

GIS-based FIRMS

Benefits of bringing FIRMs into the Digital Age



What is GIS?

In its most straightforward form, GIS is simply computer cartography or digital map production. In reality it is much more than that. Geographic Information Systems (GIS) are



computer based information systems which utilize a database associated with map features to produce "smart maps." That is, a map which reaches beyond the static limits of traditional cartography and allows the user to analyze both visible and non-visible aspects of each feature on the map. This is achieved through the multifaceted interaction of computer hardware, software, data, and user analysis. GIS is considered a very powerful decision-making tool.

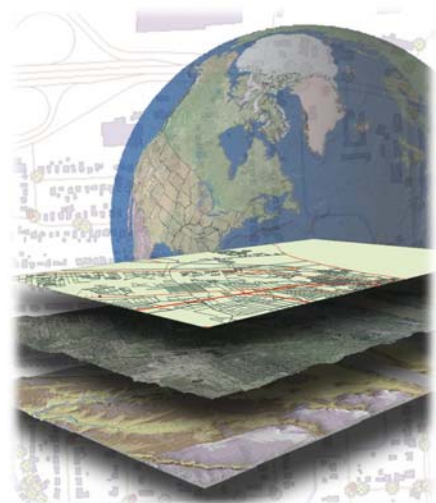
How does it work?

The principle functions of a GIS allow it to capture, store, query, analyze, edit, create, display, and output data through various geoprocessing and cartographic techniques. These procedures are conducted by trained professionals with academic backgrounds providing a thorough understanding of geographic theory and ideas. Currently, it is not unusual to see GIS being utilized by a wide variety of professionals including: economists, environmental scientists, biologists, planners, municipal governments, engineers, doctors, and lawyers. It is estimated that 80% of information in the world today has a geographic component referenced to a location on the earth. (www.gislounge.com).

Why use GIS?

The GIS benefits within the context of the MAP Mod Program are:

- Powerful decision making and planning tools
- Rapid map update, editing and production capabilities
- Easy distribution of information via the Web
- Enhanced data consistency and continuity
- Powerful analytic capabilities
- Proven and accepted technology, methodology, and concepts
- Link between location and identification of features
- Effective data storage solutions



GIS allows you to overlay different types of information for the same location.

Why do we need new maps?

- Many current Flood Insurance Rate Maps (FIRMs) were developed in the early 1970's
- In 2002 FEMA initiated the Map Modernization Program (Map Mod Program)
- Map Mod Program is nationwide and includes in-depth modeling and analysis to evaluate the impact of hurricanes and flooding along the Gulf Coast
- New FIRMs will be GIS-based Digital Maps, or a Digital Flood Insurance Rate Map (DFIRM)

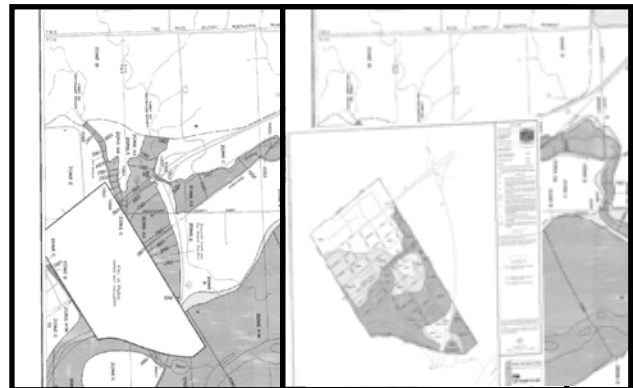
Is there still a
paper map?
✓ YES

Digital Benefits of New DFIRMS

- Geographic Information System (GIS) based
- Accessibility is improved. DFIRMs can be downloaded from the Internet to a computer
- Maintenance is improved. Updating the maps will be easier and less expensive
- Topographical changes are incorporated, i.e. updated elevations are used
- Base maps and flood zone delineations are more accurate
- Digital delivery allows for the end user to perform overlay operations such as viewing Parcels (where available) and DFIRM data simultaneously

Mapping Benefits

- DFIRM Data can be integrated with Aerial Photography
- Consistent data across panel boundaries
- Locally owned data can be easily incorporated
- Base Map Transportation Layer data updated
- GPS technology can be used



Previously, Incorporated Areas were not included and mapped at a separate scale.

