



HARRIS COUNTY, TEXAS

Office of Management and Budget 1001 Preston; Suite 500 Houston, TX 77002 713-274-1135

Grants Coordination Section - Conveyance Form Application Award

Amendment

Department Name / Number Flood Control - 090	DUNS 174097956	Grant Title 2020 CTP Flood Risk Project MAS No.37 Harris County Remapping Study Year 3
Funding Source: U.S. Department of Homeland Security: CFDA# 97.045	Grant Agency: U.S. Department of Homeland Security	
Program Year: 3 rd	Program Ending:	
Grant Begin Date: 10/01/2020	Grant End Date: 09/30/2026	
Grant Org. Key: 100001000000811	If applicable, Prior Year Org. Key: XHJ09029	

Grant Description:

Funded by the U.S. Department of Homeland Security, the Cooperating Technical Partners Program creates partnerships between FEMA and communities that participate in the National Flood Insurance Program to maintain up-to-date flood hazard maps and other hazard information.

	Revised Total Budget	New Grant Funded	Orig. Grant Funded	New County Funded	Orig. County Funded
Salary & Benefits	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Non-Labor	\$5,110,737.00	\$0.00	\$2,800,000.00	\$810,737.00	\$1,500,000.00
Sub Tot. Incremental Cost	\$5,110,737.00	\$0.00	\$2,800,000.00	\$810,737.00	\$1,500,000.00
Indirect Cost	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TOTALS	\$5,110,737.00	\$0.00	\$2,800,000.00	\$810,737.00	\$1,500,000.00

* under development

Full Time Equivalent Positions	<input type="text" value="0.00"/>	Date Guidelines are Available	<input type="text"/>
% of Positions Paid by Grant	<input type="text" value="0.00 %"/>	Grant Submittal Deadline Date	<input type="text"/>

Grant Discussion:

This amendment is related to an award approved by Commissioners Court on 9/29/20 and previously amended on 9/19/23. The purpose of this item is to extend the end date to 9/30/26 to expend the remaining funds and increase the local match by \$810,737. All other aspects remain the same.

County Funded Cost Projection

Year	Required	Discretionary
2021	120,000.00	-
2022	300,000.00	-
2023	480,000.00	-
2024	300,000.00	-
2025	1,110,737.00	-

Completed by: Michael Mattingly Mattingly, Mike

Reviewed by: [Signature]

Date: 9/4/24

Date: 09/09/24

ORDER OF COMMISSIONERS COURT

THE STATE OF TEXAS §
 §
COUNTY OF HARRIS §

The Commissioners Court of Harris County, Texas, met in regular session at its regular term at the Harris County Administration Building in the City of Houston, Texas, on _____, with all members present except _____.

A quorum was present. Among other business, the following was transacted.

ORDER AUTHORIZING AN APPLICATION FOR AN AMENDMENT ON BEHALF OF THE HARRIS COUNTY FLOOD CONTROL DISTRICT FOR A GRANT FROM FEDERAL EMERGENCY MANAGEMENT AGENCY

Commissioner _____ introduced an order and moved that Commissioners Court adopt the order. Commissioner _____ seconded the motion for adoption of the order. The motion, carrying with it the adoption of the order prevailed by the following vote:

	Yes	No	Abstain
Judge Lina Hidalgo	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comm. Rodney Ellis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comm. Adrian Garcia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comm. Tom S. Ramsey, P.E.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comm. Lesley Briones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The County Judge thereupon announced that the motion had duly and lawfully carried and that the order had been duly and lawfully adopted. The order adopted follows:

IT IS ORDERED that County Judge Lina Hidalgo, or her designee, is hereby granted the authority to take all actions and steps necessary to apply for the following grant amendment from Federal Emergency Management Agency:

APPROVAL TO APPLY – Federal Emergency Management Agency - 2020 Cooperating Technical Partners – EMT-2020-CA-00004 – MAAPnext Award Amendment

Existing Period of Performance: October 1, 2020 – September 30, 2024
Amended Period of Performance: October 1, 2020 – September 30, 2026

<i>Existing Budget:</i>	<i>Federal</i>	<i>\$2,800,000</i>
	<i>Local</i>	<i>\$1,500,000</i>
<i>Amended Budget:</i>	<i>Federal</i>	<i>\$2,800,000</i>
	<i>Local</i>	<i>\$1,500,000</i>
<i>Additional District Funds</i>		<i>\$810,737</i>



FEMA

**THE HARRIS COUNTY FLOOD CONTROL DISTRICT
COOPERATING TECHNICAL PARTNERS (CTP)
FLOOD RISK PROJECT (FRP)
MAPPING ACTIVITY STATEMENT (MAS)**

Mapping Activity Statement No. 37.2

The Flood Risk Project described in this MAS dated June 30, 2020 shall be completed in accordance with the CTP Partnership Agreement dated July 31, 2000 between The Harris County Flood Control District (herein referred to as “CTP”) and the Federal Emergency Management Agency (FEMA).

The Flood Risk Project within this MAS includes the following project areas and production phases:

- Clear Creek, Armand Bayou, Sims Bayou, San Jacinto & Galveston Bay, San Jacinto River, Vince Bayou, Carpenters Bayou, Goose Creek & Spring Gully, Cedar Bayou, Jackson Bayou, and Luce Bayou– Phase Two (Risk Identification & Assessment)
- Harris County– Phase Three (Regulatory Update) – Support

This Flood Risk Project will be completed by the following entities:

- The Harris County Flood Control District;
- The Harris County Flood Control District’s contractors*

*The Harris County Flood Control District will be overseeing all tasks, but all grant funding will be used for the contractor services

Contents

PREFACE: Implementing Risk MAP in FEMA Region 6 3

SECTION 1 – OBJECTIVE AND SCOPE 3

Project Management Activities 7

 Task – Perform Project Management7

 Task – Perform Community Engagement & Project Outreach11

Phase Two - Risk Identification and Assessment 14

 Task: Perform Floodplain Mapping.....15

 Task - Develop Flood Risk Products (including Urban Flood Study).....17

 Task - Flood Risk Review Meeting20

Phase Three – Regulatory Product Update (Support) 22

 Task - Support to Post-Preliminary Map Production.....22

 Task - Support Open House (Optional)23

SECTION 2 – TECHNICAL AND ADMINISTRATIVE SUPPORT DATA SUBMITTAL 23

SECTION 3 – PERIOD OF PERFORMANCE 24

SECTION 4 – FUNDING/LEVERAGE (For CTP, OFA, and/or Community) 24

SECTION 5 – STANDARDS 26

SECTION 6 – SCHEDULE 26

SECTION 7 – CERTIFICATIONS 27

SECTION 8 – TECHNICAL ASSISTANCE AND RESOURCES 28

SECTION 9 – CONTRACTOR SUPPORT 28

SECTION 10 – REPORTING 28

SECTION 11—PROJECT COORDINATION 31

SECTION 12—PROTECTION OF PRIVACY INFORMATION 31

SECTION 13—POINTS OF CONTACT 32

PREFACE: Implementing Risk MAP in FEMA Region 6

Region 6 Risk MAP Implementation Guidance, Tools and Templates are available on the Risk MAP SharePoint site at:

[Risk MAP SharePoint > Region 6 > Resources > Tools and Templates](#)

Projects should be phased in alignment with the *Framework to Achieve Mitigation Action*, available at:

[Risk MAP SharePoint > Region 6 > Resources Page > Regional Implementation Documents > Framework V4](#)

Phasing Risk MAP Project Production. To allow the flexibility required to move projects from initiation (Discovery) to effective issuance, FEMA Region 6 has identified the following phases for project funding:

- Phase Zero – Investment
 - Preparation of Base Level Engineering for HUC8 (or larger basin)
- Phase One - Discovery
 - To include Flood Risk Report, Flood Risk Map and Flood Risk Database
 - Discovery and Discovery Close-Out meetings
- Phase Two - Risk Identification and Assessment
 - Engineering and Risk MAP product development
 - Project Kick-off, Flood Risk Review and Resilience meetings
- Phase Three - Regulatory Product Update
 - Preparation of FIS and FIRM
 - Panel Preparation, Preliminary Panel Issuance
 - Consultation Coordination Officer's (CCO) Meeting
 - Effective Panel Issuance

FEMA Region 6 requires its Cooperating Technical Partners to utilize this phased approach for all Flood Risk Projects submitted for funding.

RMD SharePoint Site. The RMD SharePoint shall be used to deliver and coordinate with FEMA Regional POCs throughout a Flood Risk Project. Project folders are established to assist this coordination. FEMA Region 6 points of contact for assistance and questions related to the Risk MAP SharePoint are diane.howe@fema.dhs.gov and/or esavage@hwcinc.com. Please note that after 90-days your account password will need to be reset. Please email spadmin@riskmapcds.com to reset your password.

