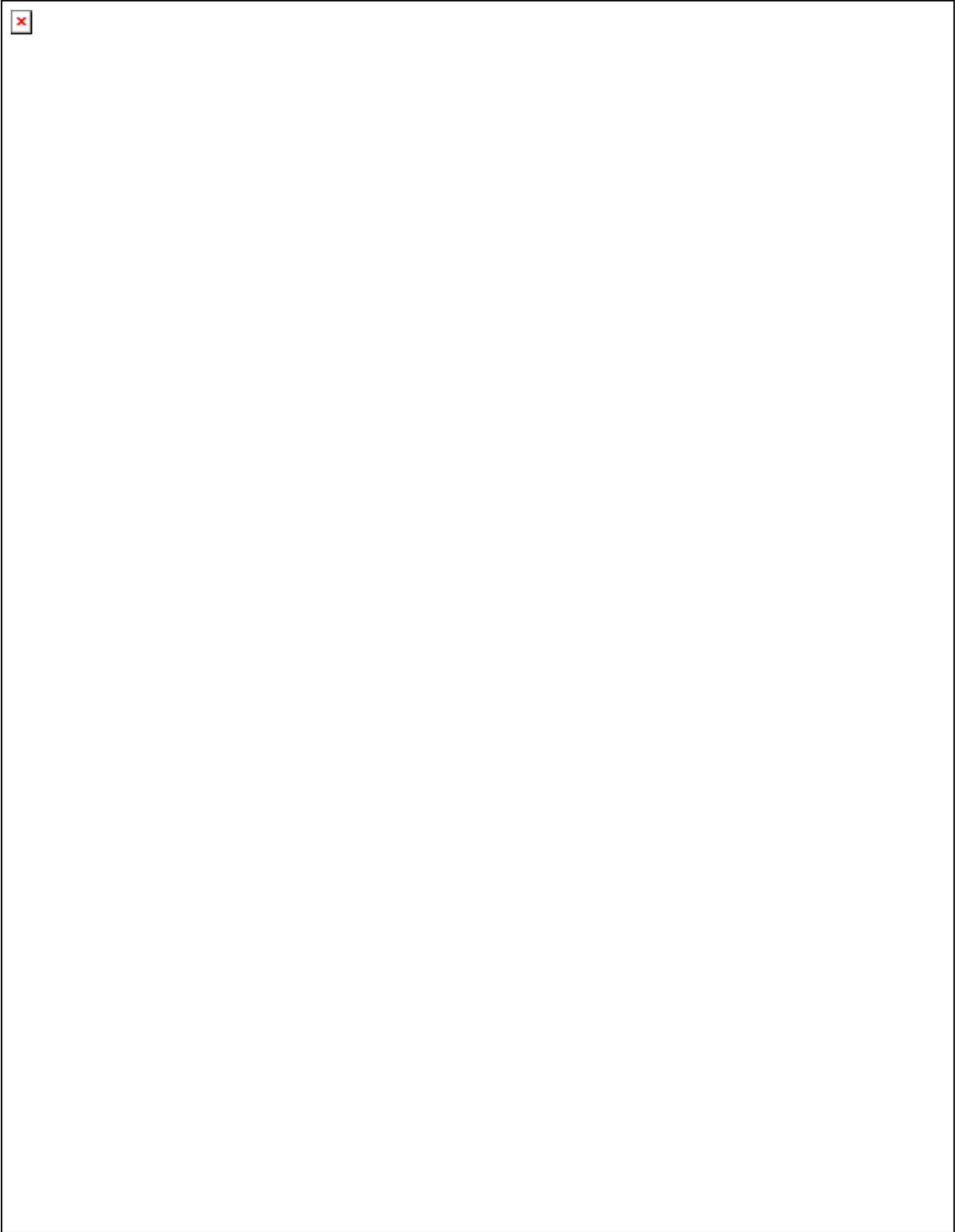
At the end of every five-year cycle, the Randolph County Hazard Mitigation Taskforce will convene a Planning Committee with representatives from each jurisdiction in the County. The Committee will review and update the hazard profile, vulnerability assessment and local capability section and submit these to the County Manager and all City and Town Managers (where there is no town manager, the town clerk) for their review, and subsequent adoption by the County Commissioners and City/Town Councils.

7. Continued Public Involvement

To facilitate continued public involvement in the planning process:

- The public will be invited to participate in the annual review of the plan.
- Copies of the plan will be kept on hand at the public library and at the Town Hall. The plan will have a contact address, email address, and phone number of the person responsible for keeping track of public comments on the plan.

- The plan will be available on the Randolph County Website, and will contain an email address and phone number the public can use for submitting comments and concerns about the plan.



8. List of Changes made to Subsection 9 for 2009 Plan Update

Non-page specific changes:

- Correct capitalization of County since any reference to County in this document refers to Randolph County.
- Correct capitalization of State since any reference to State in this document refers to the State of North Carolina.
- Correct capitalization of Town since any reference to Town in this document refers to the Town of Staley.
- Correct spacing at the end of sentences from two spaces to one space as is now common with desktop publishing.
- Correct grammatical and punctuation errors from the original document.
- Where goals or strategies have been removed or added, the goals or strategies have been renumbered to reflect the changes made.

Page S9.1:

- Corrected population of Town due to updated Census data. Corrected the number of Town Commissioners.
- Included the Planning and Zoning Board since the Town adopted zoning since the previous Plan was adopted.
- Updated the Local Government Capability section to reflect the adoption of Town wide zoning since the previous Plan was adopted.

Page S9.3:

- Strategies for Goal 1 were updated as follows:
 - **STRATEGY 1A**
This strategy was updated to reflect the fact that it is the Town Council, not the Town Clerk, given the authority to adopt ordinances such as the Flood Prevention Ordinance.

Page S9.5:

- Strategies for Goal 5 were updated as follows:
 - **STRATEGY 5B**
This strategy was removed from the Plan since it duplicates Strategy 5A.

Page S9.9:

- Included current Zoning Map since the Town does not have a Land Use Plan.

Subsection 10

Hazard Mitigation Plan for the City of Trinity:

Community Profile: Trinity is located in the northwest corner of Randolph County and has a population of approximately 6,794 persons. Trinity employs a City Manager and City Clerk and a City Planner. Trinity has relied upon Randolph County and the Piedmont Triad Council of Governments for technical assistance. It does not have a police or fire department so the Randolph County Sheriff's Department provides law enforcement services. Fire service is provided by Fair Grove and Guil-Rand Volunteer Fire Departments. Davidson Water, Inc. is the water supplier for the City. Trinity does not own or maintain a water supply system. Trinity is a NPDES Stormwater Phase II community and as such is developing a Stormwater Management Plan in accordance with the requirements of Phase II.

1. Statement of the Problem:

Overall, Trinity is vulnerable to high wind events such as those associated with severe thunderstorms, tropical and extra tropical systems, snow and ice events, river and stream flooding, flash flooding, and drought.

High wind events are highly likely to bring winds of between 38 and 73 miles per hour with winds of 74 to 100 mph possible. Tornadoes are possible with a probable intensity of F1 on the Fujita Pearson scale, which means wind speeds of 73-110 miles per hour (Category 1 hurricane winds on the Saffir Simpson scale.) Additionally, these high wind events are likely to carry with them the high probability of flash flooding and/or river and stream flooding, as well as lightning and hail.

Vulnerability to ice and snow storms are Countywide and will result in continued wide spread power outages, downed trees and limbs, as well as potential structure and building damage from falling trees and branches, or accumulation of snow on rooftops not designed to handle the snow load.

Flood Hazard

Trinity has a high flood risk for southwest Trinity. All totaled, Trinity has over 691 people exposed to flood hazards in 256 occupied units in the SFHA at an estimated value of \$22,929,000. In addition, there is one EHS facility located in the Uwharrie/Lake Reese watershed balance area, and three high hazard dams located in the area.

Repetitive Loss Structures:

The City of Trinity has no recorded repetitive loss structures.

Local Government Capability

Local government capability to mitigate against natural hazards is limited at this time. Trinity seeks to build capacity to mitigate hazards through developing land use planning tools.

2. Hazard Mitigation Goals

The goals serve as the basis for development of the more specific plan objectives and hazard mitigation activities. The multi-jurisdictional planning group has developed the following goals which are broad policy statements aimed at guiding and directing future activity so that persons, property, government, and infrastructure are protected from the impacts of natural hazards:

1. To enhance local government capability to lessen the impacts of all natural hazards;
2. To identify and protect critical services, buildings, facilities and infrastructure that are at risk of damage due to natural hazards;
3. To develop an effective public awareness/education/outreach program for natural hazards the County and municipalities are most likely to experience;
4. To protect persons and property, as well as reduce damage and loss to existing community assets; and
5. To ensure disaster resistant future development.

3. Hazard Mitigation Strategies for Trinity

In the following pages, mitigation actions for Trinity are listed and assigned specific implementation measures which include the assignment of responsibilities to local government departments and/or specific staff, along with the time frame for completion for each proposed mitigation action. When applicable, potential funding sources were also listed.

GOAL 1: To enhance local government capability to lessen the impacts of all natural hazards

Background: City of Trinity government capability includes:

- Zoning ordinance
- Subdivision ordinance
- Watershed protection ordinance

Objective:

1.1 To increase local government capability to mitigate against natural hazards.

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
1A	Employ a planner	Multi-hazard	Local	City Manager	Completed
1B	Create Planning Department	Multi-hazard	Local	City Manager City Council	Completed
1C	Adopt flood prevention ordinance	Flood	Local	City Manager	Completed
1D	Update land use plan	Multi-hazard	Local	City Manager	Completed
1E	Develop a Stormwater Management Plan as part of NPDES Phase II program requirement	Flood	Local	City Manager	Ongoing
1F	Review existing capital improvement plan to ensure capital improvements support mitigating activities and are not counter to hazard mitigation	Multi- hazard	Local	City Manager	Ongoing

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
1G	Update existing zoning ordinance to include considerations for hazard mitigation	Multi- hazard	Local	City Manager	Ongoing
1H	Update subdivision ordinance to include considerations for hazard mitigation	Multi-hazard	Local	City Manager	Ongoing
1I	Develop a section of existing Capital Improvement Plan devoted solely to hazard mitigation projects to allow for effective financial management of capital projects which have hazard mitigation ramifications	Multi- hazard	Local	City Manager	Ongoing
1J	Become National Flood Insurance Program Member	Flood	Local	City Manager	Completed
1K	Partner with County to use GIS resources	Multi-hazard	Local	City Manager	Ongoing
1L	Develop procedure for recoding damage assessment information such as type of hazard, location of hazard occurrence, when it occurred, death or injury, property damaged for local use in hazard mitigation and land use planning.	Multi-hazard	Local	County Emergency Management County Planning Department	Ongoing
1M	Look into need for emergency water supply capability as part of regular local water supply planning process	Multi- hazard	Local	City Manager	Ongoing

STRATEGY 1A

This strategy has been classified as completed since the Town hired a Town Planner during the previous five years.

STRATEGY 1B

The City did create a Planning Department during the previous cycle and has determined that this strategy is completed.

STRATEGY 1C

This strategy is completed since the City adopted the flood prevention ordinance in 2004 and again in 2007.

STRATEGY 1D

The Comprehensive Land Development Plan was adopted on February 2, 2007, and has been classified as completed.

STRATEGY 1E

This strategy is ongoing as the City works to comply with existing State laws.

STRATEGY 1F

Through its annual budget process, the City is working to follow the goal of this strategy. It has been classified as ongoing since the amount of funding varies year to year.

STRATEGY 1G and IH

This strategy is considered to be ongoing since the City is working to ensure that hazard mitigation goals are considered for zoning and subdivision cases.

STRATEGY 1I

Through its annual budget process, the City is working to follow the goal of this strategy. It has been classified as ongoing since the amount of funding varies year to year.

STRATEGY 1J

The city joined the NFIP on October 13, 2005, thereby completing this strategy.

STRATEGY 1K

This strategy is deemed to be ongoing as the County and the City share GIS resources and cost.

STRATEGY 1L

This strategy is ongoing at this time. The database has been completed and is in use by the County. It is classified as an ongoing strategy since disasters can happen at anytime and technology is changing at a rapid pace causing the need to constant changed to the database.

STRATEGY 1M

This strategy is ongoing at this time. The City is investigating methods to incorporate this into their local water supply planning process.

GOAL 2: To identify and protect critical services, buildings, facilities and infrastructure that are at risk of damage due to natural hazards

Background: City of Trinity does not have any critical facilities located in a geographically hazardous area. However, alternative power sources are necessary when natural disasters result in large-scale power outages.

Objective:

2.1 *To ensure a continuous power supply for critical facilities and services during and after an ice/snow storm*

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
2A	Procure generators and fuel for alternative sources of power for administrative building.	Multi-hazard	Local	City Manager	Completed
2B	Strengthen mobile home anchoring requirements.	Multi-hazard	Local	Planning	Ongoing

STRATEGY 2A

With the purchase of two natural gas generators for the City buildings, this strategy has been classified as completed.

STRATEGY 2B

The strategy has been classified as ongoing since many of the items needed to meet this strategy can be, and is, accomplished by the NC State Building Code.

GOAL 3: To develop an effective public awareness/education/outreach program for natural hazards the County and municipalities are most likely to experience.

Background: Currently the City does not have a formal outreach program for hazard mitigation or hazard awareness. Properties in flood plains have been identified and mapped through the County GIS system.

Objectives:

- 3.1 *Increase awareness and understanding of local government and general public of the need for hazard mitigation to protect persons and property from the impacts of natural hazards.*
- 3.2 *Provide flood protection information to property owners in high risk areas*
- 3.3 *Increase public knowledge of importance of flood insurance.*

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
3A	Educate and inform local government and elected officials (decision makers) of the need to consider hazard mitigation in policy and budgetary planning and decision-making processes.	Multi-hazard	Local	City Manager	Ongoing
3B	Disseminate information on the benefits of purchasing flood insurance to property owners in flood hazard areas. Insert as envelope stuffers in regular mailings to residents.	Flood	Local	City Manager	Ongoing

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
3C	Hold yearly “Flood Hazard Awareness Week”	Flood	Local	County Emergency Management Planning Department	Ongoing

STRATEGY 3A

This strategy has been targeted as an ongoing project since local government and elected leaders for the City can change at any election. It should be noted also that the City has created a Public Safety Board to address safety issues and to educate the public and elected officials.

STRATEGY 3B

This strategy is ongoing and has been moved from the County Emergency Management Department to the City Manager since the Emergency Management Department does not send regular mailings to residents of the City.

STRATEGY 3C

This strategy is also ongoing and is currently handles by the County Emergency Management and Planning Departments.

GOAL 4: To protect persons and property and reduce damage and loss to existing community assets

Background: Through hazard mitigation planning process and vulnerability assessment, City of Trinity has identified geographic areas at high risk for flood, and dam failure.

Objectives:

- 4.1 To identify vulnerable populations and provide emergency shelter.
- 4.2 To protect and warn persons and existing development from flood damage, dam failure and other geographically specific hazard locations.

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
4A	Identify and map mobile home parks	Multi-hazard	Local	City Manager	Ongoing
4B	Identify and designate at least one emergency shelter in each municipality	Multi-hazard	Local	City Manager County Emergency Management	Completed
4C	Put in place a Countywide 9-1-1 reverse call system for location specific warning to public of impending disaster.	Multi-hazard	Homeland Security funds	County Emergency Management	Completed
4D	Develop program to clear debris from culverts and storm drains in priority floodplains.	Flood	Local	Water Resources Public Works	Ongoing

STRATEGY 4A

This strategy was actually completed by the County prior to the implementation of the 2004 Plan. It has been given a status of ongoing since it is possible for new mobile home parks to be developed.

STRATEGY 4B

This strategy has been completed since a shelter has now been located in the City.

STRATEGY 4C

One way to alert citizens to pending events is through the use of a *Reverse 9-1-1 System*. Since the adoption of the Plan, the County Emergency Management Department has purchased and deployed the reverse 9-1-1 system through the use of Homeland Security grant funds.

STRATEGY 4D

A program has been designed to ensure the removal of debris from culverts and storm drains throughout the City. This is an ongoing program.

GOAL 5: To ensure disaster resistant future development

Background: City of Trinity is in the beginning stages of revising their zoning and subdivision ordinance and plans to build their capacity for land use planning.

Objectives:

5.1 To protect future development from the impacts of natural hazards

5.2 Regulate future development to prevent damages and losses from natural hazard events

Strategy	Project or Policy	Hazard Targeted	Funding	Lead Department(s)	Status
5A	Through existing subdivision regulations, encourage that power, cable and telephone lines be buried.	Multi-hazard	Local	City Manager Planning Department	Completed
5B	Include in land use plans to consider street connectivity in all new subdivisions to allow for multiple access points.	Multi-hazard	Local	City Manager Planning Department	Ongoing
5C	Include in land use plan as Citywide policy, wherever possible preserve natural wetlands, designate conservation corridors, especially along streams through acquisition or conservation easements.	Multi-hazard	Local	City Manager Planning Department	Completed
5D	Consider amending subdivision ordinance to allow clustering to maximize density while preserving high hazard areas.	Multi-hazard	Local	City Manager Planning Department	Completed

STRATEGY 5A

This strategy is completed since the City Council approved an amendment to the subdivision ordinance that required the placement of underground utilities.

STRATEGY 5B

This strategy is ongoing since development in the City is ongoing.

STRATEGY 5C

This strategy is completed since the Land Development Plan now encourages preservation of sensitive areas for open space and greenways.

STRATEGY 5D

This strategy is also completed since the Development Ordinance now allows for clustering of development to preserve sensitive areas.

4. Implementation

Implementation of the Hazard Mitigation Plan will start from the time that the required update is adopted. Work has already started on several of the mitigation strategies identified in the Mitigation Strategies section. Each City Department will be responsible for pursuing the development of policies, programs, ordinance revisions, and regulations as they are assigned.

The City of Trinity will create a process to incorporate requirements in this hazard mitigation plan into the floodplain ordinance, subdivision ordinance and zoning activities. During the planning process for all new and updated local planning documents, such as a land development plan, comprehensive plan, or capital improvement plan, the Town Planner will provide a copy of the hazard mitigation plan to each member of the planning team. The Town Planner will ensure that all goals and strategies of new and updated local planning documents are consistent with the hazard mitigation plan and will not contribute to increased hazards in the jurisdiction.

A process for prioritization of identified hazard mitigation strategies was performed. The hazard mitigation planning team used the following criteria for prioritization of strategies:

1. Cost-benefit review
2. Results of vulnerability assessment
3. Results of hazard identification and analysis
4. Results of capability assessment.
5. Effectiveness in meeting hazard mitigation goals.

The results of the capability assessment as well as the cost-benefit review were given special emphasis. To complete a cost-benefit review of actions listed in this plan, we utilized information from past projects that helped us determine an estimate of the probable cost of implementing any given strategy. This was supplemented by local knowledge of various personnel, Boards and historical data that helped us understand whether or not the benefits that would be incurred from such actions were greater than the costs. The prioritization of the strategies is designated through listing them as high, moderate or low priority. Time frames have been categorized as short-term and long-term. Short-term strategies are those that can be implemented within existing resources and authorities and should be completed within a time frame of 6 months to 2 years. Short-term activities are generally a higher priority and include those activities that should be implemented immediately following the adoption of this plan. Long-term strategies may require new or additional resources or authorities and should be organized to begin implementation within a timeframe of 3 - 5 years.

Table 1: Priority of Implementation

Priority	Strategy#	Amendment Completed Ongoing New	Ongoing (no end date)	Short Term (resources, and authority available now)	Long Term (resources or authority currently not available)
High	1A	C		X	
High	1B	C		X	
High	1C	C		X	
High	1D	C		X	
High	1E	O			X
Moderate	1F	O		X	
High	1G	O			
High	1H	O			
Moderate	1I	O			
High	1J	C			
High	1K	O			
High	1L	O			
High	1M	O			
Low	2A	C			X
High	2B	O			
High	3A	O	X	X	
High	3B	O	X	X	
Low	3C	O			
Moderate	4A	O		X	
Moderate	4B	C		X	
High	4C	C	X		X
High	4D	O			
High	5A	C		X	

Priority	Strategy#	Amendment Completed Ongoing New	Ongoing (no end date)	Short Term (resources, and authority available now)	Long Term (resources or authority currently not available)
Low	5B	O			
High	5C	C			
High	5D	C			

5. Monitoring, Evaluating, and Reporting Progress

The evaluation form in Appendix D will be used by County staff to begin the evaluation process. The base year statistics used in calculating progress will be the year prior to each five-year cycle. This form will be completed and submitted to the County Hazard Mitigation Taskforce, as well as all City and Town Managers (where there is no Town Manager the form will be sent to the Town Clerk).

The City Manager, and others at the Manager’s discretion, will convene annually to review the County evaluation form, evaluate the Plan’s effectiveness, and make recommendations for revision or amendment as necessary.

The City Manager or delegate will then prepare an evaluation report summarizing the progress of the Plan. The evaluation and progress report should consider the following questions.

- Have lead agencies participated as originally proposed?
- Have outcomes been adequate?
- What problems have occurred in the implementation process?
- Have members of the public been adequately involved?

The report will include:

- The status of benchmarks and indicators;
- Difficulties or impediments during implementation;
- Changes in County priorities; and
- Recommendations for changes, revisions, or amendments to the plan.

In addition to the annual review, the City Manager will review and update the plan after any *presidential disaster declaration* for the City of Trinity.

6. Revisions and Updates:

After completion of the evaluation report the Taskforce will present the findings with recommendations for updates and revision to the City Council for amendment to Subsection 10: Hazard Mitigation Plan for the City of Trinity. As updates occur, the date, reason and responsible party should be noted. Updates or revisions which affect the plan as a whole or impacts any other jurisdiction(s) will require a presentation of findings and recommendations to, and ultimate adoption by, those jurisdictions' council members.

When changes to any part of this plan entail substantial budgetary considerations, the revisions or amended plan must be submitted to the NCDEM and FEMA for review.

At the end of every five-year cycle, the Randolph County Hazard Mitigation Taskforce will convene a Planning Committee with representatives from each jurisdiction in the County. The committee will review and update the hazard profile, vulnerability assessment and local capability section and submit these to the County Manager and all City and Town Managers (where there is no town manager, the town clerk) for their review, and subsequent adoption by the County Commissioners and City/Town Councils.

7. Continued Public Involvement

To facilitate continued public involvement in the planning process:

- The public will be invited to participate in the annual review of the plan.
- Copies of the plan will be kept on hand at the public library and at the City Hall. The plan will have a contact address, email address, and phone number of the person responsible for keeping track of public comments on the plan.
- The plan will be available on the Randolph County Website, and will contain an email address and phone number the public can use for submitting comments and concerns about the plan.

8. List of Changes made to Subsection 10 for 2009 Plan Update

Non-page specific changes:

- Correct capitalization of County since any reference to County in this document refers to Randolph County.

- Correct capitalization of State since any reference to State in this document refers to the State of North Carolina.
- Correct capitalization of City since any reference to City in this document refers to the City of Trinity.
- Correct spacing at the end of sentences from two spaces to one space as is now common with desktop publishing.
- Correct grammatical and punctuation errors from the original document.
- Where goals or strategies have been removed or added, the goals or strategies have been renumbered to reflect the changes made.

Page S10.1:

- Community Profile was updated to reflect the hiring of the Town Planner and the development of a Stormwater Management Plan.

**APPENDIX A:
NATURAL HAZARD PROFILE FOR
RANDOLPH COUNTY AND ALL MUNICIPAL JURISDICTIONS**

Introduction

In this section, natural hazards such as dam failure, drought, earthquakes, flooding, flash flooding and subsequent river/stream erosion, heat wave, high wind events such as tropical storms, tropical depressions, and extra tropical storms (nor'easters), landslides, severe thunderstorms, sinkholes, tornadoes, wildfires, and winter storms, both ice and snow events are profiled. When possible the likelihood, intensity, potential impact and a determination of vulnerable geographic areas was determined through analysis of various data sources.

In order to identify natural hazards and determine their potential impact on the County and each separate jurisdiction, data on hazard events since 1950 was collected to determine if there are patterns of occurrence, or if hazards are geographically specific to an area. The primary source of data on thunderstorm, tornado, and cyclonic events, flooding, hail, extreme temperature, ice storms and snow events is the National Climatic Database. In some instances, this database provides information on events over the last 50 years. However, data prior to 1979 is incomplete. It is likely some hazardous events were not recorded. Additionally, the data gives no description of the event and little information on location except to say that the event occurred in Randolph County. The data from 1979 to the current year is progressively more detailed and the more hazard events have been recorded. Where data was lacking, other sources have been examined and used to supplement the NCDC recorded event history. These data sources are referenced throughout the hazard profile.

The National Climactic Database lists no recorded occurrences of landslides, sinkholes, wildfires, earthquakes, or dam failures. Data for these hazard events were gathered from state and federal agency data and information. For landslides, sinkholes, wildfires, data limitations were significant. These hazards were profiled using supplementary material and information referenced in their respective sections.

When possible, GIS was used to map historic occurrences of natural hazard events.

Table 1: Likelihood of Occurrence

Likelihood	Frequency of Occurrence
Unlikely	Less than one percent probability in the next year or less than one chance in the next 100 years.
Possible	Between 1% and 10% probability in the next year or at least one chance in the next 100 years.
Likely	Between 10% to 100% probability in the next year or one chance in the next ten years.
Highly Likely	Near 100% probability in the next year.

Table 2: Probable Impact

Probable Intensity	Probable Impact
Negligible or none	Minimal property damage and minor injuries only; less than 5% of property damaged.
Limited	Some severe injuries, shutdown of critical facilities for two days or more; 5% to 10% of property damaged, including agricultural (both crop and livestock).
Critical	Death possible, multiple injuries; shutdown of critical facilities for up to a week; 10% to 25% of property damaged, including agricultural (both crop and livestock).
Catastrophic	Multiple injuries and deaths; shutdown of critical facilities for more than one week; more than one quarter of property in the area damaged or destroyed.

Table 3: Area vulnerable

Proportion of County/City Vulnerable to hazard	
Location specific	Less than 10% of area vulnerable
Sizeable area	10% to 49% of area vulnerable
Substantial area	50% to 99% of area vulnerable
Countywide area	100% of area vulnerable

Dam Failure

Occurrences within past ten years	1 low-hazard dam
Likelihood of occurrence	possible
Intensity and impact to Randolph County	limited - critical
Area vulnerable	location specific

Dams are relied on to generate power, provide communities with drinking water, and protect individuals from floods. Randolph County has 204 dams

located throughout the County. The 24 high-hazard dams are generally located in the northern half of the County (north of US Highway 64) with no reported failures in the last ten years. Of all 204 dams in Randolph County (139 low, 41 intermediate and 24 high hazard), there was one reported failure within the past ten years. A low hazard river dam failed during a flood but was not discovered until flood waters receded and the dam was exposed. Actual failure caused no significant damage as all damage was flood related.

Dam failures happen for one of six reasons:

1. overtopping, caused by water spilling over the top of the dam;
2. structural failure of materials used in dam construction;
3. stability failure of the foundation or other features that hold the dam in place;
4. cracking caused by movements like the natural settling of a dam;
5. inadequate maintenance and upkeep; and
6. piping when seepage through a dam is not properly filtered and soil particles continue to progress and form sinkholes in the dam.

Dams are innately hazardous structures (Association of State Dam Safety Officials, 1999). Failure can result in the release of the reservoir contents that includes water, mine wastes or agricultural refuse causing negative impacts upstream or downstream or at locations remote from the dam.

Inspections by the Dam Safety Department

According to North Carolina General Statute (NCGS) §143-215.32:

- a) The Department may at any time inspect any dam, including a dam that is otherwise exempt from this Part, upon receipt of a written request of any affected person or agency, or upon a motion of the Environmental Management Commission. Within the limits of available funds the Department shall endeavor to provide for inspection of all dams at intervals of approximately five years.

According to the statute cited above, officials at the Division for Dam Safety, NC Department of Natural and Environmental Resources all dams should be inspected every five years at a minimum.

Dam Hazard Classification: Each dam is rated as to its hazard potential or the probable damage that would occur if the structure failed, in terms of loss of life, economic and environmental damage. Even probable future development downstream from the dam which would be affected by its failure is considered in determining classification. These hazard classifications do not refer to the likelihood or possibility of failure, or the condition of the dam.

Table 4: Hazard Classification for Dams

Hazard Classification	Description	Quantitative Guidelines
Low	Interruption of road service, low volume roads	Less than 25 vehicles per day
	Economic damage	Less than \$30,000
Intermediate	Damage to highways, interruption of service	25 to less than 250 vehicles per day
	Economic damage	\$30,000 to less than \$200,000
High	Loss of human life	Probable loss of 1 or more human lives
	Economic damage	More than \$200,000
	Probable loss of human life due to breached roadway or bridge on or below the dam	250 or more vehicles per day

Source: North Carolina Department of Natural Resources, Division of Land Quality, Dam Safety Administrative Rules

Exempt Dams

According to NCGS §143-215.25A, the following dams are exempt for the Dam Safety Law of 1967:

1. Constructed by the United States Army Corps of Engineers, the Tennessee Valley Authority, or another agency of the United States government, when the agency designed or approved plans for the dam and supervised its construction.
2. Constructed with financial assistance from the United States Soil Conservation Service, when that agency designed or approved plans for the dam and supervised its construction.
3. Licensed by the Federal Energy Regulatory Commission, or for which a license application is pending with the Federal Energy Regulatory Commission.
4. For use in connection with electric generating facilities under the jurisdiction of the North Carolina Utilities Commission, except that a dam operated by a small power producer, as defined in G.S. 62-3(27a), shall be subject to the provisions of this Part even though the dam is constructed pursuant to a certificate of public convenience and necessity issued by the North Carolina Utilities Commission.
5. Under a single private ownership that provides protection only to land or other property under the same ownership and that does not pose a threat to human life or property below the dam.

6. That is less than 15 feet in height or that has an impoundment capacity of less than 10 acre-feet, unless the Department determines that failure of the dam could result in loss of human life or significant damage to property below the dam.

A breached dam no longer poses a hazard as long as it is not repaired and in use. Breached dams are still inventoried at their hazard classification level and still inspected according to that level.

Drought

Occurrences within last 50 years	Eight periods where Palmer drought index reached -3 for > 6 months
Likelihood of occurrence	likely
Intensity and impact to Randolph County	limited
Area vulnerable	Countywide

According to the North Carolina Drought Management Advisory Council there are three different types of drought. All three types can be experienced in the State and its counties. The types of droughts are:

1. **Hydrological Drought:** refers to deficiencies in surface and subsurface water supplies;
2. **Agricultural Drought:** occurs when there is not enough soil moisture to meet the needs of a particular crop at a particular time; and
3. **Meteorological Drought:** based upon precipitation's departure from normal over some period of time.

Randolph County and its municipalities have experienced all levels of drought over the past five years and in some instances the droughts have been classified as extreme drought.

Actual drought impacts result from the demand people place on water supply. Actual water supply during drought episodes would indicate whether or not the area is dramatically affected by these natural events. It is likely that as the area grows in population and experiences increasing demands for water, these cyclical drought episodes will have a greater impact. The Palmer Drought Index is a drought-monitoring tool useful for determining periods of deficient precipitation over an extended period of time. The Palmer Drought Index ranges from -6 to +6 with negative values denoting dry spells.

Table 5: Palmer Drought Index

Category	Description	Possible Impacts	Palmer Drought Index	Percent of normal precipitation
D0	Abnormally dry	Going into drought: short-term dryness slowing planting, growth of crops or pastures; fire risk above average. Coming out of drought: some lingering water deficits; pastures or crops not fully recovered	-1.0 to -1.9	<75% for 3 months
D1	Moderate drought	Some damage to crops, pastures; fire risk high; streams, reservoirs or wells low, some water shortages developing or imminent, voluntary water use restrictions requested	-2.0 to -2.9	<70% for 3 months
D2	Severe drought	Crop or pasture losses likely; fire risk very high; water shortages common; water restrictions imposed	-3.0 to -3.9	<65% for 6 months
D3	Extreme drought	Major crop/pasture losses; extreme fire danger; widespread water shortages or restrictions	-4.0 to -4.9	<60% for 6 months
D4	Exceptional drought	Exceptional and widespread crop/pasture losses; exceptional fire risk; shortages of water in reservoirs, streams and wells, creating water emergencies	-5.0 or less	<65% for 12 months

Randolph County has experienced at least eight periods (from six months to five years in length) where the monthly value that is generated indicating the severity of a dry spell exceeded -3 for an estimated period of greater than 6 months.

Drought is very likely to occur in a cyclical pattern throughout Randolph County. Drought involves a moisture deficit leading to social, environmental or economic impacts. Water shortages could result in widespread water restrictions. Randolph County and some of its municipal jurisdictions have resorted to water restrictions during the past five years. Many of the municipal drought problems may be mitigated once the water treatment plant for the Randleman Lake come into service in the next one to two years.

During periods of severe to extreme drought, crops and pasture losses are likely and would result in major crop/pasture loss should the drought continue to an extreme level. Wildfire risk is very high to extreme. Although the intensity of drought is likely to be severe to extreme according to the drought index, the

intensity as determined by the hazard analysis can be categorized as limited. Although shutdown of critical facilities is unlikely, agricultural damage is possible.

Earthquake

Occurrences within past ten years	0
Likelihood of occurrence	possible
Intensity and impact to Randolph County	negligible
Area vulnerable	Countywide

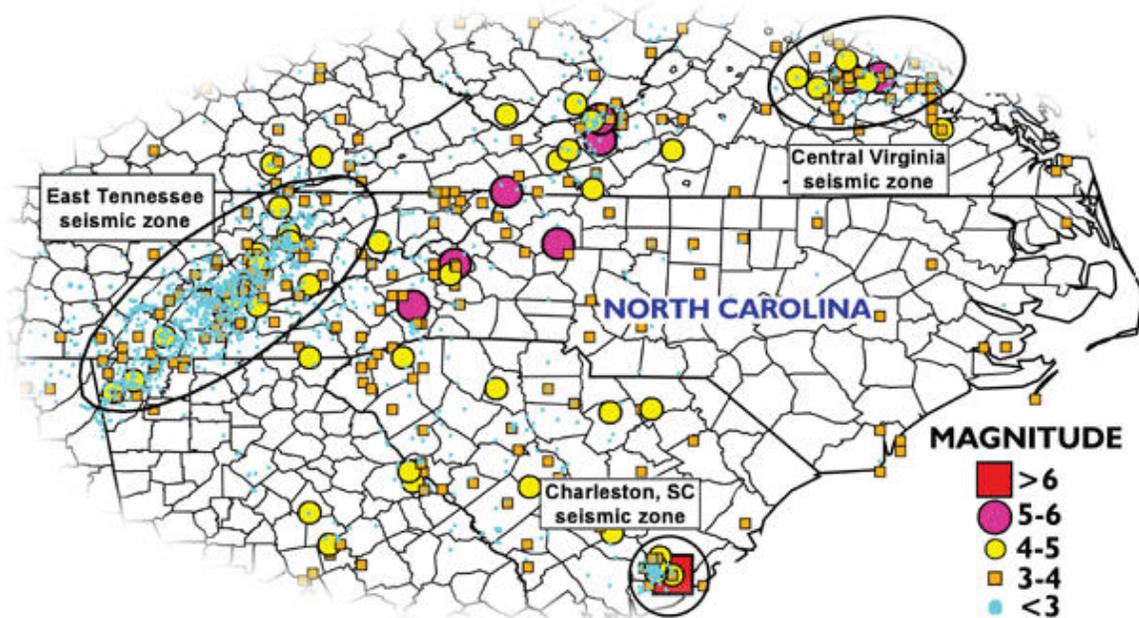
The NC Department of Emergency Management rates Randolph County’s relative risk of an earthquake as “low.” Approximately two-thirds of North Carolina is subject to earthquakes on the Eastern Tennessee Seismic Zone and the Charleston Fault in South Carolina with the western and southeast region most vulnerable.

Earthquakes are commonly measured by their magnitude and intensity. Magnitude is the measure of total energy released while intensity is the resulting degree of damage by an earthquake. The intensity of an earthquake is measured by the Richter scale where an earthquake of a magnitude of 2.5 represents a mild tremor and little to no damage while an earthquake of a magnitude of 7.0 or greater represents a major tremor where changes to the Earth's surface occur and vast damage is expected.

Table 6: Modified Mercalli Scale with Richter Scale equivalent

Richter Scale	Mercalli Scale	Intensity	Description of Effects
<4.2	I	Instrumental	Detected only on seismographs
	II	Feeble	Some people feel it
	III	Slight	Felt by people resting; like a truck rumbling
	IV	Moderate	Felt by people walking
<4.8	V	Slightly Strong	Sleepers awake; church bells ring
<5.4	VI	Strong	Trees sway; suspended objects swing, objects fall off shelves
<6.1	VII	Very Strong	Mild alarm; walls crack; plaster falls
	VIII	Destructive	Moving cars uncontrollable; masonry fractures, poorly constructed buildings damaged
<6.9	IX	Ruinous	Some houses collapse; ground cracks; pipes break open
<7.3	X	Disastrous	Ground cracks profusely; many buildings destroyed; liquefaction and landslides widespread
<8.1	XI	Very Disastrous	Most buildings and bridges collapse; roads, railways, pipes and cables destroyed; general triggering of other hazards
	XII	Catastrophic	Total destruction; trees fall; ground rises and falls in waves

Figure 1: Epicenter of earthquakes, 1698-2002

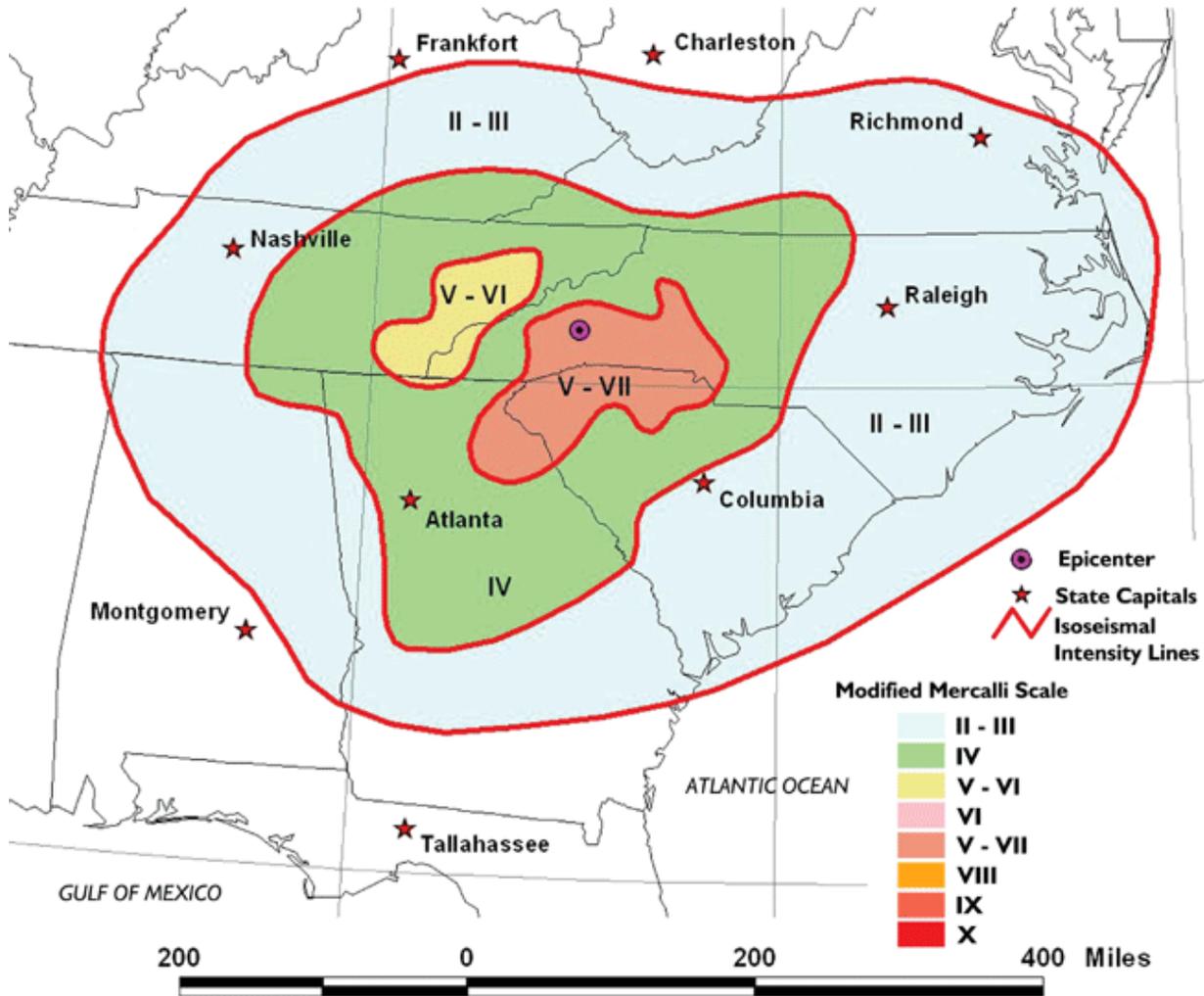


Source: North Carolina Geological Survey, 2009,
http://www.geology.enr.state.nc.us/Geologic_hazards_earthquakes/earthquakes.htm

Figure 1 shows the epicenters of earthquakes occurring in and around North Carolina since 1698. Epicenters are generally concentrated in the active Eastern Tennessee Seismic Zone. Since 1928, there has not been an earthquake in this seismic zone with intensity higher than IV (moderate) as measured by the modified Mercalli scale of earthquake intensity.

The most notable earthquake in the Carolinas was the Charleston quake of 1886, which occurred in the Charleston, South Carolina seismic zone. This earthquake caused considerable damage in both Charlotte and Raleigh (probably intensity level of X - Disastrous, or greater than 7.3 on the Richter scale). Damage was reported in a number of areas within a 200-mile radius of Charleston. The initial shock was felt over 1,000 miles away in Illinois. Randolph County likely experienced an intensity of VI or VII (see Figure 2). No substantial damage or destruction has been caused by an earthquake in NC in the past 80 years.

Figure 2: Likely intensity of Charleston quake 1886



Source: North Carolina Geological Survey, 2009,
http://www.geology.enr.state.nc.us/Geologic_hazards_earthquakes/earthquakes.htm

Subsequent minor earthquakes have occurred in North Carolina in 1926, 1928, 1957, 1959, 1971, 1973, and 1976. In the Eastern Tennessee seismic zone, the strongest earthquake was magnitude 4.6 which occurred in 1973. On December 9, 2003, a 4.5 magnitude earthquake near Richmond, Virginia, was felt in areas of Raleigh. This earthquake occurred in the Central Virginia seismic zone. No evidence for larger prehistoric shocks has been discovered, yet the micro earthquake data suggest consistent stress accumulation within the area.¹

¹ Land-Of-Sky Regional Council, "Storm Water Problems and Impacts: Why all the fuss?" fact sheet. URL: http://h2o.enr.state.nc.us/su/PDF_Files/Land_of_Sky_factsheets/FactSheet_1.pdf

The NC Department of Emergency Management rates Randolph County’s relative risk of an earthquake as “low” (*NC Division of Emergency Management, Local Natural Hazards, Sept .2002*).

Flood

Occurrences since 1995	thirty ²
Likelihood of occurrence	highly likely
Probable intensity and impact to Randolph County	limited
Area vulnerable	Countywide

Flash flooding: Hazard threat is generally higher for urban or storm water flooding (flash flooding) than for river or stream flooding. Incidences of storm water flooding associated with severe thunderstorms or localized heavy rains are on the increase, particularly in the municipalities. Storm water runoff is rainfall or snow, which melts and runs off the ground or impervious surfaces in developed areas. This runoff may drain into streams, rivers or lakebeds, or, as in urban areas, the runoff flows into streets and storm sewers. Storm drainage systems, unlike sanitary sewage systems, then directs the flow of untreated runoff water into lakes, streams, and rivers.

Changes in land use and increasing development increases storm water runoff. Increased impervious surface coverage (parking lots, urban development) decreases the amount of water that can naturally infiltrate into the soil and increases the volume and rate of storm water runoff. The result is more frequent and severe flooding and increased potential for injury or death and damage to public and private property.

Stream/River flooding: Randolph County flood zones are located throughout the County. Past flooding occurring from overflowing rivers and streams in Randolph County has been typically associated with the remnants of tropical storms. Reported property damage has been negligible. The NC Department of Emergency Management rates Randolph County’s flood risk as “low.”

In the past eight years, the National Climatic Data Center database shows ten flood events. Road closures reported in majority of flood events; crop damage in 1997 due to system ahead of tropical storm. During these ten recorded flashflood events the following roads were closed do to flood waters: Farmer Denton Road; Bescher Creek; portion of NC 64; portion of NC 62; NC 705 near Moore County; and an unidentified 40 foot section of rural road near Seagrove was reported washed out.

² National Climactic Data Center.

In June of 2006 the County experienced an extremely heavy rainstorm and as a result there was approximately \$82,314 in damages reported to the County caused by flooding.

