



## Module 2: Floodplain Mapping

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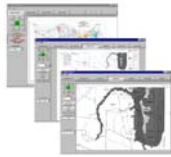
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### ATTENTION!!!

For this section it would be beneficial to have your township's flood maps in front of you. Some of the maps you may find useful are:



1. The Flood Hazard Boundary Maps
2. Flood Insurance Rate Maps
3. Flood Boundary and Floodway Maps

Having these will help make this module more relevant.

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### Module Overview

#### Types of Flood Maps

- Flood Hazard Boundary Map (FHMP)
- Flood Boundary and Floodway Map (FBFM)
- Flood Insurance Rate Map (Old & New Versions) (FIRM)
- Digital-FIRMs (DFIRM)



#### Map Changes

- Requesting Map Changes
- Effect of Map Revisions on Flood Insurance Rates

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## Flood Insurance Study

This section describes the [Flood Insurance Study \(FIS\)](#) reports and accompanying maps provided to assist communities in maintaining local floodplain management programs.

The Federal Emergency Management Agency (FEMA) provides the information being used by the community in a FIS report. This report is a compilation of information provided from many local, state and federal sources.



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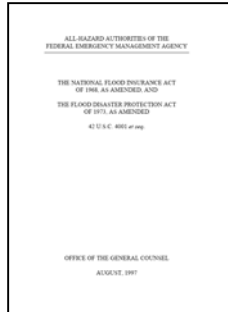
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## The National Flood Insurance Act of 1968 directed the Federal Insurance Administration (FIA) to:

- Identify all flood prone areas within the United States; and
- Establish flood-risk zones within flood prone areas.



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## Two goals of this Act were established in an effort to reduce loss of life and property by:

- Guiding future development away from the flood hazard areas; and
- Requiring new and substantially improved structures in these areas to be designed and constructed to minimize or eliminate future flood damages.



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## Flood Insurance Study (FIS) Report

The FIS is a summary of the detailed engineering analysis of the flood hazards in a community.



### The FIS :

- Provides a compilation and presentation of flood risk zones
- Establishes base flood elevations thereby serving as the basis for providing flood insurance and for regulating floodplain development and carrying out other flood plain management measures.

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## Flood Insurance Study Includes:

1. The purpose of the study, historic floods, the area and streams studied;
2. The engineering methods employed to determine flood hazard areas; and
3. Use of the study for flood plain management;
4. Vicinity map of the study area and photographs of historic floods;
5. Tables summarizing various study data; and
6. Computed flood profiles of the 10-, 50-, 100-, and 500-year floods for the stream reaches studied.

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## The Flood Insurance Rate Map (FIRM) is an essential part of the FIS that shows:

- 100-year (A and V zones) flood plain boundaries
- 500-year flood plain boundaries (B zones or shaded X
- C zones (X-unshaded)
- Floodways where applicable
- Base Flood Elevations (BFE);



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## Flood Map Types

There are four types of flood maps:

1. The Flood Hazard Boundary Maps
2. Flood Boundary and Floodway Maps
3. Flood Insurance Rate Maps
4. D-FIRM



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## Maps: Type I

The Flood Hazard Boundary Maps



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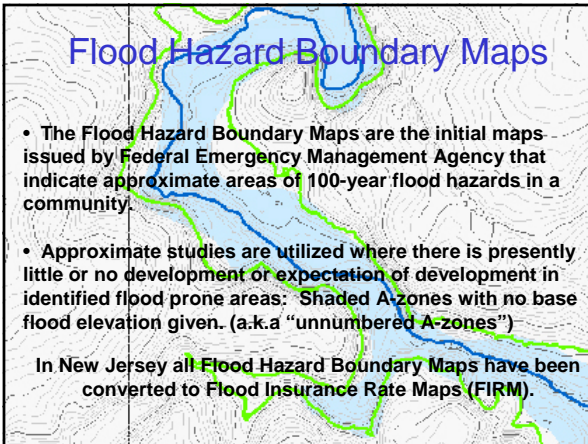
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## Flood Hazard Boundary Maps

• The Flood Hazard Boundary Maps are the initial maps issued by Federal Emergency Management Agency that indicate approximate areas of 100-year flood hazards in a community.

