

# ORDINANCE # 03-109

## AN ORDINANCE TO ADOPT A MITIGATION PLAN FOR THE TOWN OF UNICOI

**WHEREAS** The Town of Unicoi is required to have a mitigation plan in effect to protect the citizens of the Town, the Board of Mayor and Aldermen hereby adopts the Unicoi County Mitigation Plan prepared by the Unicoi County 911 Board, as follows:

### I. INTRODUCTION

This plan provides direction to the process of elimination of losses of life and property in this county as result anticipated hazards. The members of the governments of Unicoi County, the Town of Erwin and the Town of Unicoi and key affected groups participated in the development of this plan. Input from citizens was invited through the public meeting of the planning groups, Boards of Mayor and Aldermen, and the County Commission. All these bodies either endorsed or approved this plan.

### II. PLANNING PROCESS

Unicoi County is a dog bone shaped jurisdiction straddling the junction of two valleys, North and South Indian Creeks with their junction with the Nolichucky River. The head-waters of the north flowing Buffalo Creek is included in the North Indian Creek sector. The county encompasses a highway and railroad transportation corridor that connects the coalfields of Virginia and Kentucky and the chemical plants of Kingsport with the industries and the seaports of the southeast coast. NFS, Inc a sole source processor of Navy reactor fuel, is located in Erwin. The 2000 US Census indicates the population of the County as 17,667, the Town of Erwin as 5,610, and the Town of Unicoi, as 3,519.

Plan development was coordinated through the County Mitigation Team, composed of the following:

E. A. Herndon	Emergency Management Director
Larry Rose	Unicoi County Mayor
Russell Brackins	Mayor, Town of Erwin
Kenneth Lewis	Mayor, Town of Unicoi
Terry Haynes	Unicoi County Road Superintendent
Marcia Johnson	Unicoi Town Recorder
Randy Trivette	Erwin Building Inspector
Harold Townsend	President, Unicoi County Fire Association
Sarah Barron	Emergency Coordinator, NFS, Inc.

This plan is a revision of the plan of April 1998 incorporating the changes in local conditions and requirements of the Tennessee Emergency Management Agency (TEMA) and the Federal Emergency Management Agency as published in TEMA's Local Hazard Mitigation Planning Guidance, 44 Code of Federal Section 206, and the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Sections 322 and 409. The team met individually with the Emergency Management Director as needed for input in their areas of interest. The formal meetings coincided with Erwin-Unicoi County Emergency Management Council (LEPC) meetings. Plan was presented to the planning commissions of the towns of Erwin and Unicoi and the County of Unicoi. The boards of Mayor and Aldermen and the Unicoi County Commission approved the plan. All these meetings included public input. The plan was then submitted to TEMA and FEMA for approval. Primary source of data supporting the plan came from local preliminary damage assessments. Only two flooding events (1994 and 2001) resulted in Presidential Declarations for which figures were provided to county (\$501,629). Snow and ice caused two more Presidential Declarations with figures (1993 and 1998, totaling \$471,457.50). The remaining damages estimates came from ineligible expenditures and the undeclared events of 1978, 1983, and 1999.

### **III. RISK ASSESSMENT**

#### **A. FLOODING BACKGROUND**

In the urban center, Rock, McInturff and Martins creeks join with North Indian Creek and the Nolichucky River within two miles. The lower three miles of these streams are encroached by development along or over channels. In the undeclared floods of 1978, 1983, and 1999 and the declared disasters of 1993, 1994 and 2001, about one and one quarter million dollars damage was done to homes, businesses, industries and transportation routes. The problem is aggravated if North Indian Creek and/or the Nolichucky River are at or near flood stage from heavy rains in upstream watersheds, causing backflow in the local stream channels. The flow of these channels is obstructed by years of debris and silt buildup.

#### **B. SEVERE WINTER BACKGROUND**

- 1 - The winter storms of 1993 and 1998, many Unicoi County citizens had to be relocated from their homes throughout the county because they had no power to control their heating systems, to cook, and to operate their oxygen generators and medication infusion systems. In the 1998 storm, no designated shelters had electric power to provide such life support. These victims had to be sent to the local hospital, overtaxing that facility
- 2 - The public safety communication system depends on the repeater station on Pinnacle Mountain for twenty-four hour countywide coverage. The location is powered by a conventional landline over impassable terrain. All transmitters are equipped with twenty-four hour back-up batteries. The storm of 1998 proved this inadequate. Until regular power was restored, on 27

March 1998, the temporary generator had to be refueled daily by a thirty mile round trip, sometimes, in snow or freezing rain.