- Numerous templates have been created to aid the CTP in preparing for and delivering the Region's objectives as identified by phase and task in the Framework to Achieve Mitigation Action. CTPs may utilize the regionally provided templates available on the Risk MAP SharePoint site at: <https://rmd.msc.fema.gov/Regions/VI/SitePages/Resources.aspx>
- Additionally, CTPs may use the FEMA Region 6 Risk MAP SharePoint site to upload their CTP templates under the Mapping Partners Tab at the following location: <https://rmd.msc.fema.gov/Regions/VI/SitePages/Mapping%20Partners.aspx>

SECTION 1 – OBJECTIVE AND SCOPE

The objective of the Flood Risk Project (FRP) documented in this Mapping Activities Statement (MAS) is to develop and/or support flood hazard data and program-related tasks through completing technical risk analysis, engineering and mapping activities. These activities may or may not result in a new or

updated Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS) report for one or more communities within the project area. This Flood Risk Project Mapping Activity Statement (FRP-MAS) includes a project specific scope of services and deliverables for the following project efforts:

- Project Management Activities
- Clear Creek, Armand Bayou, Sims Bayou, San Jacinto & Galveston Bay, San Jacinto River, Vince Bayou, Carpenters Bayou, Goose Creek & Spring Gully, Cedar Bayou, Jackson Bayou, and Luce Bayou – Phase Two (Risk Identification & Assessment)
- Harris County – Phase Three (Regulatory Update)

The watersheds and jurisdictions in which Flood Risk Projects will be performed, as well as their applicable project type/activities, are summarized in Table 1.1: Flood Risk Project Area and Community Identification. All applicable project phases should be identified in the last column of the table for each watershed, county/parish or community listed below. The MIP project will be established based on the information included in the table below.

Table 1.1: Flood Risk Project Area and Community Identification (Watershed)

Watershed Name	HUC-8 Code	Communities Included in Project Area	Project Phase
San Jacinto River	120400101	City of Houston (480296) City of Humble (480297) Harris County Unincorporated Areas (480287)	2 – Risk ID & Assess
Luce Bayou	12040103	City of Houston (480296) Harris County Unincorporated Areas (480287)	2 – Risk ID & Assess
Goose Creek & Spring Gully, Cedar Bayou	12040203	City of Baytown (485456) Harris County Unincorporated Areas (480287)	2 – Risk ID & Assess

Watershed Name	HUC-8 Code	Communities Included in Project Area	Project Phase
Clear Creek, Armand Bayou, San Jacinto & Galveston Bay	12040204	City of Deer Park (480291) City of El Lago (485466) City of Friendswood (485468) City of Houston (480296) City of La Porte (485487) City of League City (485488) City of Morgans Point (480305) City of Nassau Bay (485491) City of Pasadena (480307) City of Pearland (480077) City of Seabrook (485507) City of Shoreacres (485510) City of Taylor Lake Village (485513) City of Webster (485516) Harris County Unincorporated Areas (480287)	2 – Risk ID & Assess
Sims Bayou, San Jacinto River, Vince Bayou, Carpenters Bayou, Jackson Bayou	12040104	City of Baytown (485456) City of Deer Park (480291) City of Galena Park (480293) City of Houston (480296) City of La Porte (485487) City of Missouri City (480304) City of Morgans Point (480305) City of Pasadena (480307) City of South Houston (480311) Harris County Unincorporated Areas (480287)	2 – Risk ID & Assess

Table 1.1b: Flood Risk Project Area and Community Identification (County/Parish)

County/Parish Name, State	FIPS Code	Communities Included in Project Area	Project Phase
Harris County, TX	48201	City of Baytown (485456) City of Bellaire (480289) City of Bunker Hill Village (480290) City of Deer Park (480291) City of El Lago (485466) City of Friendswood (485468) City of Galena Park (480293) City of Hedwig Village (480294) City of Hilshire Village (480295) City of Houston (480296) City of Humble (480297) City of Hunters Creek Village (480298) City of Jacinto City (480299) City of Jersey Village (480300) City of Katy (480301) City of La Porte (485487) City of League City (485488) City of Missouri City (480304) City of Morgan’s Point (480305) City of Nassau Bay (485491) City of Pasadena (480307) City of Pearland (480307) City of Piney Point Village (480308) City of Seabrook (485507) City of Shoreacres (485510) City of South Houston (480311) City of Southside Place (480312) City of Spring Valley Village (480313) City of Stafford (480233) City of Taylor Lake Village (485513) City of Tomball (480315) City of Webster (485516) City of West University Place (480318) Harris County Unincorporated Areas (480287)	3 – Regulatory Product Update

Additionally, the CTP involved in this project will develop new and/or updated flood hazard data as summarized in Table 1.2: Total Riverine Mileage Count & Study Type. The engineering analysis and resultant datasets, mapping and related products shall all be produced in the Geoid 12 B vertical datum.

Table 1.2 – Total Riverine Stream Mileage Counts & Study Type

Jurisdiction Name	Current vs Post-Project Validity	Detailed w/ Floodway (Zone AE)	Detailed no Floodway (Zone AE)	Limited Detail (Zone AE Or Zone A)	Approximate* (Zone A/Base Level Engineering)	Redelineation (Only applicable to Valid CNMS Miles)
Harris County (48201C)	Current Validation Status (CNMS)	Valid = ##	0	0	0	0
		Unknown = ##	0	0	0	11
		Unverified = ##	448.5	0	0	0
		New = ##	0	0	0	0
	Validation Status (Post Project)	Valid = ALL	459.5	0	0	0

Project Management Activities

Task – Perform Project Management

Responsible Mapping Partner: Harris County Flood Control District and Contractors

Scope: Project Management is the active process of planning, organizing, and managing resources toward the successful accomplishment of predefined project goals and objectives. The CTP will coordinate with the FEMA Regional Office with respect to Project Management activities and technical mapping activities identified below.

Quantities and Baseline Schedule (QBS) form. The QBS form will be prepared by the CTPs and delivered to the R6 MIP Champion (tarah.baumgartner@fema.dhs.gov) shortly after award. The QBS form identifies the initial project schedule and project tasks that will be completed as a part of this COMS Statement of Work (COMS-SOW). CTPs that require time for identification of contract support and procurement should work with their FEMA POC and the R6 MIP Champion to identify the project timeline for entry into the system of record. **The updated FY20 QBS form can be found on the Regional SharePoint page at: [RMD SharePoint > R6 > Resources > Other Resources > FY20 Quantities and Baseline Schedule Form](#)**

Personally Identifiable Information (PII). The CTP 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. The CTP must demonstrate to FEMA compliance with Subpart 24.1 of the Federal Acquisition Regulation (FAR) related to the handling of Personally Identifiable Information (PII) associated with the Activities listed in this MAS.

Quality Assurance Program for Mapping Partners. The CTP is responsible for implementation of the prepared CTP Quality Assurance/Quality Control (QA/QC) Plan. The QA/QC plan defines and outlines the CTP's oversight for all tasks, services and activities undertaken within this Mapping Activities Statement (MAS). The CTP will submit a Summary Report that describes and provides the results of all automated or manual QA/QC review steps as outlined in FEMA's Standards for Flood Risk Analysis and Mapping, dated February 2019. The plan should include the process for all activities identified within the MAS.

Internal QC review activities shall be included in the costs associated with the delivery of CTP data for tasks identified within the MAS. CTPs shall discuss and document the necessity for external review of its MAS submission, otherwise, the CTP will need document its QA/QC findings and submit with the technical data delivery and Regional Project Monitor for approval. The CTP shall follow the Quality Assurance/Quality Control procedures outlined in the CTP's Programmatic Quality Assurance/Quality Control (QA/QC) Plan, previously submitted.

Independent QC review activities may be performed by the CTP or FEMA's contractor at the discretion of FEMA. If the CTP will be responsible for the QC review, the entity that will perform QC should be identified in this MAS.

Please note FEMA will also be performing periodic audits and overall study/project management to ensure quality, including National Quality Reviews (QRs) required per FEMA standards for all flood risk projects. Whether or not the CTP performs the Independent QC review mentioned in the preceding paragraph, the CTP will be responsible for addressing all comments resulting from National QRs and any additional independent QA reviews required by the FEMA Regional Office, including re-submittal of deliverables as needed to pass technical or quality review. The CTP will submit regulatory products to FEMA's designated National QR reviewer for review and approval prior to public issuance.

Should the study outlined in the MAS be selected for Independent Verification and Validation (IV&V), the partner will be provided a copy of the IV&V findings. If the findings indicate that items are not in accordance with FEMA's Standards for Flood Risk Analysis and Mapping, dated February 2019, the partner will assist FEMA in the preparation of materials meeting these standards.

Quality Control Reports. FIRM-related tasks require a passing QC Report from FEMA's National FIRM database auto-validation tool for Quality Review (QR) #1, #2, and #5 as required in FEMA standards. Training materials for these steps are available on the Mapping Information Platform (MIP) at MIP User Care>Training Materials. The MIP can be accessed at the following web address: <http://hazards.fema.gov>.

Mapping Information Platform (MIP) Use/Update and Earned Value and Reporting Requirements. Once the baseline has been established in the MIP, the CTP shall input the performance and actual cost to date for all tasks within each project for which the CTP is responsible. Mapping Partners shall complete these updates at a minimum of once every 30 days and at the completion of the task. Mapping Partners shall update the progress in the MIP with actual costs, percent complete and as of dates by the 25th of each month in the Track Task Progress Workbench. The CTP shall maintain a Schedule Performance Index (SPI) and Cost Performance Index (CPI) between 0.92-1.08.

