

# **Mapping Needs Update Support System Tutorial for Users**

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[Accessibility](#)

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## **Welcome to the Mapping Needs Update Support System Tutorial for Users**

**This tutorial includes a glossary of terms frequently used throughout this tutorial.**

# Learning Objectives

After reviewing this tutorial, the user should:

Understand the Mapping Needs Assessment Process and how to use the Mapping Needs Update Support System (MNUSS) in assessing flood hazard mapping needs;

Be able to gather information for updating map maintenance needs to better locate properties relative to Special Flood Hazard Areas on a Flood Insurance Rate Map (FIRM);

Be able to gather information for updating flood data to provide communities with an accurate FIRM to establish floodplain management and properly rated flood insurance policies; and

Be able to enter communities' mapping needs in the MNUSS database.

# Introduction

The Mapping Needs Assessment (MNA) Process identifies flood hazard mapping needs for communities nationwide and, through the use of the Mapping Needs Update Support System (MNUSS), maintains an inventory of those needs for future map updates.

In accordance with Section 575 of the National Flood Insurance Reform Act of 1994, the Federal Emergency Management Agency (FEMA) assesses *“once during a 5-year period...the need to revise and update all floodplain areas and flood risk zones identified, delineated, or established based on an analysis of all natural hazards affecting flood risks.”*

The MNA Process is a significant component of the National Flood Insurance Program (NFIP). It allows the Program to better serve communities by providing up-to-date information needed to prioritize mapping needs.

FEMA uses the results of flood hazard mapping needs assessments for overall management of the mapping program. Many of the existing Flood Insurance Rate Maps (FIRMs) are over 15 years old and need revising. Since there are over 90,000 map panels currently published, revising the FIRMs is a big task. Gathering accurate and up-to-date information will help FEMA effectively assess community mapping needs. FEMA uses this information to assist in evaluating communities for funding allocation and study prioritizing.

Also, identifying mapping needs is a critical step in identifying those communities that would benefit from partnering with FEMA as a Cooperating Technical Partners (CTP) and are willing to assist in updating their FIRMs.

## **Introduction (*continued*)**

Through the MNA process, all mapped communities participating in the National Flood Insurance Program (NFIP) can have their mapping needs identified and documented in MNUSS.

MNUSS is a password-protected web-based database that is used to save and compile communities' mapping needs. Existing mapping needs are ranked and prioritized nationwide. Mapping needs which have been resolved can still be viewed in MNUSS, but have been removed from ranking.

To date, more than 19,000 mapped communities participating in the NFIP have been contacted for mapping update needs.

This tutorial will help State NFIP Coordinators, local floodplain managers, authorized CTPs and regional entity users of MNUSS to enter and view needs for map maintenance and flood data updates.

It will also explain how to assess mapping needs and the completion of the MNUSS Data Worksheet in order to enter information into MNUSS.

## **Introduction (*continued*)**

Accessibility to different functions of MNUSS is determined by user rights assigned by the FEMA MNUSS Administrator. User rights are based on factors, such as a user's work, user's affiliation with FEMA and the NFIP, and the duties needed to enter data into the database. Only the FEMA MNUSS Administrator can authorize new users and modification of existing user rights.

This tutorial will cover the duties needed by User Rights Level 3 users.

# MNUSS Data Worksheet

The [“Guide to Input of Mapping Needs Into MNUSS”](#) and the [MNUSS Data Worksheet](#) will help in gathering necessary information for a community’s mapping needs and aid in efficient and comprehensive data entry into MNUSS.

# Gathering Information

The MNUSS Data Worksheet should be completed before entering needs into MNUSS (<https://www.mnuss.fema.gov/PDF/mnusswrksht.pdf>). This worksheet can be printed and completed by hand or it can be completed electronically.

The following tools may be helpful in guiding you through completion of the worksheet.

Community FIRMs

Engineer's scale

Calculator

Map wheel (if available)

# Gathering Information

## Community Description & Origin

Community Name – name of the community; can be found in the FIRM's title

State – state where community is located; can be found in the FIRM's title

CID – Community Identification Number; 6 digits; can be found in the FIRM's title

Origin – organization (entity), contact name, title, address, phone and fax numbers, and e-mail address for the source of the mapping need information

(Note: All of this information is required.)

## **Map Maintenance Needs**

Map Maintenance Needs are those mapping needs that do not require changes to the Special Flood Hazard Areas (SFHA), floodways, or base flood elevations (BFE); therefore, they do not require new engineering analyses.

Map maintenance needs consist of changes to map features on the FIRM, such as road names, aligning panels, adding or revising elevation reference marks (ERM), corporate limits, adding Letters of Map Changes (LOMC), and converting to countywide format.

Map Maintenance Needs relate to these features found on the community's base map. The physical features help map users locate properties relative to the SFHA. It is important that the features shown on the map be accurate and up-to-date.

## Map Maintenance Needs

Multiple map maintenance needs should be recorded on the same worksheet, but each need should be entered separately into MNUSS. Document the map panel numbers, effective date of the affected panels and details of changes.

When examining the FIRM for updates, consider:

Adding streets to panel – new roads built; inaccuracies of road locations relative to the SFHA

Revising ERMS – ERMs shown, destroyed, or revised

Aligning contiguous map panels – FIRM panels alignment

Adding Letter of Map Changes – Letters of Map Revision and mappable Letters of Map Amendments completed after the effective FIRM was issued

Converting to countywide format – benefits to having community FIRM converted to countywide format

Annexations and Corporate Limit corrections – corporate limits changed or community annexations after the effective FIRM was issued

(Note: Not all roads are shown on a FIRM. On some FIRMs, smaller roads are only shown if they are in or near the SFHA.)

## **Flood Data Update Needs**

Flood Data Update needs are mapping needs that require new engineering analyses, which may result in the revision of the SFHA, floodway, and/or BFEs. Common flood data update needs include changes in hydrologic or hydraulic conditions that require new modeling.

These changes in hydrologic and hydraulic conditions may include development and land-use changes, new bridges, culverts, or earth moving activities.

To determine the community's Flood Data Update needs, any changes in hydrologic and hydraulic conditions since the community's Flood Insurance Study (FIS) was conducted or any errors in the effective modeling should be evaluated.

