SECTION 5: NFIP MAPS

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This section reviews the Flood Insurance Rate Map and the Floodway Map, the two basic tools the NFIP uses to display floodplain data. It also describes the different formats that are used for these maps.

5.1. FIS MAPS

In the 1970's when FEMA began publishing maps, each community received a Flood Insurance Rate Map (FIRM) and when applicable a Flood Boundary and Floodway Map (FBFM or Floodway Map). At that time, the FIRMs were designed for use by insurance agents and lenders. The Floodway Maps were directed toward the floodplain management aspects of the NFIP and intended for use by local administrators and floodplain managers.

In the late 1980's, FEMA adopted a new mapping format that includes all floodway and floodplain boundary information presented on the FIRM. These maps are currently used to identify Special Flood Hazard Areas (SFHAs), determine the location of a specific property in relation to the SFHA, and locate regulatory floodways.

Over the years the format for the flood maps has evolved, thus a community's map may be in one of several formats depending on when it was last published. FEMA's Map Modernization Program goal is to update all FIRMs to the new Digital FIRM (DFIRM) format by 2010. The various map formats are discussed herein as many currently effective maps may be in one of these older formats.

Section 7.7.3. provides additional information on ordering maps.

5.2. GENERAL MAP FEATURES

Paper flood maps are either flat or Z-fold. Flat maps are on 11-inch-by-17-inch "ledger" size paper. Z-fold maps are on larger pages and get their name from the way they are folded.

Pontiac has a Z-fold map. However, for ease of reproduction and inclusion with this desk reference, the excerpts in Section 23 are photocopies on $8\frac{1}{2}$ " x 11" paper. The original uses blue shading while the copies are in black and white.

All flood maps are prepared with general features or elements that include:

- map index
- community name and NFIP number
- a title box
- a legend (or key to map)
- panel or map number information
- an arrow pointing north on the map
- effective date or revision date information

5.2.1. Map index

Pontiac's floodplain is relatively compact and all of it can be shown on one panel. The phrase "Only Panel Printed" on the title boxes of the FIRM and Floodway Map show that everything is on the one panel. Therefore, there is no map index for Pontiac.

Many communities, especially counties, are geographically too large to fit on one map or panel at a usable scale. So maps for these communities are divided into two or more panels with unique panel numbers. Whenever a community requires more than one panel, a map index for both the FIRM and Floodway Map is prepared.

The map index shows the community's boundaries, highlighting prominent features such as major highways, railroads, and streams. The map index shows how the community is displayed on the various panels. Panels having no identified flood hazard areas (or no floodways on a Floodway Map) are not printed as indicated by an asterisk "*."

Figures 5-1 and 5-2 are from the Map Indexes for Woodstock, Illinois. In Woodstock's case, there are SFHAs on all four panels, so all four are included with the FIRM. However, only panels 0001 and 0002 have floodways mapped, so Floodway Map panels 0003 and 0004 are not printed.

The number of panels that have been printed appear in the title box ("Panels Printed: 1,2,"). Sometimes the entire panel is in one flood zone and is not printed. The flood zone for that panel is noted directly on the map index.



Figure 5-1: Woodstock's FIRM and Floodway Map Indexes' Title Boxes



Figure 5-2: Woodstock's Floodway Map Index

5.2.2. Community NFIP number

Every community that has been mapped by the NFIP is given a six digit number by FEMA. In Illinois, all community numbers start with "17" because Illinois is the 17th state when listed alphabetically.

5.2.3. Title box

The title box is the lower right portion of the opened map for both the map index and the FIRM panels (see Figures 5-1 and 5-3). The countywide map format uses a different panel numbering scheme (see Figure 5-16). Figure 5-3 shows the type of information found in the title box:



Figure 5-3: Title box to Woodstock's FIRM panel 0001

5.2.4. Map revision date

The date in the title box shows the map's most recent revision. As changes occur within a community, which results in a change in flood elevations or floodplain delineation, FEMA republishes *only the map index and changed map panels*.

Any revised panels are given a new map effective date and a new suffix letter. Some communities have map panels with different effective dates. Note that Woodstock's FIRM was revised in 1982, but the revision did not affect its 1979 Floodway Map.