When a task is completed, including all QA/QC activities in this MAS, plus the Quality Control Reviews required by FEMA standards, the CTP shall enter 100% complete, enter the actual completion cost, and the actual completion date within the Track Task Progress Workbench. **CTPs should note that projects obligated in the MIP only include FEMA dollars.**

The CTP is required to report on the earned value of projects that are in the MIP monthly and must give explanations for variances outside of the tolerance defined above. Special Problem Reports (SPR) explaining any variance must be submitted in a timely manner by the CTP. The FEMA Regional Project Monitor shall work with CTPs to detail a Corrective Action Plan (CAP) when a CTP partner is outside of

the tolerance. A CAP must define the reason for the variance and the intended resolution. FEMA Regional Offices must coordinate with FEMA Headquarters when CAPs are developed.

Leverage reporting in the MIP. The CTP shall identify and include all leverage costs, fees and data associated with the delivery of each project task completed. If the units available for reporting in the MIP not match those necessary, the CTP shall enter additional information in the comments section to identify the actual units reported.

CTP Coordination with FEMA. The Mapping Partner shall notify FEMA at least four weeks prior to all relevant meetings requiring FEMA staffing/support. The CTP should notify all other applicable parties of all Flood Risk Project meetings with community officials, and other relevant meetings, at least two weeks prior to the meeting (with as much notice as possible). Staffing needs from FEMA are to be coordinated with the FEMA Project Monitor.

Additionally, the CTP shall manage their contractor to assure delivery of the appropriate items and shall approve all data delivered on their behalf, prior to its submission. The CTP lead shall coordinate scope and deliverables question to the responsible FEMA PM to assure delivery of the tasks outlined in this FRP-MAS.

Status Reports. The CTP will provide communities with regular status reports outlining the current project status, key accomplishments to date, identified risks, if any, and next steps including estimated next meeting date and meeting content shared. These status reports shall be provided to FEMA for review before electronic distribution. Project update status reports will be distributed to communities at mid-points between each of the meetings, and between the Final Meeting and effective date (if included in this MAS), to help introduce and prepare the communities for upcoming discussions. **CTPs shall also coordinate with the RSC to update the Status of Studies viewer with target and actual meeting, milestone and data delivery dates.**

Grant Documentation Maintenance. The CTP should alert the FEMA Regional Project Monitor should a project require a modification to the scope, schedule or budget. In cases where there may be changes to scope, schedule or budget, an award amendment may be required, and in this case, the CTP should discuss with their FEMA Regional Project Monitor the modification required on the award, to determine the correct course of action and paperwork requirements for the amendment. If the CTP determines an extension to the Period of Performance will be required, the FEMA Regional Project Monitor should be notified, per the NOFO, no later than 30 days before the Period of Performance ends. Grant document requirements vary dependent on the changes that are being incurred and should be discussed with your Project Monitor.

Project Documentation. The CTP will deliver Technical Study Data Notebooks (TSDNs) intermittently, in accordance with Regional guidance. The CTP shall consult the Scope and Deliverables section within each project phase to assure they are preparing and delivering all project documentation in accordance with Regional Guidance. The CTP will review their deliveries to FEMA for completeness and certify each submittal as being in accordance with FEMA's Standards for Flood Risk Analysis and Mapping; dated November 30, 2015 and revisions thereto. CTPs shall approve all deliverables submitted on their behalf.

Key Decision Point Process Support. CTPs shall support FEMA Regional Project Monitors in preparation of project specific documentation to support the Key Decision Point process. A template with all required information for KDP1 and KDP2 is available on the RMD SharePoint at:

<https://rmd.msc.fema.gov/Regions/VI/Regional%20Implementation%20Documents/Forms/AllItems.aspx?RootFolder=%2fRegions%2fVI%2fRegional%20Implementation%20Documents%2f1%2fR6%5fDelivery%5fGuidance&FolderCTID=0x0120006BDEB5BFF71F2D479FF913787586EB31>

Project Risks and CTP Mitigation Steps. Threats to the planned completion of a project may come from various sources. Risks should be identified during the planning phase and monitored throughout the project so that potential impact can be assessed, and solution strategies developed and implemented as needed.

Table 1.3 – Project Risk Identification

Project Risk	Potential Impact to Project, Team or Delivery of Successful Project Effort	Mitigation/Solution Strategy
Delay in procurement processes	The survey, hydrology & hydraulics efforts are already underway. A delay in procurement could cause a delay in timely hand-off of results for mapping and completion of the county-wide study.	Procurement processes will be started immediately in anticipation of grant award.
Data transfer & study difficulties stemming from issues on COVID19	Stay at home work orders are currently unpredictable and can cause issues with production, especially with data intensive tasks such as Mapping & Hydraulics.	Reliable remote working options will be made available and implemented by HCFCDD and encouraged of its consultants to ensure a continuance of work.
Appeals and comments received surpass estimated amounts	A larger number of appeals than expected could exhaust available funds and cause delay.	A robust communication campaign has been implemented and will continue. Harris County Floodplain Administrators and the engineering & development community has been invited to submit data and kept up to date to limit the number future comments & appeals.
Lack of community support of results	Community support of results is critical to success	A comprehensive communications plan that includes direct and frequent communications with Harris County community officials have been ongoing and will be ramped up over 2020 and 2021.

Other Requirements

- The Project Monitor may request additional information on status of projects on an ad hoc basis to answer incoming correspondence and required reporting for FEMA leadership. The CTP will provide information as requested by the FEMA Project Monitor.

- The Mapping Partner shall maintain an archive of all data submitted. All supporting data must be retained for a minimum of three years from the date a funding recipient submits its final expenditure report to FEMA.
- FEMA will provide download/upload capability for data submittals through the MIP located at <https://hazards.fema.gov>. As each activity is completed, ALL final and editable data files shall must be submitted to the MIP for validation.
- FIRM and FIS report for the watersheds and areas identified in Table 1.1 will be produced in the NAVD 88 Vertical Datum.
- Metadata is required for all digital activities. {Insert appropriate Data Capture language applicable to this Mapping Activity Statement.}

Standards: All Project Management work shall be performed in accordance with the standards specified in Section 5 – Standards.

Deliverables: The CTP shall prepare the following deliverables while performing the Project Management activities identified above:

- Quantity and Baseline Schedule (QBS) Form
- Overall project Quality Management Plan including QA/QC maintenance information, such as maintaining a QA/QC log and providing a QA/QC approach to FEMA for review and approval.
- QA/QC Summary Report(s)
- Monthly earned value data reporting through the MIP with variance explanations to support management of technical mapping activities within specified time frame, for both Regulatory and Flood Risk Products
- Management of SPI/CPI performance for each project/task
- Leverage costs/data entered the MIP by task
- Ad-hoc status inquiries, reports and input related to project performance and project scope may be required periodically. The CTP will support the FEMA PM in providing this information as required.
- Monthly/Quarterly Coordination calls with the FEMA PM will be performed and recorded under this task
- Updates for the Status of Studies tracker portal will be submitted via email to Reddy.Mudumalagurthy@aecom.com for update as a project passes a project milestone
- Project Risk/Mitigation Identification and monitoring for project lifecycle
- Project management documentation and coordination of project data to the RMD SharePoint site
- Special Problems Report to detail any schedule or cost variations from that documented in the QBS form submitted at project initiation
- CTP documentation support for the Key Decision Point (KDP) submittals for Regional and FEMA HQ required approvals
- Corrective Action Plans and/or Grant Award Amendments, as required
- Management of adherence to scope of work and quality of work for an organization

Task – Perform Community Engagement & Project Outreach

Responsible Mapping Partner: Harris County Flood Control District and Contractors

Scope: This Flood Risk Project will include in-person opportunities to engage communities, build risk awareness, increase capabilities for risk communication, and stimulate mitigation action at the local level. The overarching goal is to create a climate of understanding and ownership of the mapping process at the State and local levels. Well-planned and executed community engagement and project outreach can reduce political stress, confrontation in the media, and public controversy, which can arise from lack of information, misunderstanding, or misinformation.

NOTE: The performance of community engagement and outreach takes place throughout the life of the Flood Risk Project. Region 6 has developed the **Communication and Action Planning Worksheet** template to assist partners. Template is available at the RMD SharePoint site at: [RMD SharePoint > R6 > Resources > Phase 1 > Comms and Action Planning Worksheet \(doc\)](#). To plan and schedule a project approach CTPs may leverage the **Region 6 Project and Communications Management Tool** is available at the RMD SharePoint site at: [RMD SharePoint > R6 > Resources > Phase 1 > Project and Communications Management Tool \(xls\)](#)

→ The activities identified here are for project specific community engagement and outreach.

The actual number/format of meetings will be determined based on the risk and need at the local level and determined as part of developing the project-based communication plan. Provisions may be made for remote access video/audio feeds for those that cannot attend in person. These activities should be reviewed for implementation throughout the Risk MAP lifecycle and the defined meetings within it. All Mapping Partners shall use Community Engagement strategies and tactics throughout the delivery of the Risk MAP program in each watershed or project area.

