City of Springfield, MO
COOPERATING TECHNICAL PARTNERS
MAPPING ACTIVITY STATEMENT

In accordance with the Cooperating Technical Partners (CTP) Partnership Agreement dated May 7, 2004 between **City of Springfield, MO** and the Federal Emergency Management Agency (FEMA), Mapping Activity Statement (MAS) No. 1 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 the areas shown in Table 1-1. The DFIRM and FIS report will be produced in the FEMA countywide format.

Table 1-1. Summary of Mapping Effort

Community	Total Stream Miles Zone A (existing approximate study; see note 1)	Total Stream Miles Zone AE (existing data; see note 2)		Total Stream Miles Zone AE (new detailed study)	Total Stream Miles Zone AE (digitized)	Total Stream Miles Zone AE (redelineated)
		With floodway	Without floodway			
Springfield, City of	2.3					9.1
Greene County						1.2

Note 1: The actual miles of new approximate study is not known at this time. The Mapping Partner shall complete new approximate analysis according to the scope in task 8.
Note 2: Existing data from other sources may duplicate parts the effective detailed study areas.

Existing GIS data and study needs for the community have been researched, obtained, organized and uploaded to the Multi-hazard Information Platform (MIP) by the Regional Management Center (RMC). The RMC will provide a pre-scoping report for each county identified in Table 1-1.

The Mapping Partners involved in this project will develop new and/or updated flood hazard data, as summarized in table 1-3.

Table 1-2

Flooding Source	Reach Limits	Hydrologic Analyses	Hydraulic Analyses	Floodplain Mapping	Redelineation Using Effective Flood Profiles and Updated Topographic Data	Refinement or Creation of Zone A
Doling Branch	Talmage St. to Farm Road 102				X	
Dickerson Branch	Talmage St. to 800’ South of Farm Rd 102				X	
Upper Wilsons Creek	Confluence with Wisons Creek to 800’ North of Nichols St.				X	
Nichols Branch	Confluence with Upper Wilsons Creek to Orchard Crest Ave.				X	
Fassnight Creek	Confluence with Wilsons Creek to Jefferson Ave.				X	
Wilsons Creek	Farm Road 123 in Greene County to upper limits.				X	
Pea Ridge	Confluence with Doling Branch to 200’ South of Camorene St.					X
Mill Creek	Farm Road 171 to Grancview St.					X
Doling Branch	Talmage St. to Kearney St.					X
Fassnight Creek	Jefferson Ave to Roanoke Ave					X
Upper Wilsons Creek	800’ North of Nichols St. to 1600’ North of Nichols St.					X

The following will complete this Flood Map Project:

- **City of Springfield, MO**;
- AMEC Inc.; and
- **National Service Provider**.

The activities for this Flood Map Project, including required Quality Assurance (QA) reviews, and the Mapping Partners that will complete them are summarized in Table 1-3. All activities that are to be accomplished by **City of Springfield, MO** are shown. The sections of this MAS that follow Table 1-3 describe the specific activities, responsible Mapping Partner(s), FEMA standards that must be met, and resultant map components.

Table 1-3

Project Background				Task Assignments																			Map Schedule			
State	County	Mapping Partner	Project Stage (1)	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8	Task 9	Task 10	Task 10A	Task 10B	Task 11	Task 12	Task 13	Task 13A	Task 14	Task 14A	Task 14B	Task 14C Task 15	Task 16	Task 16a Task 17	Final Preliminary	Effective
MO	Greene	Springfield	New			X							X			X								X		
MO	Greene	National Service Provider	New				X								X					X	X	X	X				

Notes:

(1) = Project Status (based on latest submittal):

New = New countywide DFIRM study start

LP = Legacy project at various stages of completion

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 CTP/IDIQ 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/IDIQ chooses not to use these production tools, then the CTP/IDIQ 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 Assurance reviews, data storage, archiving, and for future study updates.

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

- Project Scoping (as specified);
- Terrain Data Processing Completed;
- Field Survey Completed;
- Hydrology Completed (intermediate and final);
- Hydraulics Completed (intermediate and final);
- DFIRM Mapping (draft work and final preliminary).

