

Using and Obtaining NFIP Maps and Data

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FEMA

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1. Introduction

Customers who initiate business with the Federal Emergency Management Agency's (FEMA's) National Flood Insurance Program (NFIP) seek official FEMA decisions and actions that affect real property in which the customer has an interest. This includes requests for, or documentation of, FEMA flood hazard map interpretations and related data, requests to amend or revise such data, and requests for flood insurance.

To conduct such activities, customers or their agents are required to provide information taken from FEMA's flood hazard data in their applications. Such information includes community, NFIP map panels and indexes, and Letters of Map Change (LOMCs) identification numbers; effective dates of information; Special Flood Hazard Areas (SFHAs) and other regulated areas; Base Flood Elevations (BFEs) and their vertical datums and flood depths; point locations and their horizontal datums; and other interpretations of mapped information.

This document advises customers how to find FEMA flood hazard products and use them to locate the required information:

- Section 2 lists the categories of information that are needed most often.
- Section 3 identifies the general steps typically used to find the information needed.
- Section 4 provides an overview of NFIP maps and databases and related software tools that contain the information needed, and where to find the information on the products. The products and tools discussed include:
 - NFIP maps, including paper maps, digital scans of maps (FIRMscan data), and FIRMettes
 - Digital Flood Insurance Rate Map (DFIRM) databases and related tools for viewing the data
 - LOMCs
 - Flood Insurance Study (FIS) reports.
- Section 5 describes how to find a particular area's NFIP maps and databases and how to order and access the products from FEMA's Map Service Center.

The document also provides links to other resources for learning more about the products and their uses.

2. Information Needed to Do Business with FEMA

When doing business with the NFIP, organizations and individuals seek official FEMA decisions and actions that affect their real property (land and related improvements, structures, and related rights). These business activities include requests for official interpretations of flood hazard maps and data (such as flood hazard determinations and Elevation Certificates), requests to change the maps and data (such as Letters of Map Amendment and Letters of Map Revision), and applications

for flood insurance. Through its Flood Hazard Mapping website at <http://www.fema.gov/plan/prevent/fhm/>, FEMA provides a directory of business activities commonly sought by four major customer groups: surveyors and engineers, floodplain managers, homeowners, and insurance professionals and lenders.

Customers submit an application form to start most business activities. Although there are different forms for each activity, most forms require a common set of information from flood hazard maps and data. The common items include information about:

- the community, such as NFIP community name and number, county, and State where the property is located;
- the flood hazard map panel number, revision suffix, effective or revised date, and post-Flood Insurance Rate Map (post-FIRM) date, for the property;
- the LOMCs, such as letter date and case number, that provide changes to the map panel for the property;
- the index map for the flood hazard map panels, such as the date of the index map, for the property;
- the SFHA, Coastal Barrier Resources System (CBRS), and Other Protected Area (OPA) zone, such as the identification of the type of zone and the designation date for CBRS or OPA units, in which the property is located;
- the BFE or base flood depth for the property;
- the vertical datum for elevation values. Some applications instruct that elevation data be supplied for a specific datum and others request that applicant identify the data for the elevations provided;
- the horizontal datum for coordinates measured from the map; and
- other items interpreted from the base map, such as the location of the property, the name of the flooding source, and the distance between the property and the flooding source. (The base map is the part of the flood hazard map that shows roads, railroad, bridges, dams, culverts, streams, lakes, and boundaries of units of government like counties, cities, and towns. It can include an aerial photograph).

Some business activities require a copy of all or part of an official flood hazard map as part of an application.

3. Using FEMA Maps and Data to Find Information

FEMA flood hazard maps and related data that contain information required to complete application forms include:

- Maps of flood hazard information:
 - NFIP maps in the forms of paper maps and digital FIRMscan data that contain scanned images of the maps. FEMA offers software to view and print FIRMscan data.

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- DFIRM databases that provide information found on NFIP maps in the form of a digital database. FEMA offers software that allows users to view, interact with, and print the maps and simple reports from these databases.
- The FIS report that complements the flood hazard maps and data for a community or county. This report provides technical data from the project that developed the maps.
- LOMCs that provide changes to the maps, databases, and reports made after these products were published. LOMCs are published as digital documents.

The task of gathering information starts with using NFIP maps or DFIRM databases. These products have the same information content and contain most, if not all, of the information typically needed to complete an application form.

- Obtain the map(s) or database(s) in which a property or other place of interest is located. Section 5.2 of this report describes how to obtain NFIP maps and section 5.3 describes how to obtain DFIRM databases.
- Read the map or work with the database to find the information needed. Section 4.1 describes where to look for information on NFIP maps, and section 4.2 provides similar instructions for DFIRM databases. Sections 4.1.4, 4.2.3, and 4.2.4 describe additional options for using these maps and databases. In addition to simply copying information from the products to the forms, an application form might require the customer to read a map, locate the property using the base map, measure the longitude-latitude coordinates for the location of the property, measure distances, and interpolate BFEs. The “Learn More” sections (4.1.3 and 4.2.2) provide references and links to documents with additional instructions and help for these tasks.

FEMA provides access to NFIP maps and DFIRM databases in several forms. Appendix A provides guidance for selecting among these choices.

After obtaining the needed information from the maps or databases:

- Review the LOMCs for the NFIP map(s) or DFIRM database(s) for updates to information for the property or other areas of interest. Section 4.3 describes the Letters and section 5.4 describes how to obtain them.
- If instructed by the form, use the FIS report to obtain additional technical information, such as hydrologic or hydraulic analyses, floodway data, and flood profiles. Section 4.4 describes this document and section 5.5 describes how to obtain copies.

A good overview of how to use these materials together can be found in units 3 and 4 of *Floodplain Management Requirements: A Study Guide and Desk Reference for Local Officials*, which can be found at http://www.fema.gov/plan/prevent/floodplain/fm_sg.shtm. Detailed specifications for the maps and databases are available in *Guidelines and Specifications for Flood Hazard Mapping Partners*, which is available through http://www.fema.gov/plan/prevent/fhm/dl_cgs.shtm.

4. Overview of FEMA Maps and Data

4.1. NFIP Maps

FEMA publishes flood hazard data in map form through NFIP map panels and indexes. These maps cover much, but not all, of the United States.

4.1.1. NFIP Map Panels

Two types of NFIP maps provide SFHA and BFE data: Flood Insurance Rate Maps (FIRMs) and Flood Hazard Boundary Maps.

Flood Insurance Rate Maps

The FIRM is the insurance and floodplain management map that identifies, based on detailed or approximate analyses, areas subject to flooding during a 1-percent-annual-chance (100-year) flood event.

The main components of a FIRM panel (see Figure 1) include the map body and surrounding items; title block; map legend; notes to users; and the CBRS legend (only provided if needed).

1. The *map body* (see Figure 2) shows SFHAs, CBRS, OPA zones, and other flood hazard data such as BFEs and flood depths, cross sections, coastal transects, and related features such as hydraulic structures. This information is overlaid on a base map. Elevation data are referenced to the vertical datum identified in the *map legend* and/or *notes to users*.

Newer maps compiled on an accurate base map have references to coordinate systems and are cast in the horizontal datum and map projection identified in the *map legend* and *notes to users*. The map body is published at one of three scales: 1:24,000 (1 inch on the map is 2,000 feet on the ground), 1:12,000 (1 inch on the map is 1,000 feet on the ground), or 1:6,000 (1 inch on the map is 500 feet on the ground). The scale is identified in the *map legend*.

Most maps are printed in black-and-white. Some newer maps use an aerial photograph as the base map and have flood hazard information printed in blue.

The map can contain information from outside the rectangular boundary of the map body. This extra map coverage provides information needed to interpret flood hazard data near the boundary of the map body.

2. The *title block* provides information about the type(s), name(s), and number(s) of the community (or communities) mapped by the FIRM, identifying information for the map (such as map number, panel number, and suffix; effective date; and the relationship of the panel to others in a set), and, if the panel contains a CBRS or OPA unit, information about those units.
3. The *map legend* provides an explanation of the symbols and labels used in the map body, a north arrow, the map scale described using a bar scale(s) and verbal statement, the

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horizontal and vertical datums, and notes describing the name and location of the local map repository for the map (or reference to the index as the source of such information). The legend also includes NFIP map dates, dates of and changes made in previous revisions to the map (or a reference to the document where they can be found), and other general FIRM legend notes. If the panel contains a community that has CBRS or OPA units, the map legend also includes revision notes about changes to the units.

4. The *Notes to Users* section provides general information about the FIRM, the horizontal and vertical datums, background and reference information about sources of data used to prepare the FIRM, and sources of additional information pertinent to specific items on the FIRM.
5. If the panel contains a community or county that has CBRS or OPA units, the panel includes the *CBRS legend and abbreviated coastal barrier identification notes*. This section lists, in chronological order, an identification note for each classification of CBRS or OPA unit displayed on all of the map panels for the community or county.

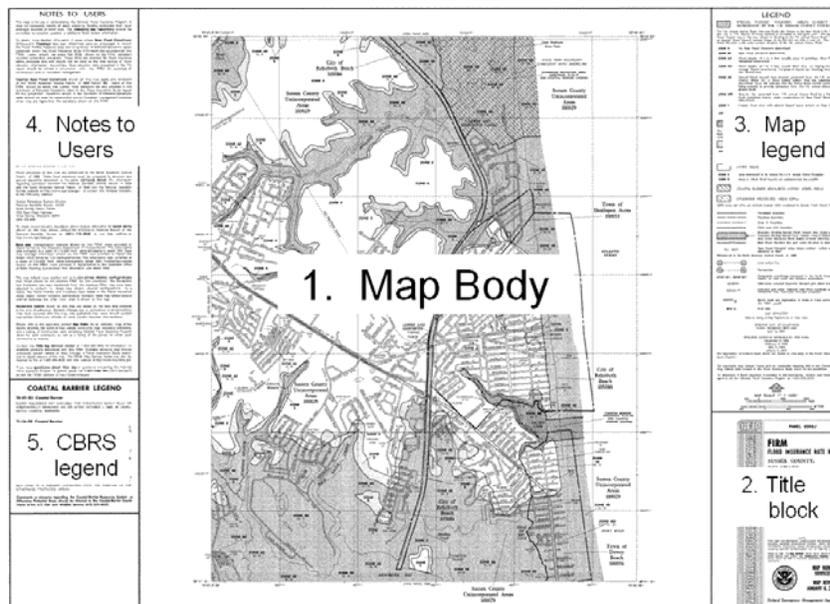
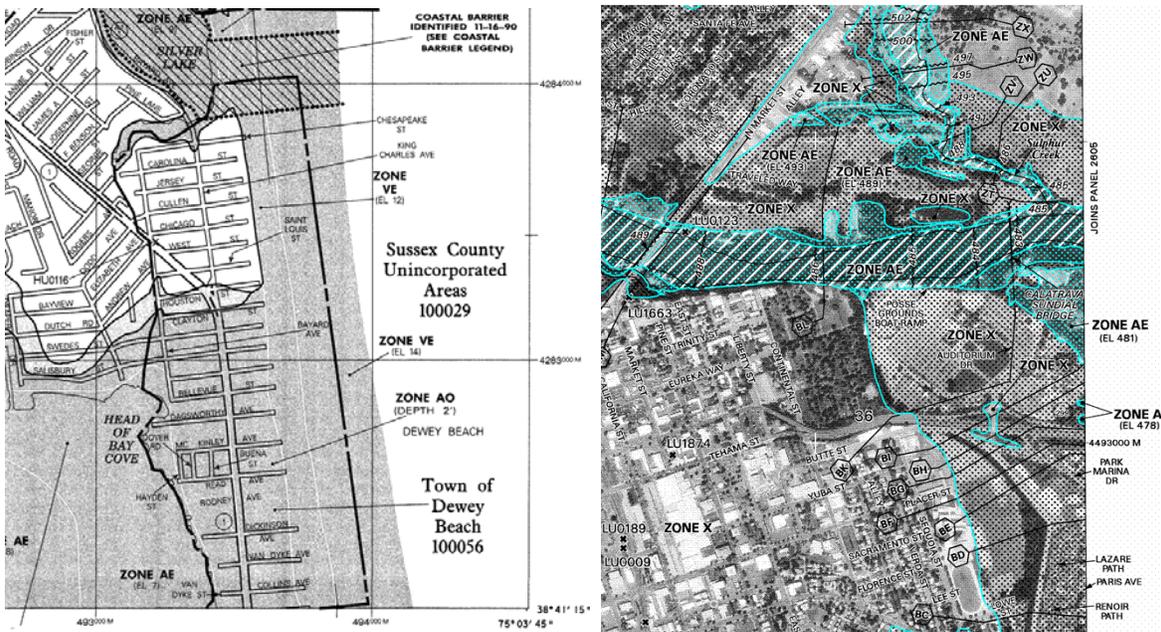


Figure 1. Example of a Flood Insurance Rate Map (FIRM) panel. The annotations highlight the main sections of the publication. Older FIRM panels have similar information laid out in different configurations. (FIRM map panel 10005C0355J)



Black-and-white FIRM panel
(from FIRM map 10005C0355J)

Two-color FIRM panel
(from FIRM panel 0603602585E)

Figure 2. Examples of portions of map bodies of FIRM panels showing flood hazard (flood zones and Base Flood Elevations) and base map information.

FIRM panels occur in different page sizes and layouts. Flood Hazard Boundary Maps can be converted to a FIRM panel by letter, in which case the title block reports the change in status.

Flood Hazard Boundary Maps

The Flood Hazard Boundary Map (FHBM) is the initial insurance map issued by FEMA that identifies, based on approximate analyses, areas of the 1-percent-annual-chance (100-year) flood hazard within a community. The main components (see Figure 3) of these maps are:

- A map body that shows approximate flood hazard zones overlaid on a base map.
- A title block that contains the community name and number, map panel number and suffix, and effective date.
- A map legend that provides an explanation of the symbols for flood hazard zones, a north arrow, map scale, and explanatory notes.

