



Georgia Department of Natural Resources COOPERATING TECHNICAL PARTNERS MAPPING ACTIVITY STATEMENT

Mapping Activity Statement No. 3 – Digital Flood Insurance Rate Map Production and Development of Updated Flood Data

In accordance with the Cooperating Technical Partners (CTP) Partnership Agreement dated August 16, 1999, between State of Georgia Department of Natural Resources and the Federal Emergency Management Agency (FEMA), Mapping Activity Statement (MAS) No. 3 is as follows.

SECTION 1—OBJECTIVE AND SCOPE

The objective of the Flood Map Project documented in this MAS is to develop a Digital Flood Insurance Rate Map (DFIRM) and Flood Insurance Study (FIS) report for Union County, Georgia. The DFIRM and FIS report will be produced in the FEMA Countywide Format. The DFIRM product will be referenced to the North American Vertical Datum of 1988 (NAVD).

In addition the Mapping Partners involved in this project will develop new and/or updated flood hazard data for approximately 100 miles of stream, as summarized in the table below.

Flooding Source	Hydrologic Analyses	Hydraulic Analyses	Floodplain Mapping	Redelineation Using Effective Flood Profiles and Updated Topographic Data	Post DFIRM Processing
Akins Creek	NRCS	NRCS	NRCS		X
Arkaqua Creek	NRCS	NRCS	NRCS		X
Barnes Creek	NRCS	NRCS	NRCS		X
Butternut Creek	NRCS	NRCS	NRCS		X
Conley Creek	NRCS	NRCS	NRCS		X
Coosa Creek	NRCS	NRCS	NRCS		X
Dooley Creek	NRCS	NRCS	NRCS		X
East Fork Coosa Creek	NRCS	NRCS	NRCS		X
Jones Creek	NRCS	NRCS	NRCS		X
Kiutuestia Creek	NRCS	NRCS	NRCS		X

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Flooding Source	Hydrologic Analyses	Hydraulic Analyses	Floodplain Mapping	Redelineation Using Effective Flood Profiles and Updated Topographic Data	Post DFIRM Processing
Little Youngcane Creek	NRCS	NRCS	NRCS		X
Nottley River	NRCS	NRCS	NRCS		X
Stink Creek	NRCS	NRCS	NRCS		X
Suches Creek	NRCS	NRCS	NRCS		X
Toccoa River	NRCS	NRCS	NRCS		X
Town Creek	NRCS	NRCS	NRCS		X
Trackrock Creek	NRCS	NRCS	NRCS		X
Wolf Creek	NRCS	NRCS	NRCS		X
Youngcane Creek	NRCS	NRCS	NRCS		X

This Flood Map Project will be completed by the following:

- State of Georgia Department of Natural Resources (DNR);
- Lowe Engineers Project Team (Contractor);

The activities for this Flood Map Project, including required Quality Assurance/Quality Control (QA/QC) reviews, and the Mapping Partners that will complete them are summarized in the table below. The sections of this MAS that follow the table below describe the specific activities, responsible Mapping Partner(s), FEMA standards that must be met, and resultant map components.

Activities	CTP	FEMA
Activity 14 – Post-Preliminary Processing	X	X

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Activity 14 - Post-Preliminary Processing

Responsible Mapping Partners: State of Georgia DNR and their contractor.

Scope: Activity 14 consists of finalizing the DFIRM and FIS report after the Preliminary copies of the DFIRM and FIS report have been issued to community officials and the public for review and comment. The activities to be performed are summarized below.

Initiation of Statutory 90-Day Appeal Period: When required, upon completion of a 30-day community comment period and/or final coordination meeting with the affected communities the State of Georgia DNR shall arrange for and verify that the following activities are completed in accordance with the current version of the *FEMA Guidelines and Specifications for Flood Hazard Mapping Partners* and *Document Control Procedures Manual*:

- Proposed BFE determination letters are sent to the community CEOs and floodplain administrators.
- News release notifications of BFE changes are published in prominent newspapers with local circulation.
- The appropriate notices (Proposed Rules) are published in the *Federal Register*.