Hurricanes, Tropical and Extra-Tropical Systems

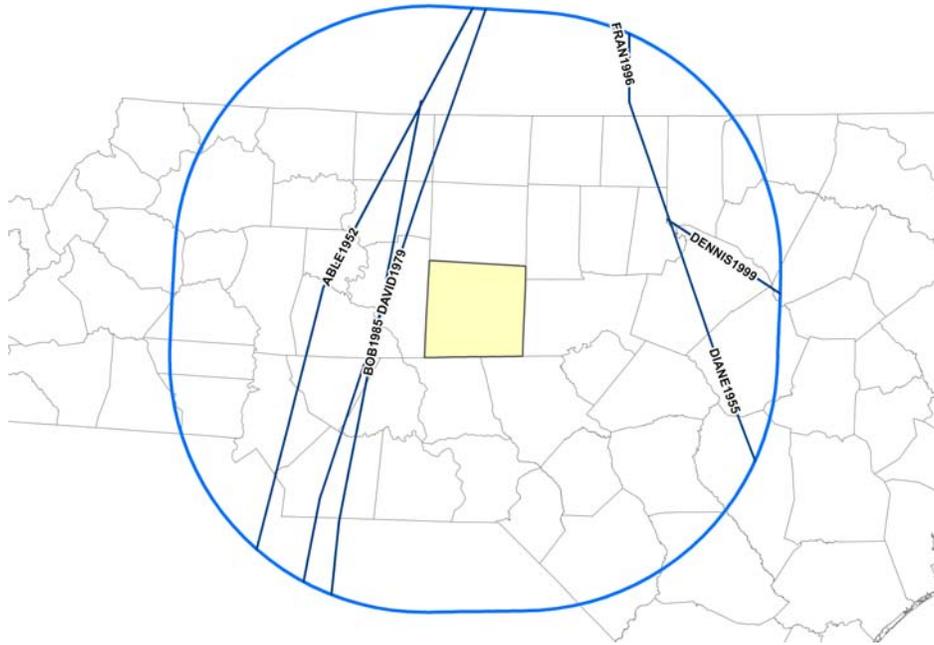
Hurricanes passing within 50 miles of Randolph County	3
Likelihood of occurrence	Category 1-2 possible; category 3-5 unlikely
Tropical storms passing within 50 miles of Randolph County	41
Likelihood of occurrence	likely
Sub-tropical, or extra-tropical depressions, passing within 50 miles	25
Likelihood of occurrence	likely
Intensity and impact to Randolph County	limited
Area vulnerable	Countywide

“Tropical” cyclonic events form over a tropical ocean and have a center of air warmer than the surrounding air. The strongest winds are lower to the ground. Tropical Depressions have counterclockwise winds blowing around a center of low pressure and contain maximum sustained one-minute winds at a ten-meter elevation of 38 miles per hour (MPH) or less. Tropical storms are named storms with maximum sustained one-minute winds at a ten-meter elevation of 39 to 73 MPH. Hurricanes have sustained one-minute winds at a ten-meter elevation of at least 74 MPH.

According to the Saffir Simpson scale, a *category one* hurricane has wind speeds of between 74-95 MPH. Damage from a category one storm primarily occurs to unanchored mobile homes, shrubbery, and trees. Some damage to poorly constructed signs also occurs. The dense wall of thunderstorms surrounding the eye has the strongest winds within the storm moving outward to about 25 miles; winds diminish significantly as distance from the eye wall increase. Although there is considerable variation, typical hurricanes are about 300 miles wide.

In contrast, an extra-tropical storm (nor’easter) forms outside the tropics and forms a rotation with the center of the storm colder than surrounding air. In these storms the strongest winds are in the upper atmosphere. The following are the cyclonic events that have come within 50 nautical miles of Randolph County over the last 50 years.

Figure 3: Name, Year and Path of named Tropical Storms within approximately 60 statute miles of Randolph County

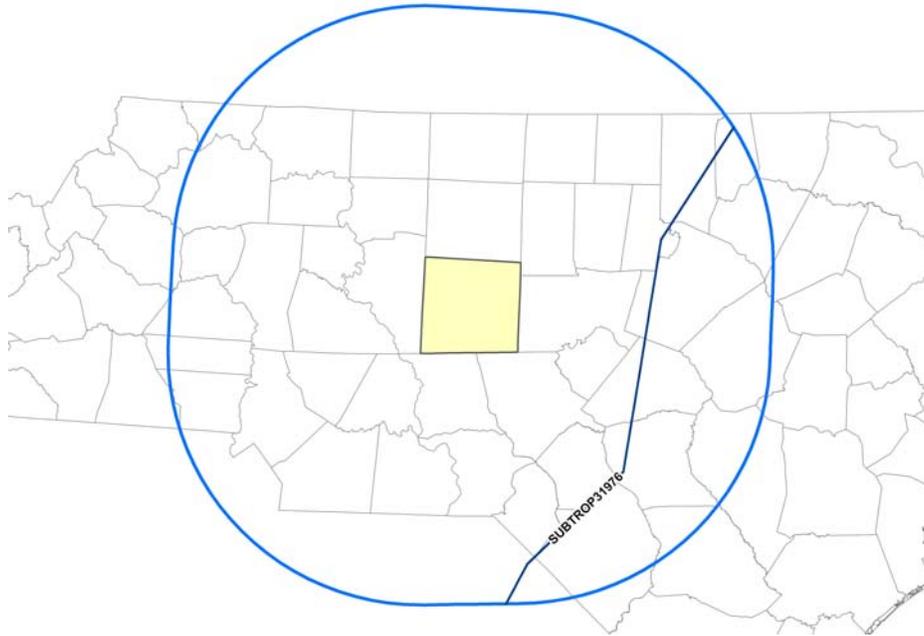


Data source: NOAA Coastal Services Center

Table 7: Date and name of Tropical Storms within approximately 60 statute miles of Randolph County

Event date	Name
August 31, 1952	Able
August 17, 1955	Diane
September 5, 1979	David
July 25, 1985	Bob
September 5, 1999	Dennis
September 6, 1996	Fran

Figure 4: Name, Year and Path of Sub-tropical Depressions within 50 Nautical miles of Randolph County

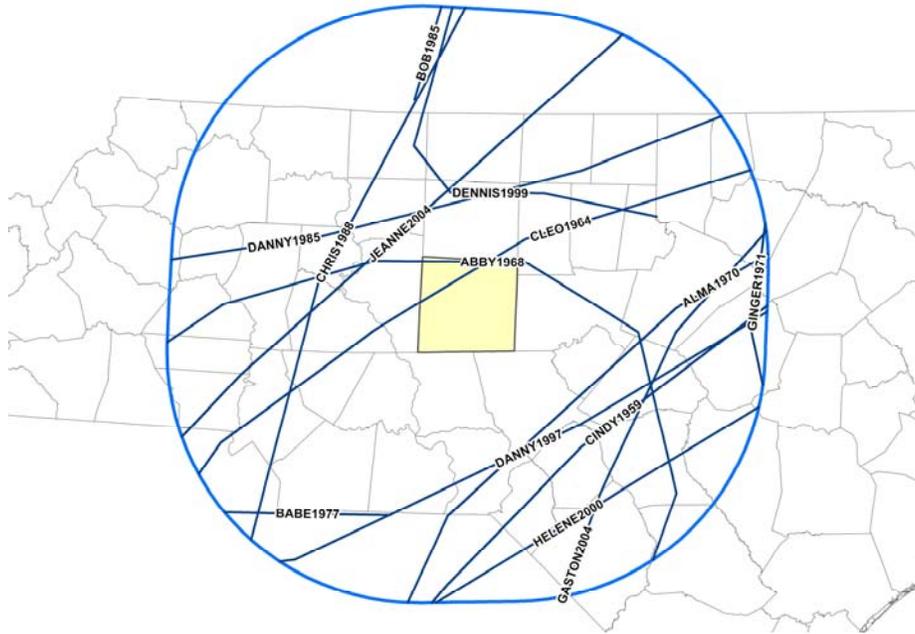


Data source: NOAA Coastal Services Center

Table 8: Date and name of Sub-tropical Depressions within approximately 60 statute miles of Randolph County

Event date	Name
September 16, 1976	Subtropical system number three

Figure 5: Name, Year and Path of Tropical Depressions within approximately 60 statute miles of Randolph County

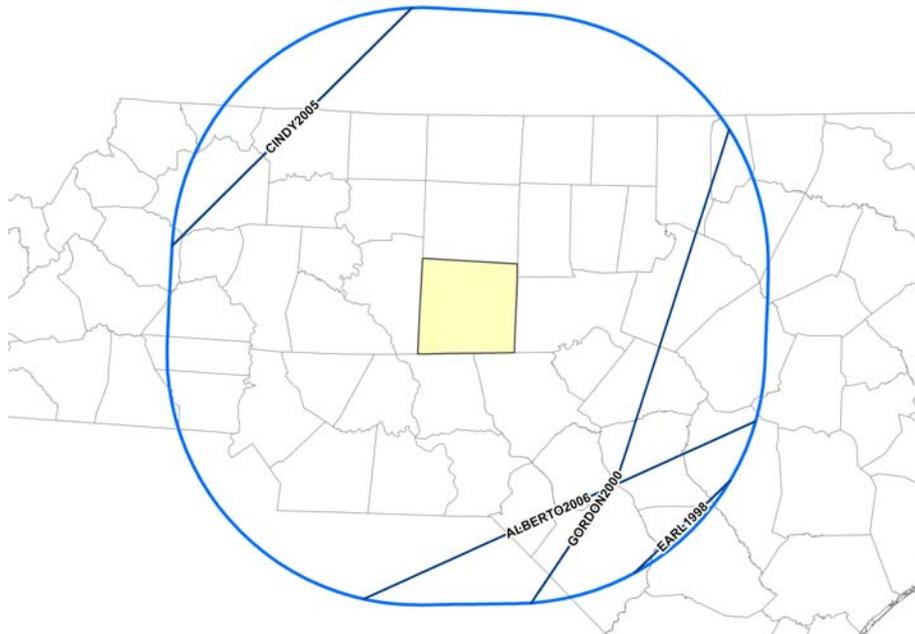


Data source: NOAA Coastal Services Center

Table 9: Date and name of Tropical Depressions within approximately 60 statute miles of Randolph County

Event date	Name	Impact on Randolph County
July 9-10, 1959	Cindy	No impact information
September 30-31, 1964	Cleo	Path within 25 nautical miles
June 9-10, 1968	Abby	Path within 25 nautical miles
May 26, 1970	Alma	No impact information
October 1-2, 1971	Ginger	No impact information
September 8, 1977	Babe	No impact information
July 25, 1985	Bob	No impact information
August 18, 1985	Danny	No impact information
August 29, 1988	Chris	Passed west of Randolph County with localized flooding
July 24, 1997	Danny	Wind damage, power outages and localized flooding
September 5-6, 1999	Dennis	Low-land flooding
September 23, 2000	Helene	No impact information
August 30, 2004	Gaston	Minor damage of \$1,500 reported
September 28, 2004	Jeanne	No impact information

Figure 6: Name, Year and Path of Extra-tropical Depressions approximately 60 statute miles of Randolph County



Data source: NOAA Coastal Services Center

Table 10: Date and name of Extra-tropical Depressions within approximately 60 statute miles of Randolph County

Event date	Name
September 4, 1998	Earl
September 19, 2000	Gordon
July 7, 2005	Cindy
June 14, 2006	Alberto

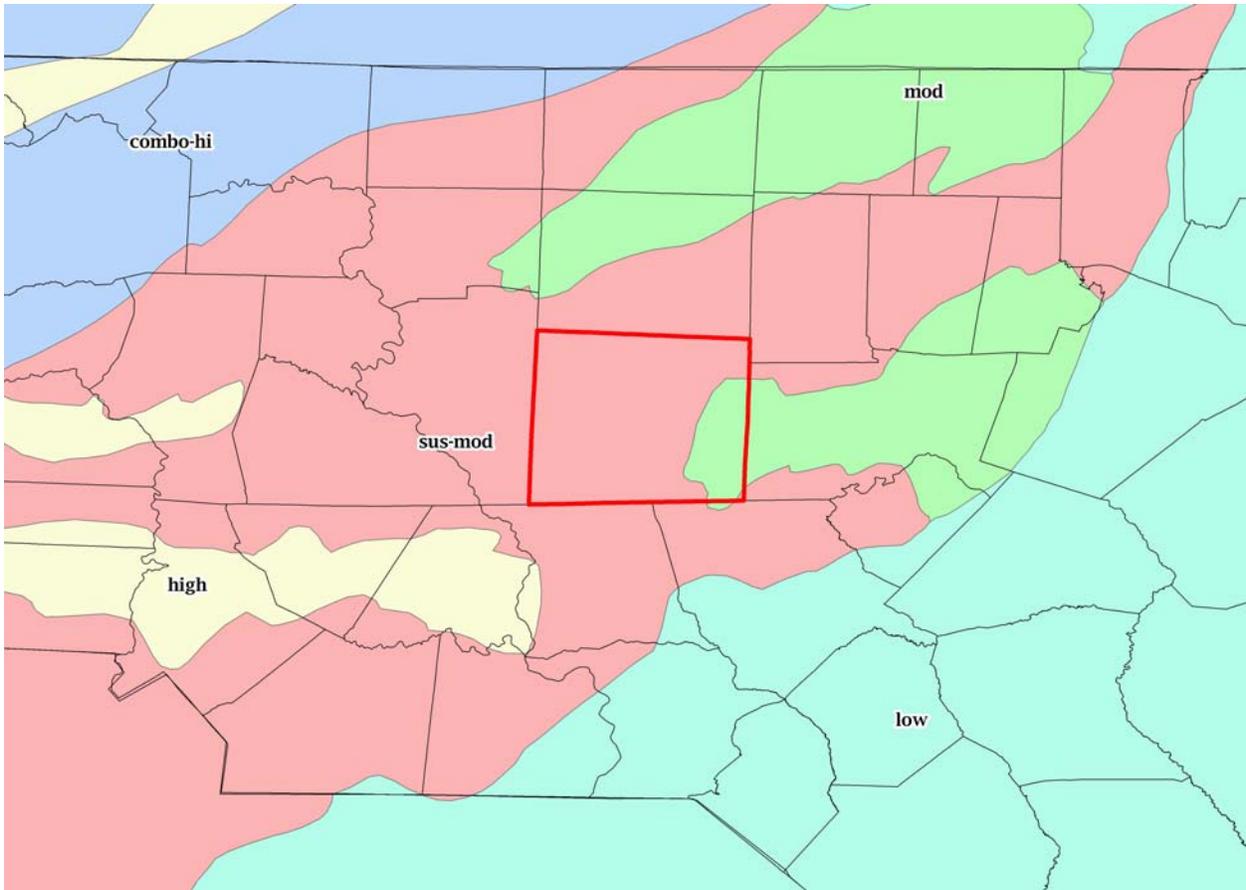
According to the National Climatic Data Center, a “hurricane” has never struck the Piedmont of NC, including Randolph County. As hurricanes have struck the NC or SC coast, they typically downgrade quickly so that by the time they reach this area, the storm is classified as either a tropical storm or a tropical depression. Tropical storms and tropical depressions are likely in the central Piedmont of NC. Winds between 35 and 58+ MPH are highly likely to occur each year. Tropical storm winds of between 38 and 74 MPH are likely. Hurricane strength winds of between 74 to 100 MPH are possible. Tornadoes and subsequent increased wind speed are also a risk as tropical storms pass through.

Landslide

Occurrences - 1950 to present	unknown
Likelihood of occurrence	unlikely
Intensity and impact to Randolph County	negligible
Area most vulnerable.....	extreme eastern portion of County

Landslides are more common through the more mountainous areas predominately from sliding of clay rich soils. According to the United States Geological Survey, landslides are typically associated with heavy rains, flooding events, and often with earthquakes.

Figure 7: Map of Landslide Incidences and Susceptibility



Date source: United State Geological Survey

Table 11: Landslide Incidence and Susceptibility

Code	Definition
combo-hi	High susceptibility to landsliding and moderate incidence.
high	High landslide incidence (more than 15% of the area is involved in landsliding).

Code	Definition
low	Low landslide incidence (less than 1.5% of the area is involved in landsliding).
mod	Moderate landslide incidence (1.5 - 15% of the area is involved in landsliding).
sus-mod	Moderate susceptibility to landsliding and low incidence.

According to the US Geological Survey as shown above, Randolph County has a low incidence and susceptibility of landslides throughout most of the County. The area east of Asheboro and south of the town of Liberty is highly susceptible and has a high incidence of landslides.

Sinkhole

Occurrences - 1950 to present	unknown
Likelihood of occurrence	possible
Intensity and impact to Randolph County.....	negligible
Area vulnerable	isolated areas

Sinkholes occur where the rock below the land surface is limestone, carbonate rock, salt beds, or rocks that can naturally be dissolved by ground water circulating through them (karst areas or regions). As the rock dissolves, spaces and caverns develop underground. Randolph County is in the slate belt and is not prone to sinkholes related to karst areas or regions. However, Randolph County has numerous abandoned mine shafts, mostly from precious metal mining, throughout the County. Gold mining occurred in 18th and 19th centuries in over 34 locations throughout Randolph County.

Subsidence is the sudden (e.g., over two hours) or gradual downward movement of the ground surface (e.g., dropping by a few inches over a number of years.) The greatest potential for subsidence exists over abandoned underground mines, tunnels or shafts, which includes gold (and other precious metal) mines. Tunnels and shafts may extend for hundreds of feet horizontally and vertically underground. If building or structures are located above these mine workings, serious damage can occur.

Reportedly mine subsistence is rare although the potential of increasing subsidence is possible as development extends or spreads to these areas.

Severe Thunderstorms

Occurrences - past ten years	116 ³
Likelihood of occurrence	highly likely
Intensity and impact to Randolph County	limited
Area vulnerable	Countywide

The National Weather Service defines a severe thunderstorm as a storm that produces hail at least three-quarters of an inch in diameter, has winds of 58 miles per hour or higher, or produces a tornado. When a severe thunderstorm warning is issued, it is possible that hazardous weather events such as a strong wind, frequent lightning, hail, downbursts, microbursts, a tornado or a flash flood could occur.

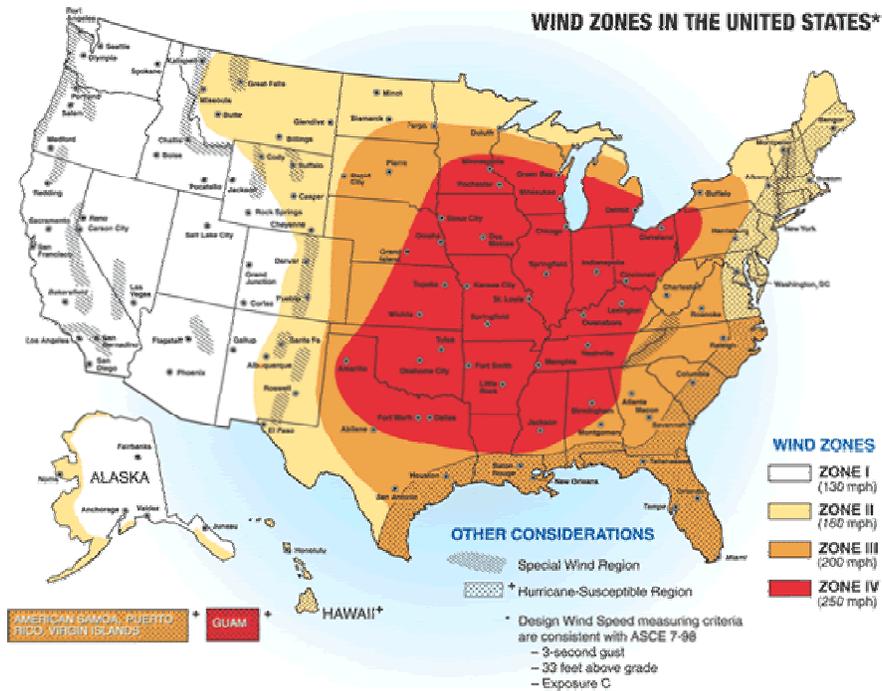
A multi-cell thunderstorm has multiple updrafts forming new cells as each downdraft dissipates the previous cell. This type of storm is more long-lived than an ordinary thunderstorm. Squall lines usually contain several multi-cell thunderstorms. These storms can produce large hail and damaging wind. Short-lived tornadoes have been known to occur in the leading edge of this type of storm. A supercell has a *persistent* rotating updraft, and is a long-lived storm (over several hours) with a familiar radar reflectivity signature called a “hook echo.” The hook echo signature is a strong indicator of tornado occurrence. Supercell thunderstorms may produce strong destructive tornadoes, large hail and damaging wind.

A downburst is a strong downdraft which includes an outburst of potentially damaging winds on or near the ground. If the diameter of the downburst is less than 2.5 miles, it is called a microburst. Downbursts and straight-line winds associated with thunderstorms can produce winds 100 to 150 miles per hour, enough to flip cars, vans, and semi-trucks. The resulting damage can equal the damage of most tornadoes.

Thunderstorms are common occurrences in Randolph County and all through North Carolina throughout the year. According to the National Climatic Data Center, a total of 116 severe thunderstorms have hit Randolph County in the past 59 years. It is extremely likely that this number is low and severe thunderstorm events have gone unreported. Almost all thunderstorms have strong winds, heavy downpours, and lightning associated with them. A single cell or ordinary thunderstorm *can* produce severe weather, but *most* ordinary storms are not categorized as severe storms and it is unlikely that they are recorded. Generally, damage from severe thunderstorms is isolated, but can be associated with downed trees, lightning strikes, and high wind. Crop damage is highest with hailstorms.

³ National Climatic Data Center.

Figure 8: Wind Zones in the United States



Source: FEMA

Severe thunderstorms (multi-cell or super-cell), and associated strong winds in excess of 58 mph, downdrafts and micro-bursts are highly likely to occur within the next year. Randolph County is located in Zone III wind zone which means that winds up to 200mph is possible in this region. However, it is more likely that wind between 38 and 73 miles per hour as in a severe thunderstorm, tropical depression or tropical storm.

According to the National Climate Data Center, since 1950 there has been no deaths attributed to thunderstorm activity and only two injuries (severity not reported). Of events from 1990 to present: 98% report tree damage only; 17% trees and power lines down; 11% reported damage to buildings/homes (data as to storm impact is unavailable through this database prior to 1990). In addition to these recorded occurrences, Randolph County experienced a downburst or straight-line wind on February 22, 2003, resulting in over \$300,000 in property damage but no injuries or deaths. The County also experienced another event on April 13, 2007, that resulted in \$11,000 in damages but no injuries or deaths.

Tornado

Occurrences - past 50 years	14
Likelihood of occurrence	likely
Intensity and impact to Randolph County	critical
Area vulnerable	Countywide

A tornado is a violently rotating column of air extending from a thunderstorm to the ground. Tornadoes may appear nearly transparent until dust and debris are picked up or a cloud forms in the funnel. The average tornado moves SW to NE but they have been known to move in any direction. The average forward speed is 30 mph but may vary from stationary to 70 mph and have rotating winds in excess of 250 mph. Tornadoes can accompany tropical storms and hurricanes as they move onto land.

Tornado potential is highest in the spring when warm air masses collide with cooler air.

Time of occurrence

Tornadoes can occur at any time of the year. They have occurred in every state, but they are most frequent east of the Rocky Mountains during spring and summer months. In the southern states, peak tornado occurrence is March through May. Texas Tech University reports that tornadoes are most likely to occur between 3 and 9 p.m. Tornado occurrences in Randolph County have generally occurred anytime from just before noon to late evening.

F-0 and F-1 tornadoes are considered "weak," F-2 and F-3 are "strong" and F-4 and F-5 are "violent." The National Weather Service accepted the Fujita Scale for use in 1973 and Allen Pearson, then director of the National Severe Storms Forecast Center, added the Pearson Scales for tornado path length and path width, creating the Fujita-Pearson Scale.

According to the National Climate Data Center database Randolph County has experienced 13 tornadoes since 1950; seven have occurred since 1980; four have occurred since 1990. Forty-six percent of the tornadoes that occurred in Randolph County over the past 50 years have been F1 tornadoes. The most severe tornado reported was an F3 in 1965 which traveled a length of 28 miles and was 300 yards wide. The average path of the tornadoes is 4.7 miles long with a width of 63 yards wide (equivalent to an F2 on the Fujita scale.) Most tornados that have occurred in Randolph County have been of F1 intensity with winds between 73 and 112 mph. Though it is possible to map the path of previous tornadoes, those locations are not indicators of greater vulnerability within the County.

Since 1950 there is one recorded death and six injuries (severity not recorded). No deaths or injuries have been reported since 1977.

Table 12: Severity and intensity of recorded tornado events in Randolph County

Fujita scale	Severity	Wind Speed	Damage	Tornados in Randolph County 1950-2008
F0	Gale tornado	40-72 mph	Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees; damages signboards.	
F1	Moderate	73-112 mph	Peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads; attached garages may be destroyed.	
F2	Significant	113-157 mph	Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light object missiles generated.	
F3	Severe	158-206 mph	Roof and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted.	
F4	Devastating	207-260 mph	Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.	

Fujita scale	Severity	Wind Speed	Damage	Tornados in Randolph County 1950-2008
F5	Incredible.	261-318 mph	Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles in excess of 100 meters; trees debarked; steel-reinforced concrete structures badly damaged.	
F6	Inconceivable	319-379 mph	Very unlikely. Probably not recognizable among damage of F-4 and F-5 winds that would surround the F-6 winds.	

Tornadoes are capable of destroying homes and vehicles, causing injuries and fatalities. After a tornado event specific hazards may develop. The structural integrity of buildings may be compromised. There may be damage to utilities including exposed live wires, sparks, or broken and frayed wires. Sewage line and waterline damage is also possible. At a minimum, tornado winds of an FO can be equivalent to a severe thunderstorm or severe tropical storm. F1 tornadoes have hurricane strength winds at 75 mph and can do considerable damage.⁴

Heatwave

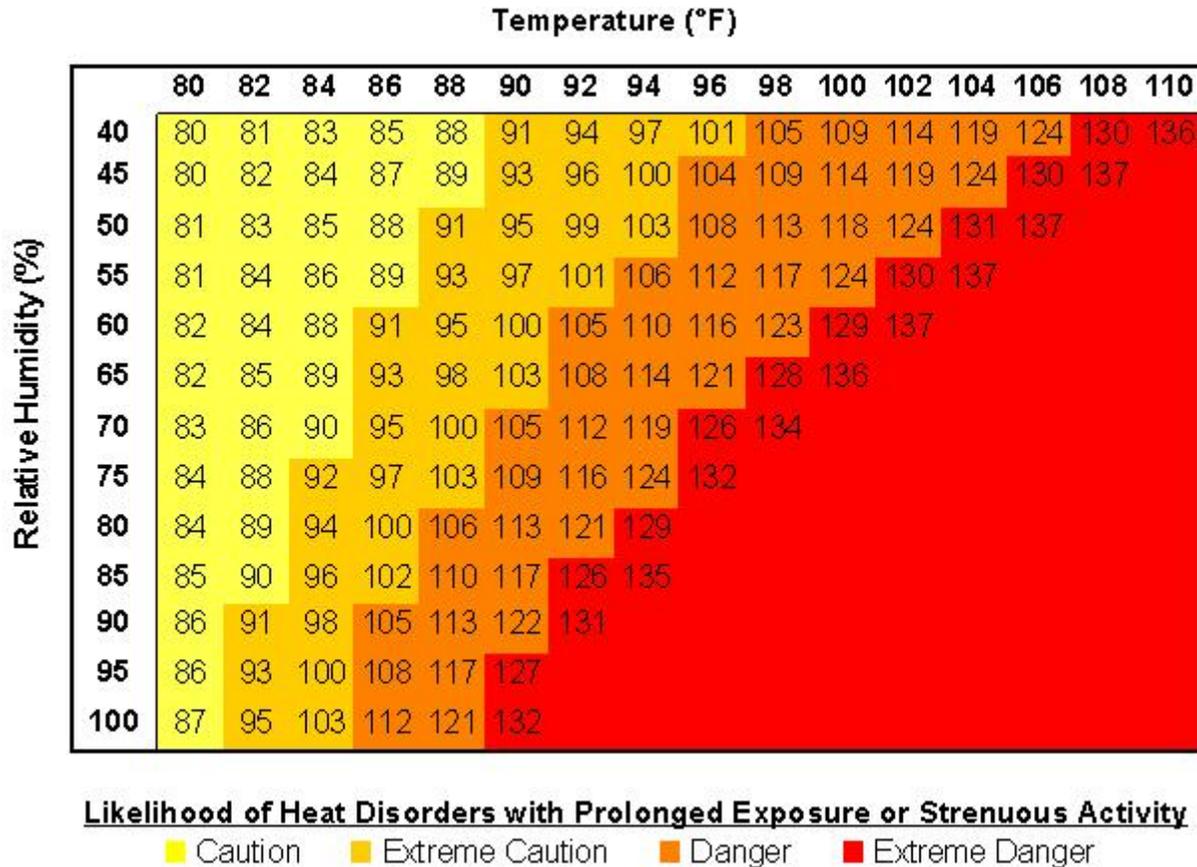
Occurrences - past 10 years	unknown
Likelihood of occurrence	highly likely
Intensity and impact to Randolph County	limited
Area vulnerable	Countywide

The National Climatic Data Center lists one occasion of excessive heat in Randolph County, although statistics on heat have only been compiled for the past eight years or so. Forecasters combine the heat and humidity numbers to

⁴ Sources: the National Weather Service, Federal Emergency Management Administration, American Red Cross, and Texas Tech University

create the heat index which is a gauge of how the body perceives the heat. An excessive heat advisory is issued when the heat index determines conditions feel like it is 105 degrees Fahrenheit or higher.

Figure 9: Heat Index Chart



Source: NOAA Office of Climate, Water and Weather Services

Strong winds, particularly with very hot, dry air can exacerbate heat hazards. In addition, the stagnant atmospheric conditions of a heat wave traps pollutants in urban areas and adds the stress of severe pollution to the already dangerous exposure to excessive heat.

Areas most likely affected in a heat wave are urban areas. Extreme heat conditions typically are the most severe for vulnerable populations, such as impoverished populations (without access to air conditioning, swimming pools or other cooling devices) and elderly populations. Those on fixed incomes, both those without air conditioning, or those who because of economic constraints, turned off their units, may be in danger from heat exhaustion. Property damage is not likely, but crop damage can be severe if the heatwave is associated with a severe or extreme drought.

From July 22-25, 1998, the heat index values for the County stayed at 110 degrees. It is not unusual for the temperature to be in the 90's during the summer, and in some instances the heat index is in the 100's.

Tsunami

Occurrences - past 50 years	none
Likelihood of occurrence	unlikely
Intensity and impact to Randolph County.....	negligible
Area vulnerable.....	n/a

Randolph County is approximately 150 miles away from the Atlantic Ocean. The risk of a tsunami causing a hazard in Randolph County is negligible.

Wildfires

Occurrences - 5 years from 1998-2008	317
Likelihood of occurrence	highly likely
Intensity and impact to Randolph County.....	negligible to limited
Area vulnerable.....	Countywide

There are approximately 311,657 total acres of forested land in Randolph County. Randolph County has two fire seasons, from March to May and from October to January. The major cause of wildfires in Randolph County is debris burning.

A total of 317 wildfires have occurred in the five-year period from 1997 to 2001, with 817 acres burned, on average 2.4 acres per fire. Over the five year period of record, debris burning is the major cause of fire (59%); 10% of wildfires caused by smoking; 10% of wildfires caused by children; 6% of wildfires caused by incendiary use. 2001 had greatest number of fire events (157); 1999 with 88; other years 40-43 fires.

From period of 1998 to 2008:

- The local fire department is the first responder in 93% of all wild fires in Randolph County;
- 38 structures (outbuildings) were damaged or destroyed at a cost of \$105,000;
- 1 home reported damaged (\$550); and
- 15 vehicles damaged at a cost of \$18,850.

Winterstorm - Ice Event

Occurrences - 1990 to 2008	10
Likelihood of occurrence	likely
Intensity and impact to Randolph County	critical
Area vulnerable	Countywide

Ice storms are also typical for the piedmont region and are much more likely to cause property damage, power outages, travel problems, and injuries than snowstorms. The geographical orientation of the mountains and Piedmont contribute to a regular occurrence of freezing precipitation events (e.g., ice pellets and freezing rain) in the Piedmont region of NC. Such ice events (up to and including ice storms) are often the result of cold air damming. Cold air damming is a shallow, surface-based layer of relatively cold, stably-stratified air entrenched against the eastern slopes of the Appalachian Mountains. With warmer air above, falling precipitation in the form of snow melts, then becomes either supercooled (liquid below the melting point of water) or re-freezes. In the former case, supercooled droplets can freeze on impact (freezing rain), while in the latter case, the re-frozen water particles are ice pellets (or sleet). The figure below shows Randolph County is located within the area of the Southeastern US that is most vulnerable to cold air damming events.

Figure 10: Cold air damming region



Precipitation normally begins as snow or sleet changing to freezing rain. Highest reported accumulation of ice was 1” to 2” in 1994. Ice accumulation ranges from ¼” to 1” in most reported ice storms. Ice accumulation of greater than ¼” is likely to begin to cause damage to trees. Tree and power line

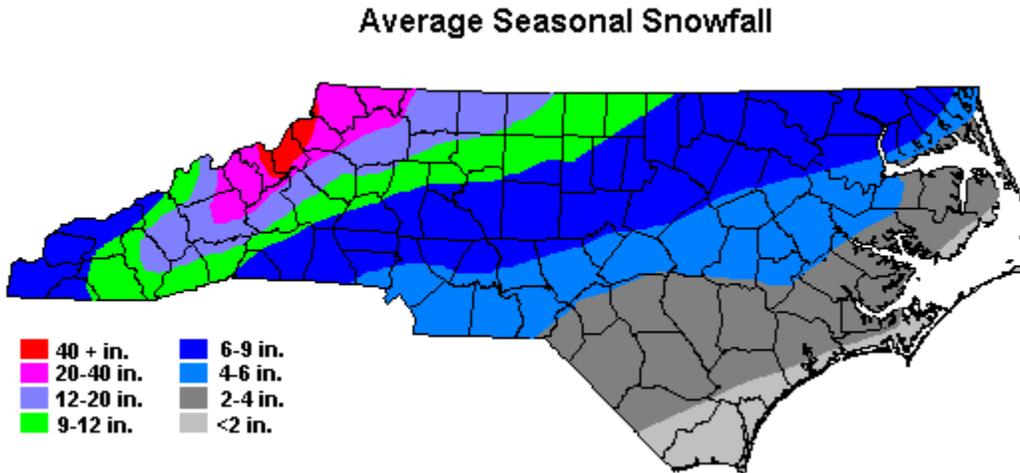
damage, motor vehicle accidents, and large-scale power outages were reported in most storms.

Winterstorm: Snow Event

Occurrences - 1990-present.....	33
Likelihood of occurrence	highly likely
Intensity and impact to Randolph County	negligible
Area vulnerable	Countywide

Snow accumulation during one event may be anywhere from 1 to 2 inches to as much as 12 inches as reported in January of 2000. The average seasonal snowfall amount for Randolph County is between six to nine inches.

Figure 11: Average Seasonal Snowfall



Disruption of services, especially schools, is likely but with no major damage. Winter of 2002-2003 saw as much as five winter storms, three of which were snow events only with mainly service disruption, but little actual damage. Two to three snow events are likely to occur each year with accumulation difficult to predict as snow accumulation may range from light dusting to heavy snowfall.

Table 13: Summary of Randolph County Hazard Events 1950-present

Hazard	1950-1978	1979-1989	1990 - present	Impact
Dam failure	n/a	n/a	1	No impact.
Drought	0	4	5	Multiple periods of drought up to and including category D3.
Earthquakes	0	0	0	No impact.
Floods	n/a	n/a	30	Total impact of approximately \$232,314.
Cyclonic events	9	6	10	Only damage reported to County Emergency Management has been \$1,500.
Landslides	0	0	0	No impact.
River erosion	n/a	n/a	n/a	No impact.
Severe thunderstorms	7	20	89	Damage of approximately \$283,000.
Sinkholes	n/a	n/a	0	No impact.
Temperature extreme: cold	n/a	n/a	1	No impact.
Temperature extreme: heat	n/a	n/a	2	Impact to approximately five injured due to heat.
Tornadoes	7	3	4	Total of three F0, six F1, three F2 and one F3 for a total of one death and six injuries. Property damage totaled approximately \$3,852,000.
Tsunamis	0	0	0	No impact.
Wildfires	n/a	n/a	371*	Total impact of one home damaged, fifteen cars damaged for a total of \$19,400.

Hazard	1950-1978	1979-1989	1990 - present	Impact
Winter storms: ice events	n/a	n/a	10	Tree and power line damage, motor vehicle accidents and large scale power outages reported.
Winter storms: snow events	n/a	n/a	13	Disruption of services, no major damage or impact reported

Table 14: Summary of Randolph County Hazard Events 1950-present

Hazard	Archdale	Asheboro	Franklinville	Liberty	Ramseur	Randleman	Trinity
Dam failure	-	-	-	-	-	-	-
Drought	2	2	2	2	2	2	2
Earthquakes	0	0	0	0	0	0	0
Floods	0	5	0	0	0	5	0
Hail	17	22	18	18	18	18	0
Hurricanes/tropical storms	3	3	3	3	3	3	3
Landslides	-	-	-	-	-	-	-
River erosion	-	-	-	-	-	-	-
Severe thunderstorms	42	50	43	43	43	48	41
Sinkholes	mines	mines	mines	-	Mines	mines	mines
Temperature extreme: cold	1	1	1	1	1	1	1

Hazard	Archdale	Asheboro	Franklinville	Liberty	Ramseur	Randleman	Trinity
Temperature extreme: heat	1+	1+	1+	1+	1+	1+	1+
Tornadoes	1	1	0	0	0	1	2
Tsunamis	-	-	-	-	-	-	-
Wildfires	?	?	?	?	?	?	?
Winter storms: ice events	10	10	10	10	10	10	10
Winter storms: snow events	13	13	13	13	13	13	13

Table 15: Randolph County Hazard Ranking

Rank	Hazard type	Likelihood of occurrence	Intensity rating	Potential impact	Total score
1	Tornadoes	3	3	3	9
2	Dam failures	2	3	4	9
3	Winter storm: ice events	3	3	3	9
4	Floodings	4	2	2	8
5	Tropical and extratropical storms	3	3	2	8
6	Severe thunderstorms	4	2	2	8
7	Hurricanes	2	3	2	7
8	Wildfires	4	1	2	7
9	Tropical depressions	4	1	1	6
10	Winter storm: snow events	4	1	1	6
11	Droughts	3	1	1	5
12	Severe heat	3	1	1	5
13	Landslide/sinkholes	2	1	1	4
14	Earthquakes	1	1	1	3
15	Tsunamis	0	0	0	0

Table 16: City of Archdale Hazard Ranking

Rank	Hazard type	Likelihood of occurrence	Intensity rating	Potential impact	Total score
1	Floodings	4	3	3	10
2	Dam failures	2	3	4	9
3	Winter storm: ice events	3	3	3	9
4	Tornadoes	3	3	2	8
5	Tropical and extratropical storms	3	3	2	8
6	Severe thunderstorms	4	2	2	8
7	Hurricanes	2	3	2	7
8	Wildfires	4	1	2	7
9	Tropical depressions	4	1	1	6
10	Winter storm: snow events	4	1	1	6
11	Droughts	3	1	1	5
12	Severe heat	3	1	1	5
13	Landslide/sinkholes	2	1	1	4
14	Earthquakes	1	1	1	3
15	Tsunamis	0	0	0	0

Table 17: City of Asheboro Hazard Ranking

Rank	Hazard type	Likelihood of occurrence	Intensity rating	Potential impact	Total score
1	Floodings	4	3	3	10
2	Winter storm: ice events	2	3	4	9
3	Severe thunderstorms	3	3	3	9
4	Tornadoes	3	3	2	8
5	Tropical and extratropical storms	3	3	2	8
6	Dam failures	4	2	2	8
7	Hurricanes	2	3	2	7
8	Wildfires	4	1	2	7
9	Tropical depressions	4	1	1	6
10	Winter storm: snow events	4	1	1	6
11	Droughts	3	1	1	5
12	Severe heat	3	1	1	5
13	Landslide/sinkholes	2	1	1	4
14	Earthquakes	1	1	1	3
15	Tsunamis	0	0	0	0

Table 18: Town of Franklinville Hazard Ranking

Rank	Hazard type	Likelihood of occurrence	Intensity rating	Potential impact	Total score
1	Floodings	4	3	3	10
2	Dam failures	2	3	4	9
3	Winter storm: ice events	3	3	3	9
4	Severe thunderstorms	3	3	2	8
5	Tropical and extratropical storms	3	3	2	8
6	Tornadoes	2	3	3	8
7	Hurricanes	2	3	2	7
8	Wildfires	4	1	2	7
9	Tropical depressions	4	1	1	6
10	Winter storm: snow events	4	1	1	6
11	Droughts	3	1	1	5
12	Severe heat	3	1	1	5
13	Landslide/sinkholes	2	1	1	4
14	Earthquakes	1	1	1	3
15	Tsunamis	0	0	0	0

Table 19: Town of Liberty Hazard Ranking

Rank	Hazard type	Likelihood of occurrence	Intensity rating	Potential impact	Total score
1	Winter storm: ice events	4	3	3	10
2	Severe thunderstorms	2	3	4	9
3	Tropical and extratropical storms	3	3	3	9
4	Tornadoes	3	3	2	8
5	Droughts	3	3	2	8
6	Wildfires	2	3	3	8
7	Hurricanes	2	3	2	7
8	Severe heat	4	1	2	7
9	Tropical depressions	4	1	1	6
10	Winter storm: snow events	4	1	1	6
11	Landslide/sinkholes	3	1	1	5
12	Floodings	3	1	1	5
13	Dam failures	2	1	1	4
14	Earthquakes	1	1	1	3
15	Tsunamis	0	0	0	0

Table 20: Town of Ramseur Hazard Ranking

Rank	Hazard type	Likelihood of occurrence	Intensity rating	Potential impact	Total score
1	Floodings	4	3	3	10
2	Dam failures	2	3	4	9
3	Winter storm: ice events	3	3	3	9
4	Severe thunderstorms	3	3	2	8
5	Tropical and extratropical storms	3	3	2	8
6	Tornadoes	2	3	3	8
7	Hurricanes	2	3	2	7
8	Wildfires	4	1	2	7
9	Tropical depressions	4	1	1	6
10	Winter storm: snow events	4	1	1	6
11	Droughts	3	1	1	5
12	Severe heat	3	1	1	5
13	Landslide/sinkholes	2	1	1	4
14	Earthquakes	1	1	1	3
15	Tsunamis	0	0	0	0

Table 21: City of Randleman Hazard Ranking

Rank	Hazard type	Likelihood of occurrence	Intensity rating	Potential impact	Total score
1	Floodings	4	3	3	10
2	Dam failures	2	3	4	9
3	Winter storm: ice events	3	3	3	9
4	Severe thunderstorms	3	3	2	8
5	Tropical and extratropical storms	3	3	2	8
6	Tornadoes	2	3	3	8
7	Hurricanes	2	3	2	7
8	Wildfires	4	1	2	7
9	Tropical depressions	4	1	1	6
10	Winter storm: snow events	4	1	1	6
11	Droughts	3	1	1	5
12	Severe heat	3	1	1	5
13	Landslide/sinkholes	2	1	1	4
14	Earthquakes	1	1	1	3
15	Tsunamis	0	0	0	0

Table 22: Town of Seagrove Hazard Ranking

Rank	Hazard type	Likelihood of occurrence	Intensity rating	Potential impact	Total score
1	Winter storm: ice events	4	3	3	10
2	Severe thunderstorms	2	3	4	9
3	Tropical and extratropical storms	3	3	3	9
4	Tornadoes	3	3	2	8
5	Droughts	3	3	2	8
6	Wildfires	2	3	3	8
7	Hurricanes	2	3	2	7
8	Severe heat	4	1	2	7
9	Tropical depressions	4	1	1	6
10	Winter storm: snow events	4	1	1	6
11	Landslide/sinkholes	3	1	1	5
12	Floodings	3	1	1	5
13	Dam failures	2	1	1	4
14	Earthquakes	1	1	1	3
15	Tsunamis	0	0	0	0

Table 23: Town of Staley Hazard Ranking

Rank	Hazard type	Likelihood of occurrence	Intensity rating	Potential impact	Total score
1	Winter storm: ice events	4	3	3	10
2	Severe thunderstorms	2	3	4	9
3	Tropical and extratropical storms	3	3	3	9
4	Tornadoes	3	3	2	8
5	Droughts	3	3	2	8
6	Wildfires	2	3	3	8
7	Hurricanes	2	3	2	7
8	Severe heat	4	1	2	7
9	Tropical depressions	4	1	1	6
10	Winter storm: snow events	4	1	1	6
11	Landslide/sinkholes	3	1	1	5
12	Floodings	3	1	1	5
13	Dam failures	2	1	1	4
14	Earthquakes	1	1	1	3
15	Tsunamis	0	0	0	0

Table 24: City of Trinity Hazard Ranking

Rank	Hazard type	Likelihood of occurrence	Intensity rating	Potential impact	Total score
1	Floodings	4	3	3	10
2	Dam failures	2	3	4	9
3	Winter storm: ice events	3	3	3	9
4	Severe thunderstorms	3	3	2	8
5	Tropical and extratropical storms	3	3	2	8
6	Tornadoes	2	3	3	8
7	Hurricanes	2	3	2	7
8	Wildfires	4	1	2	7
9	Tropical depressions	4	1	1	6
10	Winter storm: snow events	4	1	1	6
11	Droughts	3	1	1	5
12	Severe heat	3	1	1	5
13	Landslide/sinkholes	2	1	1	4
14	Earthquakes	1	1	1	3
15	Tsunamis	0	0	0	0

List of Changes made to Appendix A for 2009 Plan Update

Non-page specific changes:

- Correct capitalization of County since any reference to County in this document refers to Randolph County.
- Correct capitalization of State since any reference to State in this document refers to the State of North Carolina.
- Correct capitalization of Town or City when it references a specific Town or City.
- Correct spacing at the end of sentences from two spaces to one space as is now common with desktop publishing.
- Corrected the capitalization of Growth Management Plan, and its subsequent Areas, since it refers to a specific Plan and Ordinance adopted by the Board of County Commissioners.
- Correct grammatical and punctuation errors from the original document.
- Corrected road names to reflect the official road names within the County.
- Changed name of the nuclear power plant to Shearon Harris to reflect its correct name.
- Updated abbreviations to the full description.
- Updated leading paragraphs under hazards to reflect the time period of the data used for the analysis.
- Updated all data in their respective locations to reflect changes made in the past 5 years.

