



Mecklenburg County, North Carolina  
Federal Emergency Management Agency  
Cooperating Technical Partner  
Mapping Activity Statement



Agreement #1- HAZUS - FIT Demonstration Project

1. **Background:** When tropical storms soaked central parts of Mecklenburg County in 1995 and 1997, it was clear FEMA flood maps were out-of-date. Water seeped into homes and businesses that never used to flood, while neighborhoods with a history of flooding were waterlogged more than ever. Before getting drained by another \$50 million in flood damage, Mecklenburg County decided to pour its own money into updating its flood maps.

Mecklenburg County recognized its flood maps, last updated in the mid-1970s, no longer reflected an accurate picture of its flood risk or the development boom the county had experienced. As a *Project Impact* and *Cooperating Technical Partner* (CTP) community, Charlotte-Mecklenburg has embraced the disaster-resistant principle that acting now will dramatically reduce our future threats. Charlotte-Mecklenburg decided proper floodplain mapping was a community safety issue – similar to fire, ambulance and police services. The time had come to stop solely relying on FEMA to provide all of the floodplain maps and related data. In addition, Mecklenburg County ensured its new maps were not just a snapshot of a moving target. The maps were drawn to show not only where the floodplain is now but also where it will be when land upstream is paved and built upon.

Accounting for future land use allowed Mecklenburg County to institute stiffer regulations for new developments in or adjacent to floodplains to help reduce future flooding damage. Yet, the responsibility to regulate imposed a secondary obligation to inform and educate. Mecklenburg County decided to use the HAZUS methodology to provide estimates of potential flood loss to help policymakers and the public better understand the benefits of map revisions. The other goal of the HAZUS project was to quantify the benefits of including future landuse conditions in developing flood maps. To measure the losses avoided by mapping to future conditions and enforcing subsequent building restrictions, Mecklenburg County initiated a pilot study. The results of the pilot study were presented in graphs, maps and figures in the "Determination of Impacts From Flood Study Modifications McAlpine Creek Watershed (Final)", June, 2000. In one watershed alone, an estimated \$16 million in structural damages was avoided by investing \$250,000 in map revisions.

2. **Objective and Scope:** Even though one may consider Mecklenburg County having a firm understanding of HAZUS based on the above discussion, the understanding is only in the methodology used and the impressive results that can be generated from this type analysis. The FIT Demonstration project will help achieve the following objectives:
  - "Test drive" the software with Level 2 and 3 data;
  - Identify the advantages of a community becoming owners of floodplain maps as a CTP and the linkages to HAZUS analyses for a locally based, comprehensive floodplain management program; and
  - Act as a clearinghouse for comments on the FIT Tool from North Carolina communities and professional societies.



or other annual conferences to seek feedback from other communities that may have different GIS formats, data structures, etc. This will also promote the benefits of HAZUS as a whole.

Mecklenburg County will also share all process and conclusions with other FIT communities and post on the FIT website.

Travel:	Avg. 3 trips @ \$800 per trip	\$2,300 (rounded)
	<b>Subtotal</b>	<b>\$2,300</b>

Without seeing the FIT in operation, it is difficult to commit to an exact number of hours to "Test Drive" the software. The number of presentations/workshops we conduct will depend on the FIT.

**TOTAL            \$8,000**

- Reporting:** Quarterly reports will be prepared by the County. These reports will address the status of the project and identify any areas where problems may exist. These reports will be submitted to the FEMA Project Officer
- Points of Contact:** The FEMA Project Officer is Laura Algeo and the CTP Project Manager is W. Dave Canaan.

Each party has caused this Mapping Activity Statement to be executed by its duly authorized representatives.

  
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W. Dave Canaan, Mecklenburg County

Sept 6, 2001  
date

  
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Laura Algeo, FEMA Region IV

Sept 12, 2001  
date