



FEMA

State of Alabama COOPERATING TECHNICAL PARTNERS COORDINATED NEEDS MANAGEMENT STRATEGY MAPPING ACTIVITY STATEMENT

CNMS Mapping Activity Statement No. FY10.AL

In accordance with the Cooperating Technical Partners (CTP) Partnership Agreement dated September 30, 2002 between the State of Alabama and the Federal Emergency Management Agency (FEMA), CNMS Mapping Activity Statement (MAS) No. FY10.AL is as follows:

SECTION 1—OBJECTIVE AND SCOPE

Section 575 of the National Flood Insurance Reform Act of 1994 mandates that at least once every 5 years FEMA assess the need to revise and update all floodplain areas and flood risk zones identified, delineated, or established under Section 1360 of the National Flood Insurance Act, as amended.

In order to meet this requirement FEMA has developed a next generation strategy that utilizes modern geospatial technologies along with current FEMA policies, requirements and procedures to coordinate the management of mapping needs in a comprehensive approach referred to as the Coordinated Needs Management Strategy (CNMS).

It is necessary to determine the relative accuracy of flood hazard data presented on a community's Flood Insurance Rate Map (FIRM) before the map production process begins. The effective date of the FIRM does not provide an indication that the engineering analyses have been updated or are in need of an update to account for existing watershed characteristics that may influence the flood hazard information. Therefore, a needs assessment must be conducted to determine whether the flood hazard information reflected on the FIRM represents existing conditions and is deemed to be valid or current. The age of the analysis shall not be a determining factor in assessing the need for a restudy if the results of the needs assessment reflect the potential for minimal change to the flood hazard information.

The goal of CNMS is to define the validity of the engineering study data within the mapped inventory at the stream level. For the initial population of CNMS, the Alabama Office of Water Resources shall coordinate with the Regional office to have all flooding source centerlines included in CNMS and have defined every segment contained in the CNMS stream network as valid, invalid, or in progress. The intent of having this information is to 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 New, Validated or Updated Engineering (NVUE) reporting geospatially that will influence future program production planning activities. In FY11, CTPs shall utilize CNMS as the sole source for reporting flood map update needs to the FEMA Regional Offices through the Annual Business Plan process. The appropriate Regional Service Center (RSC) will be used to collect Regional data once it is completed. Future maintenance of this data will be documented in a future project specific MAS or Program Management MAS.

The Alabama Office of Water Resources will validate all flooding source centerlines in the CNMS inventory for each HUC-8 watershed identified in Table 1.1, HUC-8 Watersheds to be Validated, as determined by the CNMS Inventory.

Table 1.1 HUC-8 Watersheds to be Validated

Watersheds	Flooding Source Types to be Evaluated				
	Requires Assessment	Unknown	Valid	Invalid	In Progress
Bear	✓	✓			✓
Blackwater	✓	✓			✓
Buttahatchee	✓	✓			✓
Cahaba	✓	✓			✓
Chipola	✓	✓			✓
Escambia	✓	✓			✓
Escatawpa	✓	✓			✓
Guntersville Lake	✓	✓			✓
Locust Fork	✓	✓			✓
Lower Alabama	✓	✓			✓
Lower Black Warrior	✓	✓			✓
Lower Chattahoochee	✓	✓			✓
Lower Choctawhatchee	✓	✓			✓
Lower Conecuh	✓	✓			✓
Lower Coosa	✓	✓			✓
Lower Elk	✓	✓			✓
Lower Tallapoosa	✓	✓			✓
Lower Tombigbee	✓	✓			✓
Luxapallila	✓	✓			✓

