

4 Mitigation Strategy

Thus far, the planning process has identified the hazards posing a threat to Sullivan County, the City of Kingsport, and Bluff City and described and quantified the vulnerability of the communities to these risks. The next step, prior to forming Goals and Objectives for improving each jurisdiction’s ability to reduce the impacts of these risks, is to assess what loss prevention mechanisms are already in place. Doing so provides the each community’s “net vulnerability” to disasters and more accurately focuses the Goals, Objectives and Recommended Actions of this plan. This part of the plan is referred to as the capability assessment.

4.1 Capability Assessment

The CRPT and LHMT took two approaches in conducting this assessment. First, an inventory of existing policies, regulations and plans was made. These policy and planning documents were collected and reviewed to determine if they contributed to reducing hazard related losses, or if they inadvertently contributed to increasing such losses. Second, an inventory of other mitigation activities was completed through the use of a matrix. The purpose for this effort was to identify activities and actions beyond policies, regulations and plans that were either in place, needed improvement, or could be undertaken, if deemed appropriate.

Table 4.1 presents the documents collected and reviewed by the CRPT, LHMT, and AMEC.

Table 4.1 Reviewed Documents

Sullivan County
Sullivan County Flood Damage Prevention Resolution, 1989
Survey of Hazardous Materials Traffic, 1989
Urban Growth Boundary Plan, effective 2001
Subdivision Regulations, 1970 updated 2004
Land Use Plan, 1970, being updated
Zoning Resolution, 1988 and updated 2004
NPDES Phase II Notice of Intent for Coverage under the General NPDES MS4 Permit
City of Kingsport
Local Hazard Mitigation Plan, 1996
Transportation Improvement Plan
Landuse Plan, 1986
Strategic Plan
SIP Measures Report
Major Street and Road Plan
Capital Improvements Plan, 2003
NPDES Phase II Notice of Intent for Coverage under the General NPDES MS4 Permit
City of Bluff City
Floodplain Zoning Ordinance, 1997
Subdivision Regulations
Zoning and Land Use, 2000
Major Street and Roads Plan
NPDES Phase II Notice of Intent for Coverage under the General NPDES MS4 Permit

In addition to the assessment of community policies, regulations and plans, the following matrix, Table 4.2, was created as a way of taking inventory of additional mitigation capabilities in each community. The intent of this effort was to see if there were any similarities or gaps in community programs and tools that might indicate where some improvements could be made.

Table 4.2 Capability Matrix

	Sullivan County	City of Kingsport	City of Bluff City
Land Use Plan	Y	Y	Y
- with integrated Hazard Mitigation planning?	N	N	N
Subdivision Ordinance	Y	Y	Y
Zoning Ordinance	Y	Y	Y
Hazard Mitigation Plan	Y	Y	Y
Floodplain (FP) Ordinance	Y	Y	Y
FP Administrator?	Y	Y	Y
• # of parcels with buildings in FP?	2,623	Information not available	Information not available
• # of Flood Insurance Policies	Information not available	Information not available	Information not available
• # of Repetitive Loss Properties	3	1	0
Community Rating System	Not participating	Not participating	Not participating
Stormwater Program	NPDES Phase II Community	NPDES Phase II Community	NPDES Phase II Community
Building Code	N	Y	Y
Building Official	Y	Y	Y (part time)
• Inspections?	Y	Y	Y
Emergency Operations Plan?	Y	County managed	Stand alone
Warning-sirens?	Y	Y	Y
• Cable-TV over ride capability?	Y	Y	Y
• Reverse 911?	Y – Sheriff's Dept	Y	Y
Property Protection	Erosion and sediment control ordinance; Detention policies	E&SC ordinance; draft illicit discharge ordinance; requirements for detention/retention	E&SC ordinance; illicit discharge ordinance
Vulnerability Assessments	N/A	Y- Water plant	Y
Public Information Program	Y, as part of NPDES Phase II	Y, as part of NPDES Phase II	Y, as part of NPDES Phase II

Y: Yes, the community has part or all of the issue addressed.

N: No, the community does not address this issue

Yellow shading: Opportunity for improvement

The yellow boxes highlighted within Table 4.2 indicate an opportunity for the communities to make improvements to their existing capability to address natural and man-made hazards. Specifically:

Sullivan County

- Hazard mitigation planning is not currently incorporated into existing land use or comprehensive plans.
- Three repetitive loss properties are potentially eligible for future mitigation projects.
- Sullivan County does not currently participate in the Community Rating System. Participating in the CRS program provides a rate reduction for floodplain insurance policies.
- Sullivan County recently adopted a Zoning Ordinance. However, the County does not has not adopted building codes. The County should consider adopting Building codes to address hazard-proofing buildings in the County.

City of Kingsport

- Hazard mitigation planning is not currently incorporated into existing land use or comprehensive plans.
- The repetitive loss property within the City is potentially eligible for future mitigation projects.
- The City of Kingsport does not currently participate in the Community Rating System. Participating in the CRS program provides a rate reduction for floodplain insurance policies.

