



**FEMA**

June 17, 2011

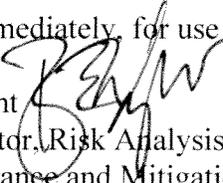
(Originally released December 16, 2010)

## Revised Procedure Memorandum No. 56

Amending the Guidelines and Standards for Flood Hazard Mapping Partners

Title: Revised Procedure Memorandum No. 56 – Guidelines for Implementation of Coordinated Needs Management Strategy (CNMS)

Effective Date: Effective immediately, for use on all projects

Approval: Roy E. Wright   
Acting Director, Risk Analysis Division  
Federal Insurance and Mitigation Administration

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**Background:** The Department of Homeland Security's Federal Emergency Management Agency (FEMA) is charged with administering the National Flood Insurance Program (NFIP) and providing reliable flood hazard data and maps for the United States. An important element in maintaining these maps is assessing FEMA's Flood Insurance Rate Maps (FIRMs) and identifying, or verifying, the status of remaining flood hazard mapping needs. Section 575 of the National Flood Insurance Reform Act of 1994 mandates that at least once every 5 years FEMA assess the need to review and update all floodplain areas and flood risk zones identified, delineated, or established under Section 1360 of the National Flood Insurance Act, as amended.

During Flood Map Modernization, this requirement was fulfilled through the Mapping Needs Assessment process. Other mechanisms such as the Mapping Needs Update Support System (MNUSS) and Scoping Reports were used to capture information describing conditions on the FIRMs and the potential for a map update. FEMA has developed a next-generation strategy that uses modern geospatial technologies within the parameters of current FEMA policies, requirements and procedures to consolidate the administration of mapping needs in a comprehensive approach referred to as the Coordinated Needs Management Strategy (CNMS). By using geospatial technologies, CNMS can leverage existing digital products and processes created in the Flood Map Modernization and Risk Mapping, Assessment, and Planning (Risk MAP) programs to improve existing flood map need management practices and production planning activities.

This Procedure Memorandum (PM) provides guidelines for the implementation of CNMS for operational management of mapping needs during Risk MAP. The PM outlines the objectives of CNMS implementation including the components, nomenclature, and validation categories and the complete CNMS lifecycle management process.

**Issues:** Floodplains are inherently dynamic, a characteristic that makes floodplain management and mapping a challenge. The underlying issue concerning FIRMs is that the flood hazard information reflected on those maps represent a static point in time, and mapping needs exist and will continue to evolve because of the changing nature of the physical environment, climate patterns, and engineering (hydraulic and hydrologic modeling) methods (PCE). The effective date of a FIRM does not reflect whether the engineering analyses have been or need to be updated to account for existing watershed characteristics that may influence current flood hazard information. Therefore, an evaluation must be conducted to determine whether the flood hazard information shown on a FIRM represents existing conditions and is therefore deemed to be “VALID” as described in the CNMS Database User’s Guide (Version 4.2 and any subsequent updates thereafter).

**Actions Taken:** While FEMA’s previous needs management system, MNUSS, met program needs at the time, it does not meet the needs of Risk MAP. Nonetheless, MNUSS contains valuable data and all appropriate data from MNUSS will be leveraged through the implementation of CNMS. MNUSS was decommissioned as of December 16, 2010.

The attached guidance document describes regional requirements and management of flood map update issues, as well as CNMS products, initial training endeavors, and frequently asked questions associated with CNMS implementation. Supporting documentation for this PM include the CNMS Database User’s Guide, which will serve as the technical reference guide for storing map update and engineering validation information, and the New, Valid, or Updated Engineering (NVUE) Summary Table, which summarizes FEMA’s map inventory with relation to status of engineering data.

How FEMA defines valid engineering flood studies is key to the design and implementation of CNMS:

*FEMA defines validation as the confirmation of an adequate level of flood hazard data reflected on a community’s FIRM, given landscape, current historical climate information, and any significant advancement in the engineering methodology that may have occurred since the date of the effective analysis.*

The results of the validation process or needs assessment will be stored as part of CNMS as described in the referenced CNMS Database User’s Guide. Flood studies for which flood hazard data are identified as having critical or significant secondary change characteristics as a result of

the methodology presented here will be labeled as “UNVERIFIED” in the CNMS database. CNMS records labeled “UNVERIFIED” are to be prioritized as part of the annual sequencing process and funded for updates as resources become available.