Although the scoping Task is not specifically included in this table, the CTP/IDIQ performing scoping activities will be required to submit scoping-related data in accordance with the data capture standards.

Quality Assurance review activities may be performed by the CTP/IDIQ 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 Standards submittals through the MIP. Data submittals uploaded via the MIP will include the same data required prior to the existence of the MIP. If the MIP is not available the FEMA Project Officer will provide an alternate point for submittal.

Task 1 – Pre-Scoping

Responsible Mapping Partner: Not Assigned

Scope: This task is not applicable to this Mapping Activity Statement.

Task 2 – Scoping

Responsible Mapping Partner: Not Assigned

Scope: This task is not applicable to this Mapping Activity Statement.

Task 3 - Field Surveys and Reconnaissance

Responsible Mapping Partner: Not Assigned

Scope: This task is not applicable to this Mapping Activity Statement.

Task 4 - Topographic Data Development

Responsible Mapping Partner: **City of Springfield, MO**

Scope: The **City of Springfield, MO** shall obtain topographic data of the overbank areas of the flooding sources to delineate floodplain boundaries. The contour interval and/or accuracy for the topographic data shall be selected based on the current FEMA requirements as documented in *Guidelines and Specifications for Flood Hazard Mapping Partners*.

Specifically, **City of Springfield, MO** shall generate topographic data for the flood sources listed in Table 1-3 using aerial photogrametry.

This task includes obtaining and preparing existing elevation data from other sources for use in later tasks assigned in this Mapping Activity Statement. The Mapping Partner should obtain available documentation to make an assessment of the usability of the data. The Mapping Partner is not expected to provide certification of existing data obtained from other sources.

All elevation data will use the NAVD 1988 vertical datum.

Standards: All work under Task 4 shall be performed in accordance with the standards specified in Section 5 of this MAS.

Deliverable: Upon completion of topographic data collection and processing for the flood sources in Table 1.3, **City of Springfield, MO** shall upload the digital data to the MIP or submit by using other digital media if the MIP is unavailable. In accordance with the TSDN format described in described in Appendix M of *Guidelines and Specifications for Flood Hazard Mapping Partners*, **City of Springfield, MO** shall make the following products available to FEMA by submitting it to the MIP or by digital media if the MIP is unavailable. This submittal will occur in accordance with the schedule outlined in the MIP. Where paper documentation is required by State Law for Professional certifications, you may submit the paper in addition to a scanned version of the paper for the digital record:

Topographic data developed as part of this mapping activity statement or obtained from a community source and used for Task 6, 8 & 10 will include:

- Checkpoint analyses to assess the accuracy of data, including Root Mean Square Error calculations to support vertical accuracy;
- Identification of remote-sensing data voids and methods used to supplement data voids; and
- National Geodetic Survey (NGS) data sheets for Network Control Points used to control remote- sensing and ground surveys;

Topographic data obtained from a community source and used for Task 10A will include:

- Accuracy documentation if available from the community providing the data;

All topographic data used for Task 10, 10A and 10B will include:

- Report summarizing methodology and results;
- Mass points and breaklines data if available from original source;
- Digital file with elevation data;
- Metadata compliant with Federal Geographic Data Committee standards; and
- FEMA Format Terrain Database or Intermediate Data Delivery consistent with the FEMA Data Capture Standards.

Task 5 - Quality Assurance Review of Topographic Data

Responsible Mapping Partner: **National Service Provider**

Scope: The **National Service Provider** shall review the mapping data generated by **City of Springfield, MO** under Task 4 to ensure that these data are consistent with FEMA standards and standard engineering practice and are sufficient to prepare the DFIRM.

If a DEM from the USGS is provided by **City of Springfield, MO** under Task 4 the **National Service Provider** will acknowledge receipt of the deliverables. No additional Quality Assurance is needed.

Standards: All work under Task 5 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*, the **National Service Provider** shall make the following products available to FEMA by uploading the digital data to the MIP. This submittal will occur in accordance with the schedule in the MIP:

- Acknowledgement that the mapping data generated under Task 4 was reviewed;
- A Summary Report that describes the findings of the Quality Assurance review; and
- Recommendations to resolve any problems that are identified during the Quality Assurance review.