Bluff City

- Bluff City does not have an existing comprehensive plan addressing growth and land use planning.
- Hazard mitigation planning is not currently incorporated into existing land use or comprehensive plans.
- Bluff City does not currently participate in the Community Rating System. Participating in the CRS program provides a rate reduction for floodplain insurance policies.
- The water treatment facility of Bluff City falls below the threshold requiring a vulnerability assessment, according to the Public Health Security and Bioterrorism and Response Act (HR. 3448). It is recommended Bluff City conduct a vulnerability assessment to provide additional protection of the water source.

Goals, Objectives, and Strategies

The hazard identification and risk assessment (vulnerability assessment and capability assessment) identified areas where mitigation improvements could be made and provided the framework for the CRPT and LHMT to formulate planning goals. Existing goals from other community plans that have had public input and review and have already been formally adopted by the local communities were reviewed. This ensured that the Mitigation Planning Goals would be in concert, not in conflict, with other existing community priorities.

The CRPT and LHMT together developed goals and objectives over several meetings. Some of the statements were determined to be better suited as objectives or actual mitigation projects, and were set aside for later use. The final goal statements listed below. The goals and objectives provide the direction for reducing future hazard-related losses in Sullivan County, the City of Kingsport, and Bluff City.

Goals

Goal 1: Protect community lifelines (existing and future) from identified natural and man-made hazards

Objective 1: Investigate ways to protect utility lines from storm damage.

Objective 2: Prepare vulnerability assessments for water and wastewater treatment facilities that do not have them in place.

Goal 2: Ensure that public funds are used efficiently

Objective 1: Leverage other funding sources for hazard mitigation implementation.

Objective 2: Partner with local industries for hazard mitigation implementation.

Goal 3: Better manage flood hazard areas

Objective 1: Participate in the Community Rating System.

Objective 2: Educate the community about stormwater and floodplains.

Objective 3: Update floodplain mapping, where needed, through the map modernization program and other programs.

Objective 4: Fully integrate hazard mitigation planning into the capital improvement planning process.

Goal 4: Protect community historic preservation resources from identified natural and man-made hazards

Objective 1: Identify all historic resources.

Objective 2: Develop repair and reconstruction policies or rules for historic structures and integrate into historic preservation requirements in each community.

Goal 5: Improve and maintain coordination and communication between all jurisdictions

Objective 1: Align the Sullivan County Multi-Jurisdictional L HMP and the City of Bristol, TN LHMP maintenance schedules.

Goal 6: Educate the public on identified natural and man-made hazards

Objective 1: Become a Storm Ready Community.

Objective 2: Seek input on the LHMP at least once every three years.

Action Plan

The Action Plan presents the prioritized recommendations for the Sullivan County, the City of Kingsport, and Bluff City to pursue in order to lessen the vulnerability of people, property, infrastructure, and natural and cultural resources to future disaster losses.

In order to assist the individual jurisdictions with the identification of specific projects to mitigate the impacts of natural hazards, all of the action item information assembled at previous CRPT and LHMT meetings was organized within the framework of the identified goals and objectives. The consultant facilitated a meeting of the HMPC to review these regional and individual community action items.

For each recommended action item, basic information for use in the mitigation project identification and implementation process was collected. This information follows the FEMA Recommended Mitigation Action Form (RMAF) and includes:

- Recommended Action Item;
- Responsible Office/Person;
- Priority;
- Cost Estimate;
- Community Benefit;
- Potential Funding; and
- Schedule.

Recommended action items were prioritized based upon several factors, including the level of risk, the existence of other programs that benefit from the same objective, the resource needs, and cost to complete. The implementation schedule reflects the prioritization, meaning that those activities with a closer implementation date have a higher priority than those activities with an implementation date further in the future. Action items that were considered, but not recommended, are included at the end of this section.

4.2.1 Regional Recommended Action Items

Regional action items were not recommended by the CRPT and LHMT for Goals 1, 2, 3, and 4 and the associated objectives to develop hazard specific mitigation actions. See Sections 4.2.2.1 through 4.2.2.3 for community-specific recommended action items.

Goal 5: Improve and maintain coordination and communication between all jurisdictions

Objective 1: Align the Sullivan County Multi-Jurisdictional L HMP and the City of Bristol, TN LHMP maintenance schedules.

REGIONAL RECOMMENDED ACTION 1:

Incorporate the Bristol LHMP into the overall Sullivan County Multi-Jurisdictional LHMP plan to coordinate hazard mitigation for all of Sullivan County.

Responsible Party: Jerry Fleenor, County EMA Director
Priority (H,M,L): High
Cost Estimate: Staff Time
Community Benefit: Regional hazard mitigation planning; reduced losses; life-safety
Potential Funding: Existing Budget
Schedule: 2005

Goal 6: Educate the public on community hazards

Objective 1: Become a Storm Ready Community.
Objective 2: Seek input on the LHMP at least once every three years.

REGIONAL RECOMMENDED ACTION 2:

Seek input from the public on the LHMP at least once every three years.

Responsible Party: Jerry Fleenor, County EMA Director
Priority (H,M,L): Medium
Cost Estimate: Staff Time
Community Benefit: Public education and involvement; reduced losses; life-safety
Potential Funding: Existing Budget
Schedule: 2007

4.2.2 Community Specific Recommended Action Items

4.2.2.1 Sullivan County – Recommended Action Items

Community specific action items were not recommended by Sullivan County representatives on the CRPT and LHMT for Goals 1 and 5 and the associated objectives to develop hazard specific mitigation actions.