Resolution of Appeals and Protests: The State of Georgia DNR shall support FEMA in reviewing and resolving appeals and protests received during the 90-day appeal period. When Necessary, dual signatures (DNR and FEMA) may be required for correspondence. Appeal and protest support shall be limited to no more than \$2,000 in contractor labor. If the cost for appeal resolution exceeds the dollar amount stated in this agreement, then FEMA will process the remainder of the appeals or coordinate with Georgia DNR concerning additional funding. For each appeal and protest, the following activities shall be conducted as appropriate:

- Initial processing and acknowledgment of submittal;
- Technical review of submittal;
- Preparation of letter(s) requesting additional supporting data;
- Performance of revised analyses; and
- Preparation of a draft resolution letter and revised DFIRM and FIS report materials for FEMA review.

The Georgia DNR shall mail all associated correspondence upon authorization by FEMA.

Preparation of Special Correspondence: The State of Georgia DNR and their contractor shall support FEMA in responding to comments not received within the 90-day appeal period (referred to as “special correspondence”), including drafting responses for FEMA review when appropriate and finalizing responses when requested by FEMA. When necessary, dual signatures (DNR and FEMA) may be required for correspondence. The State of Georgia DNR also shall mail the final correspondence (and enclosures if appropriate) and distribute appropriate copies of the correspondence and enclosures upon receipt of authorization from FEMA.

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Revision of FIRM and FIS Report: If necessary, the State of Georgia DNR and their contractor shall work together to revise the DFIRM and FIS report at the direction of the FEMA Regional Project Officer and distribute Revised Preliminary copies of the DFIRM and FIS report to the CEO and floodplain administrator of each affected community, all other Project Team members, the State NFIP Coordinator, the FEMA Regional Office, and others as directed by FEMA.

Final SOMA Preparation: The State of Georgia DNR and their contractor shall prepare Final SOMAs for the affected communities as appropriate. When necessary, dual signatures (DNR and FEMA) may be required for correspondence.

Processing of Letter of Final Determination: The State of Georgia DNR and their contractor shall work with FEMA to establish the effective date for the DFIRM and FIS report, and shall prepare a Letter of Final Determination (LFDs) for each affected community for FEMA review in accordance with the FEMA *Document Control Procedures Manual*. The State of Georgia DNR also shall mail the final signed LFDs and enclosures and distribute appropriate copies of the signed LFDs and enclosures upon receipt of authorization from FEMA.

Processing of Final DFIRM and FIS Report for Printing: The State of Georgia DNR shall prepare final reproduction materials for the DFIRM and FIS report and provide these materials to the FEMA Map Service Center for printing by the U.S. Government Printing Office. The State of Georgia DNR also shall prepare the appropriate paperwork to accompany the DFIRM and FIS report (including Print Processing Worksheet, Printing Requisition Forms, and Community Map Actions Form) and transmittal letters to the community CEOs.

Revalidation Letter Processing. The State of Georgia DNR and their contractor shall prepare and distribute letters to the community CEOs and floodplain administrators to notify the affected communities about LOMCs for which determinations will remain in effect after the DFIRM and FIS report become effective.

Archiving Data: The State of Georgia DNR and their contractor shall ensure that technical and administrative support data are packaged in the FEMA required format and stored until they are transmitted to the FEMA Engineering Study Data Package Facility. The State of Georgia DNR will maintain and archive all the technical data for at least 3 years.

Standards: All work under Activity 14 shall be performed in accordance with the standards specified in Section 5 of this MAS.

Deliverables: In accordance with the TSDN format described in described in Appendix M of *Guidelines and Specifications for Flood Hazard Mapping Partners* and the requirements documented in Section 1 and Appendix A of the FEMA *Document Control Procedures Manual*, the State of Georgia DNR shall make the following products available to FEMA:

- Documentation that the news releases were published in accordance with FEMA requirements;
- Documentation that the appropriate *Federal Register* notices (Proposed and Final Rules) were published in accordance with FEMA requirements;
- Draft and final Special Correspondence (and all associated enclosures, backup data, and other related information) for FEMA review and signature as appropriate;

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- Draft and final Appeal and Protest acknowledgment, additional data, and resolution letters (and all associated enclosures, backup data, and other related information) for FEMA review and signature as appropriate;
- Draft and final LFDs (and all associated enclosures, backup data, and other related information) for FEMA review and signature;
- DFIRM negatives and final FIS report materials, including all updated data tables and Flood Profiles;
- Paperwork for the final DFIRM and FIS report materials;
- Transmittal letters for the printed DFIRM and FIS report;
- LOMC Revalidation Letters if appropriate; and
- Complete, organized archived technical and administrative support data

**SECTION 2—TECHNICAL AND ADMINISTRATIVE SUPPORT DATA
SUBMITTAL**

The Project Team members for this Flood Map Project that have responsibilities for activities included in this MAS shall comply with the data submittal requirements summarized below.