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Figure 3. Example of the layout of a Flood Hazard Boundary Map (FHBM) panel. The map body is on the left, the title block is in the lower right, and the map legend is in the upper right. This particular FHBM was converted to a FIRM administratively by letter. (FIRM map panel 0504180009A)

NFIP Map Panels That Are Not Printed

FEMA does not print map panels that have the same SFHA zone throughout their extent. The information for the panel is published on the NFIP map index that references the panel (see Figure 4).

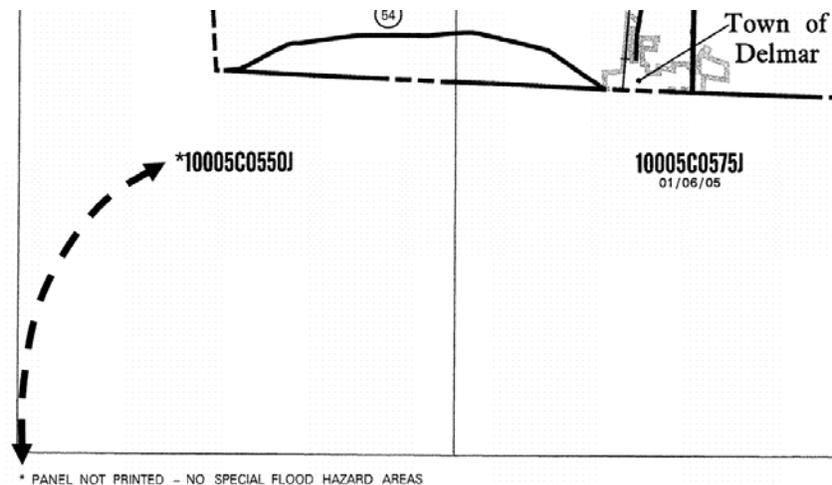


Figure 4. Example of an NFIP map index substituting for a printed NFIP map panel. The panel to the left, number 10005C0550J, is footnoted with an asterisk (*) on the map index. The meaning of the footnote is provided below the index map. In this case the map panel was not printed because the panel does not have a Special Flood Hazard Area. (from NFIP map index 10005CIND0B)

4.1.2. NFIP Map Indexes

An NFIP map index (see Figure 5) provides an overview of NFIP map panels available for a project area, such as a county or community. The main graphic components of an index are the map index body and notes, index title block, and, for countywide map indexes, lists of communities and map repositories.

1. The *map index body* shows a diagram of map panels that portrays the area overlaid on a generalized base map (which includes the boundaries of communities). The diagram (or a related table) includes the panel number, effective date, and “panel not printed” footnote (if any) for each panel.
2. The *map index title block* identifies the type and name of the area mapped by the index, the index map number and date, and a list of map panel numbers for all printed panels.
3. On a countywide map index, the *table of communities* provides the relationship between the communities included in the FIS report for the area mapped by the index and the map panels portrayed on the index. The table includes the community name and number, the FIRM panels on which the community is mapped in whole or in part, the initial NFIP map date, the initial FIRM date, and the most recent FIRM panel date.
4. The *notes to users* clarify the meaning of the dates.
5. The countywide map index also provides a *list of map repositories* for each community.

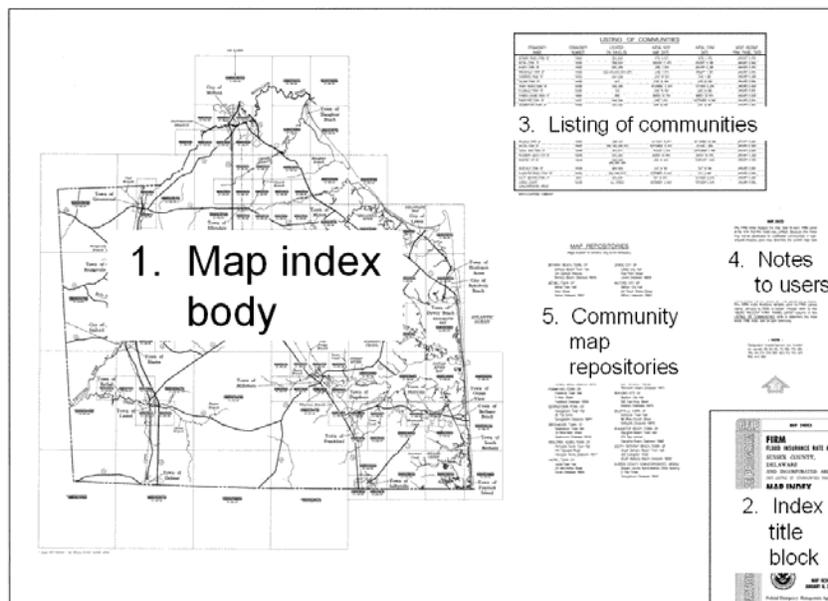


Figure 5. Example of an NFIP map index. The annotations highlight the main sections of the publication. (NFIP map index 10005CIND0B)

4.1.3. Learn More about NFIP Maps

FEMA offers the following online resources for learning more about NFIP maps:

- Overview of FIRMs: <http://www.fema.gov/hazard/map/firm.shtm>
- Online step-by-step tutorial on “how to read” NFIP maps: http://www.fema.gov/plan/prevent/fhm/ot_firmr.shtm. The text from the online tutorial that can be downloaded and read offline is available at: http://www.fema.gov/pdf/fhm/ot_frmsb.pdf
- Fact sheet on special aspects of FIRMs in coastal areas: *Using a Flood Insurance Rate Map (FIRM): Home Builder’s Guide to Coastal Construction* (FEMA Form 499, August 2005): http://www.fema.gov/pdf/rebuild/mat/fema499/hgcc_fact03.pdf
- Request samples of NFIP maps: http://www.fema.gov/plan/prevent/fhm/dl_dfrm2.shtm
- FEMA’s Map Assistance Center (FMAC) answers questions about NFIP maps. Contact the FMAC by telephone at 1-877-FEMA MAP (1-877-336-2627) or by electronic mail to FEMAMapSpecialist@mapmodteam.com. More information about the FMAC is available at http://www.fema.gov/plan/prevent/fhm/fmc_main.shtm.

4.1.4. Digital NFIP Map Images: FIRMscan Data, FIRMettes, and Related Tools

Through FIRMscan data, FIRMettes, and related tools, FEMA provides the convenience of accessing digital NFIP map images on the web or computer media. FEMA also provides web-based and standalone¹ (Flood Map Image Tool (F-MIT)) software tools to view a FIRMscan image and print portions of it.

FIRMscan Data

FIRMscan data are digital pictures of NFIP map panels and map indexes. They can be viewed, printed, and processed like other kinds of digital pictures. A FIRMscan includes an entire NFIP map sheet, so printing the entire image at full size requires a large-format plotter. FIRMscans for black-and-white NFIP maps are in Tagged Image Format Files (TIFFs) and two-color NFIP maps are in Portable Network Graphics- (PNG-) formatted files. Because the two-color maps are scans of detailed color image maps, the file size can be quite large (tens of megabytes per map). The images in Figures 1 through 5 are from FIRMscan files.

Web-based FIRMette Tool

The FIRMette tool (see Figure 6) is a web-based capability that allows users to view NFIP map panels and map indexes. Customers can pan and zoom to examine any part of the map sheet.

¹ Not connected to the Internet.

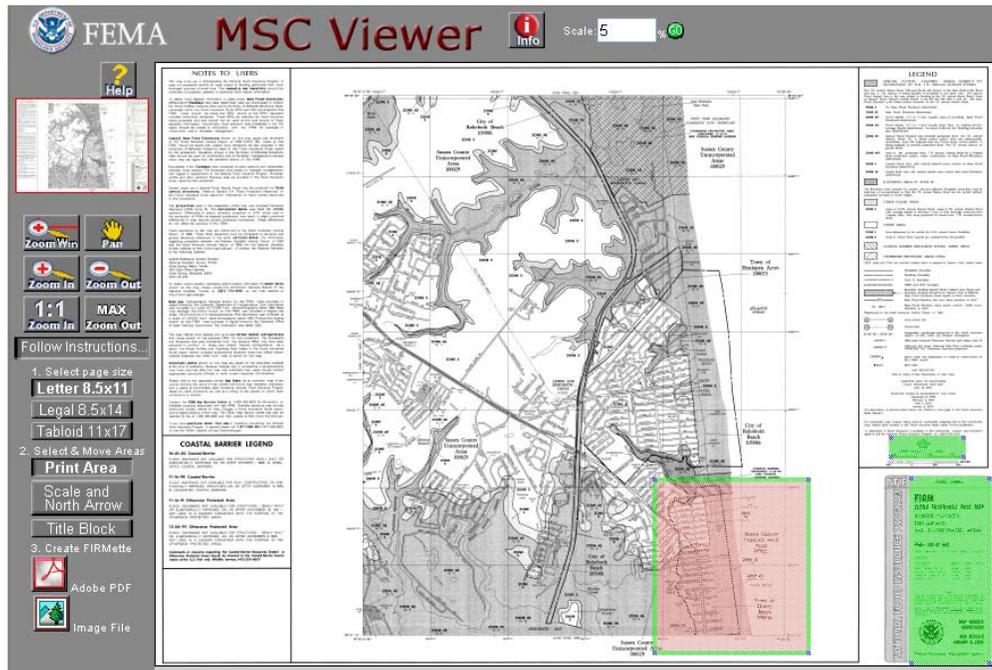


Figure 6. The web-based FIRMette tool. The tool allows users to view, save, and print sections of NFIP map panels and map indexes. Users can reposition the print area (shaded pink) to select the section of the panel to be printed. The section of the map selected for printing the title block and map scale and north arrow (shaded green) also can be adjusted.

Customers also can save portions of a FIRMscan as Adobe® Portable Document Format (PDF)² files or TIFFs for later viewing and printing. These FIRMettes (see Figure 7) typically include a portion of the map body (“print area” on the FIRMette tool) at the same scale as the original map, as well as the title block, map scale, and north arrow from the map. These files can be saved in one of three page sizes. Pages printed from the files have the same official status as the NFIP map panels from which they are derived.

² Names of products are provided for descriptive purposes only and do not represent an endorsement by the United States Government.

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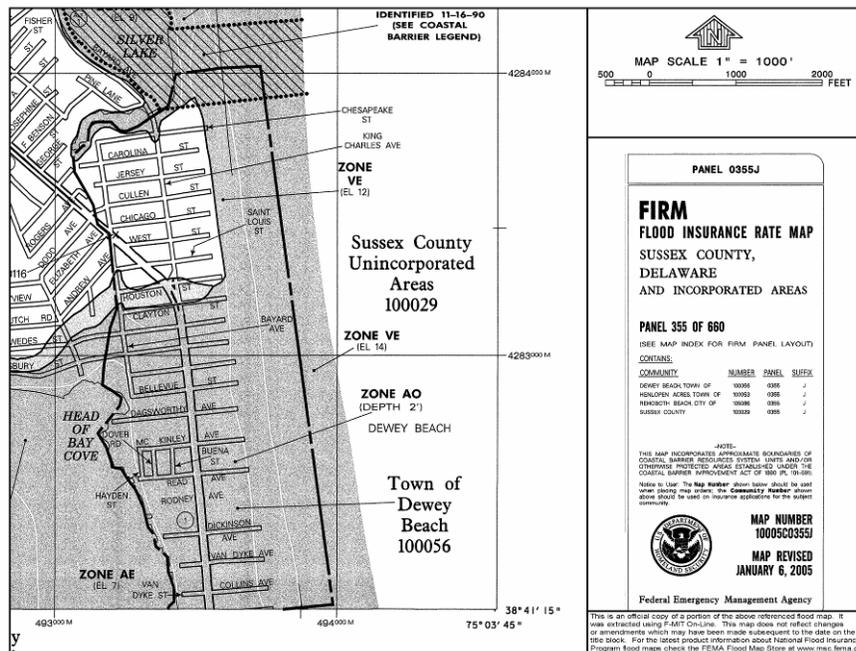


Figure 7. FIRMette produced from the web-based tool shown in Figure 6. Such FIRMettes can be used for official purposes. The image is reduced from its full size of 8½- by 11-inches.

Because of space limitations on the printed page, the map legend, notes to users, and CBRS legend are not included in the normal FIRMette file. If needed, these parts of the map page can be saved as the “print area” in FIRMettes for later viewing.

FEMA provides a tutorial for the web-based FIRMette tool through its Map Service Center at <http://msc.fema.gov> (see Figure 8).

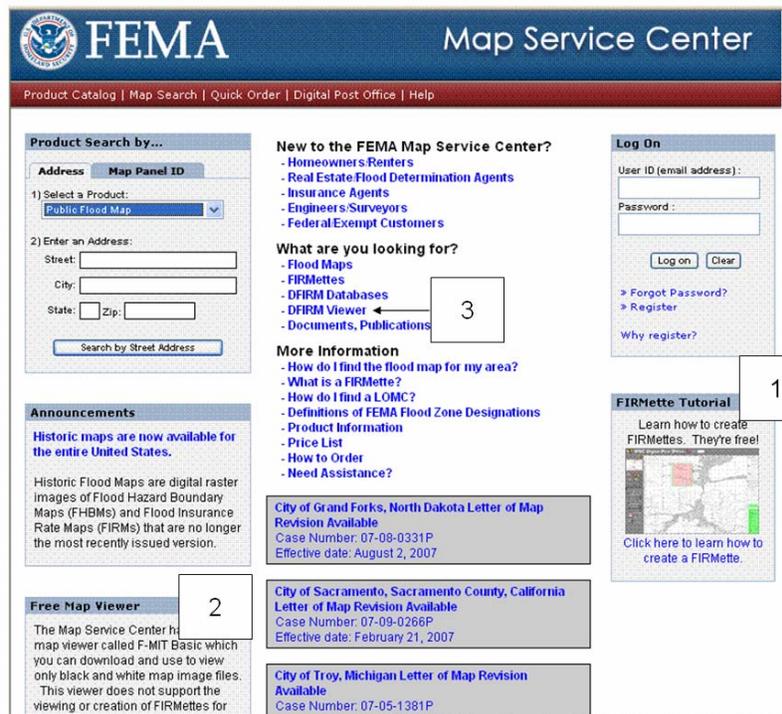


Figure 8. Through the Map Service Center home page (<http://msc.fema.gov>) users can (item 1) take the online FIRMette tutorial, (2) download the F-MIT, and (3) access the online DFIRM viewer (see section 4.2.3).