The map index shows the current effective map date for all the FIRM panels or that of the most recently revised panel. With each revision comes a new panel suffix. To check the current version of an NFIP map, check the "Community Status Book" on FEMA's website (www.fema.gov).

5.2.5. Map scales and north direction

Different map scales are used on FIRM and Floodway Maps, depending on the size of the mapped area for a community and depending on the base map that is used. As an example, the scale on the Pontiac maps is 1 inch = 600 feet as shown in Figure 5-4.



Figure 5-4: Pontiac's map scale and north arrow

5.2.6. Elevation reference marks

Be aware that different scales may be used for a single community with more than one map panel.

An arrow pointing north is shown on all maps, including the map index. For FIRMs and Floodway Maps, the north direction arrow is located near the map scale. Generally, Illinois maps have north at the top of the map. However, sometimes the north direction on the map is "turned" to maximize the mapped area that can be shown on a panel, and to minimize the number of panels.

Elevation reference marks are shown on FIRMs and Floodway Maps. Locations are identified with a small "x" and the designation "ERM" or "RM" followed by a number (see Figure 5-5).



Figure 5-5: Reference marks on Pontiac's FIRM

Descriptions of the marks, including their elevations, appear either on the FIRM panel, on the FIRM index or in the FIS text. On Pontiac's FIRM, they are listed in the lower right corner of the map.

ERMs and RMs are important sites. They provide a ground elevation reference for surveyors to start from when they shoot the elevation of a building. Additional

information on reference marks can be found in Section 4.2.5.

ERMs or RMs are not shown on maps produced following the 2003 FEMA guidelines. Only National Geodetic Survey (NGS) reference marks are required for FIRMs. Qualifying benchmarks within a given jurisdiction that are cataloged by the NGS and entered in the National Spatial Reference System (NSRS) as First or Second Order Vertical, having a stability classification ranking of A, B, or C on the FIRM. Their NSRS Permanent Identifier (PID) on each FIRM panel identifies the marks. When local jurisdictions have established their own vertical control monument network, these monuments may also be shown on the FIRM with the appropriate designations if they meet FEMA mapping specifications.

5.2.7. FIRM Zones

Flood Insurance Rate Maps will show different floodplains with different zone designations. These are primarily for insurance rating purposes, but the zone differentiation can be very helpful for other floodplain management purposes. The more common zones are listed in Figure 5-6.

	The 100-year or base floodplain. There are six types of A Zones:				
Zone A	A The base flood mapped by approximate method, i.e., base flood elevations are not provided. This is often called an unnumbered A Zone or an approximate A Zone.				
	A1-A30 These are known as numbered A Zones (e.g., A7 or A14). This is the base floodplain where the FIRM shows a base flood elevation (old format).				
	AE The base floodplain where base flood elevations are provided. AE Zone delineations are now used on new format FIRMs instead of A1-A30 Zones.				
	AO The base floodplain with sheet flow, ponding or shallow flooding. Base flood depths (feet above ground) are provided.				
	AH Shallow flooding base floodplain. Base flood elevations are provided.				
	AR The base floodplain that results from the decertification of a previously accredited flood protection system that is in the process of being restored to provide a 100-year or greater level of flood protection.				
Zone V	The base floodplain subject to coastal high hazard flooding. There are three types of V Zones: V, V1-30 and VE that correspond to the similar A Zone designations.				
Zone B and Zone X (shaded)	Area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods. It can also be an area of the base flood (1) with average depths of less than one foot, (2) with a drainage area less than one square mile or (3) protected by levees from the base flood.				
Zone C and Zone X (unshaded)	Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level. B and C Zones may have ponding and local drainage problems that don't warrant a detailed study or designation as base floodplain.				
Zone D	Area of undetermined but possible flood hazard.				

Figure 5-6: Flood Insurance Rate Map Zones

Note that the Special Flood Hazard Area (SFHA) includes only A and V Zones. There are no V Zones in Illinois.

5.3. MAP FORMATS

5.3.1. Flood Insurance Rate Map — old format

The FIRM is used to determine:

- Whether a property is in the floodplain.
- The flood insurance zone that applies to the property.
- In conjunction with the profile, the approximate base flood elevation (BFE) at the site.

This section discusses the format used for FIRMs issued before the late 1980's. Pontiac is an example of such a FIRM.