All supporting documentation for the activities in this Mapping Activity Statement shall be submitted in the TSDN format in accordance with Appendix M of the FEMA *Guidelines and Specifications for Flood Hazard Mapping Partners*, dated April 2003. Table 2-1 indicates the sections of the TSDN that apply to each mapping activity.

If any issues arise that could affect the completion of an activity within the proposed scope or budget, the responsible Mapping Partner shall complete a Special Problem Report (SPR) as soon as possible after the issue is identified and submitted to FEMA. The SPR is to describe the issue and propose possible resolutions. Additionally, the State of Georgia DNR shall collect and maintain a set of products for all Activities and shall compile a comprehensive TSDN for the entire project.

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Table 2-1. Mapping Activities and Applicable TSDN Sections

TSDN Section	Mapping Activities													
	1	2	3	4 4A	5 5A	6	7	8	9	10	11 11A	12 12A	13	14
General Documentation														
Special Problem Reports	X			X	X	X	X	X	X	X	X	X	X	X
Telephone Conversation Reports	X			X	X	X	X	X	X	X	X	X	X	X
Meeting Minutes/Reports	X			X	X	X	X	X	X	X	X	X	X	X
General Correspondence	X			X	X	X	X	X	X	X	X	X	X	X
Engineering Analyses														
Hydrologic Analyses	X			X	X	X	X	X	X					
Hydraulic Analyses	X			X	X	X	X	X	X					
Key to Cross-Section Labeling	X			X	X	X	X	X	X					
Key to Transect Labeling	X			X	X	X	X	X	X					
Draft FIS Report				X	X	X	X							
Mapping Information								X	X	X	X	X	X	X
Miscellaneous Reference Information	X			X	X	X	X	X	X	X	X	X	X	X

SECTION 3—PERIOD OF PERFORMANCE

The mapping activities outlined in this MAS for the FY 03 funds will begin upon the Notice to Proceed (NTP) issuance from FEMA and will be completed no later than 18 months from the NTP not to proceed beyond September 30, 2005. The completion time of 18 months is contingent upon the start of the 90 day appeal period no later than 1 month from the issuance of the Preliminary DFIRMS. The mapping activities may be terminated at the option of FEMA or the State of Georgia DNR in accordance with the provisions of the Partnership Agreement dated August 16, 1999.

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SECTION 4—FUNDING/LEVERAGE

SECTION 5—STANDARDS

The standards relevant to this Mapping Activity Statement are provided in Tables 5-1 and 5-2. Information on the correct volume, appendix, section, or subsection of the FEMA *Guidelines and Specifications for Flood Hazard Mapping Partners* to be referenced for each mapping activity are summarized in Table 5-2.

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Table 5-1. Applicable Standards for Project Activities

Applicable Standards	Activities													
	1	2	3	4, 4A	5, 5A	6	7	8	9	10	11, 11A	12, 12A	13	14
<i>Guidelines and Specifications for Flood Hazard Mapping Partners</i> , April 2003	X			X	X	X	X	X	X	X	X	X	X	X
American Congress on Surveying and Mapping (ACSM) procedures	X													
Global Positioning System (GPS) Surveys: National Geodetic Survey (NGS-58) "Guidelines for Establishing GPS-Derived Ellipsoid Heights," November 1997	X													
EM 1000-1-1000, <i>Photogrammetric Mapping</i> , March 31, 1993.	X													
EM 1110-2-1003, <i>Hydrographic Surveys</i> , October 31, 1994	X													
Numerical Models Accepted by FEMA for NIP Usage, January 11, 2002				X	X	X	X							
<i>Content Standards for Digital Geospatial Metadata</i> (Federal Geographic Data Committee, 1998)								X	X	X	X	X	X	X
<i>Document Control Procedures Manual</i> , December 2000												X	X	X

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Table 5-2. Project Activities and Applicable Portions of FEMA Guidelines and Specifications