Watersheds	Flooding Source Types to be Evaluated				
	Requires Assessment	Unknown	Valid	Invalid	In Progress
Middle Alabama	✓	✓			✓
Middle Chattahoochee – Lake Harding	✓	✓			✓
Middle Chattahoochee – Walter F. George	✓	✓			✓
Middle Coosa	✓	✓			✓
Middle Tallapoosa	✓	✓			✓
Middle Tennessee – Chickamauga	✓	✓			✓
Middle Tombigbee – Chickasaw	✓	✓			✓
Middle Tombigbee - Lubbub	✓	✓			✓
Mississippi Coastal	✓	✓			✓
Mobile – Tensaw	✓	✓			✓
Mobile Bay	✓	✓			✓
Mulberry Fork	✓	✓			✓
Noxubee	✓	✓			✓
Patsaliga	✓	✓			✓
Pea	✓	✓			✓
Perdido	✓	✓			✓
Perdido Bay	✓	✓			✓
Pickwick Lake	✓	✓			✓

Watersheds	Flooding Source Types to be Evaluated				
	Requires Assessment	Unknown	Valid	Invalid	In Progress
Sepulga	✓	✓			✓
Sipsey	✓	✓			✓
Sipsey Fork	✓	✓			✓
Sucarnoochee	✓	✓			✓
Upper Alabama	✓	✓			✓
Upper Black Warrior	✓	✓			✓
Upper Chickasawhay	✓	✓			✓
Upper Choctawhatchee	✓	✓			✓
Upper Conecuh	✓	✓			✓
Upper Coosa	✓	✓			✓
Upper Tallapoosa	✓	✓			✓
Upper Tombigbee	✓	✓			✓
Wheeler Lake	✓	✓			✓
Yellow	✓	✓			✓

This CNMS Project will be completed by the following Mapping Partners:

- Alabama Office of Water Resources, CTP;
- AMEC Earth and Environmental, Inc. or PBS&J Corporation, CTP Contractors; and
- Michael Baker Corporation, PTS.

The Mapping Partner shall notify FEMA and all applicable parties of all meetings, if necessary, with community officials at least two weeks prior to the meeting (with as much notice as possible). FEMA and/or its contractor may or may not attend the community meetings.

The Mapping Partner shall maintain an archive of all data submitted. (All supporting data must be retained for three years from the date a funding recipient submits its final expenditure report to FEMA.)

In cooperation with the FEMA Project Officer, a Project Management Team (PMT) will be established by the Alabama Office of Water Resources consisting of representatives from the Alabama Office of Water Resources, FEMA's regional engineer, the RSC, and other appropriate parties. The PMT will be responsible for coordinating the activities identified in this CNMS MAS. The FEMA Region will be provided with documentation identifying the established PMT.

Validation Process Documentation Checksheet

Responsible Mapping Partner: Alabama Office of Water Resources

Scope: Documentation of research and methodologies influencing validation findings recorded in the S_Studies_Ar feature class are to be retained by the Alabama Office of Water Resources and recorded in the validation process documentation checksheet (CNMS Database User's Guide, Appendix B). This checksheet must be provided to support validation decisions and inputs into CNMS. Information provided in these fields will document the location, source, and methodologies used in order to determine various validation decisions. GIS data layers and output results from the CNMS validation process will be maintained and stored by the Alabama Office of Water Resources but must be referenced in the Validation Process Documentation Checksheet. The need of the mapping partner to maintain records is important as the deliverable is subject to scrutiny of the validation decisions made by the Alabama Office of Water Resources.

Standards: All Program Management work shall be performed in accordance with the standards specified in Section 4 - Standards.

Deliverables:

- Validation Process Documentation Checksheet

Populating the CNMS Studies Database

Responsible Mapping Partner: Alabama Office of Water Resources

Scope: The Alabama Office of Water Resources will use the Validation Checklist (CNMS Database User's Guide, Appendix A) and populate appropriate table records in the S_Studies_Ar feature class in the CNMS Geodatabase.

Utilization of the Validation Checklist is primarily directed toward the evaluation of existing detailed floodplain studies, the results of which are captured as a 'CNMS Study Record'. Lack of an existing FEMA flood hazard study should result in development of a CNMS 'Request' Record. The central purpose of the Validation Checklist is to outline a format that must be utilized to document a flood study as being VALIDATED or an UNMET NEED.