Personally Identifiable Information (PII). The CTP 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. The CTP must demonstrate to FEMA compliance with Subpart 24.1 of the Federal Acquisition Regulation (FAR) related to the handling of Personally Identifiable Information (PII) associated with the Activities listed in this MAS.

Although these activities cannot be included as a line item, the Mapping Partner shall keep in mind that the efforts undertaken within the FRP-MAS are intended to:

- Increase the understanding of natural hazard risk within a community.
- Support local efforts to reduce natural hazard risk within a community or watershed area.
- Increase the effectiveness of meetings and engagement opportunities with communities throughout the Risk MAP life cycle.

Community action and community engagement cannot be purchased by line item; however, if utilized, they can influence and advance by proper project and communications planning throughout the Risk MAP process. Tasks undertaken may include:

Watershed and Community Assessment. Activities include assessing a watershed and high priority communities to understand what is important to them, their mitigation priorities, and their existing relationships with FEMA. May include holding telephone discussions with local officials and residents to understand the watershed and identify key stakeholders. Will include local planners, floodplain administrators (FPAs), elected officials, community leaders, local levee/dam/coastal leadership/business owners and others, based on local needs.

Action Identification and Planning. Support for communities to identify and/or advance mitigation opportunities, and/or select amongst alternatives, through the provision of data, analysis and/or strategic support. Based on information learned from conversations with community influencers, as well as the

Hazard Mitigation Plan, and information obtained through Discovery, identify the top 2–3 actions to focus on advancing within each community, and create a plan to advance them.

30-Day Review of Proposed Models (SID 620): Before any data development tasks within a flood risk project, including a FIRM update, begin, each community affected by the flood insurance study must be notified of the planned model or models to be used. The affected communities will be provided with a 30-day period beginning upon notification to consult with FEMA and the CTP regarding the appropriateness of the mapping model or models to be used. This notification is to be sent directly by the CTP. Copies shall be provided to the FEMA Project Monitor and included in technical submittals to the MIP. The results of the consultation do not necessarily guarantee that a change should be made and should be clearly documented. This consultation does not waive or otherwise affect the right of the community to later appeal any flood hazard determinations.

30-Day Review of Completed Models, Work Maps, and Database (SID 621): When a flood risk project will include new or updated FIRM panels, the CTP must provide access to the draft FIRM database and other contributing data, as requested, to the communities by the conclusion of Quality Review 1. The CTP also must provide the affected communities with a 30-day period during which the communities may provide data to FEMA and the CTP that can be used to supplement or modify the existing data. The CTP should incorporate any community-submitted data into the project as appropriate. Data or information submitted must be completed to a level to be directly incorporated into the study or demonstrate scientific incorrectness by:

- Identifying and provide documentation of the methods, or assumptions purported to be scientifically incorrect.
- Supporting data as to why the methods, or assumptions used are not appropriate.
- Providing new or alternative analysis and mapping data utilizing methods consistent with prevailing engineering principles and meeting FEMA’s Standards.
- Providing technical information or data indicating why the provided new or updated analysis and mapping should be accepted as more correct.

Television and Radio Outreach (SID 622): The Project Team, in coordination with the appropriate staff in the Regional Office of External Affairs, other FEMA staff, and community officials, shall engage with local radio and television outlets to further educate property owners about flood map revisions and appeals processes. FEMA cannot fund advertising, so public service announcements should be considered as a prime opportunity to meet this standard. Any engagement with the media should include explanations of the entire appeal process for flood hazard information, including comments on other information on the FIRM and FIS report. Users should review the Stakeholder Engagement – Due Process Guidance document available at <https://www.fema.gov/media-library/assets/documents/34953> and SID 622 <https://www.fema.gov/media-library/assets/documents/35313> for more information.

Meetings. Meetings are included in each phase of project delivery later in the document. Objectives and requirements are included in each phase versus being included in the Community Engagement section to promote the Phased funding approach and the R6 Quantities and Baseline Schedule (QBS) form being completed appropriately.

Project Outreach and Communication Planning. The CTP will work with the Regional Office during the initiation of this activity to develop the Project Outreach and Communication Planning effort to support the implementation of the mapping project. FEMA R6 has developed two tools that may be used by CTPs to meet the requirements of Project Outreach and Communications planning, mainly:

- [Communication and Action Tracker Worksheet – Prepare and Maintain](#)
- [Project and Communications Management Tool \(excel file\)](#)

Standards: All Community Engagement and Outreach work shall be performed in accordance with the standards specified in Section 5 – Standards. All communication with local governments will be done in accordance with 44 CFR Part 66.

Deliverables: The CTP shall prepare the following deliverables while performing the Community Engagement activities identified above:

- Communication and Action Tracker Worksheet – Prepare and Maintain
- Project and Communications Management Tool (excel file)
- Watershed/Community Assessment outputs
- Telephone logs and emails
- Meeting invitation, agenda, presentation slides (as requested), and meeting notes
- Action Identification and Advancement Plan
- Project update status reports for project communities.
- Provide documentation of adherence with the requirements for the community 30-day review of proposed models and 30-day review of work maps, completed models, and associated information. (SID 620/621/622)

Phase Two - Risk Identification and Assessment

Phase two begins at the Project Kick-Off meeting and ends with the delivery of the Risk MAP products at the Resilience Meeting with all participating parties. The emphasis of this phase is to deliver the required and identified elements (products, services and technical assistance) within the selected project areas to further the Awareness and Action metrics. The following tasks may be included in the project work for Phase Two.

Note: Engineering analysis prepared by an CTP partner during phase two may be included in a Phase Three effort for the Regulatory Product Update effort in the future. If the engineering analysis prepared is used to update the FIS and FIRM, the party whom produced the analysis is expected to participate with FEMA (and its future mapping partner) in responding to appeals and comments received during the 90-day appeal period. This effort may be funded under a separate Mapping Activity Statement in the future.

Task: Perform Floodplain Mapping

Responsible Mapping Partner: Harris County Flood Control District and its contractors

Additional Scope for Detailed Riverine Analysis: The CTP shall include the modeling effort and definition required to support future mapping of Zone AE and Zone AE (with floodway) for any streams studied by detailed methods. For detailed riverine analysis, the CTP shall delineate the 1 percent and 0.2 percent annual chance floodplain boundaries, and regulatory floodways (as applicable) and any other applicable elements for the flooding sources for which detailed hydrologic, hydraulic, and/or coastal analyses were performed. Floodways exist for the updated study area defined in this FRP-MAS. The CTP shall incorporate all new or revised hydrologic, hydraulic, and/or coastal modeling and shall use the topographic data acquired under Develop Topographic Data to delineate the floodplain and regulatory floodway boundaries on a digital work map. **Please review SID #104 listed in the last FEMA Policy for the most current language of the standard.**

The CTP shall the results of effective Letters of Map Revisions (LOMR) for all affected communities on the FIRM and provide to the appropriate PTS the required submittals for incorporation into the National Flood Hazard Layer (NFHL). Also, the CTP shall address all concerns or questions regarding Floodplain Mapping that are raised during the independent QA/QC review.

The CTP shall capture flood hazard engineering and/or mapping data quality issues encountered during this activity in the CNMS database for the area(s) of interest. These issues will be entered as “Requests” or “Needs” in the CNMS requests feature dataset based on the nature of the deficiency encountered. Detailed information on performing this task can be found in the relevant standards specified in Section 6 - Standards.

Table 1.9 Summary of Floodplain Mapping

Study Area/Flooding Source	Method	Mapping Type (A/AE)	Miles	Topographic Data Source
Clear Creek	Detailed	AE	86.4	H-GAC 2018 LiDAR
Armand Bayou	Detailed	AE	53.7	H-GAC 2018 LiDAR
Sims Bayou	Detailed	AE	49.6	H-GAC 2018 LiDAR
San Jacinto & Galveston Bay	Detailed	AE	7.4	H-GAC 2018 LiDAR
San Jacinto River	Detailed	AE	105.3	H-GAC 2018 LiDAR
Vince Bayou	Detailed	AE	12	H-GAC 2018 LiDAR

Study Area/Flooding Source	Method	Mapping Type (A/AE)	Miles	Topographic Data Source
Carpenters Bayou	Detailed	AE	17.4	H-GAC 2018 LiDAR
Goose Creek & Spring Gully	Detailed	AE	17.3	H-GAC 2018 LiDAR
Cedar Bayou	Detailed	AE	67.9	H-GAC 2018 LiDAR
Jackson Bayou	Detailed	AE	23.3	H-GAC 2018 LiDAR
Luce Bayou	Detailed	AE	19.2	H-GAC 2018 LiDAR

Internal QA/QC of Floodplain Mapping. CTPs and their contractors shall perform a review of the following items and document any issues found/resolved.