Goal 2: Ensure that public funds are used efficiently

Objective 1: Leverage other funding sources for hazard mitigation implementation.

Objective 2: Partner with local industries for hazard mitigation implementation.

RECOMMENDED ACTION 1:

Pursue alternative funding sources for updating floodplain mapping. While the existing FIRMs are good starting points, they are outdated and do not effectively regulate development in and around the floodplain. Sullivan County will identify outside funding sources to update the existing FIRMs. Programs such as the FEMA map modernization program will be investigated.

Responsible Party: Tim Earles, Building Commissioner, and Ambre Torbett, Planning Director

Priority (H,M,L): High

Cost Estimate: Staff Time

Community Benefit: More accurate delineation of the City's floodplains will allow for better floodplain management and subsequently reduce potential damage from flooding over time.

Potential Funding: Existing Budget

Schedule: 2005

Goal 3: Better manage flood hazard areas

Objective 1: Participate in the Community Rating System.

Objective 2: Educate the community about stormwater and floodplains.

Objective 3: Update floodplain mapping, where needed, through the map modernization program and other programs.

Objective 4: Fully integrate hazard mitigation planning into the capital improvement planning process.

RECOMMENDED ACTION 2:

Integrate hazard mitigation into all aspects of County planning, including land use planning and Emergency Operations Plan. While this is a fundamental requirement of the hazard mitigation planning process, including the task as an objective ensures buy-in from the communities. The County has several planning documents that could incorporate objectives and strategies, including the County Urban Growth Boundary plan and the Emergency Operations Plan. As each of these planning documents are updated, the Objectives listed in this plan will be evaluated and incorporated as appropriate.

Responsible Party: Jerry Fleenor, Emergency Manager;
Ambre Torbett, Director of Planning
Priority (H,M,L): Medium
Cost Estimate: Staff Time
Community Benefit: Better floodplain management and subsequently reduce potential damage from flooding over time
Potential Funding: Existing Budget
Schedule: As planning documents are updated

RECOMMENDED ACTION 3:

Revise floodplain regulations to better guide development in and around floodplains. Flooding of streams has caused road closures and failures, as well as property damage. While regulating development in the floodplain to higher standards does not alleviate existing property flooding, it will prevent future flood damage to property. The County will identify potential changes to the floodplain regulations and begin incorporating them into the existing regulations after the FEMA map modernization projects are complete.

Responsible Party: Tim Earles, Building Commissioner
Priority (H,M,L): Medium/High
Cost Estimate: Staff Time
Community Benefit: Regional hazard mitigation planning; reduced losses; life-safety
Potential Funding: Existing Budget
Schedule: Begin process for identifying potential changes and incorporating them in 2006

RECOMMENDED ACTION 4:

Continue identifying flood-prone areas and updating GIS. Sullivan County has several flood prone areas that are not on the FIRMs. To better track and plan around these areas, Sullivan County collected data through a GPS unit documenting these areas. Sullivan County will continue to identify and collect data on these areas, then incorporate them into their GIS and future planning efforts.

Responsible Party: Tim Earles, Building Commissioner
Ambre Torbett, Director of Planning
Priority (H,M,L): High
Cost Estimate: Staff Time
Community Benefit: Better floodplain management and subsequently reduce potential damage from flooding over time
Potential Funding: Existing Budget
Schedule: 2005 and ongoing

Goal 4: Protect community historic preservation resources

Objective 1: Identify all historic resources.

Objective 2: Develop repair and reconstruction policies or rules for historic structures and integrate into historic preservation requirements in each community.

RECOMMENDED ACTION 5:

Identify all historic resources, such as buildings and other properties, and assess their potential hazards.

Responsible Party: Ambre Torbett, Director of Planning
Priority (H,M,L): High
Cost Estimate: Staff Time
Community Benefit: Identification of resources significant to the community; Reduced losses
Potential Funding: Existing Budget
Schedule: 2005

RECOMMENDED ACTION 6:

Develop repair and reconstruction policies or rules for historic structures and integrate into historic preservation requirements in each community. Educate historic districts and the planning commission about the policies.

Responsible Party: Ambre Torbett, Director of Planning
Priority (H,M,L): Medium
Cost Estimate: Staff Time
Community Benefit: Reduced losses
Potential Funding: Existing Budget
Schedule: 2006

RECOMMENDED ACTION 7:

Identify methods to reduce flooding and loss in historic districts, such as around the Central Receiving and County Printing facilities. Implement recommendations from the engineering assessment.

Responsible Party: Ambre Torbett, Director of Planning
Priority (H,M,L): Medium
Cost Estimate: Staff Time
Community Benefit: Reduced losses
Potential Funding: Existing Budget
Schedule: 2006

Goal 6: Education the public on community hazards

Objective 1: Become a Storm Ready Community.

Objective 2: Seek input on the LHMP at least once every three years.