• Approximate studies are utilized where there is presently little or no development or expectation of development in identified flood prone areas: Shaded A-zones with no base flood elevation given. (a.k.a "unnumbered A-zones")

In New Jersey all Flood Hazard Boundary Maps have been converted to Flood Insurance Rate Maps (FIRM).



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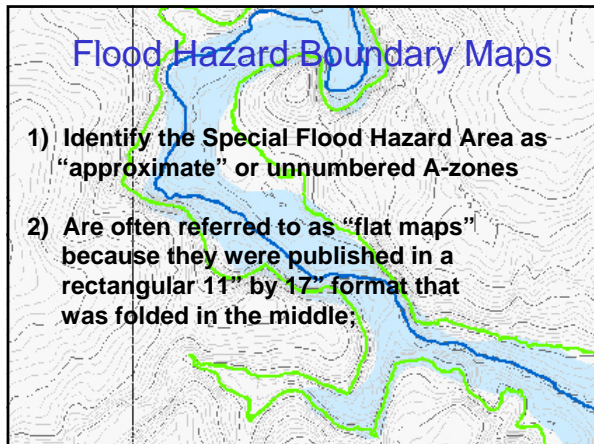
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### Flood Hazard Boundary Maps

- 1) Identify the Special Flood Hazard Area as “approximate” or unnumbered A-zones
- 2) Are often referred to as “flat maps” because they were published in a rectangular 11” by 17” format that was folded in the middle;




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### Maps: Type 2

#### The Flood Boundary and Floodway Maps




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### FLOOD BOUNDARY AND FLOODWAY MAP

- The Flood Boundary and Floodway Map (FBFM) shows the limits of the floodplain divided into floodway and flood fringe where streams are studied in detail.
- The FBFM also shows general floodplain areas where floodplains have been studied by “approximate” methods.
- If a FIRM panel does not include any detailed studied streams or floodways, a Flood Boundary and Floodway Map will not be printed.
- These maps were included in FIS started before 1985, and, in some instances, in studies after that date.




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## FLOOD BOUNDARY AND FLOODWAY MAP

**DOES:**

- Show floodplain boundaries;
- Identify the floodway for rivers and streams, shown in white down the middle of the floodplain; and
- Show study cross sections

**DOES NOT:**

- Show Base Flood Elevations
- Show Flood risk zones



It is essential that communities use both the Flood Boundary and Floodway Map and the Flood Insurance Rate Map when administering the National Flood Insurance Program regulations.

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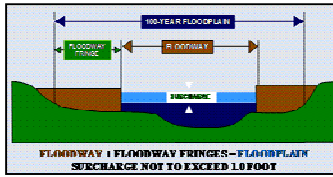
## Flood Boundary and Floodway Map

The Flood Boundary and Floodway Map is used by community officials for administration of their local floodplain management ordinance. The 100-year floodplain has been divided into two flood regulatory areas, the floodway and flood fringe.

The Flood Boundary and Floodway

Map panel depicts:

- Title Block
- Map Scale
- Floodway
- Flood Fringe
- 500-Year Floodplain
- Approximate Floodplain Areas
- Cross-section Line
- Elevation Reference Marks




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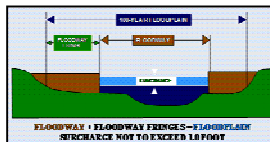
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## Some Map Definitions

**FLOODWAY.** The non-shaded areas adjacent to and including a stream or channel between the heavy dashed lines. No further development is permitted in the floodway if it will result in any increase in the Base Flood Elevation.

**FLOOD FRINGE.** Shaded areas outside of the floodway but still within the 100-year floodplain. The flood fringe may be developed in the future provided all new structures and substantial improvements are elevated or flood-protected to the Base Flood Elevation. Areas impacted by the 100-year tidal flooding have the flood elevation noted in parentheses beneath the zone designations.




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## Flood Boundary and Floodway Map Parts

**Title Block:** Includes the community name, county name, panel number, community identification number, and the map date. *NOTE: The Flood Boundary and Floodway Map panel number may be different from the Flood Insurance Rate Map panel numbers.*

**Map Scale:** Shown on the map key. *NOTE: The Flood Boundary and Floodway Map may have a different scale than the Flood Insurance Rate Map for that particular community.*

**500-Year Floodplain:** Lighter shaded areas adjacent to, but outside of the 100-year floodplain.

**Approximate Floodplain Areas:** Shaded areas detailing the 100-year floodplain areas determined using approximate methods. The limits of the approximate floodplain on the Flood Boundary and Floodway Maps are shown as dashed lines outside of the detailed study areas.

