Complex Systems Research Center, University of New Hampshire
COOPERATING TECHNICAL PARTNERS MAPPING ACTIVITY STATEMENT

Mapping Activity Statement No. – EMB-2006-CA-0863

Digital Flood Insurance Rate Map Production and Development of Updated Flood Data

In accordance with the Cooperating Technical Partners (CTP) Partnership Agreement dated September 18, 2006 between the Complex Systems Research Center (CSRC), University of New Hampshire, and the Federal Emergency Management Agency (FEMA), Mapping Activity Statement (MAS) No. EMB-2206-CA-0863 is as follows.

Section 1: Objective and Scope

The objective of the Flood Map Project documented in this MAS is to conduct the post-preliminary processing activities required to produce final Digital Flood Insurance Rate Maps (DFIRMs) and Flood Insurance Study (FIS) reports for Hillsborough and Merrimack Counties, New Hampshire. The DFIRMs and FIS reports will be produced in the FEMA Countywide Format.

The following will complete this Flood Map Project:

- Complex Systems Research Center (CSRC), University of New Hampshire.

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 Table 1-1. All activities that are to be accomplished by CSRC or contractors to CSRC, including contractors that may be selected after the project startup, are included in the "CTP" column. The sections of this MAS that follow Table 1-1 describe the specific activities, responsible Mapping Partner(s), FEMA standards that must be met, and resultant map components.

Table 1-1. Summary of Project Activities and Assignments

Activities	CTP
Activity 16: Post-Preliminary Processing	CSRC, CSRC sub-contractor

FEMA has developed tools to assist in the development of the flood hazard data studies and the Digital Flood Insurance Rate Maps (DFIRMs). FEMA will, through the NSP, provide all CTPs access to and training in these tools. The use of these tools will assist in the Map Modernization effort and the efficiency of mapping partners.

If the CTP chooses not to use these production tools, then the CTP will be required to submit project data at major milestones in each Mapping Project in accordance with data capture standards. Submitting data in these standards will aid in more efficient quality control reviews, data storage, archiving, and for future study updates.

The Data Capture Specifications submittals will be required at the following study milestones:

- DFIRM Mapping (draft and preliminary).

QA/QC review activities may be performed by CTPs or the NSP at the discretion of FEMA. Please note the NSP will also be performing periodic audits and overall study/project management to monitor study quality.

FEMA will be providing download/upload capability for data capture submittals through the MIP. Data submittals uploaded via the MIP will include the same data required prior to the existence of the MIP.

Activity 16 - Post-Preliminary Processing

Responsible Mapping Partners: Complex Systems Research Center (CSRC), University of New Hampshire, with support from the FEMA Region I office and the NSP.

Scope: Activity 16 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. FEMA may audit or assist in these activities if deemed to be necessary or advisable by the Regional Project Officer. 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 in the project area, the NSP and CSRC (and/or its subcontractor) 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; and
- The appropriate notices (Proposed Rules) are published in the *Federal Register*.

Resolution of Appeals and Protests: Under this task, any appeals and protests will be collected and acknowledged, initial research will be conducted, and documentation and recommendations will be prepared, prior to submission to FEMA for approval. Protests and comments will be resolved by CSRC and/or its subcontractor under this task, as well as an allocation of up to 50 hours/county (100 hours total) toward the resolution of valid appeals. Resolution of appeals and complex protests requiring in excess of 50 hours/county will be submitted to the Region for consideration of task modification prior to resolution.

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 for co-signature with FEMA, and revised DFIRM and FIS report materials for FEMA review.

The NSP shall mail all associated correspondence upon authorization by FEMA and copy to CSRC and its subcontractor.

Preparation of Special Correspondence: The NSP and CSRC (and/or its subcontractor) shall support FEMA in responding to comments received during the Post-Preliminary Processing phase but after 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. The NSP 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 and copy to CSRC and its subcontractor.

Revision of DFIRM and FIS Report: If necessary, the NSP and CSRC (and/or its subcontractor) shall work together to revise the DFIRM and FIS report at the direction of the FEMA Regional Project Officer and distribute revised electronic 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 NSP, with assistance from CSRC (and/or its subcontractor) as appropriate, shall prepare Final SOMAs for the affected communities as appropriate.

Processing of Letter of Final Determination: The NSP and CSRC (and/or its subcontractor) shall work with FEMA to establish the effective date for the DFIRM and FIS reports, and shall prepare a Letter of Final Determination (LFD) for each affected community for FEMA review in accordance with the FEMA *Document Control Procedures Manual*. The NSP also shall mail the final signed LFDs and enclosures (including the Final SOMA and the Final Rule for publication in the *Federal Register*, when appropriate) 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: CSRC and/or its subcontractor shall prepare final reproduction materials for the DFIRM and FIS reports and provide these materials to the FEMA Map Service Center for printing by the U.S. Government Printing Office. The NSP, CSRC, and/or its subcontractor 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 NSP, when appropriate, shall prepare and distribute revalidation 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 NSP and CSRC (and/or its subcontractor) shall ensure that technical and administrative support data are packaged in the FEMA-required TSDN format and stored properly in the library archives.

Standards: All work under Activity 16 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 NSP and CSRC (and/or its subcontractor) shall make the following products available to FEMA:

- Documentation that the news release notifications 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;
- 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 Submittals and special problem reports

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 MAS 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. Appendix M is available for viewing or download on the FEMA Web site at http://www.fema.gov/pdf/fhm/frm_gsam.pdf. Table 2-1 indicates the sections of the TSDN that apply to each mapping activity.