RECOMMENDED ACTION 8:

Educate the community about stormwater and floodplain management. The County is required to develop a stormwater management program addressing both stormwater quality and quantity. Flooding is one very visible component of stormwater management. The County is required to educate the community about stormwater management. This education will make the community more aware of flood risks and how their behavior affects stormwater management, including flooding.

Responsible Office: Ambre Torbett, Director of Planning

Priority (H, M, L): High

Cost Estimate: \$5-20,000, depending upon printing and mailing costs, level of volunteer participation, and scope and frequency of events.

Community Benefit: Life-Safety, Relatively Low Cost, Multi-Hazard program is efficient

Potential funding: 5% state set aside from future HMGP funding and PDM funds

Schedule: 2005 and ongoing

4.2.2.2 The City of Kingsport – Recommended Action Items

Community specific action items were not recommended by the City of Kingsport representatives on the CRPT and LHMT for Goals 2 and 5 and the associated objectives to develop hazard specific mitigation actions.

Goal 1: Protect community lifelines (existing and future) from identified natural and man-made hazards

Objective 1: Investigate ways to protect utility lines from storm damage.

Objective 2: Prepare vulnerability assessments for water and wastewater treatment facilities that do not have them in place.

RECOMMENDED ACTION 1:

Require underground electric lines in new major subdivisions requiring new utilities. Underground electric lines reduce outages due to downed lines during storm events. Utility district representatives that are members of the Tier 2 LHMT noted that underground utility lines in new subdivisions and other developments would be beneficial for preserving lifelines during storm events.

Responsible Party: Alan Webb, Planning Department
Priority (H,M,L): Medium
Cost Estimate: Staff Time
Community Benefit: Reduced losses; life-safety
Potential Funding: Existing Budget
Schedule: Present to Planning Commission in 2006

RECOMMENDED ACTION 2:

Integrate hazard mitigation planning into all aspects of City planning, including the Capital Improvements Plan, the Strategic Plan, the Land Use Plan, and Emergency Operations Plan.

Responsible Party: Alan Webb, Planning Department
Priority (H,M,L): High
Cost Estimate: Staff Time
Community Benefit: Regional hazard mitigation planning; reduced losses; life-safety
Potential Funding: Existing Budget
Schedule: 2005

RECOMMENDED ACTION 3:

Review and update the water treatment facilities Vulnerability Assessment annually.

Responsible Party: Dave Ruller, Public Works Department
Priority (H,M,L): High
Cost Estimate: Staff Time
Community Benefit: Reduced losses; critical facility protection
Potential Funding: Existing Budget
Schedule: 2005 and annually

Goal 3: Better manage flood hazard areas

Objective 1: Participate in the Community Rating System.

Objective 2: Educate the community about stormwater and floodplains.

Objective 3: Update floodplain mapping, where needed, through the map modernization program and other programs.

Objective 4: Fully integrate hazard mitigation planning into the capital improvement planning process.

RECOMMENDED ACTION 4:

Continue partnering with Eastman on floodplain issues and hazardous materials storage. The City and Eastman have coordinated on floodplain issues and hazardous materials storage in the past. Partnering on staff training and emergency planning will be investigated.

Responsible Party: Mike Freeman, Building Department; Craig Dye, Fire Department
Priority (H,M,L): High
Cost Estimate: Staff Time
Community Benefit: Better floodplain and hazardous materials management and subsequently reduce potential damage from flooding and/or man-made disasters over time
Potential Funding: Existing Budget
Schedule: Ongoing

RECOMMENDED ACTION 5:

Participate in the Community Rating System program. The City has participated in the CRS program in the past. However, they no longer participate. Participating in the CRS program will reduce flood insurance rates by at least 5% over existing costs.

Responsible Party: Alan Webb, Planning Department
Priority (H,M,L): Medium
Cost Estimate: Staff Time
Community Benefit: Better floodplain management; life-safety; reduction in cost of flood insurance to community
Potential Funding: Existing Budget
Schedule: Begin pursuing in 2006

RECOMMENDED ACTION 6:

Update floodplain mapping. While the existing FIRMs are good starting points, they are outdated and could more effectively regulate development in and around the floodplain. The City of Kingsport will approach TEMA/FEMA and investigate the map modernization program funding to update FIRMs in the City.

Responsible Party: Alan Webb, Planning Department
Jake White, GIS Department
Priority (H,M,L): Medium
Cost Estimate: FEMA map modernization program
Community Benefit: Better floodplain management; reduced losses; life-safety
Potential Funding: FEMA map modernization program

Schedule: 2005 begin discussions with TEMA/FEMA

Goal 4: Protect community historic preservation resources

Objective 1: Identify all historic resources.

Objective 2: Develop repair and reconstruction policies or rules for historic structures and integrate into historic preservation requirements in each community.

RECOMMENDED ACTION 7:

Identify all historic resources, such as buildings and other properties, and assess their potential hazards.

Responsible Party: Alan Webb, Planning Department
Priority (H,M,L): High
Cost Estimate: Staff Time
Community Benefit: Identification of resources significant to the community; Reduced losses
Potential Funding: Existing Budget
Schedule: 2005

RECOMMENDED ACTION 8:

Develop repair and reconstruction policies or rules for historic structures and integrate into historic preservation requirements in each community. Educate historic districts and the planning commission about the policies.

