

Coordinated Needs Management Strategy (CNMS) Tutorial

April 2015





In this tutorial you will find:

- Information about the CNMS tool and its benefits
- Available CNMS data and the validation process
- CNMS user criteria and how to request an account
- How to submit a CNMS mapping need request
- Additional CNMS user resources





Table of Contents

- Introducing CNMS
 - Benefits
 - Data Components
 - <u>Users</u>
- <u>CNMS Viewer</u>
 - Interactive Tools
 - Search Map
 - <u>NVUE Reports</u>
 - Requests
 - Studies
 - <u>NFHL</u>
- Validation Status Types
- Validation Process of Data





Table of Contents

- NVUE Report Generator
 - NVUE by Political Boundary
 - NVUE by Watershed
 - NVUE Report Example
- User Account Criteria
- Account Creation
- <u>Account Login</u>
- Submit a Mapping Need Request
 - Quick Zoom Panel
- View User-Submitted Request Data
- <u>Reset or Forgot Password</u>
- Additional Public Resources
- Help Desk Support





Introducing CNMS

- The <u>Coordinated Needs Management Strategy (CNMS) tool</u> (https://msc.fema.gov/cnms/) coordinates the management of FEMA's flood hazard mapping inventory, including validation status of flood studies and flood hazard mapping needs nationwide, with the exception of coastal study areas
 - The CNMS tool does not reflect validation statuses of coastal shorelines or coastal studies
- The tool identifies and tracks the lifecycle of flood studies and mapping need requests of FEMA's flood maps (known as <u>Flood</u> <u>Insurance Rate Maps</u> or FIRMs) to determine which flood study areas are completed with up-to-date engineering methodology and which studies may warrant additional analysis



Introducing CNMS

- FEMA uses CNMS to maintain the validity of flood hazard data and maps and to assess if conditions on the ground are adequately represented on the FIRM
 - Information that does not adequately represent actual conditions is considered a mapping need and may warrant a new flood study by FEMA





Introducing CNMS: Benefits

- CNMS helps community members and officials, and FEMA Regions analyze and manage their flood hazard mapping inventory through the following ways:
 - Informs mapping project planning and standardizes how new and updated flood data is collected for flood map production
 - Enhances data driven planning activities for map update prioritization
 - Validates <u>Special Flood Hazard Areas (SFHAs</u>) and flood hazard data on FIRMs
 - Allows authorized account users to submit, review, track, and evaluate mapping need requests
 - Facilitates greater control of review and evaluation of mapping needs requests to authorized Regional officials





Introducing CNMS: Data Components

- CNMS contains two database components:
 - CNMS Inventory: Comprised of streamline flooding sources, the CNMS Inventory represents FEMA's entire inventory of flood hazard studies. The colorcoded streamlines represent a validation status type, determined by FEMA's current validity standards. As previously stated, the CNMS Inventory does not contain validation status information for coastal studies.
 - CNMS Requests: Comprised of polygons or points to identify areas where study or mapping updates are desired. These areas can be selected by FEMA or authorized CNMS users and taken into consideration when new study activities are being planned. The CNMS tool is designed to be a portal for those viewing, submitting, and prioritizing these mapping need requests.







Introducing CNMS: Users

- **Visitors** of the CNMS tool may view the following data:
 - Validation status of studies (Valid, Unverified, Unknown, Assessed)
 - Mapping need requests for a geographic area
 - New, Valid, Updated Engineering (NVUE) Reports
 - National Flood Hazard Layer (NFHL) layers
 - FIRM panels
 - Base Flood Elevations
 - Coastal Transects
 - Cross Sections
 - Flood Zone Boundaries
 - Special Flood Hazard Areas (SFHAs)
- Registered **Submitters** may additionally:
 - Submit a mapping needs request for a geographic area within their assigned FEMA region(s)
 - View their submitted requests in the Quick Zoom panel
 - View specific review statuses of other user-submitted mapping requests in their region (e.g., pending requests)