Page A-1:

- Updated the last paragraph of the page to reflect that the County now has an Access database, documented in Subsection 1, that maintains damage assessments and impacts from events.

Page A-2:

- The information regarding Dam Failures was updated to reflect the current count of dams, including high hazard dams, within the County. The paragraph was also updated to correct location of these dams.

Page A-3:

- Updated the information regarding Inspections by the Dam Safety Department to reflect changes at the State level as they pertain to the applicable General Statutes.
- Deleted the previous classification method of dams since it has been replaced with another classification system.

Page A-4:

- Updated Table 4 to reflect the current classification system along with its description and quantitative guidelines.
- Updated the list of dam exemptions due to the updated statutes.

Page A-5:

- Deleted a sentence that was a duplicate sentence in the 2004 Plan.
- Update the section on Drought with new definitions and information from the North Carolina Drought Management Advisory Council.
- Table 5 was updated to reflect the descriptions from the North Carolina Drought Management Advisory Council.
- The graphic of the Palmer Drought Severity Index in the 2004 Plan was removed from the 2009 Plan since it could not be located at the address in the caption.

Page A-6:

- Updated the information on drought to reflect the completion of the Randleman Dam and the current construction of the water treatment plan.
- Removed information regarding the future demand for water by the municipalities since it is unclear at this time, due to the economic recession, what the growth rate in those areas will be in the future.

Page A-7:

- Changed the first paragraph under the Earthquake section to make the sentence easier to read and comprehend.

Page A-8:

- Table 6 was revised to make it easier to read and consistent with other tables throughout the plan.

Page A-9:

- Replaced Figure 1 with an updated graphic from the North Carolina Geological Survey to better reflect earthquake activity in the area. The textual description was also updated to reflect the fact that the graphic shows historical data back to 1698.
- Added information stating that the Charleston earthquake took place within the Charleston, South Carolina, seismic zone.

Page A-10:

- Figure 2 was replaced with an updated graphic from the North Carolina Geological Survey to better reflect the likely intensity of the 1886 Charleston earthquake.
- Earthquake data was also updated to reflect an earthquake near Richmond, Virginia, in December 9, 2003.

Page A-11:

- Updated the number of floods since 1995 based upon data from the National Climactic Data Center.

Page A-12:

- Information regarding the flash flooding from June, 2006, was included.

Page A-13:

- Figure 3 replaced the graphic from the 2004 Plan with information from the NOAA Coastal Service Center and the County GIS.
- Table 7 was updated to list the events in chronological order and to include only the name since recorded impacts on the County is limited.

Page A-14:

- Figure 4 replaced the graphic from the 2004 Plan with information from the NOAA Coastal Service Center and the County GIS.
- Table 8 was updated to list the events in chronological order and to include only the name since recorded impacts on the County is limited.

Page A-15:

- Figure 5 replaced the graphic from the 2004 Plan with information from the NOAA Coastal Service Center and the County GIS.
- Table 9 was updated to list the events in chronological order.

Page A-16:

- Figure 6 replaced the graphic from the 2004 Plan with information from the NOAA Coastal Service Center and the County GIS.
- Table 10 was updated to list the events in chronological order and to include only the name since recorded impacts on the County is limited.

Page A-17:

- Figure 7 replaced the graphic from the 2004 Plan with information from the NOAA Coastal Service Center and the County GIS.
- The footnote to Figure 7 in the 2004 Plan was removed.
- Table 11 was updated with the new Codes and Definitions from the US Geological Survey.

Page A-19:

- The data regarding the number of thunderstorms was updated based upon information from the National Climactic Data Center.

Page A-20:

- Figure 8 was updated with a new wind zone map from FEMA.
- The data was updated to reflect an event from April, 2007.

Page A-21:

- The graphic representing US Historic Tornadoes was removed since it cannot be readily located on the internet for update purposes.
- The count of tornadoes was updated due to new information from the National Climactic Data Center.

Page A-22:

- Table 12 was updated to reflect the number of tornadoes based upon information from the National Climactic Data Center.

Page A-24:

- Figure 9 was updated with a new heat index chart from NOAA Office of Climate, Water and Weather Services.

Page A-27:

- The graphic representing the information from the ice storm of December 4-6, 2002, was removed.

Page A-28:

- Table 13 was updated with information from the National Climactic Data Center and the County's Damage Assessment Database.

Page A-29:

- Table 14 was updated with information from the National Climactic Data Center and the County's Damage Assessment Database.

Pages A31-A35:

- Tables 15 through 24 were updated with information from the National Climactic Data Center and the County's Damage Assessment Database.

**APPENDIX B:
ASSESSMENT OF VULNERABILITY FOR
RANDOLPH COUNTY AND MUNICIPAL JURISDICTIONS**

Risk and Vulnerability Methodology

Hazard risk areas are identified geographically based on past hazardous incident history, geology, or identification by U.S. or North Carolina government agencies as those areas most likely to be affected by a given hazard. Persons and structures located within the hazard risk areas are considered to be at risk from hazards but not necessarily vulnerable to hazard impacts. The vulnerability of the people and resources within the hazard risk area is related to individual exposure to hazard events impacts and availability of resources to recover from a hazard event. Vulnerability is defined as the level of exposure combined with lack of resources, which would result in a high impact/loss on the population or area as a result of the hazard event.

High hazard risk areas are those areas with a specific hazard associated with the geographic area such as areas with high landslide incidence, presence of floodplains, areas with abandoned gold mines, especially those with horizontal and vertical shafts which may lead to ground subsidence, or those areas which are exposed to hazardous structures or facilities such as nuclear facilities, high hazard dams, or extremely hazardous substance facilities. These areas were mapped to each census block group area in order to analyze populations exposed, to assign level of vulnerability, and to determine value of exposed structures or facilities.

The vulnerability of the community was assessed through the analysis of census tract data at the block group level. Vulnerable populations were identified as those persons who are do not speak English or those who do not speak English well, who do not have accesses to vehicles, households without a telephone, and those below the poverty level. Persons with “self care” or “go out of home” disabilities were also mapped. However, the relatively low number of disabled and their scattered geographic locations did not present a pattern or concentration in any geographic location.

The vulnerability of all critical facilities was also assessed through this plan. Randolph County has defined *Critical Facilities* as “Public or private buildings services and utilities which must function to protect the health safety and viability of the community. Those facilities that provide essential services required to maintain or restart the overall function of the community.”

When these high-risk areas intersect with critical facilities or highly vulnerable populations, the likely impact from a natural or manmade hazardous event is heightened. These areas have been identified at the census block group level as

priority areas for focused consideration in the development of hazard mitigation strategies that will lessen the impact of a hazard event on the population at risk.

Randolph County

Randolph County is located in central North Carolina and covers 789.245 square miles, of which 246.585 square miles are located in watersheds and watershed critical areas. Of the 505,116.9111 acres of land in the County, 311,657 acres are forestland. Of these, 300,407 forestland acres are privately owned property. The Uwharrie National Forest covers about 34,372 acres of land in southwestern Randolph County and of that total 4,140 acres are owned by the Federal Government. Current population of Randolph County, as determined by the 2000 Census, is 130,454, which is a 22.4% increase over the past ten years.

There are nine individual municipalities within Randolph County: Archdale, Asheboro, Franklinville, Liberty, Ramseur, Randleman, Seagrove, Staley, and Trinity. All of the following municipal water supplies are located within Randolph County regulatory jurisdiction, Lake Reese, Lake Lucas, Randleman Lake, Sandy Creek, Polecat Creek, Big Alamance Creek, Rocky River, Bear Creek and Badin Lake.

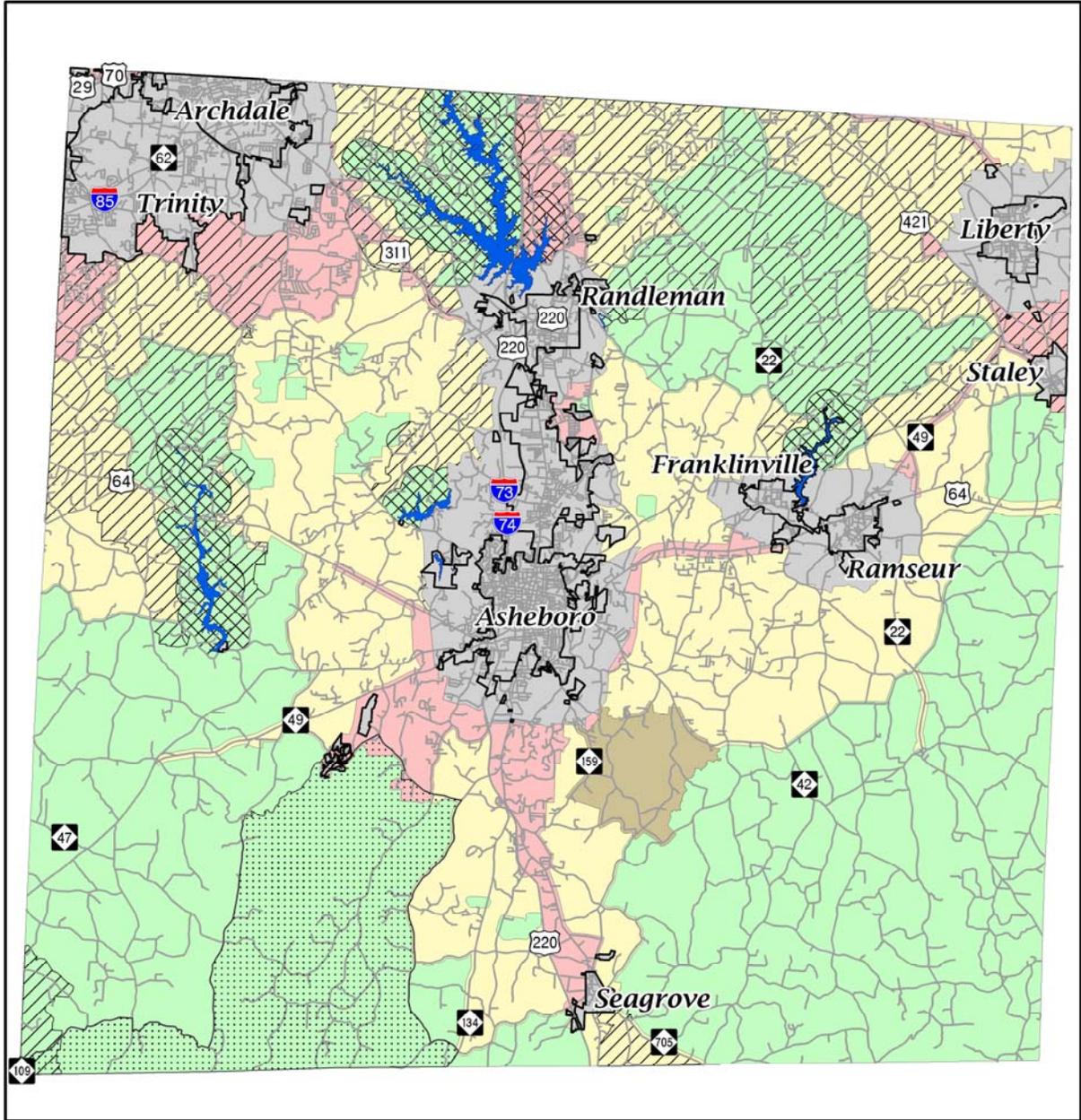
Table 1: Growth Trends

Jurisdiction	Population 2000	Population 1990	Population Change	Percent Increase
Randolph County	130,454	106,546	23,908	22.4%
Archdale	9,014	6,975	2,039	29.2%
Asheboro	21,672	16,362	5,310	32.5%
Franklinville	1,258	666	592	88.9%
Liberty	2,661	2,047	614	30.0%
Ramseur	1,588	1,186	402	33.9%
Randleman	3,557	2,612	945	36.2%
Seagrove	246	244	2	0.8%
Staley	347	204	143	70.1%
Trinity	6,690	6,470	220	3.4%

The type of residential growth occurring in Randolph County is described as rural sprawl and has been primarily medium to large lot single-family residential land subdivisions. Most of this development occurs outside of areas served by public infrastructure. Almost all public costs of residential development are covered by property tax revenue.

Randolph County's has developed a Growth Management Plan indicative of its desire for strategic growth management and development. Randolph County has identified growth management areas within the County.

Randolph County Growth Management Areas



Legend

- | | | |
|--------------------------|-----------------------|------------------------|
| Reservoirs | Watersheds | Primary Growth Area |
| Uwharrie National Forest | Type | Secondary Growth Area |
| Main roads | WQCA | Rural Growth Area |
| | Protected area | Zoo Environmental Area |
| | Municipal Growth Area | |

The Primary Growth Areas are located adjacent to municipal limits and extends along the major transportation corridors which transverse the County. These areas will be higher density areas likely to have access to infrastructure such as water and sewer. This area is zoned for mixed use that will include residential commercial and industrial development.

Secondary Growth Areas are medium density areas without access to public infrastructure and predominantly residential. As a matter of policy, Randolph County planning directs major subdivision developments to areas with adequate infrastructure and therefore discourages major subdivision development in the secondary growth areas.

The Rural Growth Areas are largely woodland, forest, and large undeveloped tracts of land predominantly agricultural and rural residential. These areas are part of the County's open space system.

Municipal areas are located within city limits or the extraterritorial regulatory jurisdiction of the cities. Urban density is expected with mixed land uses. Infrastructure is provided and density encouraged which may alleviate development pressures in areas without water and sewer.

(Source: Randolph County Growth Management Plan 2002)

Randolph County recognizes that all growth management decisions are part of a larger interconnecting framework of building sustainable and quality growth within the County. The Growth management plans municipal growth areas are designated as such because of the existing development. The plan does not support or detract from hazard mitigation planning, but instead documents where growth has occurred and will likely occur in the future. The growth management plan is designed to steer high-density development to already urbanized areas while giving some flexibility to County boards and agencies to enable them to adapt to rural needs. Through its generalized description of growth areas, it can aid *in steering development to low hazard areas* and in preserving the rural heritage of the County.

For the hazard risk areas within municipal growth areas, mitigation strategies addressing these concerns are included in this plan. The Primary Growth area within the northwest section of the County also has a number of hazards associated with its geography. However, flood prevention ordinances and County policies do not allow for development in floodplains.

The Growth Management Zone map serves as the only current land use-planning map for Randolph County.

Transportation projects

Current transportation projects will likely have a significant impact on development in Randolph County. The future I-73 corridor from Asheboro to I-85 Greensboro, I-73/74 south of NC 134 to North of SR 1462 in Asheboro, will be updated to interstate standards. In addition, a new rest area will be constructed on I-73/I-74 corridor south of Asheboro.

NCDOT is proposing to improve the US 64 corridor in the area of Asheboro, Randolph County. This project will create the US 64 southern bypass of the City of Asheboro with a connector to the North Carolina Zoological Park. The bypass begins between Stutts Road and Phillips Country Trail west of Asheboro and ends near Trogdon Hill Road east of Asheboro. As part of this action, the NCDOT will improve access to the North Carolina Zoological Park (NC Zoo). The project is currently in the environmental planning phase.

The Asheboro bypass would be a four-lane, controlled-access (no driveways) highway about 13-14 miles long with a grass median strip. The new road to the NC Zoo (the NC Zoo Connector) would be a two-lane controlled-access highway with design characteristics similar to the Blue Ridge Parkway. Total right-of-way width along the new bypass would average about 300 feet, with additional right of way needed at interchange locations to account for the ramps. Interchanges are being considered at both ends of the project on US 64, and at NC 49, I-73/74 (US 220 Bypass), the new NC Zoo Connector, NC 159, and NC 42.

US 64 east of I-85 business in Lexington to US 220 in Asheboro will be widened to four-lane traffic. NC 49 and SR1174 west of Farmer to the proposed Asheboro southern bypass will also be widened to a four lane divided highway. In addition, safety improvements and upgrades will occur at I-85 from Davidson County to I-85 in Guilford County with a bridge replacement at I-74 at SR 1627¹.

Major physical features

Randolph County has extensive watershed and watershed critical areas located throughout the northern half of the County. The Uwharrie National Forest is located in the southwest quadrant. Eight of the nine municipal jurisdictions are located in the northern half of the County with the largest municipality, Asheboro, located in the center of the County. The towns of Liberty, Staley, Franklinville, Ramseur and portions of Randleman are located within the northeastern quadrant of the County. Archdale and Trinity, as well as portions of Randleman are located in the northwest quadrant. Seagrove is located in the southeastern quadrant which is otherwise primarily a rural growth area. To the southwest is the Uwharrie National Forest, and largely rural growth areas. Flood plains run throughout the entire County with varying degrees of development found within these areas. Growth and development trends tend to run along the major highways and road networks within the County.

¹ NC DOT transportation improvement projects

Critical Facilities

Randolph County has defined *Critical Facilities* as “public or private buildings services and utilities which must function to protect the health safety and viability of the community. Those facilities that provide essential services required to maintain or restart the overall function of the community.”

Map 1: Critical Facilities:

Fire stations, rescue facilities, police stations, County buildings - administration, Municipal complexes - administration, hospitals, and emergency shelters

Map 2: Critical Facilities: Utilities

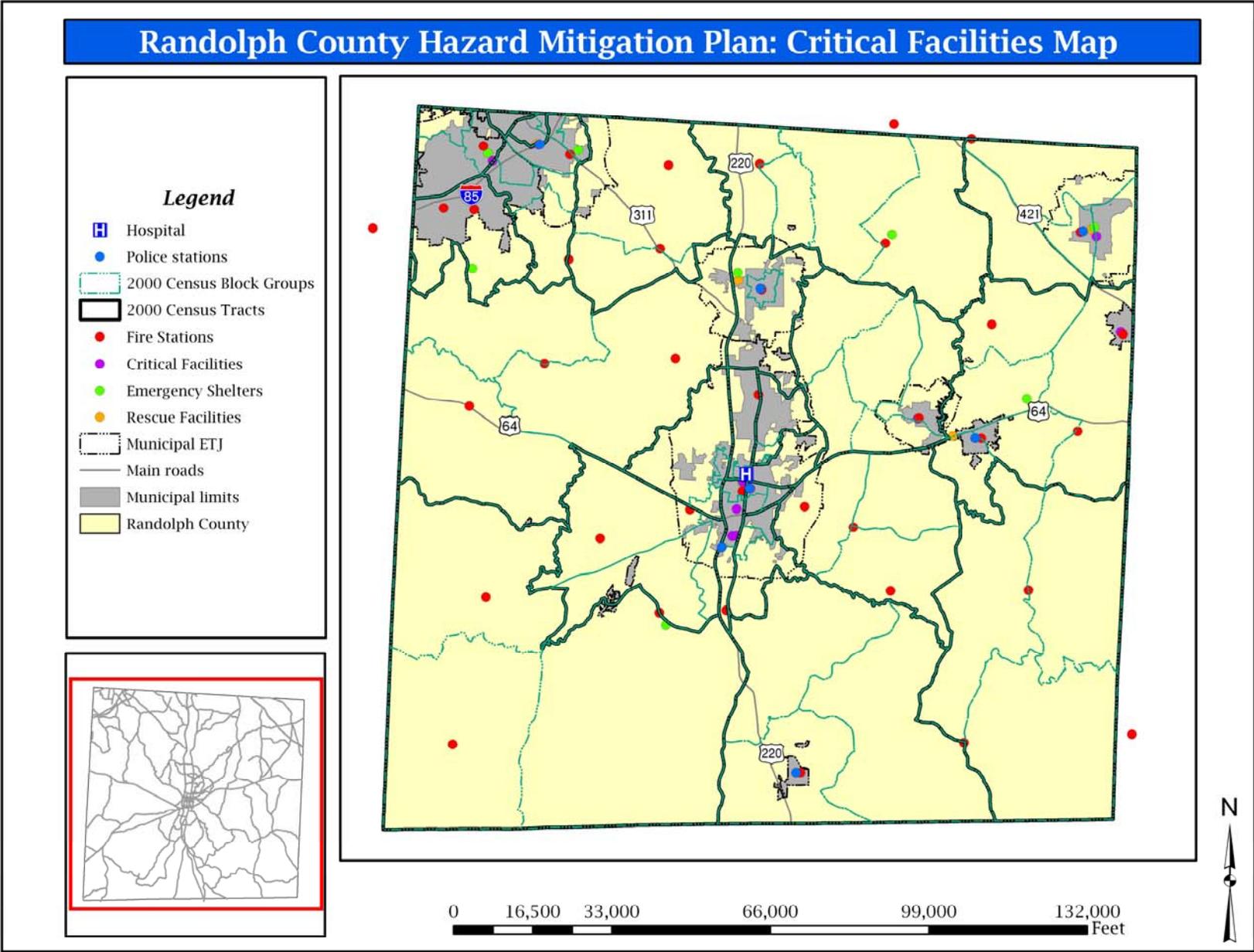
Water treatment plants, sewer treatment plants, sewer lift stations, water towers, reservoirs, power plants, power substations

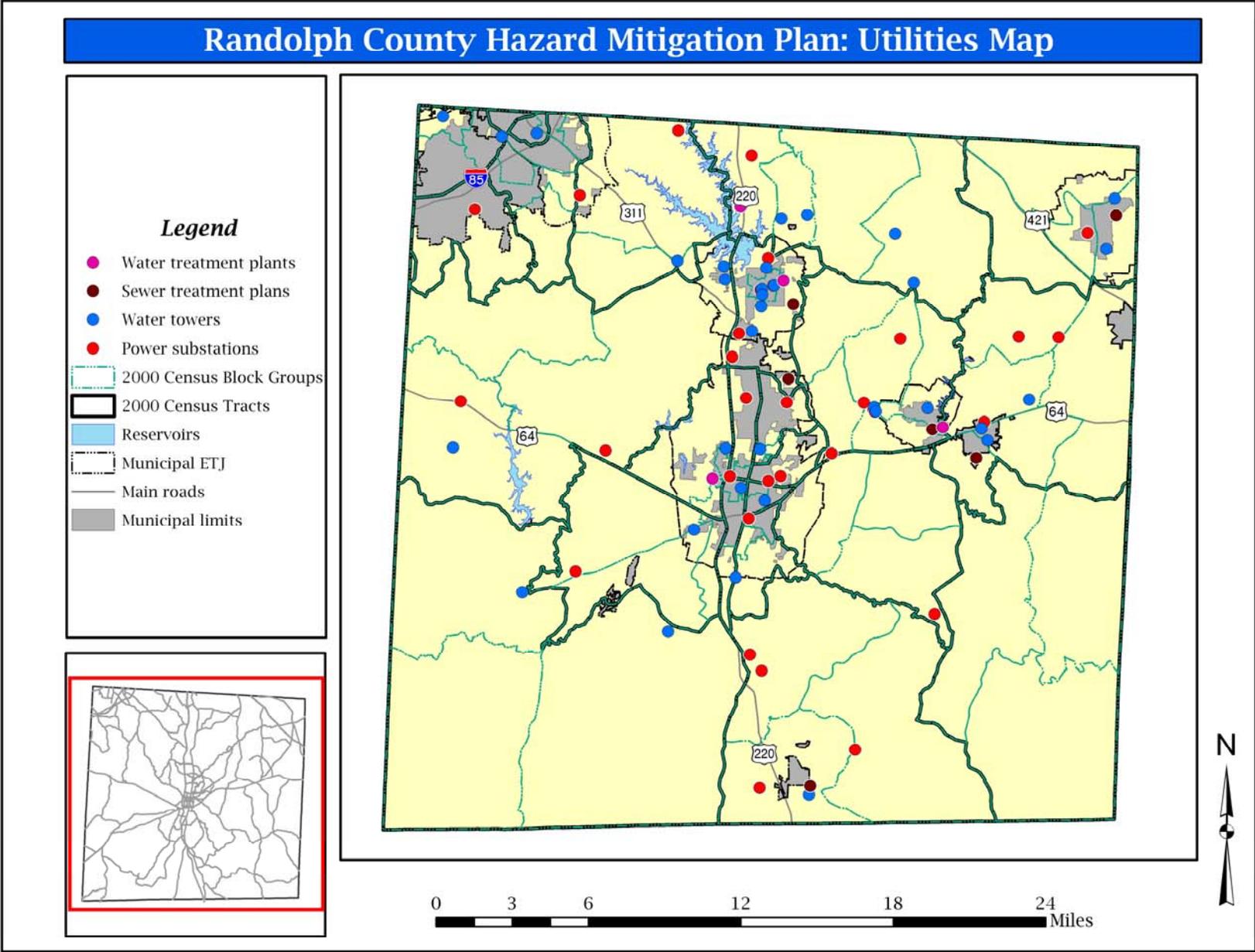
Map 3: Critical Facilities: Communications

Cell towers, telephone substations, 911 Centers, incident command centers

Map 4: Critical Facilities: Major Transportation Arteries

Railroads, major bridges, major thoroughfares, highways

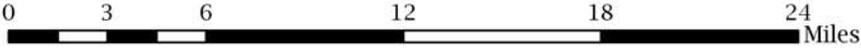
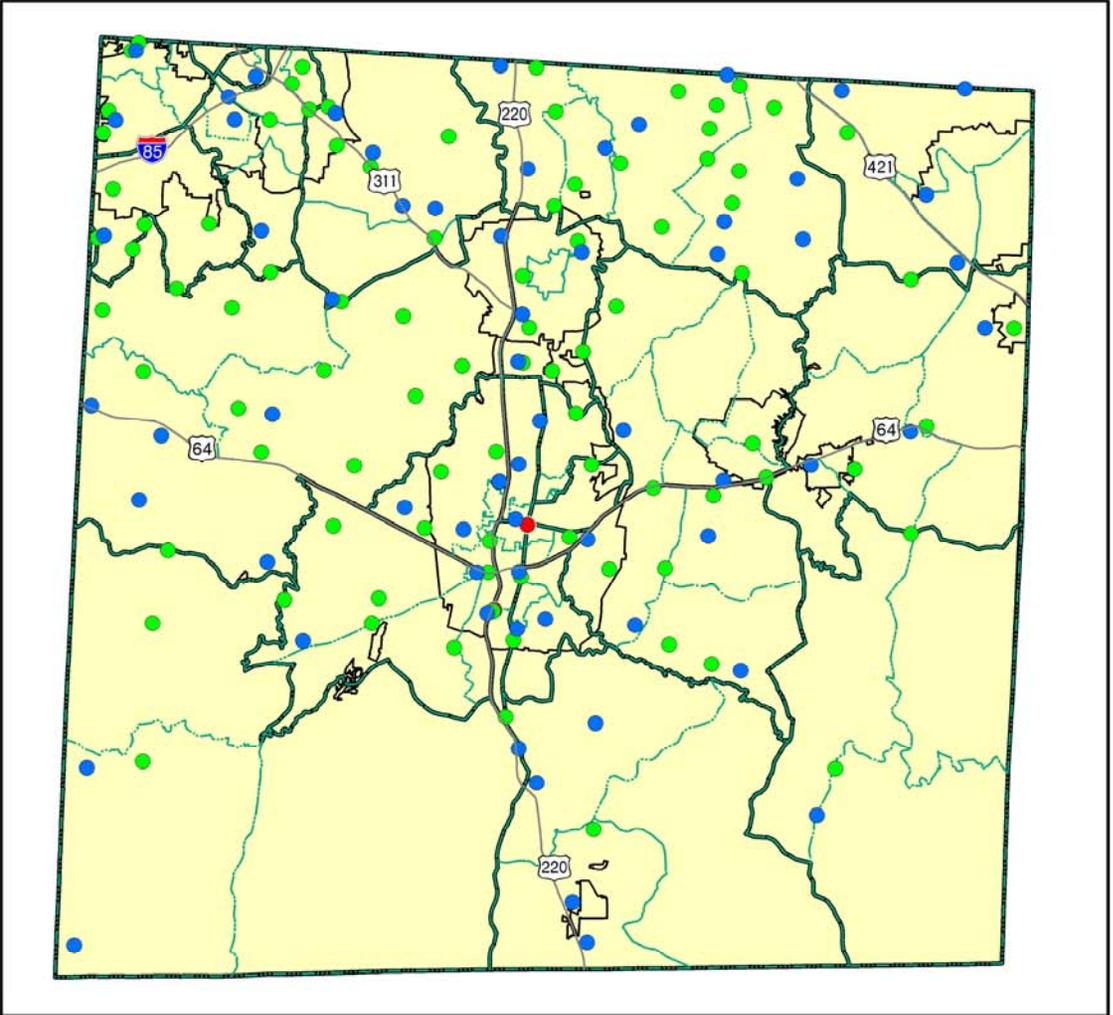


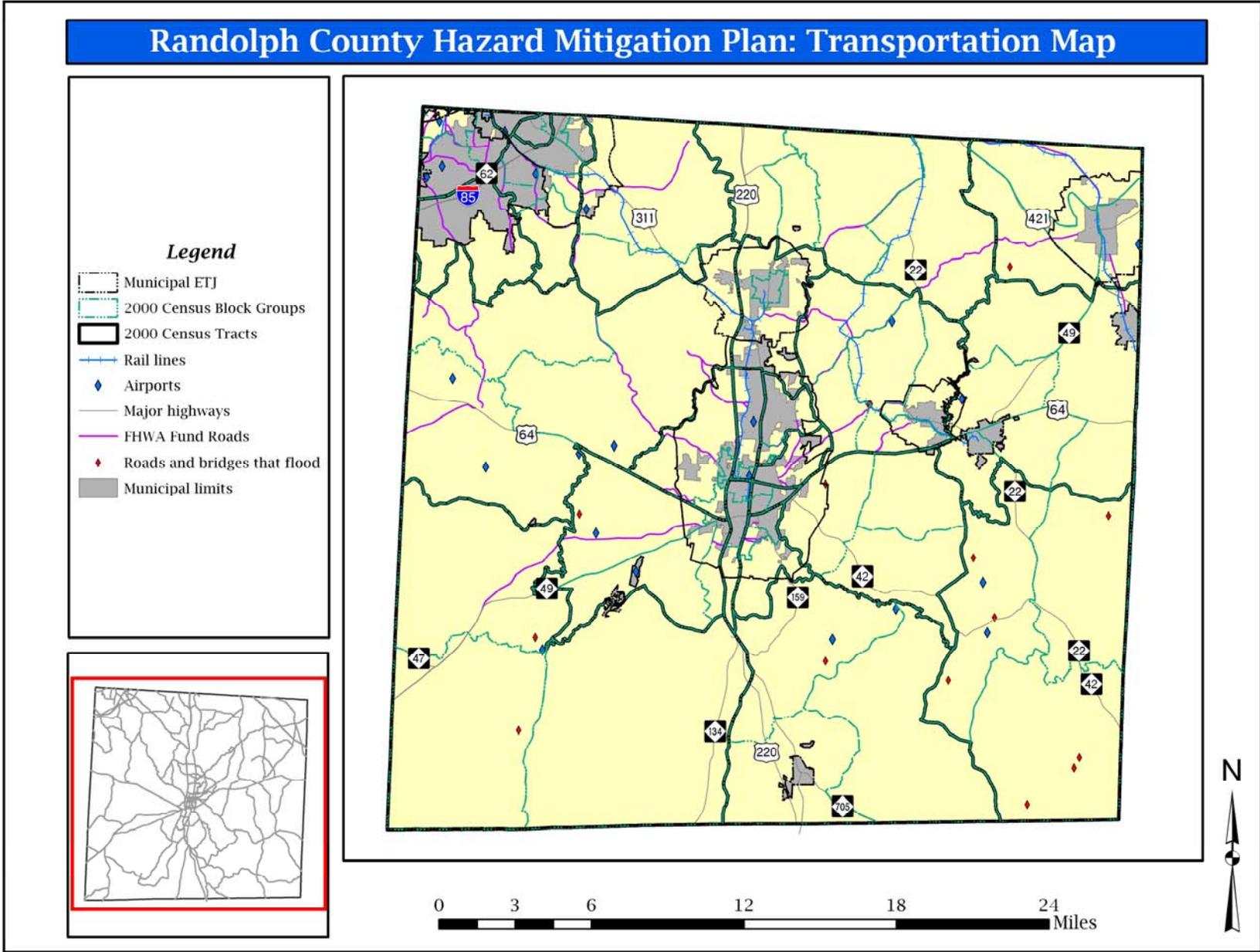


Randolph County Hazard Mitigation Plan: Communications Map

Legend

- Main roads
- Cellular towers
- Telephone substations
- 911 Centers
- 2000 Census Block Groups
- 2000 Census Tracts
- Municipal ETJ





Hazard Risk Areas

Hazard Risk Areas are those geographic areas of the County most likely to be affected by a specific hazard. People and resources located within these areas are at risk and may be exposed to greater impacts from hazard events.

Randolph County, as a whole, is vulnerable to high winds events such as, thunderstorms, tornados, and hurricanes. These high wind events are multi-hazard events bringing with them the likelihood or possibility of heavy rain, flashflooding and stream flooding. Drought, heat waves, snow and ice events and earthquakes are also Countywide hazards. Although these events are not location specific, hazard mitigation measures can be taken today which will mitigate or lessen the impact of these potential natural disasters

Natural disasters such as dam failures, floods, landslides, or vulnerability due to sinkholes or mine subsidence are location specific or more likely to occur in a specific geographic area. These areas are located on the following hazard maps. When these locations intersect with vulnerable populations they are designated as an area of primary concern.

Acceptable Risk

Through careful analysis of these documents, the following natural hazards were determined to present minimal hazard risk and therefore have an acceptable risk:

- **Landslide** - possible, low impact, high occurrence confined to region designated as rural growth management area.
- **Earthquake**- Epicenter likely in Charleston South Carolina area. Fault potentially could produce tremors in region up to 7.5 on Richter scale; however, the likelihood of tremors of this level is extremely low and the impact it would have on Randolph County is limited. The greatest impact could potentially be the possibility of tremors damaging the structural integrity of dams.
- **Heat wave** - likely, low impact
- **Wildfire** - highly likely, low impact

Natural Hazards of Concern

Natural hazards of immediate concern in developing mitigation goals, objectives and strategies are for Randolph County and its municipal jurisdictions may include:

High Wind Hazards

- Countywide vulnerability.

- Includes tornadoes, all tropical and extra tropical cyclonic systems, and severe thunderstorms. High winds are actually one element in these multi-hazard events characterized by wind, hail, lightning, rain and flood.
- Wind speeds will most likely be between 38 to 90 mph. Wind speeds greater than 90 mph are possible especially with tornadoes, however, mitigation strategies will be aimed at reducing the impacts of wind speeds up to 90 mph.
- Multiple yearly occurrences are likely.

Winter Storms

- Countywide vulnerability, including all municipalities.
- Impact: Critical facilities shut down for up to two weeks. Major power outages to facilities and service dependent upon electricity for operations.
- ***Ice storms*** produce most damage to trees, power lines, and buildings through snow loading and ice accumulation.

Flood

Of Randolph County's total population there are 272 occupied units at a value of \$27,752,460 which are located in a designated special flood hazard area (SFHA). There are no floodplains located in the towns of Liberty, Seagrove, and Staley.

Floods, whether flashfloods or from river and stream flooding, is a risk to human life and property. Possible losses due to flood include: economic losses such as destruction of property and crop losses; environmental impacts, such as erosion, ground water and surface water contamination, damage to vegetation and wetlands ecosystems; and other impacts such as, business disruption and loss of income, loss in tax revenues, transportation disruption, the spread of illness due to contamination.

Vulnerability to river and stream flood damage is highly location-specific. Flood waters can snap trees, topple buildings, and move boulders. Floodwaters often have extremely strong currents and a small amount (18 to 20 inches of water) may wash a car from a road. Buildings and persons in floodplains are at risk of death, injury, or damage from flooding. Bridge abutments, roadways, sewer lines, and other structures within floodways can be seriously damaged. Rapid runoff causes soil erosion as well as sediment deposition downstream.

Flash floods can occur within a few minutes or hours from heavy rainfall or dam failure. Floods can destroy buildings and bridges, uproot trees, washout roads and cause considerable erosion. Flashflooding from stormwater runoff may become more common in urban areas where much of the ground is covered by impervious surfaces.

Note: there are no floodplains located in the towns of Liberty, Seagrove, and Staley.

- **Priority vulnerable areas:** Archdale, Asheboro, Franklinville, Trinity, and portions of Northeast and northwest Randolph County.

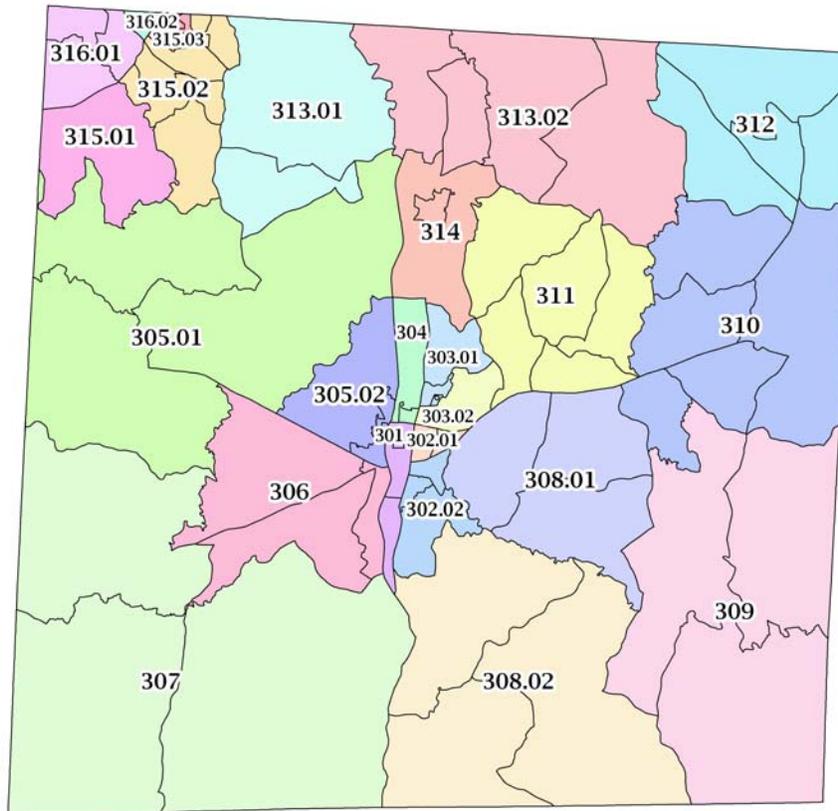
Dam Failure Hazard

- Randolph County has 199 dams scattered throughout the County (139 low hazard, 37 intermediate hazard dams, and 23 high hazard dams.)
- While the likelihood of dam failure is low, a high hazard dam failure would cause catastrophic damage and result in death.
- **Priority vulnerable areas are:**
 - **Archdale:** Two high hazard dams with development downstream
 - **Franklinville:** Ramseur Water supply dam and Randolph Mill dam in need of maintenance. These dams would directly impact the town of Franklinville and the structures located within the floodplains. Currently there is no emergency supply water source for Franklinville and Ramseur.
 - **Randleman:** A main concern is the new Randleman Dam project. There are reported cracks in the Randleman Dam in unexpected areas. Emergency Plans have been completed and are on file with the State and County Emergency Management. Downstream development would be catastrophically impacted if the dam failed. Though the proposed lake area is known and mapped, floodplains surrounding the lake area have not been determined. The buffer area around the lake is 200 feet. The Hazard Mitigation Plan will need to be revised and updated after the map maintenance phase of the DFIRMs are completed.
 - **Ramseur:** The Ramseur Water supply dam is in need of maintenance. Dam failure would catastrophically impact the town of Franklinville and also disrupt all water supplies to Ramseur and Franklinville.
 - **Trinity:** Two high hazard dams within city limits
 - **Northwest Randolph County:** Beard Lake dam is in the vicinity of the caraway creek floodplain. This neighborhood is vulnerable to both flood hazard and dam failure.

Sinkhole/Subsidence -Subsidence is the sudden (e.g., over two hours) or gradual downward movement of the ground surface (e.g., dropping by a few inches over a number of years.)

- The greatest potential for subsidence exists over abandoned underground mines, tunnels or shafts which includes gold mines. Tunnels and shafts may extend for hundreds of feet horizontally and vertically underground. There are over 33 abandoned gold mines with underground workings scattered throughout the County. The exact location of the mines and the extent of underground workings are unknown.
- Northwest Randolph County is a high concern area since it has multiple large mines scattered throughout the quadrant in areas designated as primary and secondary growth areas likely to be developed.

Hazard Map 1: The risk area for drought, heat wave, earthquake, ice events, snow events and wind hazards as occurs in hurricanes, thunderstorms, and tornadoes, covers the entire County area.



Hazard Map 2 includes: Extremely hazardous substance facilities; and 50-mile radioactive fallout area

This map identifies private facilities posing the greatest threat to human life and the environment if damaged by a severe storm, earthquake or tornado. This list is from the North Carolina Department of Emergency Management Tier II reporting system and includes the 50-mile emergency plan “ingestion area” of the Shearon Harris Nuclear Power Plant in New Hill, NC.

Hazard Map 3: Extremely hazardous substance facilities with overlay of watershed critical and protected areas

Hazard Map 4: Flood hazards

This map identifies flood plains from the 2008 DFIRMs, high hazard dams and frequently flooded State roads. For a complete list of structures in floodplains throughout Randolph County and all municipalities, please refer to Appendix G.

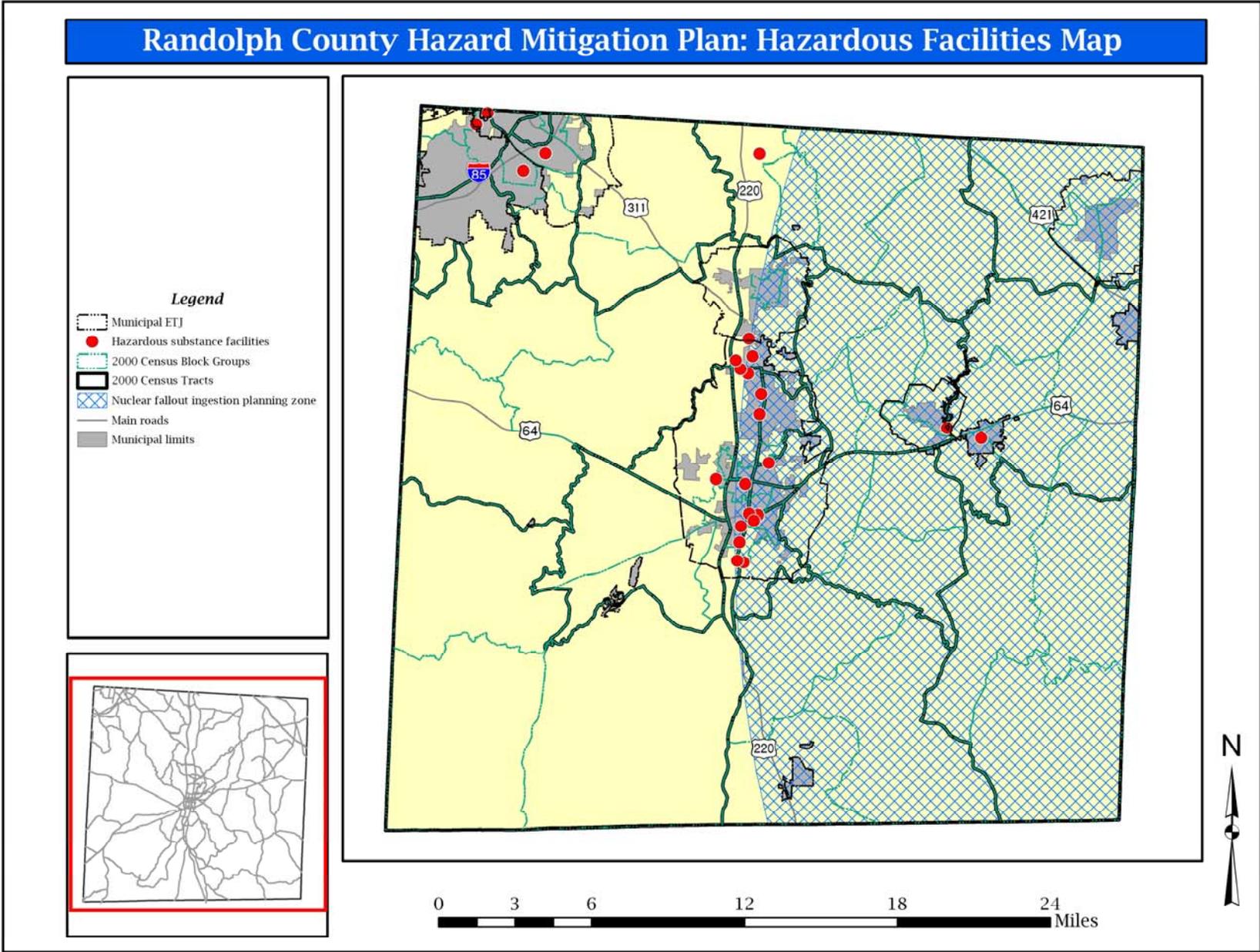
Hazard Map 5: Floodplain building values

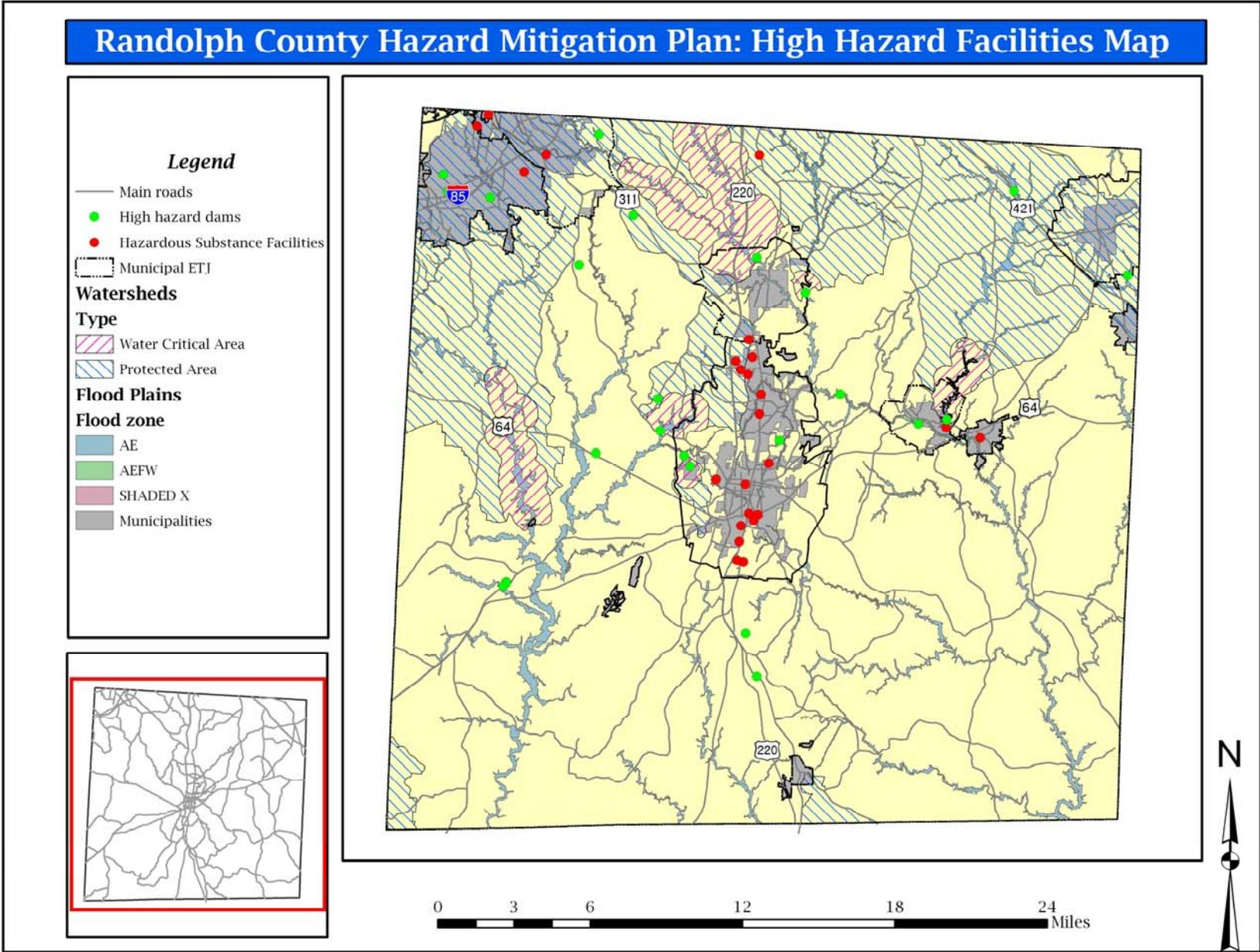
This map identifies the location and floodplain with the highest dollar values for structures in the 100-year floodplains. Those floodplains are priority geographic areas for floodplain mitigation activities.