Flood Map Image Tool (F-MIT)

The Flood Map Image Tool (F-MIT) (see Figure 9) is a standalone capability that allows users to view black-and-white TIFF FIRMscan data. The tool allows users to pan and zoom to examine, print, or save as a PDF file, all or part of a FIRMscan image.

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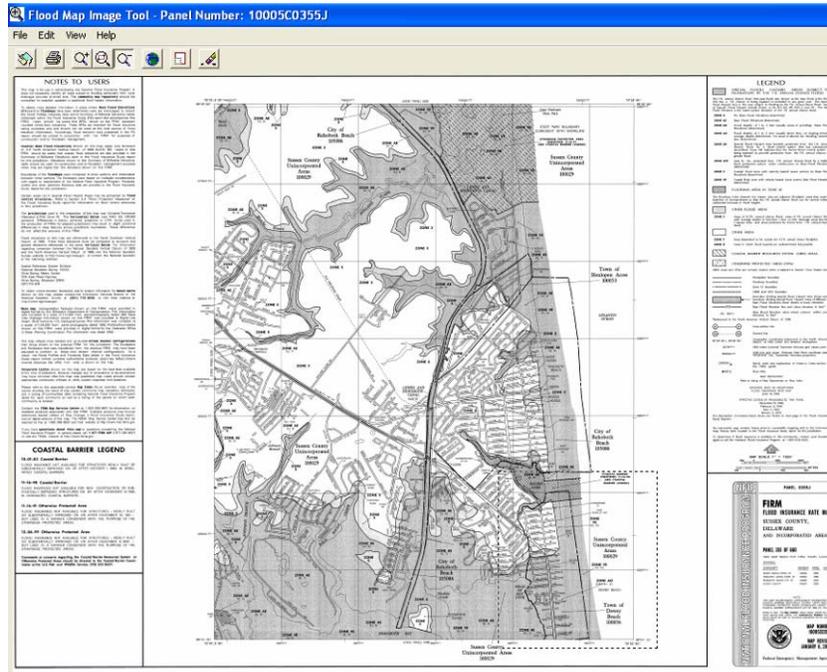


Figure 9. Screen shot of the F-MIT. The tool allows users to view, print, and create FIRMettes from black-and-white (TIFF) FIRMscan data.

The tool also can create a FIRMette that can be printed or saved as a PDF file. These FIRMettes can be created in one of three page sizes. They have the same official status as the NFIP panels from which they are derived.

F-MIT does not work with PNG-formatted FIRMscan files for two-color NFIP map panels.

FEMA provides the F-MIT for download through the Map Service Center at <http://msc.fema.gov> (see Figure 8). The Help menu provides detailed information about the functions of the buttons and menu selections, information about the flood hazard zones and their definitions, and a tutorial for using the tool.

4.2. Digital Flood Insurance Rate Map (DFIRM) Databases and Related Tools

Through DFIRM databases, FEMA provides flood hazard data in the form of a digital spatial database. Although not intended to produce an exact replica of an NFIP map, a DFIRM database allows a user of geographic information system (GIS) software to access all of the information conveyed on an NFIP map in a way that can best take advantage of the software's automated analysis capabilities (see Figure 10). Customers can use such databases to create, view, and print maps; to query and analyze attribute data; and to combine the DFIRM data with other user-supplied data for spatial analyses.

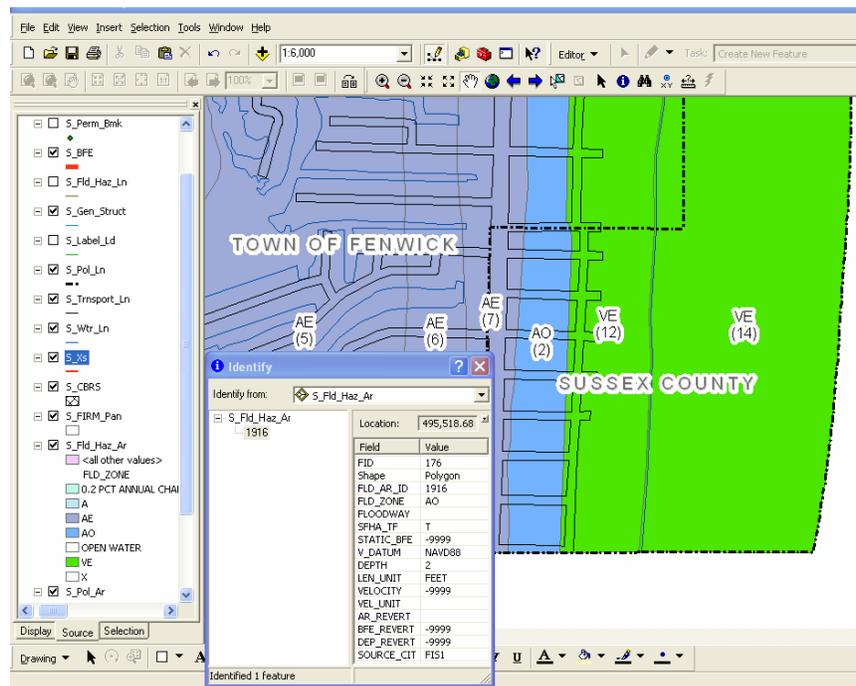


Figure 10. DFIRM database displayed in a GIS. The map shows SFHAs with zone identifiers and their static BFEs or flood depths, the boundaries and names of jurisdictions, and other base map data. The inset window shows the attributes for an SFHA.

DFIRM databases cover a small but growing area of the United States. FEMA’s ongoing Map Modernization Program plans to provide DFIRM database coverage for 65 percent of the area and more than 90 percent of the population of the United States by 2010.

FEMA also provides an online viewer through which users can view and interact with DFIRM data and a web map service that provides map images generated from DFIRM data.

After using a DFIRM database, users still must inspect LOMCs for updates made after the DFIRM data were created.

4.2.1. DFIRM Databases

A DFIRM database is composed of spatial data describing the location of features on the earth and tabular data that describe the attributes of these spatial features. The standard DFIRM database content includes:

- Flood hazard areas (1- and 0.2-percent-annual-chance flood hazard areas and floodways), BFE lines, mapped cross-section lines including the BFEs added from the FIS; and coastal transects;
- Hydraulic structures such as dams, bridges, culverts, weirs, and levees;
- CBRS areas and OPA units;

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- FIRM panel areas, including their effective date, size, scale, and corner coordinates; and
- Base map data including digital orthophotos or transportation features with feature labels; other transportation features such as railroads; the Public Land Survey System; hydrographic features (such as streams, lakes, and shorelines); river marks; boundaries of counties, communities, and other units of government and public lands such as national parks, forests, and military lands; permanent benchmarks; and U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle boundaries.

The flood hazard data contained in DFIRM databases are compiled on an accurate base map. The horizontal datum and map projection are the same for a single database, but are different from database to database. The vertical datum can vary within a database.

A database covers the entire geographic area of a project, which typically is a county or community. The geographic coverage for a database contains overedge information (outside the boundary of the county or community) if the FIRM map panels for a project include overedge information.

DFIRM databases are delivered as zipped files that contain the data in three GIS data formats: ESRI™ ARC/INFO™ Interchange Format (.e00 format), ESRI™ Shapefile format, and MapInfo® Interchange Format (MIF).³ If aerial photographs (called “orthophotos”) are part of the base map for a FIRM panel, they can be requested for DFIRM databases delivered on media. The file also includes metadata (documentation of the data) compliant with the standard of the Federal Geographic Data Committee and a “readme” file that briefly describes the file structure of the zipped file and the list and description of data tables.

DFIRM databases are available from FEMA’s Map Service Center (<http://msc.fema.gov>). Users can receive DFIRM databases through online download and on computer media. Instructions for obtaining DFIRM databases are provided in section 5.3.

4.2.2. Learn More about DFIRM Databases

FEMA offers the following online resources for learning more about DFIRM databases:

- Overview of DFIRM databases: http://www.fema.gov/plan/prevent/fhm/dfm_ovrw.shtm
- Description of standard DFIRM databases: http://www.fema.gov/plan/prevent/fhm/dfm_dfdb.shtm
- Detailed DFIRM database specification: Appendix L: Guidance for Preparing Draft Digital Data and DFIRM Database in *Guidelines and Specifications for Flood Hazard Mapping Partners*, available through http://www.fema.gov/plan/prevent/fhm/dl_cgs.shtm. (While this specification is meant for mapping partners that create DFIRM databases, it also describes the content of the fields in the distribution version of DFIRM databases.)

³ Names of products are provided for descriptive purposes only and do not represent an endorsement by the United States Government.

- Download sample DFIRM databases:
<http://msc.fema.gov/webapp/wcs/stores/servlet/info?storeId=10001&catalogId=10001&langId=-1&content=productDFIRM&title=DFIRM Databases&parent=productInfo&parentTitle=Product Information>.

For those interested in the use of DFIRM databases in GIS, FEMA offers the following online tutorials:

- Introduction to GIS: http://www.fema.gov/plan/prevent/fhm/ot_gisrq.shtm
- Using GIS to Create DFIRMs: http://www.fema.gov/plan/prevent/fhm/ot_gis2r.shtm
- Using GIS, DFIRM, and Other Data for Sample Community Applications: http://www.fema.gov/plan/prevent/fhm/ot_gis3r.shtm

4.2.3. Web-based DFIRM Data Map Viewer

The web-based DFIRM data map viewer (see Figure 11 and Figure 12) allows for online viewing of DFIRM data. Additional databases available through the viewer provide the option of viewing base maps other than those in the DFIRM database, additional NFIP map program information, FEMA's Q3 data, and other types of hazards. The viewer is available through FEMA's Map Service Center at <http://msc.fema.gov> (see item 3 in Figure 8) or directly through <https://hazards.fema.gov/wps/portal/mapviewer>.

At small map scales (that is, views covering the United States or large regions), only status information is displayed. At medium scales the boundaries of communities, NFIP map panels, and generalized flood hazard areas can be viewed. At large map scales (scales of 1:32,000 and larger), detailed DFIRM data can be displayed.

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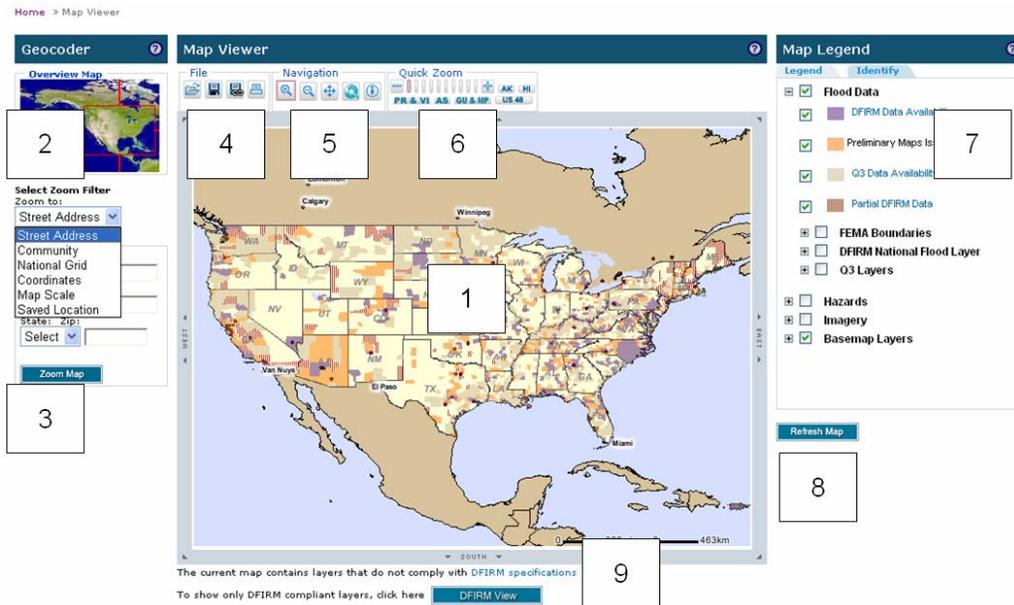


Figure 11. Initial view shown in the web-based DFIRM data map viewer. (See text for the description of the numbered areas.)