Task 6 – Hydrologic Analyses

Responsible Mapping Partner: Not Assigned

Scope: This task is not applicable to this Mapping Activity Statement.

Task 7 - Quality Assurance Review of Hydrologic Analyses

Responsible Mapping Partner: Not Assigned

Scope: This task is not applicable to this Mapping Activity Statement.

Task 8 – Hydraulic Analyses

Responsible Mapping Partner: Not Assigned

Scope: This task is not applicable to this Mapping Activity Statement.

Task 9 - Quality Assurance Review of Hydraulic Analyses

Responsible Mapping Partner: Not Assigned

Scope: This task is not applicable to this Mapping Activity Statement.

Task 10 - Floodplain Mapping (Detailed Riverine Analysis)

Responsible Mapping Partner: Not Assigned

Scope: This task is not applicable to this Mapping Activity Statement.

Task 10A - Floodplain Mapping (Redelineation of Detailed Floodplain Boundaries Using Updated Topographic Data)

Responsible Mapping Partner: **City of Springfield, MO**

Scope: **City of Springfield, MO** shall delineate the 1- and 0.2-percent-annual-chance floodplain boundaries and the regulatory floodway boundaries (if required) for the flooding sources identified in Table 1-3. **City of Springfield, MO** shall use the topographic data acquired under Task 4 to delineate the floodplain and regulatory floodway boundaries as appropriate on a digital work map. In addition, **City of Springfield, MO** shall incorporate the results of all effective (at the time of funds award) Letters of Map Change (LOMCs) within the revised areas as appropriate. Only those LOMCs visible at the published map scale shall be included. If the new topographic data do not reflect the same hydraulic characteristics as in the effective study, **City of Springfield, MO** shall evaluate the topographic data to determine if changes are significant enough to invalidate the floodplain boundary and regulatory floodway boundary redelineations. If so, **City of Springfield, MO** shall contact the FEMA Regional Project Officer identified in Section 11 of this MAS with a recommendation. **City of Springfield, MO** shall address all concerns or questions regarding Task 10 that are identified by the **National Service Provider** during the Quality Assurance review under Task 11.

All mapping will use the NAVD 1988 vertical datum.

Standards: All work under Task 10A shall be performed in accordance with the standards specified in Section 5 of this MAS.

Deliverables: Upon completion of floodplain mapping for the flood sources in Table 1-3, **City of Springfield, MO** shall upload the digital data to the MIP or submit by using other digital media if the MIP is unavailable. In accordance with the TSDN format described in described in Appendix M of *Guidelines and Specifications for Flood Hazard Mapping Partners*, **City of Springfield, MO** shall make the following products available to FEMA by submitting it to the MIP or by digital media if the MIP is unavailable. This submittal will occur in accordance with the schedule outlined in the MIP. Where paper documentation is required by State Law for Professional certifications, you may submit the paper in addition to a scanned version of the paper for the digital record:

- Digital work map showing the 1- and 0.2-percent-annual-chance floodplain boundary delineations, regulatory floodway boundary delineations, cross sections, BFEs, flood insurance zone labels, and all applicable base map features;
- DFIRM mapping files, prepared in accordance with the requirements in *Guidelines and Specifications for Flood Hazard Mapping Partners*;
- An explanation for the use of existing topography for the studied reaches, if appropriate; and

- FEMA Format Mapping Database or Intermediate Data Delivery consistent with the FEMA Data Capture Standards.

The **City of Springfield, MO** shall provide a brief statement that **City of Springfield, MO** will meet the quality / deliverable standards identified in Section 5.

Task 10B - Floodplain Mapping (Refinement or Creation of Zone A)

Responsible Mapping Partner: Not Assigned

Scope: This task is not applicable to this Mapping Activity Statement.

Task 11 - Quality Assurance Review of Floodplain Mapping (Revised Areas)

Responsible Mapping Partner: **National Service Provider**

Scope: The **National Service Provider** shall review the floodplain mapping submitted by **City of Springfield, MO** under Activities 10, 10A, and 10B to ensure that the results of the analyses performed are accurately represented, the work maps are consistent with current FEMA standards, and the draft preliminary maps are sufficient to prepare the DFIRM. This work shall include, at a minimum, the activities listed below.

