

North Carolina Cooperating Technical Partner Agreement: Process for Developing Updated DFIRMs

Scoping Flood Hazard Mapping Needs

The development of updated digital FIRMs for the 6 eastern basins in North Carolina began with a comprehensive "scoping" phase. The scoping process entails researching and inventorying all available elevation, flood hazard, and digital base map data that may be useful for preparing updated digital FIRMs. Existing flood hazard data (for example, flood elevation profiles, floodplain boundaries, floodways, and coastal hazard zones) on effective FIRMs are assessed for adequacy. Where the existing flood hazard data are inadequate, the most appropriate technical method to develop up-to-date flood hazard data is determined and a priority level established. Face-to-face meetings with the officials of counties and communities are conducted to determine their needs for updated FIRMs. Data that need to be developed or acquired--such as digital base maps, field surveys of stream channels, hydraulic structures, and coastal transects--are identified. The proposed scales and paneling scheme for digital FIRM production are determined. Finally, a schedule for completion of updated flood hazard data and digital FIRM production is developed. The results of this scoping research and coordination are consolidated and synthesized to produce "Basin Plans" tailored to the needs of all the counties and communities within the basin.

Producing Flood Hazard Mapping

Following scoping, the map production phase has begun. Production of digital FIRMs involves overlaying flood data on a base map. Digital Orthophoto Quarter-Quadrangles (DOQs) produced in partnership by the State of North Carolina and the U.S. Geological Survey will be used as the primary base map, unless there is a locally produced base map that is more current or accurate than the DOQs. The North Carolina CTP project will entail the acquisition of high-resolution topographic data and development of accurate Digital Elevation Models (DEMs). Using the basin plans developed during the scoping phase and the DEMs being developed, work on updated engineering analyses and floodplain mapping will begin. The updated flood hazard data and floodplain mapping will be used to produce seamless digital FIRM coverage statewide. Digital FIRMs will be produced on a countywide basis, whereby the county and its incorporated municipalities are shown on the same set of maps. The vertical reference for elevation data on the FIRMs will be the North American Vertical Datum of 1988 (NAVD 88). The North Carolina Geodetic Survey will work with communities and counties to implement the use of NAVD 88.

Providing Due Process

The preliminary countywide digital FIRMs will be issued to each county and its communities for review and comment. The state will hold a meeting in each county subsequent to the issuance of its preliminary digital FIRM to present the maps. After the meeting, a statutory 90-day appeal period will be provided. During this appeal period, the impacted county, communities, and/or citizens will have the opportunity to comment on the maps and submit scientific or technical data refuting or contesting the results of the preliminary digital FIRM.

In addition to production of digital FIRMs, the North Carolina flood mapping project also includes implementation of a state-of-the-art, dynamic Information Technology (IT) infrastructure to analyze, maintain, and archive maps and associated flood hazard data. This system will also present and distribute the mapping data (DEMs, engineering analyses and models, base maps, digital FIRMs, study reports) and associated documents to the public via the Internet. Finally, the project plan includes the eventual development of a real-time flood forecasting and inundation mapping capability.

For updates about the state's program and the latest developments, visit <http://www.ncfloodmaps.com/>. The site includes a description of the flood mapping program, news about the program, status and progress reports, public documents, such as project fact sheets, basin plans, presentations, etc., and additional links.