A community's FIS is based on hydrologic and hydraulic conditions. Hydrologic conditions determine the quantity of runoff generated by a given rainfall event, and hydraulic conditions determine the extent of the flooding caused by a given stream discharge.

## Flood Data Update Needs (continued)

### Hydrologic Conditions

Hydrology reflects the amount of water flowing in a stream. Typical changes that may affect hydrology:

Increase in development within the drainage area of the stream, and

Construction of a dam or lake (see [MNUSS Guide](#) for further details).

Development will often increase the amount of water flowing in a stream because of the impervious areas associated with development, such as streets and parking lots, which prevent rainfall from being absorbed into the ground. This may cause increases in flood hazard elevation, as well as changes to the SFHAs. Some dams or lakes reduce the amount of water flowing in the stream. The outlets for these dams and lakes are sized to release water at a lower rate than the floodwaters flowing to them. When a flood occurs, the floodwaters are stored behind the dam or in the lake and released at a lower rate.

### Hydraulic Conditions

Hydraulics affects how high the floodwaters rise from a given amount of runoff. It pertains to the means of carrying the runoff from streams, along with the velocity and location of the flow of water.

Some conditions that affect hydraulics are the geometry of the stream channel, vegetation or roughness in the stream channel, slope of the stream, and the presence of structures, such as, bridges, culverts, or dams. Typical changes that may affect hydraulics are:

Channel relocation,

Channel modifications (i.e., changes in channel geometry), and

Modification of bridges, culverts, or dams

## **Flood Data Update Needs (continued)**

Evaluate each flooding source or study reach (stream section) that needs to be revised separately on the FIRM. \*

Check Study Category (the type of flooding source)

Riverine (river, streams, and lakes; except for the Great Lakes)

Coastal (the Great Lakes, oceans, and areas affected by tide or wave action)

Alluvial (sedimentary deposit located at a topographic break)

Indicate the flooding source (the name of the flooding source that requires a map update)

If unnamed, write, "Unnamed tributary to ...(name of river, stream, lake or ocean)".

If the name of the flooding source is unknown, be sure to indicate the location of the flooding source in the "Notes" field of MNUSS.

Landmarks on the FIRM can also give a good description of the location of the unnamed tributary.

If the flooding source is named, but unnamed on the FIRM, include an explanation in the "Notes" field in MNUSS.

(Note: \*Each flooding source should be assessed and entered into MNUSS individually.)

## **Flood Data Update Needs (continued)**

### **Need Types**

There are 5 need types for Flood Data Update needs:

Changes to hydrologic conditions – changes that affect the amount of water that flows downstream during a flood (i.e., urban development in the watershed which increases the amount of rainfall runoff).

Changes to hydraulic conditions – changes that affect the passing of floodwaters in streams (i.e., construction of a road or culvert constricts the area available to carry floodwaters).

Changes to floodplain width – changes that affect the area subject to inundation by the base flood, whether greater or less than that shown on the effective FIRM (i.e., new topographic information displaying different areas in the floodplain).

Changes to BFE – changes that affect the water surface elevation of the 1% annual chance flood shown in the effective FIS or FIRM (i.e., the high-water mark from a base flood storm is higher or lower than the BFE shown on the effective FIRM).

Changes to coastal elevations – changes affecting the 1% annual chance flood elevations from coastal flooding shown in the effective FIS (i.e., the high-water mark from a base flood storm, including a hurricane or other severe storm, is higher or lower than the elevations shown on the effective FIRM).

## Flood Data Update Needs (continued)

### Flooding Source Specific Data

Average Change in BFE – an estimated increase or decrease (0-1 feet, 1-5 feet, or more than 5 feet) of how much the BFEs on the FIRMs will change if the flooding source is restudied (see [MNUSS Guide](#) on determining which BFE value to choose).

Length of Study Reach – the length (in miles) of the flooding source or the measurement of the streamline on a flood hazard map for areas that require restudy. The length can also be determined from the profile in the FIS. Identify beginning and ending points of the flooding source to better describe the physical location.

Average Floodplain Width – the average floodplain width (in feet) of the SFHA on the effective flood hazard map panels for areas that require restudy.

Once the Data Worksheet is entirely completed, the information is now ready to be entered into the database.

# Accessing MNUSS

## Approved Users

Go to <https://www.mnuss.fema.gov/> to view the start screen. Select the “Approved FEMA MNUSS User” link to go to the MNUSS login screen. Enter user name and password to continue. The User Name will be assigned by the FEMA MNUSS Administrator. If users forget their password, click on the “Forget Your Password? Click Here.” link to have the password e-mailed to the user.

The MNUSS Data Entry/ Edit menu, Reports and Functions menu, Resources menu, and Administrative menu will help users navigate through the web pages to enter, view, and edit data.

Before entering a new need, it is recommended that the current needs for the community in MNUSS be reviewed for duplicate data.

(Note: If there is no data entered within 20 minutes after logging in, the user will automatically be logged out.)

# Accessing MNUSS

## Local Floodplain Administrators

Go to <https://www.mnuss.fema.gov/> to view the start screen. Local floodplain administrators may select the “Local Floodplain Administrator” link to view a state profile of MNUSS community data. State profiles include flood mapping needs and other general community data that is stored in MNUSS.

A password is required to access the state profile and may be obtained from the appropriate Regional MNUSS Manager.

If local floodplain administrators have questions about the information in the state profile or if the information is inaccurate, please submit any questions or more accurate information to the appropriate FEMA Regional MNUSS Manager.

Click the Learn more about FEMA's Mapping Needs Assessment process link to return to the Mapping Needs webpage on the FEMA Flood Hazard Mapping Web Site ([http://www.fema.gov/mit/tsd/mn\\_main.htm](http://www.fema.gov/mit/tsd/mn_main.htm)).

## Accessing MNUSS

Again, accessibility to different functions of MNUSS is determined by user rights assigned by the FEMA MNUSS Administrator. To cover the duties of most users of MNUSS, this tutorial will explain how to update mapping needs at User Rights Level 3.