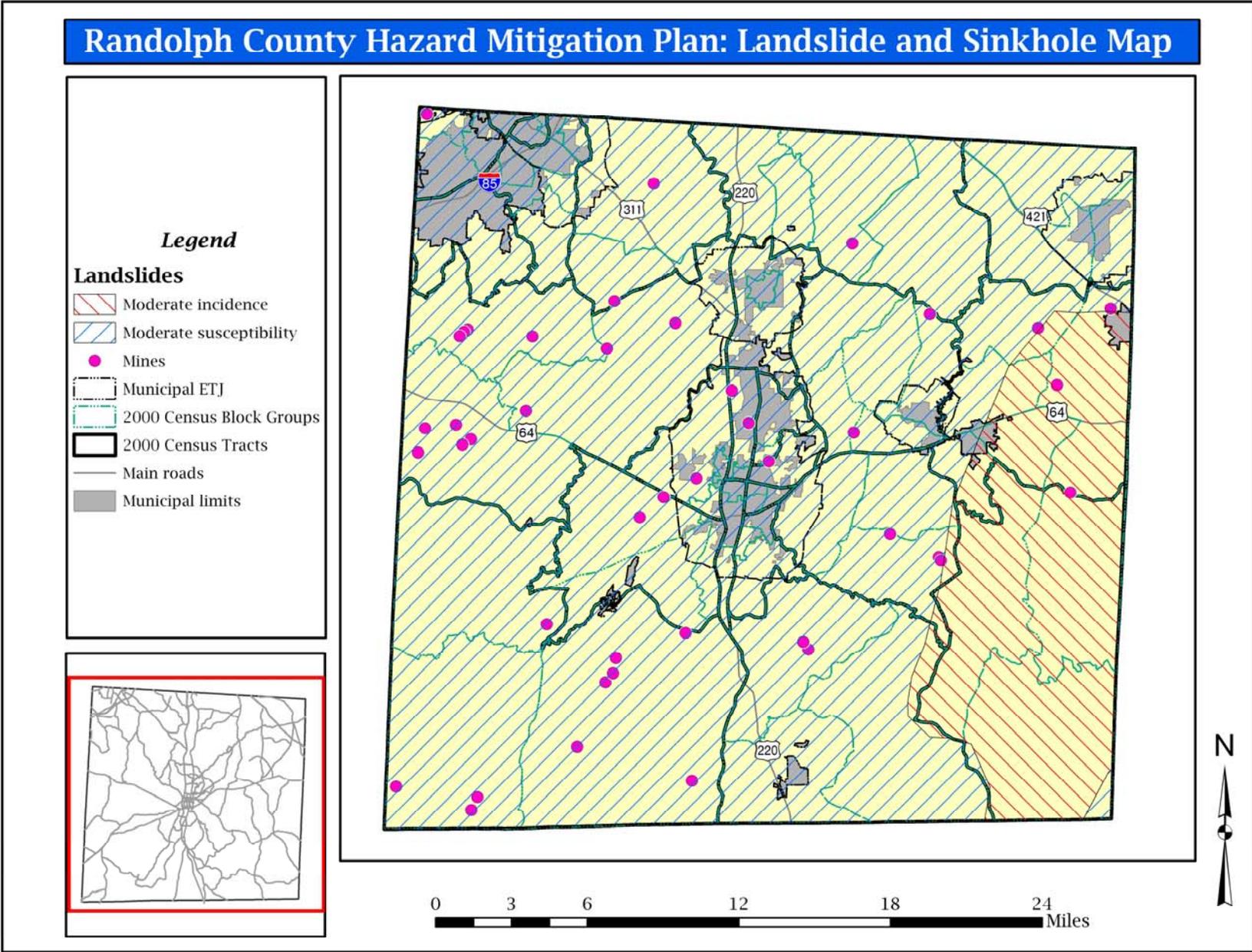
Hazard Map 6: Landslide (Eastern Portion of County) and Sinkhole – areas with abandoned mines

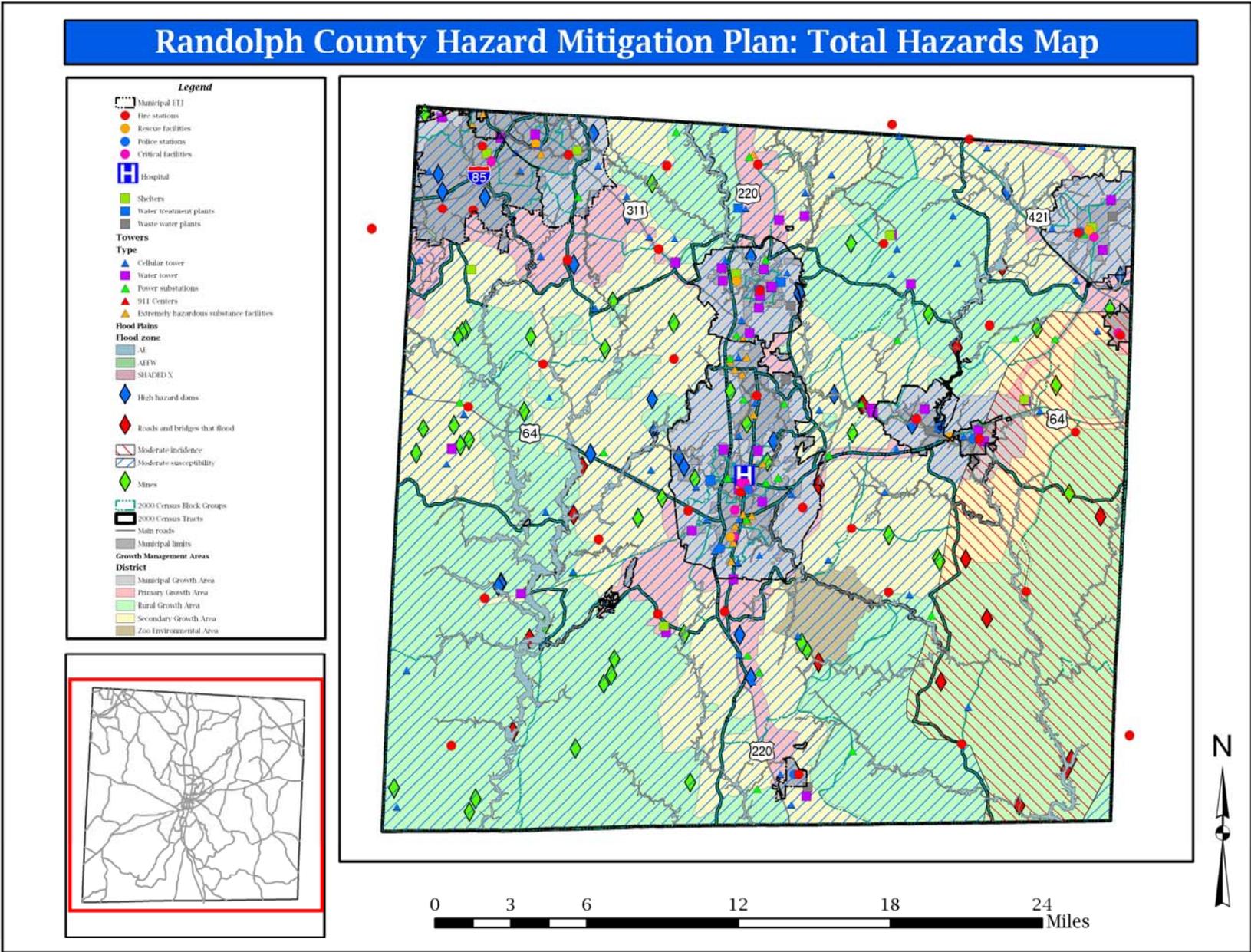
Subsidence is the sudden or gradual downward movement of the ground surface. It can involve a rapid collapse of the ground, or it can be a slow process of ground dropping and settling over a period of years. This map shows known abandoned mine locations and can be used as a planning aid. A more detailed site-specific investigation is necessary to determine the extent of mine shafts and risk of subsidence. The greatest potential for subsidence exists over abandoned underground mine workings such as tunnels and shafts and most likely occur at gold-related (precious metal) mines. There is little information as to the extent of the mining operations; tunnels and shafts may extend for hundreds of feet underground. Damage to buildings and other structures can occur if construction occurred above underground workings. The potential for subsidence increases as these abandoned areas are developed.

- All Hazard Map of Randolph County with Growth Management Areas and Critical Facility Overlay
- All Hazard Map of Archdale with Critical Facility Overlay
- All Hazard Map of Asheboro with Critical Facility Overlay
- All Hazard Map of Franklinville with Critical Facility Overlay
- All Hazard Map of Liberty with Critical Facility Overlay
- All Hazard Map of Ramseur with Critical Facility Overlay
- All Hazard Map of Randleman with Critical Facility Overlay
- All Hazard Map of Seagrove with Critical Facility Overlay
- All Hazard Map of Staley with Critical Facility Overlay
- All Hazard Map of Trinity with Critical Facility Overlay

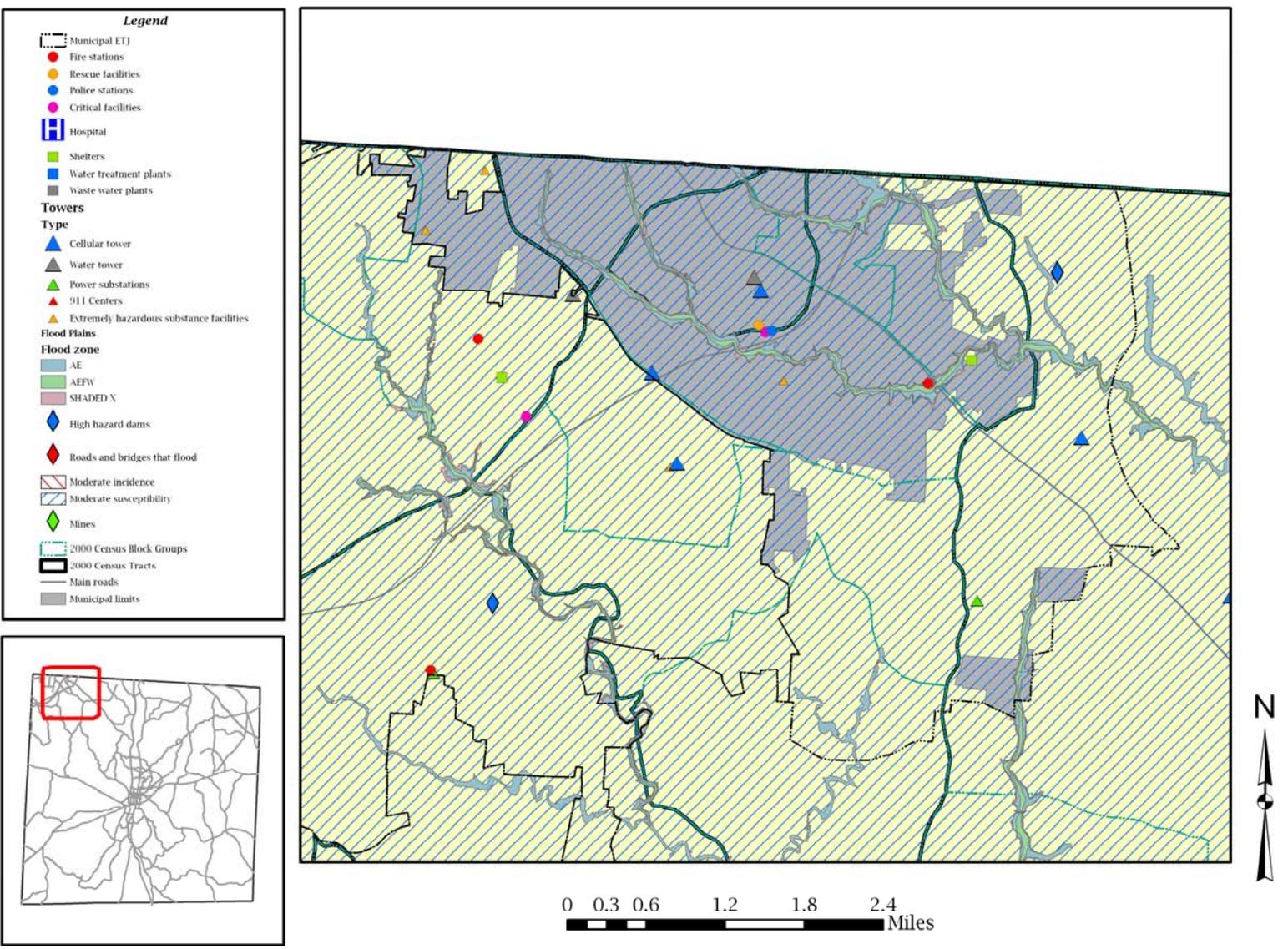




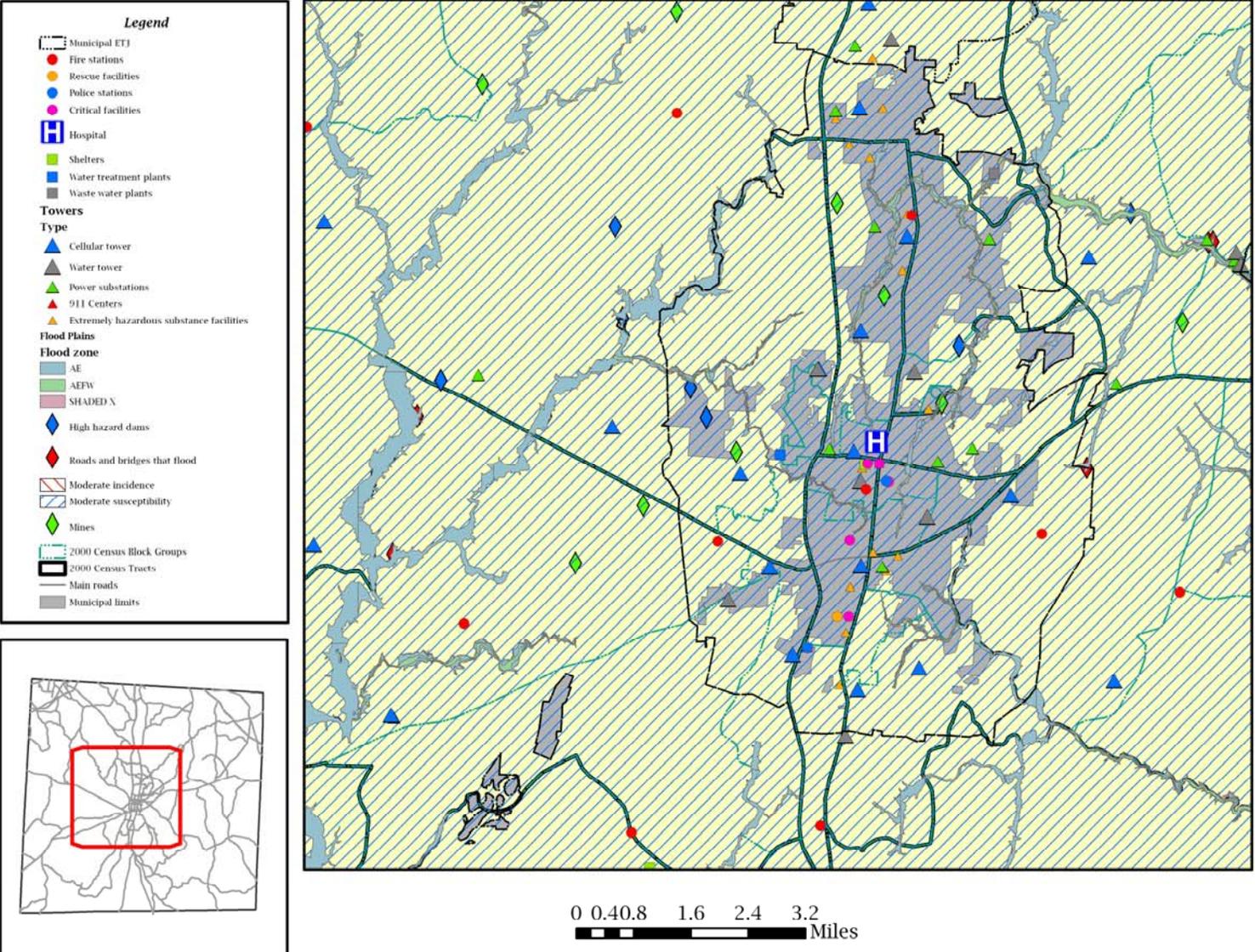




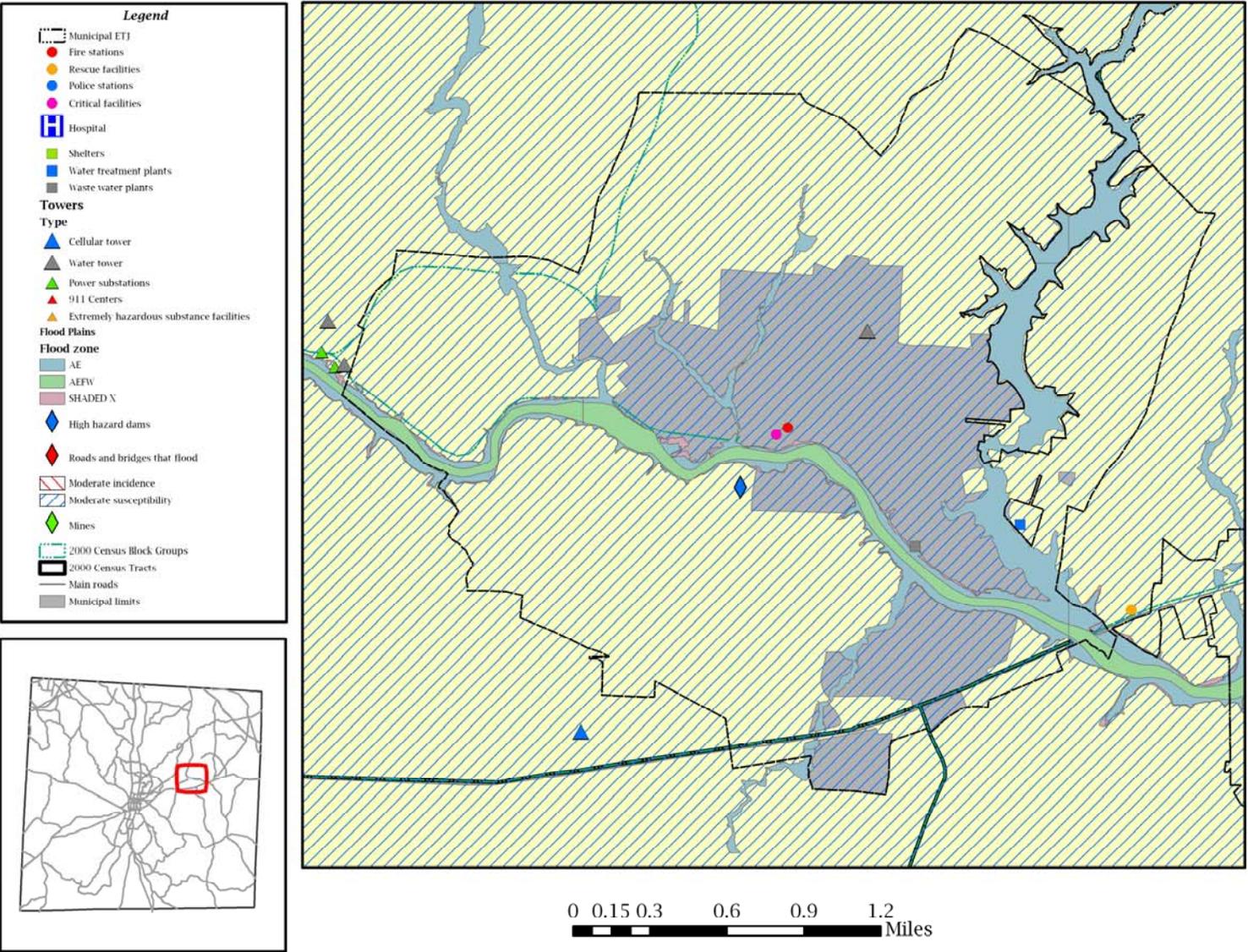
Randolph County Hazard Mitigation Plan: Total Hazards Map for City of Archdale



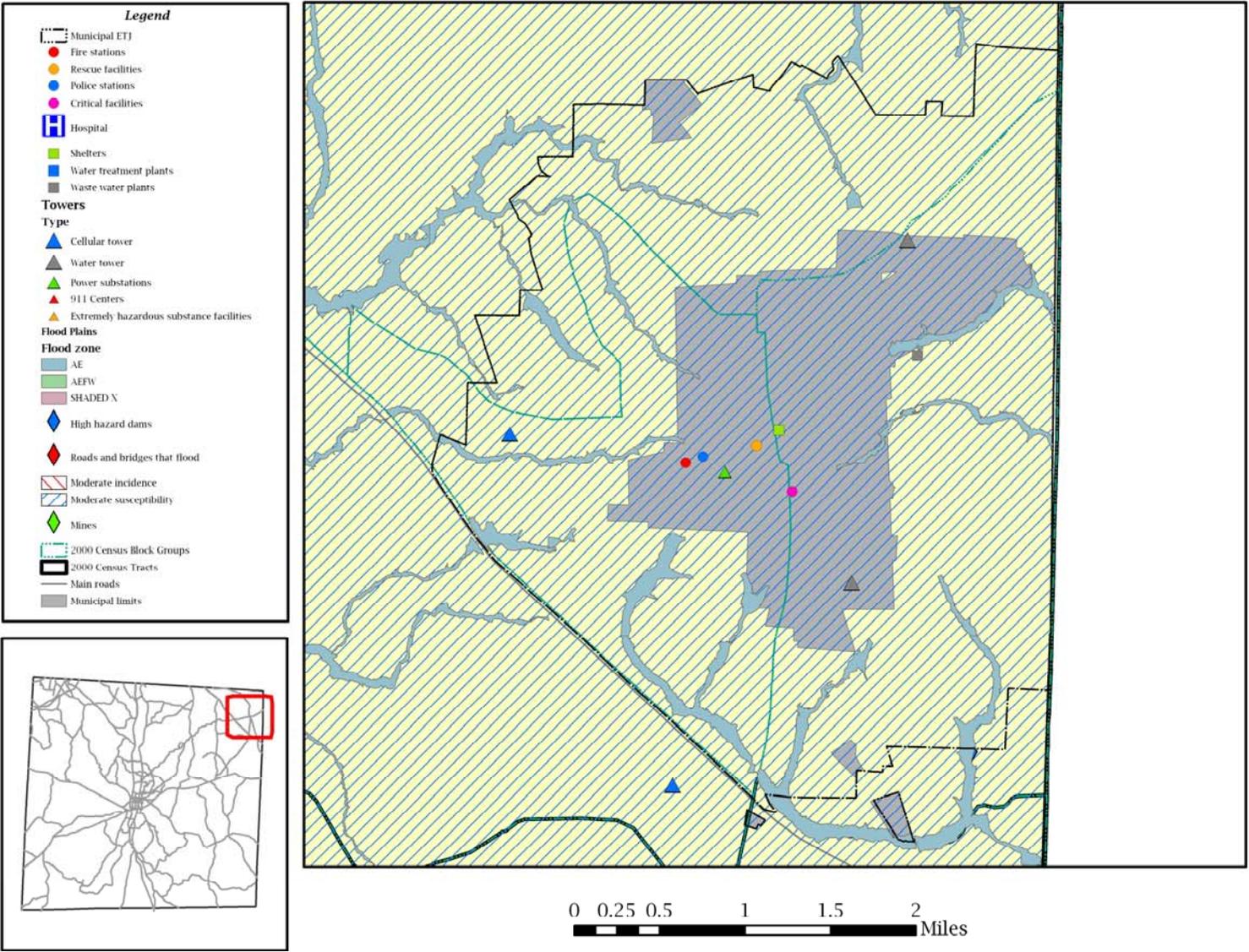
Randolph County Hazard Mitigation Plan: Total Hazards Map for City of Asheboro



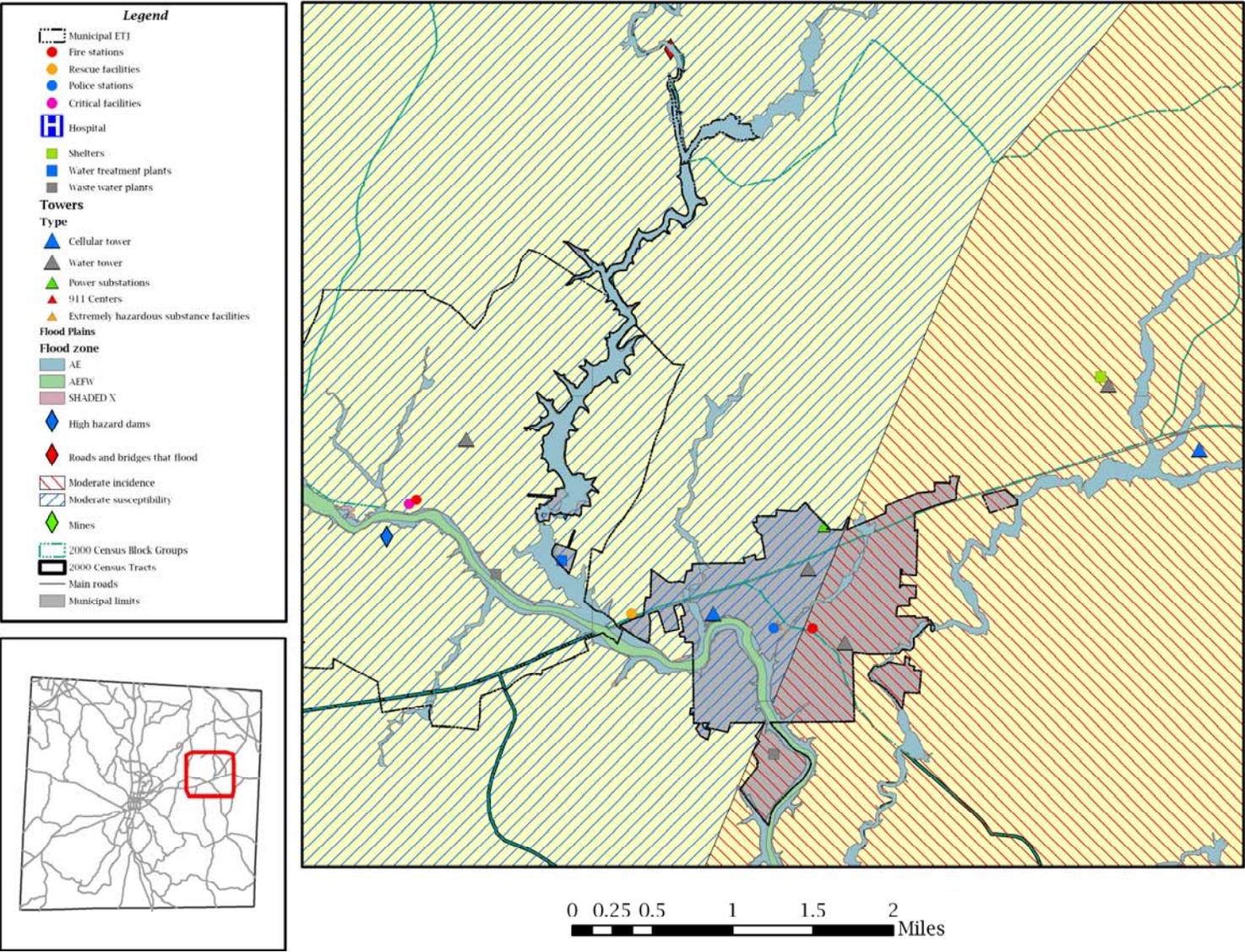
Randolph County Hazard Mitigation Plan: Total Hazards Map for Town of Franklinville

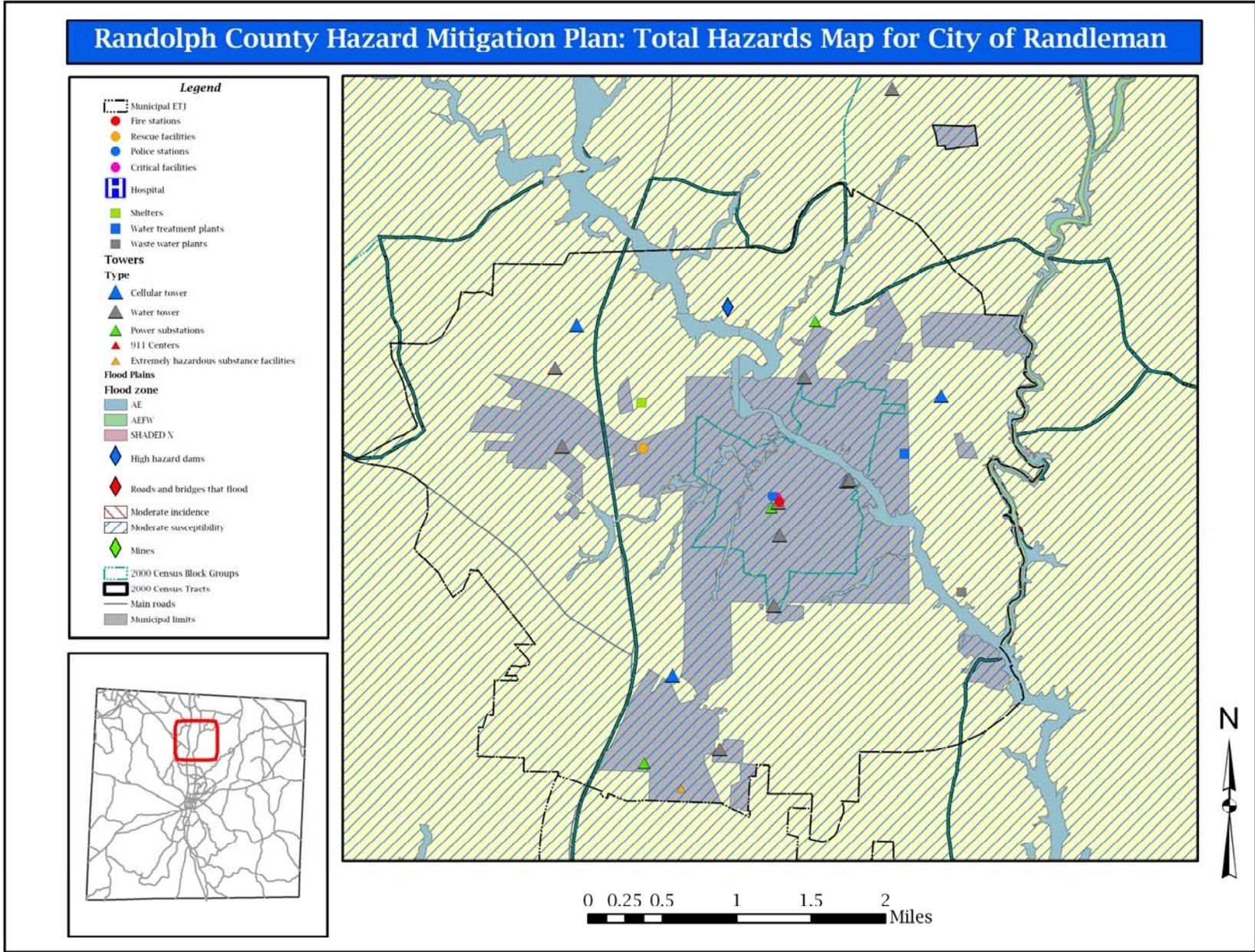


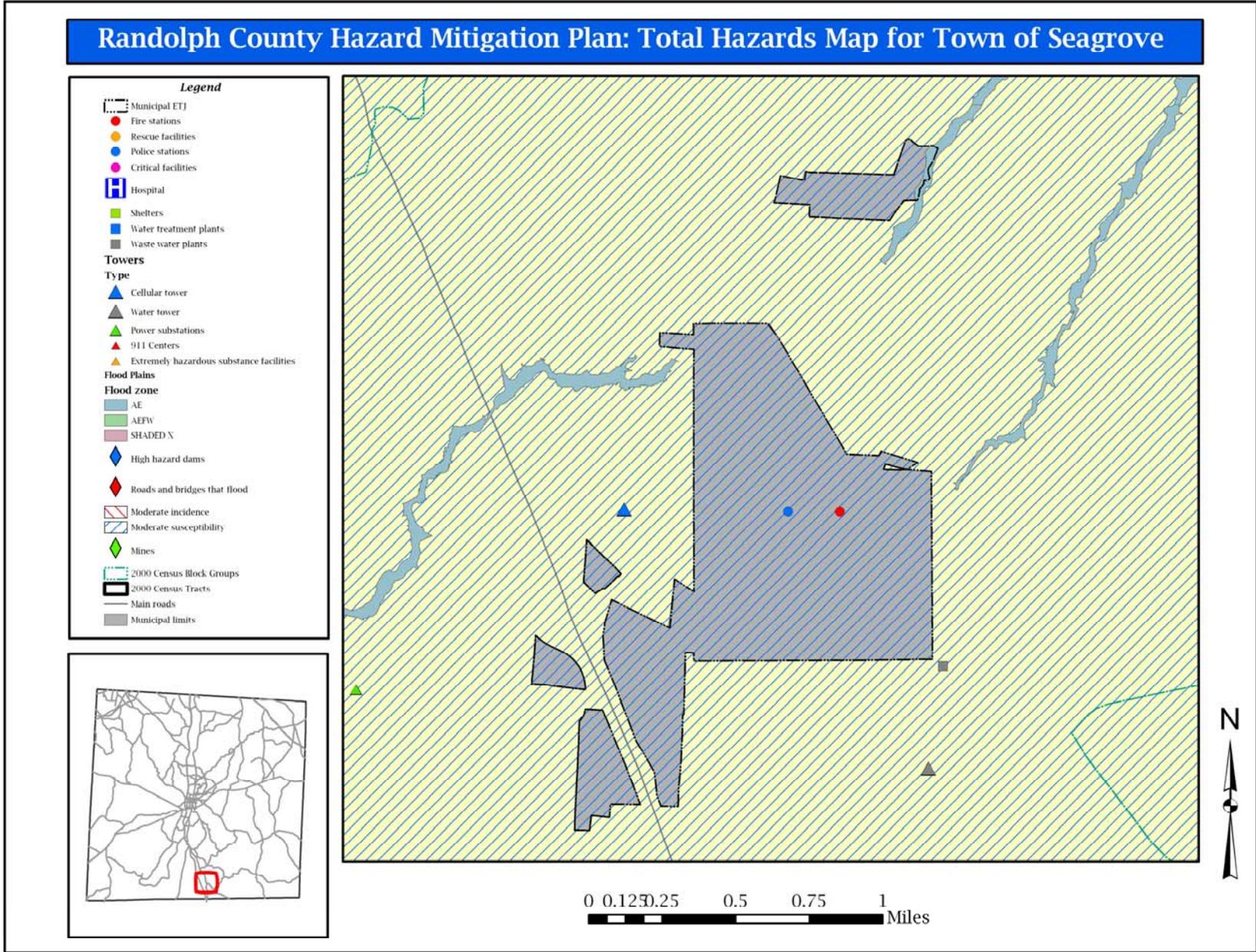
Randolph County Hazard Mitigation Plan: Total Hazards Map for Town of Liberty



Randolph County Hazard Mitigation Plan: Total Hazards Map for Town of Ramseur

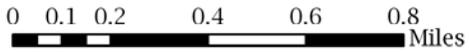
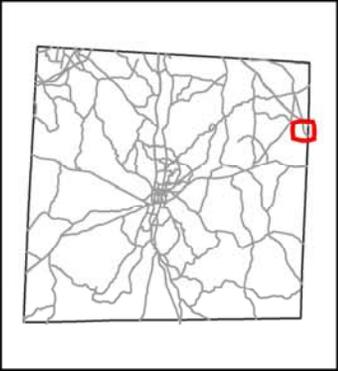
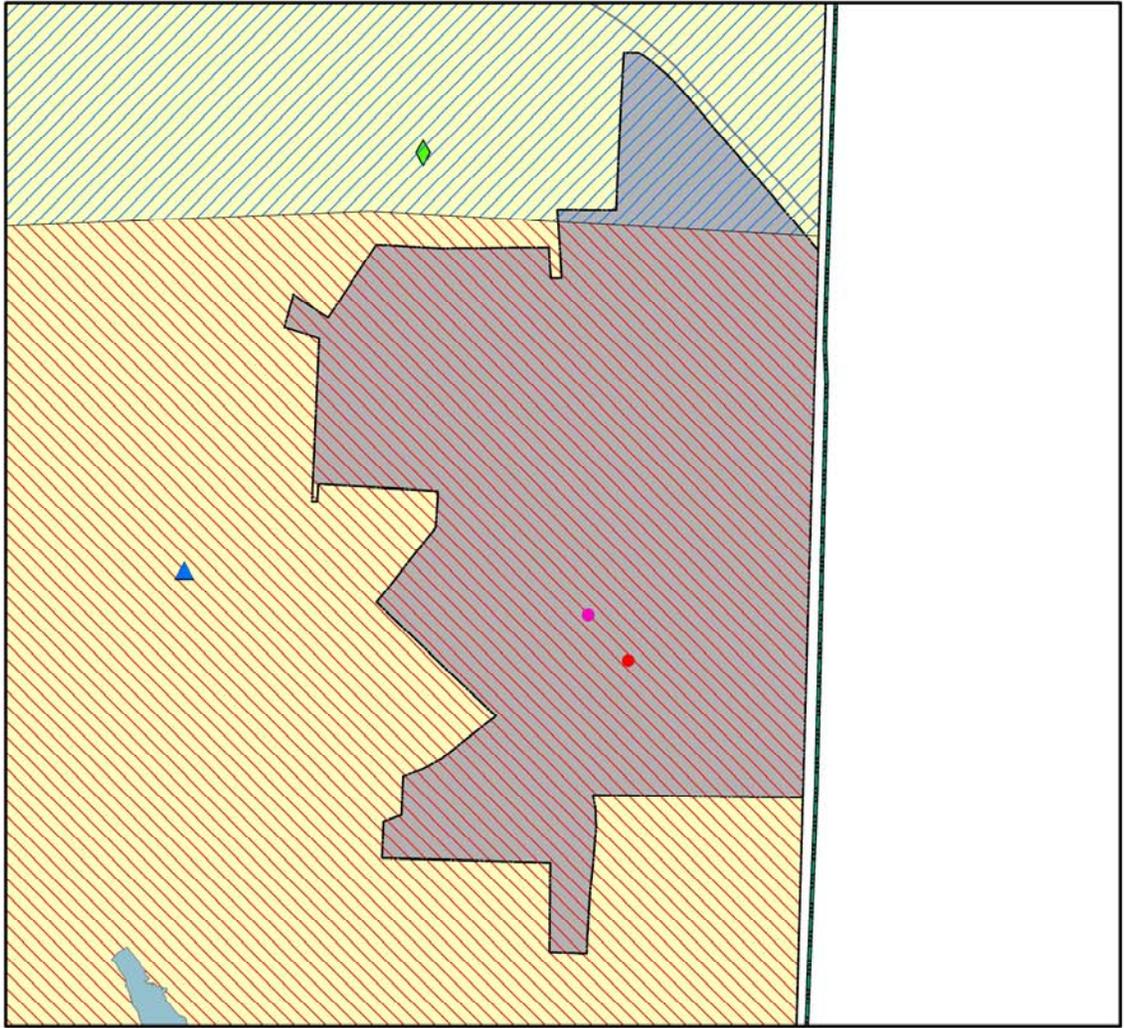


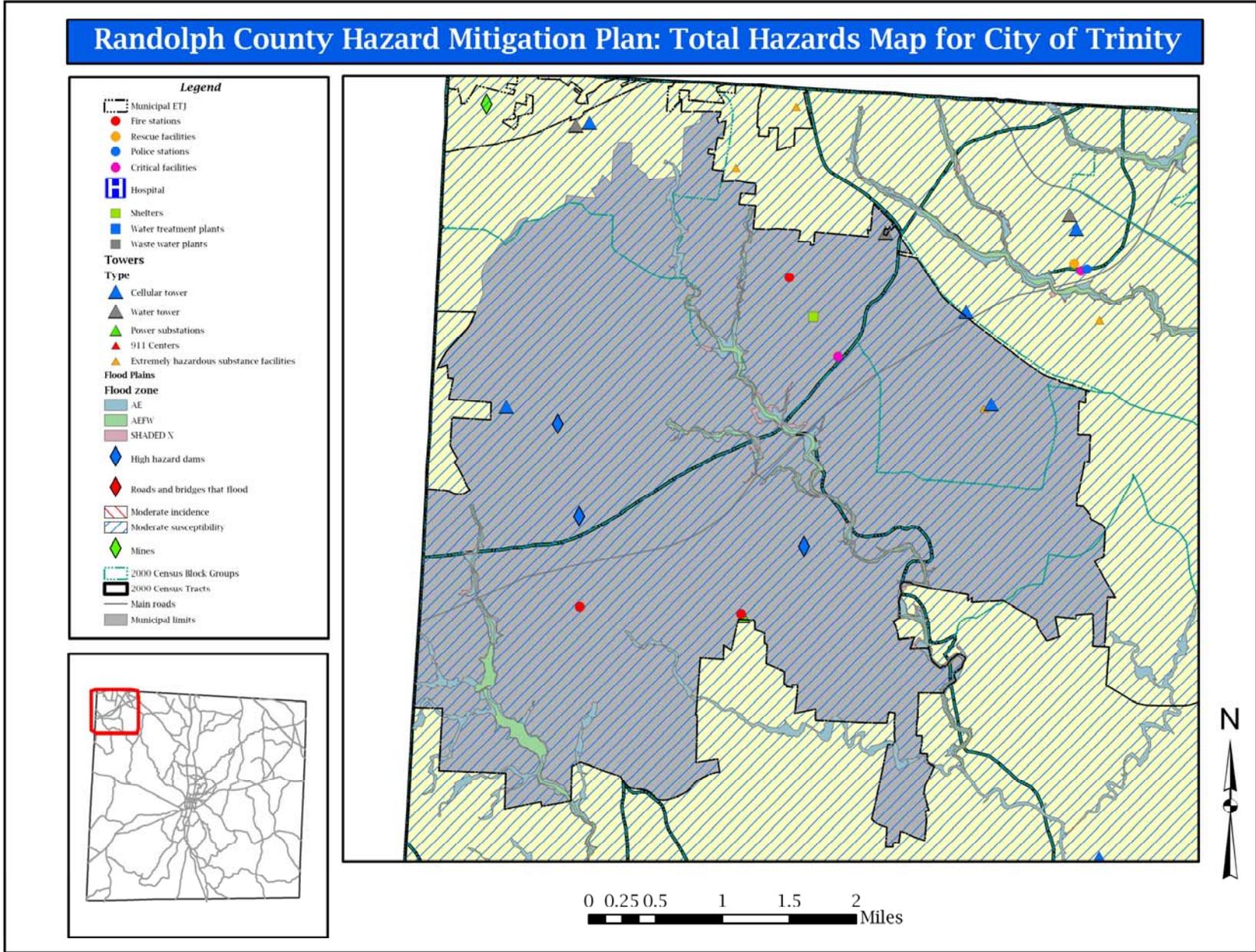




Randolph County Hazard Mitigation Plan: Total Hazards Map for Town of Staley

- Legend**
- Municipal ETJ
 - Fire stations
 - Rescue facilities
 - Police stations
 - Critical facilities
 - Hospital
 - Shelters
 - Water treatment plants
 - Waste water plants
- Towers**
- Type
- Cellular tower
 - Water tower
 - Power substations
 - 911 Centers
 - Extremely hazardous substance facilities
- Flood Plains**
- Flood zone**
- AE
 - AEFW
 - SHADED X
- High hazard dams
 - Roads and bridges that flood
 - Moderate incidence
 - Moderate susceptibility
 - Mines
- 2000 Census Block Groups
2000 Census Tracts
Main roads
Municipal limits





Vulnerable Populations

Vulnerability is defined as the level of exposure combined with lack of resources, which would result in a high impact/loss on the population or area as a result of the hazard event.