“UNVERIFIED” flood studies reflect a strong indication of change that may impact the delineation of the flood hazard or flood elevation represented on the FIRM, but warrant further engineering analysis to validate the impact of the change.

Community-specific requests to update the FIRM outside of the validation process will be documented in CNMS as mapping requests for regional review and consideration. CNMS-related data as defined in the CNMS Database User’s Guide will be maintained and coordinated through the FEMA Regional Offices.

*FEMA will use CNMS as the reporting mechanism on a quarterly basis throughout Risk MAP to identify any NVUE-compliant studies that exist within the FEMA map inventory and are reflected on the FIRMs. FEMA Regions shall update and maintain the currency of the engineering study reference information, validation status, and map issues contained in CNMS throughout all pertinent phases of the Risk MAP project timeline in order to support Goal 1 of Risk MAP. At a minimum, NVUE for each project shall be updated within CNMS at 3 production stages: 1) at Risk MAP project initiation as defined by a geospatial scope of work reflecting the stream segments or coastline representing the extents of the updated engineering analyses, 2) at preliminary issuance of the FIRM and FIS report, and 3) at issuance of the Letter of Final Determination.*

NVUE statistics will be collected and consolidated by each FEMA Regional Office through its respective Regional Support Center (RSC). Mapping Partners and Cooperating Technical Partners (CTPs) that are directed to collect and/or manage CNMS data shall provide all components of the CNMS data as described through this PM and CNMS Database User’s Guide to the RSC at regular intervals, no less than monthly, as defined by the Regional Office for periodic program reporting. As additional data and information become available through the production and map update processes that change or influence the historical background information or technical validity of the flood hazard information, Risk MAP partners will be required to incorporate these data into CNMS. The CNMS Inventory will be available through the FEMA Regional Offices.

**Supersedes/Amends:** Revised Procedure Memorandum 56 supersedes Procedure Memorandum 56 (originally issued December, 2010) in its entirety. With this revision, a new term “UNVERIFIED” will replace the use of the old term “INVALID” as a category for streams in the CNMS database which are to be prioritized as part of the annual sequencing process and funded for updates as resources become available. It also clarifies that NVUE shall be updated or verified within CNMS at 3 production stages: 1) at Risk MAP project initiation as defined by a geospatial scope of work reflecting the stream segments or coastline representing the extents of

the updated engineering analyses, 2) at preliminary issuance of the FIRM and FIS report, and 3) at issuance of the Letter of Final Determination.

**Attachments:**

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**Distribution List** (electronic distribution only):

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# FEMA

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# 1. Implementation of CNMS During Risk MAP

## 1.1. CNMS Implementation Objectives

- Establish CNMS as a long-term, regionally based mapping needs lifecycle management process;
- Provide a mechanism for data-driven planning and study selection processes;
- Establish CNMS as the voice of communities to identify and report mapping needs information to FEMA (replacement for MNUSS);
- Use CNMS to improve programmatic tracking and reporting of program milestones and metrics (NVUE);
- Use CNMS to achieve and maintain programmatic goals for data quality and quantity; and
- Develop CNMS data for use in other Risk MAP analytical analyses.

## 1.2. CNMS Implementation Plan

The plan for implementation is to establish CNMS as a long-term, regionally based mapping needs lifecycle management process. CNMS is intended to assist planning, support tracking, report on current mapping processes, and tabulate the validation status of FEMA's floodplain study inventory. The structure of CNMS originates from the innovative methodologies used by FEMA each year to perform floodplain mapping activities of the NFIP. CNMS provides a consistent structure and nomenclature for increased visibility, data supported planning, and standardized reporting. By replacing MNUSS with CNMS, the flood hazard production planning process will reflect the voice of communities as the Regional Offices integrate their requests into CNMS. Mapping need and risk evaluation and study planning will consider community contributions along with other pertinent factors.