Table 2-1. Mapping Activities and Applicable TSDN Sections

TSDN Section	16
General Documentation	
Special Problem Reports	X
Telephone Conversation Reports	X
Meeting Minutes/Reports	X
General Correspondence	X
Engineering Analyses	
Hydrologic Analyses	
Hydraulic Analyses	
Key to Cross-Section Labeling	
Key to Transect Labeling	
Draft FIS Report	
Mapping Information	X
Miscellaneous Reference Information	X

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. (For additional information on SPRs, refer to Appendix M, Subsection M.2.1.1 of *Guidelines and Specifications for Flood Hazard Mapping Partners*.)

Additionally, the NSP shall collect and maintain a set of products for all Activities and shall compile a comprehensive TSDN for the entire project.

Section 3—Period of Performance

The mapping activities documented in this MAS will begin on October 1, 2006, and will be completed no later than April 30, 2008. The mapping activities may be terminated at the option of FEMA or CSRC in accordance with the provisions of the Partnership Agreement dated September 18, 2006.

Section 4—Funding/Cost-Sharing

FEMA is providing funding in the amount o[illegible] CSRC for the completion of the Flood Map Project documented in this MAS. CSRC shall provide resources (in-kind services) valued at [illegible] to complete the assigned activities for this Flood Map Project.

Section 5—Standards

The standards relevant to this MAS 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. These Guidelines are available for viewing or download from the FEMA Flood Hazard Mapping Web site at http://www.fema.gov/fhm/dl_cgs.shtm.

In addition, Data Capture Standards referenced in the previous sections are to be applied to the project for the data formats to be submitted to FEMA.

Table 5-1. Applicable Standards for Project Activities

Applicable Standards	16
Guidelines and Specifications for Flood Hazard Mapping Partners, April 2003	X
Content Standard for Digital Geospatial Metadata (Federal Geographic Data Committee), 1998	X
Document Control Procedures Manual, December 2000	X

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

Activity Number	Activity Description	Applicable Volume, Section/Subsection, and Appendix
16	Post-Preliminary Processing	Volume 1, Section 1.5 (specifically Subsection 1.5.2)
		Appendices J, K, L, and M

Section 6—Schedule

The activities documented in this MAS shall be completed in accordance with the project schedule shown in Table 6-1. If changes to this schedule are required, the responsible Mapping Partner shall coordinate with FEMA and the other Mapping Partners in a timely manner.

Table 6-1. Project Schedule

ACTIVITIES	RESPONSIBLE PARTNER(S)	DATE DUE
Activity 16 – Post-Preliminary Processing	CSRC, CSRC subcontractor	April 30, 2008

Section 7—Certifications

There are no certifications applicable to this MAS.

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 FEMA Mapping Needs Assessment Process from the NSP, who may be contacted by telephone at 1-877-FEMA MAP (1-877-336-2627).

General technical and programmatic information, such as FEMA 265 and the Quick-2 computer program, can be downloaded from the FEMA Web site (http://www.fema.gov/fhm/). Specific technical and programmatic support may be provided through the NSP; such assistance should be requested through the FEMA Project Officer specified in Section 11 of this MAS.

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 9—Contractors

CSRC intends to use the services of a contractor for several of the Flood Map Project activities documented in this MAS. CSRC 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 U.S. Government Printing Office Web site at http://www.access.gpo.gov/nara/cfr/waisidx_02/44cfr13_02.html.

Section 10—Financial Reporting

Because funding has been provided to CSRC by FEMA for the Flood Map Project documented in this MAS, financial reporting requirements for CSRC will be in accordance with Cooperative Agreement Articles V and VI.

CSRC will meet with the NSP and/or FEMA as needed to review the progress of the project. These meetings will alternate between FEMA's Regional Office and the CSRC office.

CSRC will provide to the NSP bi-weekly reports for each of the mapping activity statements. This may, at FEMA's discretion be a spreadsheet template to be completed or the Monitoring Information on Contracted Studies (MICS) system may be used. It may include dollars spent, hours spent, and percent complete of each major Flood Map Project activity (e.g., field survey, terrain, hydrology) on a county basis. Specific reporting requirements will be finalized as a part of the scoping meeting.

Section 11—Points of Contact

The points of contact for this Flood Map Project are Dean Savramis, the FEMA Regional Project Officer; Fay Rubin, the Project Manager for CSRC; or subsequent personnel of comparable experience who are appointed to fulfill these responsibilities. When necessary, the assistance of the NSP should be requested through the FEMA Project Officer, Dean Savramis.

In addition, the NSP is required to coordinate project issues with the responsible Mapping Partner that created the MAS deliverable or portions of the MAS deliverable product and will document all such coordination activities with the CTP and FEMA.

Section 12—Project Coordination

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

- Meetings, teleconferences, and videoconferences with FEMA and other Project Team members as required;
- Telephone conversations with FEMA and other Project Team members on a scheduled monthly basis and an ad hoc basis, as required;
- Updates to the MICS, MNUSS database, and other FEMA status information systems in accordance with requirements in Volumes 1 and 3 of *Guidelines and Specifications for Flood Hazard Mapping Partners*; and
- E-mail, facsimile transmissions, and letters, as required.

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

Gary Giarruso
Manager of Research Administration
University of New Hampshire

9-8-06
Date

Dean Savramis, HIRA Branch
Regional Project Officer
Federal Emergency Management Agency, Region I

9.14.06
Date