Vulnerable populations are those in areas susceptible to the impacts from a natural disaster. Census data at the block group level was used to identify areas where the population may lack resources to safely respond to, or recover from, a disaster event.

Vulnerable populations were identified as those persons who do not speak English or those who do not speak English well, who do not have access to vehicles, households without a telephone, those below the poverty level, and the presence or concentration of critical facilities in a high hazard risk area. Each variable was indexed to give a composite score for level of vulnerability and the area was assigned a vulnerability level of extremely high, high, moderate, or low.

Mobile homes and manufactured homes

Another population specifically at risk from flood and high wind events is persons living in mobile homes or manufactured homes. When possible, mobile home parks located in flood plains were identified. Mobile homes are more likely to become floating debris in a flood event increasing the likelihood of injury, death, and structural damage as the structure is carried by water currents. In addition, mobile homes and manufactured homes are more susceptible to wind damage in the event of a thunderstorm, tornado, hurricane, or other wind event.

This vulnerable population extends to school use of mobile units for classrooms. As of March 2009, Randolph County Schools have 118 mobile classroom units. By code these mobile units must be tied down. Evacuation policies exist at each school in the event of an adverse weather event.

Church and Youth Camps

The County has a population at risk that is unique in that the population is usually only present during the weekends during the school year and all week during the summer. The County currently has thirteen church and youth camps spread throughout the entire County. Some of the camps are small in size at less than 12 acres while the largest, Camp Caraway, is over 1,000 acres. Most of the camps are located in the Northwest and Southwest Quadrant of the County. Four camp facilities are located within the Nuclear fallout ingestion planning zone so special plans need to be investigated for those camps. A majority of the camp facilities are also located within the SFHA, thereby creating another

hazardous situation to be addressed by both camp management and the County.

These populations are extremely difficult to protect due the nature of their purposes. These facilities are mainly in use on the weekends during the spring, fall and winter but all week long during the summer. These difficulties are further complicated by the fact that the attendees at the facilities can change on a daily basis making it more difficult to provide education on the proper procedures to follow in case of an incidence.

The County, along with the camps, will work to devise a system so that the vulnerabilities are mitigated.

Intersection of Risk and Vulnerability

The following table provides an overall picture of the hazards and vulnerability associated with the northwest, southwest, northeast and southeast portions of the County as well each municipal jurisdiction. The profiles depicted are designed to provide information on the most severe hazard threat facing each area as well as to determine the location of vulnerable populations. Areas of primary concern are those areas where a hazard predominates or the hazard threat intersects with highly vulnerable populations.

Table 2: Hazard Risks and Vulnerable Populations by Census Block Group

Quadrant	Jurisdiction	Census Block group	Risk of Landslide as determined by USGS map (Showing Incidence only)	Within nuclear fallout area	Presence of one or more Extremely Hazardous Substance Facilities	Presence of one or more abandoned Mine Shafts	Occupied units in Floodplain		Presence of one or more High Hazard Dam(s)	Population Vulnerability Index	Randolph County Growth Management Areas	
							>7.5% occupied units in SFHA	3% - 7.49% of occupied units in SFHA				Municipal
	Archdale	315021					4.3%					
	Archdale	315022										
	Archdale	315023										
	Archdale	315031										
	Archdale	315032										
	Archdale	316021										
	Archdale	316011							Moderate			
	Asheboro	301001							Moderate			
	Asheboro	301002							Moderate			
	Asheboro	301003										
	Asheboro	302011										
	Asheboro	302012					3.4%					
	Asheboro	302013										
	Asheboro	302021										
	Asheboro	302022										
	Asheboro	303011							Moderate			
	Asheboro	303012										
	Asheboro	304001							High			
	Asheboro	304002										
	Asheboro	305022										
	Asheboro	305023										
	Asheboro	303021										
	Franklinville	311003										
	Franklinville	311004										

Quadrant	Jurisdiction	Census Block group	Risk of Landslide as determined by USGS map (Showing Incidence only)	Within nuclear fallout area	Presence of one or more Extremely Hazardous Substance Facilities	Presence of one or more abandoned Mine Shafts	Occupied units in Floodplain		Presence of one or more High Hazard Dam(s)	Population Vulnerability Index	Randolph County Growth Management Areas	
							>7.5% occupied units in SFHA	3% - 7.49% of occupied units in SFHA				Municipal
	Liberty	312003										
	Liberty	312004										
	Ramseur	310004										
	Ramseur	310005							Moderate			
	Randleman	314002										
	Seagrove	308023										
	Staley	310003										
	Trinity	315011							Moderate			
	Trinity	315024										
	Trinity	316013							Moderate			
	Trinity & Archdale	315025										
	Trinity & Archdale	316011										
1	Randolph County	305011							Moderate			
1	Randolph County	305012							High			
1	Randolph County	305013							High			
1	Randolph County	305021					6.9%		Extremely High			
1	Randolph County	313011							Moderate			

Quadrant	Jurisdiction	Census Block group	Risk of Landslide as determined by USGS map (Showing Incidence only)	Within nuclear fallout area	Presence of one or more Extremely Hazardous Substance Facilities	Presence of one or more abandoned Mine Shafts	Occupied units in Floodplain		Presence of one or more High Hazard Dam(s)	Population Vulnerability Index	Randolph County Growth Management Areas							
								>7.5% occupied units in SFHA			Extremely vulnerable	Municipal	Primary	Secondary	Rural	Zoo		
										3% - 7.49% of occupied units in SFHA							Moderately vulnerable	
1	Randolph County	313012																
1	Randolph County	315026																
1	Randolph County	316012																
2	Randolph County	310001								Moderate								
2	Randolph County	310002								High								
2	Randolph County	310003								Moderate								
2	Randolph County	311001																
2	Randolph County	311002																
2	Randolph County	311003																
2	Randolph County	311004																
2	Randolph County	311005																
2	Randolph County	312001																

Quadrant	Jurisdiction	Census Block group	Risk of Landslide as determined by USGS map (Showing Incidence only)	Within nuclear fallout area	Presence of one or more Extremely Hazardous Substance Facilities	Presence of one or more abandoned Mine Shafts	Occupied units in Floodplain		Presence of one or more High Hazard Dam(s)	Population Vulnerability Index	Randolph County Growth Management Areas									
							>7.5% occupied units in SFHA	3% - 7.49% of occupied units in SFHA			Extremely vulnerable	Highly vulnerable	Moderately vulnerable	Municipal	Primary	Secondary	Rural	Zoo		
2	Randolph County	312002																		
2	Randolph County	313021																		
2	Randolph County	313022																		
2	Randolph County	313023																		
2	Randolph County	313024																		
2	Randolph County	314001																		
3	Randolph County	302023																		
3	Randolph County	308011																		
3	Randolph County	308012																		
3	Randolph County	308013																		
3	Randolph County	308021																		
3	Randolph County	308022																		

Quadrant	Jurisdiction	Census Block group	Risk of Landslide as determined by USGS map (Showing Incidence only)	Within nuclear fallout area	Presence of one or more Extremely Hazardous Substance Facilities	Presence of one or more abandoned Mine Shafts	Occupied units in Floodplain		Presence of one or more High Hazard Dam(s)	Population Vulnerability Index	Randolph County Growth Management Areas				
								>7.5% occupied units in SFHA				Municipal	Primary	Secondary	Rural
										3% - 7.49% of occupied units in SFHA					
3	Randolph County	309001													
3	Randolph County	309002													
3	Randolph County	309003													
4	Randolph County	306001													
4	Randolph County	306002							Moderate						
4	Randolph County	306003													
4	Randolph County	307001													
4	Randolph County	307002													
4	Randolph County	307003							High						

ANALYSIS

Countywide Hazard Risk

Randolph County and its municipal jurisdictions are equally vulnerable to high wind events such as those associated with severe thunderstorms, tropical and extra tropical systems, snow and ice events, flashflooding, and drought. All persons, critical facilities, buildings and infrastructure are vulnerable to these Countywide hazards to some degree. It is unlikely that this damage would be catastrophic, but may include the possibility of severe injuries, shutdown of critical facilities for two days or more; and 5% to 10% of property damaged, including agricultural (both crop and livestock.)

High wind events are highly likely to bring winds of between 38 and 73 miles per hour with winds of 74 to 100 mph possible. Tornadoes are likely with a probable intensity of F1 on the Fujita Pearson scale, which means wind speeds of 73-110 miles per hour (Category 1 hurricane winds on the Saffir Simpson scale.) However, the wind zone map of Texas Tech University shows 200 mph winds (as in a F3 or F4 tornado) are possible in central North Carolina. Additionally, these high wind events are likely to carry with them the high probability of flash flooding and/or river and stream flooding, as well as lightning and hail. The impact of these multi-hazard events will result in continued downed power lines and power outages, fallen trees and tree damage, roof damage, and flooding of roadways and buildings. Most susceptible to the damaging effects of high winds are mobile homes, modular units including modular classrooms for County schools, and manufactured homes.

Vulnerability to ice and snow storms are Countywide and will result in continued wide spread power outages, downed trees and limbs, as well as potential structure and building damage from falling trees and branches, or accumulation of snow on rooftops not designed to handle the snow load.

Potential Losses for Countywide Hazards

When describing the vulnerability in terms of an estimate of potential dollar losses to structures, the tax value of the structure was used. Land value was not considered. For Countywide hazards, 5-10% damage was assumed for severe impacts of major ice storms, high wind events or multi-hazard events. This 5-10% damage estimate is for severe impacts as described in Appendix A, page 1. The number of persons per household in Randolph County averages 2.5. Current Countywide employment figures (average of 14 persons per structure) were used to estimate number of persons occupying commercial, industrial and "other" structures. Future development was calculated from average annual historical increases in structures of each type. Generally, when considering

damage impacts of location specific hazards, such as flooding or dam failure, the entire value of the structure was used to assess damage and loss potential.

Table 3: Current Conditions

Type of development	Number of existing buildings	Current value	5% damage estimate	10% damage estimate	10% of population impacted
Single family	41,034	\$5,082,928,300	\$254,146,415	\$508,292,830	10,259
Multi-family	731	\$102,740,990	\$5,137,049.50	\$10,274,099	183
Commercial and industrial	3151	\$1,565,881,470	\$78,294,073.50	\$156,588,147	788
Critical facilities	964	\$167,440,110	\$8,372,005.50	\$16,744,011	241
Other (ex. infrastructure, etc.)	9,460	\$1,341,897,990	\$67,094,899.50	\$134,189,799	2,365
Totals	55,340	\$8,260,888,860	\$413,044,443	\$826,088,886	13,835

Repetitive Loss Structures:

Randolph County and its municipalities have no recorded repetitive loss structures.

Location Specific Hazard Risks

Area 1: Northwest quadrant which is the area west of US Highway 220 and north of US Highway 64.

The Northwest quadrant, which is the area west of US Highway 220 and north of US Highway 64, is an area of primary concern for Randolph County. Northwest Randolph has moderate to high flood prone areas. In addition, there is some risk of dam failure and mine subsidence due to the numerous abandoned underground mine workings. Unincorporated northwest Randolph County is predominantly designated as either Municipal Growth, Primary Growth or Secondary Growth Areas and has the highest population density in the County.

This area has approximately 110 occupied units in the SFHA zone with an estimated value of the structures at \$13,982,170 and 275 persons exposed to flood hazards. The Caraway Creek floodplain and Beard Lake Dam (especially through Clover Drive and Oak View Drive) have numerous single-family dwellings located either directly downstream of the dam.

There are approximately eleven abandoned mines throughout the northwest County area. Of particular concern are abandoned gold mines which are generally underground mines with shafts that increase the likelihood of ground

subsidence and contamination of water supplies by arsenic. According to the Senior Geologist for the State of North Carolina, the location of these mines and information pertaining to their type are maintained by the North Carolina Geological Survey and US Bureau of Mines. The County has endeavored to place these mine locations and information in its GIS.

Another issue that confronts this section of the County is high hazard dams. There are approximately 78 dams in this section of the County with the following eleven dams being classified as high hazard dams by NC Department of Environment and Natural Resources Dam Safety Section:

- Asheboro Country Club Lake Dam;
- Beard Lake Dam;
- Bob Cat Acres Lake Dam;
- Colonial Country Club Dam Lower;
- Holly Ridge Gold Links Dam Number One;
- Ingold Dam;
- Joe Lambeth Dam;
- John Bunch Lake Dam;
- King Lake Dam; and
- McCrary Lake Dam.

Area 2: Northeast quadrant includes County area east of US Highway 220 and north of US Highway 64

The unincorporated territory in the northeast quadrant of the County has moderate to high flood prone areas. At risk for flooding is an exposed population of 345 persons with 137 occupied units within the special flood hazard area. These units are valued at an estimated \$27,600,210. There are approximately nine abandoned mines throughout the northeast County area. According to the Senior Geologist for the State of North Carolina, the location of these mines and information pertaining to their type are maintained by the North Carolina Geological Survey and US Bureau of Mines. The County has endeavored to place these mine locations and information in its GIS.

There are approximately 63 dams in this section of the County with the following eight dams being classified as high hazard dams by NC Department of Environment and Natural Resources Dam Safety Section:

- Bullins Lake Dam;
- Cox Lake Dam;
- Dodson Lake Dam;
- Overman Lake Dam;
- Ramseur Water Supply Dam;
- Randleman Lake Dam; and

- Randolph Mill Earth Dam.

Area 3: Southeast quadrant includes all area south of US Highway 64 and east of US Highway 220

Southeast Randolph County has two hazards unique to the County. According to USGS maps, the eastern portion of Randolph County has a high incidence of landslide, although there is no formal record or anecdotal memory of occurrences. Approximately the same area of landslide hazard risk is also within a 50-mile radius of the Shearon Harris Nuclear Power Plant in Raleigh. The Nuclear Regulatory Commission has designated the 50-mile zone around each nuclear power station as an "Ingestion Exposure Pathway Zone" which means that the main exposure in the event of a nuclear disaster is from ingestion of contaminated water, fish or other aquatic foods, as well as milk and fresh vegetables. While planning for the 50-mile zone is left to the State, cooperation from local governments, particularly at the County level is necessary. If an evacuation of the 10-mile emergency plan area was in effect, voluntary evacuations within a 50-mile area would likely occur. The Towns of Staley, Liberty, Ramseur and Franklinville and most of the western portion of rural Randolph County fall within this 50-mile zone. US Highway 64 West is the main evacuation route.

Risk of flooding is lowest in this area of the County with an estimated 20 occupied units in a flood plain and 50 people exposed to the hazard. Occupied units in the floodplains are valued at \$2,696,760. This area is designated as a rural growth area and is not likely to be developed in the near future. There are six abandoned mine shafts in the southeast area.

Area 4: Southwest Quadrant includes all area south of US Highway 64 and west of US Highway 220

The southwest quadrant has moderate to high instance of occupied units in flood prone areas. This area has 17 abandoned mines, which reportedly have some deep vertical shafts. The Newby main shaft, 4.5 miles southwest of Asheboro, is about 100 feet deep and extends for over 200 feet. Other shafts depths are not known but most of these mines are abandoned gold mines with underground workings. Most of this area is designated as a rural growth management area and could be developed on a limited basis.

There are 4 occupied units in floodplains with 10 persons exposed. Occupied units are valued at an estimated \$973,660. Three high hazard dams are located in this quadrant:

- Upper Toms Creek Nursery Dam;
- Middle Toms Creek Nursery Dam; and

- Lower Toms Creek Nursery Dam.

Municipalities

City of Asheboro and ETJ:

Asheboro has a moderate amount of occupied units in flood plains areas. Sixteen of the 24 extremely hazardous substance facilities as identified by the NC Division of Emergency Management are located within Asheboro, most are located in north Asheboro.

There are four abandoned mines in Asheboro area. The exact location of these mines is unknown. The Scarlet mine is located approximately 2.4 miles north of Asheboro. The mineshafts depths are 60 foot to 120 foot long and extend over 500 feet. According to the Senior Geologist for the State of North Carolina, the location of these mines and information pertaining to their type are maintained by the North Carolina Geological Survey and US Bureau of Mines. The County has endeavored to place these mine locations and information in its GIS.

Approximately 258 persons in 103 occupied housing units are exposed to flood hazard throughout the City of Asheboro. The structures are valued at approximately \$19,875,890.

The geographic area census block group 304001 is of primary concern with 1.43% of occupied housing units within the SFHA, four EHS facilities, and high population density with vulnerable populations. This is developed municipal area with an estimated 22 occupied housing units, including mobile homes, in the SFHA exposing over 55 persons to a flood hazard. The approximate value of the structures in the flood plain is \$1,652,190.

Another area of primary concern is the Pennwood Branch floodplain running through geographic planning area 303021. This area has a highly vulnerable population and public housing in this area is located within the floodplain.

Table 4: Vulnerability Assessment: Pennwood Branch, Census Block Group 303021

Type of development	Number of existing buildings	Current value	Current number of people
Residential	15	\$1,324,770	37.5
Commercial	4	\$589,250	0
Total	19	\$1,9,14,020	37.5

Table 5: Vulnerability Assessment: Pennwood Branch, Census Block Group 302013

Type of development	Number of existing buildings	Current value	Current number of people
Residential	2	\$131,180	5
Commercial	0	0	0
Total	2	\$131,180	5

City of Archdale and ETJ:

The City of Archdale has numerous occupied units in flood plains areas making it highly vulnerable to flooding. Archdale has 75 occupied housing units located in a flood plain with approximately 187.5 persons exposed to flood hazards. The total value of property within the SFHA is \$7,151,340.

Muddy Creek floodplain in Census Block Group 315022 has 13 structures located in the floodplain. Replacement value for these structures is approximately \$1,307,830.

Table 6: Vulnerability Assessment: Muddy Creek, Census Block Group 315022

Type of development	Number of existing buildings	Current value	Current number of people
Residential	8	\$1,371,820	20
Commercial	0	0	0
Total	8	\$1,371,820	20

Table 7: Vulnerability Assessment: Muddy Creek, Census Block Group 315023

Type of development	Number of existing buildings	Current value	Current number of people
Residential	13	\$1,307,830	32.5
Commercial	0	0	0
Total	13	\$1,307,830	32.5

Table 8: Vulnerability Assessment: Muddy Creek, Census Block Group 316021

Type of development	Number of existing buildings	Current value	Current number of people
Residential	15	\$1,498,190	37.5
Commercial	0	0	0
Total	15	\$1,498,190	37.5

Table 9: Vulnerability Assessment: Muddy Creek, Census Block Group 315032

Type of development	Number of existing buildings	Current value	Current number of people
Residential	17	\$426,210	42.5
Commercial	0	0	0
Total	17	\$426,210	42.5

No critical facilities, government buildings or schools are located within the flood plains and it does not appear that emergency access is compromised due to road flooding. However, one extremely hazardous substance facilities is located in a watershed balance area affecting the Deep River which is part of the Randleman Lake watershed.

Town of Franklinville and ETJ:

Franklinville is highly vulnerable to floods and dam failure would likely severely impact the Town. The Randolph Mill Earthen Dam is in need of maintenance; the last inspection report states that there is seepage, several areas of sliding, and the dam face is very wet.

Table 10: Vulnerability Assessment: Randolph Mill Dam, Census Block Group 311004

Type of development	Number of existing buildings	Current value	Current number of people
Residential	0	0	0
Commercial	3	\$3,388,670	0
Total	3	\$3,388,670	0

Franklinville is just within the 50-mile "Ingestion Exposure Pathway Zone" of Shearon Harris Power Plant which means that the main radiation exposure in the event of a nuclear disaster is from ingestion of contaminated water, fish or other aquatic foods, as well as milk and fresh vegetables. US Highway 64 would be the likely evacuation route.

Town of Liberty and ETJ:

The Town of Liberty has the structures located within an SFHA. The town is within 50 miles of Shearon Harris Power Plant and evacuations would likely be via US Highway 64 and NC Highway 49.

Table 11: Vulnerability Assessment: Town of Liberty

Type of development	Number of existing buildings	Current value	Current number of people
Residential	2	\$127,400	5
Commercial	1	\$179,060	0
Total	3	\$306,460	0

Town of Ramseur:

Ramseur is vulnerable to floods and Ramseur Water Supply Dam failure would severely impact the town since this is the main water supply. There is only one occupied housing unit in a flood plain with at least 2.5 persons exposed to flood hazards. The structure is valued at \$102,420. There are also four commercial structures located within the SFHA with a combined value of \$226,640. The Town does have one government building and critical facilities exposed in the case of flooding and that facility is the Water Treatment Plant located on NC Highway 22 North.

The town of Ramseur borders an area with a moderate incidence of landslides although the likelihood of a landslide event is low.

Ramseur water is supplied by Sandy Creek Reservoir, and Ramseur Water Supply Dam. Ramseur Water Supply Dam is located within the SFHA which increases the risk of dam failure. Reportedly, there is a transverse crack in the concrete on the upstream and downstream face of the dam. A crack monitor has been placed to check movement. Dam Safety officials have recommended repairs be made on a depression near the left top abutment (no record of repair completed). Ramseur filtration plant is 1000 feet downstream; the new Ramseur filtration plant is 2700 feet downstream. Also at risk are parts of Franklinville, US 64, numerous dwellings, buildings, roads and utilities downstream.

The Ramseur Water Supply Dam is located within the SFHA which increases the risk of dam failure. Reportedly, there is a transverse crack in the concrete on the upstream and downstream face of the dam. A crack monitor has been placed to check movement. Dam Safety officials have recommended repairs be made on a depression near the left top abutment (no record of repair completed). Ramseur filtration plant is 1000 feet downstream; the new Ramseur filtration plant is 2700 feet downstream. Also at risk are US 64, numerous dwellings, buildings, roads and utilities downstream.

Table 12: Vulnerability Assessment: Town of Ramseur

Type of development	Number of existing buildings	Current value	Current number of people
Residential	1	\$102,420	2.5
Commercial	3	\$226,640	0
Critical Facility	1	Unknown	0
Total	4	\$306,460	0

Ramseur is within 50-mile "Ingestion Exposure Pathway Zone" of Shearon Harris Power Plant which means that the main radiation exposure in the event of a nuclear disaster is from ingestion of contaminated water, fish or other aquatic

foods, as well as milk and fresh vegetables. US Highway 64 would be the likely evacuation route.

City of Randleman and ETJ:

Randleman is vulnerable to flood hazards. While there is no critical facility located within the SFHA, there are approximately three occupied housing units and one multi-family unit with a total valuation of \$1,419,470 in the SFHA. An estimated 27.5 persons are exposed to flood hazards. The most critical area will be the homes and development downstream of the Randleman Dam.

One extremely hazardous substance facility is located within the Lake Reese Watershed balance area. In addition, the location of the middle school, high school and emergency shelter will be in or near the Randleman Lake flood zone which may result in compromised road access.

There are reported cracks in the Randleman Dam in unexpected areas. Emergency Plans have been completed and are on file with the State and County Emergency Management. Downstream development would be catastrophically impacted if the dam failed. Though the proposed lake area is known and mapped, floodplains surrounding the lake area have not been determined. The buffer area around the lake is 200 feet. The Hazard Mitigation Plan will need to be revised and updated after the map maintenance phase of the DFIRMs is completed.

In addition, water is supplied to Randleman by Polecat Creek Reservoir and Randleman City Lake Dam located east of the town. This high hazard dam is located within the SFHA which increases the likelihood or possibility of dam failure. Dam safety officials report seepage on abutments and wetness at the base of the dam with cracks on both sides and holes on right side. Creekrige County Road and houses are downstream of the Dam. Dam failure would result in loss of water supply, would fail Worthville Dam, and cause considerable property damage.

Table 13: Vulnerability Assessment: City of Randleman

Type of development	Number of existing buildings	Current value	Current number of people
Residential	4	\$1,419,470	27.5
Commercial	0	0	0
Total	4	\$1,419,470	0

Town of Seagrove:

Seagrove has no hazard risk areas associated with its geography.

Town of Staley:

Staley is within 50 miles of Shearon Harris Power Plant and evacuations would likely be via US 64. There is one abandoned gold mine on the north border of Staley. Its exact location, its depth and extent of underground workings is unknown.

City of Trinity and ETJ:

Trinity has a high flood risk for southwest Trinity. All totaled, Trinity has 25 people exposed to flood hazards in 10 occupied units in the SFHA at a value of \$1,994,980. In addition, there is one EHS facility located in the Lake Reese watershed balance area and three high hazard dams located in the area.

Table 14: Vulnerability Assessment: City of Trinity, Census Block Group 315011

Type of development	Number of existing buildings	Current value	Current number of people
Residential	14	\$2,563,640	35
Commercial	0	0	0
Total	14	\$2,563,640	35

Table 15: Vulnerability Assessment: City of Trinity, Census Block Group 316013

Type of development	Number of existing buildings	Current value	Current number of people
Residential	4	\$111,110	10
Commercial	0	0	0
Total	4	\$111,110	10

List of Changes made to Appendix B for 2009 Plan Update

Non-page specific changes:

- Correct capitalization of County since any reference to County in this document refers to Randolph County.
- Correct capitalization of State since any reference to State in this document refers to the State of North Carolina.
- Correct capitalization of Town or City when it references a specific Town or City.
- Correct spacing at the end of sentences from two spaces to one space as is now common with desktop publishing.
- Corrected the capitalization of Growth Management Plan, and its subsequent Areas, since it refers to a specific Plan and Ordinance adopted by the Board of County Commissioners.

- Correct grammatical and punctuation errors from the original document.
- Corrected road names to reflect the official road names within the County.
- Changed name of the nuclear power plant to Shearon Harris to reflect its correct name.
- Update map documents contained within the plan to reflect updated data.
- Updated all data in their respective locations to reflect changes made in the past 5 years.

Page B-2:

- Corrected calculations of square mileage of County and area located in watershed areas due to updated calculations from the County GIS.
- Corrected number of acres in the County due to updated calculations from the County GIS.
- Corrected number of acres in the Uwharrie National Forest due to updated calculations from the County GIS.
- Table 1 was reformatted to match the format of other tables within the document.

Page B-4:

- Original map document updated to reflect changes made since the previous Plan was adopted.

Pages B-8 through B-10:

- Original map document updated to reflect changes made since the previous Plan was adopted.

Page B-12:

- Updated the information regarding the Flood Hazard due to the implementation of new DFIRMs on January 1, 2008.

Page B-13:

- Updated the information regarding the Randleman Dam project.

Page B-15:

- Original map document updated to reflect changes made since the previous Plan was adopted.

Page B-16:

- Updated the information regarding map number four to reflect the adoption of the 2008 DFIRMs.
- Updated the list of maps for consistency.

Pages B-17 through B-29:

- Original map document updated to reflect changes made since the previous Plan was adopted.

Page B-30:

- Updated the information regarding the number of mobile classroom unit for Randolph County Schools.

Pages B-31 through B-35:

- Table 2 was updated to reflect the changes in the County and its municipalities due to development over the past 5 years and the implementation of the 2008 DFIRMs.

Page B-36:

- Updated the average number of persons per household to the national average of 2.5.

Page B-37:

- Table 3 was amended to delete the future conditions for the planning area. Due to the current economic recession it would be very difficult to accurately predict the future development for any part of the County.
- The information in the section *Location Specific Hazard Risks* was updated to match the information contained in other sections of the document.

Page B-38:

- The information regarding the northeast quadrant was updated to match the information contained in other sections of the document.

Page B-39:

- Changed name of the nuclear power plant to Shearon Harris to reflect its correct name.

- Updated flood information due to the new 2008 DFIRMs.
- Information regarding the southwest quadrant was updated to reflect new information and to accurately reflect the intent and policies of the Growth Management Plan.

Page B-40:

- Added information to the page heading to reflect that the information also covers the ETJ for the City of Asheboro.
- Table 4 was amended to delete the future conditions for the planning area. Due to the current economic recession it would be very difficult to accurately predict the future development for any part of the County.

Page B-41:

- Tables 5 through 8 were amended to delete the future conditions for the planning area. Due to the current economic recession it would be very difficult to accurately predict the future development for any part of the County.
- Added information to the page heading to reflect that the information also covers the ETJ for the City of Archdale.

Page B-42:

- Tables 9 through 11 were amended to delete the future conditions for the planning area. Due to the current economic recession it would be very difficult to accurately predict the future development for any part of the County.
- Added information to the section heading to reflect that the information also covers the ETJ for the Town of Franklinville and the Town of Liberty.
- Removed information stating that there were critical facilities between flood zones as it is no longer true.

Page B-43:

- Table 12 was amended to delete the future conditions for the planning area. Due to the current economic recession it would be very difficult to accurately predict the future development for any part of the County.
- Added information to the section heading to reflect that the information covers the Town of Ramseur.
- Added information regarding the Ramseur Water Supply Dam from another section of the plan.

Page B-44:

- Table 13 was amended to delete the future conditions for the planning area. Due to the current economic recession it would be very difficult to accurately predict the future development for any part of the County.
- Added information to the section headings to reflect that the information also covers the ETJ for the City of Randleman and the Town of Seagrove.

Page B-45:

- Tables 14 through 15 were amended to delete the future conditions for the planning area. Due to the current economic recession it would be very difficult to accurately predict the future development for any part of the County.
- Added information to the section headings to reflect that the information also covers the ETJ for the City of Trinity and the Town of Staley.

APPENDIX C: LOCAL GOVERNMENT LEGAL AUTHORITY IN NORTH CAROLINA

North Carolina legislation has empowered Randolph County to adopt and implement policies and ordinances that can mitigate the impact of natural hazards. This authority gives the County and its municipalities the power to regulate, tax, acquire property in hazardous areas and financially support hazard mitigation practices.

Mitigation is sustained action that reduces or eliminates long-term risk to people and property from impacts of natural hazards or disasters. Any action taken before, during or after a disaster event that makes structures, buildings, and communities resilient and minimizes the impact on the affected population community built environment and businesses can be a mitigating activity.

Mitigation tools are designed to reduce risk, share risk, or eliminate risk. Risk reduction refers to activities that reduce the impact of natural hazards and involves either structural (building or creating control structures) or non-structural measures (activities which modify vulnerability or exposure). Risk sharing involves using financial instruments to spread the cost of the disaster event and moderate financial losses to business, individuals and community through insurance, tax incentives, and relief payments. Risk elimination seeks to avoid exposure to natural hazards by steering development to less vulnerable areas.

Regulation

General Police Power: All local governments in North Carolina have been granted broad regulatory powers through the North Carolina General Statutes (NCGS.) General police power empowers local government to enforce ordinances which define, prohibit, regulate, or abate acts, omissions, or conditions detrimental to the health, safety, and welfare of the people, and to define and abate nuisances (including public health nuisances.)

Hazard mitigation activities are designed to protect the health, safety and welfare of the public and as such, counties and its municipalities may require hazard mitigation activities and strategies in their local ordinances.

The power to abate “nuisances,” could include, by local definition, any activity or condition making people or property more vulnerable to any hazard (NCGS 160A Article 8, Delegation and Exercise of the General Police Power to Cities and Towns, and 153A, Article 6, Delegation and Exercise of the General Police Power to Counties.)

Building Codes and Building Inspection: Counties and municipalities can engage in risk reduction activities directed at strengthening building codes and requiring retrofits on existing structures and facilities (including private residences and business facilities,) to protect the integrity of buildings and other structures in the event of a natural hazard.

North Carolina has a statewide compulsory building code (NCGS 143-138(c)). However, municipalities and counties may adopt stronger building codes for their respective areas if approved by the state as providing “adequate minimum standards” (NCGS 143-138(e).) Local regulations cannot be less restrictive than the State code. Exempted from the State code are: public utility facilities other than buildings; liquefied petroleum gas and liquid fertilizer installations; and farm buildings outside municipal jurisdictions. A State permit is not required for structures under \$20,000. (Note that exemptions apply only to state, not local permits.)

Local governments in North Carolina are also empowered to carry out building inspections (NCGS 160A, Article 19, Part 5; and 153A Article 18, Part 4,) and empowers counties and their municipalities to create an inspection department, enumerates its duties and responsibilities, including enforcement of State and local laws relating to the construction of buildings, installation of plumbing, electrical, heating systems, building maintenance and other matters.

Local governments may:

- Set building codes standards;
- Enforce building codes;
- Conduct ongoing building inspections to ensure structural integrity;
- Require building strengthening and retrofits to withstand winds and absorb the force of movement; and
- Require safe construction practices such as securing buildings, mobile homes and manufactured units to a foundation and using appropriate fasteners to connect the roof to the structure.

Land Use Controls: Land use controls are effective risk elimination strategies. Local government can control the use of land through various land use regulatory powers giving local control over the amount, density, quality, and location of new development. Land use regulatory power includes the power to engage in planning, enact and enforce zoning ordinances, floodplain ordinances, storm water management ordinances, watershed ordinances and subdivision controls.

Zoning: Zoning is the most basic tool available to control the use of land. NC General Statutes give broad enabling authority for counties and municipalities in North Carolina to use zoning as a planning tool (NCGS

160A-381; and for counties in NCGS 153A-340.) Counties may also regulate inside municipal jurisdiction at the request of a municipality (NCGS 160A-360(d).)

Land “uses” controlled by zoning includes the type of use (e.g., residential, commercial, industrial) as well as minimum specifications for use (e.g., lot size, building height, set backs, density). Local government is authorized to divide its territorial jurisdiction into districts, and to regulate and restrict the erection, construction, reconstruction, alteration, repair or use of buildings, structures, or land within those districts (NCGS 160A-382). Districts may include general use districts, overlay districts, and special use or conditional use districts.

Zoning ordinances consist of maps and written text and have the force of law behind them.

Comprehensive or Master Planning: In order to exercise the regulatory powers related to land use conferred by the General Statutes, local governments in North Carolina are required to create or designate a planning agency (NCGS 160A-3 87). The planning agency may: make studies of an area; determine objectives; prepare and adopt plans for achieving objectives; develop and recommend policies, ordinances, and administrative means to implement plans; and perform other related duties (NCGS 160A-361).

NCGS 160A-383, requires that zoning regulations be made in accordance with a comprehensive plan. While the ordinance itself may provide evidence that zoning is being conducted “in accordance with a plan,” the existence of a separate comprehensive planning document ensures that the government is developing regulations and ordinances that are consistent with the overall goals of the community.

Subdivision Regulation: Subdivision regulations control the division of land into parcels for the purpose of building development or sale. Subdivision is defined as all divisions of a tract or parcel of land into two or more lots and all divisions involving a new street. (NCGS 160A-376). The definition of subdivision does not include the division of land into parcels greater than ten acres where no street right-of-way dedication is involved (NCGS 160A-376(2)).

Flood-related subdivision controls typically require installation of adequate drainage facilities, and the design of water and sewer systems to minimize flood damage and contamination. Generally, subdivision regulations require that subdivision plans be approved prior to the sale of land. Subdivision regulation is limited in its ability to directly affect

the type of use made of land or minimum specifications for structures. Broad subdivision control enabling authority for municipalities is granted through NCGS 160-371, and in 153-330 for counties and municipal extraterritorial areas.

Floodplain Regulation: The “Act to Prevent Inappropriate Development in the One Hundred-Year Floodplain and to Reduce Flood Hazards” passed by the state of North Carolina to regulate development within floodways (NCGS 143-214.51-214.61) is a risk reduction or risk elimination tool depending on local government use. The act is designed to minimize the extent of floods by preventing obstructions that inhibit water flow and increase flood height and damage. In addition, such regulation will prevent and minimize loss of life, injuries, property damage, and other losses in flood hazard areas.

This statute authorizes counties and municipalities to adopt a flood hazard prevention ordinance to regulate uses in flood hazard areas and to grant permits for the use of flood hazard areas that are consistent with the requirements of the statute. The statute establishes minimum standards for local ordinances and provides for variances for prohibited uses such as:

- (a) A flood hazard prevention ordinance adopted by a County or city pursuant to this part shall, at a minimum:
 1. Meet the requirements for participation in the National Flood Insurance Program and of this section.
 2. Prohibit new solid waste disposal facilities, hazardous waste management facilities, salvage yards, and chemical storage facilities in the 100-year floodplain except as noted in section (b) below.
 3. Provide that a structure or tank for chemical or fuel storage incidental to a use that is allowed under this section or to the operation of a water treatment plant or wastewater treatment facility may be located in a 100-year floodplain only if the structure or tank is either elevated above base flood elevation or designed to be watertight with walls substantially impermeable to the passage of water and with structural components capable of resisting hydrostatic and hydro dynamic loads and the effects of buoyancy.
- (b) A flood hazard prevention ordinance may include a procedure for granting variances for uses prohibited under NCGS 143-215.54
- (c) A County or municipality shall notify the Secretary of Crime Control and Public Safety of its intention to grant a variance at least 30 days prior to granting the variance. A variance may be granted upon finding that all of the following apply:

- (1) The use serves a critical need in the community;
- (2) No feasible location exists for the location of the use outside the 100-year floodplain;
- (3) The lowest floor of any structure is elevated above the base-flood elevation or is designed to be watertight with walls substantially impermeable to the passage of water and with structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy; and
- (4) The use complies with all other applicable laws and regulations.

Enforcement

Local government enforcement of existing ordinances, building codes, and local plans is critical to effective mitigation

Acquisition

Local governments can eliminate risk through their power to acquire a piece of property or area (either in fee or a lesser interest, such as an easement), and remove the property from the private marketplace thereby eliminating or reducing the possibility of inappropriate development. North Carolina legislation empowers cities, towns, and counties to acquire property for public purpose by gift, grant, devise, bequest, exchange, purchase, lease, or eminent domain (NCGS 153A. Article 8; 160A. Article 11).

Taxation

As a risk reduction strategy, local governments may set preferential tax rates for areas unsuitable for development (e.g., agricultural land, wetlands), thereby discouraging development in hazardous areas. As a risk sharing strategy, local government may also levy special assessments on property owners for all or part of the costs of acquiring, constructing, reconstructing, extending or otherwise building or improving flood and hurricane protection works within a designated area (NCGS 160A-238.)

Expenditure

The North Carolina General Assembly has given local governments the power to make expenditures in the public interest. By including hazard mitigation principles as a routine consideration in all spending decisions (annual budgets, capital improvement plans) local governments can effectively steer future development and growth and mitigate the impacts of natural hazards.

FUNDING SOURCES

In the State of North Carolina, property taxes provide the primary source of revenue for counties. These taxes primarily finance critical services available and delivered on a daily basis, such as schools, health and social services, planning, solid waste management, and emergency service, leaving little for funding of special projects such as hazard mitigation activities.

Government Funding

Some state and federal funds are available to local governments for the development and implementation of hazard mitigation programs.

Federal Funding:

- **The Hazard Mitigation Grant Program (HMGP).** A post-disaster declaration funding provided for under the Stafford Act. The HMGP is funded by the Federal government and administered by the State. HMGP funds can be used for acquisition or relocation, retrofitting, development of local mitigation standards and comprehensive mitigation planning, structural hazard control and the purchase of equipment to improve preparedness and response.
- **Pre Disaster Mitigation Program Grants (PDM).** The PDM Program provides funding to States and communities for cost-effective hazard mitigation activities. The PDM Program was authorized by §203 of the Robert T. Stafford Disaster Assistance and Emergency Relief Act (Stafford Act), 42 USC, as amended by §102 of the Disaster Mitigation Act of 2000 (DMA). FEMA provides PDM grants to States that, in turn, provide sub-grants to local governments for mitigation activities such as planning and the implementation of projects identified through the evaluation of natural and man-made hazards.
- **Flood Mitigation Assistance Programs.** The Flood Mitigation Grant Program (FMAP) is a federally funded program for mitigation assistance to states, communities and individuals to reduce or eliminate the long-term risk of flood damage to the built environment and real property. Unlike the HMGP, FMAP is available to eligible communities on an annual basis. An eligible community must be a participant in the National Flood Insurance Program and must develop a flood mitigation plan. FMAP funds may be used for elevation and/or dry flood proofing of structures, acquisition of real property, relocation or demolition of structures, and other minor structural projects.

- **National Flood Insurance Program.** Federal risk-sharing program. In order to participate, communities must adopt and enforce floodplain management ordinances to reduce future losses.
- **Buy out programs.** Programs which seek to buy back floodplains, relocate residents, and demolish structures in order to eliminate or reduce payouts for recurring flood damage.
- **Earthquake Hazard Reduction Grants.** This program provides funds for states with moderate or high risk of seismic activity.
- **Community Development Block Grants.** The Community Development Block Grant (CDBG) is designed to assist communities in rehabilitating substandard dwelling structures and to expand economic opportunities, primarily for low-to-moderate-income families. In addition, as a result of a Presidential declared disaster, CDBG funds may be used for long-term needs such as acquisition, reconstruction, and redevelopment of disaster-affected areas.
- **Small Business Administration (SBA) Pre-Disaster Mitigation Loan Program:** The purpose of the Pre-Disaster Mitigation Loan Program is to make low-interest; fixed-rate loans to eligible small businesses for the purpose of implementing mitigation measures to protect business property from damage that may be caused by future disasters. The program is a pilot program, which supports the Federal Emergency Management Agency (FEMA) Pre-Disaster Mitigation Program.

State Funding:

- **Uniform Relocation Act:** Tenants who must relocate as a result of acquisition of their housing are entitled to URA relocation benefits (such as moving expenses, replacement housing rental payments, and relocation assistance advisory services), regardless of the owner's voluntary participation
- **Ability to Pay:** In recognition of the disparate economic prosperity of the State's one hundred counties, the North Carolina Department of Commerce ranks counties in an economic tier system. The impetus for this system was the William S. Lee Quality Jobs and Business Expansion Act of 1996 which provides for a sliding scale of state tax credits for economic investment. The Lee Act has become the state's main development tool in an effort to help smaller rural counties become economically competitive. The most economically distressed counties are ranked in Tier 1 and the most economically prosperous in Tier 5. The rankings are evaluated annually using three factors:

- population growth;
- unemployment rate; and
- per capita income.

The 2007 County Tier Designation places Randolph County in Tier 4.¹ The tier ranking is widely used by the State as a measure of an individual County's ability to pay when applying for state and federal grants.

Non-Government Funding:

Funding from non-governmental sources for mitigation efforts is possible through the contribution of non-governmental organizations, such as churches, charities, community relief funds, the Red Cross, hospitals, for-profit businesses, and nonprofit organizations (e.g., nature conservancy, land trust organizations).

TECHNICAL ASSISTANCE

State and Federal Technical Assistance

Agencies such as the Federal Emergency Management Association (FEMA) and the North Carolina Division of Emergency Management (NCDEM) have made available numerous implementation manuals and other resource documents. These manuals provide information on mitigation techniques for various hazards, including hurricanes, floods, wildfires, tornadoes and earthquakes and include technical information on engineering principles, construction methods, costs and suggestions for how techniques can be financed and implemented. Federal agencies such as the U.S. Army Corps of Engineers and Soil Conservation Service also provide similar services.

Statewide Floodplain Mapping Initiative: The State of North Carolina, through the Federal Emergency Management Agency's Cooperating Technical Community partnership initiative, has been designated as a Cooperating Technical State (CTS). As a CTS, the State has assumed primary ownership and responsibility for Flood Insurance Rate Maps (FIRMs) for all North Carolina communities. This project includes conducting flood hazard analysis and producing updated, digital FIRMs (DFIRMs).

Regional Technical Assistance

¹ NC Department of Commerce,
[http://www.nccommerce.com/en/BusinessServices/SupportYourBusiness/Incentives/Article+3A+\(William+S.+Lee+Act\)+Archived+Wage+Standards.htm](http://www.nccommerce.com/en/BusinessServices/SupportYourBusiness/Incentives/Article+3A+(William+S.+Lee+Act)+Archived+Wage+Standards.htm)

Piedmont Triad Council of Governments:

The Piedmont Triad Council of Governments (PTCOG) is a voluntary association of local governments authorized by state law in part, to provide management, planning and technical services to local governments. PTCOG services include: preparing multi-jurisdictional hazard mitigation plans; preparing land use plans, zoning ordinances, and annexation studies; producing GIS maps to support a variety of planning activities; and by providing planning and training for County emergency medical services staffs.