The implementation of CNMS as FEMA's mapping-needs lifecycle management process involves a year-long process starting with an assessment of status types attributed to the stream centerlines in the CNMS Inventory. Some status types suggest that no further assessment is necessary and some indicate CNMS validation evaluation is necessary. A study in the CNMS Inventory, with a status type indicating CNMS evaluation is necessary, will be analyzed along with other inputs for associated watersheds like connectivity, community input, planning objectives, and impact on NVUE to feed into the study selection process. The decisions made here will be tracked and reflected in the reporting cycles that occur regularly throughout the year. The Inventory is to be maintained for changing status of existing records, new inventory added, status associated with studies in progress, and new input and requests from communities. Before the study planning process begins for the next fiscal year, CNMS data for each Region will be compiled for use in the process. Each Region will also be responsible for assisting with the consolidation of data at the national level. This consolidation will occur at least once per quarter for program reporting purposes.

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One of the goals of CNMS is to define the validity of the engineering study data within the CNMS Inventory at the stream reach and coastline segment level, regardless of study type. For the initial population of CNMS Records, each FEMA Regional Office coordinated with its respective RSC or CTPs to account for all flooding source centerlines in CNMS and categorize every stream reach and coastline segment in the Inventory. A related goal of CNMS is to summarize the contents of the Inventory in the context of all recognized stream reaches and coastline segments. This will help define the mapping need of each engineering study, determine and time-stamp the validity of the engineering study, and establish a national baseline record of NVUE reporting geospatially that will influence future program production planning activities. CTPs shall use CNMS as the sole source for reporting flood map update needs to the FEMA Regional Offices through the Annual Business Plan process. Other stakeholders outside of the CTP program can also contribute to CNMS by coordinating with the FEMA Regional Office and their respective RSC.

The components of CNMS include:

- CNMS Inventory Records (lines): The CNMS Inventory serves as spatial linework representing flooding sources within FEMA's map inventory. With attributes indicating CNMS validation status, these lines serve as the foundation for calculating mileages and percentages used in NVUE reporting.
- CNMS Studies (polygons) and Request (polygons, points) Records: These records store information on individual studies and map update issues logged as requests. The study validation checklist of critical and secondary elements is associated with the study records.
- Validation Process Documentation: This provides a summary of the specific mapping issues identified from a comprehensive technical assessment of an existing flood study. FEMA Regional Offices, through their RSCs, will be responsible for collecting and maintaining the current status of the CNMS components.
- NVUE Summary Table (Excel spreadsheet): This table provides a tabulation of miles and NVUE percentages calculated from the Inventory lines. The table is designed to report summaries at the State, regional, and national levels.

### 1.3. CNMS Lifecycle

The CNMS Lifecycle Flow Diagram (see Attachment A) outlines an ongoing operational maintenance strategy for CNMS. All Inventory types - modernized, paper, and unmapped - are addressed. On an annual basis, the Inventory and map update requests will be assessed to determine where floodplain mapping work needs to occur. The list of floodplain mapping work is then prioritized and either funded for evaluation or deferred until a later date based on regional assessment. The funded list progresses through CNMS evaluation to determine Validation Status and Status Type. All studies processed through CNMS evaluation will be categorized as 'Valid'/'NVUE Compliant' or 'Unverified'/'Being or To Be Studied'. More specifically, the CNMS Lifecycle illustrates:

- How validation status will be tracked and categorized.

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- How studies will be assessed to determine if CNMS evaluation is warranted.
- How the prioritized list of studies that need CNMS evaluation are either funded in the current year, deferred until next year, or deferred for reassessment in 5 years for instances of low risk and need.
- How studies in the CNMS Inventory migrate among the Validation Statuses and Status Types.