User Rights Level 3 grants the user the ability to:

- View Needs

- Add Needs

- Edit Needs

- View Community Data

- Edit Community Data, and

- Upload files associated with selected mapping need

For more information on User Rights, click [here](#).

## **Data Entry/ Edit Menu**

The options under the Data Entry/ Edit menu allow the user to add and edit needs and data for mapped communities. The option is:

Mapped Communities

The following option, though visible, is not authorized to User Rights Level 3 users:

Unmapped Communities

## Data Entry/ Edit Menu

### Mapped Communities

Click Mapped Communities under the Data Entry/ Edit Menu from the main menu sidebar. The Mapped Communities function window will appear.

Please select a function to perform:

[Edit Needs](#) (search for a mapped community to edit needs.), or

[Add Needs](#) (enter a mapped community's Flood Data Update or Map Maintenance needs data.), or

[Edit Communities](#) (search for a mapped community to edit community data.)

## **Data Entry/ Edit Menu**

### **Mapped Communities**

#### **Edit Needs**

If the button for Edit Needs is selected, the Geographic Location box will appear below to search by county, community name or CID.

Enter the full or partial county or community name or CID in the respective field and select the State from the drop down menu.

Click the “Advanced Search” link, or

Click the “Search” button.

## **Data Entry/ Edit Menu**

### **Mapped Communities**

#### **Edit Needs (continued)**

The Need: Search Results report window will appear with information for the requested community, county, or CID entered in the Edit Needs window. The report includes:

Need ID

CID

Need Type

Community Name

County

Status

Flooding Source

Click on the Need ID number to edit the need details currently saved for the community. The Need: Edit window will appear with the community data.

# Data Entry/ Edit Menu

## Mapped Communities

### Edit Needs (continued)

Data for the community's need details can be updated or added in the Need: Edit window.

In the General Information box, select:

Study Category:

Riverine

Coastal

Alluvial

Source:

Response to Letter – community response to FEMA MNA Correspondence

CTP – Cooperating Technical Partner

Future File – Flood Map Production Coordination Contractor archive file

Biennial Report – report compiled of communities' mapping needs, along with information on floodplain structures, flood insurance, and other NFIP related information.

Response to Questionnaire – community response to questionnaire, sent by States or Regional Office, requesting information on community mapping needs

Flooding Event – a major flooding event which resulted in a mass mapping needs assessment for a community

Other – community voluntarily sends updated mapping needs information; needs information gathered from workshop or conference; or any other means of gathering mapping needs information

## Data Entry/ Edit Menu

### Mapped Communities

#### Edit Needs (continued)

Also, in the Flooding Source box, select:

A listed flooding source, or

If the flooding source is not listed in the drop down menu, click the “Add Source” button to enter the additional flooding source.

In the Need Types box, select all that apply:

Changes to hydrologic conditions

Changes to hydraulic conditions

Changes in floodplain width

Changes to BFEs

No changes to BFEs

In the Data box, select:

Anticipated BFE Change

Select the increase or decrease button and the number of feet in the change (less than 1 foot, 1-5 feet, or more than 5 feet).  
(Note: For guidance on determining the increase or decrease in BFE feet, reference the [“Guide to Input of Mapping Needs Into MNUSS”](#); page 3.)

Length of Study (in miles)

Average width of floodplain (in feet)

In the Notes field, provide the location of the flooding source (e.g. – 7 mile south of intersection I-94 and Main Street)

## **Data Entry/ Edit Menu**

### **Mapped Communities**

#### **Edit Needs (continued)**

In the Affected Panels box, check all of the FIRM panels affected by the need.

In the Origin of Need box, update or add any contact information for the origin or contact for the need.

Click the “Save” button to save the edits.

Existing needs edited by MNUSS users will automatically be submitted to the appropriate FEMA Regional MNUSS Manager for approval or rejection.

To view the community information, click on the CID or community name to display the Need Information for the community along with estimated costs. The Community Information window appears.

## **Data Entry/ Edit Menu**

### **Mapped Communities**

#### **Edit Needs (continued)**

At the top of the Community Information window are links to:

Community Data – displays the Community data for the community.

Ranking Data – displays Community data used for ranking.

Estimated Total Number of Structures in the Community

Projected Number of New Residential Structures (per year)

Projected Number of New Non-Residential Structures (per year)

Percentage of Structures in SFHA

Average Value of New Residential Structures

Average Value of New Non-Residential Structures

Projected Number of Building Permits (per year)

Total Number of Flood Insurance Policies

Total Land Area of the Community (square miles)

Population Data – displays population information for the community

Current year

Current population

Previous year

Previous population

Land area (square miles)

Population Growth (number of people per square mile per year)

## **Data Entry/ Edit Menu**

### **Mapped Communities**

#### **Edit Needs (continued)**

Effective Panels – displays the effective FIRM panels for the community.

Related Files – displays computer files that are associated with the community.

Click on the "Related Files" link and select a file to view.

If files need to be uploaded regarding needs for the community, click the "Upload File" button. The MNUSS File Upload box will open.

Enter a description of the file's content.

Enter the file type (document, spreadsheet, text file)

Enter the filename and location (path) or click on "Browse" to choose a file.

Click the "Upload File" button to complete the upload.

Home - returns to the MNUSS homepage.

# **Data Entry/ Edit Menu**

## **Mapped Communities**

### **Add Needs**

If the button for Add Needs is selected, the Geographic Location box will appear below to search by county, community name or CID.

Enter the full or partial county or community name or CID in the respective field and select the State from the drop down menu.

In the Study Category box, select:

Flood Data Update (riverine, coastal or alluvial), or

Map Maintenance

Click the “Continue” button.

## **Data Entry/ Edit Menu**

### **Mapped Communities**

#### **Add Needs (continued)**

The New Need: Community Results window will appear with possible matches for the community, county and State entered in the Add Need window.

Click on a CID or community name to continue.

The New Need window will appear to enter new need details.

(Note: If the desired community is not in the list, click the “Back” button to return to the New Need screen to re-enter the community, county name or CID.)

## **Data Entry/ Edit Menu**

### **Mapped Communities**

#### **Add Needs (continued)**

Enter the required information from the MNUSS Data Worksheet in the respective fields as explained in the previous section, [Edit Needs](#).