COUNTY AND MUNICIPAL CAPABILITY

This municipal and County capability assessment identifies and evaluates existing systems, plans, documents related to hazard mitigation. Randolph County and all municipalities within the County will create a process to incorporate its floodplain ordinance, subdivision ordinance and zoning activities into this and future revisions of the hazard mitigation plan. For this and future multi-jurisdictional hazard mitigation plan development or revision, all local planning documents, such as land development plans, comprehensive plans, and capital improvement plans, are to be provided to the Hazard Mitigation Planning team by the Planning Director. The Planning Director will ensure that all goals and strategies of the hazard mitigation plan are consistent with existing planning documents.

Table 1: Randolph County Capability:

Yes	In progress	No	Plans, Policies, Ordinances and Regulations in place	Comments
X			Zoning	Countywide zoning effective since 1987. Article X regulates size and placement of signs in zoning districts. Article XI regulates non-conforming use of structure or property.
X			Comprehensive Land Use Planning	Growth Management Plan adopted February 4, 2002.
X			Watershed Protection Program	Watershed and Critical Areas of existing and proposed watersheds have been protected since 1987. The County regulated the Randleman Lake Watershed Area prior to adoption by the State and surrounding jurisdictions.
	X		Storm Water Management	County programs involving expanded storm water management continues to evolve as part of smart environmental programming.
X			National Flood Insurance Program	Member since 1981.
X			Floodplain Ordinance	Randolph County land use programs restrict or prohibit certain types of development within designated flood plains and regulate the construction of barriers that might increase flood hazards to other lands.
X			Subdivision Regulations	Provides for the orderly division of land along with general requirements and minimum standards of design.
		X	Drought Management Policies	

Appendix C: Local Government Legal Authority in North Carolina

Yes	In progress	No	Plans, Policies, Ordinances and Regulations in place	Comments
		X	Tree preservation program	
X			Stream Buffer protection	Contained in Subdivision Ordinance and Watershed Protection Ordinance.
X			GIS Capability	The GIS system provides detailed data on property such as ownership, land use type, location, value of land and structures.
X			Permitting System	Centralized system for issuing all land development permits that allows the County to accurately track and monitor development occurring in the County.
X			Well Protection Program	The program has rules governing the construction and abandonment of private well water supplies.
X			Randolph County Watershed Interlocal Agreements	The County Planning Director is authorized by the State to administer State-mandated watershed regulations within a municipality that makes such a request of Randolph County by resolution. Agreements are with: Liberty, Franklinville, Staley and Seagrove.

Table 2: City of Archdale Capability:

Yes	In progress	No	Plans, Policies, Ordinances and Regulations in place	Comments:
X			Zoning	Article III 3.5: Open Space requirements Section 3.18: Class C Mobile Homes Prohibited SR5: Mobile Home Parks Article XI: Non Conforming Situations
X			Land Use Development Plan	
X			Watershed Protection Program	Article 300: Allows single-family residential development at a max of one dwelling unit per two acres. All other residential and non-residential development shall be allowed at a max of 6% built upon area.
X			Storm Water Management	Phase II community: storm water management mandatory and in progress;
X			National Flood Insurance Program participant	Member
X			Floodplain Ordinance:	Article V: Provisions for flood hazard reduction Section B: Specific standards are outlined
X			Subdivision Regulations	Required open space for subdivisions Section 1-6 Opens space requirements: active and passive open space designations, greenways, greenbelts and dimensional limitations.
		X	Drought Management Policies	
X			Emergency Response Plan	Administered through watershed ordinance
		X	Tree preservation program	
X			Stream Buffer ordinance	Section 304 Watershed Protection Ordinance:
X			GIS Capability	Arc View 3.3
X			Randolph County Watershed Interlocal Agreements	

Table 3: City of Asheboro Capability:

Yes	In progress	No	Plans, Policies, Ordinances and Regulations in place	Comments
X			Zoning	Article 100: General Regulations Article 800: Non Conforming Situations:
X			Land use Development Plan	Yes
X			Watershed Protection Program	Article 300B: Watershed Protection Regulations Critical Area: Allows single-family residential development at a max of one dwelling unit per two acres. All other residential and non-residential development shall be allowed at a max of 6% built upon area.
		X	Storm Water Management	
X			National Flood Insurance Program	Member
X			Floodplain Ordinance:	Flood Damage Prevention Ordinance
X			Subdivision Regulations	
X			Drought Management Policies	Water conservation plan not reviewed
X			Emergency Response Plan	
		X	Tree preservation program	
X			Stream Buffer ordinance	As part of watershed protection ordinance: 100' around reservoirs; 50' on both sides of perennial streams.
X			GIS Capability	Also utilizes Randolph County information; In process of deploying City GIS on internet
X			Randolph County Watershed Interlocal Agreements	

Table 4: City of Randleman Capability:

Yes	In progress	No	Plans, Policies, Ordinances and Regulations in place	Comments
X			Zoning	Includes “floodplain district,” and “watershed overlay district.”
X			Land Development Plan	
X			Watershed Protection Program	
		X	Storm Water Management	Minimal reference to storm drainage in subdivision ordinance. Amount of impervious surface not addressed.
X			National Flood Insurance Program	Member
X			Floodplain Ordinance:	Chapter 18, Article II: Flood Damage Prevention act
X			Subdivision Regulations	Flood control ordinance is within subdivision ordinance.
		X	Drought Management Policies	
			Emergency Response Plan	Not reviewed
		X	Tree preservation program	Subdivision ordinance: tree planting not required; but service to be expected.
X			Stream Buffer ordinance	30’ buffer for development required along perennial streams
	X		GIS Capability	
X			Randolph County Watershed Interlocal Agreements	

Table 5: Town of Ramseur Capability:

Yes	In progress	No	Plans, Policies, Ordinances and Regulations in place	Comments
X			Zoning	
X			Land Development Plan	March 2003.
		X	Watershed Protection Program	
		X	Storm Water Management	
		X	National Flood Insurance Program	
		X	Floodplain Ordinance:	
X			Subdivision Regulations	Section VII: Use Manufactured Home Park, Site development and Parking: Manufactured homes shall be properly staked. Sect. XII, 3 Nonconforming uses: If SFH substantially damaged, may rebuild SFH so long as nonconformity is not increased.
		X	Drought Management Policies	
			Emergency Response Plan	Not reviewed.
		X	Tree preservation program	
X			Stream Buffer ordinance	Subdivision ordinance have recently been revised to include regulations to require 50 foot vegetated buffer strips along both sides of all perennial streams within new subdivisions to reduce storm runoff and protect water quality
		X	GIS Capability	
X			Randolph County Watershed Interlocal Agreements	

Table 6: Town of Liberty Capability:

Yes	In Progress	No	Plans, Policies, Ordinances and Regulations in place	Comments
X			Zoning	
X			Land Development Plan	
X			Watershed Protection Program	
		X	Storm Water Management	
		X	National Flood Insurance Program	Town will participate once State/FEMA complete DFIRMS.
		X	Floodplain Ordinance:	
X			Subdivision Regulations	
X			Drought Management Policies	The Town has a water shortage response ordinance. It has been utilized during droughts.
	X		Emergency Response Plan	Expect to have a plan in place by the end of the summer. Draft Ordinance is complete and is undergoing staff review.
		X	Tree preservation program	
X			Stream Buffer ordinance	Included as part of the Watershed Protection Ordinance.
		X	GIS Capability	
X			Permitting System:	The town does issue Zoning Compliance Permits as part of the Zoning Ordinance.
	X		Well Protection Program:	The town and NCRWA are in the final stages of permitting a wellhead protection plan.
		X	Randolph County Watershed Interlocal Agreements	

Table 7: Town of Franklinville Capability:

Yes	In Progress	No	Plans, Policies, Ordinances and Regulations in place	Comments
X			Zoning	
X			Land Development Plan	
X			Watershed Protection Program	
		X	Storm Water Management	
X			National Flood Insurance Program	
X			Floodplain Ordinance:	
X			Subdivision Regulations	
		X	Drought Management Policies	
		X	Emergency Response Plan	
		X	Tree preservation program	
X			Stream Buffer ordinance	
		X	GIS Capability	
			Permitting System:	
			Well Protection Program:	
X			Randolph County Watershed Interlocal Agreements	

Table 8: Town of Seagrove Capability:

Yes	In Progress	No	Plans, Policies, Ordinances and Regulations in place	Comments
X			Zoning	
		X	Land Development Plan	
		X	Watershed Protection Program	
		X	Storm Water Management	
		X	National Flood Insurance Program	
		X	Floodplain Ordinance:	
		X	Subdivision Regulations	
		X	Drought Management Policies	
		X	Emergency Response Plan	
		X	Tree preservation program	
		X	Stream Buffer ordinance	
		X	GIS Capability	
		X	Permitting System:	
		X	Well Protection Program:	
		X	Randolph County Watershed Interlocal Agreements	

Table 9: Town of Staley Capability:

Yes	In Progress	No	Plans, Policies, Ordinances and Regulations in place	Comments
X			Zoning	
		X	Land Development Plan	
		X	Watershed Protection Program	
		X	Storm Water Management	
		X	National Flood Insurance Program	
		X	Floodplain Ordinance:	
		X	Subdivision Regulations	
		X	Drought Management Policies	
		X	Emergency Response Plan	
		X	Tree preservation program	
		X	Stream Buffer ordinance	
		X	GIS Capability	
		X	Permitting System:	
		X	Well Protection Program:	
		X	Randolph County Watershed Interlocal Agreements	

Table 10: City of Trinity Capability:

Yes	In Progress	No	Plans, Policies, Ordinances and Regulations in place	Comments
X			Zoning	
X			Land Development Plan	
X			Watershed Protection Program	Critical Area: Allows single-family residential development at a max of one dwelling unit per two acres. All other residential and non-residential development shall be allowed at a max of 6% built upon area.
	X		Storm Water Management	Phase II community: Must comply with EPA mandate to address storm water drainage
X			National Flood Insurance Program	Section 15: Mobile home guidelines. Minimum roof pitch of 2.2 feet for every 12 feet. Mobile home construction must meet or exceed standards of US Department of Housing and Urban Development
X			Floodplain Ordinance	
X			Subdivision Regulations	
		X	Drought Management Policies	
		X	Emergency Response Plan	
		X	Tree preservation program	
X			Stream Buffer ordinance	
X			GIS Capability	
		X	Permitting System:	
		X	Well Protection Program	
		X	Randolph County Watershed Interlocal Agreements	

List of Changes made to Appendix B for 2009 Plan Update

Non-page specific changes:

- Correct capitalization of County since any reference to County in this document refers to Randolph County.
- Correct capitalization of State since any reference to State in this document refers to the State of North Carolina.
- Correct capitalization of Town or City when it references a specific Town or City.

- Correct spacing at the end of sentences from two spaces to one space as is now common with desktop publishing.
- Corrected the capitalization of Growth Management Plan, and its subsequent Areas, since it refers to a specific Plan and Ordinance adopted by the Board of County Commissioners.
- Correct grammatical and punctuation errors from the original document.
- Corrected road names to reflect the official road names within the County.
- Changed name of the nuclear power plant to Shearon Harris to reflect its correct name.
- Updated abbreviations to the full description.
- Updated all data in their respective locations to reflect changes made in the past 5 years.

Page C-1:

- Removed the word *tax* from the introductory paragraph since it was a duplicate.

Page C-3:

- Revised the last paragraph on the page to clarify the intended meaning of the paragraph.

Page C-7:

- Updated information regarding Earthquake Hazard Reduction Grants to reflect that the program provides funding for mitigation activities.
- Removed information regarding Alternate funding for Open Space Management since the information could not be verified to be available at the website referenced in the 2004 Plan.

Page C-8:

- Updated the County Tier Designation based upon new information.

Page C-10:

- Placed heading on page to indicate a new section of the 2009 Plan.
- Table 1 was updated to reflect the current plans, policies, ordinances and regulations in place. The table was further revised to remove specific regulations from the 2009 Plan so as to prevent the need for constant review in case of policy or ordinance changes. Lastly, the County name was removed from the table since the table heading listed the jurisdiction.

Page C-12:

- Table 2 was updated to reflect the current plans, policies, ordinances and regulations in place. The table was further revised to remove specific regulations from the 2009 Plan so as to prevent the need for constant review in case of policy or ordinance changes. Lastly, the City name was removed from the table since the table heading listed the jurisdiction.

Page C-13:

- Table 3 was updated to reflect the current plans, policies, ordinances and regulations in place. The table was further revised to remove specific regulations from the 2009 Plan so as to prevent the need for constant review in case of policy or ordinance changes. Lastly, the City name was removed from the table since the table heading listed the jurisdiction.

Page C-14:

- Table 4 was updated to reflect the current plans, policies, ordinances and regulations in place. The table was further revised to remove specific regulations from the 2009 Plan so as to prevent the need for constant review in case of policy or ordinance changes. Lastly, the City name was removed from the table since the table heading listed the jurisdiction.

Page C-15:

- Table 5 was updated to reflect the current plans, policies, ordinances and regulations in place. The table was further revised to remove specific regulations from the 2009 Plan so as to prevent the need for constant review in case of policy or ordinance changes. Lastly, the City name was removed from the table since the table heading listed the jurisdiction.

Page C-16:

- Table 6 was updated to reflect the current plans, policies, ordinances and regulations in place. The table was further revised to remove specific regulations from the 2009 Plan so as to prevent the need for constant review in case of policy or ordinance changes. Lastly, the City name was removed from the table since the table heading listed the jurisdiction.

Page C-17:

- Table 7 was updated to reflect the current plans, policies, ordinances and regulations in place. The table was further revised to remove specific

regulations from the 2009 Plan so as to prevent the need for constant review in case of policy or ordinance changes. Lastly, the City name was removed from the table since the table heading listed the jurisdiction.

Page C-18:

- Tables 8 and 9 were updated to reflect the current plans, policies, ordinances and regulations in place. The table was further revised to remove specific regulations from the 2009 Plan so as to prevent the need for constant review in case of policy or ordinance changes. Lastly, the City name was removed from the table since the table heading listed the jurisdiction.

Page C-19:

- Table 10 was updated to reflect the current plans, policies, ordinances and regulations in place. The table was further revised to remove specific regulations from the 2009 Plan so as to prevent the need for constant review in case of policy or ordinance changes. Lastly, the City name was removed from the table since the table heading listed the jurisdiction.

APPENDIX D:

**Randolph County Multi-jurisdictional Hazard Mitigation Plan
Evaluation and Monitoring**

Part I. Flood mitigation monitoring

Jurisdiction	# of new structures built in floodplain	Percent increase or decrease in floodplain development	Percent Increase/decrease in flood insurance policies in force	Flood damage information recorded and mapped for jurisdiction	# structures in SFHA damaged from flood event /Damage cost estimate	# structures flood damaged outside of SFHA /Damage cost estimate	# of Repetitive Damage Structures	Latest flood prevention ordinance adopted?	NFIP Member	Based on new knowledge of actual occurrence of flood events and damage, recommend further review of plan and revise or amend as necessary.
County										
Archdale										
Asheboro										
Franklinville										
Liberty										
Ramseur										
Randleman										
Seagrove										
Staley										
Trinity										
Total:										

Comments and Recommendations:

Randolph County Multi-jurisdictional Hazard Mitigation Plan Evaluation and Monitoring

Part 2: Other Hazards

	Number of wind damaged structures	Average cost of damage	Generators needed	Generators procured	Problems or Considerations:
County					
Archdale					
Asheboro					
Franklinville					
Liberty					
Ramseur					
Randleman					
Seagrove					
Staley					
Trinity					
Totals					
% increase in # of high hazard dams (HHd)					
% of HHd Emergency Plans on file with County Emergency Management					
% increase in # of Intermediate hazard dams					
% increase in # of low hazard dams					

Has there been progress toward attainment of the Hazard Mitigation goals of the Strategy? Yes No

NORTH CAROLINA
RANDOLPH COUNTY

AFFIDAVIT OF PUBLICATION

Before the undersigned, a Notary Public of said County and State, duly commissioned, qualified, and authorized by law to administer oaths, personally appeared

Maria Shaw

who being first duly sworn, deposes and says, that he (she) is

Business Manager

of The Courier-Tribune, engaged in the publication of a newspaper known as The Courier-Tribune, published, issued, and entered as second class mail in the City of Asheboro, in said County and State; and the he (she) is authorized to make this affidavit and sworn statement; that the notice or other legal advertisement, a true copy of which is attached hereto, was published in the Courier-Tribune on the following dates:

April 30, 2009

and that the said newspaper in which such notice, paper, document, or legal advertisement was published was, at the time of each and every such publication, a newspaper meeting all of the requirements and qualifications of Section 1-597 of the General Statutes of North Carolina, 1943, as amended, and was a qualified newspaper within the meaning of Section 1-597 of the General Statutes of North Carolina.

the 30th day of April, 2009

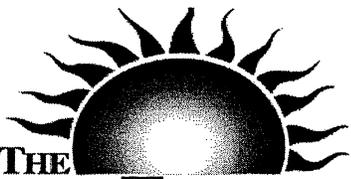
Maria Shaw

Sworn to and subscribed before me the 30th day of April, 2009

Janice W. Rimmer
Notary Public

My commission expires: 6/19/11

NOTICE
Public comment period will be held by the County of Randolph and its incorporated municipalities on Thursday, May 14, 2009, at 8:00 a.m. in the Commissioners Meeting Room at the Randolph County Office Building, 725 W. Howell Rd., Asheboro, NC. The purpose is to give citizens the opportunity to provide comments on the updated draft version of the Randolph County Multi-Jurisdictional Multi-Hazard Mitigation Plan that was originally adopted in 2004. The draft plan can be viewed on the Randolph County Government webpage at www.randolphnc.us.
Donovan Davis
Emergency Services Director
11/4/09/08:10:43 AM



THE COURIER-TRIBUNE

Affidavit of Publication

State of North Carolina,
Randolph County

To Whom It May Concern:

This is to certify the advertisement attached hereto has been published in-

The Courier-Tribune

on the following dates:

July 15

Sworn to on this 4th day
of August, 2011

Jenny Shore
Courier-Tribune Representative

Sworn to and Subscribed
Before me this 4th day
of August, 2011

Lydia B. Shiver
Notary Public

My Commission Expires
12/13/2012

LYDIA B. SHIVER
Notary Public, North Carolina
Randolph County
My Commission Expires
12/13/2012

NOTICE

The Liberty Town Council will conduct a public hearing at 7:30 pm on Monday, July 25, 2011 in the Town Hall at 239 S. Fayetteville Street. The purpose is to give citizens the opportunity to provide comments on the undated draft version of the 2009 Randolph County Multi-Jurisdictional Multi-Hazard Mitigation Plan. The plan was originally adopted in 2004. The draft plan can be viewed on the Randolph County Government webpage at www.co.randolph.nc.us.

1t 7/15/11



Affidavit of Publication

State of North Carolina,
Randolph County

To Whom It May Concern:

This is to certify the
advertisement attached
hereto has been published
in-

The Courier-Tribune

on the following dates:

July 6, 2011
July 7, 2011

TOWN OF STALEY
LEGAL NOTICE

Public Hearing

A public hearing will be held on July 12, 2011, at 7 p.m.,
at the Town Hall, 220 S. Main St., Staley, North Carolina,
concerning the countywide Hazard Mitigation Plan. The
plan can be viewed before the Public Hearing on the
Randolph County Website.

Lonna Hart
Town Clerk

2ts - 7/6,7/2011

Sworn to on this 11th day
of July, 2011

Brendi Poole

Courier-Tribune Representative

Sworn to and Subscribed
Before me this 11th day
of July, 2011

Lydia B. Shiver
Notary Public

My Commission Expires
12/13/2012

LYDIA B. SHIVER
Notary Public, North Carolina
Randolph County
My Commission Expires
12/13/2012



Affidavit of Publication

State of North Carolina,
Randolph County

To Whom It May Concern:

This is to certify the advertisement attached hereto has been published in-

The Courier-Tribune

on the following dates:

June 10, 2011

Notice of Public Hearing

The public will take notice that the Board of Aldermen of the City of Randleman has called a public hearing at 6:30 P.M. on Monday, June 20, 2011 at the Council Chambers of the Randleman City Hall Annex on the matter of adoption resolution of the Randolph County Multi-Jurisdictional Multi-Hazard Mitigation Plan. This plan was originally adopted in 2004.

Greg Patton

Planning Director

1t - 6/10/2011

Sworn to on this 22nd day
of June, 2011

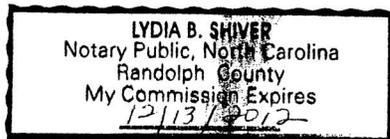
Brenda Poole

Courier-Tribune Representative

Sworn to and Subscribed
Before me this 22nd day
of June, 2011

Lydia B. Shiver
Notary Public

My Commission Expires
12/13/2012



**APPENDIX G:
Master List of Structures in Floodplains**

STRUCT_ID	ADDRESS	BGROUP	FLOODZONE	PIN	LAND_VALUE	BLDG_VALUE	TOT_VALUE	LAND_USE
P600264	2347 FORK CREEK MILL RD, 27341	308022	AE	7685475043	\$ 56,660	\$ 117,770	\$ 174,430	101
P601860	6540 NC HWY 47, 27239	307002	AE	6697181851	\$ 331,170	\$ -	\$ 331,170	113
P6439	4930 NC HWY 22 42, 27316	309002	AE	8618870142	\$ 155,820	\$ 101,280	\$ 257,100	401
P649371	5175 NC HWY 49 S, 27205	307001	AE	7618287756	\$ 262,700	\$ 211,750	\$ 474,450	397
P649333	1396 WILLOW DOWNS CT, 27205	308021	AE	7669806336	\$ 44,170	\$ 117,560	\$ 161,730	101
P55752	4983 OLD NC HWY 49, 27205	307001	AE	7619892258	\$ 137,910	\$ 1,460	\$ 139,370	112
T43280	1252 COPPERHEAD RD, 27205	308011	AE	7669797217	\$ 14,250	\$ 400	\$ 14,650	108
T624071	4812 OLD NC HWY 49, 27205	306001	AE	7710804964	\$ 28,670	\$ -	\$ 28,670	112
P653220	597 SYKES FARM RD, 27205	302022	SHADED X	7750915332	\$ 41,310	\$ 449,830	\$ 491,140	101
P619959	1765 PINE GROVE DR, 27205	302021	AE	7760139970	\$ 38,690	\$ 86,560	\$ 125,250	101
P1133	2511 OLD COLERIDGE RD, 27344	309002	AE	8730437669	\$ 28,400	\$ 32,470	\$ 60,870	101
P619950	1741 PINE GROVE DR, 27205	302021	AE	7760240110	\$ 21,340	\$ 89,740	\$ 111,080	101
M630088	945 S CHURCH ST, 27203	301002	AE	7750783637	\$ 153,000	\$ 2,466,470	\$ 2,619,470	212
P616043	209 ARMFIELD AVE, 27203	301002	AE	7750792154	\$ 16,020	\$ 39,620	\$ 55,640	101
P616005	202 ARMFIELD AVE, 27203	301001	AE	7750793343	\$ 8,720	\$ 39,520	\$ 48,240	101
P628840	815 GLENWOOD RD, 27203	302013	AE	7760090339	\$ 8,480	\$ -	\$ 8,480	697
P615966	832 HAMMER AVE, 27203	301001	AEFW	7750793403	\$ 8,840	\$ 31,780	\$ 40,620	101
M615967	818 HAMMER AVE, 27203	301001	AE	7750793601	\$ 49,000	\$ 255,330	\$ 304,330	211
P613424	717 GLENWOOD RD, 27203	302013	AE	7760090645	\$ 16,610	\$ 48,980	\$ 65,590	102
M615968	806 HAMMER AVE, 27203	301001	AE	7750793601	\$ 49,000	\$ 255,330	\$ 304,330	211
P613423	715 GLENWOOD RD, 27203	302013	AE	7760090645	\$ 16,610	\$ 48,980	\$ 65,590	102
M615974	809 S CHURCH ST, 27203	301001	AE	7750791661	\$ 56,000	\$ 408,450	\$ 464,450	211
M615969	740 HAMMER AVE, 27203	301001	SHADED X	7750793805	\$ 56,000	\$ 291,870	\$ 347,870	211
P628830	715 S PARK ST, 27203	301002	AEFW	7751604066	\$ 7,710	\$ -	\$ 7,710	697
P614268	709 S PARK ST, 27203	301002	AE	7751604168	\$ 21,980	\$ 61,250	\$ 83,230	101
P614329	726 W KIVETT ST, 27203	301001	AE	7751409826	\$ 23,080	\$ 80,900	\$ 103,980	101
P613884	412 GLENWOOD RD, 27203	302012	AE	7751909958	\$ 19,090	\$ 69,040	\$ 88,130	101
P639841	735 HOLLY ST, 27203	301001	AE	7751418091	\$ 17,660	\$ 53,740	\$ 71,400	101
P614039	344 LINDLEY AVE, 27203	302012	AE	7751918115	\$ 15,730	\$ 56,330	\$ 72,060	101
P614038	342 LINDLEY AVE, 27203	302012	AE	7751917127	\$ 19,720	\$ 71,940	\$ 91,660	101
P614353	728 HOLLY ST, 27203	301001	AE	7751419295	\$ 18,480	\$ 45,180	\$ 63,660	101

**APPENDIX G:
Master List of Structures in Floodplains**

STRUCT_ID	ADDRESS	BGROUP	FLOODZONE	PIN	LAND_VALUE	BLDG_VALUE	TOT_VALUE	LAND_USE
P615286	736 HOLLY ST, 27203	301001	AEFW	7751418220	\$ 24,770	\$ 52,840	\$ 77,610	101
P614352	730 HOLLY ST, 27203	301001	AE	7751419235	\$ 21,360	\$ 60,220	\$ 81,580	101
P615277	415 UWHARRIE ST, 27203	301001	AE	7751418352	\$ 28,850	\$ 52,490	\$ 81,340	101
P615269	812 OCCONEECHEE AVE, 27203	301001	AEFW	7751416209	\$ 12,020	\$ 28,530	\$ 40,550	101
P615268	820 OCCONEECHEE AVE, 27203	301001	AE	7751414397	\$ 14,190	\$ 57,690	\$ 71,880	101
X615267	830-A OCCONEECHEE AVE, 27203	301001	AE	7751413481	\$ 15,260	\$ 40,560	\$ 55,820	102
X615266	830-B OCCONEECHEE AVE, 27203	301001	AE	7751413481	\$ 15,260	\$ 40,560	\$ 55,820	102
P613982	215 S ELM ST, 27203	302012	AE	7761010704	\$ 18,410	\$ 103,680	\$ 122,090	101
X619030	146 S RANDOLPH AVE, 27203	302012	AE	7761014804	\$ 75,760	\$ 638,090	\$ 713,850	650
X619029	144 S RANDOLPH AVE, 27203	302012	AE	7761014804	\$ 75,760	\$ 638,090	\$ 713,850	650
P617660	401 WORTH ST, 27203	302012	AE	7761024630	\$ 23,670	\$ 115,880	\$ 139,550	101
P617661	411 WORTH ST, 27203	302012	AE	7761025519	\$ 20,290	\$ 73,070	\$ 93,360	101
P617659	361 WORTH ST, 27203	302012	AE	7761023611	\$ 18,350	\$ 91,570	\$ 109,920	101
P619077	111 N ELM ST, 27203	302012	AE	7761022752	\$ 14,120	\$ 63,410	\$ 77,530	101
P619080	118 N ELM ST, 27203	302012	AE	7761024791	\$ 12,890	\$ 86,080	\$ 98,970	101
P619076	117 N ELM ST, 27203	302012	AE	7761022767	\$ 13,960	\$ 60,340	\$ 74,300	101
P619079	120 N ELM ST, 27203	302012	AE	7761025708	\$ 10,680	\$ 36,250	\$ 46,930	101
P619075	121 N ELM ST, 27203	302012	AE	7761022872	\$ 14,140	\$ 94,540	\$ 108,680	101
P619078	126 N ELM ST, 27203	302012	AE	7761025814	\$ 14,920	\$ 49,840	\$ 64,760	101
P619074	127 N ELM ST, 27203	302012	AE	7761022887	\$ 13,840	\$ 46,430	\$ 60,270	101
P617518	408 E SALISBURY ST, 27203	302012	AE	7761035080	\$ 62,780	\$ 120,100	\$ 182,880	
P619073	133 N ELM ST, 27203	302012	AE	7761023932	\$ 11,000	\$ 41,240	\$ 52,240	101
P41717	623 LUCK RD, 27205	308011	AE	7771336132	\$ 23,550	\$ 45,120	\$ 68,670	101
P619072	360 E SALISBURY ST, 27203	302012	AE	7761033050	\$ 15,150	\$ 55,770	\$ 70,920	101
V41715	613 LUCK RD, 27205	308011	AE	7771336132	\$ 23,550	\$ 45,120	\$ 68,670	101
P617517	401 E SALISBURY ST, 27203	303021	AE	7761036107	\$ 91,280	\$ 74,930	\$ 166,210	348
P617295	214 N ELM ST, 27203	303021	AE	7761035269	\$ 31,270	\$ 71,590	\$ 102,860	373
X617297	254 N ELM ST, 27203	303021	AE	7761036800	\$ 9,390	\$ 40,490	\$ 49,880	102
X617296	256 N ELM ST, 27203	303021	AE	7761036800	\$ 9,390	\$ 40,490	\$ 49,880	102
X617262	316 N ELM ST, 27203	303021	AE	7761046006	\$ 10,830	\$ 41,370	\$ 52,200	102
X617261	318 N ELM ST, 27203	303021	AE	7761046006	\$ 10,830	\$ 41,370	\$ 52,200	102

**APPENDIX G:
Master List of Structures in Floodplains**

STRUCT_ID	ADDRESS	BGROUP	FLOODZONE	PIN	LAND_VALUE	BLDG_VALUE	TOT_VALUE	LAND_USE
P617266	322 N ELM ST, 27203	303021	AE	7761046103	\$ 9,940	\$ 45,660	\$ 55,600	101
P651544	321 CHESTNUT ST, 27203	304001	AE	7751449693	\$ 16,630	\$ 40,930	\$ 57,560	101
P651543	327 CHESTNUT ST, 27203	304001	AE	7751449781	\$ 16,760	\$ 34,200	\$ 50,960	101
X617303	422-B BREWER ST, 27203	303021	AE	7761047529	\$ 22,130	\$ 162,470	\$ 184,600	102
C617305	431 DUNLAP ST, 27203	303021	AE	7761049706	\$ 17,080	\$ 143,010	\$ 160,090	608
X617302	422-A BREWER ST, 27203	303021	AE	7761047529	\$ 22,130	\$ 162,470	\$ 184,600	102
X617301	420-B BREWER ST, 27203	303021	AE	7761047529	\$ 22,130	\$ 162,470	\$ 184,600	102
P651542	333 CHESTNUT ST, 27203	304001	AE	7751449779	\$ 17,250	\$ 38,680	\$ 55,930	101
C617304	433 DUNLAP ST, 27203	303021	AE	7761049706	\$ 17,080	\$ 143,010	\$ 160,090	608
X617300	420-A BREWER ST, 27203	303021	AE	7761047529	\$ 22,130	\$ 162,470	\$ 184,600	102
P651541	339 CHESTNUT ST, 27203	304001	AE	7751449855	\$ 16,790	\$ 42,280	\$ 59,070	101
P614216	343 CHESTNUT ST, 27203	304001	AE	7751449980	\$ 13,550	\$ 34,790	\$ 48,340	101
P614217	345 CHESTNUT ST, 27203	304001	AE	7751449975	\$ 18,870	\$ 69,150	\$ 88,020	620
P614623	219 FOUST ST, 27203	304002	AE	7751747722	\$ 498,920	\$ -	\$ 498,920	300
P655509	347 CHESTNUT ST, 27203	304001	AE	7751459070	\$ 16,330	\$ 54,580	\$ 70,910	101
P614218	349 CHESTNUT ST, 27203	304001	AE	7751459070	\$ 16,330	\$ 54,580	\$ 70,910	101
M619373	208 FOUST ST, 27203	304002	AE	7751758403	\$ 463,760	\$ 1,124,310	\$ 1,588,070	349
M619369	220 FOUST ST, 27203	304002	AE	7751757148	\$ 112,090	\$ 360,430	\$ 472,520	349
P617814	369 CHESTNUT ST, 27203	304001	AE	7751459264	\$ 17,210	\$ 26,250	\$ 43,460	101
P619371	212 FOUST ST, 27203	304002	AE	7751758403	\$ 463,760	\$ 1,124,310	\$ 1,588,070	349
P619370	216 FOUST ST, 27203	304002	AE	7751758403	\$ 463,760	\$ 1,124,310	\$ 1,588,070	349
P612752	532 MEADOWBROOK RD, 27203	303021	AE	7761150369	\$ 14,730	\$ 68,950	\$ 83,680	101
P612793	587 VANCE ST, 27203	303021	AE	7761153559	\$ 9,730	\$ 40,520	\$ 50,250	101
P612792	583 VANCE ST, 27203	303021	AE	7761152660	\$ 17,990	\$ 26,890	\$ 44,880	101
P651256	2246 PINE CREEK RDG, 27205	308011	AE	7781054569	\$ 38,200	\$ 194,890	\$ 233,090	101
P640684	261 W PRESNELL ST, 27203	304002	AE	7751756868	\$ 12,430	\$ 39,460	\$ 51,890	101
P612787	509 E PRESNELL ST, 27203	303021	AE	7761161092	\$ 13,080	\$ 46,190	\$ 59,270	101
P619393	244 W PRESNELL ST, 27203	304001	AE	7751767170	\$ 23,010	\$ 47,570	\$ 70,580	101
P613027	617 PENNWOOD DR, 27203	303021	AE	7761164115	\$ 16,740	\$ 71,790	\$ 88,530	101
P617824	505 CHESTNUT ST, 27203	304001	AE	7751560231	\$ 20,480	\$ 25,560	\$ 46,040	101
P41995	273 MADISON CIR, 27205	308011	AE	7771465451	\$ 16,030	\$ 88,420	\$ 104,450	101

**APPENDIX G:
Master List of Structures in Floodplains**

STRUCT_ID	ADDRESS	BGROUP	FLOODZONE	PIN	LAND_VALUE	BLDG_VALUE	TOT_VALUE	LAND_USE
P41989	241 MADISON CIR, 27205	308011	AE	7771466761	\$ 15,830	\$ 63,740	\$ 79,570	101
P59892	1341 LITTLE GATE DR, 27203	304001	AE	7751572899	\$ 22,980	\$ 2,380	\$ 25,360	101
M4470	860 EDWARDS FARM RD, 27316	310004	AE	8711086571	\$ 183,140	\$ 150,160	\$ 333,300	213
P4482	1046 NC HWY 22 S, 27316	309001	AE	8711080173	\$ 18,300	\$ 65,400	\$ 83,700	101
P57100	1087 LITTLE LAKES TRL, 27205	305021	AE	7742503455	\$ 268,300	\$ -	\$ 268,300	113
P659781	2011 BROOKLYN AVE, 27316	310005	AE	8702512673	\$ 36,170	\$ 660	\$ 36,830	401
P605618	1539-B MAIN ST, 27316	310005	AE	8702518388	\$ 73,960	\$ 1,320	\$ 75,280	398
P644253	810 DEPOT ST, 27316	310005	SHADED X	8702515726	\$ 20,470	\$ 31,230	\$ 51,700	398
P47800	1028 SNOWDON CT, 27203	303012	SHADED X	7762511815	\$ 19,200	\$ 107,200	\$ 126,400	101
P604833	407 COLERIDGE RD, 27316	310004	AE	8702625444	\$ 25,830	\$ 37,000	\$ 62,830	332
P604643	393 CURTIS ST, 27316	310004	AE	8702834875	\$ 23,850	\$ 78,570	\$ 102,420	101
P632095	1264 ANDREW HUNTER RD, 27248	311004	SHADED X	7792252925	\$ 57,570	\$ 10,000	\$ 67,570	398
P603317	1306 ANDREW HUNTER RD, 27248	311004	SHADED X	7792267079	\$ 42,220	\$ 64,490	\$ 106,710	602
P621351	919 DRAPER ST, 27203	303011	AE	7762573909	\$ 55,250	\$ -	\$ 55,250	300
P19323	2478 CEDAR FALLS RD, 27248	311004	AE	7782482659	\$ 397,730	\$ 2,816,660	\$ 3,214,390	467
P49455	1062 JERICO RD, 27205	305012	AE	7722486584	\$ 50,060	\$ 141,120	\$ 191,180	101
P23912	2305 CEDAR FALLS RD, 27248	311004	SHADED X	7782390199	\$ 18,500	\$ 17,040	\$ 35,540	373
P19297	1120 WICKER LOVELL RD, 27317	311005	SHADED X	7782291334	\$ 164,140	\$ 207,370	\$ 371,510	401
P19295	1139 WHITES MEMORIAL RD, 27248	311002	AE	7782299758	\$ 10,000	\$ 28,540	\$ 38,540	101
P19299	1203 WICKER LOVELL RD, 27317	311005	AE	7782199623	\$ 300	\$ -	\$ 300	100
P19301	1209 WICKER LOVELL RD, 27317	311005	AE	7782198665	\$ 10,000	\$ 11,890	\$ 21,890	101
P604395	1265 WICKER LOVELL RD, 27317	311005	SHADED X	7782190362	\$ 23,800	\$ 29,560	\$ 53,360	694
P19303	1215 WICKER LOVELL RD, 27317	311005	AE	7782198607	\$ 450	\$ -	\$ 450	101
P19293	1151 WHITES MEMORIAL RD, 27248	311002	SHADED X	7782299841	\$ 10,000	\$ 11,670	\$ 21,670	101
P19305	1227 WICKER LOVELL RD, 27317	311005	AE	7782196737	\$ 7,500	\$ 8,680	\$ 16,180	101
P618955	317 W CENTRAL AVE, 27203	304001	SHADED X	7753902189	\$ 211,190	\$ 212,740	\$ 423,930	397
X618957	2051-A CHAMPAGNE DR, 27203	304001	SHADED X	7753917650	\$ 52,560	\$ 238,140	\$ 290,700	421
P654710	519 GLEN CIR, 27203	303011	AE	7763411508	\$ 18,010	\$ 96,950	\$ 114,960	101
P605356	1215 FRANKLIN DR, 27317	311005	AEFW	7773617519	\$ 7,740	\$ 18,940	\$ 26,680	109
X618956	2051 CHAMPAGNE DR, 27203	304001	AE	7753917650	\$ 52,560	\$ 238,140	\$ 290,700	421
P631053	2134 HENLEY CTRY RD, 27317	311005	AE	7773122259	\$ 53,420	\$ 143,880	\$ 197,300	367

**APPENDIX G:
Master List of Structures in Floodplains**

STRUCT_ID	ADDRESS	BGROUP	FLOODZONE	PIN	LAND_VALUE	BLDG_VALUE	TOT_VALUE	LAND_USE
P618947	2139 ROSE LN, 27203	304001	SHADED X	7753823632	\$ 19,550	\$ 78,160	\$ 97,710	101
P618928	217 GREENVALE RD, 27203	304001	AE	7753928518	\$ 21,700	\$ 70,730	\$ 92,430	101
P618927	221 GREENVALE RD, 27203	304001	AE	7753927509	\$ 24,260	\$ 49,820	\$ 74,080	101
P618915	214 GREENVALE RD, 27203	304001	AE	7753929812	\$ 26,250	\$ 99,630	\$ 125,880	101
P618930	226 GREENVALE RD, 27203	304001	AEFW	7753925865	\$ 31,570	\$ 63,020	\$ 94,590	101
P618929	218 GREENVALE RD, 27203	304001	AE	7753927854	\$ 29,380	\$ 79,860	\$ 109,240	101
P618339	1450 OLD LIBERTY RD, 27203	311005	AE	7773035371	\$ 5,180	\$ -	\$ 5,180	300
P618338	1452 OLD LIBERTY RD, 27203	311005	AE	7773036354	\$ 6,980	\$ -	\$ 6,980	300
P618337	1453 OLD LIBERTY RD, 27203	311001	SHADED X	7773035627	\$ 8,460	\$ -	\$ 8,460	100
P616791	404 NORTHWOOD DR, 27203	304001	AE	7753852394	\$ 23,690	\$ 66,730	\$ 90,420	101
P27345	2074 W O W RD, 27317	311001	AE	7763956654	\$ 14,000	\$ 54,410	\$ 68,410	101
X631150	311-B MCKNIGHT ST, 27203	304001	AE	7753866465	\$ 16,470	\$ 109,800	\$ 126,270	102
X631149	311-A MCKNIGHT ST, 27203	304001	AE	7753866465	\$ 16,470	\$ 109,800	\$ 126,270	102
P616869	229 MCKNIGHT ST, 27203	304001	AE	7753869457	\$ 24,670	\$ 29,620	\$ 54,290	101
P616837	303 MCKNIGHT ST, 27203	304001	AE	7753868405	\$ 17,660	\$ 44,230	\$ 61,890	101
T56518	1150 INDIAN CREEK DR, 27370	305011	AE	7703771352	\$ 40,580	\$ -	\$ 40,580	108
T56528	1260 VICKREY DR, 27370	305011	AE	7703786172	\$ 60,350	\$ 46,510	\$ 106,860	101
T38312	2344 PLOTT HOUND TRL, 27350	305012	AE	7733690978	\$ 256,170	\$ 4,500	\$ 260,670	108
M39395	5118 JORDAN VALLEY RD, 27370	305011	AE	7714738406	\$ 907,730	\$ 310,620	\$ 1,218,350	213
P15556	4313 KIDDS MILL RD, 27248	310001	AE	8704260433	\$ 18,480	\$ 32,540	\$ 51,020	101
P38328	2761 APACHE TRL, 27350	305012	AE	7734261453	\$ 21,620	\$ 37,610	\$ 59,230	101
T36011	3041 SHAWNEE TRL, 27350	305012	SHADED X	7734372259	\$ 30,500	\$ 18,960	\$ 49,460	101
T61818	3382 THAYER RD, 27370	315011	AE	7705306153	\$ 29,670	\$ 500	\$ 30,170	108
P624712	408 SUNSET DR, 27317	314002	AE	7755916619	\$ 15,340	\$ 81,200	\$ 96,540	101
P26364	3543 CREEKRIDGE CTRY RD, 27317	314001	AE	7765918633	\$ 17,890	\$ 29,740	\$ 47,630	101
M611245	203 REECE AVE, 27317	314001	AE	7755746058	\$ 105,000	\$ 1,101,460	\$ 1,206,460	211
P16186	7472 JOHN MARSH RD, 27298	312004	AE	8735631659	\$ 234,270	\$ 110,050	\$ 344,320	112
P26232	1719 NAOMI RD, 27317	314001	AE	7765964075	\$ 41,760	\$ 27,080	\$ 68,840	101
P21232	4123 CAMP NAWAKA RD EXT, 27317	314001	AE	7775062620	\$ 6,440	\$ -	\$ 6,440	100
P21233	4119 CAMP NAWAKA RD EXT, 27317	314001	SHADED X	7775061637	\$ 5,180	\$ 18,080	\$ 23,260	101
P13284	7561 OVERMAN RD, 27298	312004	AE	8735668965	\$ 109,000	\$ 2,000	\$ 111,000	109

**APPENDIX G:
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STRUCT_ID	ADDRESS	BGROUP	FLOODZONE	PIN	LAND_VALUE	BLDG_VALUE	TOT_VALUE	LAND_USE
T38884	3600 GREY DR, 27350	313012	AE	7725579764	\$ 35,030	\$ 70,070	\$ 105,100	101
P64265	2682 TREE HOLLOW EXT, 27360	315011	AE	6795085231	\$ 6,020	\$ -	\$ 6,020	100
P632227	7023 COURTLAND DR, 27360	315011	AE	6795081830	\$ 22,270	\$ 113,410	\$ 135,680	101
P633819	7003 COURTLAND DR, 27360	315011	AE	6795083821	\$ 35,840	\$ 103,240	\$ 139,080	101
P16144	3832 OLD 421 RD, 27298	312004	AE	8735383965	\$ 37,310	\$ 141,750	\$ 179,060	398
M64326	2975 OLD MOUNTAIN RD, 27370	315011	AE	6795398132	\$ 31,650	\$ 9,830	\$ 41,480	213
P651757	3741 COURTLAND CIR, 27360	315011	AE	6795296183	\$ 27,820	\$ 115,490	\$ 143,310	101
P629271	7044 COURTLAND DR, 27360	315011	AE	6785999158	\$ 27,820	\$ 108,290	\$ 136,110	101
P652200	3789 COURTLAND CIR, 27360	315011	AE	6795294186	\$ 33,400	\$ 109,330	\$ 142,730	101
P66152	3425 KATRINA DR, 27360	315011	AE	6786933191	\$ 22,200	\$ 78,270	\$ 100,470	101
P12224	8536 OLD LIBERTY RD, 27298	312002	AE	8716239435	\$ 63,940	\$ 63,920	\$ 127,860	101
P69049	3693 MEADOWBROOK DR, 27370	315011	AE	7706749081	\$ 21,850	\$ 4,660	\$ 26,510	108
P641830	621 E GRAHAM AVE, 27298	312004	AE	8736358767	\$ 16,400	\$ -	\$ 16,400	100
T626552	3900 CURTIS LN, 27355	312002	AE	8716766310	\$ 36,950	\$ 17,980	\$ 54,930	110
P38360	4631 OAKVIEW DR, 27370	313011	SHADED X	7726562984	\$ 29,280	\$ 106,260	\$ 135,540	101
P38362	4641 OAKVIEW DR, 27370	313011	SHADED X	7726572093	\$ 30,910	\$ 126,710	\$ 157,620	101
P38364	4649 OAKVIEW DR, 27370	313011	AE	7726573103	\$ 30,950	\$ 145,130	\$ 176,080	101
P609941	4667 OAKVIEW DR, 27370	313011	AE	7726573213	\$ 33,660	\$ 145,710	\$ 179,370	101
P612400	4671 OAKVIEW DR, 27370	313011	SHADED X	7726573335	\$ 26,750	\$ 124,590	\$ 151,340	101
P652816	7314 CITATION DR, 27370	315011	AE	6786974420	\$ 55,840	\$ 316,160	\$ 372,000	101
P647815	3665 SADDLE BROOK DR, 27370	315011	AE	6796177750	\$ 89,730	\$ 339,880	\$ 429,610	101
T604609	4963 IRVIN CTRY RD, 27317	313023	AEFW	7776473675	\$ 41,570	\$ 164,160	\$ 205,730	101
P625678	3730 STEEPLGATE DR, 27370	315011	SHADED X	6796183101	\$ 113,280	\$ 419,300	\$ 532,580	101
P38380	3797 WOOD VILLAGE DR, 27370	313011	AE	7726582407	\$ 45,680	\$ 177,520	\$ 223,200	101
P604379	7078 CHAPSWORTH DR, 27370	315011	AE	6796198035	\$ 64,510	\$ 263,380	\$ 327,890	101
P649226	5172 VICTORY JUNCTION LN, 27317	313022	SHADED X	7776190571	\$ 420,110	\$ 171,370	\$ 591,480	
P628670	1367 BARKER DR, 27317	313023	SHADED X	7777117871	\$ 27,790	\$ 135,260	\$ 163,050	101
X660958	4219 MEADOWBROOK VIEW RD, 27360	316013	AE	6797122653	\$ 7,140	\$ -	\$ 7,140	100
X660956	4217 MEADOWBROOK VIEW RD, 27360	316013	AE	6797122653	\$ 7,140	\$ -	\$ 7,140	100
P500285	1455 CREEKSIDE DR, 27317	313023	SHADED X	7777638525	\$ 33,030	\$ 173,870	\$ 206,900	101
P601233	1662 PROVIDENCE CHURCH RD, 27317	313023	AE	7777747300	\$ 116,290	\$ 130,310	\$ 246,600	101