The CNMS Validation checklist is divided into three main categories; Background Information, Critical Elements, and Secondary Elements. The Background Information category contains the date of the effective analyses for each studied stream, the Hydrologic and Hydraulic (H&H) models used for the effective study, and if the H&H models are available in a digital format. The Critical Elements section of the checklist includes 7 critical elements that consist of physical factors, climatological factors, and engineering methodology that have changed since the date of the effective analyses. The Secondary Elements section contains 10 secondary factors that have changed since the date of the effective analyses,

and are used in the validation process.

Any deficiency identified as an UNMET NEED or a CNMS Request Record will warrant a review for inclusion in the map update investment process. For existing floodplain studies, this review will be triggered when one critical or four or more secondary deficiencies have been identified to mark the area as having an UNMET NEED. Based on the Validation Checklist, if the validation evaluation identifies no critical elements and less than four secondary deficiencies for a stream segment flood study, the engineering analysis is considered VALIDATED. Validating approximate studies is completed independent of the Validation Checklist. For validation rules applicable to approximate studies refer to CNMS Database User's Guide.

Standards: All Program Management work shall be performed in accordance with the standards specified in Section 4 - Standards.

Deliverables:

- CNMS Geodatabase with the following elements populated as specified in the CNMS User's Guide:
 - 'S_Studies_Ar' Polygon feature class populated for detailed engineering studies.
 - 'S_Requests_Ar' Point/Polygon feature class populated as necessary.
 - 'Specific_Needs_Info' Table populated as necessary.
 - 'Point_of_Contact' Table populated as necessary.

Updating the CNMS Inventory

Responsible Mapping Partner: Alabama Office of Water Resources

Scope: The CNMS Inventory serves as spatial linework representing flooding sources within FEMA's map inventory and the foundation for NVUE reporting. Validation status assigned to the CNMS Inventory linework is sourced from the CNMS Studies dataset (S_Studies_Ar). The Alabama Office of Water Resources will use the existing CNMS Inventory linework acquired from the Region as a baseline for updating the flooding source centerlines previously attributed as "Requires Assessment" or "Unknown". As study validation categories are updated or changed in the CNMS Studies records (polygons created under the Populating the CNMS Studies Database task of this MAS) these changes will be imprinted on the respective flooding source centerlines in the CNMS Inventory. Modifying the Inventory linework geometry prior to attribute transfer from the S_Studies_Ar polygons may be necessary due to a) better quality line geometry available, or b) due to inaccurate representation of stream miles for the SFHAs in the existing Inventory. The validation status of all streams within the CNMS Inventory shall be labeled as Valid, Invalid, In Progress, or Unknown as described in Section 2.3 of the CNMS Database User's Guide.

Standards: All Program Management work shall be performed in accordance with the standards specified in Section 4 - Standards.

Deliverables:

- CNMS Geodatabase with 'S_Studies_Ln' Feature Class (Polyline) updated to inherit the current validation statuses from the 'S_Studies_Ar' feature class and updated to reflect any changes in validation status of approximate studies.

SECTION 2—PERIOD OF PERFORMANCE

The mapping activities outlined in this CNMS MAS will be completed as specified in the Agreement Articles of the Cooperative Agreement. The Activities may be terminated at the option of FEMA or the State of Alabama in accordance with the provisions of the Partnership Agreement dated September 30, 2002. If these activities are terminated, all products produced to date must be returned to the FEMA Regional Office and the remaining funds from uncompleted activities, provided by FEMA for this CNMS MAS, will be returned to FEMA.

SECTION 3—FUNDING/LEVERAGE

FEMA is providing funding, in the amount of _____ to the Alabama Office of Water Resources for the completion of this CNMS Project. The Alabama Office of Water Resources shall provide any additional resources required to complete the assigned activities for this CNMS Project. Activities associated with any additional needs would be performed based on availability of additional funds. The leverage listed below includes in-kind services and estimated values for acquired information (i.e. database population, CNMS Inventory update, validation process documentation, etc.).