- Review the cross sections for proper location and orientation on the work map and agreement with the Floodway Data Table;
- Review the BFEs shown on the draft work map for proper location and agreement with the results of the hydraulic modeling;
- Review the regulatory floodway widths shown on the draft work map for agreement with the widths shown in the Floodway Data Table and the results of the hydraulic modeling;
- Review the floodplain boundaries shown on the draft work map or agreement with the flood elevations shown in the Floodway Data Table and the contour lines and other topographic information shown on the draft preliminary maps;
- Review the floodplain widths at cross sections as shown on the draft preliminary maps to ensure they match the Floodway Data Table;
- Review the floodplain boundaries as shown on the draft preliminary maps to ensure they match the Flood Profiles;
- Review the flood insurance risk zones as shown on the draft preliminary maps to ensure they are labeled properly;
- Review all effective LOMCs not superceded by the revised mapping to ensure they are included;
- Review the DFIRM mapping files to ensure they were prepared in accordance with the requirements in *Guidelines and Specifications for Flood Hazard Mapping Partners*; and

Standards: All work under Task 11 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*, the **National Service Provider** shall make the following products available to FEMA by uploading the digital data to the MIP. This submittal will occur in accordance with the schedule in the MIP:

- A Summary Report that describes the findings of the QA review, noting any deficiencies in or agreeing with the mapping results;
- Recommendations to resolve any problems that are identified during the Quality Assurance review; and
- An annotated draft work map with all questions and/or concerns indicated, if necessary.

Task 12 - Base Map Acquisition

Responsible Mapping Partner: **City of Springfield, MO**

Scope: **City of Springfield, MO** shall use the same base map that will be used for Greene County Mapping Activity Statement #1, Activity 10

Standards: All work under Task 12 shall be performed in accordance with the standards specified in Section 5 of this MAS.

Deliverables: Greene County, MO will deliver the base map as part of their Mapping Activity Statement.

Task 13 – DFIRM Production (Non-Revised Areas)

Responsible Mapping Partner: Not Assigned

Scope: This task is not applicable to this Mapping Activity Statement.

Task 13A – Quality Assurance Review of DFIRM Production (Non-Revised Areas)

Responsible Mapping Partner: Not Assigned

Scope: This task is not applicable to this Mapping Activity Statement.

Task 14 – DFIRM Production (Merging Revised and Non-Revised Information)

Responsible Mapping Partner: Not Assigned

Scope: This task will be completed by Greene County, MO as part of the activities defined in Mapping Activity Statement #1 for Greene County, MO. Therefore this task is not applicable to this Mapping Activity Statement.

Task 14A – DFIRM Production (Application of FEMA Graphics and Database Specifications)

Responsible Mapping Partner: Not Assigned

Scope: This task will be completed by the National Service Provider as part of the activities defined in Task Order #1 for Greene County, MO. Therefore this task is not applicable to this Mapping Activity Statement.

Task 14B – Quality Assurance Review of DFIRM Product Meeting FEMA Graphics and Database Specifications

Responsible Mapping Partner: Not Assigned

Scope: This task will be completed by the National Service Provider as part of the activities defined in Task Order #1 for Greene County, MO. Therefore this task is not applicable to this Mapping Activity Statement.

Task 14C – Inclusion of Letter of Map Changes (LOMC)

Responsible Mapping Partner: Responsible Mapping Partner: Not Assigned

Scope: This task is not applicable to this Mapping Activity Statement.

Task 15 - Preliminary DFIRM and FIS Report Distribution

Responsible Mapping Partner: Not Assigned

Scope: This task is not applicable to this Mapping Activity Statement.

Task 16 - Post-Preliminary Processing

Responsible Mapping Partner: Not Assigned

Scope: This task is not applicable to this Mapping Activity Statement.

Task 16A - Post-Preliminary DFIRM and FIS Report Finalization

Responsible Mapping Partner: Not Assigned

Scope: This task is not applicable to this Mapping Activity Statement.