- Review the cross sections for proper location and orientation on the work map and agreement with the Floodway Data Table and Flood Profiles.
- Review the BFEs and coastal flood zones (both Zones VE and Zones AE) shown on the work map for proper location and agreement with the results of the coastal modeling.
- Review the regulatory floodway widths for agreement with the widths shown in the Floodway Data Table.
- For non-revised floodplain areas, the 1 percent and 0.2 percent annual chance floodplain boundaries agree with the floodplain boundaries shown on the FIRM, the contour lines, other topographic information, and planimetric information shown on the FIRM base.
- Road and floodplain relationships are maintained for all unrevised areas.
- Review the flood insurance risk zones as shown on the work maps to ensure the data are labeled properly.
- Review the FIRM mapping files to ensure the data were prepared in accordance with FEMA standards.
- Review the metadata files to ensure the data includes all required information shown in the NFIP Metadata Profiles Specification.
- Review that effective LOMCs for all affected communities on the FIRM have been addressed.

Standards: All floodplain mapping work shall be performed in accordance with the standards specified in Section 6 - Standards. The CTP will perform self-certification audits for the Floodplain Boundary Standards for all flood hazard areas.

Deliverables: The CTP shall produce items listed in the Floodplain Mapping Data Capture section within the most currently dated “Technical Reference: Data Capture” document, located at <https://www.fema.gov/media-library/assets/documents/34519>, made available to FEMA by uploading the digital data to the MIP in accordance with the schedule outlined in Section 6.

<input type="checkbox"/>	Intermediate TSDN/Report summarizing the floodplain mapping task
<input type="checkbox"/>	Rough floodplains for each analysis area and type should be included in submittal documentation
<input type="checkbox"/>	Seamless floodplain layer for study area
<input type="checkbox"/>	Summary report including any approaches for floodplain “cleaning”
<input type="checkbox"/>	Annotated work maps with details of technical/engineering judgement decisions

Task - Develop Flood Risk Products (including Urban Flood Study)

Responsible Mapping Partner: Harris County Flood Control District and its contractors

Scope: Risk assessment data and analyses are defined as processes for analyzing or evaluating the risk associated with a hazard and using that information to make informed decisions on the appropriate ways to reduce the impacts of the hazard on people and property. As part of the Risk MAP Program, non-regulatory Flood Risk Products shall be developed/refined to include all Phase Two analysis results within a watershed area.

During Phase Two, the CTP will update the previously created Flood Risk Products (Flood Risk Report, Flood Risk Map and Flood Risk Database) to include the findings of the engineering analysis performed. The Mapping Partner will prepare Flood Risk Assessment with a combination of the new engineering analysis, with the previous HUC8 datasets prepared with Base Level Engineering results. The tables and risk assessment calculations within the Flood Risk Report (FRR), Flood Risk Map (FRM) and Flood Risk Database (FRD) will be updated to reflect these changes.

Prepare Flood Risk Products:

- HUC8 Watershed Flood Risk Report.** The Flood Risk Report activity includes documenting and delivering local communities a summary of their watershed and local flood risk information along with best practices for risk reduction. This is a standard non-regulatory product. The CTP shall leverage the Watershed Flood Risk Report that was prepared during the Phase One – Discovery effort and update the contents to reflect the changes due to data refinement and interactions with communities throughout the Phase Two efforts. CTPs shall feel free to deviate from the National template to prepare and provide a tool that is reliable and useful to the communities throughout the Watershed. Modifications to the delivery of the Flood Risk Report are welcomed to assist communities in understanding their natural hazard risks, allowing them to make decisions at a local level related to minimizing their future natural hazard risk. CTPs shall discuss recommended changes to the delivery of the FRR with their FEMA PM. FEMA Region 6 has prepared a modular Flood Risk Report template for use by CTPs, it is available on the RMD SharePoint at:
<https://rmd.msc.fema.gov/Regions/VI/Phase%20One%20%20Discovery/Forms/AllItems.aspx?RootFolder=%2FRegions%2FVI%2FPhase%20One%20%20Discovery%2F1%2FFlood%20Risk%20Report%20Templates&FolderCTID=0x01200073F4B5873AE9F64AAE09FAA351582DA5&View=%7B14D17E9C%2DFDC9%2D4E61%2D8346%2DC6DE9F4B4151%7D>
- Flood Risk Map.** The Flood Risk Map activity includes developing exhibits that depict non-regulatory flood risk dataset and selected base map information. This is a standard non-regulatory product. The CTP shall leverage the watershed Flood Risk Map that was prepared during the Phase One – Discovery effort and update the contents to reflect the changes due to data refinement and interactions with communities throughout Phase Two.
- Flood Risk Assessment Dataset.** HCFCD will evaluate the number of structures and estimated damages associated with the 10%, 4%, 2%, 1%, and 0.2% annual chance events. HCFCD will

utilize its Structural Inventory data for this analysis, which is a database of structure locations, estimated and surveyed Finished Floor Elevations, property values, and depth-damage curves.

- **Flood Risk Database.** The Flood Risk Database shall include information used to prepare the Flood Risk Map and Flood Risk Report. Additionally, the CTP shall deliver the minimum Flood Risk Datasets outlined in SID 417. The following Flood Risk Datasets are required for delivery in the Flood Risk Dataset following the Phase Two efforts (unless an exception has previously been approved):
 - Changes Since Last FIRM (denoting Zone changes)
 - Water Surface Elevation Grids
 - For Detailed Study Streams (Zone AE) the 10%, 4%, 2%, 1%, and 0.2% annual chance events shall be prepared
 - For Limited Study Streams and Approximate Study Streams (Zone A) the 1% and 0.2% annual chance events shall be prepared
 - Flood Depth Grids
 - For Detailed Study Streams (Zone AE) the 10%, 4%, 2%, 1%, and 0.2% annual chance events shall be prepared
 - For Limited Study Streams and Approximate Study Streams (Zone A) the 1% and 0.2% annual chance events shall be prepared
 - Structural Inventory analysis results for the 10%, 4%, 2%, 1%, and 0.2% annual chance events shall be prepared
 - Percent Annual Chance Grid
 - These products shall be prepared for all areas analyzed in the Phase Two efforts
 - Percent 30-Year Chance Grid
 - These products shall be prepared for all areas analyzed in the Phase Two efforts
 - Areas of Mitigation Interest (AOMI) - This standard dataset is to be included and delivered within the Flood Risk Database product. The CTP shall update it based on the analysis results and the interactions with communities throughout the project area within the Phase Two efforts.
- **Perform Urban Flood Analysis and Report.** This task will investigate and recommend a methodology for reflecting local drainage infrastructure in hydrologic and hydraulic models in order to evaluate the urban flood risk for any given study area. Detailed scope information for this task can be found in the *Mapping Activity Statement No. 37 Addendum – Urban Flooding Project based on Findings from National Academy of Sciences Report*.
- Where paper documentation is required by State Law for Professional certifications, the Mapping Partner may submit the paper in addition to a scanned version of the paper for the digital record. Please coordinate with the Regional and/or State representative to verify state reporting requirements.
- Perform Quality Assurance and Quality Control (QA/QC) review on the products prepared within this task and provide:
 - A Summary Report that describes the findings of the independent QA/QC review;
 - Recommendations to resolve any problems that are identified during the independent QA/QC review.

Table 1.6 – Risk Assessment Product Development Table

Watershed(s) and/or Project Areas	Flood Risk Database (Datasets)						
	Flood Risk Products (Flood Risk Report/Map)	Watershed-wide Composite Floodplain Results	WSEL Grid(s)	Depth Grid(s)	Structural Inventory Flood Risk Assessment	AOMI	Other (Non- Riverine Flood Risk Grid)
Clear Creek, Armand Bayou, Sims Bayou, San Jacinto & Galveston Bay, San Jacinto River, Vince Bayou, Carpenters Bayou, Goose Creek & Spring Gully, Cedar Bayou, and Luce Bayou	X	X	X	X	X	X	X

Standards: All work shall be performed in accordance with the standards specified in Section 5 - Standards.

Deliverables: The following products, for those communities identified in Table 1.1, will be made available to FEMA (CD/DVD, external hard drive, FTP, or uploaded to the MIP, as determined by the Region):

<input type="checkbox"/>	Flood Risk Report, Map, and Database;
<input type="checkbox"/>	Flood Risk Assessment
<input type="checkbox"/>	Water Surface Elevation Grids (minimum 10%, 1% and 0.2% events)
<input type="checkbox"/>	Depth Grids (minimum 10%, 1% and 0.2% events)
<input type="checkbox"/>	Structural Inventory analysis results for the 10%, 4%, 2%, 1%, and 0.2% annual chance events
<input type="checkbox"/>	Areas of Mitigation Interest dataset (standard; required)
<input type="checkbox"/>	Percent Annual Chance Grid
<input type="checkbox"/>	Percent 30-Year Chance Grid
<input type="checkbox"/>	Urban Flood H&H models and backup data
<input type="checkbox"/>	Interim Urban Flood Reports
<input type="checkbox"/>	Urban Flood Report
<input type="checkbox"/>	Urban Flood Risk Communication Products

All Flood Risk Databases that are compliant with the Flood Risk Database Technical Reference (February 2018).

Standards: All Risk MAP work shall be performed in accordance with the standards specified in Section 5 - Standards.