To achieve and maintain valid study status, Inventory type over time will migrate from the Paper and Unmapped categories to the Modernized category. Likewise, Validation Statuses and Status Types will fluctuate as Regions manage priorities to achieve their NVUE goals. Status Types have specific connotations. When studies from the Modernized or Paper Inventories are assigned to the Validation Status of “UNVERIFIED”, it is a commitment that a study is planned or underway. For studies to go from the ‘UNVERIFIED’ to “VALID” status, they must be restudied.

In certain situations, the assessment can temporarily be deferred. When the last assessment date of the Modernized or Paper Inventory exceeds 5 years, the Validation Status will revert to ‘Unknown’ and require reassessment. The assessment can be deferred to the next fiscal year or can be deferred for a maximum of 5 years. The 5-year deferment will be applied to studies in areas of low risk and low need as determined by engineering judgment by the Regional Offices. Individual studies are not to be perpetually deferred until the next fiscal year without due cause. The option to defer an assessment for 5 years must be held to a minimum and requires discussion with the National office during each fiscal year production planning process.

### 1.4. CNMS / NVUE Nomenclature and Categories

The CNMS Inventory data is organized using three tiers of categories to distinguish all stream miles in the Nation: Inventory Type, Validation Status, and Status Type. Each of the Inventory Types, Validation Statuses, and Status Types is illustrated in Figure 1. Inventory Type is the top-tier category that separates stream miles based on whether they are Modernized, Paper Inventory, or Unmapped. The Modernized inventory includes all studied and mapped stream miles, regardless of study type, that have a Flood Insurance Rate Map (FIRM) database. The Paper Inventory includes all studied and mapped stream miles, regardless of study type, that do not have a FIRM database. Finally, the Unmapped Inventory includes all stream miles that do not currently have a mapped study.

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**Figure 1. Table of Inventory Types, Validation Statuses, and Status Types in the CNMS Lifecycle**

Inventory Type	Validation Status	Status Type	Inventory Type	Validation Status	Status Type	Inventory Type	Validation Status	Status Type
Modernized Inventory	Unknown	To Be Assessed	Paper Inventory	Unknown	To Be Assessed	Unmapped	Unknown	Being Assessed
		Being Assessed			Being Assessed			Not Being Assessed
		Deferred			Deferred			
	Unverified	To Be Studied		Unverified	To Be Studied		Assessed	To Be Studied
		Being Studied			Being Studied			Being Studied
		NVUE Compliant			NVUE Compliant			Deferred
	Valid			Valid				

The second tier of organization is Validation Status. This tier identifies whether the engineering analysis behind a studied stream mile in the Modernized or Paper Inventory has been classified as Valid, Unverified, or Unknown. The Validation Status tier is referenced to provide the official NVUE percentage statistics through the formula  $[NVUE = total \text{ 'Valid' } stream \text{ miles} / total \text{ studied } stream \text{ miles}]$ . For all Unmapped Inventory, the second tier is defined as Assessed or Unknown, where Assessed indicates that the stream miles in question have been investigated by the Regional Office for consideration of a possible mapping project.

The third tier of organization is Status Type. This tier identifies the action that has been designated for the corresponding stream mileage. Modernized and Paper Inventory classified as 'Unknown' will be categorized as one of the following:

- To Be Assessed – Regional Office must provide input to determine whether to fund a CNMS evaluation, defer due to low risk/priority, or convert to Zone A.
- Being Assessed – CNMS evaluation was funded and/or is in progress.
- Deferred – Prior regional assessment determined low risk/priority; study is deferred for a maximum of 5 years before re-assessment is required.

Modernized and Paper Inventory that is classified as 'UNVERIFIED' will automatically enter a queue for funding to be restudied and will be categorized as one of the following:

- To Be Studied – Stream miles have been prioritized by Regional Office to receive out-year funding and will go through sequencing.
- Being Studied – New or revised analysis has been funded and/or is in progress.

Modernized and Paper Inventory that is classified as "VALID" will have the following status:

- NVUE Compliant – Stream miles meet NVUE criteria and will be re-assessed after a maximum of 5 years.