Responsible Party: Alan Webb, Planning Department
Priority (H,M,L): Medium
Cost Estimate: Staff Time
Community Benefit: Reduced losses
Potential Funding: Existing Budget
Schedule: 2006

Goal 6: Educate the public on community hazards

Objective 1: Become a Storm Ready Community.

Objective 2: Seek input on the LHMP at least once every three years.

RECOMMENDED ACTION 9:

Educate the community about stormwater and floodplain management. The City of Kingsport is required by the NPDES Phase II regulations to develop a stormwater management program addressing both stormwater quality and quantity. Flooding is one very visible component of stormwater management. The City is required to educate the community about stormwater management. This education will make the community more aware of flood risks and how their behavior affects stormwater management, including flooding. Education materials will be developed for distribution to the general public about stormwater management, including floodplain issues.

Responsible Office: Dan Wankel, Public Works Department
Priority (H, M, L): High

Cost Estimate: \$5-20,000, depending upon printing and mailing costs, level of volunteer participation, and scope and frequency of events.
Community Benefit: Life-Safety, Relatively Low Cost, Multi-Hazard program is efficient
Potential funding: 5% state set aside from future HMGP funding and PDM funds
Schedule: 2005 and ongoing

RECOMMENDED ACTION 10:

Become a StormReady community. The National Weather Service sponsors a program called StormReady. This program helps arm America's communities with the communication and safety skills needed to save lives and property– before and during the event. StormReady helps community leaders and emergency managers strengthen local safety programs. The City of Kingsport will become a StormReady community in an effort to better prepare the community for storm events.

Responsible Party: Donna Carrier, 911 Dispatch Director, Police Department
Priority (H,M,L): Low
Cost Estimate: Staff Time
Community Benefit: Reduced losses; life-safety
Potential Funding: Existing Budget
Schedule: 2007

4.2.2.3 Bluff City – Recommended Action Items

Community specific action items were not recommended by the City of Kingsport representatives on the CRPT and LHMT for Goals 2 and 5 and the associated objectives to develop hazard specific mitigation actions.

Goal 1: Protect community lifelines (existing and future) from identified natural and man-made hazards

Objective 1: Investigate ways to protect utility lines from storm damage.

Objective 2: Prepare vulnerability assessments for water and wastewater treatment facilities that do not have them in place.

RECOMMENDED ACTION 1:

Develop a Vulnerability Assessment for the water treatment facility. While the water treatment facility in Bluff City is not required to develop a Vulnerability Assessment due to the size, developing and implementing a VA will lower the terrorist threat for the water supply.

Responsible Party: Public Works Department
Priority (H,M,L): Low
Cost Estimate: Staff Time
Community Benefit: Critical facility protection
Potential Funding: Existing Budget
Schedule: within 5 years

RECOMMENDED ACTION 2:

Integrate hazard mitigation planning into all aspects of City planning, including the Capital Improvements Plan, the Strategic Plan, the Land Use Plan, and Emergency Operations Plan

Responsible Party: Planning Department
Priority (H,M,L): Medium
Cost Estimate: Staff Time
Community Benefit: Regional hazard mitigation planning; reduced losses; life-safety
Potential Funding: Existing Budget
Schedule: 2005

Goal 3: Better manage flood hazard areas

Objective 1: Participate in the Community Rating System.

Objective 2: Educate the community about stormwater and floodplains.

Objective 3: Update floodplain mapping, where needed, through the map modernization program and other programs.

Objective 4: Fully integrate hazard mitigation planning into the capital improvement planning process.

RECOMMENDED ACTION 3:

Update floodplain mapping. While the existing FIRMs are good starting points, they are outdated and should be more current to more effectively regulate development in and around the floodplain.

Responsible Party: Planning Department
Priority (H,M,L): Medium
Cost Estimate: FEMA map modernization program
Community Benefit: Better floodplain management; reduced losses; life-safety
Potential Funding: FEMA map modernization program
Schedule: 2005 begin discussions with TEMA/FEMA

Goal 4: Protect community historic preservation resources

Objective 1: Identify all historic resources.

Objective 2: Develop repair and reconstruction policies or rules for historic structures and integrate into historic preservation requirements in each community.

RECOMMENDED ACTION 4:

Identify all historic resources, such as buildings and other properties, and assess their potential hazards.

Responsible Party: Planning Department
Priority (H,M,L): High
Cost Estimate: Staff Time
Community Benefit: Identification of resources significant to the community; Reduced losses
Potential Funding: Existing Budget
Schedule: 2005

RECOMMENDED ACTION 5:

Develop repair and reconstruction policies or rules for historic structures and integrate into historic preservation requirements in each community. Educate historic districts and the planning commission about the policies.

Responsible Party: Planning Department
Priority (H,M,L): Medium
Cost Estimate: Staff Time
Community Benefit: Reduced losses
Potential Funding: Existing Budget
Schedule: 2006

Goal 6: Educate the public on community hazards

Objective 1: Become a Storm Ready Community.

Objective 2: Seek input on the LHMP at least once every three years.