Deliverables: The CTP shall produce items listed in the Flood Risk Products Data Capture section within the most currently dated “Technical Reference: Data Capture” document, located at <https://www.fema.gov/media-library/assets/documents/34519>, made available to FEMA by uploading the digital data to the MIP in accordance with the schedule outlined in Section 6. Flood Risk Report

- Flood Risk Map

- Flood Risk Database (including);
 - Changes Since Last FIRM (denoting Zone and BFE changes)
 - Water Surface Elevation Grids
 - For Detailed Study Streams (Zone AE) the 10%, 4%, 2%, 1%, and 0.2% annual chance events shall be prepared
 - For Limited Study Streams and Approximate Study Streams (Zone A) the 1%, and 0.2% annual chance events shall be prepared
 - Flood Depth Grids
 - For Detailed Study Streams (Zone AE) the 10%, 4%, 2%, 1%, and 0.2% annual chance events shall be prepared
 - For Limited Study Streams and Approximate Study Streams (Zone A) the 1%, and 0.2% annual chance events shall be prepared
 - Structural Inventory analysis results for the 10%, 4%, 2%, 1%, and 0.2% annual chance events
 - Percent Annual Chance Grid
 - These products shall be prepared for all areas analyzed in the Phase Two efforts.
 - Percent 30-Year Chance Grid
 - These products shall be prepared for all areas analyzed in the Phase Two efforts.
 - Areas of Mitigation Interest (AOMI) - This standard dataset is to be included and delivered within the Flood Risk Database product. The CTP shall leverage the AOMI coverage prepared in Discovery and update it based on the analysis results and the interactions with communities throughout the project area within the Phase Two efforts.
- Project coordination materials will be uploaded and shared with FEMA PM through the Region 6 Risk MAP SharePoint.
- Documentation of all conversation and interactions with communities related to Data Development efforts
 - Enter contact date & info into Region 6 Communications Tracker
 - Call Logs and emails
- Non-Riverine Flood Risk Grid
- Urban Flood Analysis H&H models and backup data
- Interim Urban Flood Reports
- Urban Flood Report
- Urban Flood Risk Communication Products

Task - Flood Risk Review Meeting

Responsible Mapping Partner: Harris County Flood Control District and its contractors

Scope: This meeting will serve to provide community technical staff and decision makers an opportunity to review the engineering analysis and study results prepared under the data development tasks contained within Phase Two. The focus on this meeting shall be to socialize the results of the engineering analysis prepared and assure the community has the proper time and information to provide their input prior to the preparation of any Flood Insurance Rate Maps. The CTP shall collect local feedback and revise its analysis as needed. The objective of this meeting effort is to:

- Promote local buy-in of study results (Appeals/Comments now, not later)
- Establish local ownership of risk within community

- Review Risk Identification (Engineering) results with local communities
- Review of Hazard Mitigation Plan versus Study Findings
- Identify risk communications needs and options
- Support for identified community driven mitigation actions
- Resolve community comments/appeals before 90-day appeal period
- Community input is required to move forward
- Continue developing relationship with communities

As indicated in each of the Data Development tasks within this phase, FEMA Region 6 and its CTPs shall coordinate with technical staff from local communities in the process earlier than this meeting as the data is being developed. The CTP should work with local communities to identify technical staff to engage with throughout the preparation of the analysis and mapping efforts leading up to this Flood Risk Review meeting. It is the expectation of FEMA that its Mapping Partners shall have intermediate discussions and touch points with the local communities affected by analysis results through webinars (minimum) prior to this meeting.

The Flood Risk Review Meeting will also provide the opportunity to show how datasets and outreach tools can help communities become more resilient by understanding risk data, communicating about risk, prioritizing mitigation actions and improving mitigation plans, especially risk assessments and mitigation strategies. Activities include planning, presenting, and facilitating discussions of data inputs and engineering models used for flood studies with community officials. In addition, draft work maps showing initial study results will be presented during the meeting.

Standards: All Risk MAP work shall be performed in accordance with the standards specified in Section 5 - Standards. All communication with local governments will be done in accordance with 44 CFR Part 66.

Deliverables: The CTP shall produce items listed in the Outreach Data Capture section within the most currently dated “Technical Reference: Data Capture” document, located at <https://www.fema.gov/media-library/assets/documents/34519>, made available to FEMA by uploading the digital data to the MIP in accordance with the schedule outlined in Section 6.

<input type="checkbox"/>	All documentation prepared for this meeting task shall be delivered in a Coordination & Correspondence TSDN at the completion of Phase Two.
<input type="checkbox"/>	Watershed Project Team meetings support (intermediately throughout this phase, with the inclusion of the FEMA Project Monitor intermittently for progress update purposes)
<input type="checkbox"/>	<u>Communication and Action Tracker Worksheet</u> – Prepare and Maintain
<input type="checkbox"/>	<u>Project and Communications Management Tool</u> (excel file)
<input type="checkbox"/>	Preparation and distribution of all letters, newsletters, flyers, exhibits and reports identified by the Watershed Project Team based on project areas
<input type="checkbox"/>	Project materials for distribution at these meetings will be uploaded and shared with FEMA PM (Diane.Howe@fema.dhs.gov) through the <u>Region 6 Risk MAP SharePoint</u> .
<input type="checkbox"/>	Preparation of Key Decision Point (KDP) process paperwork and coordination with local entities to prepare: <ul style="list-style-type: none"> o KDP2 – Prepare Preliminary Flood Insurance Rate Map (FIRM) panels documentation o Indication of the number of panels intersected by the updated analysis prepared o Overview of the severity of change and a recommendation for the panels that should be updated or remain as is based on the analysis prepared in Phase Two
<input type="checkbox"/>	Documentation of all conversation and interactions with communities related to Data Development efforts

<input type="checkbox"/>	Meeting invitation, agenda, presentation slides (as requested), and meeting notes for FEMA review.
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Phase Three – Regulatory Product Update (Support)

Responsible Mapping Partner: Harris County Flood Control District and its contractors

Scope: Phase Three encompasses the update of the Regulatory Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS) report. This phase is to update the regulatory FIS and FIRM information prepared in phase two.

Task - Support to Post-Preliminary Map Production

Responsible Mapping Partners: Harris County Flood Control District and its contractors

Scope: If another Mapping Partner is selected to prepare the Phase Three – Regulatory Products Update, the CTP who produced the Hydrology, Hydraulics and Floodplain Mapping tasks will support the Flood Risk Project in responding to Appeals and Comments received during the Statutory 90-Day Appeal and Comment period.

This activity consists of responding to appeals and comments received from the communities and residents within the project area. The CTP will be responsible for:

- Coordination with the Post Preliminary Mapping Partner to review the incoming Appeals and Comments associated with the Hydrology, Hydraulics and Floodplain Mapping submittals.
 - The CTP will be responsible for a coordinated review effort with the Phase Three Mapping Partner to prepare suggestions for appeal and comment incorporation.
 - The CTP shall review the draft FIS text sections submitted during the production of the Hydrology, Hydraulics or Floodplain Mapping tasks to identify areas of required update to incorporate the incoming appeal or comment.
 - The CTP shall review the Hydrologic or Hydraulic modeling submitted during the production of the Hydrology, Hydraulics or Floodplain Mapping tasks to identify areas of required update to incorporate the incoming appeal or comment.
 - Conference calls should be held at the close of the appeal period to allow the review of all appeals and comments received.
- The Post Preliminary Mapping Partner will be responsible for the update of the Hydrology, Hydraulics and/or Floodplain Mapping tasks to resolve the incoming appeal or comment.
 - The Post Preliminary Mapping Partner should provide copies of the appeal and comments received to the CTP and provide at least 10 business days for CTP review and comment.
- The CTP should prepare an Addendum/Memorandum to document the suggested amendments to the FIS and modeling as well as the TSDNs submitted during the production of the Hydrology, Hydraulics or Floodplain Mapping tasks for upload to the MIP.
- The CTP should indicate several hours, appeals and comments that will be supported for the project areas prepared in Phase Two efforts.

Standards: All Post Preliminary work shall be performed in accordance with the standards specified in Section 5 – Standards.

Deliverables: The CTP shall produce items listed in the Hydrologic and Hydraulic Data Capture sections within the most currently dated “Technical Reference: Data Capture” document, located at

<https://www.fema.gov/media-library/assets/documents/34519>, made available to FEMA by uploading the digital data to the MIP in accordance with the schedule outlined in Section 6.

- Addendum/Memorandum to document the suggested amendments to the FIS and modeling as well as the TSDNs submitted during the production of the Hydrology, Hydraulics or Floodplain Mapping tasks for upload to the MIP;

Task - Support Open House (Optional)

Responsible Mapping Partners: Harris County Flood Control District

Scope: If necessary and agreed upon, the CTP will support the local officials, or deliver the messages, at the Public Meeting if the local officials are unwilling. Also, communities will be encouraged to identify short- and long-term efforts to progress towards increasing flood risk awareness and management. These meetings can be held concurrently or separately at the Region and community’s discretion.

- It is FEMA’s preference for the local communities to hold and host Open House meetings.
- If a local community requires assistance to staff the meeting or assist an Open House, limited assistance may be funded as deemed necessary.
- For all meetings, provisions may be made for remote access video/audio feeds for those that cannot attend in person.

Standards: All Risk MAP work shall be performed in accordance with the standards specified in Section 5 - Standards. All communication with local governments will be done in accordance with 44 CFR Part 66.