In the Origin of Need box:

Enter the contact information from the Origin section at the top of the MNUSS Data Worksheet, or

Import the contact information by:

Clicking the "Search" button in the bottom of the Origin of Need Information box to import the contact information. The Entity Search window opens.

Enter the name of the organization or agency. Click "Search."

Select the contact by clicking on the name from the Entity column. All of the information is automatically placed in the Origin of Need Information window.

Click the "Save" button to save the new need.

New needs entered by MNUSS users will automatically be submitted to the appropriate FEMA Regional MNUSS Manager for approval or rejection.

## **Data Entry/ Edit Menu**

### **Mapped Communities**

#### **Add Needs (continued)**

Once the data is submitted to the FEMA Regional MNUSS Manager, the Need: Confirmation window appears displaying the need has been submitted and is pending approval. Enter any additional notes in the Need Notes and Comments section, if needed.

For Flood Data Updates, MNUSS calculates the estimated cost of revising map panels that have mapping needs saved in MNUSS in the Study Costs section of the Confirmation page.

The cost includes study contractor, engineering review, digital conversions, and printing and shipping. Costs can be adjusted by percentage or amount with reason on the Cost Override page, if needed.

For map panels that have no needs, MNUSS calculates the cost for digital conversion and printing and shipping. A detailed description of the cost may be found in the document "[Benefit Point Calculations in MNUSS.](#)"

## **Data Entry/ Edit Menu**

### **Mapped Communities**

#### **Edit Communities**

If the button for Edit Communities is selected, the Geographic Location box will appear below to search by county, community name or CID.

Enter the full or partial county or community name or CID in the respective field and select the State from the drop down menu.

Click the “Search” button.

The Edit: Community Search Results window will appear with information for the requested community, county, or CID entered in the Edit Communities window.

## **Data Entry/ Edit Menu**

### **Mapped Communities**

### **Edit Communities (continued)**

The Edit: Search Results report includes:

CID

Community Name

County

Needs

Click on the CID or Community Name. The Community Information page for the selected community will appear. Click on any of the Community Information links at the top of the page to make edits.

Check or update all of the community data that applies to changes or updates of the community as recorded on the MNUSS Data Worksheet.

Click the "Save" button when finished.

Communities edited by MNUSS users will automatically be submitted to the appropriate FEMA Regional MNUSS Manager for approval or rejection.

## **Reports and Functions Menu**

The options under the Reports and Functions menu allow the user to view reports from community mapping needs stored in MNUSS. User authorized options include:

- Community Data

- Need Summary

- Statistics

The following options, though visible, are not authorized to most users:

- Ranking

- Multi-Jurisdictional Groups

- Unit Costs

- Cost Distribution

# Reports and Functions Menu

## Community Data

This option conducts a search to get existing data of communities' demographics, general or specific mapping needs, or get needs by State or region.

Again, it is important to view any existing Community Data saved in MNUSS before adding or editing community information to avoid duplication.

Click Community Data from the main menu sidebar. The Report and Functions: Community Data window will appear.

Choose the type of needs to view in a report:

[Community](#) (for community demographics and general mapping needs), or

[Need](#) (for specific mapping needs), or

[Need Analysis](#) (for mapping needs by State or region)

# Reports and Functions Menu

## Community Data

### Community

This option allows the user to search for the mapping needs for a specific community.

Select the Community button in the report type box. The Geographic Location box will appear below to search by county or community name in the respective State.

Enter the full or partial community or county name or CID in the respective field.

Click the "Search" button.

# Reports and Functions Menu

## Community Data

### Community – Search Results

The Community Data: Search Results window appears with matching community records for the county or community name entered in the previous geographic location window. The report contains:

- CID number

- Community Name

- County

- Needs (type of needs that require updating)

- Unmapped Communities

The following option, though visible, is not authorized to User Rights Level 3 users:

- View Calculations (lists benefit/cost parameters and calculations for the community)

To get the community's mapping needs information, click on the CID number or community name. The Community Summary Report window will open with all of the community-related information for the stored mapping needs.

# Reports and Functions Menu

## Community Data

### Community – Search Results (continued)

In the General Information box is:

Community Name

CID

The Estimated Costs Box includes:

Study Costs

Engineering Review Costs

Digital Conversion Costs

Printing and Shipping Costs

Total Estimated Cost for this Community

The Needs Box includes:

Need ID

Need Classification

Origin

Flooding Source

Status

# **Reports and Functions Menu**

## **Community Data**

### **Community – Search Results (continued)**

The Community Data Needed for Ranking box includes:

Estimated Total Number of Structures in Community

Projected Number of New Residential/ Non-Residential Structures

Percentage of Structures in SFHA

Average Value of New Residential/ Non-Residential Structures

Number of Building Permits

Total Number of Flood Insurance Policies

Total Land Area of the Community

# Reports and Functions Menu

## Community Data

### Community – Search Results (continued)

The Population Data box includes:

- Current Year

- Current Population

- Previous Year

- Previous Population

- Population Growth (number of people per square mile per year)

Effective Panels (panel numbers and effective date)

The Community Data box includes community information, such as:

- Community Rating System (CRS)

- GIS Data Available

- Adopted Local Mitigation Plan

- Mitigation Plan: % Completed/ Committed (25, 50, 75, 100)

- Cooperating Technical Partner (CTP)

- Community Can Provide Base Map

- Residential/ Community/ Industrial Growth within Flood Data Update

# Reports and Functions Menu

## Community Data

### Community – Search Results (continued)

To view unmapped community information, click on the Unmapped Communities link in the Community Data: Search Results window. The Unmapped Community Summary Report window will open with general, community, and flooding information and community-related information for the stored mapping needs recommendations.

The report includes:

#### General Information

Community

County

State

Date

Entered by

Organization

# Reports and Functions Menu

## Community Data

### Community – Search Results (continued)

The Unmapped Communities Summary Report also includes:

#### Community Information

Land Area

Population (latest year)

Population (previous recorded year)

Population Growth (number of people per square mile per year)

#### Flooding Information

Is the community Floodprone?

Map Need Identified

Number of Flooding Sources with Needs

Number of Declared Disasters

FHBM Status

FIRM Status

Does Flood Hazard Data Exist?