Unmapped Inventory that is classified as "UNKNOWN" will be categorized as one of the following:

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- Not Being Assessed – Includes all stream miles that FEMA has not investigated. This status will contain the majority of stream miles that are not in FEMA’s mapped SFHA inventory (approx 3.1M miles, as of September 2010, are not in FEMA’s mapped SFHA inventory).

Unmapped Inventory that is classified as ‘Assessed’ will be categorized as one of the following:

- To Be Studied – Stream miles have been prioritized for funding to be mapped as a SFHA during Risk MAP.
- Being Studied – New engineering analysis is in progress.
- Deferred – Stream miles were investigated by the Regional Office and determined to be low risk/priority.

### 1.5. Timetables/ Trigger Points

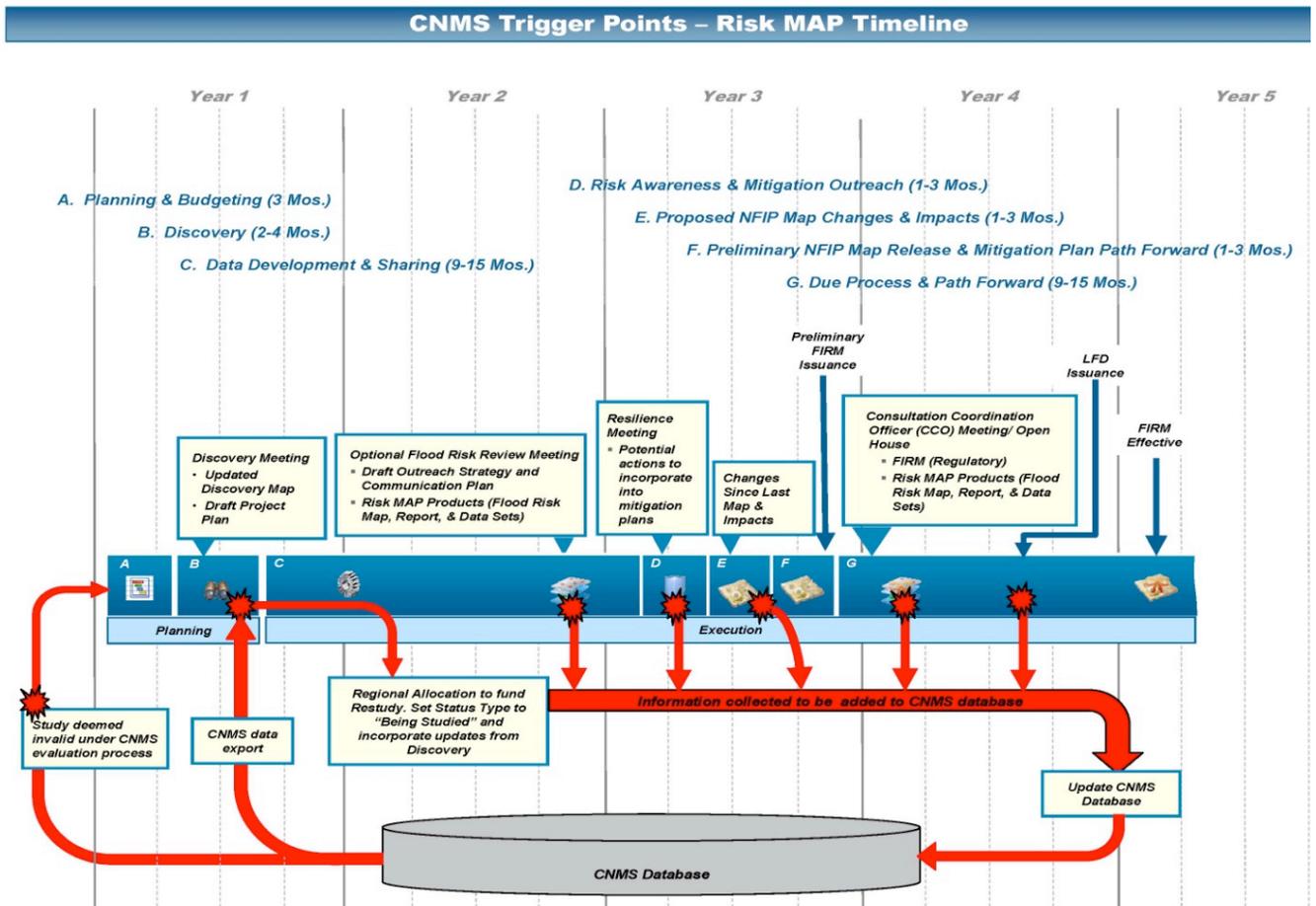
A Region’s Inventory is to be assessed on an ongoing basis, and reported at least quarterly. Several trigger points in the lifetime of a segment of CNMS Inventory will require the Inventory to be re-assessed.