CNMS Viewer

- The Homepage will display an interactive Geographic Information System (GIS) map viewer, known as the CNMS Viewer
- Navigate through the map using your mouse or the Quick Zoom tool
- Use the left-hand menu to display data, including:
 - NVUE data
 - Requests
 - <u>Studies (validation status types)</u>
 - NFHL layers







CNMS Viewer: Interactive Tools

• Use the interactive tools to navigate, generate and view NVUE statistics, and measure distance in the Viewer:

lcon	Icon Description
	Click and drag the Viewer to navigate through the map
NVUE	Click on an area in the Viewer to retrieve a NVUE Report for a region, state, county, or watershed
	Click two points on the map and measure the distance between two points
6	Click and drag a specified path, then click again to measure the length of that path
	Click and explore existing and requested studies and requests shown on the Viewer
	Allows you to enter in a comment on an area or request a study (visible to registered CNMS users)





CNMS Viewer: Search Map

- Search for an area of interest by:
 - Zip code
 - County name or Federal Information Processing Standards (FIPs) County code
 - To look up a county name by FIPS code, visit the <u>United</u> <u>States Census Bureau</u>
 - 8-digit Hydrologic Unit Code (HUC8) or Watershed Name
 - Search term (e.g., Washington D.C)
- Select Search to zoom to area of interest







CNMS Viewer: NVUE Reports

- Select the NVUE tool icon
- Under NVUE reports by Type, select a desired report type (Region, State, County, HUC8 Code)
 - County and HUC8 will become available once zoomed to the appropriate level
- Move the NVUE tool to the area of interest on the Viewer
 - Depending on your selection, the NVUE tool will highlight a region, state, county, or HUC8 geographic area
- Click on the Viewer to generate your NVUE report





CNMS Viewer: Requests

- Expand the Requests tab to view mapping need requests
- Navigate the Viewer or Search Map by to locate your area of interest
- Select the check boxes of the Request data
 - Data will become available once zoomed to the appropriate level
 - Color coded Request Points (circular points) and Request Areas (geometric polygons) will display
 - User-submitted requests: Requests currently in the review process to be implemented in FEMA's official request dataset
 - Official requests: Once approved, the request will be labeled a FEMA official request
- Create New Request will be grayed out if you do not have an account or not logged into the tool





CNMS Viewer: Requests

• Outlined in red, the image below displays User-submitted and Official Request points and areas:







CNMS Viewer: Requests

- Use the interactive tool to explore existing and submitted request information for a specific request
- Visitors of the CNMS tool and users not logged-in may view the following information pertaining to a submitted request:
 - Submit Date
 - Request Category (Cartographic Request or Flood Data Request)
 - Request Type (e.g., Base Map Update)





CNMS Viewer: Studies

- To view validation status of flood studies, expand the Studies tab
- Navigate the Viewer or Search Map by to locate your area of interest
 - Data will become available once zoomed to the appropriate level
- Select the Existing Studies (line) check boxes to populate the data
 - The color coded streamlines represent a <u>validation status</u>, determined by FEMA's current validity standards
 - Valid studies are also referred to as New, Valid, Updated Engineering (NVUE) compliant
 - NVUE compliant studies describe studies that are complete with up-to-date engineering methodology and/or conducted in areas which have not seen significant Physical environment, Climate patterns, and Engineering methodology (PCE) changes since the date of the area's effective flood study



🔻 Sear	ch Map	by:		
● ZIP		🔵 Cou	nty	or FIPS
🔵 нис	8 Code (or Waters	hed	Name
Washir	igton D.C	>		Search <mark>»</mark>
▶ Requ	ests			
₹ Stud	ies			
Exis Valic Unve Unke	ting Stud NVUE co Being st To be student Being st Being as To be as Deferred Being st	dies (line ompliant udied udied sessed sessed udied)	••