## C. RISKS

### 1. TOWN OF ERWIN

The Town of Erwin faces the greatest flooding risk. The major flood prone watercourses combine within or near the town limits. Rock Creek, McInturff Creek, and Martins Creek enter North Indian Creek within the town limits. Rock Creek travels about one and one half miles through the Town of Erwin to its mouth. The entire route has been restricted and obstructed by development, resulting in flooding after several violent storms on the US Forest Service mountain land upstream. McInturff Creek arises entirely within the town limits. However, the watercourse has been obstructed, restricted and overbuilt by about one hundred years of development. Residences are built adjacent and over the creek through its one and one tenth mile length. Downtown businesses are built over the creek. A heavy downpour within its watershed will result in business flooding downtown. Martins Creek travels about one and one half miles within the town limits through housing and industrial areas. Flooding from downpours on upstream Forest Service property does endanger the town's largest employer, NFS, Inc, a crucial defense contractor. All three creeks cross under the CSX Railroad, causing another flood producing obstruction. North Indian Creek and South Indian Creek enter the Nolichucky River within sight of the city limits but about three miles part. If the Nolichucky is high from rains in North Carolina, backflow can come up North Indian Creek into the lower reaches of the McInturff and Martins Creeks multiplying flooding effects.

With the largest concentration of population, the Town of Erwin has the greatest need of adequate sheltering. The largest number of potential special needs evacuees live within the town limits. This number is greater than the capacity of the only hospital in the town and county.

With the entire town limits within range of the public safety radio base station, failure of the repeater has minimal direct impact upon town operations.

### 2. TOWN OF UNICOI

The Town of Unicoi is susceptible to flooding at various points along the two and three quarter mile length of North Indian Creek within the town limits. This stream has suffered from restrictions, debris obstructions and bank mutilation caused by negligent agriculture and development practices. Similar problems exist along several drainage channels in older residential areas. In the five-mile length of Buffalo Creek within the town limits, debris obstructions, channel reductions and undersized culverts cause flash flooding after heavy storms on Buffalo Mountain.

With no medical facilities, the Town of Unicoi needs a structure that can be converted quickly in to a special needs shelter. Although small in population, the town is large in area with special needs citizens spread throughout.

During a repeater outage, only the southern part of the town is in range of the public safety radio base station.

3. UNICOI COUNTY

The mile between the town limits of Erwin and Unicoi and the seven miles upstream of the Town of Unicoi on North Indian Creek fall within the county and are subject to the same flooding problems as the portion within the Town of Unicoi. The three-mile portion of Rock Creek between the Town of Erwin limit and the US Forest Service property line is subject to restrictions, debris obstruction and channel reductions that facilitate flooding after extremely heavy rains on Forest Service property. The eight tenth mile portion of Martin Creek upstream of the Town of Erwin limit is subject to the same problems as Rock Creek. The entire watershed of South Indian Creek, including Spivey, Mill, Sams, Rice and Devils Fork Creeks are within the county. This creek system suffers from channel encroachment from debris and undersized culverts that cause occasional flooding.

Many citizens live in the rural portions of the county who are dependent upon electrically operated medical equipment or heating systems for survival. With no medical facilities in any rural parts, the county needs a facility that can be activated quickly into special needs shelters.

Repeater failure of the public safety radio system gravely affects the county as most of the rural portions fall outside the base transmitter range. In addition, the mountains obstruct much of the signal from that transmitter.

D. VULNERABILITIES

1. TOWN OF ERWIN

The Town of Erwin is particularly vulnerable to flooding and certain other hazards because of its location in the lowest suitable portion of the county and its concentration of business, industry, and population. The leadership of Erwin has recognized these factors and is continually upgrading town-controlled structures to reduce vulnerabilities. However, the known risks are so immense that they exceed the resources of the town and the available grant programs. With some risks currently unmitigatable, other measures must be explored. As such, a state of the art warning system will be necessary. Shelter upgrades are still warranted.

2. TOWN OF UNICOI

Since its inception in 1994, the leadership of the Town of Unicoi has learned about

its risks through experience and analysis of past events. The town is utilizing private contractors and the Unicoi County Road Department to improve vulnerable town controlled structures during maintenance and restoration projects. However, the town faces the same dilemma as the Town of Erwin in that the known risks exceed the town's resources and available grant programs. The need for an improved warning system, a shelter and public safety communication upgrades are even more crucial because of the community's remote locations.