RECOMMENDED ACTION 6:

Educate the community about stormwater and floodplain management. Bluff City is required by the NPDES Phase II regulations to develop a stormwater management program addressing both stormwater quality and quantity. Flooding is one very visible component of stormwater management. The City is required to educate the community about stormwater management. This education will make the community more aware of flood risks and how their behavior affects stormwater management, including flooding. Education materials will be developed for distribution to the general public about stormwater management, including floodplain issues.

Responsible Office: Public Works Department

Priority (H, M, L): High

Cost Estimate: \$5-20,000, depending upon printing and mailing costs, level of volunteer participation, and scope and frequency of events.

Community Benefit: Life-Safety, Relatively Low Cost, Multi-Hazard program is efficient

Potential funding: 5% state set aside from future HMGP funding and PDM funds

Schedule: 2005 and ongoing

4.2.2.4 Other Action Items Considered

Not all of the mitigation actions presented to and/or discussed by the CRPT and LHMT became recommended action items. Action items may not have been considered to be cost-effective or support the communities' goals. Additionally, action items may have lacked political support, constituent support, and funding. Action items not recommended or included in the priority list are presented below.

- Improvements to the severe weather warning system.
- Construct tornado saferooms and/or seek vendor donation of one model saferoom.
- Update and/or develop vegetation ordinances (i.e., urban forester, landscape ordinances).
- Development of tree-trimming program to lessen the risk of power outages by falling limbs.
- No action.

5 Maintenance Process

5.1 Monitor, Evaluate, and Update

Plan maintenance implies an ongoing effort to monitor and evaluate the implementation of the plan, and to update the plan as progress, roadblocks, or changing circumstances are recognized.

This monitoring and updating will take place through an annual review by the CRPT and a 5-year written update to be submitted to the state and FEMA Region IV, unless disaster or other circumstances (e.g., changing regulations) lead to a different time frame. When the CRPT reconvenes for the review they will coordinate with all of the stakeholders that participated in the planning process, or that have joined the CRPT since the inception of the planning process, to update and revise the plan.

The evaluation of the progress can be achieved by monitoring changes in the degree of vulnerability identified in the plan. Changes in vulnerability status can be identified by noting:

- Lessened vulnerability as a result of implementing Recommended Actions;
- Increased vulnerability as a result of failed or ineffective mitigation actions; and/or,
- Increased vulnerability as a result of new development (and/or annexation).

The plan will be updated via written changes and submissions, as the CRPT deems appropriate and necessary, and as approved by the governing bodies of the communities.

5.2 Incorporation

The recommended strategies in this Local Hazard Mitigation Plan will be incorporated into planning documents as they are being updated, such as Urban Growth Boundary plan, Capital Improvement Plans for each jurisdiction, and Emergency Operations Plans.

5.3 Public Participation

Public notice will be given and public participation will be invited in the LHMP update process, at a minimum, through available webpostings and press releases to the local media outlets, primarily newspapers and AM radio stations.

(This page intentionally left blank.)

6 Plan Adoption

The governing bodies of Sullivan County, the City of Kingsport, and Bluff City will adopt this plan, once finalized.

(This page intentionally left blank.)

7 Resources

The following resources were used in the development of this plan:

Websites

TEMA Mitigation

<http://www.tnema.org/Mitigation/Default.htm>

Sullivan County Adopted Zoning Ordinance

<http://www.sullivancounty.org/PDF/2003%20Proposed%20Zoning%20Back-UP.pdf>

USGS National Seismic Hazard Mapping Project

<http://geohazards.cr.usgs.gov/eq/html/data2002.html>

National Climatic Data Center

<http://www.ncdc.noaa.gov/oa/ncdc.html>

Documents

TEMA Local Hazard Mitigation Planning Guide

TVA Emergency Action Plans for Dams

(This page intentionally left blank.)

Appendix A

Local Hazard Mitigation Team Members

(Tier 1 of Public Input)

(This page intentionally left blank.)

**Local Hazard Mitigation Planning Team Members
(Tier 1 of Public Input)**

Name	Affiliation	Phone	Email
General Public			
Kevin Rasnick	John Mize & Associates (Local Surveyor)	423.323.4562	RLS2179@earthlink.net
City of Kingsport			
Jake White	GIS	423.224.2465	whitej@ci.kingsport.tn.us
Mike Freeman	Development Services (building)	423.229.9393	m.freeman@ci.kingposrt.tn.us
Bill Albright		423.224.2677	Albright@ci.kingsport.tn.us
Alan Webb	Planning	423.229.9319	webb@ci.kingsport.tn.us
Paul Bowman	Emergency Response	423.229.9498	bowmanp@ci.kingsport.tn.us
Charles White	Emergency Response	423.229.9444	whitec@ci.kingsport.tn.us
Chip Adkins	Emergency Response	423.229.9441	
Kitty Frazier	Parks and Rec	423.229.9457	frazier@ci.kingsport.tn.us
Bob Winstead	Engineering	423.224.2416	winstead@ci.kingsport.tn.us
Eddie Lawrence	Water Dept.	423.229.9454	Lawrence@ci.kingsport.tn.us
City of Bristol			
Rex Montgomery	Transportation Planning	423.989.5519	rmontgomery@bristoltn.org
David Metzger	Transportation Planning	423.989.5522	dmetzger@bristoltn.org
Michael Yaniero	Police Chief	423.989.5544	myaniero@bristoltn.org
Michael Carrier	Fire Dept	423.989.5701	
Phil Vinson	Fire Dept	423.989.5701	
Gary Spry	Public Utilities	423.989.5649	gspry@bristoltn.org
David St. John	Water Plant	423.989.5576	dstjohn@bristoltn.org
Frank Neal	Public Utilities	423.989.5262	fneal@bristoltn.org
Wes Ritchie	Streets	423.989.5583	writchies@bristoltn.org
Charles Roberts	Streets	423.989.5583	
Jack Spurgeon	Building and Codes		