Activity Number	Activity Description	Applicable Volume, Section/Subsection, and Appendix
1	Field Surveys and Reconnaissance	Volume 1, Sections 1.2, 1.3, 1.4 (specifically Subsection 1.4.2.1) Appendix A, Sections A.5, A.6, A.7, and A.8 Appendices B, C, and M
3	QA/QC Review of Topographic Data	Volume 1, Section 1.4 (specifically Subsections 1.4.1 and 1.4.2.1) Appendix A, Sections A.2, A.3, A.7 (specifically Subsection A.7.5), and A.8 (specifically Subsection A.8.6) Appendix M
4	Hydrologic Analyses	Volume 1, Section 1.4 (specifically Subsections 1.4.2.2 and 1.4.2.4) Appendix C, Sections C.1 and C.7 Appendices E, F, G, H, and M
4A	Coastal Hazard Analyses	Volume 1, Section 1.4 (specifically Subsection 1.4.2.2) Appendix A, Section A.4 Appendices B, D, and M
5	QA/QC Review of Hydrologic Analyses	Volume 1, Section 1.4 (specifically Subsection 1.4.1) Appendix C, Section C.2 Appendices E, F, G, H, and M
5A	Independent QA/QC Review of Coastal Hazard Analyses	Volume 1, Section 1.4 (specifically Subsection 1.4.1) Appendix A, Section A.4 Appendices B, D, H, and M

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Table 5-2. Project Activities and Applicable Portions of FEMA Guidelines and Specifications (Cont'd)

Activity Number	Activity Description	Applicable Volume, Section/Subsection, and Appendix
6	Hydraulic Analyses	Volume I, Section 1.4 (specifically Subsections 1.4.2.2 and 1.4.2.4) Appendix C, Sections C.3 and C.7 Appendices B, E, F, G, H, and M
7	Independent QA/QC Review of Hydraulic Analyses	Volume I, Section 1.4 (specifically Subsection 1.4.1) Appendix A, Section A.4 (specifically Subsection A.4.7) Appendix C, Section C.5 Appendices B, E, F, G, H, and M
8	Floodplain Mapping (Detailed Riverine or Coastal Analysis)	Volume I, Section 1.4 (specifically Subsection 1.4.2.3) Appendix C, Sections C.4 and C.6 Appendices K, L, and M
8A	Floodplain Mapping (Redelineation Using Effective Flood Profiles and Updated Topographic Data)	Volume I, Section 1.4 (specifically Subsections 1.4.2.2 and 1.4.2.3) Appendices K, L, and M
8B	Floodplain Mapping (Refinement or Creation of Zone A)	Volume I, Section 1.4 (specifically Subsection 1.4.2.3) Appendix C, Sections C.4 and C.6 Appendices K, L, and M
9	QA/QC Review of Floodplain Mapping (Revised Areas)	Volume I, Section 1.4 (specifically Subsection 1.4.2.3) Appendix C, Sections C.4 and C.6 Appendices K, L, and M

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Table 5-2. Project Activities and Applicable Portions of FEMA Guidelines and Specifications (Cont'd)

Activity Number	Activity Description	Applicable Volume, Section/Subsection, and Appendix
10	Base Map Acquisition and Preparation	Volume 1, Section 1.3 (specifically Subsection 1.3.1.8) and 1.4 (specifically Subsection 1.4.3) Appendices A and B
11	Independent QA/QC Review of DFIRM Production (Non-Revised Areas)	Volume 1, Section 1.4 (specifically Subsections 1.4.2.3 and 1.4.3.2) Appendices K, L, and M
11A	DFIRM Production (Merging Revised and Non-Revised Areas)	Volume 1, Section 1.4 (specifically Subsection 1.4.3) Appendices K, L, and M
12	DFIRM Production (Merging Revised and Non-Revised Areas)	Volume 1, Section 1.4 (specifically Subsections 1.4.2.3 and 1.4.3.3) Appendices K, L, and M
12A	DFIRM Production (Application of DFIRM Graphic and Database Specifications)	Volume 1, Section 1.4 (specifically Subsection 1.4.3) Appendices K, L, and M
12B	Independent QA/QC Review of DFIRM Product Meeting FEMA Graphic and Database Specifications	Volume 1, Section 1.4 (specifically Subsections 1.4.2.3 and 1.4.3.3) Appendices K, L, and M
13	Preliminary DFIRM and FIS Report Distribution	Volume 1, Section 1.4 (specifically Subsections 1.4.2 and 1.4.3) Appendix C, Sections C.4 and C.6 Appendices J, K, L, and M
14	Post-Preliminary Processing	Volume 1, Section 1.4 (specifically Subsection 1.4.2 and 1.4.3) Appendices J, K, L, and M