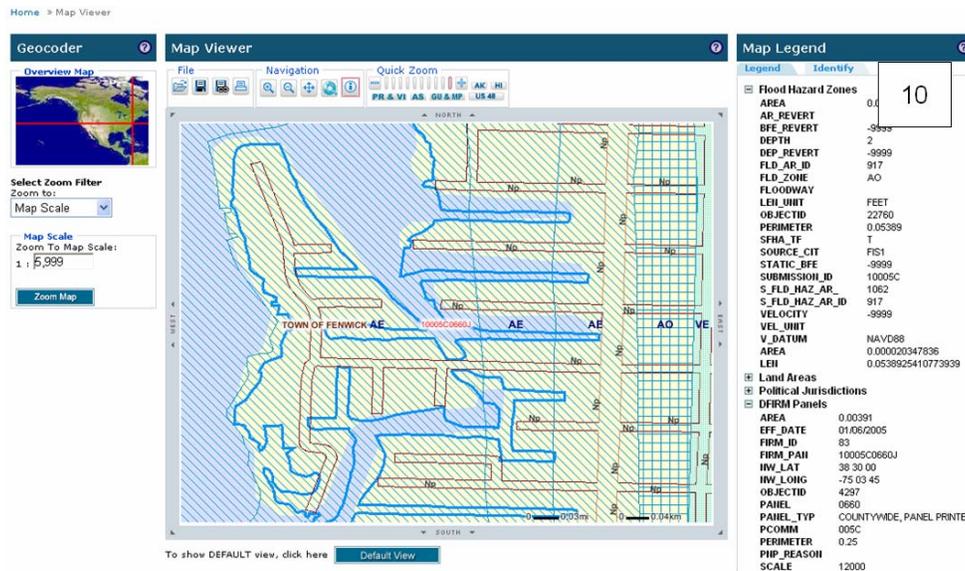


Figure 12. DFIRM data displayed with attribute information in the web-based map viewer. (See text for the description of the numbered areas.)

The capabilities of the viewer include (the numbers in the list refer to the annotations in Figure 11 and Figure 12):

1. The map view displays the map created from DFIRM data and other base map, hazards, and imagery data. Various functions of the viewer require the user to click or draw boxes on the map view.
2. The Overview Map shows the area being displayed in the map view. Users can click on the overview map to change the area displayed in the map view.
3. The Zoom Filter section allows a user to zoom to places defined in different ways and to different map scales. The options include zooming to a street address (or part of an address, such as a State, city and State, or zip code), community, National Grid coordinate, longitude-latitude coordinate, and saved location. The map scale option changes the amount of area shown in the map view. Click on “zoom map” below this section to change the map view.
4. The File section allows users to save their work from a session with the viewer to a file and reload the map from the file at a later time. Other File section commands save a map to a temporary location (users can later reload the map using the “saved location” function in the Zoom Filter section) and print the map view to a PDF file.
5. The Navigation section allows users to Zoom In (show more detail and less area in the map view), Zoom Out (show less detail and more area in the map view), Pan (move the map around in the map view at the same size), and Zoom to initial extent (return the map view to the national map shown in Figure 11). After clicking on a command, click a single point or click and draw a box on the map view for the Zoom In and Zoom Out command, or click on a point to recenter the map for the Pan command.

The Identify command (the “i” button) reveals the attributes for the data displayed in the map for a point on the map view selected by the user. To use this feature, click on the Identify command to activate the function and then click on a point on the map view. The results are shown in a table of attributes displayed under the Identify tab in the Map Legend area (area 10 in Figure 12).

6. The Quick Zoom section allows a user to zoom to preset zoom scales by clicking on the small vertical bars. Near the Quick Zoom bars are small buttons to zoom to Alaska (AK), Hawaii (HI), Puerto Rico and the Virgin Islands (PR & VI), American Samoa (AS), Guam and Micronesia (GU & MP), and the coterminous 48 states (US 48).
7. The Map Legend area consists of two tabs: Legend and Identify. The Legend tab (item 7 in Figure 11) allows users to turn data layers on and off and to view map symbology. Click on the data layer descriptions to view metadata for the layer. Select the Refresh Map button (item 8) to draw a new map after turning layers on or off. (The Identify tab is described in item 10.)
8. The Refresh Map button will redraw the map according to the layers the user turned on or off in the Legend.

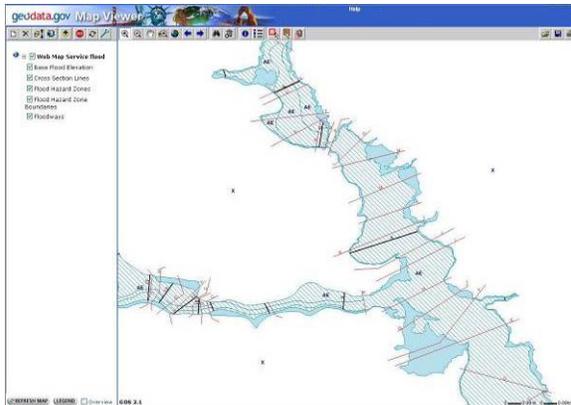
Using and Obtaining NFIP Maps and Data

9. Clicking on the DFIRM View Button toggles between the “default view” that displays any data available through the viewer and the “DFIRM view” that displays only DFIRM data.
10. The Identify tab (see item 10 in Figure 12) displays attribute data in response to the Identify command. (See item 5 for instructions on the use of the Identify command.)

The information listed above and additional help is available by clicking on the question marks (“?”) to the right of the blue Geocoder, Map Viewer, and Map Legend headings at the top of the viewer.

4.2.4. Web Map Service (WMS) for DFIRM Data

In response to a web request, the web map service for DFIRM data returns via the web a georegistered map image created from DFIRM data. These map images can be added to Internet-based applications (see Figure 13), including GIS software, web-based map viewers, and other applications.



Map image from the DFIRM web map service

DFIRM web map service image in Google Earth™

Figure 13. Map images from the web map service for DFIRM data can be used in different software applications.

The service is organized as a set of data layers that users can view. They include:

- BFE
- Bench marks
- CBRS protected areas
- Coastal transect lines
- Cross-section lines
- DFIRM panels
- DFIRM streets
- Flood hazard zone boundaries

- Flood hazard zones
- Floodways
- General structures
- Letters of Map Revision (LOMRs)
- Public Land Survey System (PLSS) sections
- PLSS township range lines
- Political boundaries
- Political jurisdictions
- River distance markers
- Streams
- USGS quads
- Water bodies

The service also provides access to additional NFIP map program information and FEMA's Q3 data through the layers:

- Flood data availability (at two map scales);
- Preliminary maps issued; and
- Q3 flood hazard data.

The symbology and labels for the map image are controlled by the service. At small map scales (that is, views covering the United States or large regions), only status information is displayed. At medium scales, the boundaries of communities, NFIP map panels, and generalized flood hazard areas can be viewed. At large map scales (scales of 1:32,000 and larger), detailed DFIRM data are displayed.

This service is in compliance with Web Map Service (WMS) Interface Specification 1.1.1 (see <http://www.opengeospatial.org/standards/wfs>) of the Open Geospatial Consortium, Inc.⁴ The WMS capabilities file is available at <http://hazards.fema.gov/wmsconnector/wmsconnector/Servlet/flood?REQUEST=GetCapabilities&SERVICE=WMS>. To view the document, save the file as flood.xml; this Extensible Markup Language- (XML-) formatted file is then available for viewing. The service responds to GetMap requests at <http://hazards.fema.gov/wmsconnector/wmsconnector/Servlet/flood>.

Information about the web map service is available through the MIP. Starting at <https://hazards.fema.gov>, follow the links "Tools and Links" and then "FEMA National Flood Map Web Service."

⁴ Names of products are provided for descriptive purposes only and do not represent an endorsement by the United States Government.

4.3. Letters of Map Change (LOMC)

“Letter of Map Change” is a collective term used to describe official amendments and revisions to NFIP maps. These changes are accomplished by administrative procedures and disseminated by letter instead of issuance of a revised map. LOMCs are available for download from FEMA’s Map Service Center (<http://msc.fema.gov>) as PDF files. See section 5.4 for instructions on obtaining LOMCs.

Of interest are two forms of LOMC: Letter of Map Amendment (LOMA) and LOMR.

4.3.1. Letter of Map Amendment (LOMA)

A LOMA is an official determination by FEMA about the relationship between an SFHA and a property or structure. A LOMA can state that a property or structure is shown on a map panel as being in an SFHA zone, outside the SFHA zone, or inadvertently included in an SFHA zone and therefore not subject to inundation by the 1-percent-annual-chance flood.

The content of a LOMA includes the LOMA case number, community name and number, number and date of the affected map panel, the name of the flooding source, the flood zone, and flood elevation and related vertical datum. The LOMA also identifies the property by legal description, by lot, block/section, and subdivision, and by street address. A LOMA is referenced to the map panel it affects, regardless if the panel is printed or not.

An example of a LOMA determination document is shown in Appendix B.

4.3.2. Letter of Map Revision (LOMR)

A LOMR is a letter issued by FEMA to revise a map panel and/or FIS report to change BFEs, floodplain and floodway boundary delineations, and coastal high hazard areas.

The content of a LOMR includes the LOMR case number; the name and number, county, and State of affected community(ies); effective date of the LOMR; the type, number and effective date of the NFIP map(s) being revised; the flooding source(s) and revised reach(es); a summary of the revisions; and relationship of the LOMR to FEMA map production activities. A portion of the affected NFIP map annotated with changes also is included.

An example of a LOMR determination document is shown in Appendix C.

4.4. Flood Insurance Study (FIS) Reports

An FIS report documents the production of the NFIP map for a county or community. The standard sections of the report are:

- Introduction, which describes the purpose of the study, authority and acknowledgements, and coordination with the community;

- Area Studied, which describes the scope of the study, community, principal flood problems, and flood protection measures;
- Engineering Methods, which includes hydrologic analyses, hydraulic analyses, wave height analyses, and vertical datum for elevation values;
- Floodplain Management Applications, which describes floodplain boundaries and floodways;
- Insurance Application, which defines SFHA designations, used for flood insurance purposes, shown on the FIRM;
- The FIRM, which describes the purpose of the map for flood insurance and floodplain management;
- Other Studies, which identifies other studies of flooding in the area and indicates if these studies agree or disagree with the findings of the project;
- Location of Data, which identifies the FEMA Regional Office and community map repository that keeps a copy of the report and gives their addresses;
- Bibliography and References for information used in the project;
- Revision Descriptions, which provides brief information on revisions to the FIS report; and
- Exhibit 1, Flood Profiles, which lists new and revised flood profiles developed by the project.

The FIS report also includes floodway maps if they are available.

FIS reports are available in paper and digital forms from FEMA's Map Service Center (<http://msc.fema.gov>). See section 5.5 for instructions on obtaining FIS reports. The digital forms are available to be downloaded online or to be shipped on computer media. They also can be viewed (see Figure 14) through the web in an application that works in a way similar to the web-based FIRMette viewer.

Using and Obtaining NFIP Maps and Data

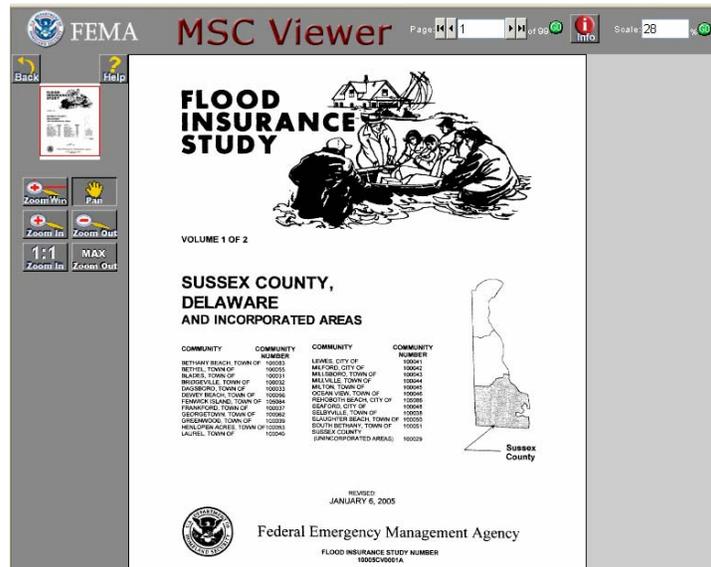


Figure 14. FIS reports can be viewed through the Map Service Center web site.

4.4.1. Learn More about FIS Reports

FEMA offers the following online resources for learning more about FIS reports:

- Overview of FIS reports: <http://www.fema.gov/hazard/map/fis.shtm>
- Online step-by-step tutorial on “how to read” an FIS report: http://www.fema.gov/plan/prevent/fhm/ot_fisr.shtm
- Sample FIS report: http://www.fema.gov/plan/prevent/fhm/dl_dfft.shtm

5. Obtaining FEMA’s Flood Hazard Products

FEMA distributes products through its Map Service Center (MSC). Table 1 provides contact information for the MSC.

Table 1. Contact Information for the FEMA Map Service Center

Mailing address	FEMA Map Service Center P.O. Box 1038 Jessup, Maryland 20794-1038
Telephone	(800) 358-9616
Fax	(800) 358-9620
Electronic mail	FEMA-MSCservice@dhs.gov
Web site	http://msc.fema.gov

5.1. Getting Started

The best starting point for becoming acquainted with the MSC is its web site at <http://msc.fema.gov> (see Figure 15).