Dates: Several dates may be listed in the FIRM legend, including:

- Initial Identification date of the first Flood Hazard Boundary Map.
- Flood Insurance Rate Map Effective the date of the initial FIRM. This is the date that determines whether a building is "pre-FIRM" or "post-FIRM." In Pontiac's case, it is December 4, 1979.
- Flood Insurance Rate Map Revisions dates of subsequent revisions to the FIRM.

The FIRM also will show:

Base floodplain or SFHA. Designated by the dark-shaded areas (Insurance Zones A, A1–A30, AE, AO, AH). See Pontiac's FIRM (page 23-3): the SFHA downstream (west) of the Illinois Central railroad tracks is Zone A6.

500-Year floodplain. Designated by the lighter-shaded areas (Insurance Zone B).

Base Flood Elevation (BFE). The water surface elevation of the base flood at that point of the stream is denoted in whole numbers by wavy lines running across the floodplain. See Pontiac's FIRM: the approximate BFE just downstream of Route 66 is 636 feet, NGVD.

Note that in riverine floodplains, the BFE on the FIRM is the approximate elevation rounded to a whole number. The flood elevations in the profile are more accurate and can usually be determined to 0.1 foot. The profile should be used to determine the BFE at a site.

AH Zones and some lake AE Zones have the base flood elevation noted in parentheses beneath the zone designations.

Zone break line. The thin white line separates flood insurance rate zones within the 100-year floodplain. Such a line appears at the Illinois Central Gulf Railroad tracks in Pontiac's FIRM, separating the downstream A6 Zone from the A8 Zone upstream.

Approximate floodplain areas. The 100-year floodplain areas are delineated using approximate methods. No BFEs are shown in approximate floodplain areas; these areas are classified as (unnumbered) A Zones.

Unnumbered A Zones are common in counties and rural areas where development is not likely. They are also used in parks or public lands that won't be built on.

An example of a FIRM with SFHAs using both approximate and detailed study methods is in Figure 5-7. Note the white line that separates the approximate SFHA (the Zone A) to the west from the detailed studied area (the Zone A4) to the east. Note also the approximate Zone A to the west has no wavy lines showing the base flood elevation or B Zones subject to the 500-year flood.





5.3.2. Flood Boundary and Floodway Map

The Flood Boundary and Floodway Map is also known at the FBFM or, simply, the Floodway Map. The Floodway Map shows how the floodplain is divided into the floodway and fringe where streams are studied in detail. They also show general floodplain areas where floodplains have been studied by approximate methods.

Floodway Maps have these features:

Title box: Includes the community name, county name, panel number, community number, and the map date. The panel numbers and effective dates may be different from the FIRM panel numbers.

Map scale: The Floodway Map may have a different scale than the FIRM for the same community.

Cross section line: These lines represent the location of some of the surveyed cross sections used in the computer model of the stream for calculating 100-year flood elevations. These cross sections can be used to relate a specific point on the Floodway Map to the flood profile and floodway data table.

Floodway: The 100-year floodplain has been divided into two areas, the floodway and the fringe (see the floodway map legend in Figure 5-8). The white area adjacent to and including the channel is the floodway. The shaded area is the fringe.

One problem with this method of delineating floodways is that sometimes people confuse the white floodway with the white area representing land that is in the C Zone (for an example, see the area on the Pontiac Floodway Map that is west of Route 66 and north of the river).

Also, because the floodway was mapped separately, often property owners, lenders, real estate agents, and others do not have easy access to the Floodway Maps and did not know of the severe flood hazard associated with the floodway.



Figure 5-8: Floodway Map legend

Newer FIS reports have corrected this problem — they do not have separate FIRM and Floodway Maps. Floodways are delineated on the newer FIRMs as a diagonally hatched area (see Figures 5-10 and 5-11).

Note that no BFEs or flood zone names are shown on the Floodway Map.

If a map panel area does not include any detailed study streams or floodways, a Floodway Map will not be printed; only a FIRM panel will be printed. Because coastal studies do not have floodways, all of the data needed are shown in the FIS report and on the FIRM.

Fringe: The fringe is shown as a shaded area outside of the floodway but still within the 100-year floodplain.