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## Flood Boundary and Floodway Map Parts ...Continued...

**Cross-section Line:** Lines used in the computer model of the stream for computing 100-year flood elevations.

These lines are individually labeled with a letter or letter combination put in a hexagon at either end of the cross-section. These labels are also used on the profiles and floodway data tables.



**Elevation Reference Marks:** Known recorded elevations that are used by surveyors to determine elevations at nearby locations.

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## NOTE: About the Flood Boundary and Floodway Maps

The Flood Boundary and Floodway Maps are not automatically sent out by the Map Service Center when flood maps are revised. They must be specifically requested. They are always sent when a Flood Insurance Study is requested. All communities should request one or more copies of their Flood Insurance Study.



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### Maps: Type 3 Flood Insurance Rate Maps (FIRM)



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### Flood Insurance Rate Maps

The Flood Insurance Rate Map (FIRM) is an essential product of the Flood Insurance Study, which shows floodplain boundaries and flood data for both floodplain management.



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### Flood Insurance Rate Maps

- Identify the Special Flood Hazard Areas, areas between the 100-year and 500-year flood zone;
- Show flood risk zones;
- Show Base Flood Elevations;
- Identify the location of elevation reference marks;
- Show certain landmark features in the community (i.e. major roadways)



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## Revised FIRM: Post-1985 Format

Since 1985, many changes have been made to the Flood Insurance Rate Map:

- 1) The previous Zones A1-A30 and V1-V30 have been replaced by the designations AE and VE, respectively; B and C-Zones are replaced by X-Zone (shaded and unshaded).
- 2) Countywide Flood Insurance Rate Maps show flood information for all geographic areas of the county.
- 3) Undeveloped portions of the coastal barrier islands and adjoining otherwise protected areas designated as units in the Coastal Barrier Resources System have been identified on the maps.




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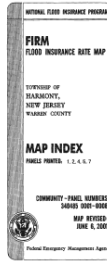
## General Map Features

Many of New Jersey's National Flood Insurance Program participating communities are geographically too large to fit on one map panel at a usable scale. The maps for these communities are, therefore, divided into two or more panels with unique panel numbers. Whenever a community requires more than one panel, a map index is provided.

### Map Index

The map index shows the entire community boundary, highlighting prominent features within the community, including major highways, railroads and streams. The map index shows how the community is divided into the various panels. Additionally, the map index depicts the following:

- Title block
- Community ID number
- Panels Printed
- Panels not Printed
- Map Index Date
- Map Panel Numbers




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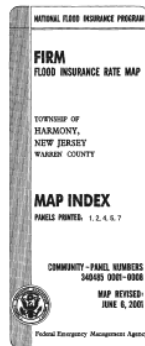
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## The Map Index Also Depicts:

**Title Block:** Includes the community name, county name, community identification number, and panel numbers. It is located at the lower right hand corner of the map when unfolded.

**Community Identification Number:** The community number consists of six digits, in which the first two digits are the same for all communities in a state. All New Jersey communities will have 34 as the first two digits in the community identification number.

**Panels Printed:** The Federal Emergency Management Agency prints only those panels having Special Flood Hazard Areas; printed panel numbers are indicated on the title block.




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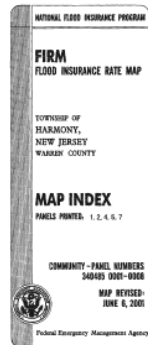
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## The Map Index Also Depicts:

**Panels Not Printed:** Panels that have no Special Flood Hazard Areas are indicated by an asterisk, \*.

**Map Index Date:** The date shown on the title block reflects the most recent map revision. As changes occur within a community which result in a change in flood elevations or floodplain delineation, the Federal Emergency Management Agency republishes only the map index and those map panels affected. The revised panels are given a new map effective date, indicating when they were officially revised, and a suffix letter after the panel number to indicate the number of times the panel has been revised. The panel suffix letter is changed (to B.C. etc.) with each revision. A given community could have two or more map panel effective dates.

**Map Panel Numbers:** Each map panel is assigned a four-digit number, which follows the community identification number.