Table 3.1 Contribution and Leverage

CNMS Task	FEMA Contribution	Partner Contribution	% Partner Leverage	Total Project Cost
Validation Process Documentation Checksheet; Populating the CNMS Studies Database; and Updating the CNMS Inventory				
TOTAL FUNDING AMOUNTS				

SECTION 4—STANDARDS

The standards relevant to this CNMS MAS are the CNMS File Geodatabase, the CNMS Database User's Guide, Version 3.0, April 2010, CNMS Sample Validation Process Documentation Checksheet, and appropriate FEMA Procedural Memorandums. These documents can be obtained from the FEMA library at <http://www.fema.gov/library/index.jsp>.

SECTION 5— SCHEDULE

The activities documented in this CNMS MAS shall be completed and submitted by the following dates: 33% of the total number of watersheds/counties (must include planned FY11 studies) by September 30, 2010; 67% of the total number of watersheds/counties by December 31, 2010; and 100% of the total number of watersheds/counties by May 15, 2011 to the appropriate RSC for Regional consolidation. The following table lists the watersheds/counties in priority and the date they will be submitted.

Table 5.1 Delivery Schedule

Submittal Date	Watersheds	Counties
September 30, 2010	Perdido Bay, Mobile Bay, Mississippi Coastal, Perdido, Mobile-Tensaw, Middle Tennessee-Chickamauga, Upper Coosa, Locust Fork, Wheeler Lake, Middle Coosa, Lower Elk, Chipola, Pickwick Lake, Lower Choctawhatchee, Escatawpa, Upper Choctawhatchee, Upper Black Warrior and Guntersville Lake	Autauga, Baldwin, Blount, Calhoun, Cherokee, Coffee, Colbert, Dale, DeKalb, Elmore, Etowah, Geneva, Houston, Jackson, Jefferson, Lauderdale, Lawrence, Limestone, Madison, Marshall, Mobile, Montgomery, Morgan, Shelby, St. Clair, Talladega and Tuscaloosa
December 31, 2010	Blackwater, Cahaba, Lower Coosa, Sipsey Fork, Middle Chattahoochee – Walter F. George, Upper Alabama, Escambia, Mulberry Fork, Lower Conecuh, Middle Chattahoochee – Lake Harding, Lower Black Warrior, Yellow, Pea, Lower Tallapoosa, Sepulga and Middle Alabama	Barbour, Bibb, Bullock, Butler, Chambers, Chilton, Cleburne, Conecuh, Coosa, Covington, Cullman, Dallas, Escambia, Greene, Hale, Lee, Lowndes, Macon, Perry, Pike, Russell, Walker, Wilcox and Winston
May 15, 2011	Lower Chattahoochee, Upper Tallapoosa, Lower Alabama, Upper Chickasawhay, Upper Tombigbee, Sipsey, Noxubee, Middle Tallapoosa, Bear, Middle Tombigbee-Lubbub, Lower Tombigbee, Buttahatchee, Middle Tombigbee-Chickasaw, Luxapallila, Sucarnoochee, Upper Conecuh and Patsaliga	Choctaw, Clarke, Clay, Crenshaw, Fayette, Franklin, Henry, Lamar, Marengo, Marion, Monroe, Pickens, Randolph, Sumter, Tallapoosa and Washington

If gaps or missing information in the submittal are identified then the CTP shall provide missing information within 1 month of notification from the RSC. If changes to this schedule are required, the responsible Mapping Partner shall coordinate with FEMA and the other Mapping Partners in a timely manner.

SECTION 6—CERTIFICATIONS

For completion of the CNMS Validation Checklist, some of the validation elements should be completed under the supervision of an engineer or other responsible party. For example, investigation of updated and effective peak discharges based on confidence limits criteria in the FEMA Guidelines and Specifications (G&S) for Flood Hazard Mapping Partners. Entering & updating the validation elements in the Geodatabase should be performed by users experienced with Geographic Information Systems (GIS) software.