Deliverables: The CTP shall deliver the following to the FEMA Regional Project Monitor in accordance with the schedule outlined in Section 6 – Schedule and include within the TSDN:

<input type="checkbox"/>	All documentation prepared for this meeting task shall be delivered in a Coordination & Correspondence TSDN at the completion of Phase Three.
<input type="checkbox"/>	Watershed Project Team meetings support (intermediately throughout this phase, with the inclusion of the FEMA Project Monitor intermittently for progress update purposes)
<input type="checkbox"/>	<u>Communication and Action Tracker Worksheet – Prepare and Maintain</u>
<input type="checkbox"/>	<u>Project and Communications Management Tool</u> (excel file)
<input type="checkbox"/>	Preparation and distribution of all letters, newsletters, flyers, exhibits and reports identified by the Watershed Project Team based on project areas
<input type="checkbox"/>	Project materials for distribution at these meetings will be uploaded and shared with FEMA PM (Diane.Howe@fema.dhs.gov) through the <u>Region 6 Risk MAP SharePoint</u> .
<input type="checkbox"/>	Documentation of all conversation and interactions with communities related to Data Development efforts
<input type="checkbox"/>	Meeting invitation, agenda, presentation slides (as requested), and meeting notes for FEMA review.
<input type="checkbox"/>	Project update status reports for project communities.

SECTION 2 – TECHNICAL AND ADMINISTRATIVE SUPPORT DATA SUBMITTAL

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

All supporting documentation for the activities in this MAS shall be submitted according to FEMA standards and requirements and will include a FEDD folder. Submittals must be made to the appropriate

PTS for a review of required materials. The CTP will respond to requests from FEMA or its contractors for additional information and ensure that all required documents are included in the TSDN.

If any issues arise that could affect the completion of an activity within the proposed scope or budget, the CTP shall complete and submit to FEMA a Special Problem Report (SPR) as soon as possible after the issue is identified. The SPR describes the issue and proposes possible resolutions. For additional information on SPRs, consult the Regional Office.

Information supporting FEMA standards and requirements regarding the TSDN and FEDD file may be found in the “Technical Reference: Data Capture” document and other associated guidance documents.

Mapping Activities	TSDN Section												
	General Documentation	Change Requests	Telephone Conversation	Meeting Minutes/ Reports	General Correspondence	Hydrologic Analyses	Engineering Analyses	Hydraulic Analyses	Key to Cross-Section Labeling	Key to Transect Labeling	Draft FIS Report	Mapping Information	Miscellaneous Reference
Outreach													
Perform Flood-plain Mapping (and Re-delineation)		X	X	X	X	X		X	X	X		X	X
Develop Flood Risk Products		X	X	X	X							X	X

SECTION 3 – PERIOD OF PERFORMANCE

The mapping activities outlined in this MAS will be completed as specified in the Cooperative Agreement Funding Opportunity Announcement, Award Notice and/or Articles of Agreement. The Mapping Activities may be terminated at the option of FEMA or the CTP in accordance with the provisions of the Partnership Agreement dated July 31, 2000. If these mapping activities are terminated, all products produced to date must be submitted and updated into the MIP (if applicable) and the remaining funds, provided by FEMA for this MAS, from uncompleted activities will be returned to FEMA.

SECTION 4 – FUNDING/LEVERAGE (For CTP, OFA, and/or Community)

FEMA is providing funding, in the amount of \$2,800,000 through a Cooperative Agreement to the Harris County Flood Control District for the completion of this Flood Risk Project. The Harris County Flood Control District shall provide any additional resources required to complete the assigned activities for this Flood Risk Project as outlined in Table 4.1: Contribution and Leverage. During the discovery process, additional needs may be identified. Activities associated with any additional needs would be performed based on availability of additional funds. The leverage listed below includes in-kind services and blue book values for obtained existing information from the CTP or communities associated with the project

(i.e., base map data, hydrologic and hydraulic analyses, etc.). These values must also be reported in the MIP by the CTP during the appropriate task. The current Blue Book (4.1) is dated May 2017 and can be downloaded from FEMA's Information Resource Library at www.fema.gov/library/viewRecord.do?id=2473.

Optional: Table 4.1: Contribution and Leverage

Project Task	FEMA Contribution	Partner Contribution	% Partner Leverage (of total project task cost)	Total Project Task Cost (FEMA + Partner)
Project Management	\$562,523	\$736,202	43.3%	\$1,298,725
Perform Community Engagement and Outreach	\$29,257	\$198,568	12.8%	\$227,825
Perform Floodplain Mapping <i>(Includes QA/QC task)</i>	\$500,000	\$160,054	75.8%	\$660,054
Develop Flood Risk Products and Datasets <i>(Includes QA/QC task)</i>	\$172,557	\$117,119	59.6%	\$289,676
Develop Flood Risk Products and Datasets - <i>Urban Flood Study</i>	\$800,000	\$0	100.0%	\$800,000
Flood Risk Review Meeting	\$24,074	\$18,056	57.1%	\$42,130
Post-Preliminary Processing (Support)	\$660,160	\$1,066,827	38.2%	\$1,726,987
Support Open House	\$51,429	\$13,911	78.7%	\$65,340
TOTAL FUNDING AMOUNTS*	\$2,800,000	\$2,310,736	54.8%	\$5,110,737

*The numbers for each task are rounded, introducing a rounding error when added up. See budget cost estimate for detailed calculation without rounding.

Final leverage dollars or units will be entered, as applicable, within the leverage section of each applicable MIP Task. Leverage data shall be an estimate of available leverage data at the time the MAS is prepared and shall be further defined in the Discovery Report and throughout the project.

SECTION 5 – STANDARDS

The standards relevant to this MAS are presented in FEMA Policy 204-078-1 [Standards for Flood Risk Analysis and Mapping](http://www.fema.gov/media-library/assets/documents/35313), Revision 10, dated November 2019, located at <http://www.fema.gov/media-library/assets/documents/35313>. This Policy supersedes all previous standards included in the *Guidelines and Specifications for Flood Hazard Mapping Partners*, including all related appendices and Procedure Memorandums (PMs). Additional information and links to FEMA Technical References, guidance documents, templates and other resources may be accessed and downloaded at <http://www.fema.gov/guidelines-and-standards-flood-risk-analysis-and-mapping>. Revisions to the Policy memo are made on a regular basis. Some changes / updates are considered low impact, not requiring any scope, financial, process or technology changes to implement. CTPs should always check for the latest version of the policy memo to evaluate potential standards updates.

To facilitate the use of standards and related documents, users can access the FEMA *Guidelines and Standards Master Index* located here: www.fema.gov/media-library/assets/documents/94095. This index provides a cross-reference of documentation available for Flood Risk Projects, Letters of Map Change and related Risk MAP activities. The cross-referenced relationships are organized and accessible through linkages for standards, guidance, technical references and templates. The master index is updated in coordination with the FEMA Policy Memo noted above.

CTPs and their sub-awardees must comply with FEMA’s Federal Regulations in Chapter 44 of the Code of Federal Regulations (CFR), specifically CFR Parts 65, 66 and 67, and the appropriate year CTP Notice of Funding Opportunity and Agreement Articles. CTPs shall also coordinate with their Regional office to determine additional standards that should be met.

SECTION 6 – SCHEDULE

The activities documented in this MAS shall be completed in accordance with Table 6.1 Project Activities Schedule, which should drive the schedule within the MIP. If changes to this schedule are required, the CTP shall coordinate with FEMA Project Monitor in a timely manner.

Table 6.1 or a similar table is required and needs to be filled out as part of the grant’s submission process.

Table 6.1: Project Activities Schedule

Activities	Responsible Partners(s)	Estimated START DATE	Estimated END DATE
Perform Project Management	Harris County Flood Control District and Contractors	02/01/2021	09/30/2026
Seamless Floodplain Mapping (include QA/QC)	Harris County Flood Control District and Contractors	02/01/2021	07/30/2021
Develop Flood Risk Products and Datasets	Harris County Flood Control District and Contractors	01/01/2021	10/31/2021

Activities	Responsible Partners(s)	Estimated START DATE	Estimated END DATE
Develop Flood Risk Products and Datasets – <i>Urban Flood Study</i>	Harris County Flood Control District and Contractors	04/01/2021	10/01/2022
Perform Community Engagement and Project Outreach	Harris County Flood Control District and Contractors	10/01/2020	09/30/2026
Flood Risk Review Meeting	Harris County Flood Control District and Contractors	01/01/2021	07/31/2022
Support Open House	Harris County Flood Control District	01/01/2024	09/30/2026
Phase Three – Regulatory Product Update			
Post-Preliminary (Appeals Support)	Harris County Flood Control District and Contractors	06/01/2024	09/30/2026

The CTP will coordinate with FEMA, or its designee, to develop a baseline schedule for individual project activities. FEMA or its designee will utilize the individual project task schedule to create the Flood Risk Project in the MIP and baseline the project activities with schedule and cost information within 30 days of the funds being awarded and FEMA’s approval of the final cost and schedule. The baseline schedule for individual project activities may be re-baselined in the MIP with approval from the FEMA Project Officer, and does not require a change to this MAS unless the overall project end date is modified.