SECTION 6—SCHEDULE

The Deliverables identified in the Activities documented in this MAS shall be completed and submitted to FEMA in accordance with the project schedule below. All due dates are referenced from the Notice to Proceed Date (NTP) from FEMA. If changes to this schedule are required, the responsible Mapping Partner shall coordinate with FEMA and the other Mapping Partners in a timely manner.

ACTIVITIES	RESPONSIBLE PARTNER(S)	DATE DUE
Activity 14 – Post-Preliminary Processing	CTP	18 Months

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SECTION 7—CERTIFICATIONS

The following certifications apply to this MAS:

Activity 1 (Field Surveys and Reconnaissance)

A Registered Professional Engineer or Licensed Land Surveyor will certify topographic data, in accordance with 44 CFR 65.5(c). Certification of topographic data by the American Society for Photogrammetry and Remote Sensing is also acceptable.

Activity 4 (Hydrologic Analyses), Activity 6 (Hydraulic Analyses), Activity 8 (Floodplain Mapping— Detailed Riverine Analysis), and Activity 8B (Floodplain Mapping {Refinement of Zone A})

- A Registered Professional Engineer or Licensed Land Surveyor will certify hydrologic and hydraulic analyses and data in accordance with 44 CFR 65.6(f).
- A Registered Professional Engineer or Licensed Land Surveyor will certify topographic information in accordance with 44 CFR 65.5(c).
- Any levee systems to be accredited will be certified in accordance with 44 CFR 65.10(e).

Activity 8 (Floodplain Mapping— Detailed Riverine Analysis), and Activity 8B (Floodplain Mapping {Refinement of Zone A}), Activity 9 (QA/QC Review of Floodplain Mapping {Revised Areas}), Activity 11 (DFIRM Production {Non-Revised Areas}), Activity 12 (DFIRM Production {Merging Revised and Non-Revised Information}), and Activity 12A (Application of DFIRM Graphic and Database Specifications)

The DFIRM metadata files will include a description of the horizontal and vertical accuracy of the DFIRM base map and floodplain information.

Activity 10 (Base Map Acquisition and Preparation)

- A community official or responsible party will provide written certification that the digital data meet FEMA minimum standards and specifications.
- The State of Georgia DNR will provide documentation that the digital base map can be used by FEMA.

SECTION 8—TECHNICAL ASSISTANCE AND RESOURCES

Project Team members may obtain copies of FEMA-issued LOMCs, archived engineering backup data, and data collected as part of the Mapping Needs Assessment Process from FEMA's National Contractor.

General technical and programmatic information, such as FEMA 265 and the Quick-2 computer program, can be downloaded from the FEMA Web site (www.fema.gov/fhm).

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.

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SECTION 9—CONTRACTORS

State of Georgia DNR intends to use the services of Lowe Engineers and their subcontractors; Dewberry, URS, and MACTEC for this Flood Map Project. State of Georgia DNR shall ensure that the procurement for all contractors used for this Flood Map Project complies with the requirements of 44 CFR 13.36.

SECTION 10—REPORTING

Financial Reporting: Financial reporting requirements will be in accordance with Cooperative Agreement Articles V & VI.

Status Reporting: Status reports will be submitted on a quarterly basis in accordance with the financial reporting submittals. At a minimum these reports will include a summary of the work that was completed during the quarter and a comparison for the % work completed to the % of funds expended. The FEMA Regional Project Officer, as needed, may request additional information on status.

SECTION 11—POINTS OF CONTACT

The points of contact for this Flood Map Project are Laura Algeo, the FEMA Regional Project Officer; Collis Brown, the Project Manager for State of Georgia DNR; or subsequent personnel of comparable experience who are appointed to fulfill these responsibilities. When necessary, additional assistance should be requested through the FEMA Regional Project Officer.

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



9/23/03

David Word
Acting Director, Environmental Protection Division
State of Georgia Department of Natural Resources

Date



9/23/03

Laura Algeo
Regional Project Officer
Federal Emergency Management Agency, Region IV

Date