Task 17 – Outreach and Coordination

Responsible Mapping Partner: Not Assigned

Scope: This task is not applicable to this Mapping Activity Statement.

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 Task.

Table 2-1. Mapping Task and Applicable TSDN Sections

TSDN Section	Mapping Task															
	1	2	3	4	5	6	7	8	9	10, 10 A, 10 B	11	12	13, 13 A	14, 14A, 14B, 14C, 16A	15	16
General Documentation																
Special Problem Reports	X	X	X	X	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	X	X	X	X
Meeting Minutes/Reports	X	X	X	X	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	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	X	X	X	X
Miscellaneous Reference Information	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

If any issues arise that could affect the completion of a Task 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*.)

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 outlined in this MAS will begin on June 16, 2005, and will be completed no later than September 30, 2005. The mapping activities may be terminated at the option of FEMA or **City of Springfield, MO** in accordance with the provisions of the Partnership Agreement dated May 7, 2004.

Section 4—Funding/Leverage

FEMA is not providing funding to the **City of Springfield, MO** for the completion of the Flood Map Project documented in this MAS. The **City of Springfield, MO** shall provide all resources required 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, 5-2, and 5-3. 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 task is 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.

Requirements applicable to this Mapping Activity Statement from Chapter 7 of the Multi-Year Flood Hazard Identification Plan, (MHIP) are summarized in Table 5-3. The MHIP is available for download at http://hazards.fema.gov/resources/.

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	Activities															
	1	2	3	4	5	6	7	8	9	10, 10A, 10B	11	12	13, 13A	14, 14A, 14C, 16A	15	16
Guidelines and Specifications for Flood Hazard Mapping Partners, April 2003	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
American Congress on Surveying and Mapping Procedures			X	X	X											
Global Positioning System (GPS) Surveys: National Geodetic Survey (NGS-510), "Guidelines for Establishing GPS-Derived Ellipsoid Heights," November 1997			X	X	X											
Engineer Manual 1110-1-1000, *Photogrammetric Mapping* (USACE), July 1, 2002			X	X	X											
Engineer Manual 1110-2-1003, *Hydrographic Surveys* (USACE), January 1, 2002			X													
"Numerical Models Accepted by FEMA for NFIP Usage," Updated April 2003						X	X	X	X							
Content Standard for Digital Geospatial Metadata (Federal Geographic Data Committee), 1998				X	X					X	X	X	X	X	X	X
Document Control Procedures Manual, December 2000															X	X

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

Task Number	Task Description	Applicable Volume, Section/Subsection, and Appendix
1	Pre-Scoping	Volume 1, and Appendix I
2	Scoping	Volume 1, and Appendix I
3	Field Surveys and Reconnaissance	Volume 1, Section 1.4 (specifically Subsection 1.4.2.1)
		Appendix A, Sections A.4, A.5, A.6, A.7, and A.8
		Appendix F, Section F.3
		Appendices B, C, M, and N
4	Topographic Data Development	Volume 1, Section 1.4 (specifically Subsection 1.4.2.1)
		Appendix A, Sections A.2, A.3, A.7, and A.8
		Appendix M and N
5	Quality Assurance 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
6	Hydrologic Analyses	Volume 1, Section 1.4 (specifically Subsections 1.4.2.2 and 1.4.2.4)
		Appendix A, Section A.4
		Appendix C, Sections C.1 and C.7
		Appendices B, D, E, F, G, H, M, and N

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

Task Number	Task Description	Applicable Volume, Section/Subsection, and Appendix
7	Quality Assurance Review of Hydrologic Analyses	Volume 1, Section 1.4 (specifically Subsection 1.4.1)
		Appendix A, Section A.4
		Appendix C, Section C.2
		Appendices B, D, E, F, G, H, and M
8	Hydraulic Analyses	Volume 1, Section 1.4 (specifically Subsections 1.4.2.2 and 1.4.2.4)
		Appendix A, Section A.4 (specifically Subsection A.4.7)
		Appendix C, Sections C.3 and C.7
		Appendices B, E, F, G, H, M, and N
9	Quality Assurance Review of Hydraulic Analyses	Volume 1, 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
10	Floodplain Mapping (Detailed Riverine or Coastal Analysis)	Volume 1, Section 1.4 (specifically Subsection 1.4.2.3)
		Appendix C, Sections C. 4 and C.6
		Appendix D, Sections D.2 (specifically Subsection D.2.7) and D.3 (specifically Subsection D.3.7)
		Appendices E, F, G, H, K, L, M, and N