## **Reports and Functions Menu**

### **Community Data**

#### **Community – Search Results (continued)**

The Unmapped Community Summary Report also includes information for:

#### Community Mapping Recommendation

Study required (Detailed, Use Existing Data, Approximate)

Conversation by Letter

None - Part of on-going study

None - No land use jurisdiction

None - Shown on another map

Does not qualify as a NFIP Community

The Community Summary Report may be printed by selecting the “Print” option from the File menu of the Internet browser.

Click the “Close Window” link at the top of the Community Summary Report to return to the Community Data: Search Results window.

# Reports and Functions Menu

## Community Data

### Need

This option allows the user to generate a report for a community's specific mapping need.

Click the Need button from the report type box. The Geographic Location box will appear.

Enter the full or partial county or community name or CID in the respective field and select the State from the drop down menu.

Click the "Search" button.

# Reports and Functions Menu

## Community Data

### Need (continued)

The Community Data: Need Search Results window appears with need records for the county or community entered in the Need Report: Search window.

To view the Needs Information Details, click on the Need ID number. The Need report window will open.

To view the community's mapping needs information, click on the CID number or Community name in the Search Results window. The Community Summary Report window will open with all of the community-related information for the stored mapping needs.

This report may be printed through the File menu of the Internet browser.

Click the "Close Window" link at the top of the report when finished viewing or printing.

# Reports and Functions Menu

## Community Data

### Need Analysis

This option allows the user to compare flood data updates and map maintenance needs in a region, state, or county.

Click the Need Analysis button from the report type box. Additional data boxes will appear.

In the Geographic Location box:

Select the Region button and the FEMA region from the drop down menu, or

Select the State button and the state from the drop down menu, or

Select the County and the State from the drop down menu. A list of counties in that state will automatically be displayed in the next drop down menu. Select a county.

Select the Study Type:

Flood Date Updates

Map Maintenance Needs, or

Both (Flood Data Updates and Map Maintenance)

# Reports and Functions Menu

## Community Data

### Need Analysis (continued)

In the Additional Criteria box, select how the information should be organized in the report of Search Results.

In the Order by section, select:

Community Name (alphabetically)

CID (chronologically)

County (alphabetically)

Need ID (sequentially)

In the Return section, select the status of needs to include:

Existing Needs

Needs Being Addressed

Resolved Needs

All Needs

Click the “Search” button.

# Reports and Functions Menu

## Community Data

### Need Analysis (continued)

The Need Analysis Report for the selected region or State will appear. The report contains:

Need ID

CID

Study Category

Community Name

County

Length of Study

Flooding Source

Affected Panels

Status

Click on a community's Need ID number to view more need information. The Data View: Need window opens for the selected Need ID.

This report may be printed through the File menu of the Internet browser.

Click the "Close Window" link at the top or bottom of the report when finished viewing or printing.

# Reports and Functions Menu

## Need Summary

Click Need Summary under the Reports and Functions menu of the main menu sidebar. The Report and Functions: Need Summary window will appear.

Choose a State from the drop down menu and click the "Search" button. The Need Summary: Search Results window will open.

Choose a County from the drop down and click the "Submit" button. The Mapping Needs Summary Report for the selected county will open. The report includes the:

Community Name(s)

CID

Panel Date Range

Responding (communities who have responded to FEMA's request for mapping needs updates)

Map Maintenance Needs

Flood Data Update Needs

Chart displaying Responding/ Non-Responding Communities With/ Without Needs

# Reports and Functions Menu

## Need Summary

The side frame menu indexes CIDs in the county to link to the preview of need summary information for the selected community.

The Need Summary report includes the following features to help in the navigation of viewing community need summary information:

Advance – view first, previous, next, or last pages of Need Summary Report

Go to – enter a page number to preview other communities in the Need Summary Report

Refresh – refresh information in the Need Summary Report

Search – enter a community name or CID to preview in the Need Summary Report

Preview – return to the preview page of communities in the Need Summary Report

Export – export the community need summary information to a file

## Reports and Functions Menu

### Need Summary

Click on a community name or CID to link to detailed need summary information.

To export the Need Summary Report:

Click the Export button at the top of the window. The Export Format window appears.

Select the export format from the drop down menu to save for the file.

Crystal Report (.rpt)

Microsoft Excel 7.0 (.xls)

Microsoft Word (.doc)

Rich Text Format (.rtf)

Portable Document Format (.pdf)

Select the "Open exported report in new window?" check box if the report should be opened in another window software program for the selected format.

Click the "Click here to start download of exported report" button to export the Need Summary Report to a file.

# Reports and Functions Menu

## Statistics

This option generates reports of mapping needs for communities in the respective State that have responded and have not responded to FEMA in updating flood data update and map maintenance needs. Also, the number of flood map panels with mapping update needs by FEMA region can be viewed here.

Click Statistics in the main menu bar. The Reports and Functions: Statistics window appears.

Select a button in the Choose a report box:

Responding/Non-Responding to view communities that have and have not responded to FEMA's request for mapping needs. These statistics are applicable only to needs gathered from communities by request of FEMA, during the first five-year cycle (1994-1999), in accordance with Section 575 of the National Flood Insurance Reform Act of 1994.

Panel Analysis to view the number of flood map panels with mapping needs by FEMA region.

# Reports and Functions Menu

## Statistics

### Responding/Non-Responding

If the button for Responding/Non-Responding is selected, the Search Criteria box appears at the bottom of the page.

Select a State from the drop down menu.

Select a Report Type from the drop down menu of mapping needs types to include in the report.

- Flood Data Updates and Maintenance Needs

- Flood Data Updates Only

- Maintenance Needs Only

- Communities Reporting No Needs

- Communities Responding

- Communities Not Responding

- All Responding/Non-Responding Statistics

Click the "Search" button.

# Reports and Functions Menu

## Statistics

### Responding/Non-Responding (continued)

The Responding/Non-Responding Statistics Report window appears for the selected state and report type.