Three trigger points, falling into two categories, are indicated on the lifecycle diagram. The first category involves a situation where 5 years have elapsed since a segment of Inventory was last assessed in the CNMS lifecycle process. The other category exists when at least 1 year has elapsed since allocation of resources for new studies had been determined necessary under the CNMS process, but was deferred.

Other trigger points that require updates to the CNMS Inventory are not indicated on the diagram. One is described here. If a specific request for a restudy has been received from a community, the request should be logged into the CNMS database and the data supporting the request used to assess the corresponding Inventory for validity. Numerous other trigger points exist within the Risk MAP production process. Figure 2 illustrates CNMS trigger points and the interaction between the parallel processes of Risk MAP production and CNMS maintenance.

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**Figure 2. Risk MAP production timeline with CNMS interaction and trigger points.**



Because CNMS provides one element in the foundation for prioritizing new study selection, CNMS and the Risk MAP production process interact immediately. Once a watershed is selected for study, the Discovery activities shall involve collecting and analyzing data on which the available CNMS validation status were based. This information is brought to the Discovery meetings and can serve as discussion points. Conversely, the Discovery process may yield new information that will then be brought to, and incorporated into, the CNMS database. This new information may be community requests for new study or information that, when considered under the CNMS evaluation process, may warrant a change in validation status of a stream segment within the CNMS Inventory. Information gathered during Discovery is used to develop a Statement of Work and corresponding allocation of funds for a new study. The funding of a new study is a trigger point that requires changing the affected Inventory Status Type to “Being Studied,” and incorporating the information revealed during Discovery into the CNMS database.

Similar to the Discovery tasks, meetings and data development tasks performed during the Execution phase may also generate information pertinent to CNMS. Under existing Risk MAP

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production procedures, information on mapping needs must be documented in meeting summary reports, Technical Support Data Notebooks, and other project documentation. Therefore, collection of this information requires no change in the current Risk MAP production process. This information, once documented, awaits the next CNMS update trigger, the Letter of Final Determination (LFD) issuance.

At LFD issuance, the CNMS Inventory will be updated to reflect the newly-developed FIRM database, as well as any new requests submitted by the community during the Execution phase.

### 1.6. Regional Responsibilities

Ultimately, the FEMA Regional Offices are responsible for the data inputted into CNMS to ensure that an accurate depiction of the Region's inventory is reflected and maintained over the course of the Risk MAP program. Regional decisions to prioritize, assess, and perform engineering studies along various flooding sources must be supported by the data contained in CNMS.

The Regional CNMS work plans completed under Risk MAP Standard Operations Task Order 2, CNMS Phase 2.5, will serve as a road map for the assessment, scheduling, and prioritizing of CNMS evaluation of studied streams during CNMS Phase 3. These work plans are to be considered living documents. The contents are therefore dynamic and may change to reflect refinements and efficiencies realized during the course of the project. Using these Regional CNMS work plans, the FEMA Regions shall work with their RSC and/or CTPs to manage and communicate assessment decisions illustrated in the CNMS lifecycle flow diagram.