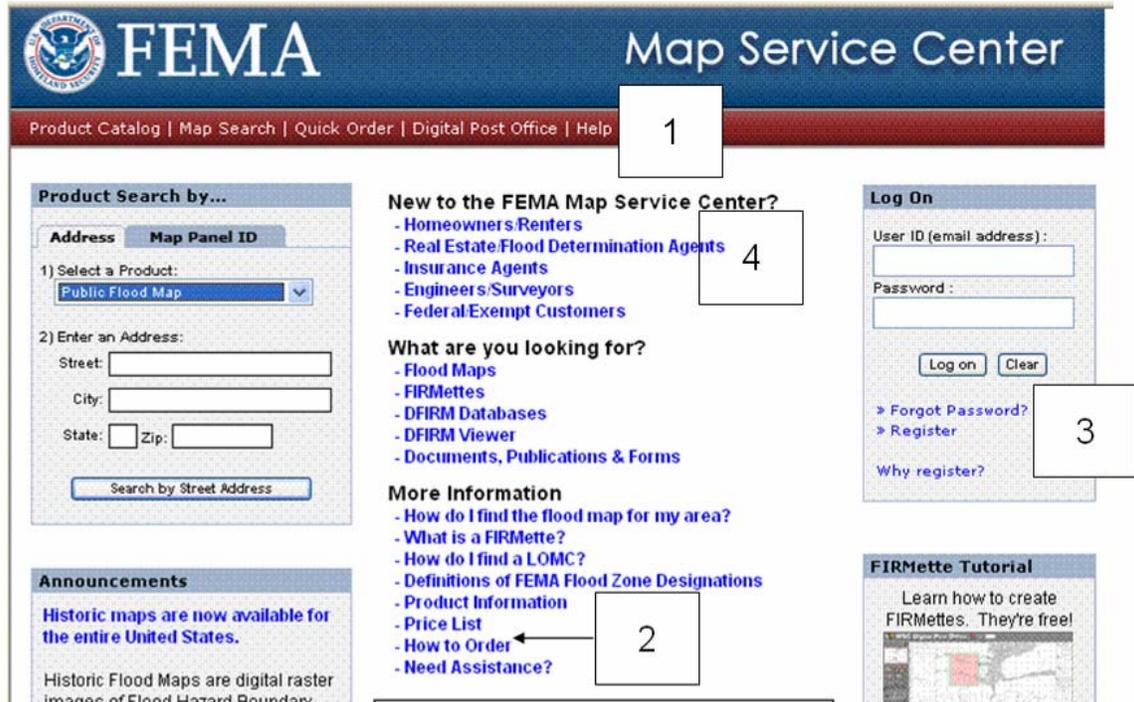


Figure 15. Starting points for becoming acquainted with the MSC.

Useful starting points include (the numbers in the list refer to the annotations in Figure 15):

1. The “Help” page reviews the mechanics of registering with the MSC web site, finding products, and placing, paying for, and receiving orders for products.
2. The “Price List” page provides the fees for products. There is a fee for most products. There is no fee for viewing products on the site, and FIRMettes and LOMCs, can be downloaded for free.

Federal and other exempt customers can obtain most products used for official purposes without a fee. The MSC also offers a separate Express Document Delivery web site for such customers. Eligible customers should contact the MSC by phone to register as an exempt customer.

The “How to Order” page provides instructions for ordering products online and by phone, fax, and mail, and order forms for those ordering products by fax and mail.

3. The “Log On” section allows customers to register with and log on to the site. Customers must register and log on to the site to place orders. Registering with the site also allows

Using and Obtaining NFIP Maps and Data

customers to receive advance announcements of enhancements from the MSC. Customers do not have to register with the site to access products for which there is no fee.

4. The “New to the FEMA Map Service Center?” section directs major customer groups to products that they seek most often.

In addition to individual products, the MSC packages products in standard collections called “kits.” A kit contains all the products of a particular type for a jurisdiction (State, county, or community). County and community kits may be ordered online; to order a State kit call the MSC. An NFIP map kit contains all the maps for a jurisdiction. An FIS report kit contains all the studies and floodway maps (if available) for a jurisdiction.

5.2. Obtaining NFIP Maps and FIRMscan Data

5.2.1. Finding the Right Maps

The MSC web site offers several ways to search for NFIP maps and FIRMscan data. Sections of the MSC home page that provide access to these search capabilities are shown in Figure 16.

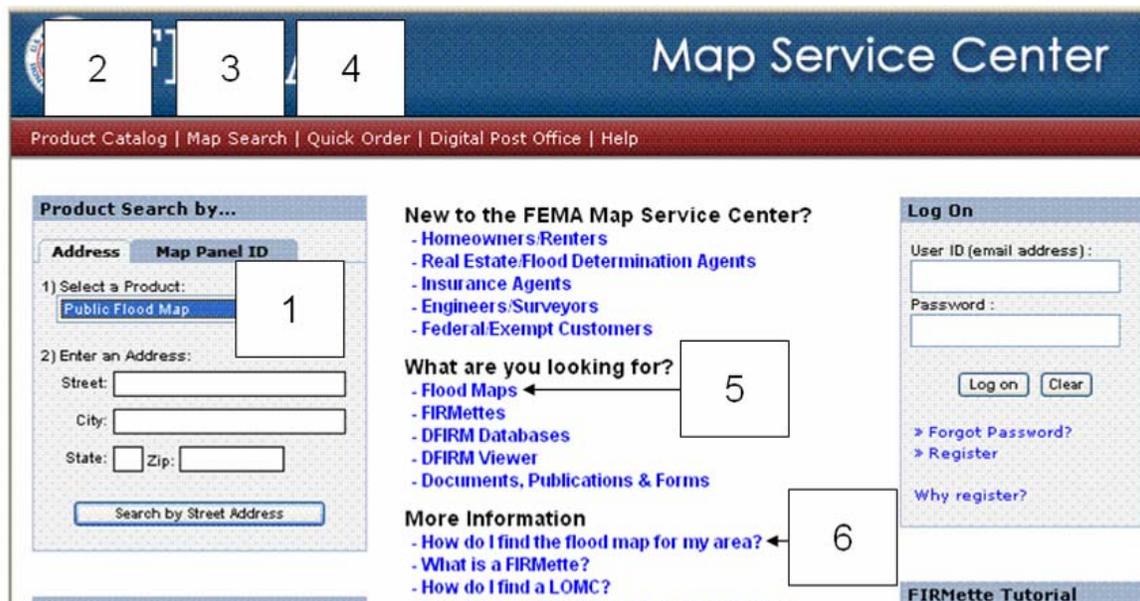


Figure 16. Starting points for finding NFIP maps on the MSC home page.

These search capabilities are (the numbers in the list refer to the annotations in Figure 16):

1. Search by address or by NFIP map number: By clicking on the tabs “Address” or “Map Panel ID” customers can enter a street address or map panel number(s) and view the record(s) for the product(s). When searching by address, be sure that the product type is “Public Flood Map.”

2. Search by State, county, and community: Click on “Product Catalog” to view the product list, and then click on product type “Latest Available Flood Map” to search for NFIP maps by State, county, and community to display the record(s) for available products.
3. Search using a map: Click on “Map Search” to search for products using a map. The main parts of this capability (the numbers refer to annotations in Figure 17) are (1) the selection of product type (“Public Flood Map”) and the ability to zoom to an address (or part of an address, such as a State, city and State, or zip code) or longitude-latitude coordinate, (2) a Help page that describes how to use the map controls, (3) the controls for zooming in and out and panning to control the map being displayed, and the controls to select product(s), (4) the map view, and (5) the map legend, which includes the ability to select the features that are displayed in the map view. Figure 18 shows the results after zooming to an area and using the Point control to select an NFIP map panel. After selecting products using the Point or Box command, a new window will display the records for the products selected.
4. Search by NFIP panel number: Click on “Quick Order” to search by NFIP panel number for individual NFIP maps, or by county or community number to order a county or community kit.
5. Search by State, county, and community: Click on “Flood Maps” to search for products by State, county, and community to display the record(s) for available products.
6. For additional instructions about searching for products click on “How do I find the flood map for my area?”

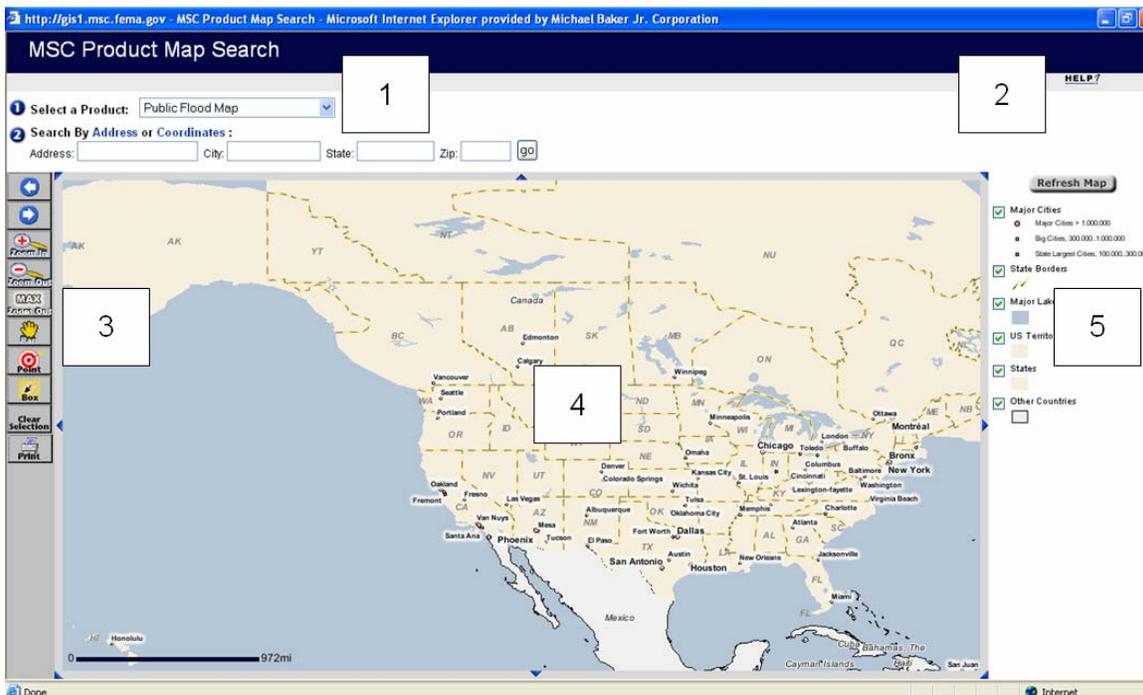


Figure 17. Opening screen to search for NFIP maps using a map.

Using and Obtaining NFIP Maps and Data

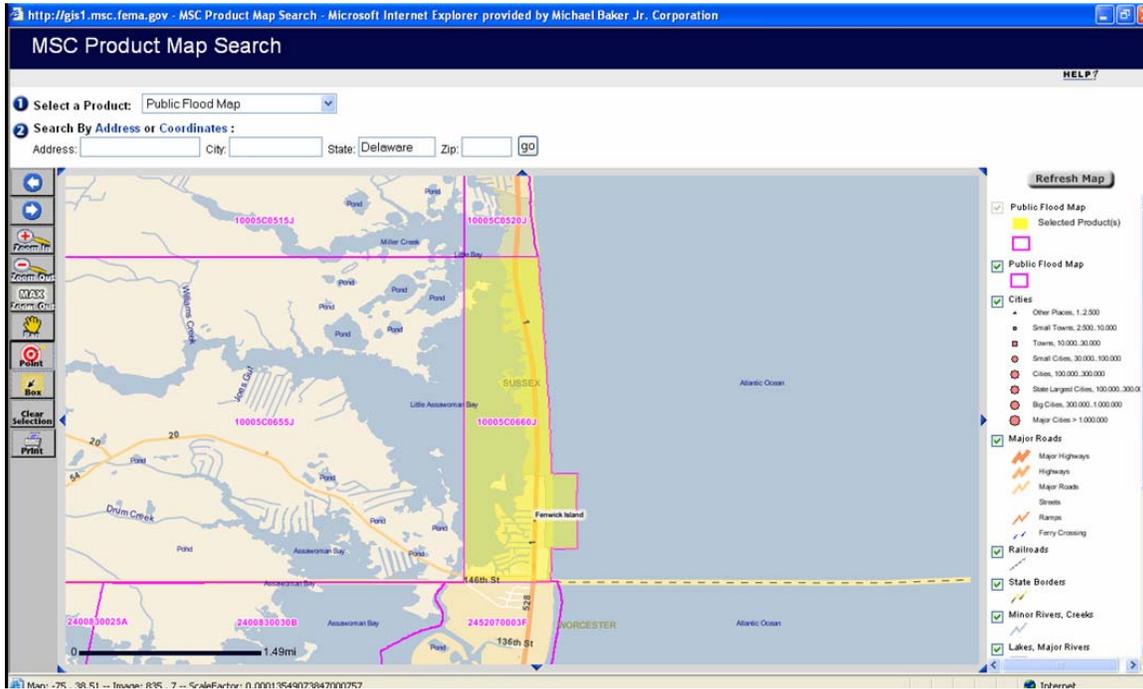


Figure 18. After zooming in to an area to see the panels, select the desired panel using the "Point" command or more than one panel using the "Box" command. A new window pops up to display the record(s) for the selected product(s).

The best way to search depends on what a customer knows (numbers refer to annotations on Figure 16). If the customer knows:

- A street address: Use item 1 (with the Address tab) to access the map that contains that address, or 3 to use all or part of an address and a map to search for products.
- A State, county, and community name and wants to see all products for that place: Use items 2, 4 (if looking for a kit), or 5.
- An area by looking at a map, by using part of a street address, or by using a longitude-latitude coordinate: Use item 3.
- The map panel or map index number: Use item 1 (with the Map Panel ID tab) or 4.

5.2.2. Ordering NFIP Maps and FIRMscan Data

The goal for using the search capabilities described in the previous section is to view the record(s) for the product(s) (see Figure 19). The record identifies the NFIP map number, name, and effective date.

The screenshot shows the FEMA Map Service Center website. At the top, there is a blue header with the FEMA logo and the text "FEMA Map Service Center". Below the header is a navigation bar with links: "Product Catalog | Map Search | Quick Order | Digital Post Office | Help" and a "Log on" button. The main content area is titled "Map Search Results" and "FEMA issued Flood Maps". It contains a table with the following data:

Map Item ID	Description	Effective Date	Show LOMC	View	Buy
10005C0660J	SUSSEX CO UNINC&INC AREAS	01/06/2005	+		

At the bottom of the page, there is a footer with links: "FEMA.gov | Accessibility | Privacy Policy | FAQ | Site Help | Site Index | Contact Us" and contact information: "FEMA Map Service Center, P.O. Box 1038 Jessup, Maryland 20794-1038 Phone: (800) 358-9616".

Figure 19. Record for NFIP map panel 10005C0660J. Clicking on the blue dollar sign (“\$”) reveals ordering options for the paper map and FIRMscan data (see Figure 22).

