



## Forsyth County Multi-Jurisdictional Hazard Mitigation Plan 2014 Progress Report

Plan Adopted:  
September 27, 2010

Jurisdictions Included in Plan:

- Unincorporated Forsyth County (NFIP Community # 375349)
- City of Winston-Salem (NFIP Community # 375360)
- Town of Bethania (NFIP Community # 370477)
- Village of Clemmons (NFIP Community # 370531)
- Town of Kernersville (NFIP Community # 370319)
- Town of Lewisville (NFIP Community # 370581)
- Village of Tobaccoville (NFIP Community # 370624)
- Town of Rural Hall (NFIP Community # 370606)
- Town of Walkertown (NFIP Community # 370679)

Plan Update Background:

During the 2010 Forsyth County Multi-Jurisdictional Hazard Mitigation Plan (FC MJHMP) Update, the Mitigation Planning Team (see p. I-19 of plan for a list of team members), reviewed the mitigation actions contained in the previous plan (FC MJHMP 2005) and identified and analyzed a comprehensive range of new mitigation actions. The statuses of the actions were determined to be completed, ongoing or deleted. Where feasible, mitigation actions were given completion dates. The Team reviewed the local capabilities and determined if actions could readily be accomplished by existing programs, plans, personnel and funds. The Team also reviewed the actions contained in the 2007 North Carolina State Hazard Mitigation Plan and determined that the actions selected for the plan update are consistent with those of the State. The process for prioritizing the selected mitigation actions included discussions by the Mitigation Planning Team about the advantages and drawbacks of each identified action carried over from the previously approved plan as well as new actions identified during the update process. Actions that were carried over from the previous plan were re-prioritized based on the updated risk assessment, existing conditions in the jurisdiction, and current capabilities. The Team sought input from staff of local departments responsible for implementing each action.

Mitigation Actions were evaluated to determine if they:

- Are Cost Beneficial
- Address Identified Hazard Risks
- Are Attainable and Within Identified Capabilities
- Are Technically Feasible

**Winston-Salem/Forsyth County  
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**City Council:** Mayor Allen Joines; Vivian H. Burke, Mayor Pro Tempore, Northeast Ward; Denise D. Adams, North Ward; Dan Besse, Southwest Ward; Robert C. Clark, West Ward; Molly Leight, South Ward; Wanda Merschel, Northwest Ward; Derwin L. Montgomery, East Ward; James Taylor, Jr., Southeast Ward; City Manager: Lee D. Garrity

**Forsyth County Commissioners:** Richard V. Linville; Chairman; Gloria D. Whisenhunt; Vice Chair; Mark Baker; Walter Marshall; David R. Plyler, Bill Whiteheart; Everette Witherspoon; County Manager: Dudley Watts, Jr.

- Are Politically Acceptable
- Are Socially Acceptable
- Are Legal
- Are Environmentally Sound
- Are Compatible with Mitigation Goals & Objectives

## **Review of Mitigation Action Plan**

The Winston-Salem/Forsyth County Office of Emergency Management coordinates the review of the Multi-Jurisdictional Hazard Mitigation Plan to ensure that goals and objectives set forth in the plan are kept current and the local mitigation efforts to reduce the impact of natural hazards are being accomplished. The review process involves all members of the Mitigation Planning Team, which includes representatives of all affected County departments, as well as representatives from all jurisdictions included in the plan: the City of Winston-Salem, Town of Bethania, Village of Clemmons, Town of Kernersville, Town of Lewisville, Village of Tobaccolville, Town of Rural Hall and Town of Walkertown.

A progress report is generated to reflect the effectiveness of mitigation action implementation, as outlined in the plan and reviewed by each Mitigation Planning Team member. This report includes any recommended revisions to the plan. To comply with National Flood Insurance Program regulations, this report must be reviewed by each jurisdiction's governing board, released to the media and made available to the public. The report and the Plan are available at the following ReadyFORSYTH ([www.ReadyFORSYTH.org](http://www.ReadyFORSYTH.org)) link: <http://www.readyforsyth.org/category/stayinformed/hazard-mitigation-plan/>

Because the entire plan is currently being updated (revisions to become effective in 2015), many mitigation actions will transition into community capabilities and will no longer require an annual review.

## **Mitigation Goals & Objectives**

All mitigation objectives outlined in the plan support the overall mitigation goals to promote public health, safety and welfare of the citizens of the community; therefore the objectives have not changed and are carried out in the more specific mitigation actions. Mitigation goals and objectives can be found in Section II, p. II-2 - 4 of the FC MJHMP.

## Mitigation Actions

Please reference the following documents at ReadyFORSYTH.org: Mitigation Action Plan (Section II, Table II-1 – p. II-7 - 12), the 2011 Mitigation Action Review and the 2012 & 2013 Mitigation Action Review for the discussion of the action items below.