500-year floodplain: Lighter shaded areas adjacent to, but outside of the 100-year floodplain delineate the 500-year floodplain for streams studied in detail.

Approximate floodplain areas: 100-year floodplain areas that are determined using approximate methods. The limits of the approximate floodplain on the Floodway Map are shown as dashed lines. An example is in Figure 5-9.



Figure 5-9: Detailed and approximate studies shown on a Floodway Map. Note: This is the same area shown in Figure 5-7.

5.3.3. Flood Insurance Rate Map — new format

Flood maps have been redesigned over the years since the first FIS reports were prepared in the late 1960s, making them easier to use. A new format for FIRMs was introduced in 1985 that includes:

- Floodways and other floodplain management information, such as cross section locations, that was previously provided on separate Flood Boundary and Floodway Maps (Floodway Maps). (Except for a few instances, Floodway Maps are no longer being prepared.)
- Simplified flood insurance zone designations. The previous Zones A1-A30 were replaced by the designations AE; Zones B and C were replaced by shaded Zone X and unshaded Zone X (respectively). The 500-year floodplain is still shown as lightly "shaded" portions of Zone X.

Figure 5-10 is an example of a new format FIRM with a floodway and Figure 5-11 is the legend for the new format.

With these changes, the FIRMs can more easily be used by community officials for floodplain management, by lenders to determine the need for flood insurance, by insurance agents to rate policy applications, and by land surveyors, engineers, property owners, and others to determine flood hazards in a given location.