SECTION 7—TECHNICAL ASSISTANCE AND RESOURCES

Project Team members may obtain copies of FEMA-issued LOMCs, archived engineering backup data, and data collected from FEMA and/or your Regional Project Officer. Specific technical and programmatic support may be provided through FEMA and/or its contractor; such assistance should be requested through the FEMA Project Officer specified in Section 11 – Points of Contact.

Data requests to the FEMA library will follow guidance documentation within the CNMS Procedure Memorandums for data library requests. Project Team members also may consult with the FEMA Regional Project Officer to request support in the areas of selection of data sources, digital data accuracy standards, assessment of vertical data accuracy, data collection methods or subcontractors, and GIS-based engineering and modeling training.

SECTION 8—CONTRACTORS

The Alabama Office of Water Resources intends to use the services of AMEC Earth and Environmental, Inc. or PBS&J Corporation as a contractor for this CNMS Project. The Alabama Office of Water Resources shall ensure that the procurement for all contractors used for this Flood Map Project complies with the requirements of 44 CFR 13.36.

Part 13 may be downloaded in PDF or text format from the United States Government Printing Office website at http://www.access.gpo.gov/nara/cfr/waisidx_04/44cfr13_04.html.

SECTION 9—REPORTING

Financial Reporting: Because funding has been provided to the Alabama Office of Water Resources by FEMA, financial reporting requirements for the Alabama Office of Water Resources will be in accordance with Cooperative Agreement Articles. The Alabama Office of Water Resources shall also refer to 44 CFR 13.41.

The Alabama Office of Water Resources shall provide financial reports to the FEMA Regional Project Officer and Assistance Officer in accordance with the terms of the signed Cooperative Agreement for this MAS.

Status Reporting: Status reports will be submitted on a quarterly basis in accordance with the financial reporting submittals. The Alabama Office of Water Resources shall refer to 44 CFR 13.4 to obtain minimum requirements for status reporting. The Project Officer, as needed, may request additional information on status.

The Alabama Office of Water Resources may meet with FEMA and/or its contractor up to bi-weekly, or more frequently if needed, to review the progress of the project in addition to the quarterly financial and status submittals. These meetings will alternate between FEMA's Regional Office, the Alabama Office of Water Resources office, and conference calls, as necessary.

The Project Officer, as needed, may request additional information on status on an ad hoc basis.

SECTION 10—PROJECT COORDINATION

Throughout the project, all members of the PMT will coordinate, as necessary, to ensure the products meet the technical and format specifications required and contain accurate, up-to-date information. Coordination activities shall include:

- Meetings, teleconferences, and video conferences with FEMA and other Project Team members, as required;
- Telephone conversations with FEMA and other Project Team members on a scheduled basis and an ad hoc basis, as required;
- E-mail, facsimile transmissions, and letters, as required.

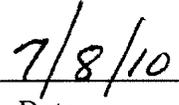
SECTION 11—POINTS OF CONTACT

The points of contact for this CNMS Project are Kristen Martinenza, the FEMA Regional Project Officer; Leslie Durham, the Project Manager for the Alabama Office of Water Resources; or subsequent personnel of comparable experience who are appointed to fulfill these responsibilities. When necessary, any additional FEMA assistance should be requested through the FEMA Regional Project Officer.

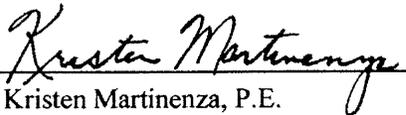
Each party has caused this CNMS MAS to be executed by its duly authorized representative.



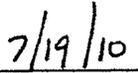
Leslie Durham, P.E.
Project Manager
Alabama Office of Water Resources



Date



Kristen Martinenza, P.E.
Regional Project Officer
Federal Emergency Management Agency, Region 4



Date