A search can result in the return of multiple product records. For example, searching by State, county, and community (see Figure 20) will result in the return of multiple product records (see Figure 21). The records might be returned on several web pages. Records initially are sorted by NFIP map panel number in ascending order. Figure 20 also shows how county and community kits are offered to customers.

In cases when the search returns the record(s) for an NFIP map index(es), the index(es) initially sort as the last record(s). Indexes have map numbers that include “IND.”

Using and Obtaining NFIP Maps and Data

FEMA Map Service Center

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

Home > Product Catalog > FEMA Issued Flood Maps

FEMA Issued Flood Maps

Use the following selection boxes to find your area of interest. If you want all maps for a particular jurisdiction click the "Get Kit" button which will appear to the right.

FEMA ID

To order state kits, please contact customer service at (800) 358-9616.

- Select a State, District or Territory: DELAWARE
- Select a County, Parish, etc.: SUSSEX COUNTY
- Select a Community: SUSSEX CO*
-

* designates unincorporated areas

FEMA.gov | Accessibility | Privacy Policy | FAQ | Site Help | Site Index | Contact Us

FEMA Map Service Center, P.O. Box 1038 Jessup, Maryland 20794-1038 Phone: (800) 358-9616

Figure 20. Example of a product search based on State, county and community. Clicking on "Get FEMA Issued Flood Maps" (item 4) returns records for all NFIP maps for the community (the result is Figure 21).

FEMA Map Service Center

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

Home > Product Catalog > FEMA Issued Flood Maps

FEMA Issued Flood Maps

State: DELAWARE County: SUSSEX COUNTY Community: SUSSEX CO*

Click the *View* button to view a map or to make a FIRMette. To purchase a map, click the *Buy* button to show pricing information. If you would like all the maps for the community, then click the *Get Community Kit* link above. Please be aware that some maps may have been amended by Letter of Map Change (LOMC) since publication. These maps have a "plus" sign in the "Show LOMC" column. Please note, that only LOMCs issued from June 1, 1997 through August 15, 2007 are available for viewing. To determine if additional LOMCs have been issued for a map, contact your local government office responsible for floodplain management. Index maps, if available, are located at the bottom of the listing and contain the characters ".IND." Flood Boundary and Floodway Maps may have been produced for this community. To view or order these, select the Flood Insurance Studies link on the catalog page.

A total of 97 items found. Displaying map item 1 through 20. Sort by: Item Id: Lowest First

1 | 2 | 3 | 4 | 5 NEXT >>

Item ID	Item Name	Effective Date	Show LOMC	View	Buy
10005C0019J	FLOOD INSURANCE RATE MAP (FIRM)	01/06/2005			
10005C0036J	FLOOD INSURANCE RATE MAP (FIRM)	01/06/2005			
10005C0037J	FLOOD INSURANCE RATE MAP (FIRM)	01/06/2005			
10005C0038J	FLOOD INSURANCE RATE MAP (FIRM)	01/06/2005			
10005C0039J	FLOOD INSURANCE RATE MAP (FIRM)	01/06/2005	+		

Figure 21. Portion of the first page of records returned for the search illustrated in Figure 20.

Clicking on the blue dollar sign (“\$”) in a product record under the “Buy” column (see Figure 19) reveals options and prices for ordering paper NFIP maps (“Paper”), FIRMscans for the map on media (“CD”), or for downloading over the web (“On-line”) (see Figure 22).

The screenshot shows the FEMA Map Service Center website. At the top, there is a blue header with the FEMA logo and the text "Map Service Center". Below the header is a navigation bar with links for "Product Catalog", "Map Search", "Quick Order", "Digital Post Office", and "Help", along with a "Log on" button. The main content area is titled "Map Search Results" and displays a table of "FEMA issued Flood Maps". The table has columns for "Map Item ID", "Description", "Effective Date", "Show LOMC", "View", "Paper", "CD", and "On-Line". A single product record is shown for item ID 10005C0660J, described as "SUSSEX CO UNINC&INC AREAS", with an effective date of 01/06/2005. The "Buy" column shows three options: Paper (\$3.00), CD (\$3.00), and On-Line (\$2.50). There is a blue plus sign under "Show LOMC" and a globe icon under "View". An "Add to Cart" button is located below the table. At the bottom of the page, there is a footer with links for "FEMA.gov", "Accessibility", "Privacy Policy", "FAQ", "Site Help", "Site Index", and "Contact Us", along with the address and phone number of the FEMA Map Service Center.

Map Item ID	Description	Effective Date	Show LOMC	View	Paper	CD	On-Line
10005C0660J	SUSSEX CO UNINC&INC AREAS	01/06/2005	+		<input type="checkbox"/> \$3.00	<input type="checkbox"/> \$3.00	<input type="checkbox"/> \$2.50

[Add to Cart](#)

Figure 22. Clicking on the blue dollar sign under the “Buy” column in a product record (see Figure 19) reveals options for ordering paper maps or FIRMscan data.

5.2.3. Creating Web-based FIRMettes

The record for a map product also provides access to the capability to create a FIRMette on the web. Clicking on the globe-and-magnifying glass icon under the “View” column opens the FIRMette tool in a new window and loads the map image. See section 4.1.4 for more discussion of the web-based FIRMette tool.

5.3. Obtaining DFIRM Databases

5.3.1. Finding the Right DFIRM Databases

The MSC web site offers several ways to search for DFIRM databases. Sections of the MSC home page that provide access to these search capabilities are shown in Figure 24.

Using and Obtaining NFIP Maps and Data

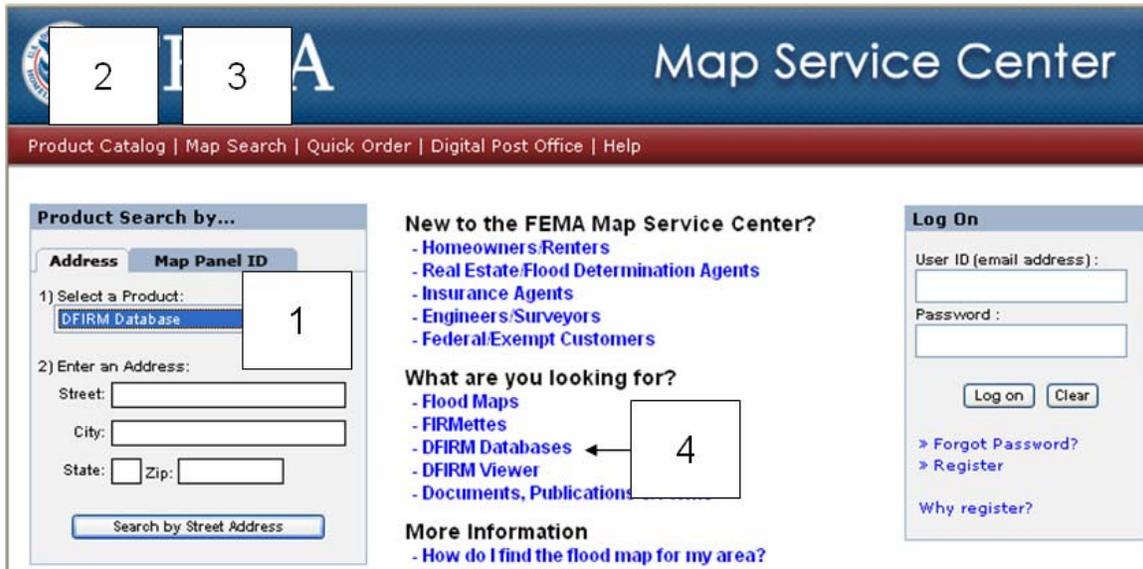


Figure 23. Starting points for finding DFIRM databases on the MSC home page.

These capabilities are (the numbers in the list refer to the annotations in Figure 23):

1. Search by address: By clicking on the tab “Address” customers can enter a street address and view the record(s) for the product(s). When searching by address, be sure that the product type is “DFIRM Database.”
2. Search by State, county, and community: Click on “Product Catalog” to view the product list, and then click on product type “DFIRM databases” to search for products by State, county, and community to display the record(s) for available products.
3. Search using a map: Click on “Map Search” to search for products using a map (see Figure 24). Main parts of this capability (the numbers refer to annotations in the figure) are (1) the selection of product type (“DFIRM Database”) and the ability to zoom to an address (or part of an address, such as a State, city and State, or zip code) or coordinate, (2) a Help page that describes how to use the map controls, (3) the controls for zooming in and out and panning to control the map being displayed and the controls to select individual product(s), (4) the map view (on which DFIRM database availability is among the data shown), and (5) the map legend, which includes the ability to select the features that are displayed in the map view. After selecting products using the Point or Box command, a new window will display the records for the products selected.
4. Search by State, county, and community: Click on “DFIRM databases” to search for products by State, county, and community to display the record(s) for available products.

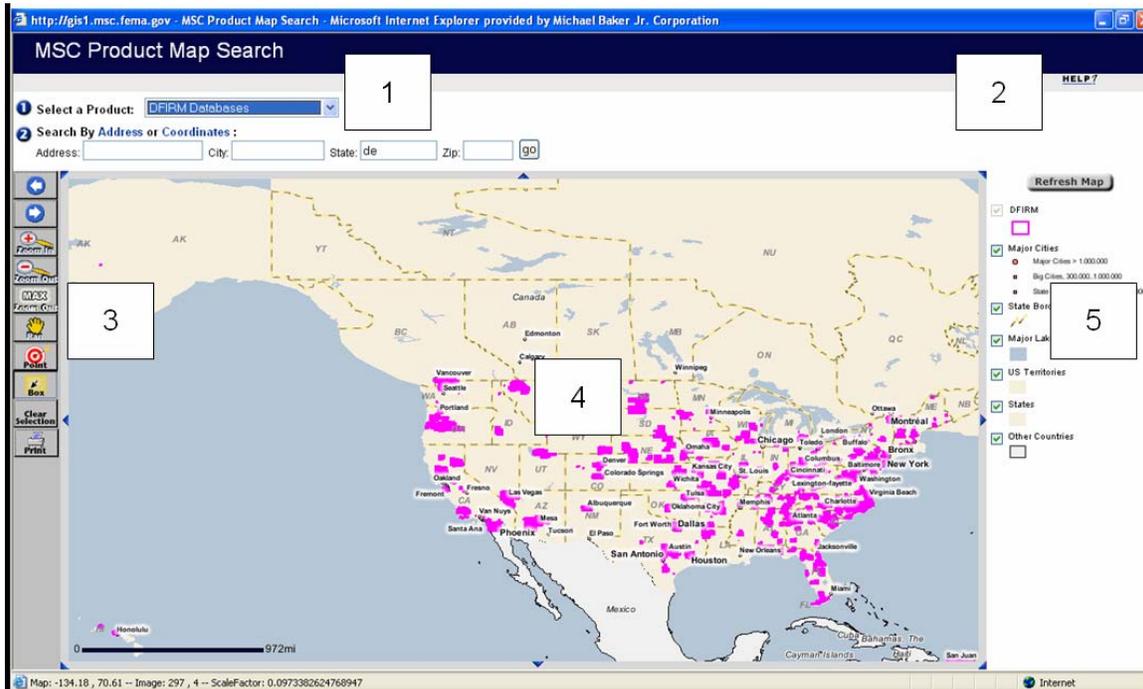


Figure 24. Opening screen to search for DFIRM databases using a map. The shaded areas show the places for which DFIRM data are available.

5.3.2. Ordering DFIRM Databases

The goal for using these search capabilities is to view the record(s) for the DFIRM database(s) (see Figure 25). The record identifies the DFIRM number, name, and effective date.

A search can result in the return of one or more DFIRM database product records. DFIRM databases usually cover an entire county or community, so typically there are fewer records returned than for a similar search for NFIP maps. The records might be returned on several web pages. Records initially are sorted by DFIRM database identifier in ascending order.

As shown in Figure 25, DFIRM databases can be downloaded over the web (“On-Line”) or obtained on media (“CD”). The third column, “CD with Basemaps,” is offered if the base map is an orthophoto (aerial photograph). Orthophoto data are only available on media.

Using and Obtaining NFIP Maps and Data

The screenshot shows the FEMA Map Service Center website. At the top, there is a navigation bar with the FEMA logo and the text 'Map Service Center'. Below this is a secondary navigation bar with links for 'Product Catalog', 'Map Search', 'Quick Order', 'Digital Post Office', and 'Help', along with a 'Log on' button. The main content area is titled 'Map Search Results' and features a section for 'DFIRM Databases'. This section contains a table with the following data:

DFIRM ID	Description	Effective Date	On-Line	CD	CD with Basemaps
10003C	NEW CASTLE CO., UNINC&INC AREAS	05/05/2003	<input type="checkbox"/> \$10.00	<input type="checkbox"/> \$10.00	
24025C	HARFORD CO UNINC&INC AREAS	01/07/2000	<input type="checkbox"/> \$10.00	<input type="checkbox"/> \$10.00	
42029C	CHESTER ALL JURISDICTIONS	09/29/2006	<input type="checkbox"/> \$10.00	<input type="checkbox"/> \$10.00	<input type="checkbox"/> \$10.00
42071C	LANCASTER CO ALL JURISDICTIONS	04/19/2005	<input type="checkbox"/> \$10.00	<input type="checkbox"/> \$10.00	

Below the table, there is an 'Add to Cart' button with a shopping cart icon. At the bottom of the page, there is a footer with links for 'FEMA.gov', 'Accessibility', 'Privacy Policy', 'FAQ', 'Site Help', 'Site Index', and 'Contact Us', along with the address and phone number: 'FEMA Map Service Center, P.O. Box 1038 Jessup, Maryland 20794-1038 Phone: (800) 358-9616'.

Figure 25. Results from a product search for DFIRM databases.