SECTION 7 – CERTIFICATIONS

Data Capture.

Please refer to the current “Technical Reference: Data Capture” document, located at <https://www.fema.gov/media-library/assets/documents/34519>, for instructions on certifications. Generally, each Data Capture task includes certification forms and a project narrative. Mapping Partners should complete and submit only one Certification of Completeness and/or one Certification of Compliance form when the task is complete.

Perform Field Surveys and Develop Topographic Data.

A Registered Professional Engineer or Licensed Land Surveyor shall provide an accuracy statement for field surveys and/or topographic data used and shall certify these data meet the accuracy statement provided. Data accuracy should be stated used the Federal Geographic Data Committee National Standards

for Spatial Data Accuracy, but the American Society for Photogrammetry and Remote Sensing accuracy reporting standards are acceptable.

Develop Hydrologic Data, Develop Hydraulic Data, and Seamless Floodplain Mapping.

- A Registered Professional Engineer shall certify hydrologic and hydraulic and coastal analyses and data in accordance with 44 CFR 65.6(f).
- Any levee systems to be accredited will be certified by the levee owner or other appropriate entity in accordance with 44 CFR 65.10.
- Certifications are required at the time the intermediate or final data 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 CNMS process from FEMA and/or your Regional Project Officer.

General technical and programmatic information can be downloaded from the FEMA website at <https://www.fema.gov/cooperating-technical-partners-program>. 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 12 – Points of Contact. 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.

Please contact the region to obtain the most recent version of the Risk MAP timeline.

Assistance with the MIP may be requested at miphelp@riskmapcds.com.

SECTION 9 – CONTRACTOR SUPPORT

Contractor support may be used for all activities within this MAS.

The CTP intends to use the services of several teams of contractors as a contractor for this MAS. The CTP shall ensure that the procurement for all contractors used for this Program Management Activity complies with the requirements of 2 CFR Part 200.

Guidance provided in this part includes, but is not limited to, contract administration and record keeping, notification requirements, review procedures, competition, methods of procurement, and cost and pricing analysis. The 2 CFR 200 documents may be viewed online at <http://www.ecfr.gov/cgi-bin/text-idx?SID=cc011f4fb962e68cb0da4bc91e8fbb43&mc=true&node=pt2.1.200&rgn=div5>. Additionally, contractors must not pose a conflict of interest issue.

SECTION 10 – REPORTING

Financial Reporting: Because funding has been provided to the CTP by FEMA, financial reporting requirements for the CTP will be in accordance with the terms of the Cooperative Agreement Funding Opportunity Announcement, Articles of Agreement or Award Notice for this MAS. The CTP shall also refer to 2 CFR Part 200. The CTP 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.

Performance Reporting: Recipients are responsible for providing a signed performance report using the

required list of information shown in the NOFO (or and old SF-PPR if you prefer) on a quarterly basis throughout the period of performance, including partial calendar quarters as well as for periods where no grant award activity occurs. The CTP shall refer to 2 CFR Part 200 to obtain minimum requirements for progress reporting. The Project Officer, as needed, may request additional information on progress.

The CTP may meet with FEMA and/or its contractor(s) as frequently as needed to review the progress of the project in addition to the quarterly financial and status submittals. These meetings may alternate between FEMA’s Regional Office, the Harris County Flood Control District office, and conference calls, as necessary.

The CTP must report performance of the grant in conjunction with the progress reporting. The performance of the CTP is measured by the following criteria. Quantitative Targets for performance measures will be defined using the CTP Performance Measures Menu in conjunction with your FEMA PM and defined in Table 10.1.

Table 10.1: Performance Measures Targets

Phase	Measure	Target
ALL	CTP will maintain the financial health of the project within the Mapping Information Platform (MIP) system of Record.	<ul style="list-style-type: none"> Acceptable Schedule Performance Index (SPI) and Cost Performance Index between 0.92 and 1.08 is required. Region will review project health each month and record when the CTP is contacted for SPI/CPI out of range.
2	CTP will coordinate periodic conference calls/webinars to convene with local technical champions and key influencers in the project/watershed area throughout the Phase Two effort. The project will identify a minimum number of key staff to be coordinated as technical data is prepared over the project lifecycle.	<ul style="list-style-type: none"> Quarterly reporting shall update the Region on the identification of local technical champions and key influencers. These champions and influencers shall be indicated in the CTPs project contact database/worksheet. Quarterly reporting will identify calls held in each quarter and identify next coordination point for tracking of progress on this metric.
2	CTP will work with local communities to identify local resources and information that may be used for model refinements.	CTP will continue to review, as part of its Model and Map Management process, physical changes within its jurisdiction which may have an effect on flood risk information.

The CTP shall communicate with communities throughout the life of each project. Continued engagement is necessary and appropriate and will build upon the relationships established or enhanced during Discovery and provide transparency into the Risk MAP process.

This may occur through monthly or quarterly updates or project status calls with community leaders, project websites including updates at several milestones or along a specific timeline, or other methods.

SECTION 11—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 video conferences with FEMA and other Project Team members quarterly
- Telephone conversations with FEMA and other Project Team members on a monthly basis, and an ad hoc basis, as required.
- Updates to the MIP and other FEMA status information systems in accordance with FEMA standards and requirements.
- E-mail, facsimile transmissions, and letters, as required.

SECTION 12—PROTECTION OF PRIVACY INFORMATION

To accomplish the tasks outlined in this scope, FEMA will provide the CTP access to Risk Analysis Management (RAM) which includes all PII collected in RAM as outlined in DHS/FEMA/PIA-045 Hazard Mitigation Planning and Flood Mapping Products and Services Support Systems <https://www.dhs.gov/publication/dhsfemapia-045-hazard-mitigation-planning-and-flood-mapping-products-and-services>

The information sharing outlined in this scope authorized by the following System of Records Notice(s) and Routine Use(s): DHS/FEMA-014 Hazard Mitigation Planning and Flood Mapping Products and Services Records System of Records. <https://www.federalregister.gov/documents/2017/10/25/2017-23205/privacy-act-of-1974-system-of-records>

When necessary to accomplish a function related to this system of records, CTPs (term used to include any subrecipients and/or contractors used by the CTP for this work) must comply with the Privacy Act. Individuals provided information under this routine use are subject to the same Privacy Act requirements and limitations on disclosure as are applicable to DHS officers and employees.

The mapping program for the NFIP, implemented through Risk MAP, is established through the National Flood Insurance Act of 1968, as amended and the Biggert-Waters Flood Insurance Reform Act of 2012 (BW-12), as amended (42 U.S.C. 4001 et seq.). The mapping program is governed by the implementing regulations at Code of Federal Regulations - Title 44 (44 CFR) parts 59-72.

The CTP will limit access to the PII provided by FEMA under this contract only to the CTP's authorized personnel who need to know the information to accomplish the tasks outlined in this contract.

Definition. As used in this section, "personally identifiable information" means information that can be used to distinguish or trace an individual's identity, either alone or when combined with other information that is linked or linkable to a specific individual. (See Office of Management and Budget (OMB) Circular A-130, Managing Federal Information as a Strategic Resource).

- A. The CTP will ensure that initial privacy training, and annual privacy training, thereafter, is completed by CTP employees, subrecipients and/or contractors and subcontractors who

- i. Have access to a system of records.
 - ii. Create, collect, use, process, store, maintain, disseminate, disclose, dispose, or otherwise handle personally identifiable information on behalf of an agency; or
 - iii. Design, develop, maintain, or operate a system of records
- B. FEMA will provide the link to external facing initial privacy training, and annual privacy training thereafter, to CTPs for the duration of this grant.
 - C. The CTP shall maintain and, upon request, provide documentation of completion of privacy training to FEMA.
 - D. The CTP shall not allow any employee access to a system of records, or permit any employee to create, collect, use, process, store, maintain, disseminate, disclose, dispose or otherwise handle personally identifiable information, or to design, develop, maintain, or operate a system of records unless the employee has completed privacy training, as required by this section.

The CTP will ensure no computer matching, as that term is defined in U.S.C. § 552a(o), will occur for the purpose of establishing or verifying eligibility or compliance as it relates to cash or in-kind assistance of payments under federal benefit programs.

If at any time during the term of this cooperative agreement any part of FEMA PII, in any form, that the CTP obtains from FEMA ceases to be required by the CTP for the performance of the scope, or upon termination of the cooperative agreement, whichever occurs first, the CTP shall, within fourteen (14) days thereafter, promptly notify FEMA and securely return PII to FEMA, or, at FEMA’s written request destroy, un-install and/or remove all copies of such PII in the CTP’s possession or control, and certify in writing to FEMA that such tasks have been completed.

SECTION 13—POINTS OF CONTACT

The points of contact for this Flood Risk Project are Larry Voice, the FEMA Regional Project Officer; Brian Edmondson, the Project Manager for the Harris County Flood Control District; 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 MAS to be executed by its duly authorized representative.

The Honorable Lina Hidalgo
 Harris County Judge
 Harris County Flood Control District

Date

Larry Voice
 Regional Project Officer
 Federal Emergency Management Agency, Region VI

Date