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

Task Number	Task Description	Applicable Volume, Section/Subsection, and Appendix
10A	Floodplain Mapping (Redelineation Using Effective Flood Profiles and Updated Topographic Data)	Volume 1, Section 1.4 (specifically Subsections 1.4.2.2 and 1.4.2.3)
		Appendix C, Section C.6 (specifically Subsection C.6.1.3)
		Appendices K. L, M, and N
10B	Floodplain Mapping (Refinement or Creation of Zone A)	Volume 1, Section 1.4 (specifically Subsection 1.4.2.3)
		Appendix C, Sections C.4 and C.6
		Appendices K, L, and M
11	Quality Assurance Review of Floodplain Mapping (Revised Areas)	Volume 1, Section 1.4 (specifically Subsections 1.4.1 and 1.4.2.3)
		Appendix C, Sections C.4 and C.6
		Appendix D, Sections D.2 (specifically Subsection D.2.7) and D.3 (specifically Subsection D.3.7)
		Appendices E, F, G, H, K, L, and M
12	Base Map Acquisition and Preparation	Volume 1, Section 1.3 (specifically Subsection 1.3.1.8) and 1.4 (specifically Subsections 1.4.3.1 and 1.4.3.2)
		Appendix A, Section A.1 (specifically Subsection A.1.1)
13	DFIRM Production (Non-Revised Areas)	Volume 1, Section 1.4 (specifically Subsections 1.4.2.2, 1.4.2.3, and 1.4.3.2)
		Appendices K, L, and M
13A	Quality Assurance Review of DFIRM Production (Non-Revised Areas)	Volume 1, Section 1.4 (specifically Subsections 1.4.2.2, 1.4.2.3, and 1.4.3.2)
		Appendices K, L, and M

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

Task Number	Task Description	Applicable Volume, Section/Subsection, and Appendix
14	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
14A, 14C & 16A	DFIRM Production (Application of FEMA Graphics and Database Specifications)	Volume 1, Section 1.4 (specifically Subsections 1.4.2.3, 1.4.3.3, 1.4.3.9, and 1.4.3.10)
		Appendices K, L, and M
14B	Quality Assurance Review of DFIRM Product Meeting FEMA Graphics and Database Specifications	Volume 1, Section 1.4 (specifically Subsections 1.4.2.3, 1.4.3.3, 1.4.3.9, and 1.4.3.10)
		Appendices K, L, M, and N
15	Preliminary DFIRM and FIS Report Distribution	Volume 1, Sections 1.4 (specifically Subsections 1.4.2 and 1.4.3) and 1.5 (specifically Subsection 1.5.1)
		Appendices J, K, L, and M
16	Post-Preliminary Processing	Volume 1, Section 1.5 (specifically Subsection 1.5.2)
		Appendices J, K, L, and M

Table 5-3. Project Activities and Applicable Portions of MHIP Chapter 7

Task Number	Task Description	
4	Topographic Data Development	Table 7-6 Suitability of Topographic Data Sources
6	Hydrologic Analyses	Table 7-3 Suitability of Various Hydrologic Analyses Methods Table 7-4 Suitability of Various Methods of Validation
8	Hydraulic Analyses	Table 7-5 Suitability of Manning's N-value Methodology Table 7-7 Suitability of the Inclusion of Hydraulic Structures
10, 10A, 10B	Floodplain Mapping	Table 7-1 Risk Classes of Flood Insurance Rate Maps
13	DFIRM Production (Non-Revised Areas)	Section 7.4.3 Utilization of Effective Flood Insurance Study Information

Section 6—Schedule

The tasks documented in this Mapping Task Statement shall be completed in accordance with the project schedule. The Multi-Hazard Information Platform (MIP) will be used to report progress for this Mapping Activity Statement. The initial schedule will be entered into MIP within two weeks of funds award. The data reported in the MIP may include estimated and actual completion dates, budget and amount spent for each task, and the percent complete of each major Flood Map Project Task (e.g., field survey, terrain, hydrology). Each county identified in Table 1-1 will have separate schedule established.