The report contains the CID and community name for report types:

- Flood Data Updates and Maintenance Needs

- Flood Data Updates Only

- Maintenance Needs Only

- Communities Reporting No Needs

- Communities Responding

- Communities Not Responding

The report for All Responding/Non-Responding Statistics provides:

- CID

- Community Name

- Status(of Response(s))

Links to other report types are listed above the current report.

This report may be printed through the File menu of the Internet browser.

Click the “Close Window” link at the top of the report when finished viewing or printing.

# Reports and Functions Menu

## Statistics

### Panel Analysis

If the button for Panel Analysis is selected, the "Generate Report" button appears below the box.

Click the "Generate Report" button to get the Mapping Panel Distribution.

The Mapping Panel Distribution table lists the total numbers of flood map panels for each FEMA region in the following categories:

Region

Total Number of Panels With Maintenance Needs Only

Total Number of Panels With Restudy Needs Only

Total Number of Panels With Maintenance And Restudy Needs

Total Number of Panels With No Needs

Total Number of Panels With No Response

This report may be printed through the File menu of the Internet browser.

Click the "Close Window" link at the top of the report when finished viewing or printing.

## Resources Menu

There are documents available under the Resources menu to assist the user in gathering accurate information and understanding how that information is used for communities' mapping needs in MNUSS. Options include:

[MNUSS Guide](#)

[MNUSS Data Worksheet](#)

[Benefit Points Calculations](#)

[Multi-Jurisdictional Groups Guide](#)

[Download Adobe Acrobat Reader](#)

(Note: All of the documents in the Resources Menu are Portable Document Format (.pdf). Adobe Acrobat Reader 5.0 may be downloaded to better view these files.)

## **Resources Menu**

### **MNUSS Guide**

The "Guide to Input of Mapping Needs Into MNUSS" will assist users in the assessment of mapping needs and data entry into MNUSS. It lists detailed information on gathering information and determining map maintenance and flood data update needs.

(<https://www.mnuss.fema.gov/PDF/mnussguides.pdf>)

### **MNUSS Data Worksheet**

This worksheet is helpful for completing all mapping needs data for entering into MNUSS.

(<https://www.mnuss.fema.gov/PDF/mnusswrksht.pdf>)

### **Benefit Points Calculations**

This document explains how Benefit Points are calculated in MNUSS, and provides the parameters, their sources, and assumptions.

<https://www.mnuss.fema.gov/PDF/BPReport.pdf>

### **Multi-Jurisdictional Groups Guide**

This document explains the design and functionality of multi-jurisdictional groups. (<https://www.mnuss.fema.gov/PDF/MJGGuide.pdf>)

## **Administrative Menu**

The Administrative menu has utilities and information to help the user understand and manage security tools and keeps users informed of latest updates or information on MNUSS. Options include:

- Announcements

- Feedback

- Change Password

- User Rights

# **Administrative Menu**

## **Announcements**

Announcements inform users of latest updates or changes in the Mapping Needs Assessment process and MNUSS.

Click Announcements under the Administrative Menu of the main menu sidebar. A list of posted announcement links will be displayed.

Select an announcement to view.

Click the “Return to Main Menu” link to close the window and return to the main menu.

## **Feedback**

Users are encouraged to use feedback to provide comments or questions about MNUSS.

Click Feedback under the Administrative Menu on the main menu sidebar. The Feedback window will appear.

Enter a comment or question in the Feedback window  
(Note: Feedback is limited to 2,000 characters, including spaces).

Click the “Save” button. A confirmation window will open that your feedback has been sent.

Select:

Home – to return to the MNUSS home page, or

Submit more feedback – to send another comment or question.

# Administrative Menu

## Change Password

MNUSS is a password-protected web-based database. To ensure all data entered and viewed is secure, each user has a different password. Users should protect their password and change it occasionally for increased security when using MNUSS.

Click Change Password under the Administrative Menu of the main menu sidebar. The Change Password window will appear.

Enter your old password, new password, and confirm your password in the respective boxes. Click:

Save - save your new password, or

Reset - to start over in changing your password.

If you forget your password, Click the "Forget Your Password? Click Here." link on the login screen to have your password e-mailed to you.

# Administrative Menu

## User Rights

User rights to control, add, edit, and view information are based on factors such as, a user's affiliation with FEMA and the NFIP and the duties needed to enter data into the system. Only the system administrator can modify existing user rights.

Click User Rights under the Administrative Menu of the main menu sidebar. The User Rights window will appear with your user rights for getting and editing information.

Geographic Location - lists all of the FEMA Regions.

Level - lists your level of rights, 1 through 5.

Rights - lists the types of rights you have for the information in the Geographic Location.

For a more detailed description of user rights, click the "User Rights Glossary" link at the top of the User Rights window.

(Note: Users who have been directed here to User Rights, may return to the Accessing MNUSS section to continue the tutorial by clicking [here](#).

## Summary

As communities grow and change, it is important to update flood maps with the latest changes for flood data and map maintenance needs.

The MNA process advances towards FEMA's goal to have accurate flood maps that show the current risk of the 1% annual chance flood event. Flood Data and Map Maintenance data are helpful to FEMA so they can be responsive to community's mapping needs.

The MNA process is a building block in updating flood maps. It provides the starting point for determining which communities and flooding sources to study or restudy. Gathering complete needs information for communities will help in developing a more efficient mapping update process.

For the latest updates on the MNA process and MNUSS, visit the Mapping Needs web page ([http://www.fema.gov/mit/tsd/mn\\_main.htm](http://www.fema.gov/mit/tsd/mn_main.htm)) on the FEMA Flood Hazard Mapping Website (<http://www.fema.gov/mit/tsd/>).

## Glossary for MNUSS Tutorial for Users

**1% chance annual elevation** - It is the flood elevation that has a 1% chance of happening in any given year, or approximately a 26-percent chance of occurrence over the life of a 30-year mortgage. Also known as the Base Flood Elevation (BFE)

**1% chance annual flood (or 100-year flood)** -- The flood having a 1-percent chance of being equaled or exceeded in any given year; also known as the base flood. The 1-percent annual chance flood, which is the standard used by most Federal and state agencies, is used by the National Flood Insurance Program (NFIP) as the standard for floodplain management and to determine the need for flood insurance. A structure located within a special flood hazard area shown on an NFIP map has a 26 percent chance of suffering flood damage during the term of a 30-year mortgage.