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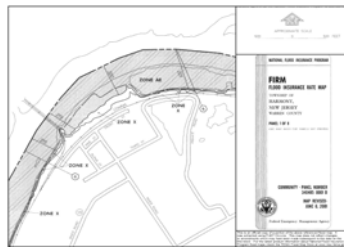
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## FIRM: Flood Insurance Rate Maps

•Since 1986, the new FIRM have generally combined the data that was shown separately on the old format Flood Boundary and Floodway Map and Flood Insurance Rate Map.




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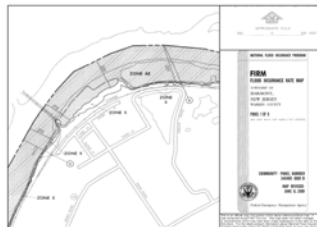
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## FIRM Panels Depict:

- Title Block
- Map Dates
- Zone Break (Gutter Line)
- 100-Year Floodplain
- Floodway
- Base Flood Elevation
- Approx. Floodplain Areas
- Evaluation Reference Marks
- Cross-Section Line
- 500-Year Floodplain
- Minimally Floodprone Areas
- Coastal Barrier Resource System Units




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## Specifically....

**Title Block:** Includes the community name, county name, community identification number, panel number and suffix.

(The suffix "B" means the panel has been revised once.)



**Map Dates:** Several dates may be listed, including:

- **Initial Identification Date** –date of first Flood Hazard Boundary Map.

- **Flood Insurance Rate Map date** community was converted to the Regular Phase of the NFIP, which normally corresponds to the date of initial Flood Insurance Rate Map. The date of conversion to the Regular Phase is also date that determines whether structures are pre-Flood Insurance Rate Map or post-Flood Insurance Rate Map.



- **Flood Insurance Rate Map Revision**-date of subsequent revisions to the Flood Insurance Rate Map.

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## FIRM Map Panels *Continued...*



**100-Year Floodplain:** Designated by the dark shaded areas (Zones A, AE, A99, AO, AH, V, VE). Zones A1-A30 within the areas of 100-year tidal flooding, as well as AH, AO and AE-Zones all have the flood elevation noted in parentheses beneath the zone designation.



**Floodway:** The cross-hatched areas adjacent to a stream. No further development is permitted in the floodway if it will result in any increase in the Base Flood Elevation.

**Base Flood Elevation:** The water surface elevation of the base flood at the point of the stream or within a zone (denoted in whole numbers on the Flood Insurance Rate Map).

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## FIRM Map Panels *Continued...*

**Zone Break Line (or Gutter Line):** Thin white lines separate different flood insurance rate zones and BFEs within the 100-year floodplain on new format Flood Insurance Rate Map. These are shown as black lines on digital Flood Insurance Rate Map.



**Approximate Floodplain Areas:** 100-year floodplain areas determined using approximate methods. No Base Flood Elevations will be shown in approximate floodplain areas. These areas are classified as unnumbered A-Zones.



**Elevation Reference Marks.** Benchmarks with known, recorded elevations that are used by surveyors to determine elevations at nearby locations.

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## FIRM Map Panels *Continued...*



**Cross-Section Line:** These lines with hexagonal labels represent the surveyed cross sections used in the computer model of the stream in calculating 100-year flood elevations. These cross sections can be used to relate a specific point on the Flood Insurance Rate Map to the flood profile and/or floodway data table.



**500-Year Floodplain:** Designated as the light-shaded area. In the old format, the 500-year floodplain was designated as B-Zone. On the new FIRM it is designated as a shaded X-Zone

**Minimally Floodprone Areas:** On the old format FIRM these zones correspond to the C-Zone. On the new FIRM these are designated as unshaded X-Zone.

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## FIRM Map Panels *Continued...*

### Coastal Barrier Resource

**System Units:** Designated by diagonal line patterns (three of them) that overlay other designations.




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## FIRM maps can be found online

**FEMA Map Service Center**

Product Catalog | Map Search | Quick Order | Digital Post Office | Help

**Log On**  
 User ID (email address):   
 Password:   
 Log on Clear

+ Forgot Password?  
 Register (must register to purchase)

**Product Search by Address**  
 1) Select a Product:   
 2) Enter an Address:  
 Street:   
 City:   
 State:  Zip:   
 Product Search

**Welcome to the FEMA Map Service Center**

FEMA's Map Service Center (MSC) has a new look and feel that is designed to provide you with the same great functionality, but with more information and resources at your disposal. The new MSC website is not only your official government source, but the premier site for flood hazard mapping information, products, and services. We hope our revamped website better serves your personal or professional needs.