Sullivan County			
Audrey Thompson	Sheriff's Dept.	423.279.7330	Audrey@scsotn.com
Harold Owens	Sheriff's Dept.	423.279.7500	owens@scsotn.com
Mark Vance	EMS	423.323.6471	
Jim Bean	Health Dept.	423.279.7563	jbean@sullivanhealth.org
Gary Medlin	Sheriffs Office		MedlinG173@hotmail.com
Tim Earles	Building		
Jerry Cunningham	Sheriffs Office		Josh@scsotn.com
Harold Gillenwater	Emergency Response	423.245.5449	hdgilenwater@chartertn.net
Bluff City			
Judy Delaney	City Clerk		bluffcitycityof@aol.com
Jeff Broyles	Gen. Superintendent		bluffcitycityof@aol.com

Appendix B

LHMT Meeting Sign-In Sheets

(Tier 1 of Public Input)

(This page intentionally left blank.)

Appendix C

Stakeholder Meeting Sign-In Sheets

(Tier 2 of Public Input)

(This page intentionally left blank.)

**Stakeholders Group Meeting
(Tier 2 of Public Input)
March 10, 2004**

Name	Affiliation	Address	Email
Larry Baker	Intermount	291 V.I. Ranch Rd	
William Ogle Jr.	Intermount	291 V.I. Ranch Rd	
Amber Torbett	Sullivan Co.		
Larry Holloway	Eastman	PO Box 511, B-18 Kingsport, TN 37662	Holloway@eastman.com
Gail Plum	BAE Systems	4509 W. Stone Dr. Kingsport, TN 37660	Gail.plum@baesystems.com
David Lewis	TDOT	PO Box 3518 CRS Johnson City, TN 37602	
Reggie Lett	East TN Natural Gas	1277 Fordtown Rd. Kingsport, TN 37663	JR left on Duke-Energy.com
Dee Dee Hash	BMS		
Niki ENSOR	City of Kingsport Water Plant	2436 Sherwood Rd. Kingsport, TN	ensor@ci.kingsport.tn.us
Herbert Morell	Sprint	# 2 Spruce St. Bristol, TN 37620	Herbert.morrell@mail.sprint.com
Patrick Wilson	Tri-Cities Airport Commission	PO Box 1055 Blountville, TN 37617	pwilson@triflight.com
Matthew Drake	Bristol WWTP US Filter	578 Beaver Creek Rd. Bluff City, TN 37618	
Andy Blake	Bristol, WWTP US Filter	578 Beaver Creek Rd. Bluff City, TN	blaketa@usfiler.com

Meeting Minutes

Ambre Torbett with Sullivan County Planning provided an introduction. Beth Chesson of AMEC Earth & Environmental gave an overview of the process and reviewed hazards for Sullivan Co. HMP goals and objectives were discussed and input from individual stakeholders was received as follows:

INPUT FROM STAKEHOLDERS

What are potential hazards for your sector of the community and what activities do you feel are appropriate for your community sector?

Bluff City

Bluff City representatives gave an overview of their program and noted that they desire to have an active role in the HMP from this point forward. They noted that their city has the following potential hazards or high priority facilities:

- Railroad
- Rocky terrain
- Boone Lake
- River flooding
- Small system flooding-high to medium risk
- Tornadoes
- Earthquakes-high due to fault line
- Use Southern building codes with no add-ons for earthquakes beyond what is in ICC.
- Winter Storms
- High due to terrain (steep hills), but public works can control things (salting, barricades) to reduce risk to medium
- Wildfires
- Moderate (has a lot of high terrain), but volunteer fire dept. is top notch, so rates commensurate at medium
- Dam failures
- Moderate risk (Boone Lake – however the lake is a TVA facility)
- Hazardous Materials
- Due to railroad and truck traffic as high with commensurate risk at high
- Drought-low risk
- Terrorism
- Staff is fairly proficient and educated to terrorist risks in line with Sullivan Co.

Overall, the City has small system flooding and sinkholes issues. City Hall in downtown has had major flooding/sinkhole problems. BMS impacts the city greatly, with increased traffic.

Sprint

Ice and snow storms are top hazard- storm events in general. In general, they try to bury phone lines to the extent practical, but rocky terrain does not always make it feasible. The company has an emergency preparedness plan, but it is not specific to Sullivan Co.

Intermont Utility

IU is one of many utility districts serving water to the Sullivan County communities. IU gets water from Bristol's water treatment plant. Their biggest concern is flooding events as they affect water lines and transmission. The utility representatives are also concerned about terrorism at water storage facilities.