If changes to the schedule are required, the responsible Mapping Partner shall coordinate with FEMA and the other Mapping Partners in a timely manner.

Section 7—Certifications

If applicable, the following certifications apply to this MAS:

Task 3 (Field Surveys and Reconnaissance) and Task 4 (Topographic Data Development)

A Registered Professional Engineer or Licensed Land Surveyor shall 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.

Task 6 (Hydrologic Analyses). Task 8 (Hydraulic Analyses), Task 10 (Floodplain Mapping–Detailed Riverine Analysis), Task 10A (Floodplain Mapping {Redelineation Using Effective Flood Profiles and Updated Topographic Data}), and Task 10B (Floodplain Mapping {Refinement or Creation of Zone A})

- A Registered Professional Engineer shall certify hydrologic and hydraulic analyses and data in accordance with 44 CFR 65.6(f).
- A Registered Professional Engineer or Licensed Land Surveyor shall 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).

Task 10 (Floodplain Mapping– Detailed Riverine Analysis), Task 10A (Floodplain Mapping {Redelineation Using Effective Flood Profiles and Updated Topographic Data}), and Task 10B (Floodplain Mapping {Refinement or Creation of Zone A}), Task 11 (Quality Assurance Review of Floodplain Mapping {Revised Areas}), Task 13 (DFIRM Production {Non-Revised Areas}), Task 14 (DFIRM Production {Merging Revised and Non-Revised Information}), and Task 14A (DFIRM Production {Application of FEMA Graphics and Database Specifications})

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

Task 12 (Base Map Acquisition and Preparation)

- Written statement that the digital data meet FEMA's minimum standards and specifications.
- The responsible Mapping Partner shall provide documentation that the digital base map can be used by FEMA. Please note that uploading base map data to the MIP does not constitute agreement that the digital base map can be used by FEMA. Documentation that the digital base map can be used by FEMA will still be required.

Certifications must be made at the time the intermediate data is submitted. For example, if hydrologic data is submitted, certification will be required at the time it is submitted.

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

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

City of Springfield, MO intends to use the services of AMEC Inc. as a contractor for this Flood Map Project. If federal funds are used **City of Springfield, MO** 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.

OR

City of Springfield, MO does not intend to use the services of a contractor for the Flood Map Project documented in this Mapping Activity Statement.

Section 10— Reporting

Because FEMA is not providing any funding to **City of Springfield, MO** for the Flood Map Project documented in this MAS, no financial reporting by **City of Springfield, MO** is required.

Progress reporting will utilize the MIP or other systems as identified by FEMA. A separate report is not necessary.

The Project Officer, as needed, may request additional information on status. In addition to the monthly financial and status submittals by the **City of Springfield, MO** may meet more frequently with the NSP and/or FEMA to review the progress of the project.

Section 11—Points of Contact

The points of contact for this Flood Map Project are Bob Franke, the FEMA Regional Project Officer; Errin Kemper, the Project Manager for **City of Springfield, MO**; 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, Bob Franke.

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 on a ad hoc basis;
- Telephone conversations with FEMA and other Project Team members on an ad hoc basis, as required;
- Updates to the MIP, 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.
- Project Team members shall meet with the Regional Management Center and/or FEMA quarterly to review the progress of the project. These meetings will be held via a conference call at a mutually agreeable time to be determined. Typically the call will occur following the submittal of the quarterly progress report.

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

/s/	08/15/05
Errin Kemper Project Manager **City of Springfield, MO**	Date
/s/	08/15/05
Nicholas A. Heatherly, P.E. Floodplain Administrator **City of Springfield, MO**	Date
/s/	08/15/05
Timothy W. Smith, P.E. Administrator **Greene County, MO**	Date
/s/	09/22/05
Robert G. Bissell, Director Federal Insurance and Mitigation Division Federal Emergency Management Agency, Region VII	Date