**What has changed?**  
 The FEMA Flood Map Store ([store.msc.fema.gov](http://store.msc.fema.gov)) and the MSC informational website ([mcs.fema.gov](http://mcs.fema.gov)) have been merged into a single new MSC website: [www.mcs.fema.gov](http://www.mcs.fema.gov). You do not need to update your favorites or bookmarks; the FEMA Flood Map Store URL will redirect you automatically to the new MSC website. For more details on what has changed, look at the new MSC Website Fact Sheet.

**More Information**  
 Product Information  
 How to Order  
 Price List  
 How do I find the flood map for my area?  
 What is a FIRMlets?  
 Need Assistance?

[www.mcs.fema.gov](http://www.mcs.fema.gov)

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# How to read a FIRM Tutorial

[http://www.fema.gov/plan/prevent/fhm/ot\\_firmr.shtm](http://www.fema.gov/plan/prevent/fhm/ot_firmr.shtm)

## FIRM Tutorial System Requirements

The FIRM multimedia tutorial is a Macromedia Flash movie. In order to view the movie, you must have the Flash Player installed on your local machine. Your system must also meet some minimum specifications in order to optimally run the movie. The necessary requirements and suggested specifications are outlined below. Click on the links for more detailed information.

### Minimum Requirements and Specifications

1. Flash Player
2. Internet Explorer 2.0 / Netscape 3.0 or higher
3. Screen Resolution: 1024 x 768 or higher
4. Processor: 1.3 GHz or higher; sound card; speakers; 56k modem or higher
5. Stable Internet
6. Tell-A-Friend Feature
7. Tutorial User Guide (optional)

If your system meets the requirements listed above and you are ready to start the FIRM Tutorial, click on the [Begin the Tutorial!](#) link.



[Begin the Tutorial!](#)

[List equipment for how to Read A Flood Insurance Rate Map \(FIRM\) tutorial](#)

Once you are on the website, click here



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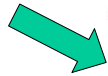
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# FIRMettes: Online FIRM Maps

From [www.msc.fema.gov](http://www.msc.fema.gov)

click here and work through an example



The screenshot shows the FEMA Map Service Center homepage. At the top is the FEMA logo and the text 'Map Service Center'. Below this is a navigation bar with links: 'Product Catalog', 'Map Search', 'Quick Order', 'Digital Print Office', and 'Help'. The main content area is divided into several sections: 'Log On' with fields for 'User ID (email address)' and 'Password', and 'Forgot Password? Register (Must register to purchase)'; 'Product Search by Address' with a dropdown menu for 'Select a Product' (set to 'Public Flood Map') and input fields for 'Street', 'City', and 'State' (set to 'DC'); 'FIRMettes Tutorial' with a link to 'Learn how to create FIRMettes. They're Best!'; and 'More Information' with links for 'Product Information', 'How to Order', 'Price List', 'How do I find the flood map for my area?', 'What is a FIRMettes?', and 'Need Assistance?'. A 'Welcome to the FEMA Map Service Center' message is also visible in the center.

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# Maps: Type 4 Digital Flood Insurance Rate Maps (D-FIRM)



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# D-FIRMs

The new D-FIRMs are countywide and include the title block, map number, and map effective date. These are made as aerial images in a Geographic Information Systems (GIS) format.



**NOTE: ONLY A FEW COUNTIES IN NJ HAVE ADOPTED THE NEW DIGITAL FORMAT. THIS MAP TYPE MAY NOT BE AVAILABLE FOR YOUR TOWNSHIP AT THIS TIME (Ocean, Bergen, Hudson, and Union have D-FIRMs adopted)**

Details are provided on the next slide...

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## D-FIRM Panel Blocks

**Title Block:** A list of communities in the county is included on the title block for each panel, along with a panel location map. A Community Identification Number is assigned for each municipality

**Map Number:** Each countywide map panel is identified on the title block by a number starting with a five-digit code unique to the county, followed by the letter "C" which stands for "countywide" mapping. It ends with a four-digit panel number, plus a suffix letter if the panel for one or more municipalities and/or the unincorporated county have been revised. The initial countywide Flood Insurance Rate Map often has a "C" suffix, used as a convenient starting point for each of the new panels.