Bristol

Representatives from the City of Bristol noted one of the biggest concerns for the city continues to be small stream flooding. Reintroduction of power after ice storms is also a concern. Secondary impacts to water storage facilities from earthquakes could also be problematic (they have 2 days of storage water). Bristol has the railroad through the town, with the potential for hazardous materials spills. However, the greatest concern for the City is terrorism during race days at Bristol. Bristol is working on getting 911 addresses for critical infrastructure.

Bristol WWTP

Hazard concerns for the WWTF are flooding and power loss, should the WWTF not be able to provide services for an extended period of time. The WWTF does not store highly hazardous chemicals on site. The WWTF does not have a vulnerability assessment, as it is not required by law to have one. Terrorism against the facility would likely be localized, such as a disgruntled employee and local group.

BAE

Terrorism and Other natural hazards are of concern to BAE. The facility has a hazard vulnerability assessment and emergency preparedness plan for natural hazards. The DoD conducts routine security inspections on the facility to ensure the facility is as secure as possible. Security plans for the facility change as Homeland Security threat levels change. BAE feels their spill response is good.

Sullivan Co. Sheriff Dept.

Feels communication to public and employees on hazards and during emergency events is essential. Currently do not have enough manpower for hazards and alerts. Need more deputies. The County is in the process of setting up a reverse 911 system. The Sheriff's department feels Sullivan County is in good shape with respect to terrorism prevention with community response and neighborhood watches. Sheriff's dept. representatives noted that for Homeland Security, power substations are the #1 county threat. The Sheriff's Dept would like to know water system information to provide security during high threat times. (Note: Jerry Fleenor could manage this information)

City of Kingsport WWTP

At the WWTP, the focus is on power restoration during storm events, especially providing power to priority facilities. The WWTP rep's noted that the City's Emergency Response staff have a very limited spill response time if spills occur on certain bridges and creeks that are close to intakes. Better communication between spill responders and the WWTP is needed to respond quickly enough to shut down their intake. They have only 30 minutes.

Bristol Electric

Bristol Electric gets power from TVA. Total loss of power delivery is unlikely, as they have 3 separate delivery points. Bristol Electric reps have the following thoughts on requiring underground utilities:

- less likely to experience hazards due to outages
- major TVA feeders and substations are overhead and cannot be run underground
- underground utilities are expensive and are only good for individual outages, not systemwide outages
- overhead is easier to fix

Storm damage is frequent, but extent of service loss and damage is dependent on type of storm and location. Bristol Electric flags special customers for priority power restoration.

Eastman

Internal and external vulnerability assessments are in place for terrorism. A -preparedness plan is in place for flooding. The plant must shut down with too much and too little water, as both can affect the plant negatively. Terrorism is considered the greatest threat. Terrorism assessment was done in late 2003.

Duke Energy

They have an interstate pipeline. To address terrorism, they have annual drills and a have security response plan in place. Duke Energy is part of National Security Response Plan. The DOD has conducted threat assessments. Much of their system is underground, so storms and flooding aren't big issues. However, earthquakes are an issue, because they could shut down natural gas lines. LNG plant is a concern, but would be minimal impact on community

TriCities Airport

Airport has separate plans that address each of these: terrorism, winter storms (winter operations plan); and hazardous materials spills. Non-local events can shut down National level air system, which would affect TriCities Airport.

Ambre Torbett

-flooded areas that are not identified on flood FIRMS are numerous (flooded roads, etc...)

-chronic flood areas known to rest of community should be submitted to Ambre (by location)

Sensitive information management

Sullivan County Planning noted that having sewer distribution line locations and lift stations on a layer for their GIS system would be beneficial. Bristol made the point that much information about lift stations and storage facilities for water are often sensitive and that information should not be made public in the HMP document. How will HMP and planning/mitigation process deal with sensitive material such as water intakes, pump stations, system mapping?

3 Options for Handling Sensitive Issues in the LHMP:

1. Put in Appendix labeled “sensitive” and produce only for certain people
2. leave out completely
3. Give info. Only to specific people (Jerry Fleenor etc.)

Meeting participants discussed the types of information that might be considered “sensitive” and decided that each entity should determine the level of system security they desire and provide the information to Planning as they feel appropriate to either Planning or Emergency Management. The information will be left out of the LHMP

Note: A BMS representative was in attendance but had to leave early for another meeting to get ready for race day in 2 weeks.

Dede Hash

Admin. VP

423-989-6928

dede@bristolmotorspeedway.com

(This page intentionally left blank.)

Appendix D

General Public Meeting Sign-In Sheet

(Tier 3 of Public Input)

Public Meeting

Sullivan County Planning Commission held a public meeting on October 19th, 2004. Jerry Fleenor gave the presentation. Maps were printed out and placed on a display board. The following citizens, or general public, were present:

Dwight King
Archie Pierce
Roy Settle
Gordon Peterson
Jack Dutton
Harry Boggs
Buddy King
Mike McIntire
Ambre Torbett
Ronda Sawyer
Tim Earles
Jerry Fleenor
Deputy White

Appendix E – Plan Adoption

(This page intentionally left blank.)

Appendix F – Mapping

(This page intentionally left blank.)