Figure 5-10: Floodway in new FIRM format

LEGEND					
SPECIAL FI BY 100-YEA	.00D HAZARD AREAS INUNDATED R FLOOD				
ZONE A	No base flood elevations determined.				
ZONE AE	Base flood elevations determined.				
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.				
ZONE A0	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flood- ing, velocities also determined.				
ZONE A99	To be protected from 100-year flood by Federal flood protection system under contruction; no base elevations determined.				
ZONE V	Coastal flood with velocity hazard (wave action); no base flood elevations determined				
ZONE VE	Coastal flood with velocity hazard (wave action); base flood elevations determined.				
FLOODWA	AY AREAS IN ZONE AE				
OTHER F Zone X	LOOD AREAS Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood				
OTHER .	AREAS				
ZONE X	Areas determined to be outside 500-year flood plain.				
ZONE D	Areas in which flood hazards are undetermined.				
	Flood Boundary				
	- Floodway Boundary				
	Zone D Boundary				
	Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.				
~~~~ 513 ~~~	Base Flood Elevation Line; Elevation in Feet*				
	Cross Section Line				
(EL 987)	Base Flood Elevation in Feet Where Uniform Within Zone*				
RM7×	Elevation Reference Mark				
•M1.5	River Mile				

* Referenced to the National Geodetic Vertical Datum of 1929

Figure 5-11: New format FIRM legend

5.4. SPECIAL FIRM FEATURES

5.4.1. Lakes

Most lakes have a whole number BFE shown in parentheses below the flood zone (see Figure 5-12). The actual BFE is obtained from the FIS. However, many long lakes, especially reservoirs, have a higher BFE at the upstream end than at the outfall. These types of lakes and reservoirs have BFEs shown with wavy lines, the same as riverine BFEs. They also appear on the stream profiles in the FIS.



Where studies have been carried out for lakes and reservoirs, information on BFEs is contained in Section 3 of the FIS. A *Summary of Stillwater Elevations* is provided as a table in the FIS (Figure 5-13). Note that BFEs are rounded to one-tenth of a foot in the table, but are shown in parentheses in *whole* numbers on the FIRM.

For the most accurate BFE, use the "100-year flood elevation" from the table, not the FIRM. For a shortcut method, add 0.4 foot to the elevation shown on the FIRM. This will give an elevation at least as high as the number shown in the table.

FLOODING SOURCE AND LOCATION	ELEVATION (ft. NGVD)			
	10- YEAR	50- YEAR	100- YEAR	500- YEAR
FALLS LAKE Entire shoreline	256.9	260.7	262.5	266.0

NGVD is National Geodetic Vertical Datum of 1929

Figure 5-13: Summary of stillwater elevations for a lake floodplain

5.4.2. Shallow flooding FIRMs

Under the NFIP, ponding or sheet flow constitutes shallow flooding, which is mapped based on historic flood experiences and study of the topography.

Two methods can be used to display shallow flooding. An AO Zone may or may not show the base flood depth. An "AO 2" Zone designates that the base flood is 2 feet deep. It is not known how high the base flood is in relation to sea level, but it is known that the base flood should be no deeper than two feet above the ground.

An AO Zone with no number means the base flood depth was not calculated. This type of zone is treated like an unnumbered A Zone.

Figure 5-14 provides an example of the other way FEMA maps a ponding area: using an AH Zone with a base flood elevation. This is from East St. Louis and shows both the Mississippi River (Zone A20) and the drainage problem areas that are outside (i.e. behind) the levee (Zone AH).

Note how the BFE on the Mississippi is 426 (feet above sea level) while in the AH Zones ponding areas it is 402, 404, 405 and 412. While there are still SFHAs outside the levee, the flood levels are much lower because the levee protects the area from the base flood of the Mississippi River.



Figure 5-14: Shallow flooding areas shown as AH Zones

Note: The areas outside (or landward) of the levee are referred to as the areas of interior drainage.

5.5. OTHER TYPES OF FIRMS

5.5.1. Countywide FIRMs

Countywide FIRM maps show flood hazard information for all geographic areas of the county, including incorporated cities and villages. Figure 5-15 lists which Illinois counties have a Countywide FIRM.

Previously, maps were prepared for each jurisdiction. County FIRMs, for example, only showed the flood hazards identified in the unincorporated areas of the county and did not show any flood information inside the corporate limits of a municipality. Now all the identified flood hazard areas within the boundaries of the county are shown on one set of countywide maps.

The countywide FIRM format has a number of advantages, and one in particular is that FIRMs do not need to be updated when municipal boundaries change.

Figure 5-16 shows the title box of a countywide FIRM panel. The title box lists the communities mapped on that panel and their six digit NFIP community ID numbers.

Note: The FIRM panel has a number with five digits and the letter "C," which stands for "countywide." Do not confuse the 5 digit map panel number with the 6 digit NFIP community number.

The initial FIRM date for each community is shown on the FIRM index. These are the "post-FIRM" dates for insurance rating. Don't confuse them with the effective date of the latest FIRM panel, which is shown in the title box.

An example of a countywide FIRM, showing the Special Flood Hazard Areas across community boundaries is shown in Figures 5-16 and 5-17. The communities are noted by separate NFIP Community ID numbers.

As of November 2005, the following 17 of Illinois' 102 counties have Countywide FIRMs: Clark Clinton Cook DeWitt Dekalb DuPage Iroquois Kane Lasalle Lake Lee Logan McLean Rock Island St. Clair Sangamon Will

It is anticipated that all Countywide FIRMs will be completed by 2010.

Figure 5-15: Illinois counties with DFIRMs in DLG Format



Figure 5-16: Title box of countywide FIRM panel



Figure 5-17: Example of a countywide FIRM

5.5.2. Digital FIRMs

The conversion of FIRMs to a digital format has many benefits. For example, they can be revised and updated easily with just a few keystrokes and they can be incorporated in the community's mapping system and tied in with other geographic information systems, such as the zoning map.