5.4. Obtaining Letters of Map Change (LOMCs)

The MSC web site offers several ways to search for LOMCs. The section of the MSC home page that provides access to these search capabilities is shown in Figure 26. Clicking the link “How do I find a LOMC?” opens a web page that allows users to search by LOMC case number. This capability returns records for user-provided case numbers (see Figure 27).

FEMA Map Service Center

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

Product Search by...

Address | Map Panel ID

1) Select a Product:

2) Enter an Address:
 Street:
 City:
 State: Zip:

New to the FEMA Map Service Center?

- Homeowners/Renters
- Real Estate/Flood Determination Agents
- Insurance Agents
- Engineers/Surveyors
- Federal/Exempt Customers

What are you looking for?

- Flood Maps
- FIRMettes
- DFIRM Databases
- DFIRM Viewer
- Documents, Publications & Forms

More Information

- How do I find the flood map for my address?
- What is a FIRMette?
- How do I find a LOMC? ← 1
- Definitions of FEMA Flood Zones
- Product Information

Log On

User ID (email address):

Password:

> [Forgot Password?](#)
 > [Register](#)

[Why register?](#)

Announcements

FIRMette Tutorial

[Learn how to create](#)

Figure 26. Starting points for finding LOMCs on the MSC home page.

FEMA Map Service Center

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

LOMC Search Results

Item ID	Item Name	Effective Date	View
05-03-0188A-100029	LOMC	02/01/2005	

FEMA.gov | Accessibility | Privacy Policy | FAQ | Site Help | Site Index | Contact Us

FEMA Map Service Center, P.O. Box 1038 Jessup, Maryland 20794-1038 Phone: (800) 358-9616

Figure 27. Record for LOMC case number 05-03-0188A, Click on the red PDF icon under the “View” column to download the LOMC.

The other means for finding LOMCs is through the records for the NFIP map panel(s) they affect. The record for every NFIP map provides access to the LOMCs (if there are any) for the panel (see Figure 28 and Figure 29). Clicking on the blue plus sign (“+”) under the “Show LOMC” column reveals the LOMCs for the panel.

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Clicking on the red PDF icon downloads the LOMC to the user's computer where it can be saved and printed.

The screenshot shows the FEMA Map Service Center interface. At the top, there is a navigation bar with the FEMA logo and the text "Map Service Center". Below this is a secondary navigation bar with links for "Product Catalog", "Map Search", "Quick Order", "Digital Post Office", and "Help", along with a "Log on" button. The main content area is titled "Map Search Results" and displays a table of "FEMA issued Flood Maps". The table has columns for "Map Item ID", "Description", "Effective Date", "Show LOMC", "View", and "Buy". The first row shows item 10005C0355J, "SUSSEX CO UNINC&INC AREAS", with an effective date of 01/06/2005. Under the "Show LOMC" column, there is a blue plus sign (+). Under the "View" column, there is a magnifying glass icon. Under the "Buy" column, there is a dollar sign icon. At the bottom of the page, there is a footer with links for "FEMA.gov", "Accessibility", "Privacy Policy", "FAQ", "Site Help", "Site Index", and "Contact Us", along with the address and phone number for the FEMA Map Service Center.

Map Item ID	Description	Effective Date	Show LOMC	View	Buy
10005C0355J	SUSSEX CO UNINC&INC AREAS	01/06/2005	+		

Figure 28. Record for NFIP map panel 10005C0355J. Click on the blue plus sign (“+”) under the “Show LOMC” column to reveal the LOMCs for the map panel (see Figure 29).

The screenshot shows the FEMA Map Service Center interface with the "Show LOMC" column expanded. The table now lists several LOMC records for the map panel 10005C0355J. Each LOMC record includes a "LOMC" ID, a description, and an effective date. Under the "View" column, there are red PDF icons for each LOMC. Under the "Show LOMC" column, there is a blue minus sign (-). The "Buy" column still shows a dollar sign icon.

Map Item ID	Description	Effective Date	Show LOMC	View	Buy
10005C0355J	SUSSEX CO UNINC&INC AREAS	01/06/2005	-		
LOMC	05-03-0291V-100029	01/07/2005			
LOMC	05-03-0188A-100029	02/01/2005			
LOMC	05-03-0229A-100029	01/27/2005			
LOMC	05-03-0811A-100029	07/01/2005			
LOMC	05-03-0959A-105086	08/04/2005			
LOMC	05-03-1007A-105086	08/23/2005			
LOMC	06-03-0137A-105086	12/29/2005			

Figure 29. Clicking on the plus sign (see Figure 28) reveals LOMCs for the map panel and changes the plus sign to a minus sign (“-”). Click on the red PDF icons under the “View” column to download the LOMCs. Click on the minus sign under the “Show LOMC” column to hide the list of LOMCs.

5.5. Obtaining Flood Insurance Study (FIS) Reports

The MSC web site offers FIS reports through the Product Catalog (see item 1 in Figure 30). After clicking on “Flood Insurance Studies” on the Product Catalog page, users identify the State, county, and community for the FIS of interest (see Figure 31).



Figure 30. Starting point for finding FIS reports on the MSC home page.

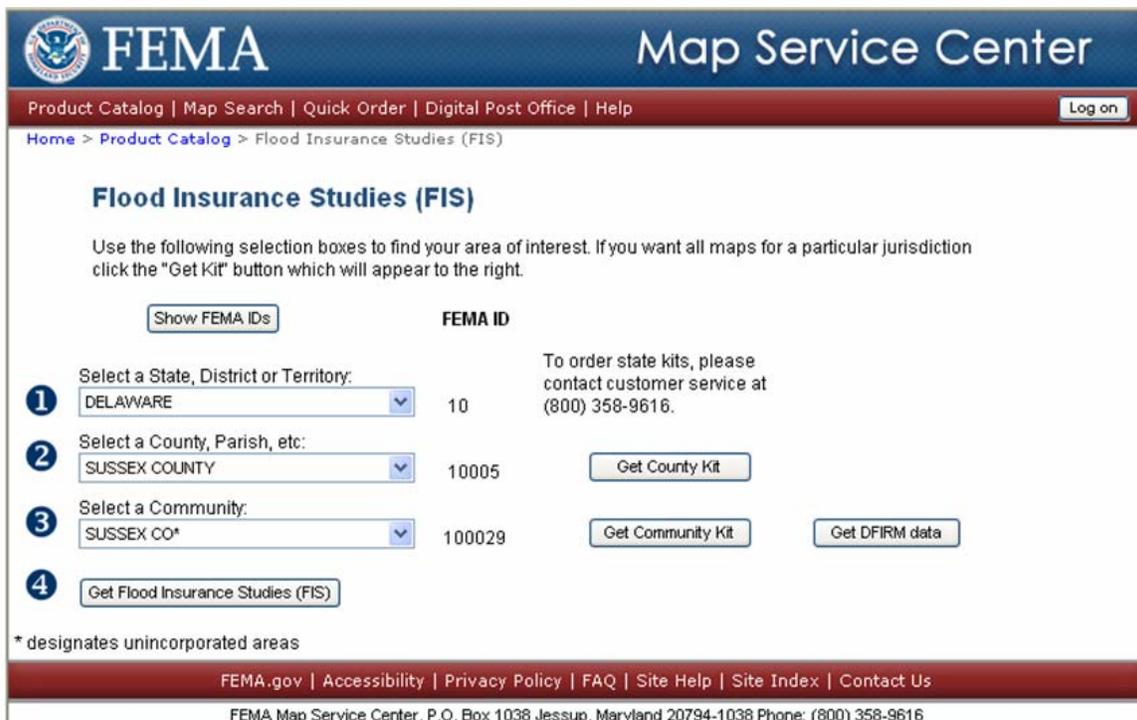


Figure 31. Example of a search for an FIS report based on State, county and community. Clicking on "Get Flood Insurance Studies" (item 4) returns the FIS report record (see Figure 32) for the area of the study (typically a county or community).

The search returns the record for the FIS report (see Figure 32). The record includes the FIS product identifier and name. FIS reports can be received on paper, computer media (“CD”), or by

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download over the web (“On-Line”). They can be viewed online by clicking on the globe-and-magnifying glass icon under the “View” column.

Flood Insurance Studies (FIS)
State : DELAWARE County : SUSSEX COUNTY
Community : SUSSEX CO*

Product ID	Paper	CD	On-Line
100029S	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Product Item ID	Product Item Name	Effective Date	View
10005CV001A	FLOOD INSURANCE STUDY (FIS)	01/06/2005	
10005CV002A	FLOOD INSURANCE STUDY (FIS)	01/06/2005	

[Add to Cart](#)

* designates unincorporated areas

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Figure 32. Record for the FIS for Sussex County, Delaware. Users can order the FIS by checking the appropriate box or view it online by clicking on the green globe-and-magnifying glass icon.

An FIS report is only sold as a kit to ensure that customers receive all report components. This kit includes the FIS report volumes and floodway maps if available.

Appendix A. Choosing the Right Map Product

FEMA offers access to its flood hazard maps and data in many forms. This appendix provides guidance on selecting a product.

Figure 33 starts with the task “I want to see if a property is in a flood zone.”

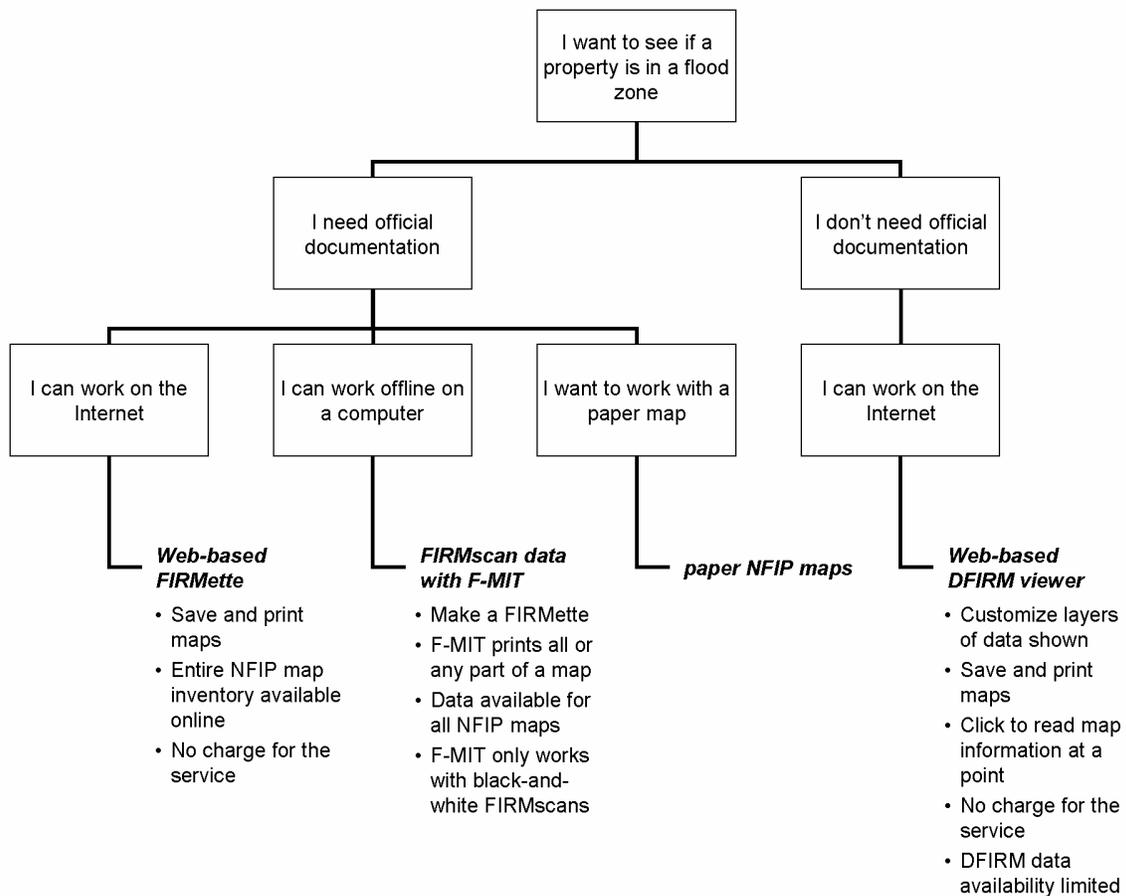


Figure 33. Deciding on the right product to determine whether a property is in an SFHA.

Figure 34 starts with the task “I want to work with FEMA flood data in a geographic information system (GIS) or other computer software.”

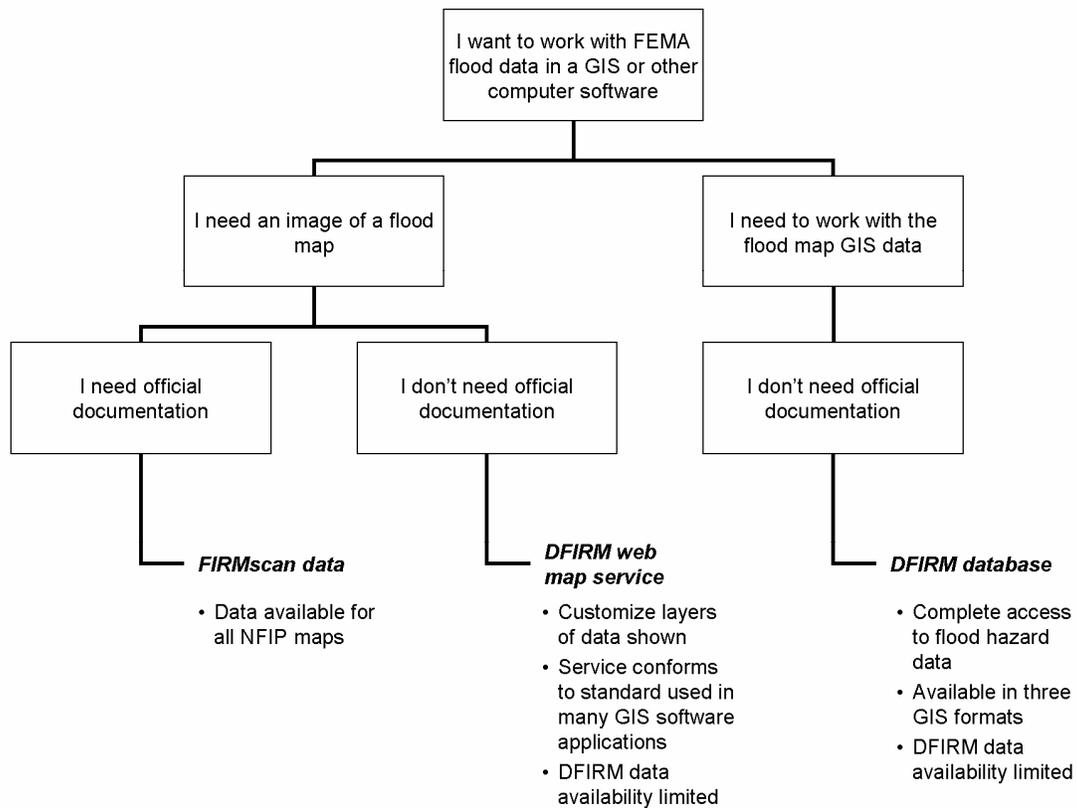


Figure 34. Deciding on the right product for use with GIS or other computer software.