**Map Effective Date.** The effective date for a particular panel is shown on the title block. The date of the initial Flood Insurance Rate Map date is used to determine whether a structure is pre-or post- Flood Insurance Rate Map for insurance rating purposes.



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## MORE D-FIRM INFO.



Online at:  
[www.fema.gov/plan/prevent/fhm/dfm\\_dfh\\_m.shtm](http://www.fema.gov/plan/prevent/fhm/dfm_dfh_m.shtm)

### Digital Flood Insurance Rate Map Homepage

- FEMA DFIRM Issues
- Product Development
- Product Certification
- Flood Hazard Mapping Home Page

This web page is provided to distribute information about the components of the Digital Flood Insurance Rate Map (DFIRM). From here you can access information about the DFIRM specifications. These specifications are contained within a larger document, *FEMA's Guidelines and Specifications for Flood Hazard Mapping Partners*. In addition to providing links to the pertinent sections of the *Guidelines and Specifications for Flood Hazard Mapping Partners*, these pages also provide sample data and other supporting documentation that may be useful to creators and users of DFIRM data.

### Automated DFIRM

FEMA's Automated Risk Reduction (ARR) Modernization was established to assess the available technologies that are being used to automate the different aspects of floodplain analysis, including hydrologic and hydraulic modeling and footprint mapping.

### DFIRM Data Map Specifications

This page provides information about the options for the data used to prepare a DFIRM and the priority assigned to each option. It also outlines the minimum data map standards for spatial accuracy, resolution, currency, content, and restrictions on use.

### DFIRM Specifications for Flood Hazard Mapping

This page provides information about the guidelines and specifications for the application of Automatic Light Detection and Ranging (LiDAR) systems for gathering the data necessary to create digital elevation models (DEMs) and/or digital terrain maps used in the preparation of DFIRMs and related products.

### DFIRM Graphic Specifications

This page provides information about the specifications for the graphic elements shown on the DFIRMs, including the base map elements, flood hazard information, map legend, and title block. It also provides details about the lineweights, colors, styling, and font fonts used on the DFIRMs. Issues such as how the DFIRMs are printed and the specifications for the DFIRM Map Index are also addressed.

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# Making Map Changes

## Section #2



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# Making Changes to Maps

From time to time, it may be necessary to challenge or change a Flood Insurance Rate Map or floodplain mapping designation. This is especially important because the location of a building in respect to the floodplain is essential to determining whether or not the minimum National Flood Insurance Program construction and design standards as well as the mandatory purchase requirements are applicable. There are many reasons why a map may need to be changed.



*The next few slides give examples of such reasons...*

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# Reasons to Change Maps

**1) To correct non-flood-related features, such as a change in the community's corporate limits:** The local government should send the correct information to the Federal Emergency Management Agency Region II office. However, the community does not need a new map if it has annexed an area that is shown on the county's Flood Insurance Rate Map...It can regulate floodplain development using the county's Flood Rate Map and data.



*Since it is very expensive to reprint and redistribute flood maps; corporate boundary changes are usually only made when maps are revised for new or better flood data.*

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## Reasons to Change Maps

### 2) To reflect better ground elevation data:

A Flood Insurance Rate Map does not always represent site specific ground elevations. If there is better information on natural ground elevations, the applicant may apply to have the map information reflect the better topographic information. This is usually accomplished via a Letter of Map Amendment (LOMA), but if a large area is affected, this better topographic information should be submitted to the Federal Emergency Management Agency Region II



office so that a revision of the map may be initiated. Letters of Map Amendment should be noted on the community's master flood maps and filed by panel number in an accessible location.

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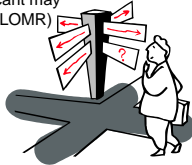
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## Reasons to Change Maps

### 3) To reflect changes in ground elevations in the floodplain:

If there has been a substantial change in ground elevation (for example, fill is placed in the floodplain in order to raise building sites above the Base Flood Elevation), the applicant may request a map change to reflect the new ground information. This is usually accomplished via a Letter of Map Revision (LOMR), but if a large area is affected, the map panel will be reprinted or an "annotated" Flood Insurance Rate Map panel will be issued as a Physical Map Revision (PMR). National Flood Insurance Program maps are not changed based on proposed projects, however, an applicant may request a Conditional Letter of Map Revision (CLOMR) based on a proposed projects. This will inform the builder and others (e.g. the bank financing the project), that when the project is completed, it will qualify for a map revision or a Letter of Map Revision.