**100-year floodplain** – This is the boundary of the flood that has a 1-percent chance of being equaled or exceeded in any given year. Officially termed the 1-percent annual chance floodplain.

**500-year floodplain** -- This is the boundary of the flood that has a 0.2-percent chance of being equaled or exceeded in any given year. Officially termed the 0.2-percent annual chance floodplain.

**Alluvial** - A sedimentary deposit located at a topographic break, such as the base of a mountain front, escarpment or valley side, which is composed of streamflow and/or debris flow sediments and has the shape of a fully or partially extended fan.

Active alluvial fan flooding is characterized by flow path uncertainty, while inactive alluvial fan flooding is characterized by relatively stable flow paths with a higher degree of predictability.

**Base Flood** – The flood having a 1-percent chance of being equaled or exceeded in any given year; also known as the 100-year flood. The base flood, which is the standard used by most Federal and state agencies, is used by the National Flood Insurance Program (NFIP) as the standard for floodplain management and to determine the need for flood insurance. A structure located within a special flood hazard area shown on an NFIP map has a 26 percent chance of suffering flood damage during the term of a 30-year mortgage.

**Base Flood Elevation (BFE)** -- The height of the base flood, usually in feet, in relation to the National Geodetic Vertical Datum of 1929, the North American Vertical Datum of 1988, or other datum referenced in the Flood Insurance Study report, or depth of the base flood, usually in feet, above the ground surface.

**Base map** -- A map containing geographic features (e.g., roads) used for locational reference.

**Benefit/Cost Calculation** – This calculation is used to rank communities' needs against those of other communities, to prioritize map updates with limited funding. It incorporates many factors in determining the estimated monetary benefit to a community of revised maps compared to the estimated cost of preparing the maps (including studies).

**Community Rating System (CRS)** -- A program recognizing and encouraging community floodplain management activities that exceed the minimum NFIP standards. Under the CRS, flood insurance premium rates are adjusted to reflect the reduced flood risk resulting from community activities that meet the three goals of the CRS: (1) reduce flood losses; (2) facilitate accurate insurance rating; and (3) promote the awareness of flood insurance.

**Conditional Letter of Map Amendment (CLOMA)** – A letter from FEMA stating that a proposed structure that is not to be elevated by the placement of fill would not be inundated by the base flood, if built as proposed.

**Conditional Letter of Map Revision (CLOMR)** -- A letter from FEMA that officially revises the current flood map to show changes to floodplains, floodways, or flood elevations, if built as proposed.

**Conditional Letter of Map Revision based on Fill (CLOMR-F)** – A letter from FEMA stating that a parcel of land or proposed structure that is to be elevated by the placement of fill would not be inundated by the base flood if fill is placed on the parcel as proposed or the structure is built as proposed.

**Cooperating Technical Partners (CTPs)** - Communities, regional agencies, and State agencies that have the interest and capability to become active partners in the FEMA Flood Hazard Mapping Program. They enter into an agreement with FEMA that formalizes their contribution and commitment to flood mapping to help ensure their flood maps are accurate, up-to-date, and to reflect local conditions.

**Cross Section** -- line developed from topographic information, across a floodplain at which a computation of flood flow has been made to establish a potential flood elevation. Cross sections are shown on the Flood Boundary Floodway Map, Flood Insurance Rate Map, and/or Flood Profiles of a Flood Insurance Study.

**Cubic Feet per Second (cfs)** -- Typical units used to express the rate of flow of surface water in open channels. One "cfs" is approximately equal to 7.5 gallons per second.

**Datum** -- FEMA's Flood Insurance Rate Maps (FIRMs) reference the elevation datum used to compute flood elevations. In completing elevation certificates, the same elevation datum as that shown on the FIRM must be used to compute lot and/or structure elevations and to compute flood elevations that are not given on the FIRM. The National Geodetic Vertical Datum (NGVD) is the national standard reference datum for elevations, formerly referred to as Mean Sea Level (MSL) of 1929. NGVD is used as the reference datum on most FIRMs.

**Depth** -- Maximum depth of water in the cross section as measured below the water-surface elevation.

**Digital Flood Insurance Rate Map (DFIRM)** -- As part of FEMA's Map Modernization Objectives, a new Digital Flood Insurance Rate Map (DFIRM) product was developed. The new DFIRM product includes a spatial database with options that can be invoked depending on the available data. The DFIRM spatial database includes certain standard features and meet minimum mapping requirements. Additional enhancements will be included depending on community needs, available data, and funding. DFIRM specifications are consistent with those required for mapping at a scale of 1:24,000, or larger.

**Discharge** -- The volume of water that passes a given location within a given period of time. Usually expressed in cubic feet per second.

**Elevation Reference Marks (ERM)** – These marks are shown on all FIRMs and identify points where a ground elevation is established by survey. These elevations are usually expressed in feet; for some communities, however, the elevations are shown in meters. Descriptions of the marks, including their elevations are provided; however, descriptions of locations appear in different places, depending on the format of the flood map.

**Federal Emergency Management Agency (FEMA)** – An independent agency of the Federal government, founded in 1979, which reports directly to the President. FEMA is responsible for identifying and mitigating natural and man-made hazards. The agency's mission is:

*to reduce loss of life and property and protect our nation's critical infrastructure from all types of hazards through a comprehensive, risk-based, emergency management program of mitigation, preparedness, response and recovery.*

**Flood (also Flooding)** – A general and temporary condition of partial or complete inundation of normally dry land areas. For flood insurance claim purposes, two or more structures must be inundated before flood damage will be covered.

**Flood Boundary Floodway Map (FBFM)** -- A pre-Map Initiatives floodplain management map that delineates the 100-year (1% annual chance) and 500-year (0.2% annual chance) floodplains, floodway, and cross sections.

**Flood Data Update Needs** – Mapping needs that require new engineering analyses, resulting in revision to the Special Flood Hazard Area (SFHA), floodway, and/or base flood elevations (BFEs). Common flood data updates include changes in hydrologic or hydraulic conditions that require new modeling.