The assessment decision to defer CNMS evaluation of studied streams with validation status 'Unknown' shall be coordinated with the FEMA Regions and documented in the CNMS database. Regions will need to re-assess streams in the deferred category at least every 5 years with the understanding that assessment may be required sooner because of circumstances such as watershed connectivity issues, and as risk and need factors change over time. Likewise, the assessment decisions for unmapped streams requiring a SFHA shall be carefully considered and coordinated with the FEMA Regions. Studied stream segments with the validation status of 'Invalid' are to be prioritized and funded for updates. Therefore, as CNMS data are rolled up to each Region by the RSC for quarterly reporting, Regions will need to review the list of newly invalidated studies and initiate assessment as to how these invalid studies will be prioritized and funded for updates.

### 1.7. CNMS Reporting Requirements

FEMA Regional Offices through their RSCs will be responsible for reporting CNMS data population, maintenance updates, and NVUE status to FEMA HQ on a quarterly basis. Validation status assigned to the CNMS Inventory network will be sourced from the CNMS Studies dataset. As study validation categories are updated or changed in the CNMS Studies records (polygons), these changes are imprinted on the respective flooding source centerlines in the CNMS Inventory. NVUE reporting of stream miles in each validation status category will be calculated from the CNMS Inventory linework. A summary of the Region's progress will be requested for quarterly program reviews by FEMA HQ in a format consistent with NVUE reports. CTPs managing the

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population and reporting of CNMS and NVUE data shall serve the three data components of CNMS to the appropriate FEMA Regional Office for consolidation to meet this reporting requirement. RSCs will support the FEMA Regions to collect and store all CNMS data, and RSCs will report progress to their respective Regional Office and the Program Management contractor at regular intervals.

The RSCs and/or CTPs will be responsible for incorporating any new or updated inventory data that become available through the production and map update processes and communicating these updates to the Region. FEMA Regions and Mapping Partners shall continue to monitor newly identified and unresolved mapping needs that result from the post-preliminary process via protests or appeals. Any outstanding issues that will not be incorporated into the final effective DFIRM for the project shall be documented in CNMS, as the issue will serve as a potential trigger for 'Unverified' or as a 'Request' to be sequenced and prioritized by the FEMA Regional Office when it decides where resources should be spent for future map updates.

### 1.8. CNMS Training

It is important that the CNMS process is consistent to the extent possible for all FEMA Regions. Many rules and multiple steps in the study evaluation process require consistent methods to create an accurate database that reflects needs throughout the Nation. Therefore, it is imperative that nationally developed training materials include a standardized process to be used by the Regions, Production and Technical Services (PTS) contractors, CTPs and their subcontractors.

CNMS has been and will continue to be a dynamic initiative that will evolve to best serve the goals of Risk MAP. National training materials defining the purpose, uses and implementation of CNMS will be developed and provided in FY11. As updates are needed, these materials will be distributed throughout Risk MAP and used for training stakeholders of the CNMS lifecycle process. Official training sessions dedicated to Regional staff, CTPs, RSCs, PTS and other stakeholders involved in the implementation and management of the CNMS lifecycle will be provided as needed.

CNMS will ultimately be the tool that the Regions will use for managing needs during Risk MAP. The Regions also require a deep understanding of CNMS. They will be responsible for the status of all miles depicted in CNMS and managing the long-term implementation and prioritization of CNMS. The Regions will be briefed regularly by their respective PTS or RSC on the current status of the CNMS through the reporting process.

## 2. Frequently Asked Questions

### **What is a ‘Valid’ Study?**

A ‘Valid Study’ meets FEMA’s current validity standards and, until otherwise noted, the information shown on the FIRM does not need to be updated.

### **What is an ‘Unverified’ Study?**

An ‘Unverified’ Study is identified when a mapping needs assessment determines that flood hazard information reflected on the FIRM, regardless of study type, reflects a strong indication of change that may impact the delineation of the flood hazard or flood elevation represented on the FIRM, but warrants further engineering analysis to validate the impact of the change. It is also a commitment that a restudy is currently underway, or resources for a restudy will be allocated in the future. An ‘Unverified’ validation status changes to ‘Valid’ when that stream segment is restudied.