*There is a fee charged for conditional letters.*

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## Reasons to Change Maps

**4) To revise the flood data:** A request may be made to revise the existing study, based on a new flood study. The applicant must demonstrate that the original study was in error or that the new study is based on more accurate or better technical data. This is often submitted as a Letter of Map Revision, but if a large area is affected, the map panel will be reprinted or an "annotated" Flood Insurance Rate Map panel will



be issued as a Physical Map Revision. They should be noted on the community's master flood maps and filed by panel number in an accessible location.

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## Reasons to Change Maps

**5) To submit new flood data:** When a flood study is prepared for a development in an unnumbered A-Zone, the data must be submitted to the Federal Emergency Management Agency within six months after the data become available. This is usually done via a Letter of Map Revision, or a Physical Map Revision if the area of revision is rather large.



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## Reasons to Change Maps

**6) To reflect a flood control project:** If a new levee, reservoir, or channel modification affects the flow of the base flood, the community must request that the map be revised to reflect the new conditions or new (lower) base flood elevations. The map cannot be changed until the project is actually constructed and/or operating. Again, the Letter of Map Revision or Physical Map Revision process is used. It is important to note that many small projects, such as channel clearing or retention basins in new subdivisions, do not have a measurable effect on the Base Flood Elevations and therefore, do not warrant a change. The request for a change needs to be carefully prepared by an engineer under the employment of the community who knows the Federal Emergency Management Agency flood study guidelines.



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## FEMA & Map Changes



There are two methods FEMA uses to make map changes:

1. Actually change the map and reprint new copies.
2. Issue a letter that describes the map change.

*(This letter describes a map change when the revision can be adequately described in writing or through use of a small annotated map panel, such as when only one lot is affected.)*

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## FEMA Letter Types



There are two types of letters:

1. A Letter of Map Amendment
2. A Letter of Map Revision

A Conditional Letter of Map Revision can also be issued based on proposed filling. When a project is completed, it will qualify for a map revision or a Letter of Map Revision.

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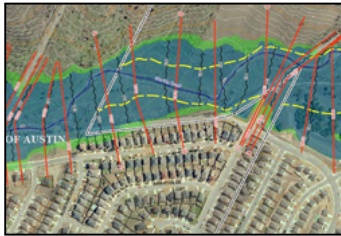
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## Approaches to Changing NFIP Maps

1. Restudies
2. Limited Map Maintenance Projects
3. Amendments
4. Revisions



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## “Restudies”

· A “restudy” is a new flood insurance study for some or all of the community.

*For example - the Federal Emergency Management Agency may decide to conduct a restudy where development in a small watershed has substantially changed stormwater runoff conditions during the 5 or 10 years since the original Flood Insurance Study was completed. If growth is occurring along streams without Base Flood Elevations, detailed studies will be prepared.*

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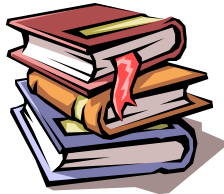
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## Limited Map Maintenance Projects

A limited map maintenance project is like a small scale restudy and is limited in size and cost. It is frequently used for studies in unnumbered A Zones.



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## Amendments

An amendment is used to remove an area that was inadvertently included in the A or V-Zone. This typically happens because of the problem of accurately locating the floodplain boundary on a topographic map. Better ground elevation data can be used to amend a Flood Insurance Rate Map.



An amendment does not challenge the Flood Insurance Study, it is a request to show that certain areas are higher than the Base Flood Elevations and the zone designation for that parcel should be changed.

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## Map Revisions

Revisions can be challenges to the flood elevations, incorporation of new data that become effective after a flood control project, proposals to place fill in the floodplain, or proposals to change the floodplain or floodway boundaries or inclusions of new flood studies.



NATIONAL  
FLOOD  
INSURANCE  
PROGRAM

Federal Emergency Management Agency

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## NFIP Map Changes Continued....

- All requests for restudies, amendments, or revisions must be approved or made by the community, since they affect the local floodplain management program.
- A restudy or limited map maintenance project will generally result in a new map.
- Sometimes amendments and revisions result in a reprinted map.