All mitigation actions listed in the 2010 FC MJHMP will transition to community capabilities, with the exception of the mitigation actions listed below.

After the 2014 review of the plan, the Mitigation Planning Team determined that the following mitigation actions need further attention and will be included in the updated 2015 plan:

### Preventive Actions

<b>MITIGATION ACTION P-6</b>	
<b>Proposed Action:</b>	<b>Revise, update and locally adopt floodplain maps (FIRMs – Flood Insurance Rate Maps)</b>
<b>BACKGROUND INFORMATION</b>	
<b>Site and Location:</b>	NC Emergency Management (NCEM) and Forsyth County multi-jurisdictional floodplain management officials work together to identify flood prone areas throughout the county in which to conduct detailed flood studies during FIRM revisions.
<b>History of Damages:</b>	Flash flooding, caused by heavy and prolonged rain, is possible throughout Forsyth County. Due to past events, Forsyth County has repetitive flood loss areas.
<b>MITIGATION ACTION DETAILS</b>	
<b>Hazard(s) Addressed:</b>	Flood
<b>Category:</b>	Prevention
<b>Priority (High, Moderate, Low):</b>	High
<b>Estimated Cost:</b>	Local Staff Costs
<b>Potential Funding Sources:</b>	Federal, State & Local
<b>Lead Agency/Department Responsible:</b>	Winston-Salem Stormwater
<b>Implementation Schedule:</b>	Present – December 2016

**Property Protection Actions**

<b>MITIGATION ACTION PP-2</b>	
<b>Proposed Action:</b>	<b>Acquire and remove or elevate structures in flood prone areas</b>
<b>BACKGROUND INFORMATION</b>	
<b>Site and Location:</b>	The City of Winston-Salem has multiple flood prone areas and NFIP Repetitive Loss properties.
<b>History of Damages:</b>	Several properties have been flooded multiple times.
<b>MITIGATION ACTION DETAILS</b>	
<b>Hazard(s) Addressed:</b>	Flooding
<b>Category:</b>	Property Protection
<b>Priority (High, Moderate, Low):</b>	High
<b>Estimated Cost:</b>	Varies depending on property
<b>Potential Funding Sources:</b>	Federal grants, property owner cost share
<b>Lead Agency/Department Responsible:</b>	Winston-Salem Stormwater
<b>Implementation Schedule:</b>	Current – December 2015

**Emergency Services**

<b>MITIGATION ACTION ES-2</b>	
<b>Proposed Action:</b>	Equip an emergency shelter with an alternate power source.
<b>BACKGROUND INFORMATION</b>	
<b>Site and Location:</b>	Winston-Salem/Forsyth County Schools high school.
<b>History of Damages:</b>	Displacement of individuals and families during emergencies require local governments to provide emergency shelter. These emergencies often result in widespread power outages that affect shelter locations. Past Forsyth County events include winter storms and tropical systems, but shelters may be used for other types of emergencies.
<b>MITIGATION ACTION DETAILS</b>	
<b>Hazard(s) Addressed:</b>	All
<b>Category:</b>	Emergency Services
<b>Priority (High, Moderate, Low):</b>	Moderate
<b>Estimated Cost:</b>	\$50,000
<b>Potential Funding Sources:</b>	Local staff costs, Federal grant
<b>Lead Agency/Department Responsible:</b>	Emergency Management
<b>Implementation Schedule:</b>	July 2015 – June 2017

**MITIGATION ACTION ES-6**

<b>Proposed Action:</b>	<b>Install stream gages along flood prone streams for flood warning and alerting purposes</b>
<b>BACKGROUND INFORMATION</b>	
<b>Site and Location:</b>	Muddy Creek at Highway 67/Reynolda Rd and Salem Creek at Fraternity Church Road
<b>History of Damages:</b>	Both sites would monitor streams that contribute to flood prone areas and NFIP Repetitive Loss properties. Muddy Creek and Salem Creek meander through urban areas. The gages would provide more accurate flash flood and river flood warning services, as well as data related to pollutant loading.
<b>MITIGATION ACTION DETAILS</b>	
<b>Hazard(s) Addressed:</b>	Flood
<b>Category:</b>	Emergency Services
<b>Priority (High, Moderate, Low):</b>	Moderate
<b>Estimated Cost:</b>	USGS Gages - \$75,000 each (does not include annual maint.) NCEM Gages (water level only)- \$10,000 each (does not include annual maintenance)
<b>Potential Funding Sources:</b>	Federal, Local, Local staff costs
<b>Lead Agency/Department Responsible:</b>	Winston-Salem Stormwater
<b>Implementation Schedule:</b>	January 2015 – July 2017