### **What is the difference between an ‘Unverified’ study and a ‘Request’?**

While an ‘Unverified’ Validation Status for existing flood hazard studies is identified to indicate a potential change to the flood hazard information, ‘Requests’ describe a desire to address mapping needs based on the lack of existing engineering studies, cartographic concerns, or labeling issues.

### **What is the NVUE metric and what does it track?**

NVUE stands for New, Validated, or Updated Engineering. The NVUE metric allows FEMA to track and report the percentage of their mapped SFHA inventory that meet FEMA’s current validity standards.

### **What are the minimum required deliverables for those participating in CNMS implementation?**

- The populated CNMS Studies Database
- Updated CNMS Inventory
- Validation Process Documentation Checksheet

Required deliverables do not include backup data referenced in the Checksheet.

### **When should I update CNMS?**

CNMS consists of a process, methodologies, and associated tools. It is an ongoing approach that tracks the lifecycle of mapping needs. When a needs assessment determines that flood hazard information reflected on a FIRM does not adequately convey current risk conditions, a CNMS update is warranted. Certain milestone events that should also trigger CNMS update activity:

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- The Discovery process and preliminary issuance of a DFIRM
- Issuance of a LOMR that updates the engineering data of an effective study
- Community input identifying needs
- Major flood events
- Repetitive loss recorded at flooding sources
- Statutory requirements
- Availability of new data

### **Do I use the Validation Checklist for approximate studies?**

The Validation Checklist should be utilized for detailed and approximate engineering studies. It may not be appropriate to utilize the entire Validation Checklist for effective approximate studies unless the technical data, methodology, and basis for the study is known. Therefore, for approximate engineering studies, the Validation Checklist should be used to the extent possible and practical without far exceeding expected costs. The FEMA Regional office can provide guidance to Mapping Partners to ensure this is met. For an approximate analysis to be categorized as a ‘Valid’ study, FEMA must have determined the approximate floodplains utilizing engineering methods and/or technical data.

### **Do I need to answer every question in the Validation Checklist?**

Although an ‘Unverified’ status can be triggered with one critical element, a full understanding of the situation is strongly recommended. All Checklist questions for which data are readily available are expected to be answered.

### **Can I customize the Data Model to fit individual issues within my area of concern?**

Yes, but compliance with the existing CNMS data model should be preserved. Alterations should not prohibit roll-up activities of the CNMS database in the published format.

### **Does this replace MNUSS?**

Official release of this CNMS procedure memorandum marks decommissioning of MNUSS.

### **What is the CNMS Inventory and does it contain the unmodernized and unmapped stream miles?**

The CNMS Inventory refers to FEMA’s inventory of data representing mapped floodplains, including unmodernized stream miles. Inventory records represent FEMA’s digital flood hazard data inventory in the form of a set of flooding source centerlines. These centerlines will enable tracking of the portions of FEMA’s inventory that attain status as NVUE studies and those that do not. The CNMS Inventory can also include unmapped stream miles. The ‘Unmapped Inventory’ helps calculate stream mileage in areas where request records are generated.

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### **How is the CNMS Inventory used?**

FEMA will use the CNMS Inventory as the sole mechanism for tracking and reporting NVUE metrics. The CNMS Inventory may also be used for:

- Spatial analysis to assess needs of geographies at a regional, State, county, watershed, stream reach level, etc.;
- Conveyance of needs information for Discovery and community outreach purposes; and
- Sequencing and planning processes.

### **Who created the CNMS Inventory and who will maintain it?**

FEMA created the CNMS Inventory for NVUE metrics tracking and reporting. Contracted service providers, CTPs, and others conducting evaluation of mapping needs via CNMS are responsible for maintenance of the CNMS Inventory in coordination with the FEMA Regional Office. Ultimately, the FEMA Regional Office is responsible for the data contained within CNMS and owns the validation status of miles depicted in their respective inventory.

### **How do I obtain the CNMS Inventory?**

The FEMA Regional Offices are the custodians of the CNMS Inventory. The Inventory may be procured through data exchange agreements with the FEMA Regional Office.

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## Attachment A. CNMS Lifecycle Flow Diagram

### CNMS Lifecycle Flow Diagram

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