*(Note: This can be very expensive and is only done if the change affects a large area. For smaller areas, the Federal Emergency Management Agency issues a Letter of Map Amendment or Letter of Map Revision.)*



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## Requesting Map Changes

- MT-1 forms shall be used to request Letters of Map Amendment (LOMAs), Conditional Letters of Map Amendment (CLOMAs), Letters of Map Revision Based on Fill (LOMR-Fs), and Conditional Letters of Map Revision Based on Fill (CLOMR-Fs).  
[http://www.fema.gov/plan/prevent/fhm/dl\\_mt-1.shtm](http://www.fema.gov/plan/prevent/fhm/dl_mt-1.shtm)
- MT-2 forms shall be used to request Conditional Letters of Map Revision (CLOMRs) and Letters of Map Revision (LOMRs).  
[http://www.fema.gov/plan/prevent/fhm/dl\\_mt-2.shtm](http://www.fema.gov/plan/prevent/fhm/dl_mt-2.shtm)

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## Requesting Map Changes

- Except for a single-lot Letter of Map Amendment and Letter of Map Revision-Based On Fill, requests for map changes should be carefully completed by a qualified engineer.

*The number one reason why a request for a map change is denied is because the applicant did not submit adequate technical data to validate the needed change.*

- A property owner is encouraged to complete and apply for a single-lot Letter of Map Amendment and Letter of Map Revision – Based On Fill with assistance from the local administrator and the land surveyor who certifies the elevation data.

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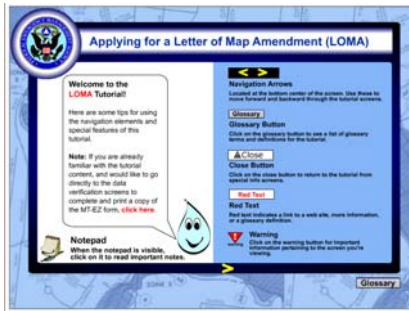
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## Tutorial on LOMAs



[www.fema.gov/plan/prevent/fhm/ot\\_lmreq.shtm#3](http://www.fema.gov/plan/prevent/fhm/ot_lmreq.shtm#3)

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## Effect of Map Revisions on Flood Insurance Rates

In situations where the Flood Insurance Rate Map is revised and republished, the Federal Insurance Administration has adopted "grandfather rules". These rules recognize policyholders that have insured properties built in compliance with a previous Flood Insurance Rate Map and maintained continuous property coverage.

For such properties, the insured would have the option of using the current rating criteria for that property or having the premium rate determined by using the Base Flood Elevation and/or flood zone on the Flood Insurance Rate Map that was in effect when coverage was first obtained (for those with continuous coverage). This provides a cost saving to the insured when the new Flood Insurance Rate Map would result in a higher premium rate.



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## Effect of Map Revisions on Flood Insurance Rates

If a new policy is applied for, and the proper documentation is submitted\*, the rates can be based on the Flood Insurance Rate Map zone and the Base Flood Elevation on the old map in effect on the date the building was constructed.

(\*The documentation must show that the building was built in compliance with the Flood Insurance Rate Map in effect at the time of construction. It must also show that the building has not been altered in any way that results in a reference level, for rating purposes, lower than the Base Flood Elevation on that Insurance Rate Map (such as enclosing the area below an elevated building). If such alteration has occurred, the new Flood Insurance Rate Map has to be used for insurance rating.)



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## Effect of Map Revisions on Flood Insurance Rates

If a building is substantially improved or substantially damaged, it must be re-rated using the Flood Insurance Rate Map in effect at the time that the substantial improvement occurred. Therefore, it is important that communities retain copies of all rescinded or superseded flood maps that have been revised. A newer Flood Insurance Rate Map can always be used, if it will result in a more favorable rating.



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## Effect of Map Revisions on Flood Insurance Rates

The Region II, Federal Emergency Management Agency and the State Assistance Office for the National Flood Insurance Program - NJ Department of Environmental Protection, Office of Engineering and Construction, Bureau of Dam Safety and Flood Control, Flood Plain Management Section (609) 292-2296 may have a set of historic flood maps for each community that can be used to determine the appropriate zone and Base Flood Elevation in effect at the date of construction.



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905 East State Street  
P.O. Box 419  
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In order to move onto the next section you must complete this module's web quiz. This Quiz can be found by clicking on the link below:

[www.surveymonkey.com/s.asp?u=52793440029](http://www.surveymonkey.com/s.asp?u=52793440029)

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