Overview of the Map Modernization Process

Digital Map Production

Converting paper maps to digital maps requires the following steps:

1. **Incorporate Base Map Data**
   - Orthophotography: USGS 2005, 1”=6,000’
   - Road names: 2000 TIGER files
   - Stream & lake names: USGS DLGs
   - Municipal boundaries: IL Dept. of Revenue 2005
   - Elevation: USGS 7.5 minute quadrangle maps, 10’ contours (used to redelineate studied streams if necessary)

   Better data will result in better maps. Local data that is more current or more detailed may be used. However, it must meet FEMA minimum standards.

2. **Incorporate Flood Study Data**
   - Digitize floodplain boundaries from existing FIRMS and align with stream locations on the base map.
   - Validate cross section locations using profiles in the Flood Insurance Study.
   - Convert base flood elevations to NAVD 1988 vertical datum.

3. **Incorporate Letters of Map Revision**
   - Letters of Map Amendment and Letters of Map Revision based on Fill will be revalidated unless a new study is incorporated for the source of flooding.
   - A Summary of Map Actions will describe the action taken for each Letter of Map Change.

4. **Incorporate Changes on Studied Streams**
   - Changes that may affect Base Flood Elevations, such as new bridges, channelization, or open channels replaced by storm sewers.
   - Cross sections and BFEs from the U.S. Army Corps of Engineers Upper Mississippi River System Flow Frequency Study.

5. **Redelineate floodplain boundaries if more detailed or more recent topographic data is available.**
The Illinois Department of Natural Resources (IDNR), in partnership with the Federal Emergency Management Agency (FEMA), is modernizing flood maps in Illinois. The mapping is part of a five-year, $1 billion FEMA program to update and convert the nation’s Flood Insurance Rate Maps to a countywide digital format.

One compelling reason for Congress to authorize flood map modernization is the age of map panels. In 2002, seventy percent of Illinois map panels were more than 10 years, making it difficult for communities to use them for regulation or planning.

The New Flood Maps

The new Digital Flood Insurance Rate Maps (DFIRMs) use black and white photography as the base layer. The floodplain is shown in blue. The photographic base helps with geographic orientation and makes floodplain determinations easier. The objective of the remapping effort is twofold:

1. to convert the older community-based paper maps to the new digital countywide product and
2. to improve the flood boundary delineation where better data is available. Floodplain boundaries (from the paper maps) are transferred to the new photographic base map, aligned with stream locations, and matched to the best available topography.

Local geographic information systems (GIS) will be able to incorporate the resulting digital flood layer with their own data layers. Counties and communities will have access to the digital files after the maps are finalized.

The Multi-Year Flood Hazard Identification Plan (MHIP) details FEMA’s plan for providing flood hazard data and maps for areas with the greatest flood risk. The MHIP is available [www.fema.gov](http://www.fema.gov).

**FLOOD MAP MODERNIZATION**

**MAP MOD OBJECTIVES**

- Improved floodplain management
- Local involvement in map revisions
- Seamless, nationwide digital flood layer in a GIS compatible geodatabase format
- Easier and faster map revisions
- Final flood maps available on the internet

**Ways to Help**

- Provide base map data
- Review current maps for errors or changes
- Review preliminary digital maps when they are available; provide comments, protests, or appeals as appropriate
- Document local mapping needs

**Community Participation**

**Sharing of Local Data:** Better data means better maps. Counties and communities are highly encouraged to share data such as recent high resolution aerial photography, updated roads, and topography with contour intervals less than 10 feet.

**Community Review:** Once a countywide DFIRM is complete, the county will receive a complete set of printed preliminary map panels and the countywide Flood Insurance Study (FIS). Communities will receive the FIS and their respective map panels. Map panels and the FIS will be posted on the web at: [www.illinoisfloodmaps.org](http://www.illinoisfloodmaps.org).

IDNR and FEMA will host an Open House where local government officials and the public may view the maps and provide comments. Communities will have 30 days from the date of the Open House to submit written comments to IDNR. If there are Base Flood Elevation (BFE) changes, communities have 90 days after the Open House to submit protests or appeals to IDNR. Once protests and appeals are resolved, FEMA will issue a Letter of Final Determination (LFD) to the community and, when appropriate, publish the final BFEs in the Federal Register. The final FIS and maps become effective on the date specified in the LFD.

**Map Adoption:** Communities participating in the National Flood Insurance Program (NFIP) must update their floodplain ordinance to adopt the effective maps and FIS. Failure to adopt by the effective date will result in suspension from the NFIP.

**New or Future Flood Studies**

Flood studies that have been reviewed and approved by FEMA or the State of Illinois prior to the start of the remapping project will be included in each new county map. During project scoping, IDNR collects information on flood studies not yet reviewed to prioritize them for possible inclusion in this map update or for future mapping. Another goal of Map Modernization is to collect information about local mapping needs, even if they cannot be addressed in this map update. Potential mapping issues include areas where flood risk needs to be identified for the first time or refined because of changes in local conditions that affect hydrology or hydraulics.