CNMS Viewer: Studies

 The image below displays the validation status types of FEMA's flood study inventory (CNMS Inventory):







CNMS Viewer: Studies

- Using the interactive tool to explore existing and submitted studies information for a specific study
 - The name of the study will display in the pop-up window (e.g., Oxon Run)
- Visitors of the CNMS tool and users not logged-in may view the following information pertaining to the selected study:
 - Miles
 - Flood Zone
 - Validation Status
 - Study Status





19

CNMS Viewer: NFHL

- The National Flood Hazard Layer (NFHL) dataset represents current effective flood data nationwide where maps have been updated, including effective FIRM databases and Letters of Map Revision (LOMR) data
 - You may also view NFHL data on the <u>FEMA GeoPlatform</u>, accessible from the top menu bar
- NFHL data layers become available once zoomed to the appropriate level







Validation Status Types

- When viewing the Studies data in the CNMS Viewer, each streamline is color coded to represent a validation status type
- There are 4 validation status types:

Validation Status Type	Description
ValidA NVUE compliant study that has been completed using up-to-date engineer methodology and/or conducted in areas which have not seen significant climatological or physiological changes since the effective date of the study.	
Unverified	A study that has not passed the Critical and Secondary Element checks part of FEMA's validation standards and is eligible to receive resources for a re-study in the future OR is currently being restudied.
Unknown	A study that is either being currently evaluated, is planned to be evaluated, OR lacks enough information to be able to determine a validation status.
Assessed	A study in an unmapped area that has been identified for a new study in the current or a future fiscal year OR is a deferment of a new study request. Streams not part of FEMA's SFHA inventory (i.e., Zone X, Zone D, or Area Not Included), that have been, or are being considered for a new study also fall under this validation status category.





Validation Process of Data

- Floodplains are constantly changing due to Physical environment, Climate patterns, and Engineering (hydraulic and hydrologic modeling) methodology (PCE) changes
- The CNMS Validation Process inspects a study against a variety of PCE changes that may have occurred since the date of the effective flood study (e.g., changes in land use, new/removed bridges and culverts, recent flood events captured by gauge data)
 - By statute, FEMA is required to inspect all floodplain studies at least once every 5 years
- FEMA evaluates a study on 17 elements (7 critical and 10 secondary) to determine validity
 - For additional information on FEMA's validation process and validity standards, view the most current <u>Coordinated Needs Management Strategy</u> (<u>CNMS</u>) <u>Technical Reference</u> on FEMA's website



NVUE Report Generator

- In addition to generating a report in the CNMS Viewer, you may also generate a report for the entire nation, specific regions, states, counties, communities or watersheds using the NVUE Report Generator tool
- Select NVUE Reports in the top menu
- Generate by a report by:
 - Political Boundary

OR,

Watershed



💠 C N M S	Coordinated Needs Management Strategy NVUE Reports NFHL on GeoPlatform Help
NVUE Report Generato This tool provides a means to yield NVUE reports for selections. This will render a report which you may Rich Text File (RTF) Microsoft Excel (XLS) Mit Portable Document Format (PDF)) T r the entire nation, specific regions, states, counties, communities or watersheds based upon your export to the following file formats: crosoft Word (DOC) Crystal Report (RPT) Comma Separated Values (CSV) Extensible Markup Language (XML)
Select a Location Region: State: County: NVUE by Political Boundary >	Community ID: HUC8 #: List of Watersheds: Soloct AI



NVUE Report Generator: NVUE by Political Boundary

- Select a location (Region, State, or County) from the drop down menus
 - A list of Watersheds for your location selections will populate in the next box
 - If there is a specific Watershed(s) you wish to select, view <u>NVUE Report</u> <u>Generator: NVUE by</u> <u>Watershed</u> for more information
- Select NVUE by Political Boundary to pull a NVUE Report for your selected Region, State, or County



Increasing Resilience Togethe



NVUE Report Generator: NVUE by Watershed

- Option1: Enter in Community ID or HUC8 #
 - Select the Watershed of interest from the list of results
 - Select NVUE by Watershed