**APPENDIX G:
Master List of Structures in Floodplains**

STRUCT_ID	ADDRESS	BGROUP	FLOODZONE	PIN	LAND_VALUE	BLDG_VALUE	TOT_VALUE	LAND_USE
P605623	1658 PROVIDENCE CHURCH RD, 2731	313023	AE	7777747300	\$ 116,290	\$ 130,310	\$ 246,600	101
P500049	5990 STARMOUNT RD, 27298	312001	AE	8717257655	\$ 416,950	\$ 1,400	\$ 418,350	309
T69633	4770 MAPLE OAK DR, 27263	316013	AE	6797970372	\$ 16,470	\$ 10,700	\$ 27,170	110
T69631	4685 PIKE ST EXT, 27263	316013	AE	6797970443	\$ 25,470	\$ 44,190	\$ 69,660	110
P23208	2857 BETHEL CHURCH RD, 27233	313023	AE	7787879275	\$ 107,320	\$ 141,120	\$ 248,440	101
P66419	6300 NC HWY 62, 27370	315025	SHADED X	7707373461	\$ 31,610	\$ 163,670	\$ 195,280	101
T22384	3539 OLD RED CROSS RD, 27233	313024	AE	7797798529	\$ 20,920	\$ -	\$ 20,920	108
P22412	3467 MOBILE CT, 27233	313024	AE	7797699672	\$ 26,960	\$ 13,100	\$ 40,060	109
T22394	3734 GREESON CTRY RD, 27233	313024	AE	7797890956	\$ 16,950	\$ 10,600	\$ 27,550	101
M62701	6044 POOLE RD, 27263	313011	AE	7728905382	\$ 425,570	\$ 212,350	\$ 637,920	213
P610013	110 SHEAN DR, 27263	315023	AE	7728106864	\$ 18,000	\$ 99,050	\$ 117,050	101
P609962	5005 MACON DR, 27263	315023	AE	7728104866	\$ 22,860	\$ 52,200	\$ 75,060	101
P609961	5003 MACON DR, 27263	315023	AE	7728103869	\$ 26,360	\$ 81,410	\$ 107,770	101
P609960	5001 MACON DR, 27263	315023	SHADED X	7728102953	\$ 25,040	\$ 54,190	\$ 79,230	101
P646268	108 SHEAN DR, 27263	315023	AE	7728106974	\$ 18,000	\$ 100,870	\$ 118,870	101
P609959	4903 MACON DR, 27263	315023	SHADED X	7728101968	\$ 26,390	\$ 98,980	\$ 125,370	101
P609956	4825 MACON DR, 27263	315023	AE	7728017082	\$ 24,460	\$ 56,870	\$ 81,330	101
P609958	4901 MACON DR, 27263	315023	AE	7728110042	\$ 26,440	\$ 62,930	\$ 89,370	101
P609957	4827 MACON DR, 27263	315023	AE	7728019016	\$ 24,780	\$ 78,660	\$ 103,440	101
P610015	106 SHEAN DR, 27263	315023	AE	7728117004	\$ 18,000	\$ 81,830	\$ 99,830	101
P610216	4014 CHEYENNE DR, 27263	315023	SHADED X	7718810711	\$ 49,500	\$ -	\$ 49,500	300
P648431	504 POWELL WAY, 27263	315022	AE	7728426082	\$ 30,860	\$ 134,050	\$ 164,910	101
P610225	152 RENOLA DR, 27263	315023	AE	7718729519	\$ 33,290	\$ 88,660	\$ 121,950	101
P609639	4208 BARRETT DR, 27263	315023	AE	7718338111	\$ 24,290	\$ 68,930	\$ 93,220	101
P609650	505 BALFOUR DR, 27263	315023	SHADED X	7718338303	\$ 25,670	\$ 69,670	\$ 95,340	101
P609651	506 BALFOUR DR, 27263	315032	SHADED X	7718337526	\$ 25,120	\$ 68,050	\$ 93,170	101
P637069	105 SCHOOL RD, 27370	315032	SHADED X	7718236638	\$ 19,180	\$ 99,150	\$ 118,330	101
T62574	3419 HILLTOP DR, 27263	313011	AE	7728635877	\$ 19,950	\$ 400	\$ 20,350	108
P604429	758 WILLIAMS CT, 27313	313023	SHADED X	7768543005	\$ 40,260	\$ 128,470	\$ 168,730	101
P639160	3408 HILLTOP DR, 27263	313011	AE	7728645085	\$ 19,950	\$ 59,120	\$ 79,070	101
P641327	313 MEREDITH DR, 27370	316021	AEFW	7708761737	\$ 39,290	\$ 125,280	\$ 164,570	101

**APPENDIX G:
Master List of Structures in Floodplains**

STRUCT_ID	ADDRESS	BGROUP	FLOODZONE	PIN	LAND_VALUE	BLDG_VALUE	TOT_VALUE	LAND_USE
P641326	311 MEREDITH DR, 27370	316021	AE	7708760921	\$ 27,300	\$ 106,210	\$ 133,510	101
P611505	318 MEREDITH DR, 27370	316021	AE	7708677071	\$ 18,350	\$ 65,910	\$ 84,260	101
C632894	1218 WEST BROOK CT, 27263	315032	SHADED X	7718070537	\$ -	\$ -	\$ -	
C632895	1208 WEST BROOK CT, 27263	315032	SHADED X	7718070537	\$ -	\$ -	\$ -	
C632892	1216 WEST BROOK CT, 27263	315032	SHADED X	7718070537	\$ -	\$ -	\$ -	
C632893	1206 WEST BROOK CT, 27263	315032	SHADED X	7718070537	\$ -	\$ -	\$ -	
C632890	1214 WEST BROOK CT, 27263	315032	SHADED X	7718070537	\$ -	\$ -	\$ -	
C632891	1204 WEST BROOK CT, 27263	315032	SHADED X	7718070537	\$ -	\$ -	\$ -	
C632888	1212 WEST BROOK CT, 27263	315032	SHADED X	7718070537	\$ -	\$ -	\$ -	
C632889	1202 WEST BROOK CT, 27263	315032	SHADED X	7718070537	\$ -	\$ -	\$ -	
C632886	1210 WEST BROOK CT, 27263	315032	SHADED X	7718070537	\$ -	\$ -	\$ -	
C632887	1200 WEST BROOK CT, 27263	315032	SHADED X	7718070537	\$ -	\$ -	\$ -	
C633744	1112 WEST BROOK CT, 27263	315032	SHADED X	7718070874	\$ -	\$ -	\$ -	
P611986	131 OAKSPRING LN, 27263	315021	SHADED X	7718879857	\$ 28,480	\$ 65,530	\$ 94,010	101
C633746	1114 WEST BROOK CT, 27263	315032	SHADED X	7718070874	\$ -	\$ -	\$ -	
C633747	1106 WEST BROOK CT, 27263	315032	SHADED X	7718070874	\$ -	\$ -	\$ -	
P651501	105 BAILEYS WAY, 27263	315022	AEFW	7728174839	\$ 27,600	\$ 113,910	\$ 141,510	101
P640784	104 DELTA CT, 27263	315021	AE	7718778980	\$ 27,580	\$ 128,100	\$ 155,680	101
P612140	119 LONITA ST, 27263	315021	AE	7718773954	\$ 25,520	\$ 112,720	\$ 138,240	101
P655565	906 WALL ST, 27263	315021	AE	7718872879	\$ 25,170	\$ 134,450	\$ 159,620	101
P612139	113 LONITA ST, 27263	315021	AE	7718770959	\$ 27,460	\$ 76,210	\$ 103,670	101
P612138	111 LONITA ST, 27263	315021	AE	7718689041	\$ 27,910	\$ 111,390	\$ 139,300	101
P649897	904 WALL ST, 27263	315021	AE	7718871888	\$ 27,140	\$ 134,790	\$ 161,930	101
P656725	908 WALL ST, 27263	315021	AE	7718874906	\$ 25,000	\$ 125,410	\$ 150,410	101
P651435	103 BAILEYS WAY, 27263	315022	AEFW	7728184003	\$ 27,600	\$ 120,530	\$ 148,130	101
P651436	101 BAILEYS WAY, 27263	315022	AEFW	7728183185	\$ 26,010	\$ 94,950	\$ 120,960	101
P612129	508 ASHLAND ST, 27263	315031	AE	7718685211	\$ 24,450	\$ 35,980	\$ 60,430	101
P612128	512 ASHLAND ST, 27263	315031	AE	7718685361	\$ 25,880	\$ 48,800	\$ 74,680	101
P611631	704 LAKE DR, 27263	316021	AE	7708680530	\$ 18,330	\$ 105,840	\$ 124,170	101
P610874	407 ENGLEWOOD DR, 27263	315032	AE	7718486429	\$ 27,040	\$ 85,700	\$ 112,740	101
P612115	3405 ROCKLANE DR, 27263	315031	AE	7718581439	\$ 34,310	\$ 54,110	\$ 88,420	101

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Master List of Structures in Floodplains**

STRUCT_ID	ADDRESS	BGROUP	FLOODZONE	PIN	LAND_VALUE	BLDG_VALUE	TOT_VALUE	LAND_USE
P641700	127 HOPE VALLEY DR, 27263	315022	AEFW	7728181881	\$ 36,020	\$ 124,000	\$ 160,020	101
P611632	700 LAKE DR, 27263	316021	AE	7708680760	\$ 20,890	\$ 35,020	\$ 55,910	101
P637751	119 HOPE VALLEY DR, 27263	315022	AE	7728085848	\$ 73,680	\$ 109,190	\$ 182,870	101
P611202	410 LYNBROOK DR, 27263	315032	AE	7718486700	\$ 30,370	\$ 71,600	\$ 101,970	101
P643565	123 HOPE VALLEY DR, 27263	315022	AEFW	7728089910	\$ 87,480	\$ 158,700	\$ 246,180	101
P642024	125 HOPE VALLEY DR, 27263	315022	SHADED X	7728180970	\$ 61,820	\$ 145,420	\$ 207,240	101
P632257	203 SIMMONS CREEK CT, 27263	315021	AE	7728083858	\$ 33,890	\$ 133,030	\$ 166,920	101
P618978	104 JACOB CT, 27263	315021	SHADED X	7728081923	\$ 46,520	\$ 118,200	\$ 164,720	101
P611671	401 EDEN TER, 27263	316021	AE	7708994256	\$ 33,370	\$ 112,040	\$ 145,410	101
P612252	1007 LUNAR DR, 27263	315021	AE	7718898430	\$ 27,500	\$ 100,800	\$ 128,300	101
P611867	3413 LONGVIEW DR, 27263	315021	AE	7718991406	\$ 31,860	\$ 112,070	\$ 143,930	101
P611680	320 EDEN TER, 27263	316021	AE	7708993670	\$ 24,480	\$ 86,860	\$ 111,340	101
P611681	318 EDEN TER, 27263	316021	AEFW	7708994672	\$ 25,350	\$ 92,090	\$ 117,440	101
P611208	403 LIBERTY RD, 27263	316021	SHADED X	7718399607	\$ 19,330	\$ 25,580	\$ 44,910	101
P611209	407 LIBERTY RD, 27263	316021	AE	7718490725	\$ 22,240	\$ 26,070	\$ 48,310	101
P611648	722 EDEN TER, 27263	316021	AEFW	7708692763	\$ 28,970	\$ 58,290	\$ 87,260	101
P611866	3411 LONGVIEW DR, 27263	315021	AE	7718991636	\$ 30,010	\$ 68,320	\$ 98,330	101
P611210	324 GREENOAK DR, 27263	316021	AE	7718490884	\$ 48,850	\$ 30,540	\$ 79,390	105
P611870	139 GREENHAVEN DR, 27263	315021	AE	7718894844	\$ 28,940	\$ 119,380	\$ 148,320	101
P612243	137 APOLLO CIR, 27263	315021	AE	7718795864	\$ 25,590	\$ 81,530	\$ 107,120	101
P612242	135 APOLLO CIR, 27263	315021	AE	7718794856	\$ 24,710	\$ 89,630	\$ 114,340	101
P611658	3105 CORINA CIR, 27263	316021	AE	7708692988	\$ 25,960	\$ 78,280	\$ 104,240	101
P611657	3107 CORINA CIR, 27263	316021	AE	7708691979	\$ 28,180	\$ 71,820	\$ 100,000	101
P621580	401 PLAYGROUND RD, 27263	316021	SHADED X	7709902044	\$ 16,830	\$ 80,640	\$ 97,470	101

TOTAL: \$ 13,763,020 \$ 31,913,710 \$ 45,676,730

**Appendix H
Hazard Mitigation Strategies:**

The following is a strategy development worksheet with a comprehensive listing of all mitigation strategies under consideration by the County and all municipal jurisdictions.

Table 1: Master List of Strategies for Randolph County

Hazard	Project or policy
Dam failure	Identify potential inundation areas downstream of high hazard dams.
Dam failure	Work with Dam Safety Officials to have emergency plans for high hazard dams filed with the local government.
Flood	Design a seasonal public information/education program targeted to mobile home/manufactured home residents through Central Permit process. Explaining hazards such as high wind events, flooding and alternative shelters in a storm/high wind event/flood. Will distribute information through existing Central Permit process with standard permitting information.
Flood	Disseminate information on the benefits of purchased flood insurance to property owners in flood hazard areas.
Flood	Hold yearly <i>Flood Hazard Awareness Week</i> .
Flood	Look into funding for and developing program to clear debris from culverts and storm drains in priority floodplains.
Flood	Strengthen flood plain regulation to current standards. (New model regulation.)
High wind events	Consider sign ordinances limiting height or size of signs in certain corridors.
High wind, ice or snow	Through existing subdivision regulations, encourage the power, cable and telephone lines be buried.
Multi-hazard	Adopt as Countywide policy as part of the Unified Development Ordinance: Wherever possible preserve natural wetlands, designate conservation corridors, especially along streams through acquisition or conservation easements.
Multi-hazard	Develop plan for alternate communications in the event of loss of 9-1-1 communication system.
Multi-hazard	Develop recommendation for protecting command centers. Identify alternate command posts.

Hazard	Project or policy
Multi-hazard	Educate and inform local government and elected officials (decision makers) of the need to consider hazard mitigation in policy and budgetary planning and decision making processes. Outreach and Education is part of job descriptions for Planning and Emergency Management personnel. Staff will incorporate hazard mitigation education into existing programs. Education and outreach goals are written into the Emergency Management Departmental goals submitted to the State annually.
Multi-hazard	EOP originally developed in 1994. Update Emergency Operations Plan.
Multi-hazard	Identify and designate at least one emergency shelter in each municipality.
Multi-hazard	Identify and map mobile home parks by GIS and Information Specialist at County level.
Multi-hazard	Incorporate safe growth management strategies for development downstream of dams.
Multi-hazard	Investigate establishing a mobile command center in the event of loss of the 9-1-1 Center.
Multi-hazard	Looking onto safe growth management strategies for development downstream of dams. Will incorporate into overall Countywide Growth Management Plan.
Multi-hazard	Obtain and install transfer switches.
Multi-hazard	Planning and Emergency Management will coordinate the collection and storage of damage assessment information such as type of hazard, location of hazard, when it occurred, death or injury, property damages, in digitized form, and in one central location for easy retrieval. Information Planning Specialist is responsible for collection and maintenance of database.
Multi-hazard	Procure generators and fuel for alternative sources of power for County School system.
Multi-hazard	Procure generators and fuel for alternative sources of power for waste water treatment plants.
Multi-hazard	Put in place a Countywide 9-1-1 reverse call system for location specific warning to public of impending disaster. Will be implemented as part of Emergency Management ongoing program to improve efficiency and effectiveness of department.
Multi-hazard	Review and revise location of emergency shelters throughout County and municipalities.

Hazard	Project or policy
Sinkhole or subsidence	Create a GIS overlay of abandoned mine locations. When a mine is identified on a plat under review for development, the locations of the mine is noted and the mine is investigated to determine the extent of underground workings before the land is developed.

Table 2: Master List of Strategies for the City of Archdale

Hazard	Project or policy
Drought	Develop a comprehensive policy regarding drought management and response as part of existing local water supply planning process.
Drought	Maintain comprehensive policy regarding drought management and response as part of existing local water supply planning process.
Flood	Design a seasonal public information/education program targeted to homes located in a flood hazard area explaining flooding hazard and alternative shelters. Pamphlets to be inserted in mailings to residents.
Flood	Develop stormwater management program as part of required NPDES Phase II.
Flood	Disseminate information on the benefits of purchasing flood insurance.
Flood	Identify sites for temporary storage of debris.
Flood	Maintain current floodplain regulation standards.
Flood	Maintain program for clearing debris from culverts and storm drains in priority areas as part of NPDES Phase II stormwater control standards.
Flood	Maintain Stormwater Management Program as part of required NPDES Phase II
Flood	Provide flood insurance awareness through existing stormwater outreach program and permitting process.
Multi-hazard	Create a mobilization plan for response to an emergency.
Multi-hazard	Define and identify all “critical facilities” if any.
Multi-hazard	Educate and inform citizens (children and adults) of environmental issues at the Archdale Library through education seminars done on a six week basis.
Multi-hazard	Educate and inform local government and elected officials (decision makers) of the need to consider hazard mitigation in policy and budgetary planning and decision making processes.
Multi-hazard	Establish predefined street and detour plans and disbursement of MUTCD (Manual on Uniform Traffic Control Devices) measures in response to an emergency.
Multi-hazard	Fully assess the vulnerability of each identified critical facility to natural hazards.

Hazard	Project or policy
Multi-hazard	Identify additional emergency shelter in Archdale.
Multi-hazard	Identify emergency water supply through existing local water supply planning process.
Multi-hazard	In land use plans and development plans: wherever possible preserve natural wetlands, designate conservation corridors and protect streams by requiring buffering standards or through acquisition of conservation easements. (Stormwater and Watershed Ordinance provide effective standards for continuing maintenance.)
Multi-hazard	Maintain emergency water supply through existing local water supply planning process.
Multi-hazard	Maintain maps of mobile home parks as part of ongoing planning activities.
Multi-hazard	Maintain program for clearing debris from culverts and storm drains in priority areas as part of NPDES Phase II stormwater control standards.
Multi-hazard	Put in place a Countywide 9-1-1 reverse call system for location specific warning to public of impending disaster.
Multi-hazard	Through existing subdivision regulations, encourage the power, cable and telephone lines be buried.

Table 3: Master List of Strategies for the City of Asheboro

Hazard	Project or policy
Flood	Consult with Asheboro Housing Authority to consider buyout and relocation for public housing in flood plains.
Flood	Consult with Asheboro Housing Authority to create evacuation plans for those units in flood plains.
Flood	Develop a program to clear debris from culverts and storm drain in priority floodplains.
Flood	Disseminate information on the benefits of purchasing flood insurance.
Flood	Look into funding for and developing program to clear debris from culverts and storm drains in priority floodplains.
Flood	Strengthen flood plain regulation to current standards. (New model regulations.)
Flood	To require retention/detention ponds or other stormwater measure for any planned building groups (residential or commercial); will build into existing zoning ordinance.
Ice	Existing zoning ordinance to be modified to require ice damage resistant trees along buffers and screens.
Multi-hazard	Build in house GIS capability
Multi-hazard	Develop municipal Emergency Operations Plan

Hazard	Project or policy
Multi-hazard	Educate and inform local government and elected officials (decision makers) of the need to consider hazard mitigation in policy and budgetary planning and decision making processes, through ongoing hazard mitigation planning five year cycle.
Multi-hazard	Identify and designate at least one emergency shelter in each municipality.
Multi-hazard	Identify and map mobile home parks.
Multi-hazard	In land use plans and development plans, adopt as City policy: Wherever possible preserve natural wetlands, designate conservation corridors, especially along streams through acquisition or conservation easements.
Multi-hazard	Procure generators and fuel for alternative sources of power for all City schools, water plant and water pump. Will incorporate into annual budget process over next three years.
Multi-hazard	Put in place a Countywide 9-1-1 reverse call system for location specific warning to public of impending disaster.
Multi-hazard	Through existing subdivision regulations, encourage that power, cable and telephone lines be buried.

Table 4: Master List of Strategies for the Town of Franklinville

Hazard	Project or policy
Flood	Develop program to clear debris from culverts and storm drains in priority floodplains.
Flood	Purchase flood insurance for Franklinville Town Hall.
Flood	Store important documents and materials on upper floor of Town Hall.
Flood	Update flood prevention ordinance.
Multi-hazard	Develop procedure for recording damage assessment information such as type of hazard, location of hazard occurrence, when it occurred, death or injury, property damaged, narrative description of damage, not just dollar amount, for local use in hazard mitigation and land use planning.
Multi-hazard	Educate and inform local government and elected officials (decision makers) of the need to consider hazard mitigation in policy and budgetary planning and decision making processes.
Multi-hazard	Evaluate generators and fuel for alternative sources of power.
Multi-hazard	Identify and designate at least one emergency shelter in the Town.
Multi-hazard	Include in land use and development plans as Town policy: Wherever possible preserve natural wetlands, designate conservation corridors, especially along streams through acquisition or conservation easements.

Hazard	Project or policy
Multi-hazard	Include in land use and development plans: will encourage street interconnectivity in all new subdivisions to allow multiple exit points.
Multi-hazard	Put in place a Countywide 9-1-1 reverse call system for location specific warning to public of impending disaster.
Multi-hazard	Strengthen mobile home/manufactured home anchoring requirements.
Multi-hazard	Through existing subdivision regulations, encourage that power, cable and telephone lines be buried.
Multi-hazard	Working with Ramseur in regular water supply planning process, develop emergency water supply capability.

Table 5: Master List of Strategies for the Town of Liberty

Hazard	Project or policy
Drought	Develop and adopt a drought management/water shortage (conservation) ordinance as part of local water supply planning process.
Flood	Adopt flood prevention ordinance.
Flood	Become National Flood Insurance Program member.
Flood	Develop program to clear debris from culverts and storm drains in priority floodplains.
High wind	Strengthen mobile home/manufactured home anchoring requirements.
Ice and wind	Consider Urban Forestry Services development.
Ice events	Adopt tree planning ordinances or programs and landscaping practices that encourage planting trees which are less susceptible to damage from ice storms.
Multi-hazard	Create planning department.
Multi-hazard	Design a seasonal public information/education program targeted to mobile home/manufactured home residents through Central Permit Process—explaining hazards such as high wind events, flooding and alternative shelters in a storm/high wind event/flood through Central Permit Process already in place.
Multi-hazard	Develop emergency water supply capability as part of local water supply planning process.
Multi-hazard	Develop procedure for recording damage assessment information such as type of hazard, location of hazard occurrence, when it occurred, death or injury, property damaged, narrative description of damage, not just dollar value, for local use in hazard mitigation and land use planning.
Multi-hazard	Educate and inform local government and elected officials (decision makers) of the need to consider hazard mitigation in policy and budgetary planning and decision making processes.

Hazard	Project or policy
Multi-hazard	Employ a planner.
Multi-hazard	Evaluate generators and fuel for alternative sources of power for critical facilities.
Multi-hazard	Identify and designate at least one emergency shelter in each municipality.
Multi-hazard	Identify and map mobile home parks.
Multi-hazard	Include in existing land development plans, where feasible will encourage street interconnectivity in all new subdivision to allow multiple access points.
Multi-hazard	Include in existing land development plans, wherever possible preserve natural wetlands, designate conservation corridors, especially along streams through acquisition or conservation easements.
Multi-hazard	Put in place a Countywide 9-1-1 reverse call system for location specific warning to public of impending disaster.
Multi-hazard	Review and amend existing capital improvement plan to ensure capital improvement support mitigating activities and are not counter to hazard mitigation.
Multi-hazard	Through amendments to existing subdivision regulations, encourage that power, cable and telephone lines be buried.
Multi-hazard	Update existing Emergency Operations Plan.

Table 6: Master List of Strategies for the Town of Ramseur

Hazard	Project or policy
Flood	Develop program to clear debris from culverts and storm drains in priority floodplains.
Flood	Update flood damage prevention ordinance to limit and/or restrict future development in the flood plain.
Flood	Update flood prevention ordinance.
High wind	Strengthen mobile home/manufactured home anchoring requirements.
Multi-hazard	Adopt as Town policy and incorporate into land use plans that wherever possible preserve natural wetlands, designate conservation corridors, especially along streams through acquisition or conservation easements.
Multi-hazard	Develop emergency water supply capability.
Multi-hazard	Develop procedure for recording damage assessment information such as type of hazard, location of hazard occurrence, when it occurred, death or injury, property damaged, narrative description of damage, not just dollar value, for local use in hazard mitigation and land use planning.

Hazard	Project or policy
Multi-hazard	Educate and inform local government and elected officials (decision makers) of the need to consider hazard mitigation in policy and budgetary planning and decision making processes.
Multi-hazard	Educate and inform residents of the need for and means of hazard mitigation to more effectively protect persons and property from the impacts of natural hazards.
Multi-hazard	Evaluate generators and fuel for alternative sources of power.
Multi-hazard	Identify and designate at least one emergency shelter in the Town.
Multi-hazard	In land use planning documents, where feasible, will encourage street interconnectivity in all new subdivision to allow multiple access points.
Multi-hazard	Install hookups for portable generators at sewer lift stations which do not currently have hookups.
Multi-hazard	Put in place a Countywide 9-1-1 reverse call system for location specific warning to public of impending disaster.
Multi-hazard	Through existing subdivision regulations, encourage that power, cable and telephone lines be buried.

Table 7: Master List of Strategies for the City of Randleman

Hazard	Project or policy
Dam failure	Identify potential inundation areas downstream of high hazard dams.
Drought	Continue use of drought management ordinance as part of the regular Local Water Supply Planning process.
Drought	Develop and adopt a drought management/water shortage (conservation) ordinance as part of the regular Local Water Supply Planning process.
Flood	Continue stormwater management planning
Flood	Continue to clear debris from culverts and storm drains in priority floodplains.
Flood	Develop program to clear debris from culverts and storm drains in priority floodplains.
Flood	Disseminate information on the benefits of purchasing flood insurance to property owners in flood hazard areas.
Flood	Look into Stormwater Management Planning.
Flood	Strengthen floodplain regulation to current standards.
Flood	Track floodplain changes impacting the City during infill of Randleman Lake.
Flood	Update flood prevention ordinance to latest model standard.
Flood or Dam Failure	Remove Polecat Creek Dam after water supply system change to Randleman Lake.
Flood/Dam failure	Remove Polecat Creek Dam after water supply system change to Randleman Lake.

Hazard	Project or policy
High wind events	Consider amending sign ordinances limiting heights or size of signs.
Ice	Adopt tree planning ordinances or programs and landscaping practices that encourage planting trees less susceptible to damage.
Multi-hazard	Adopt as City policy through Land Development Plans that wherever possible preserve natural wetlands, designate conservation corridors, especially along streams through acquisition or conservation easements.
Multi-hazard	Continue evaluation of purchase of stand alone generators for wastewater plant and pump stations.
Multi-hazard	Continue to develop GIS capability.
Multi-hazard	Continue to develop GIS capability.
Multi-hazard	Continue to educate and inform local government and elected officials (decision makers) of the need to consider hazard mitigation policy and budgetary planning and decision making processes.
Multi-hazard	Continue to procure generators and fuel for alternative sources of power for lift stations and boost stations and emergency shelter.
Multi-hazard	County recording damage assessment information for Randleman, such as type of hazard, location of hazard occurrence, when it occurred, death or injury, property damaged, for local use in hazard mitigation and land use planning.
Multi-hazard	Educate and inform local government and elected officials (decision makers) of the need to consider hazard mitigation in policy and budgetary planning and decision making processes.
Multi-hazard	Evaluate current capacity of critical services to deal with power outages.
Multi-hazard	Identify and designate at least one emergency shelter in each municipality.
Multi-hazard	Looking into safe growth management strategies for development downstream of dams and incorporate into Land Use Plans.
Multi-hazard	Procure generators and fuel for alternative sources of power for lift stations and boost stations (12) and emergency shelter.
Multi-hazard	Put in place a Countywide 9-1-1 reverse call system for location specific warning to public of impending disaster.
Multi-hazard	Review capital improvement plan to ensure capital improvements support or consider mitigating activities and are not counter to hazard mitigation.
Multi-hazard	Through existing subdivision regulations, encourage that power, cable and telephone lines be buried.

Table 8: Master List of Strategies for the Town of Seagrove

Hazard	Project or policy
Flood	Adopt a flood prevention ordinance
Flood	Become an NFIP member.
Flood	Develop program to clear debris from culverts and storm drains in priority floodplains.
High wind	Strengthen mobile home/manufactured home anchoring requirements.
Ice/high wind	Evaluate generators and fuel needs and supply alternative sources of power.
Multi-hazard	Adopt as Town policy: Wherever possible preserve natural wetlands, designate conservation corridors, especially along streams through acquisition or conservation easements.
Multi-hazard	Develop procedure for recoding damage assessment information such as type of hazard, location of hazard occurrence, when it occurred, death or injury, property damages, narrative description of damage, not just dollar value, for local use in hazard mitigation and land use planning.
Multi-hazard	Educate and inform local government and elected officials (decision makers) of the need to consider hazard mitigation in policy and budgetary planning and decision-making processes.
Multi-hazard	Identify and designate at least one emergency shelter in each municipality.
Multi-hazard	Put in place a Countywide 9-1-1 reverse call system for location specific warning to public of impending disaster.
Multi-hazard	Wherever possible preserve natural wetlands, designate conservation corridors, especially along streams through acquisition or conservation easements.

Table 9: Master List of Strategies for the Town of Staley

Hazard	Project or policy
Flood	Adopt a flood prevention ordinance.
Flood	Become an NFIP member.
Flood	Develop program to clear debris from culverts and storm drains in priority floodplains.
High winds	Strengthen mobile home/manufactured home anchoring requirements.
Multi-hazard	Develop procedure for recoding damage assessment information such as type of hazard, location of hazard occurrence, when it occurred, death or injury, property damaged, narrative description of damage, not just dollar value, for local use in hazard mitigation and land use planning.

Hazard	Project or policy
Multi-hazard	Educate and inform local government and elected officials (decision makers) of the need to consider hazard mitigation in policy and budgetary planning and decision making processes.
Multi-hazard	Evaluate generators and fuel needs to supply alternative sources of power.
Multi-hazard	Identify and designate at least one emergency shelter in the Town.
Multi-hazard	Put in place a Countywide 9-1-1 reverse call system for location specific warning to public of impending disaster.
Multi-hazard	Wherever possible preserve natural wetlands, designate conservation corridors, especially along streams through acquisition or conservation easements.

Table 10: Master List of Strategies for the City of Trinity

Hazard	Project or policy
Flood	Adopt flood prevention ordinance.
Flood	Become National Flood Insurance Program member.
Flood	Develop a Stormwater Management Plan as part of NPDES Phase II program requirement.
Flood	Develop program to clear debris from culverts and storm drains in priority floodplains. (Part of Stormwater Management Plan.)
Flood	Disseminate information on the benefits of purchasing flood insurance to property owners in flood hazard areas. Insert as envelope stuffers in regular mailings to residents.
Flood	Hold yearly “Flood Hazard Awareness Week.”
Multi-hazard	Consider amending subdivision ordinance to allow clustering to maximize density while preserving high hazard areas.
Multi-hazard	Create Planning Department.
Multi-hazard	Develop a section of existing Capital Improvement Plan devoted solely to hazard mitigation projects to allow for effective financial management of capital projects which have hazard mitigation ramifications.
Multi-hazard	Develop procedure for recoding damage assessment information such as type of hazard, location of hazard occurrence, when it occurred, death or injury, property damages, narrative description of damage, not just dollar value, for local use in hazard mitigation and land use planning.
Multi-hazard	Educate and inform local government and elected officials (decision makers) of the need to consider hazard mitigation in policy and budgetary planning and decision-making processes.
Multi-hazard	Employ a planner.
Multi-hazard	Identify and designate at least one emergency shelter in the City.

Hazard	Project or policy
Multi-hazard	Identify and map mobile home parks.
Multi-hazard	Include in land use plan as Citywide policy, wherever possible preserve natural wetlands, designate conservation corridors, especially along streams through acquisition or conservation easements.
Multi-hazard	Include in land use plans to consider street connectivity in all new subdivisions to allow for multiple access points.
Multi-hazard	Look into need for emergency water supply capability as part of regular local water supply planning process.
Multi-hazard	Partner with County to use GIS resources.
Multi-hazard	Procure generators and fuel for alternative sources of power for administrative building.
Multi-hazard	Put in place a Countywide 9-1-1 reverse call system for location specific warning to public of impending disaster.
Multi-hazard	Review existing capital improvement plan to ensure capital improvements support mitigating activities and are not counter to hazard mitigation.
Multi-hazard	Strengthen mobile home anchoring requirements.
Multi-hazard	Through existing subdivision regulations, encourage that power, cable and telephone lines be buried.
Multi-hazard	Update existing zoning ordinance to include considerations for hazard mitigation.
Multi-hazard	Update Land Use Plan.
Multi-hazard	Update subdivision ordinance to include considerations for hazard mitigation.

List of Changes made to Appendix H for 2009 Plan Update

- This entire section was reformatted to include projects or policies specific to each jurisdiction. It was changed to make it easier for the reader to quickly find specific projects or policies for a specific jurisdiction.

INSTRUCTIONS FOR USING THE PLAN REVIEW CROSSWALK FOR REVIEW OF LOCAL MITIGATION PLANS

Attached is a Plan Review Crosswalk based on the **Local Multi-Hazard Mitigation Planning Guidance**, published by FEMA in July, 2008. This Plan Review Crosswalk is consistent with the *Robert T. Stafford Disaster Relief and Emergency Assistance Act* (Stafford Act), as amended by Section 322 of the *Disaster Mitigation Act of 2000* (P.L. 106-390), the *National Flood Insurance Act of 1968*, as amended by the *National Flood Insurance Reform Act of 2004* (P.L. 108-264) and *44 Code of Federal Regulations (CFR) Part 201 – Mitigation Planning*, inclusive of all amendments through October 31, 2007.

SCORING SYSTEM

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

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

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

When reviewing single jurisdiction plans, reviewers may want to put an N/A in the boxes for multi-jurisdictional plan requirements. When reviewing multi-jurisdictional plans, however, all elements apply. States that have additional requirements can add them in the appropriate sections of the *Local Multi-Hazard Mitigation Planning Guidance* or create a new section and modify this Plan Review Crosswalk to record the score for those requirements. Optional matrices for assisting in the review of sections on profiling hazards, assessing vulnerability, and identifying and analyzing mitigation actions are found at the end of the Plan Review Crosswalk.

The example below illustrates how to fill in the Plan Review Crosswalk.:

Assessing Vulnerability: Overview				
<i>Requirement §201.6(c)(2)(ii): [The risk assessment shall include a] description of the jurisdiction’s vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community.</i>				
Element	Location in the Plan (section or annex and page #)	Reviewer’s Comments	SCORE	
			N	S
A. Does the new or updated plan include an overall summary description of the jurisdiction’s vulnerability to each hazard?	Section II, pp. 4-10	The plan describes the types of assets that are located within geographically defined hazard areas as well as those that would be affected by winter storms.		
B. Does the new or updated plan address the impact of each hazard on the jurisdiction?	Section II, pp. 10-20	The plan does not address the impact of two of the five hazards addressed in the plan. Required Revisions: • Include a description of the impact of floods and earthquakes on the assets. Recommended Revisions: This information can be presented in terms of dollar value or percentages of damage.		
SUMMARY SCORE				

LOCAL MITIGATION PLAN REVIEW SUMMARY

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

Prerequisite(s) (Check Applicable Box)	NOT MET	MET
1. Adoption by the Local Governing Body: §201.6(c)(5) OR	N/A	N/A
2. Multi-Jurisdictional Plan Adoption: §201.6(c)(5) AND		X
3. Multi-Jurisdictional Planning Participation: §201.6(a)(3)		X
Planning Process	N	S
4. Documentation of the Planning Process: §201.6(b) and §201.6(c)(1)		X
Risk Assessment	N	S
5. Identifying Hazards: §201.6(c)(2)(i)		X
6. Profiling Hazards: §201.6(c)(2)(i)		X
7. Assessing Vulnerability: Overview: §201.6(c)(2)(ii)		X
8. Assessing Vulnerability: Addressing Repetitive Loss Properties. §201.6(c)(2)(ii)		X
9. Assessing Vulnerability: Identifying Structures, Infrastructure, and Critical Facilities: §201.6(c)(2)(ii)(B)		X
10. Assessing Vulnerability: Estimating Potential Losses: §201.6(c)(2)(ii)(B)		X
11. Assessing Vulnerability: Analyzing Development Trends: §201.6(c)(2)(ii)(C)		X
12. Multi-Jurisdictional Risk Assessment: §201.6(c)(2)(iii)		X

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

SCORING SYSTEM

Please check one of the following for each requirement.

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

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

Mitigation Strategy	N	S
13. Local Hazard Mitigation Goals: §201.6(c)(3)(i)		X
14. Identification and Analysis of Mitigation Actions: §201.6(c)(3)(ii)		X
15. Identification and Analysis of Mitigation Actions: NFIP Compliance. §201.6(c)(3)(ii)		X
16. Implementation of Mitigation Actions: §201.6(c)(3)(iii)		X
17. Multi-Jurisdictional Mitigation Actions: §201.6(c)(3)(iv)		X
Plan Maintenance Process	N	S
18. Monitoring, Evaluating, and Updating the Plan: §201.6(c)(4)(ii)		X
19. Incorporation into Existing Planning Mechanisms: §201.6(c)(4)(ii)		X
20. Continued Public Involvement: §201.6(c)(4)(iii)		X
Additional State Requirements*	N	S
Insert State Requirement		
Insert State Requirement		
Insert State Requirement		

LOCAL MITIGATION PLAN APPROVAL STATUS

PLAN NOT APPROVED

See Reviewer's Comments

PLAN APPROVED

Local Mitigation Plan Review and Approval Status

Jurisdiction: Randolph County	Title of Plan: Randolph County Multi-Jurisdictional Hazard Mitigation Plan	Date of Plan:
Local Point of Contact: Tim Mangum	Address: 204 E Academy Street P O Box 771 Asheboro NC 27204	
Title: Planning Information Specialist		
Agency: Randolph County Planning and Development		
Phone Number: 336 318-6552	E-Mail: vmangum@co.randolph.nc.us	

State Reviewer: Ryan Wiedenman	Title: Hazard Mitigation Planner	Date: 10-25-2010
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FEMA Reviewer: Larry Breland II Linda L. Byers (QC)	Title: Hazard Mitigation Community Planner R4 Lead Planning Specialist	Date: 1/3/11 January 7, 2011
Date Received in FEMA Region IV	11/9/10	
Plan Not Approved	January 7, 2011	
Plan Approved	8/5/11	
Date Approved	8/5/11	

Jurisdiction:	DFIRM		NFIP Status*			
	In Plan	NOT in Plan	Y	N	N/A	CRS Class
1. Randolph County			√			
2. City of Archdale			√			
3. City of Asheboro			√			
4. Town of Franklinville			√			
5. Town of Liberty			√			
6. Town of Ramseur			√			

7. City of Randleman			√			
8. Town of Seagrove				√		
9. Town of Staley				√		
10. City of Trinity			√			

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

PREREQUISITE(S)

1. Adoption by the Local Governing Body

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

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			NOT MET	MET
A. Has the local governing body adopted new or updated plan?	N/A	<p><i>Update has not been adopted as the Plan has not yet been reviewed by NCEM or FEMA. Once approval from NCEM and FEMA is received, the plan will be adopted.</i></p> <p><u>NCEM Reviewer comments:</u> This plan will be adopted upon approval by NCEM and FEMA</p> <p>This is an updated multi-jurisdictional plan.</p>	N/A	N/A
B. Is supporting documentation, such as a resolution, included?	N/A	<p><i>Update has not been adopted as the Plan has not yet been reviewed by NCEM or FEMA. Once approval from NCEM and FEMA is received, the plan will be adopted.</i></p> <p><u>NCEM Reviewer comments:</u> This plan will be adopted upon approval by NCEM and FEMA</p> <p>This is an updated multi-jurisdictional plan.</p>	N/A	N/A
SUMMARY SCORE			N/A	N/A

2. Multi-Jurisdictional Plan Adoption

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

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			NOT MET	MET
A. Does the new or updated plan indicate the specific jurisdictions represented in the plan?	<p><i>The Plan section, pages 7-12</i></p> <p>Page. 1</p>	<p><i>The Update lists municipalities that participated in the 2004 Plan. We have had limited success with municipal involvement for the 2009 Update.</i></p> <p><u>NCEM Reviewer comments:</u> The plan indicates the specific jurisdictions that are represented in the plan</p> <p>The plan lists the following jurisdictions that are represented in the plan: Randolph Co Unincorporated, Cities of Archdale, Asheboro, Randleman, Trinity and Towns of Franklinville, Liberty, Ramseur, Staley and Seagrove.</p>		X

LOCAL MITIGATION PLAN REVIEW CROSSWALK FINAL Randolph Co NC NOVEMBER 2010

<p>B. For each jurisdiction, has the local governing body adopted the new or updated plan?</p>	<p>n/a</p>	<p><i>Update has not been adopted as the Plan has not yet been reviewed by NCEM or FEMA. Once approval from NCEM and FEMA is received, the plan will be adopted.</i></p> <p><u>NCEM Reviewer comments:</u> This plan will be adopted upon approval by NCEM and FEMA</p> <p>The updated plan has not been adopted yet.</p> <p><u>REQUIRED REVISION:</u></p> <p>The Updated Plan must be adopted within one calendar year of FEMA’s “approval pending adoption” of the Updated Plan.</p> <p>The plan was adopted and approved for the following jurisdictions: Randolph Co Unincorporated, Town of Staley, City of Asheboro, City of Archdale, Town of Liberty, Town of Ramseur and City of Randleman as of 8/5/11.</p> <p>8-24-11 Town of Franklinville adopted the Plan. 8-31-11 City of Trinity adopted the Plan. 9-20-11 Town of Seagrove adopted the Plan.</p>		<p>X</p>
<p>C. Is supporting documentation, such as a resolution, included for each participating jurisdiction?</p>	<p>n/a</p>	<p><i>Update has not been adopted as the Plan has not yet been reviewed by NCEM or FEMA. Once approval from NCEM and FEMA is received, the plan will be adopted.</i></p> <p><u>NCEM Reviewer comments:</u> This plan will be adopted upon approval by NCEM and FEMA</p> <p>The updated plan has not been adopted yet.</p> <p><u>REQUIRED REVISION:</u></p> <p>The new Plan shall include a copy of the resolution or other documentation of formal adoption of the Updated Plan within one calendar year.</p> <p>A resolution is included for the following jurisdictions as of 8/5/11: Randolph Co Unincorporated, Town of Staley, City of Asheboro, City of Archdale, Town of Liberty, Town of Ramseur and City of Randleman</p> <p>8-24-11 Town of Franklinville provided an adoption resolution. 8-31-11 City of Trinity provided an adoption resolution. 9-20-11 Town of Seagrove provided an adoption resolution.</p>		<p>X</p>
<p style="text-align: right;">SUMMARY SCORE</p>				<p>X</p>

3. Multi-Jurisdictional Planning Participation

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

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			NOT MET	MET
A. Does the new or updated plan describe how each jurisdiction participated in the plan's development?	<i>The Plan section pages 7-11</i> p. 7	<p><u><i>NCEM Reviewer comments:</i></u> <i>The Plan Update provides a detailed description of who was involved in the planning process and how each jurisdiction participated in the update.</i></p> <p>The updated plan states the Multi-Jurisdictional Hazard Mitigation Plan was developed through the efforts of individuals representing the county & each municipality. Participants have included the following. Ex: Frank Willis-County Manager, Neil Allen-Director, Emergency Management</p>		X
B. Does the updated plan identify all participating jurisdictions, including new, continuing, and the jurisdictions that no longer participate in the plan?	<i>The Plan section pages 7-11</i> p. 1	<p><u><i>NCEM Reviewer comments:</i></u> <i>The Plan Update identifies all participating jurisdictions as well as jurisdictions that did not provide updated information for the Plan Update.</i></p> <p>The plan lists the following jurisdictions that are represented in the plan: Randolph Co Unincorporated, Cities of Archdale, Asheboro, Randleman, Trinity and Towns of Franklinville, Liberty, Ramseur, Staley and Seagrove. There were no new jurisdictions included.</p>		X
SUMMARY SCORE				X