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Appendix B. Letter of Map Amendment Determination Document

Page 1 of 2	Date: February 1, 2005	Case No.: 05-03-0188A	LOMA					
 Federal Emergency Management Agency Washington, D.C. 20472								
LETTER OF MAP AMENDMENT DETERMINATION DOCUMENT (REMOVAL)								
COMMUNITY AND MAP PANEL INFORMATION		LEGAL PROPERTY DESCRIPTION						
COMMUNITY	SUSSEX COUNTY, DELAWARE (Unincorporated Areas) COMMUNITY NO.: 100029	Lot 28, Pine Bay, Section of Country Manor, as described in the Deed recorded as Instrument No. 10826 in Book 01976, Pages 033 and 034, in the Office of the Recorder of Deeds, Sussex County, Delaware						
AFFECTED MAP PANEL	NUMBER: 10005C0355J NAME: SUSSEX COUNTY, DELAWARE AND INCORPORATED AREAS DATE: 1/6/2005							
FLOODING SOURCE: REHOBOTH BAY								
		APPROXIMATE LATITUDE & LONGITUDE OF PROPERTY: 38.698, -75.084 SOURCE OF LAT & LONG: PRECISION MAPPING STREETS 4.0 DATUM: NAD 83						
DETERMINATION								
LOT	BLOCK/ SECTION	SUBDIVISION	STREET	OUTCOME WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANGE FLOOD ELEVATION (NAVD 88)	LOWEST ADJACENT GRADE ELEVATION (NAVD 88)	LOWEST LOT ELEVATION (NAVD 88)
28	—	Pine Bay	1 Hawks Nest	Structure	X (shaded)	6.2 feet	9.0 feet	—
Special Flood Hazard Area (SFHA) - The SFHA is an area that would be inundated by the flood having a 1-percent chance of being equalled or exceeded in any given year (base flood).								
ADDITIONAL CONSIDERATIONS (Please refer to the appropriate section on Attachment 1 for the additional considerations listed below.)								
PORTIONS REMAIN IN THE SFHA								
This document provides the Federal Emergency Management Agency's determination regarding a request for a Letter of Map Amendment for the property described above. Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we have determined that the structure(s) on the property(ies) is/are not located in the SFHA, an area inundated by the flood having a 1-percent chance of being equalled or exceeded in any given year (base flood). This document amends the effective NFIP map to remove the subject property from the SFHA located on the effective NFIP map; therefore, the Federal mandatory flood insurance requirement does not apply. However, the lender has the option to continue the flood insurance requirement to protect its financial risk on the loan. A Preferred Risk Policy (PRP) is available for buildings located outside the SFHA. Information about the PRP and how one can apply is enclosed.								
This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, 3601 Eisenhower Avenue, Suite 600, Alexandria, VA 22304-6439.								
				 Doug Bellomo, P.E., CFM, Chief Hazard Identification Section, Mitigation Division Emergency Preparedness and Response Directorate				
						Version 1.3.3	1029299.1LOMA-SL035440188	

Page 2 of 2	Date: February 1, 2005	Case No.: 05-03-0188A	LOMA
 Federal Emergency Management Agency Washington, D.C. 20472			
LETTER OF MAP AMENDMENT DETERMINATION DOCUMENT (REMOVAL) ATTACHMENT 1 (ADDITIONAL CONSIDERATIONS)			
<p>PORTIONS OF THE PROPERTY REMAIN IN THE SFHA (This Additional Consideration applies to the preceding 1 Property.) Portions of this property, but not the subject of the Determination/Comment document, may remain in the Special Flood Hazard Area. Therefore, any future construction or substantial improvement on the property remains subject to Federal, State/Commonwealth, and local regulations for floodplain management.</p>			
<p>This attachment provides additional information regarding this request. If you have any questions about this attachment, please contact the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, 3601 Eisenhower Avenue, Suite 600, Alexandria, VA 22304-6439.</p>			
 Doug Bellomo, P.E., CFM, Chief Hazard Identification Section, Mitigation Division Emergency Preparedness and Response Directorate Version 1.3.3 1029299.1LOMA-SL035440188			

Using and Obtaining NFIP Maps and Data

Appendix C. Letter of Map Revision Determination Document

Page 1 of 4	Issue Date: JUN 30 2006	Effective Date: JUL 31 2006	Case No.: 05-03-0362P	LOMR-APP
		FEMA U.S. Department of Homeland Security One Independence Mall, Sixth Floor 615 Chestnut Street Philadelphia, PA 19106-4404		
LETTER OF MAP REVISION DETERMINATION DOCUMENT				
COMMUNITY AND REVISION INFORMATION		PROJECT DESCRIPTION	BASIS OF REQUEST	
COMMUNITY	Town of Lovettsville Loudoun County Virginia COMMUNITY NO.: 510259	NO PROJECT	HYDRAULIC ANALYSIS NEW TOPOGRAPHIC DATA	
IDENTIFIER	Pine Grove Subdivision, Floodplain Study, Lot 5A	APPROXIMATE LATITUDE & LONGITUDE: 39.2724, -77.6369 SOURCE: USGS QUADRANGLE DATUM: NAD 83		
ANNOTATED MAPPING ENCLOSURES		ANNOTATED STUDY ENCLOSURES		
TYPE: FIRM* NO.: 51107C0025 D DATE: July 5, 2001		NO REVISION TO THE EFFECTIVE FLOOD INSURANCE STUDY REPORT		
Enclosures reflect changes to flooding sources affected by this revision. * FIRM - Flood Insurance Rate Map; ** FBFM - Flood Boundary and Floodway Map; *** FHBM - Flood Hazard Boundary Map				
FLOODING SOURCE(S) & REVISED REACH(ES)				
Dutchman Creek - from approximately 1,350 feet downstream to approximately 700 feet upstream of Church Street (State Route 675)				
SUMMARY OF REVISIONS				
Flooding Source	Effective Flooding	Revised Flooding	Increases	Decreases
Dutchman Creek	Zone AE BFes*	Zone AE BFes	YES NONE	YES NONE
* BFes - Base Flood Elevations				
DETERMINATION				
This document provides the determination from the Department of Homeland Security's Federal Emergency Management Agency (FEMA) regarding a request for a Letter of Map Revision (LOMR) for the area described above. Using the information submitted, we have determined that a revision to the flood hazards depicted in the Flood Insurance Study (FIS) report and/or National Flood Insurance Program (NFIP) map is warranted. This document revises the effective NFIP map, as indicated in the attached documentation. Please use the enclosed annotated map panels revised by this LOMR for floodplain management purposes and for all flood insurance policies and renewals in your community.				
This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Assistance Center toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMR Depot, 3601 Eisenhower Avenue, Alexandria, VA 22304. Additional information about the NFIP is available on our website at http://www.fema.gov/nfip .				
 Eugene K. Gruber, P.E., Director Federal Insurance and Mitigation Division Federal Emergency Management Agency, Region III			106979 10.3.1.05030362	102-I-C

Page 2 of 4 Issue Date: JUN 30 2006 Effective Date: JUL 31 2006 Case No.: 05-03-0362P LOMR-APP



FEMA

U.S. Department of Homeland Security
One Independence Mall, Sixth Floor
615 Chestnut Street
Philadelphia, PA 19106-4404

LETTER OF MAP REVISION DETERMINATION DOCUMENT (CONTINUED)

COMMUNITY INFORMATION

APPLICABLE NFIP REGULATIONS/COMMUNITY OBLIGATION

We have made this determination pursuant to Section 206 of the Flood Disaster Protection Act of 1973 (P.L. 93-234) and in accordance with the National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968, P.L. 90-448), 42 U.S.C. 4001-4128, and 44 CFR Part 65. Pursuant to Section 1361 of the National Flood Insurance Act of 1968, as amended, communities participating in the NFIP are required to adopt and enforce floodplain management regulations that meet or exceed NFIP criteria. These criteria, including adoption of the FIS report and FIRM, and the modifications made by this LOMR, are the minimum requirements for continued NFIP participation and do not supersede more stringent State/Commonwealth or local requirements to which the regulations apply.

COMMUNITY REMINDERS

We based this determination on the 1-percent-annual-chance flood discharges computed in the FIS for your community without considering subsequent changes in watershed characteristics that could increase flood discharges. Future development of projects upstream could cause increased flood discharges, which could cause increased flood hazards. A comprehensive restudy of your community's flood hazards would consider the cumulative effects of development on flood discharges subsequent to the publication of the FIS report for your community and could, therefore, establish greater flood hazards in this area.

Your community must regulate all proposed floodplain development and ensure that permits required by Federal and/or State/Commonwealth law have been obtained. State/Commonwealth or community officials, based on knowledge of local conditions and in the interest of safety, may set higher standards for construction or may limit development in floodplain areas. If your State/Commonwealth or community has adopted more restrictive or comprehensive floodplain management criteria, those criteria take precedence over the minimum NFIP requirements.

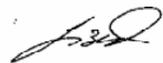
We will not print and distribute this LOMR to primary users, such as local insurance agents or mortgage lenders; instead, the community will serve as a repository for the new data. We encourage you to disseminate the information in this LOMR by preparing a news release for publication in your community's newspaper that describes the revision and explains how your community will provide the data and help interpret the NFIP maps. In that way, interested persons, such as property owners, insurance agents, and mortgage lenders, can benefit from the information.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Assistance Center toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMR Depot, 3801 Eisenhower Avenue, Alexandria, VA 22304. Additional information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

Eugene K. Gruber, P.E., Director
Federal Insurance and Mitigation Division
Federal Emergency Management Agency, Region III

106979 10.3.1.05030362 102-I-C

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		FEMA		
U.S. Department of Homeland Security One Independence Mall, Sixth Floor 615 Chestnut Street Philadelphia, PA 19106-4404				
LETTER OF MAP REVISION DETERMINATION DOCUMENT (CONTINUED)				
We have designated a Consultation Coordination Officer (CCO) to assist your community. The CCO will be the primary liaison between your community and FEMA. For information regarding your CCO, please contact:				
Mr. Eugene K. Gruber Director, Federal Insurance and Mitigation Division Federal Emergency Management Agency, Region III One Independence Mall, Sixth Floor 615 Chestnut Street Philadelphia, PA 19106-4404 (215) 931-5512				
STATUS OF THE COMMUNITY NFIP MAPS				
We will not physically revise and republish the FIRM for your community to reflect the modifications made by this LOMR at this time. When changes to the previously cited FIRM panel(s) warrant physical revision and republication in the future, we will incorporate the modifications made by this LOMR at that time.				
Because this revision does not involve floodway changes, we are not revising the Flood Boundary and Floodway Map (FBFM); therefore, no annotated copies of the FBFM are enclosed. Unless a subsequent physical map revision involves floodway changes for the FBFM panel(s), we will not revise the FBFM to show the modifications described in this LOMR.				
This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Assistance Center toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMR Depot, 3601 Eisenhower Avenue, Alexandria, VA 22304. Additional Information about the NFIP is available on our website at http://www.fema.gov/nfip .				
 Eugene K. Gruber, P.E., Director Federal Insurance and Mitigation Division Federal Emergency Management Agency, Region III				
				106979 10.3.1.05030362 102-I-C

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LETTER OF MAP REVISION DETERMINATION DOCUMENT (CONTINUED)

PUBLIC NOTIFICATION OF REVISION

This revision will become effective 30 days from the date of this letter. Any requests to review or alter this determination should be made within 30 days and must be based on scientific or technical data.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Assistance Center toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMR Depot, 3601 Eisenhower Avenue, Alexandria, VA 22304. Additional Information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

Eugene K. Gruber, P.E., Director
Federal Insurance and Mitigation Division
Federal Emergency Management Agency, Region III

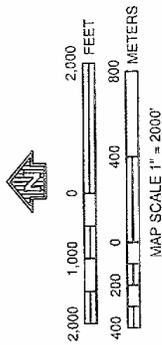
106979 10.3.1.05030362 102-I-C

Using and Obtaining NFIP Maps and Data

Legend

-  1% annual chance (100-Year) Floodplain
-  1% annual chance (100-Year) Floodway
-  0.2% annual chance (500-Year) Floodplain

All Elevations Referenced in NGVD 29



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
LOUDOUN COUNTY,
VIRGINIA
AND INCORPORATED AREAS

PANEL 25 OF 435
SEE MAP INDEX FOR PANELS NOT SHOWN

DATE OF MAP: 2000
DATE OF REVISION: 2000

MAP NUMBER: 510259 D
EFFECTIVE DATE: JULY 5, 2001

Federal Emergency Management Agency