OR,

- Option 2: Use the Select a Location drop down menus to narrow down your selection of Watershed studies
 - Select the Watershed of interest from the list of results
 - Select NVUE by Watershed

- HUC8 #-	17110017	
1000 #.	List of Watersheds:	Select A
Skokomish.	Washington.	
	NMIE by Wetershed	

NVUE Report Generator This tool provides a means to yield NVUE reports for the entire nation, specific regions, states, counties, communities or watersheds based upon your selections. This will render a report which you may export to the following file formats: Rich Text File (RTF) Microsoft Excel (XLS) Crystal Report (RPT) Microsoft Word (DOC) Comma Separated Values (CSV) Portable Document Format (PDF) Extensible Markup Language (XML)







NVUE Report Generator: Report Example

- Print or export the report in the following available file formats
 - Rich Text File (RTF)
 - Microsoft Excel (XLS)
 - Microsoft Word (DOC)
 - Portable Document Format (PDF)
 - Crystal Report (RPT)
 - Comma Separated Values (CSV)
 - Extensible Markup Language (XML)

- 🐼 F1	ϜΜΔ	CNM		Report
L 🧠 T. 7		Coordinated	Needa Managam	noport
				ent Strategy
	NVUE Report for R		RGINIA	
MODERNIZED INVE	NTORY			
United in	TO BE ASSESSED	Detailed Miles A 231.09	15 382 98	15.614.0
	BEING ASSESSED	0.00	0.00	0.0
	DEFERRED	0.00	0.00	0.0
UNVERIFIED				
	TO BE STUDIED	1,631.78	227.31	1,859.0
VALID	BEING STUDIED	0.00	0.00	0.0
WILL D	NVUE COMPLIANT	3 670 58	1 583 94	5 254 5
		5,570.55 E E22.4E	47.404.00	22,204.0
	NTORT Totals.	0,033.40	17,154.25	22,727.0
PAPER INVENTORY				
UNKNOWN	TO BE ASSESSED	Detailed Miles A	pproximate Miles	Total Mile
	BEING ASSESSED	0.00	0.00	0.0
	DEFERRED	0.00	0.00	0.0
UNVERIFIED				
	TO BE STUDIED	0.00	0.00	0.0
MALID	BEING STUDIED	0.00	0.00	0.0
VALID	NVUE COMPLIANT	0.00	0.00	0.0
	Totals	0.00	0.00	0.0
	Totals.	0.00	0.00	0.0
		D. () () () ()		
onnorm	BEING ASSESSED	Detailed Miles A	pproximate Miles	10tal Mile
	NOT BEING ASSESSED	0.00	0.00	0.0
ASSESSED				
	TO BE STUDIED	0.00	0.00	0.0
	BEING STUDIED	0.00	0.00	0.0
	DEFERRED	0.00	0.00	0.0
UNIVIAFFED TOTAIS.		0.00	0.00	0.0
		5,533.45	17,194.23	22,727.6
Report Totals				
MV/HE Statistics		NVUE Compliant N	on-NVUE Complian	Relubites () A/UE
WOL Statistics		5 254 52	47 472 40	22.429/
Modernized Inver	tory	RIAESge	17,475.10	Compfiant
incucrime ou interest		5,254.53	17,473.16	23.12%
Full Inventory				



User Account Criteria

- User accounts are only necessary for submitting and reviewing mapping need requests
 - All other CNMS functions and data are publically available and do not require an account, including viewing validation statuses of flood studies and usersubmitted mapping requests in the Viewer
- To create an account, you must be a local, state, or federal official approved by FEMA (e.g., community officials, floodplain managers, city planners, etc.)
 - Contact the CNMS Administrator in your Region or a <u>CNMS Lead</u> for more information on eligibility requirements for an account
- The CNMS Administrator for your region will review the request and grant appropriate account access