Users must bear in mind that the simple conversion of FIRMs to a digital format does not inherently improve the engineering quality of the product. Many of the same difficulties with interpretation of flood risk data — and the requirement that users apply sound judgment in methods selected for decision making and map interpretation — remain unchanged.

DFIRMs produced following FEMA specifications issued in 2003 are produced in a countywide format, where all flood hazards for the county and incorporated communities are shown on one set of maps. It can be used for floodplain management purposes in a manner similar to other flood maps, but it can also be combined with other digital map information to create new information for planning purposes.

DFIRMs are subject to community review and approval. They are, therefore, the official basis for implementing the community's NFIP regulations.

There are two digital FIRM types. One is produced in a Digital Linegraph Format (DLG). The other format is a geographic information system (GIS) geodatabase format. These are dramatically different digital platforms. The GIS geodatabase format is now required for maps produced through the Map Modernization Program. Through the Map Modernization Program, all FIRMs will be converted to the GIS geodatabase format.

FEMA charges a fee for all digital FIRM data products. Any questions regarding these products may be directed to:

Federal Emergency Management Agency Map Service Center P.O. Box 1038 Jessup, Maryland 20794-1038

Phone: 800/358-9616 Fax: 800/358-9620 Internet: www.fema.gov **Digital Flood Insurance Rate Map** — **Digital Line Graph** -The Digital Flood Insurance Rate Map — Digital Line Graph (DFIRM-DLG) is a means of transferring flood-risk data depicted on FIRMs to a digital medium, often using an auto-cad system. The data may be used in a GIS platform, but it is not necessarily referenced to other GIS data. Communities whose digital base mapping files were used as the base map for the DFIRM will find that they may easily use the DFIRM-DLG files for determination of flood zones and for enforcement of regulations. A graphic image of a DFIRM-DLG is shown in Figure 5-18.

The digital data captured from the hardcopy FIRM consists of FEMA hydrography (location of water bodies), flood hazard zones, BFEs, cross section locations and elevation reference marks. All lines and area features in DLG files are encoded with one or more seven-digit attribute codes that provide the user with detailed information about the features. FEMA intends to make the DFIRM-DLG available on CD-ROM compatible with Insurance Services Office (ISO) 9660 standards.

Many commercially-available GIS software packages allow the direct conversion of DLG data into vector data usable within the GIS environment. Third-party conversion software is also available that will convert DLG data to other proprietary GIS formats.



Figure 5-18: Graphic image of a DFIRM-DLG

Digital Flood Insurance Rate Map – **Geodatabase** - The FEMA Geographic Information System (GIS) databases will store the digital data used in the map production process, as well as the engineering backup data for floodplain studies. These databases will provide a standard, systematic method for FEMA to distribute comprehensive details of flood studies to the public and others in a digital format.

The advantages of preparing these data in digital format are twofold. First, digital data allow for more efficient storage, update, records search, and distribution. Moreover, the data are designed to work within a GIS environment. This means that the FEMA database can be used for automated analyses that are costly and impractical with paper products and is compatible with Internet applications.

FEMA collects as much data as possible in digital format and archives the data in the GIS database for each DFIRM created. For development of these data, FEMA provides two versions of the DFIRM database. The simplified version is called the Standard DFIRM Database. The Standard DFIRM Database provides end users who do not require the complete engineering backup data; however, it is not intended to limit the scope of the GIS data collected and submitted to FEMA. The full GIS database that contains all of the available flood study information is called the Enhanced DFIRM Database.

In Illinois, digital orthophotography will serve as the basemap for all DFIRMs. The DFIRMs are two colors with SFHAs shown in cyanne. All mapping will be countywide. If a community is located in more than one county, a county FIRM will show only that part of the community located in the county. The panel scheme follows the USGS quadrangles: full 7.5 minute quadrangle, quarter quadrangle, and quarter-quarter quadrangle, with maps scales of 1 inch = 2000 feet, 1000 feet, and 500 feet, respectively. An example of a DFIRM is shown in Figure 5-19. DFIRMs prepared in the geodatabase format will supersede other digital formats.

Additional information on DFIRM – geodatabase can be found in FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners*, Appendix L Guidance for Preparing Draft Digital Data and DFIRM Database.



Figure 5-19: Example of DFIRM following FEMA 2003 specifications

5.5.3. Flood Hazard Boundary Map

Flood Hazard Boundary Maps (FHBMs) were initially prepared to provide flood maps to many communities in a short period of time. They were made in the 1970's and early 1980's without benefit of detailed studies or hydraulic analyses for nearly all floodprone communities in the nation (over 21,000). They were intended for interim use in most communities until more detailed studies could be carried out.

FHBMs are still being used where detailed Flood Insurance Studies have not been prepared or cannot be justified. They are to be used for floodplain management, in conjunction with other local studies and other available data. On the FHBM, the SFHA is designated as a shaded area labeled "Zone A," and no base flood elevations are given (see Figure 5-20).

In some cases FEMA simply converted the FHBM to a FIRM by issuing a letter to the community stating that the FHBM shall be considered a FIRM. In those cases the community was instructed to line out "FHBM" on the map's title box and write in "FIRM." In these situations, the Zone A is treated the same as an unnumbered A Zone on a FIRM.



Figure 5-20: Flood Hazard Boundary Map