County government leadership has benefited from past experience and uses maintenance and restoration projects to reduce vulnerabilities of county controlled structures. The county shares the same situation with both towns that the known risks exceed the counties resources and available grant programs. The many remote locations of the county underscore the necessity for the best possible warning, sheltering, and public safety communications systems.

### C. MULTIJURISDICTIONAL PLANNING

The Towns of Erwin and Unicoi have decided to use the Erwin-Unicoi County Emergency Management Agency for emergency planning and direction. Both towns are included the Unicoi County Emergency Operation Plan.

## IV. MITIGATION STRATEGY

### A. CAPABILITY ASSESSMENT

Unicoi County, the Town of Erwin and the Town of Unicoi participate in the National Flood Insurance Program. No new construction is authorized in flood prone areas. Both the US Army Corps of Engineers and the Tennessee Valley Authority are undertaking flood management surveys to update outdated data and determine needed improvements. Both the Town of Erwin and the Town of Unicoi have zoning programs and building codes to insure new construction and major renovations meet universally accepted safety standards. The county and the towns participate in state bridge and highway programs that have replaced flood prone drainage structures and routed highways to lessen damage and improve water flow. The County and the towns have received an approximate \$500,000 Emergency Watershed Restoration Grant through the Natural Resource Conservation Agency, US Department of Agriculture for Fiscal Year 2003. This grant will help finance debris removal, bank restoration and stabilization for streams that continue to threaten residences, businesses and highways. Because of limited funds, the downtown flooding of Erwin and other problems are not included.

### B. STATEMENT OF GOALS

1. To provide the residents of Unicoi County a safe environment through minimum exposure to risks or natural hazards.
2. To protect and properly manage the county's floodplain and floodways.

3. To promote a public awareness of natural hazards and activities which can lessen exposure to natural hazards.

#### C. STATEMENT OF OBJECTIVES

1. Identify, annually evaluate and implement a hazard mitigation planning process for the purpose of eliminating risks associated with natural hazards.
2. Continue participation in the National Flood Insurance Program in enforcing construction restrictions in flood prone areas.
3. Create an ongoing county wide public information program targeting earthquakes, flood and severe winter weather preparedness.

#### D. MITIGATION MEASURES

##### A. Flooding

1. The urban center of Unicoi County, comprising the Town of Erwin and adjacent developed areas, is subject to flash flooding from Rock, O'Brien, and Martins creeks. The preferred mitigation action is to install stream gauges on the affected streams to provide warning to citizens, facilities, and agencies to implement established flood plans. The gauges will be part of the National Weather Service Integrated Flood Observing and Warning System (IFLOWS) and will transmit their data through the Weather Services network to a radio receiver and warning computer in the Emergency Communication Center (E-911). The Center will broadcast the warning through the media, public safety agencies and automatic dialing system that will transmit recorded warnings to all phone numbers in the E-911 data bank in the affected areas. This system will also provide warning for other hazards such as tornadoes, severe winter weather, hazardous materials releases and terrorism.
2. Alternative plans
  - a. The first alternative, to relocate all vulnerable facilities and homes (160) is not cost effective. The tax base of the jurisdictions will not provide the local grant share of at least \$400,000.
  - b. The second, to elevate all vulnerable structures, is not cost effective. The tax base and assets of the affected property owners will not provide the local grant share of at least \$300,000. Many of the structures cannot be raised, but must be replaced.
  - c. The third, to provide flood control structures, would require implementing alternative one to provide space. The available watershed protection programs are not large enough to fund all three watershed areas.
  - d. The fourth, to install warning sirens in all populated areas to provide warning to citizens will cost approximately \$1,350,000 to install and \$130,000 a year to maintain. The sirens will be heard

only in older structures and outdoors. As such, the program would not be affordable or practical.

e. The last, to do nothing, risks the loss of life and property.

3. Implementing Agencies

Erwin/Unicoi Civil Defense-Emergency Management  
Towns of Erwin and Unicoi, NFS Inc.

4. Implementing Schedule

12-18 months after funding

5. Funding Sources

FEMA Mitigation Funds, Community Development Block Grants, Town of Erwin General Funds, Town of Unicoi General Funds, Unicoi County General Funds, and NFS Inc. Funds.