Account Creation

- To continue to request an account, visit the <u>CNMS</u>
 <u>Create An Account</u> page and enter in the required information:
 - Email address (account email address)
 - First and Last Name
 - Associated FEMA Region
 - Organizational Affiliation
- Select Yes or No to receive CNMS updates or system downtimes via email
- Select Create Account





Account Creation

• A confirmation message in the CNMS tool will display

Information Submitted	×
You have successfully submitted your CNMS registration information. Once approved, you will recieve further instructions via e-mail.	
	Ok

- Once approved, a link will be sent via email to reset your password
- Select the provided link to enter in your new password
- Select Reset Password

Dear John Smith, You have successfully registered a new user ac	count with CNMS. Cli	ck on the following link or	copy and paste the link	
In the address bar of your browser to complete	your registration:	CNMS	Coordinated Needs Management Strategy	
https://192.168.17.25/Account/ChangePasswor nuv9veJSH62TA4pGr3NS8tyosz2zT9CVT5l0E1	rd.aspx?hashKey=q		NVUE Reports NFHL on GeoPlatform Help	Log In
This message has been generated automaticall	ly. Please do not rej	Reset Passwor	rd	
		Passwords must be:		
		Minimum 8 characters At	least one alphabetic character At least 1 numeric character At least 1 special character	
		Pass	word	
L	>	Confirm Pass	word	
	Ļ	Reset Password		



Account Login

- Select Log In in the top menu bar of the CNMS tool
- Enter in your
 Username (email address) and
 Password
- Select Log In

💠 C N M S	Coordinated Needs Management Strategy NVUE Reports NFHL on GeoPlatform Help	Log In
💠 C N M S	Coordinated Needs Management Strategy NVUE Reports NFHL on GeoPlatform Help	Log In
Log In Username (e-mail addr Password Remember me		
Create an Account Forgot Password?		
You are about to access a Dep Government and provided for a system. The use of a passworc the terms set forth in this notice restricted to authorized users of system, may constitute a violat system without authorization or use of information on the comp is subject to monitoring for adn and to ensure proper performa	artment of Homeland Security computer system. This computer system and data therein are property official U.S. Government information and use. There is no expectation of privacy when you use this conducted on any other security measure does not establish an expectation of privacy. By using this system, you are you may not process classified national security information on this computer system. Access to the holy. Unauthorized access, use, or modification of this system or of data contained herein, or in transition of section 1030 of title 18 of the U.S. Code and other criminal laws. Anyone who accesses a Feder exceeds access authority, or obtains, alters, damages, destroys, or discloses information, or prevent puter system, may be subject to penalties, fines or imprisonment. This computer system and any relation inistrative oversight, law enforcement, criminal investigative purposes, inquiries into alleged wrongdence of applicable security features and procedures. DHS may conduct monitoring activities without fi	y of the U.S. omputer ou consent to is system is it to/from this eral computer its authorized ted equipment oing or misuse, urther notice.



Submit a Mapping Need Request

- Zoom or **Search Map by** to navigate to your geographic area
 - Create New Request will become available once zoomed to the appropriate level
 - Note: Remember you must be logged into your CNMS account to submit a request

• Select Create New Request





Submit a Mapping Need Request

- A request pop-up window will display
- Enter in the required data fields for your request
 - Select your mapping tool of choice (circle or a polygon shape)
 - Place the mouse on the Viewer and click on the map to start drawing your request area
 - Do not drag the mouse to draw the area
 - Each click will mark an endpoint for the polygon figure
 - Double click the mouse to complete the request geographic area