**MITIGATION ACTION ES-7**

<b>Proposed Action:</b>	<b>Acquisition of WebEOC (resource management &amp; communications software).</b>
<b>BACKGROUND INFORMATION</b>	
<b>Site and Location:</b>	Emergency Operations Center/Emergency Management Office
<b>History of Damages:</b>	This software is vital to the operation of the Emergency Operations Center and can be utilized by all jurisdictions. County-wide emergency exercises are performed on an annual basis. Every exercise has proven the need for such a resource management tool. The Forsyth County tornado event that occurred on May 8, 2008 would have been better managed with this tool, allowing for resource coordination from a central location.
<b>MITIGATION ACTION DETAILS</b>	
<b>Hazard(s) Addressed:</b>	All
<b>Category:</b>	Emergency Services
<b>Priority (High, Moderate, Low):</b>	High
<b>Estimated Cost:</b>	\$75,000 cost / \$25,000 annually
<b>Potential Funding Sources:</b>	Local
<b>Lead Agency/Department Responsible:</b>	Emergency Management
<b>Implementation Schedule:</b>	Current – June 2016

<b>MITIGATION ACTION</b>	
<b>Proposed Action:</b>	<b>Create maps indicating flood inundation areas during high hazard dam failure</b>
<b>BACKGROUND INFORMATION</b>	
<b>Site and Location:</b>	There are more than 50 high hazard dams in Forsyth County. Less than 10 have inundation maps on file with Emergency Management.
<b>History of Damages:</b>	In 1912, Winston Dam was overtopped but the extent of damages is unknown. Future occurrences are possible, considering most dams are maintained by private land owners and the date of dam construction is not recorded.
<b>MITIGATION ACTION DETAILS</b>	
<b>Hazard(s) Addressed:</b>	Dams
<b>Category:</b>	Emergency Services
<b>Priority (High, Moderate, Low):</b>	High
<b>Estimated Cost:</b>	Unknown
<b>Potential Funding Sources:</b>	Local staff time
<b>Lead Agency/Department Responsible:</b>	Map Forsyth
<b>Implementation Schedule:</b>	Current - 2017



**Public Information/Public Education & Awareness**

<b>MITIGATION ACTION PI-1</b>	
<b>Proposed Action:</b>	Update flood protection, emergency preparedness and other hazard education materials in Forsyth County Public Library.
<b>BACKGROUND INFORMATION</b>	
<b>Site and Location:</b>	Forsyth County Public Library
<b>History of Damages:</b>	N/A
<b>MITIGATION ACTION DETAILS</b>	
<b>Hazard(s) Addressed:</b>	All
<b>Category:</b>	Public Education & Awareness
<b>Priority (High, Moderate, Low):</b>	High
<b>Estimated Cost:</b>	Minimal, < \$100
<b>Potential Funding Sources:</b>	Local Library System & FEMA Publications
<b>Lead Agency/Department Responsible:</b>	Emergency Management
<b>Implementation Schedule:</b>	Current - June 2015

<b>MITIGATION ACTION PI-5</b>	
<b>Proposed Action:</b>	<b>Update and maintain ReadyFORSYTH website, ReadyFORSYTH social media and ReadyFORSYTH web application for mobile devices on a daily basis.</b>
<b>BACKGROUND INFORMATION</b>	
<b>Site and Location:</b>	Web-based
<b>History of Damages:</b>	These educational tools provide current emergency preparedness and response information to Forsyth County residents, business owners and visitors. The website also contains local hazards, events, incidents, training and exercises. The website and social media are accessible via free computer and internet services that are available to the public at all county library locations.
<b>MITIGATION ACTION DETAILS</b>	
<b>Hazard(s) Addressed:</b>	All
<b>Category:</b>	Public Education & Awareness
<b>Priority (High, Moderate, Low):</b>	High
<b>Estimated Cost:</b>	Staff cost & \$500 annual server cost
<b>Potential Funding Sources:</b>	Local
<b>Lead Agency/Department Responsible:</b>	Emergency Management
<b>Implementation Schedule:</b>	Daily, Current – June 2015

After the 2014 review of the plan, the Mitigation Planning Team determined that the following mitigation actions will be deleted and will not be included in the updated 2015 plan:

**P-14 – Develop and implement the Firewise Program.**

Reason for deletion: The suburban nature of Forsyth County and effective local codes offset the benefits of implementing the Firewise Program in Forsyth County.

**PP-3 – Limit new development encroachment (building or fill) to 15% of the Floodway Fringe.**

Reason for deletion: No change has been made to fill limits in the floodway fringe due to lack of political will. Currently, the ordinance allows for 50% fill.