6. Estimated Costs

\$83,000

B. Sheltering Upgrades

1. The preferred mitigation action for making shelters survivable for special needs evacuees is to provide equipment and special furnishings to selected existing structures. These structures have fossil fuel heating systems that only require electricity for controls. These structures are four schools and the Unicoi County Memorial Hospital. Supplemental gas fired food storage and preparation equipment, generators, and supply containers.

2. Alternative Plan

- a. The first alternative, to construct a special shelter, is not cost effective. The tax base of the jurisdictions cannot fund the local cost share.
- b. The second is to do nothing risking loss of life.

2. Implementing Agencies

Erwin/Unicoi County Civil Defense/Emergency Management, Unicoi County Board of Education, Unicoi County Memorial Hospital

4. Implementation Schedule

6-8 months

5. Funding Sources

FEMA Hazard Mitigation Funds, TEMA Funds, Community Development Block Grants, Town of Erwin General Funds, Town Of

Unicoi General Funds, Unicoi County General Funds, Unicoi County Board of Education Funds, Unicoi County Memorial Hospital Funds.

6. Estimated Cost

\$41,000

C. Communication Upgrades

1. The preferred mitigation to provide for survivable countywide communications is to equip the repeater site with an automatic propane generator with large propane tank. This allows time to open road with bulldozer and for Erwin Utilities to restore normal power
2. Alternative Plans
  - a. The first alternative is for the system to be down while bulldozer opens the road and a portable generator made operational.
  - b. The other is to do nothing and risk loss of life to responders and citizens in remote portions of county.

2. Implementation Agencies

Erwin Utilities, Unicoi County Sheriff

3. Implementation Schedule

4-8 months

4. Funding Sources

FEMA Hazard Mitigation Funds, TEMA Funds, Community Development Block Grants, Town of Erwin General Funds, Town of Unicoi General Funds, Unicoi County General Funds, Erwin Utility Funds.

6. Estimated Cost

\$11,000

**VI. PLAN MAINTENANCE**

The Erwin/Unicoi County Mitigation Committee of the Erwin/Unicoi County Emergency Management Council will meet after every disaster and on an annual basis to monitor, evaluate and amend this plan. Public attendance will be encouraged. After completion of amendments, the plan will be submitted for approval. The plan will be revised every five years unless conditions warrant earlier revision.



**V. ADOPTION**

This plan is prepared by members of the Mitigation Team singularly and collectively. It is reviewed and endorsed by the Erwin/Unicoi County Emergency Management Council (LEPC) at open advertised meeting on \_\_\_\_\_.

It is reviewed and endorsed by the respective Planning Commissions of the Towns of Erwin and Unicoi and Unicoi County at open advertised meetings.

Town of Erwin Planning Commission \_\_\_\_\_  
 Town of Unicoi Planning Commission \_\_\_\_\_  
 Unicoi County Planning Commission \_\_\_\_\_

The plan is approved by the Boards of Mayor and Alderman of the Towns of Erwin and Unicoi and the Unicoi County Commission.

Town of Erwin \_\_\_\_\_  
 Town of Unicoi \_\_\_\_\_  
 County of Unicoi \_\_\_\_\_

**NOW, THEREFORE, BE IT RESOLVED**, as follows:

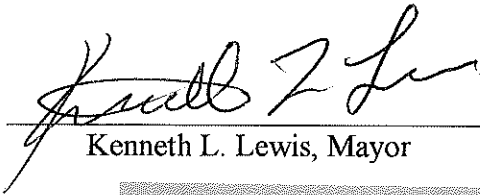
The Board of Mayor and Aldermen adopts the aforementioned Mitigation Plan for the benefit and welfare of the citizens of the Town of Unicoi.

This ordinance was presented for first reading and voted on as follows:

	<u>Aye</u>	<u>No</u>
Ted Hopson	<u>✓</u>	___
Johnny Lynch	<u>✓</u>	___
Ruby McLaughlin	<u>✓</u>	___
Mark Ramsey	<u>✓</u>	___
Mayor Lewis	<u>✓</u>	___

This ordinance was presented for second reading and voted on as follows:

	<u>Aye</u>	<u>No</u>
Ted Hopson	<u>✓</u>	___
Johnny Lynch	<u>✓</u>	___
Ruby McLaughlin	<u>✓</u>	___
Mark Ramsey	<u>absent</u>	___
Mayor Lewis	<u>✓</u>	___


BY:   
Kenneth L. Lewis, Mayor

Passed  
2nd Reg  
9/03

Attest:

  
Marcia Johnson, Town Recorder

Approved as to form:

  
Lois Shults-Davis, Attorney