Submit a Mapping Need Request

- Select Clear to re-draw your request area
 - Map Tools will become grayed out after completing the drawing of your request area
- Required data fields include
 - Request Category: Cartographic or Flood Data
 - Method Type: New, Updated, or Redelineation
 - Cartographic Request Type: Base Map Update, Index Panel Errors, Map Body Errors, Feature Symbolization, Map Collar Issues
 - Request Level: Detailed without Floodway, Detailed with Floodway, Approximate, Limited Detail, N/A
 - Region will populate with your affiliated FEMA Region(s)
 - Request Description (optional field)
- Select Submit when complete
 - A confirmation message in the CNMS tool will display stating your request will be reviewed soon



lessage	
Thank you for su reviewed soon.	bmiting your request, it will be
	ок



Submit a Mapping Need Request: Quick Zoom Panel

- After submitting a request, track your submission in the Quick
 Zoom Panel on the CNMS Viewer
 - The request will automatically go into 'Pending' status
- Select the magnifying glass to zoom to your submitted request
 - By default, the request area will be shaded blue to represent that the object is selected
 - When another request area is selected, the shaded color will change to reflect the current review status of the request (e.g., green, yellow, grey, or purple)





Submit a Mapping Need Request: Quick Zoom Panel

 You will receive an email when the status of your submitted request is updated

> Dear John Smith, Your status of request 8002 submitted on Mar 30, 2015 has changed from 'Pending' to 'Accepted'. This message has been generated automatically. Please do not reply to this message.

 Logging back into the tool, the request will be shaded as appropriate to reflect the updated status (e.g., green for approved)





View User-Submitted Request Data

- You may view review statuses of other user-submitted requests located within your affiliated FEMA Region
- Select the interactive tool outlined in red to explore existing and submitted requests
- Select a submitted request of interest and view the following details of that request:
 - Submit Date

'EM A

- Request Category (Cartographic Request or Flood Data Request)
- Request Type (Base Map Update, Index Panel Errors, Map Body Errors, Feature Symbolization, Map Collar Issues)
- Review Status (Pending, Approved, Reviewed, Official)





View User-Submitted Request Data

- Users may view details of request data outside their Region, but will not have access to Review Status information
 - This is the same level off access as public visitors (unregistered users) of the CNMS tool







Reset and Forgot Password

- Account passwords expire every 45 days
- Select Reset Password displayed in the footer of the CNMS tool
 - If you forgot your password, select
 Forgot Password? on the Log In page
- Select Reset Password
 - A confirmation message will display in the tool and your password reset will be sent to your email
- Select the provided hyperlink in the email to reset your password
- You will receive a confirmation email stating your password has been updated



Dear John Smith,

Your CNMS account password has been changed. If this change was NOT initiated by you, please contact us immediately at miphelp@riskmapcds.com.

This message has been generated automatically. Please do not reply to this message.



Additional User Resources

- For more information on CNMS, visit the following user resources:
 - Webpage
 - Fact sheet on the FEMA Library
- Or, contact the following CNMS leads:
 - National CNMS Leads:
 - Rick Sacbibit- <u>Patrick.Sacbibit@fema.dhs.gov</u> (Headquarters)
 - Andy Read- <u>Andrew.Read@fema.dhs.gov</u> (Headquarters)
 - Jon Johnson at <u>Jonathan.Johnson@atkinsglobal.com</u> (Production and Technical Services (PTS) Provider)
 - Eric Danielson at <u>erik.danielson@aecom.com</u> (Production and Technical Services (PTS) Provider)
 - ^o Jeff Burm at <u>jeffrey.burm@aecom.com</u> (Production and Technical Services (PTS) Provider)





Help Desk Support

- For Help Desk support, contact:
 - A <u>FEMA Map Information eXchange (FMIX)</u> Map Specialist for flood hazard mapping or floodplain management related inquiries
 - Call (1-877)FEMA MAP (1-877-336-2627) Monday-Friday, 8:00am- 6:30pm (EST)
 - Email <u>FEMAMapSpecialist@riskmapcds.com</u>
 - Chat with a Map Specialist Monday-Friday, 9:00am- 5:00pm (EST)
 - The <u>MIP Help Desk</u> at <u>miphelp@riskmapcds.com</u> for assistance in password resets or other system related inquiries