**Flood Hazard Boundary Map (FHBM)** -- Initial map issued by FEMA to identify approximate Special Flood Hazard Areas within a community.

**Flood Hazard Data** -- Information about a community's flooding hazards used to prepare Flood Insurance Rate Maps and Flood Insurance Study reports. It may include information such as, statistical analyses of records of river-flow, storm tides, and rainfall; information obtained through consultation with the community; floodplain topographic surveys; and hydrologic and hydraulic analyses.

**Flood Insurance Rate Map (FIRM)** -- A map on which the 100-year (1% annual chance) and 500-year (0.2% annual chance) floodplains, Base Flood Elevations, and risk premium zones (and floodway information on Map Initiatives FIRMs) are delineated to enable insurance agents to issue accurate flood insurance policies to homeowners in communities participating in the National Flood Insurance Program.

**Flood Insurance Study (FIS)** – An examination, evaluation, and determination of flood hazards and, if appropriate corresponding water-surface elevations. The resulting reports are used to develop Flood Insurance Rate Maps. Also know as a flood elevation study.

**Floodplain or Flood-Prone Area** -- Any land area susceptible to inundation by water from any source.

**Floodplain Management** -- The operation of a program of corrective and preventative measures for mitigating flood damage, including, but not limited to, emergency preparedness plans, flood-control works, and floodplain management regulations.

## **Flood Map Production Coordination Contractors (FMPCCs) --**

Coordinate projects and provide technical support to FEMA. Duties of the FMPCC include:

Researching available data for scoping activities

Completing base map research and providing independent quality assurance and control of study contractor and Cooperating Technical Partners products

DFIRM production

Preliminary and post-preliminary processing

Evaluation of the National Flood Insurance Program Regulations, Part 65 revision and Part 70 amendment requests

**Flood Profile** -- A cross-sectional drawing showing the contiguous cross sections along a stream, with ground elevations and potential flood elevations plotted.

**Floodway** – Channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 100-year flood discharge can be conveyed without increasing the elevation of the 100-year flood by more than a specified amount (1 foot in most states).

**Geographic Information System (GIS)** -- A Geographic Information System (GIS) is a computer-based system used to capture, store, analyze and display geographic information.

**Hydraulic conditions** - The extent of the flooding caused by a given stream discharge. Changes to hydraulic conditions include, but are not limited to, culvertization, re-channelization, or bridges.

**Hydrologic conditions** - Determine the quantity of stream discharge generated by a given rainfall event. Changes to hydrologic conditions include, but are not limited to, urban development, revised watershed studies, or slope of the land.

**Letter of Map Amendment (LOMA)** -- Official amendment, by FEMA, of a community's effective National Flood Insurance Program map to remove structure(s) or lot(s) from the floodplain that have not been elevated above the base flood elevation by placement of fill.

**Letter of Map Change (LOMC)** – The Letter of Map Change (LOMC) process was developed to amend or revise the published flood hazard information by letter.

A LOMC is a letter that revises or amends the FIRM according to the conditions stated in the letter. LOMCs include Letters of Map Amendment (LOMAs), Conditional Letters of Map Amendment (CLOMAs), Letters of Map Revision (LOMRs), Conditional Letters of Map Revision (CLOMRs), Letters of Map Revision Based on Fill (LOMR-F), and Conditional Letters of Map Revision Based on Fill (CLOMR-Fs). They are produced by FEMA for structures and properties of homeowners and for large development projects.

**Letter of Map Revision (LOMR)** – A Letter of Map Change from FEMA officially revising the current flood map to show changes to floodplains, floodways, or flood elevations.

**Letter of Map Revision Based on Fill (LOMR-F)** -- Official amendment, by FEMA, of a community's effective National Flood Insurance Program map to remove structure(s) or lot(s) from the floodplain when they have elevated above the Base Flood Elevation by the placement of fill.

**Map Maintenance Needs** – Mapping needs that do not require changes to the SFHA, floodways, or BFEs; and therefore, do not require new engineering analyses. Map maintenance needs consist of changes to map features, such as new road names, aligning panels, adding/revising elevation reference marks (ERMs), changes to corporate limits, adding Letters of Map Change (LOMCs), and converting to countywide format.

**Mapping Needs** – Flood Data Update needs or Map Maintenance needs. The differences, as determined by a community, between the flooding hazards and base map information shown on a FIRM and conditions that exist in the community.

**Mapping Needs Update Support System (MNUSS)** – A password-protected web-based database that is used to collect and compile communities' mapping needs. These needs are ranked prioritized nationwide. MNUSS will be used as a tool by FEMA in prioritizing communities for funding updates to the National Flood Insurance Program's Flood Insurance Rate Maps.

**Mitigation** – Within the NFIP, mitigation assists citizens in flood hazard areas reduce or eliminate long-term risks of flood damage to insurable structures.

**National Flood Insurance Program (NFIP)** -- Federal insurance program under which flood-prone areas are identified and flood insurance is made available to residents of participating communities that agree to adopt and enforce floodplain management ordinances to reduce future flood damage.

**National Geodetic Vertical Datum(NGVD) of 1929 and North American Vertical Datum(NAVD) of 1988** -- Standard reference planes established by the Federal Government from which elevations are measured.

**Slope** – Determined for any area by dividing the rise over the length.

**Spatial Data** -- Includes the geographic information or boundaries that make up a map; also known as georeferenced data.

**Special Flood Hazard Area (SFHA)** -- Area inundated by the base flood (1-percent annual chance), identified on the Flood Insurance Rate Map as Zones A, AE, AH, AO, AR, V, VE, or A99.

**Study Costs** – One of the factors that contribute to the total cost of updating a community's FIRM. Associated with flood data update needs, these costs are determined by a calculation for the length of stream or coastline or alluvial flooding that requires study or restudy.

**Swale** – An area of land used for drainage, usually for small amounts of water, in small areas. Usually, trough-shaped and has a grassy bottom.

**Velocity** --  $V^2/2g$ , represents the kinetic energy per pound of fluid.

**Water-Surface Elevation** – The height, in relation to the National Geodetic Vertical Datum of 1929 (or other datum, where specified) of floods of various magnitudes and frequencies in the identified floodplains of coastal or riverine areas.