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

4. Documentation of the Planning Process

Requirement §201.6(b): *In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include:*

- (1) *An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;*
- (2) *An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process; and*
- (3) *Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.*

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

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			N	S
A. Does the plan provide a narrative description of the process followed to prepare the new or updated plan?	The Plan section pages 11-16	<p><u>NCEM Reviewer comments:</u></p> <p><i>The Plan Update provides a detailed description of the planning process, including the dates of each meeting and the involvement of participating jurisdictions.</i></p> <p>The Plan provides a narrative description of the process that was followed to prepare the Updated Plan.</p> <p>Phase I: September 2008 through January 2009</p> <ul style="list-style-type: none"> • Identify contacts for municipalities and other involved agencies to prepare for the Plan update. • Meeting held on September 23, 2008, with identified contacts to being the update process. Attendees were given assignments to review their portion of the Plan and to review the previous goals and strategies. As part of that process each jurisdiction was tasked with the following: <ul style="list-style-type: none"> ○ Review the vulnerability assessment. Any changes to the assessments were to be reported to the County for inclusion in the 2009 Plan. <p>Review existing ordinances, regulations, studies, reports and land use plans for elements related to hazard mitigation.</p> <p>Phase II: January 2009 through April 2009</p> <ul style="list-style-type: none"> • County Planning Team met on January 13, 2009, to review 		X

4. Documentation of the Planning Process

Requirement §201.6(b): In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process **shall** include:

- (1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;
- (2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process; and
- (3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

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

			SCORE	
		<p>the section of the Plan pertaining to Unincorporated Randolph County.</p> <ul style="list-style-type: none"> • Municipalities met on January 15, 2009, to review the appropriate sections to the Plan. Each jurisdiction was advised to forward updated documents to the County for inclusion in the 2009 Plan update. • Sections of the Plan that have been updated based upon information from the jurisdictions include: <ul style="list-style-type: none"> ○ County of Randolph (Subsection 1); ○ City of Archdale (Subsection 2); ○ Town of Franklinville (Subsection 4); ○ Town of Liberty (Subsection 5); ○ Town of Ramseur (Subsection 6); ○ City of Randleman (Subsection 7); ○ Town of Staley (Subsection 9); and ○ City of Trinity (Subsection 10). <p>All other municipalities not listed have not forwarded update information to the County.</p>		
<p>B. Does the new or updated plan indicate who was involved in the current planning process? (For example, who led the development at the staff level and were there any external contributors such as contractors? Who participated on the plan committee, provided information, reviewed drafts, etc.?)</p>	<p>The Plan section pages 7-11</p> <p>The Plan section pages 7-11</p>	<p><u>NCEM Reviewer comments:</u> <i>The Plan Update indicates the participants from each agency, organization, government, etc who were involved in the update process.</i></p> <p>The updated plan states: This Multi-jurisdictional Hazard Mitigation Plan was developed through the efforts of individuals representing the County and each municipality. The County Planning Committee consisted of Donovan Davis, Hal Johnson, Jared Byrd and Tim Mangum. This Committee is responsible for the maintenance and update of the Plan as required by NCEM and FEMA guidelines. The Committee worked to update the entire Plan and encouraged all municipalities to submit update information in a timely manner. The Committee also coordinated all public meetings during the revision</p>		X

4. Documentation of the Planning Process

Requirement §201.6(b): In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process **shall** include:

- (1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;
- (2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process; and
- (3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

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

			SCORE	
<p>C. Does the new or updated plan indicate how the public was involved? (Was the public provided an opportunity to comment on the plan during the drafting stage and prior to the plan approval?)</p>	<p><i>The Plan section page 12 and Appendix F</i></p> <p>The Plan p. 12</p>	<p>process.</p> <p><i>Once approval from NCEM and FEMA is received, the additional public meetings will be scheduled for the adoption and approval. The Affidavit of Publication for public comment period and meeting is included in Appendix F.</i></p> <p><u>NCEM Reviewer comments:</u> <i>The Plan indicates that two public meetings and the posting of the draft Plan Update on the County website gave the public an opportunity to participate in the update process.</i></p> <p>The updated plan states: The <u>first public meeting</u> was advertised in <i>The Courier-Tribune</i> and posted on the County website. Copies of the draft plan were available in the County Planning Department and on the County website. The public meeting was held at 6:30 pm in the Board of Commissioners Meeting Room. No citizens attended the meeting. The County Emergency Services Department and the Planning Department were represented along with the City of Asheboro Planning Department.</p> <p><u>REQUIRED REVISION:</u> The public has been given an opportunity to comment during the drafting stage. The public must also be given the opportunity to comment on the plan prior to plan approval.</p> <p><i>For more information, see "Documentation of the Planning Process" in the Local Multi-Hazard Mitigation Planning Guidance, Pages 26 – 28.</i></p> <p>The plan was officially adopted at the Randolph County Board of County Commissioners meeting in which the Public had a final opportunity to comment.</p>		<p>X</p>
<p>D. Does the new or updated plan discuss the opportunity for neighboring communities, agencies,</p>	<p><i>The Plan section pages 7-11,</i></p>	<p><i>As is indicated in the Plan text, numerous agencies were invited to all meetings regarding the Plan. Currently, other than County</i></p>		

4. Documentation of the Planning Process

Requirement §201.6(b): In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process **shall** include:

- (1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;
- (2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process; and
- (3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

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

			SCORE	
			N	S
F. Does the updated plan document how the planning team reviewed and analyzed each section of the plan and whether each section was revised as part of the update process?	The Plan section pages 10-11 and 16 The Plan p. 10-11	<p style="text-align: center;"><u><i>NCEM Reviewer comments:</i></u> <i>The Plan Update documents how the planning team reviewed and analyzed each section of the plan</i></p> <p>The Plan Update documents how the planning team reviewed and analyzed each section of the plan. Examples are as follows:</p> <p>On January 13, 2009, the County Planning Team convened and reviewed the section of the plan that pertained to Unincorporated Randolph County. The Team reviewed each strategy and discussed strategies that have been completed, those yet to be completed and new strategies for the next five year process.</p> <p>Arnold Allred and Shelia Vince, Town of Franklinville, coordinated the review and update process for the Town. Information from the Town’s review was forwarded to the County Planning Committee for inclusion in the Plan update.</p>		X
	SUMMARY SCORE			

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

5. Identifying Hazards

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

Element	Location in the Plan (section or annex and page #)	Reviewer’s Comments	SCORE	
			N	S
A. Does the new or updated plan include a description of the types of all natural hazards that affect the	Appendix A Pages A2-A27	<i>Changes made to the section included updated mapping and incidence reports along with other updated material.</i>		X

jurisdiction?	Appendix A A1-A29	<p><u>NCEM Reviewer comments:</u> <i>The Plan Update includes a thorough description of each hazard likely to affect the jurisdiction.</i></p> <p>The plan lists & provides a description of the following natural hazards: Dam Failure, Drought, Earthquakes, Flooding, Flash Flooding, Subsequent river/stream erosion, Heat Wave, High Wind events such as tropical storms, tropical depressions, & extra tropical storms (nor'easters), landslides, severe thunderstorms, sinkholes, tornados, wildfires, & winter storms, both ice -& snow events.</p>		
SUMMARY SCORE				X

6. Profiling Hazards

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

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			N	S
A. Does the risk assessment identify the location (i.e., geographic area affected) of each natural hazard addressed in the new or updated plan?	<p>Appendix A Pages A-3-A27, Appendix B Pages B-8-B11, B18-B30</p> <p>Appendix A1-A27 Appendix B1-B33</p>	<p><i>The specific locations are not identified but instead a general location is used to protect citizens. The maps are at such a large scale it would be impossible to locate these areas without specific data.</i></p> <p><u>NCEM Reviewer comments:</u> <i>The Plan Update provides general locations that are vulnerable to each natural hazard addressed in the Plan as well as maps which show the location of each hazard.</i></p> <p>The geographic area affected (location) of each of the identified hazards has been identified using the best available data:</p> <p>Hazards Maps depict that hazards can cover the entire county area.</p> <p><u>Severe Thunderstorms-</u> National Weather Service, National Climate Data Center Database</p> <p><u>Tornadoes-</u> National Climate Data Center Database. Location Map</p> <p><u>Flooding-</u> National Climate Data Center Database</p> <p>Also, the plan includes narrative that identifies the location of each natural hazard in the plan.</p>		X

<p>B. Does the risk assessment identify the extent (i.e., magnitude or severity) of each hazard addressed in the new or updated plan?</p>	<p><i>The Plan</i> pages 4-7, S1.2-S1.4, S2.1-S2.2, S3.1-S3.2, S4.1-S4.2, S5.1-S5.2, S6.1-S6.2, S7.1-S7.2, S8.1-S8.2, S9.1-S9.2, S10.1-S10.2, A-2-A-35</p> <p>Appendix A1-A27</p>	<p><i>The Plan was updated to reflect the best information available at the time.</i></p> <p><u>NCEM Reviewer comments:</u> <i>The Plan Update identifies the probable intensity and impact of each hazard addressed in the plan.</i></p> <p>The risk assessment identifies the magnitude or severity of each hazard addressed in the Updated Plan. A discussion of what the jurisdictions could anticipate was supported by technical measures and scientific scales such as: <u>Earthquake-</u> Modified Mercalli Scale with Richter Scale equivalent, <u>Drought-</u> Palmer Drought Index, <u>Flooding-</u> National Climate Data Center Database, <u>Hurricanes, Tropical & Extra Tropical Systems-</u> Saffir Simpson Scale</p>		<p>X</p>
<p>C. Does the plan provide information on previous occurrences of each hazard addressed in the new or updated plan?</p>	<p>Appendix A Pages A-2-A-30</p> <p>Appendix A1-A27</p>	<p><i>The data includes information from the County Damage Assessment database and the National Climactic Data Center.</i></p> <p><u>NCEM Reviewer comments:</u> <i>The Plan Update includes previous occurrences of each hazard, including events in the past five years.</i></p> <p>The plan provides information on previous occurrences of each identified hazard by discussion of recorded history of each identified hazard in the plan.</p> <p>Examples are as follows: Previous occurrences of Hurricanes, Tropical & Extra-Tropical Systems are listed in Table Format.</p> <ol style="list-style-type: none"> 1. 9/4/1999 Dennis Tropical Depression 2. 9/6/1997 Danny Tropical Depression 3. 2000 Gordon Extra-tropical Depression 		<p>X</p>
<p>D. Does the plan include the probability of future events (i.e., chance of occurrence) for each hazard addressed in the new or updated plan?</p>	<p>Appendix A Pages A-2-A-35</p> <p>Appendix A1-A27</p>	<p><i>The updated Plan gives a "best guess" for probability for future events.</i></p> <p><u>NCEM Reviewer comments:</u> <i>The Plan Update includes the likelihood of occurrence for each hazard.</i></p> <p>The plan includes the probability of future events for each identified hazard.</p> <p>Examples are as follows:</p>		<p>X</p>

		<p><u>Hurricanes, Tropical and Extra-Tropical Systems</u> As hurricanes have struck the NC or SC coast, they typically downgrade quickly so that by the time they reach our area, the storm is classified as either a tropical storm or a tropical depression. Tropical storms and tropical depressions are likely in the central Piedmont of NC. Winds between 35 and 58+ miles are highly likely to occur each year. Tropical storm winds of between 38 and 74 miles per hour are likely. Hurricane strength winds of between 74 to 100 miles per hour are possible. Tornadoes and subsequent increased wind speed are also a risk as tropical storms pass through.</p>		
SUMMARY SCORE				X

7. Assessing Vulnerability: Overview

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

Element	Location in the Plan (section or annex and page #)	Reviewer’s Comments	SCORE	
			N	S
<p>A. Does the new or updated plan include an overall summary description of the jurisdiction’s vulnerability to each hazard?</p>	<p>Appendix A Pages A-31-A-35, Appendix B Pages B-31-B47</p> <p>Appendix A1-A27</p>	<p><i>Word did not renumber all pages so the beginning page number is given.</i></p> <p><i>NCEM Reviewer comments:</i> <i>The Plan Update includes overall summary descriptions of each jurisdiction’s vulnerability to each hazard.</i></p> <p>The plan includes an overall summary description of the jurisdiction’s vulnerability to each hazard. Examples are as follows:</p> <p>There are approximately 311,657 total acres of forested land in Randolph County. Randolph County has two fire seasons, from March to May and from October to January. The major cause of wildfires in Randolph County is debris burning.</p> <p>A total of 317 wildfires have occurred in the five year period from 1997 to 2001, with 817 acres burned, on average 2.4 acres per fire. Over the five year period of record, debris burning is the major cause of fire (59%); 10% of wildfires caused by smoking; 10% of wildfires caused by children; 6% of wildfires caused by incendiary use. 2001 had greatest number of fire events (157); 1999 with 88; other years 40-43 fires.</p>		
<p>B. Does the new or updated plan address the impact of each hazard on the jurisdiction?</p>	<p>Appendix B Pages B-31-B47</p> <p>Appendix B B34</p>	<p><i>Word did not renumber all pages so the beginning page number is given.</i></p> <p><i>NCEM Reviewer comments:</i> <i>The Plan Update addresses potential impacts of each hazard on the jurisdiction.</i></p> <p>Each hazard includes a discussion of the overall impact of the hazard on each of the jurisdictions participating in the plan. This includes a discussion of the impact of the hazards on the built environment. The impact that each hazard has on the jurisdiction is depicted in table format which shows # of existing building, current value, 5% damage estimate, 10% damage estimate, 10% of population impacted.</p>		

		<p>Ex: Current Conditions Multi-hazards (severe high wind, snow, ice, multi-hazard events)</p> <p># of existing buildings current value</p> <p>Single family 44,606 \$ 4,270,922,800.00</p> <p>5% damage estimate</p> <p>\$ 213,546,140.00</p>			
SUMMARY SCORE					X

8. Assessing Vulnerability: Addressing Repetitive Loss Properties

Requirement §201.6(c)(2)(ii): [The risk assessment] **must** also address National Flood Insurance Program (NFIP) insured structures that have been repetitively damaged floods.

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE		
			N	S	
<p>A. Does the new or updated plan describe vulnerability in terms of the types and numbers of repetitive loss properties located in the identified hazard areas?</p>	<p><i>The Plan page 7, Page S2.2</i></p> <p>The Plan page 7, Page S2.2</p>	<p>Note: This requirement becomes effective for all local plans approved after October 1, 2008.</p> <p><i>The information on repetitive loss properties has been updated based upon information from the municipalities. The County is still awaiting information from the NC Floodplain Mapping program regarding repetitive loss properties.</i></p> <p><u>NCEM Reviewer comments:</u></p> <p>The Plan Update describes vulnerability in terms of the types and number of repetitive loss properties. These properties are located only in the City of Archdale.</p> <p>The plan states: Randolph County & its municipalities have three recorded repetitive loss structures. The three repetitive loss structures are listed in the City of Archdale.</p> <p>What were the types?</p>		X	
SUMMARY SCORE					X

9. Assessing Vulnerability: Identifying Structures

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

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			N	S
<p>A. Does the new or updated plan describe vulnerability in terms of the types and numbers of existing buildings, infrastructure, and critical facilities located in the identified hazard areas?</p>	<p>Pages S1.2-S1.5, S2.1-S2.2, S3.1-S3.2, S4.1-S4.2, S5.1-S5.2, S6.1-S6.2, S7.1-S7.2, S8.1-S8.2, S9.1-S9.2, S10.1-S10.2, B-31-B-47, Appendix G</p> <p>Appendix B B-34</p>	<p>Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.</p> <p><i><u>NCEM Reviewer comments:</u></i> The Plan Update describes vulnerability in terms of the types, numbers, and value of existing buildings infrastructure, and critical facilities located in the hazard areas.</p> <p>The updated plan describes vulnerability in terms of the types and numbers of existing buildings, infrastructure, and critical facilities located in the identified areas by providing in Table format for each identified hazard.</p> <p>Examples are as follows: The Table on p. B-34, Appendix B depicts the types & numbers of buildings such as: single-family, multi-family, commercial & industrial, critical facilities, other (including infrastructure, roads, bridges, etc), countywide & current value, 5% and 10% should they become susceptible to hazards.</p>		<p>X</p>
<p>B. Does the new or updated plan describe vulnerability in terms of the types and numbers of future buildings, infrastructure, and critical facilities located in the identified hazard areas?</p>		<p>Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.</p> <p><i>The information regarding future buildings has not been included due to the economic recession. It would be impossible to guess the impacts to development at this point in time.</i></p> <p><i><u>NCEM Reviewer comments:</u></i> The Plan Update does not include projections of vulnerability in terms of future development.</p> <p>The updated plan describes vulnerability in terms of the types and numbers of future buildings, infrastructure, and critical facilities located in the identified areas by providing in Table format for each identified hazard.</p> <p>Examples are as follows:</p>		<p>X</p>

		Future Conditions Countywide Multi-hazards (severe high wind, snow, ice, multi-hazard events) Projected Value 5% damage Critical Facilities 102 \$ 168,197,989.59 \$ 8,409,899.48		
SUMMARY SCORE				X

10. Assessing Vulnerability: Estimating Potential Losses

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

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE										
			N	S									
A. Does the new or updated plan estimate potential dollar losses to vulnerable structures?	Pages S1.2-S1.3, S2.1-S2.2, S3.1-S3.2, S4.1-S4.2, S5.1-S5.2, S6.1-S6.2, S7.1-S7.2, S8.1-S8.2, S9.1-S9.2, S10.1-S10.2, B-31-B-47, Appendix G Appendix B,B34 Appendix G	<p>Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.</p> <p><i>NCEM Reviewer comments:</i> <i>The Plan Update provides the approximate value of structures in the flood plain within each jurisdiction.</i></p> <p>The updated plan estimates potential dollar losses to vulnerable structures using table format for each identified hazard.</p> <p><u>Examples are as follows for Countywide Multi-hazard events:</u></p> <table border="1"> <thead> <tr> <th><u>Type of Development</u></th> <th><u># of existing buildings</u></th> <th><u>Current Value</u></th> </tr> </thead> <tbody> <tr> <td>Commercial & Industrial</td> <td>3,303</td> <td>\$ 1,029,769,940.00</td> </tr> <tr> <td>Critical Facilities</td> <td>98</td> <td>\$ 161,601,990.00</td> </tr> </tbody> </table>	<u>Type of Development</u>	<u># of existing buildings</u>	<u>Current Value</u>	Commercial & Industrial	3,303	\$ 1,029,769,940.00	Critical Facilities	98	\$ 161,601,990.00		X
<u>Type of Development</u>	<u># of existing buildings</u>	<u>Current Value</u>											
Commercial & Industrial	3,303	\$ 1,029,769,940.00											
Critical Facilities	98	\$ 161,601,990.00											
B. Does the new or updated plan describe the methodology used to prepare the estimate?	Appendix B-1-B-2 Appendix B-1-B-2	<p>Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.</p> <p><i>NCEM Reviewer comments:</i> <i>The Plan Update uses census tract data at the block group level to prepare estimates of potential dollar losses to vulnerable structures.</i></p> <p>The updated plan states the following regarding the methodology used to prepare the estimate: The plan states: The vulnerability of the community was assessed through the analysis of census tract data at the block group level.</p>		X									

SUMMARY SCORE

X

11. Assessing Vulnerability: Analyzing Development Trends

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

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			N	S
A. Does the new or updated plan describe land uses and development trends?	Pages S1.1-S1.2, S2.19, S3.14, S4.1.16, S6.17, S9.13, S10.1, B-2-B-5 Appendix B B3-B4	Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing. <i><u>NCEM Reviewer comments:</u></i> <i>The Plan Update includes development trends in the Community Profile and land use maps for most jurisdictions represented in the Plan. Please include these sections in the previous column on the Crosswalk.</i> The plan provides a description of land uses & development trends for each of the identified hazards. Examples are as follows: <u>Growth Trends</u> The type of residential growth occurring in Randolph County is described as rural sprawl & has been primarily medium to large lot single family residential land subdivisions. The Primary Growth Areas are located adjacent to municipal limits & extends along the major transportation corridors which transverse the county. <u>Land Uses</u> Municipal areas are located within city limits or the extraterritorial regulatory jurisdiction of the cities. Urban density is expected with mixed land uses. Infrastructure is provided & density encouraged which may alleviate development pressures in areas without water & sewer.		X
SUMMARY SCORE				X

12. Multi-Jurisdictional Risk Assessment

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

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			N	S
A. Does the new or updated plan include a risk	Appendix B Pages B-31-B-47	<i><u>NCEM Reviewer comments:</u></i>		X

<p>assessment for each participating jurisdiction as needed to reflect unique or varied risks?</p>	<p>Appendix B B-33</p>	<p><i>The Plan Update includes a risk assessment for the County and each participating jurisdiction.</i></p> <p>The plan includes an overall summary description of the jurisdiction’s vulnerability to each hazard. The updated plan gives a detailed risk assessment description for the hazards that pose a direct measurable threat to the community which are high wind events such as severe thunderstorms, tropical & extra tropical systems, snow & ice events, flash flooding & drought.</p>		
SUMMARY SCORE				X

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

13. Local Hazard Mitigation Goals

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

Element	Location in the Plan (section or annex and page #)	Reviewer’s Comments	SCORE	
			N	S
A Does the new or updated plan include a description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards?	S1.5-S1.22, S2.3-S2.14, S3.3-S3.9, S4.3-S4.11, S5.3-S5.13, S6.2-S6.12, S7.3-S7.13, S8.2-S8.7, S9.2-S9.8, S10.2-S10.13 Subsection 1-10	<i>An individual municipalites goals for the next 5 year cycle is included in their subsection of the plan.</i> <u>NCEM Reviewer comments:</u> The Plan Update describes mitigation goals for each jurisdiction participating in the Plan. The updated plan includes a description of goals with associated objectives by each identified hazard that affects the jurisdiction. Ex: <u>Goal 1:</u> To enhance local government capability to lessen the impacts of all natural hazards. <u>Goal 2:</u> To identify & protect critical services, building, facilities & infrastructure that are at risk of damage due to natural hazards & to undertake cost effective mitigation measures to minimize losses.		X
SUMMARY SCORE				X

14. Identification and Analysis of Mitigation Actions

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

Element	Location in the Plan (section or annex and page #)	Reviewer’s Comments	SCORE	
			N	S
A. Does the new or updated plan identify and analyze a comprehensive range of specific mitigation actions and projects for each hazard?	Appendix H Pages H-1-H-12	<i>This appendix is the master list of hazard mitigation strategies and projects for the next 5 year cycle.</i> <u>NCEM Reviewer comments:</u> The Plan Update includes a range of specific mitigation actions for each jurisdiction represented in the Plan. The plan identifies a comprehensive range of specific mitigation		X

		<p>actions and projects for each hazard.</p> <p><u>Goal 1:</u> To enhance local government capability to lessen the impacts of all natural hazards.</p> <p><u>Action 1C:</u> Develop recommendation for protecting command centers. Identify alternate command posts.</p> <p><u>Goal 2:</u> To identify & protect critical services, building, facilities & infrastructure that are at risk of damage due to natural hazards & to undertake cost effective mitigation measures to minimize losses.</p> <p><u>Action 2B:</u> Obtain & install transfer switches.</p>		
<p>B Do the identified actions and projects address reducing the effects of hazards on new buildings and infrastructure?</p>	<p>Appendix H Pages H-1-H-12</p> <p>Appendix H H1-12</p>	<p><i>The projects and policies listed in Appendix H apply to both existing and future structures and infrastructure.</i></p> <p><i>NCEM Reviewer comments:</i> <i>The identified actions and projects address reducing the effects of hazards on new and existing buildings and infrastructure.</i></p> <p>The plan identifies actions and projects that address reducing the effects of hazards on new buildings and infrastructure.</p> <p><u>Ex:</u> City of Asheboro- <u>Action 4D: Flood-</u> Look into funding for & developing programs to clean debris from culverts & storm drains in property floodplains.</p> <p><u>1C: Flood-</u> To require retention/detention ponds or other storm water measure for any planned building groups (residential or commercial) will build into existing zoning ordinance.</p>		<p>X</p>
<p>C. Do the identified actions and projects address reducing the effects of hazards on existing buildings and infrastructure?</p>	<p>Appendix H Pages H-1-H-12</p> <p>Appendix H H1-12</p>	<p><i>The projects and policies listed in Appendix H apply to both existing and future structures and infrastructure.</i></p> <p><i>NCEM Reviewer comments:</i> <i>The identified actions and projects address reducing the effects of hazards on new and existing buildings and infrastructure.</i></p> <p>The plan identifies actions and projects that address reducing the effects of hazards on existing buildings and infrastructure.</p> <p><u>Ex:</u> Randolph County-<u>Action 5D: Multi-Hazard-</u> Incorporate safe growth management strategies for development downstream of dams.</p> <p><u>4C:Multi-Hazard:</u> Review & revise location of emergency shelters</p>		<p>X</p>

		throughout county & municipalities.		
			SUMMARY SCORE	X

15. Identification and Analysis of Mitigation Actions: National Flood Insurance Program (NFIP) Compliance

Requirement: §201.6(c)(3)(ii): [The mitigation strategy] must also address the jurisdiction’s participation in the National Flood Insurance Program (NFIP), and continued compliance with NFIP requirements, as appropriate.

Element	Location in the Plan (section or annex and page #)	Reviewer’s Comments	SCORE	
			N	S
A. Does the new or updated plan describe the jurisdiction (s) participation in the NFIP?	<i>The Plan pages 4-6, Crosswalk Pages A-3-A-4</i> The Plan pages 4-6	Note: This requirement becomes effective for all local mitigation plans approved after October 1, 2008. <u>NCEM Reviewer comments:</u> <i>The Plan describes each jurisdiction's participation in the NFIP.</i> The updated plan states all jurisdictions in Randolph County, with the exception of Town of Seagrove & the Town of Staley, are members of the national Flood Insurance Program.		X
B. Does the mitigation strategy identify, analyze and prioritize actions related to continued compliance with the NFIP?	<i>Pages S1.14-S1.22, S2.2-S2.14, S3.2-3.9, S4.2-S4.11, S5.2-5.13, S6.1-S6.2, S6.6-S6.12, S7.2-S7.2, S7.6-S7.13, S8.1-S8.7, S9.2-S9.8, S10.2-S10.13</i> Subsection 1-10	Note: This requirement becomes effective for all local mitigation plans approved after October 1, 2008. <u>NCEM Reviewer comments:</u> <i>The Plan explains how the mitigation strategy prioritizes actions related to NFIP compliance.</i> The plan includes the following actions related to continued compliance with the NFIP: Ex: Randolph County Action 5B: Strengthen flood plain regulation to current standards.(New Model Regulation) Ex: City of Archdale Action 5B: Maintain current floodplain regulation standards.		X
SUMMARY SCORE				X

16. Implementation of Mitigation Actions

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

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			N	S
A. Does the new or updated mitigation strategy include how the actions are prioritized ? (For example, is there a discussion of the process and criteria used?)	<i>The Plan</i> page 15, S1.23-S1.25, S2.15-S2.17, S3.10-S3.11, S4.12-S4.13, S5.14-S5.15, S6.13-S6.14, S7.14-S7-15, S8.8-S8.9, S9.9-S9.10, S10.14-S10.15 Subsection 1-10	<i>NCEM Reviewer comments:</i> <i>The Plan Update includes a prioritization of mitigation actions and a proposed time-frame for implementing each strategy.</i> The plan states: A process for prioritization of identified hazard mitigation strategies was performed. The hazard mitigation planning team used the following criteria for prioritization of strategies: <ol style="list-style-type: none"> 1. Cost-benefit review 2. Results of vulnerability assessment 3. Results of hazard identification & analysis 4. Results of capability assessment;& 5. Effectiveness in meeting hazard mitigation goals. The prioritization of the strategies is designated through listing them as high, moderate or low priority.		X
B. Does the new or updated mitigation strategy address how the actions will be implemented and administered, including the responsible department, existing and potential resources and the timeframe to complete each action?	<i>The Plan</i> page 15, S1.23-S1.25, S2.15-S2.17, S3.10-S3.11, S4.12-S4.13, S5.14-S5.15, S6.13-S6.14, S7.14-S7-15, S8.8-S8.9, S9.9-S9.10, S10.14-S10.15 Subsection 1-10	<i>NCEM Reviewer comments:</i> <i>The implementation and administration of each mitigation strategy is addressed, including the funding sources, lead department, and the current status of the strategy.</i> The updated plan addresses how the actions will be implemented & administered, including the responsible department, existing, & potential resources and timeframe to complete each action. Examples are as follows: <u>Action 1D:</u> Develop plan for alternate communications in the event of loss of 911 communication system. <u>Hazard Targeted:</u> Multi-hazard <u>Funding:</u> County <u>Lead Department:</u> Emergency Management		X

		<p><u>Status:</u> New <u>Priority:</u> Moderate <u>Timeframe:</u> Long Term</p> <p><u>Table 2: Priority of Implementation identifies the timeframe to complete each action</u></p> <p>Time frames have been categorized as short-term and long-term. Short-term strategies are those that can be implemented within existing resources and authorities and should be completed within a time frame of 6 months to 2 years. Short-term activities are generally a higher priority and include those activities that should be implemented immediately following the adoption of this plan. Long-term strategies may require new or additional resources or authorities and should be organized to begin implementation within a timeframe of 3 – 5 years.</p>		
<p>C. Does the new or updated prioritization process include an emphasis on the use of a cost-benefit review to maximize benefits?</p>	<p>S1.23, S2.15, S3.10, S4.12, S5.14, S6.13, S7.14, S8.8, S9.9, S10.14</p> <p>Subsection 1-10</p>	<p><i><u>NCEM Reviewer comments:</u></i> <i>The plan contains a brief explanation of the cost-benefit review process that was carried out to help determine prioritization of mitigation actions.</i></p> <p>The plan states: The results of the capability assessment as well as the cost-benefit review were given special emphasis. To complete a cost-benefit review of actions listed in the plan information was utilized from past projects that helped determine an estimate of the probable cost of implementing any given strategy.</p>		<p>X</p>
<p>D. Does the updated plan identify the completed, deleted or deferred mitigation actions as a benchmark for progress, and if activities are unchanged (<i>i.e.</i>, deferred), does the updated plan describe why no changes occurred?</p>	<p>S1.6-S1.22, S2.4-S2.14, S3.4-S3.9, S4.5-S4.11, S5.3-S5.13, S6.4-S6.12, S7.4-S7.13, S8.3-S8.7, S9.3-S9.8, S10.3-S10.13</p> <p>Subsection 1-10</p>	<p><i>The completed actions were indicated in the draft submitted to NCEM with the use of strike-through.</i></p> <p><i><u>NCEM Reviewer comments:</u></i> <i>The Plan Update clearly identifies and describes actions which have been completed, deleted, or deferred.</i></p> <p>The plan identifies the following completed, deleted, or deferred mitigation actions.</p> <p><u>Ex: 4A:</u> Consider sign ordinances limiting height or size of signs in certain corridors. Status: Completed</p>		<p>X</p>

		<p><u>Ex:4C:</u> Review & revise location of emergency shelters throughout county & municipalities Status: Ongoing</p>		
SUMMARY SCORE				X

17. Multi-Jurisdictional Mitigation Actions

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

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			N	S
A Does the new or updated plan include identifiable action items for each jurisdiction requesting FEMA approval of the plan?	Appendix H, Pages H.1-H.12 Appendix H, Pages H.1-H.12	<u><i>NCEM Reviewer comments:</i></u> <i>The Plan Update includes mitigation action items for each jurisdiction participating in the plan.</i> The plan includes mitigation actions for each of the participating jurisdictions. Such as the following example: Randolph County Hazard-Dam Failure <u>Action:</u> Identify potential inundation areas downstream of high hazard dams. City of Archdale Hazard- Flood <u>Action:</u> Maintain current floodplain regulation standards.		X
B. Does the updated plan identify the completed, deleted or deferred mitigation actions as a benchmark for progress, and if activities are unchanged (<i>i.e.</i> , deferred), does the updated plan describe why no changes occurred?	S1.6-S1.22, S2.4-S2.14, S3.4-S3.9, S4.5-S4.11, S5.3-S5.13, S6.4-S6.12, S7.4-S7.13, S8.3-S8.7, S9.3-S9.8, S10.3-S10.13, H-1-H-12 Subsection 1-10	<u><i>NCEM Reviewer comments:</i></u> <i>The Plan Update identifies the completed, deleted, or deferred actions.</i> The plan identifies the following completed, deleted, or deferred mitigation actions. <u>Ex: 4A:</u> Consider sign ordinances limiting height or size of signs in certain corridors. Status: Completed <u>Ex:4C:</u> Review & revise location of emergency shelters throughout county & municipalities Status: Ongoing		X

SUMMARY SCORE

X

PLAN MAINTENANCE PROCESS

18. Monitoring, Evaluating, and Updating the Plan

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

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			N	S
A. Does the new or updated plan describe the method and schedule for monitoring the plan, including the responsible department?	Pages S1.25-S1.26, S2.17-S2-18, S3.11-S3.13, S4.13-S4.14, S5.16-S5.17, S6.14-S6.15, S7.116, S8.9-S8.10, S9.10-S9.11, S10.16-S10.17 Subsection 1-10	<i>NCEM Reviewer comments:</i> <i>The pages indicated describe the method and schedule for monitoring the updated plan.</i> The updated plan states the following: It is the responsibility of the Director of Planning and the Emergency Management Director to continually monitor the progress of the strategies outlined in this plan. The Hazard Mitigation Core Taskforce will include the County Planning Director, Emergency Management Director, and County Information Specialist. This core taskforce (and others at the discretion of the taskforce) will convene annually to review and evaluate the Plan's effectiveness, and make recommendations for revision or amendment as necessary.		X
B. Does the new or updated plan describe the method and schedule for evaluating the plan, including how, when and by whom (i.e. the responsible department)?	Pages S1.25-S1.26, S2.17-S2-18, S3.11-S3.13, S4.13-S4.14, S5.16-S5.17, S6.14-S6.15, S7.116, S8.9-S8.10, S9.10-S9.11, S10.16-S10.17 Subsection 1-10	<i>NCEM Reviewer comments:</i> <i>The pages indicated describe the method and schedule for evaluating the updated plan.</i> The plan states: The evaluation form in Appendix D will be used by County staff to begin the annual evaluation process. The base year statistics used in calculating progress will be the year prior to each five-year cycle. This form will be completed and submitted to the County Hazard Mitigation Taskforce, as well as all City and Town Managers (where there is no Town Manager the form will be sent to the Town Clerk). The Hazard Mitigation Core Taskforce will include the County Planning Director, Emergency Management Director, and County Information Specialist. This core taskforce (and others at the discretion of the taskforce) will convene		X

		annually to review and evaluate the Plan's effectiveness, and make recommendations for revision or amendment as necessary		
C. Does the new or updated plan describe the method and schedule for updating the plan within the five-year cycle?	Pages S1.25-S1.26, S2.17-S2.18, S3.11-S3.13, S4.13-S4.14, S5.16-S5.17, S6.14-S6.15, S7.116, S8.9-S8.10, S9.10-S9.11, S10.16-S10.17 Subsection 1-10	<p><i>NCEM Reviewer comments:</i> <i>The pages indicated describe the method and schedule for updating the plan.</i></p> <p>The plan states: the Hazard Mitigation Taskforce will review and update the plan after any <i>presidential disaster declaration</i> for the County or any of its municipalities. The Core Taskforce is also responsible for updating and revising the hazard profile, vulnerability assessment, and local capability sections for all jurisdictions at the end of every five-year cycle.</p>		X
SUMMARY SCORE				X

19. Incorporation into Existing Planning Mechanisms

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

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			N	S
A. Does the new or updated plan identify other local planning mechanisms available for incorporating the mitigation requirements of the mitigation plan?	<p>Appendix C pages C-10-C19</p> <p>Appendix C pages C-10-C19</p>	<p><i>These pages lists the various ordinances that each jurisdiction currently has in force that could be used to incorporate the requirements of this Plan.</i></p> <p><u>NCEM Reviewer comments:</u> <i>The Plan Update identifies a variety of planning mechanisms for each jurisdiction that are available for incorporating the mitigation requirements of the Plan.</i></p> <p>The plan states: municipal and County capability assessment identifies and evaluates existing systems, plans, documents related to hazard mitigation. Randolph County and all municipalities within the County will create a process to incorporate its floodplain ordinance, subdivision ordinance and zoning activities into this and future revisions of the hazard mitigation plan.</p>		X
B. Does the new or updated plan include a process by which the local government will incorporate the mitigation strategy and other information contained in the plan (e.g., risk assessment) into other planning mechanisms, when appropriate?	<p>Appendix C pages C-10-C19, Appendix H</p> <p>Appendix C pages C-10-C19</p>	<p><u>NCEM Reviewer comments:</u> <i>The Plan Update includes a process by which mitigation strategies are incorporated into other planning mechanisms.</i></p> <p>The plan states: For this and future multi-jurisdictional hazard mitigation plan development or revision, all local planning documents, such as land development plans, comprehensive plans, and capital improvement plans, are to be provided to the Hazard Mitigation Planning team by the Planning Director. The Planning Director will ensure that all goals and strategies of the hazard mitigation plan are consistent with existing planning documents.</p>		X
C. Does the updated plan explain how the local government incorporated the mitigation strategy and other information contained in the plan (e.g., risk assessment) into other planning mechanisms, when appropriate?	<p>Appendix C pages C-10-C19, Appendix H</p> <p>Appendix C pages</p>	<p><u>NCEM Reviewer comments:</u> <i>The Plan Update explains how mitigation strategies are incorporated into other planning mechanisms.</i></p>		X

	C-10-C19	<p>This municipal and County capability assessment identifies and evaluates existing systems, plans, documents related to hazard mitigation. Randolph County and all municipalities within the County will create a process to incorporate its floodplain ordinance, subdivision ordinance and zoning activities into this and future revisions of the hazard mitigation plan. For this and future multi-jurisdictional hazard mitigation plan development or revision, all local planning documents, such as land development plans, comprehensive plans, and capital improvement plans, are to be provided to the Hazard Mitigation Planning team by the Planning Director. The Planning Director will ensure that all goals and strategies of the hazard mitigation plan are consistent with existing planning documents.</p> <p>Table 1 p. C 10-19 list the capability of all the jurisdictions. In table format it list plans, policies, ordinances, & regulations in place & comments for each participating jurisdiction.</p>		
SUMMARY SCORE				X

Continued Public Involvement

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

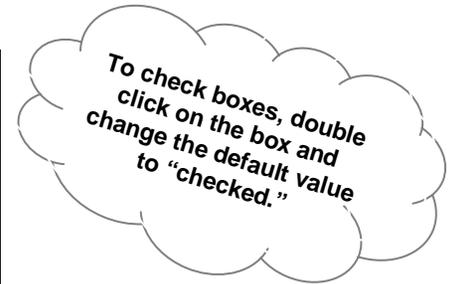
Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			N	S
<p>A. Does the new or updated plan explain how continued public participation will be obtained? (For example, will there be public notices, an on-going mitigation plan committee, or annual review meetings with stakeholders?)</p>	<p><i>The Plan Page 16, S1.26-S1.27, S2.18, S3.13, S4.15-S4.15, S5.17, S6.15-S6.16, S7.17, S8.10-S8.11, S9.11-S9.12, S10.17</i></p> <p>Subsection 1-10</p>	<p><u><i>NCEM Reviewer comments:</i></u> <i>The Plan Update explains how continued public participation will be obtained.</i></p> <p>The plan states: To facilitate continued public involvement in the planning process:</p> <ul style="list-style-type: none"> • The public will be invited to participate in the annual review of the plan. • Copies of the plan will be kept on hand at all public libraries and at appropriate agencies through the County. The plan will have a contact address, email address, and phone number of the 		X

		<p>person responsible for keeping track of public comments on the plan.</p> <ul style="list-style-type: none"> The plan will be available on the Randolph County Website, and will contain an email address and phone number the public can use for submitting comments and concerns about the plan. 		
SUMMARY SCORE				X

MATRIX A: PROFILING HAZARDS

This matrix can assist FEMA and the State in scoring each hazard. Local jurisdictions may find the matrix useful to ensure that their plan addresses each natural hazard that can affect the jurisdiction. **Completing the matrix is not required.**

Note: First, check which hazards are identified in requirement §201.6(c)(2)(i). Then, place a checkmark in either the N or S box for each applicable hazard. An “N” for any element of any identified hazard will result in a “Needs Improvement” score for this requirement. List the hazard and its related shortcoming in the comments section of the Plan Review Crosswalk.



Hazard Type	Hazards Identified Per Requirement §201.6(c)(2)(i)	A. Location		B. Extent		C. Previous Occurrences		D. Probability of Future Events	
	Yes	N	S	N	S	N	S	N	S
Avalanche	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coastal Erosion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coastal Storm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dam Failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drought	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Earthquake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expansive Soils	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Levee Failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hailstorm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hurricane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Land Subsidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landslide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Severe Winter Storm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tornado	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tsunami	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Volcano	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wildfire	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Windstorm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Legend:

§201.6(c)(2)(i) Profiling Hazards

- A. Does the risk assessment identify the location (*i.e.*, geographic area affected) of each hazard addressed in the **new or updated** plan?
- B. Does the risk assessment identify the extent (*i.e.*, magnitude or severity) of each hazard addressed in the **new or updated** plan?
- C. Does the plan provide information on previous occurrences of each natural hazard addressed in the **new or updated** plan?
- D. Does the plan include the probability of future events (*i.e.*, chance of occurrence) for each hazard addressed in the plan?

MATRIX B: ASSESSING VULNERABILITY

This matrix can assist FEMA and the State in scoring each hazard. Local jurisdictions may find the matrix useful to ensure that the new or updated plan addresses each requirement. **Completing the matrix is not required.**

Note: First, check which hazards are identified in requirement §201.6(c)(2)(i). Then, place a checkmark in either the N or S box for each **applicable** hazard. An “N” for any element of any identified hazard will result in a “Needs Improvement” score for this requirement. List the hazard and its related shortcoming in the comments section of the Plan Review Crosswalk. Note: Receiving an N in the shaded columns will not preclude the plan from passing.

To check boxes, double click on the box and change the default value to “checked.”

Hazard Type	Hazards Identified Per Requirement §201.6(c)(2)(i)	A. Overall Summary Description of Vulnerability				B. Hazard Impact				A. Types and Number of Existing Structures in Hazard Area (Estimate)				B. Types and Number of Future Structures in Hazard Area (Estimate)				A. Loss Estimate				B. Methodology			
	Yes	N		S		N		S		N		S		N		S		N		S		N		S	
Avalanche	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coastal Erosion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coastal Storm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dam Failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drought	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Earthquake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expansive Soils	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Levee Failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hailstorm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hurricane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Land Subsidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landslide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Severe Winter Storm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tornado	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tsunami	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Volcano	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wildfire	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Windstorm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Legend:

§201.6(c)(2)(ii) Assessing Vulnerability: Overview

- A. Does the **new or updated** plan include an overall summary description of the jurisdiction’s vulnerability to each hazard?
- B. Does the **new or updated** plan address the impact of each hazard on the jurisdiction?

- B. Does the **new or updated** plan describe vulnerability in terms of the types and numbers of future buildings, infrastructure, and critical facilities located in the identified hazard areas?

§201.6(c)(2)(ii)(A) Assessing Vulnerability: Identifying Structures

- A. Does the **new or updated** plan describe vulnerability in terms of the types and numbers of existing buildings, infrastructure, and critical facilities located in the identified hazard areas?

§201.6(c)(2)(ii)(B) Assessing Vulnerability: Estimating Potential Losses

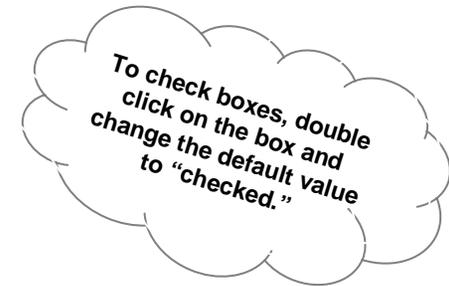
- A. Does the **new or updated** plan estimate potential dollar losses to vulnerable structures?
- B. Does the **new or updated** plan describe the methodology used to prepare the estimate?

MATRIX C: IDENTIFICATION AND ANALYSIS OF MITIGATION ACTIONS

This matrix can assist FEMA and the State in scoring each hazard. Local jurisdictions may find the matrix useful to ensure consideration of a range of actions for each hazard. **Completing the matrix is not required.**

Note: First, check which hazards are identified in requirement §201.6(c)(2)(i). Then, place a checkmark in either the N or S box for each applicable hazard. An “N” for any identified hazard will result in a “Needs Improvement” score for this requirement. List the hazard and its related shortcoming in the comments section of the Plan Review Crosswalk.

Hazard Type	Hazards Identified Per Requirement §201.6(c)(2)(i)	A. Comprehensive Range of Actions and Projects	
	Yes	N	S
Avalanche	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coastal Erosion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coastal Storm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dam Failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drought	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Earthquake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expansive Soils	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Levee Failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hailstorm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hurricane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Land Subsidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landslide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Severe Winter Storm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tornado	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tsunami	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Volcano	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wildfire	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Windstorm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Legend:

§201.6(c)(3)(ii) Identification and Analysis of Mitigation Actions

A. Does the **new or updated** plan identify and analyze a comprehensive range of specific mitigation actions and projects for each hazard?