



# FEMA

## Suwannee River Water Management District COOPERATING TECHNICAL PARTNERS MAPPING ACTIVITY STATEMENT

### Mapping Activity Statement No. 09.06

In accordance with the Cooperating Technical Partners (CTP) Partnership Agreement dated December 25, 2002 between Suwannee River Water Management District (SRWMD) and the Federal Emergency Management Agency (FEMA), Mapping Activity Statement (MAS) No. 6 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 Dixie, Gilchrist, Lafayette and Suwannee County DFIRM updates. These updates will be based on new detailed studies for flood prone areas identified by the Counties, municipalities and the SRWMD. All processes and deliverables shall be completed in accordance to the Federal Emergency Management Agency's (FEMA's) *Guidelines and Specifications for Flood Hazard Mapping Partners (G&S)* and effective Procedure Memoranda (PMs). These documents can be found on FEMA's website at:  
[http://www.fema.gov/plan/prevent/fhm/gs\\_main.shtm](http://www.fema.gov/plan/prevent/fhm/gs_main.shtm) and  
[http://www.fema.gov/plan/prevent/fhm/gs\\_memos.shtm](http://www.fema.gov/plan/prevent/fhm/gs_memos.shtm).

The DFIRM and FIS report updates will be produced in the FEMA Countywide format in the North American Vertical Datum of 1988 (NAVD88). (Refer to PM 41 for exceptions.) Only the panels for the areas affected by the detailed studies will be updated.

In addition, the Mapping Partners involved in this project will develop new and/or updated flood hazard data, as summarized in Table 1.1, Flooding Source(s) to be Studied.

**Table 1.1 Flooding Source(s) to be Studied**

Flooding Source	Reach Limits	Reach Length	Hydrology		Hydraulics		Stillwater				Setup			Wave Height			Wave Runup			Erosion			Redelineation of SFHAs Using Effective Profiles and New Topography	Refine/ Establish Zone A	
			Detailed Riverine	Detailed Riverine	Detailed Riverine	Detailed Coastal			Limited Detail Study																
Pickett Lake, Adams Lake and Ten Mile Pond	Lafayette County	500 acres	X		X																				
Water Lake, Christmas Lake and Waccassa Lake Area	Gilchrist County	550 acres	X		X																				
Northeast portion of Trenton	Gilchrist County	700 acres	X		X																				
East Cross City	Dixie County	850 acres	X		X																				



**Table 1.2 Flood Mapping Project Activities.**

**TASK ASSIGNMENTS**

OR6 Check LED	X	X	X
QR5 Validate Final DFIRM Database and	X	X	X
QR4 Validate BFE Notice and CEO Letters	X	X	X
Post Preliminary Processing	X	X	X
Distribute Preliminary Map Products	X	X	X
QR3 10% Visual Check	X	X	X
QR2 Auto Validation of Preliminary Database	X	X	X
Perform Independent QA/QC of Preliminary Map Products	X	X	X
Produce Preliminary Map Products	X	X	X
Quality Review (QR)1 Auto Validation of Draft DFIRM Database	X	X	X
Develop DFIRM Database	X	X	X
Perform Independent QA/QC of Perform Floodplain Mapping	X	X	X
Perform Floodplain Mapping	X	X	X
Perform Independent QA/QC of Hydraulic	X	X	X
Perform Hydraulic Analyses	X	X	X
Perform Independent QA/QC of Hydrologic	X	X	X
Perform Hydrologic Analyses	X	X	X
Acquire Base map	X	X	X
Perform Independent QA/QC of Topographic Data			
Develop Topographic Data			
Perform Field Survey	X	X	X
Scoping	X	X	X
Program Management			
Partner Type	CTP	CTP	CTP
Partner Name	SRWMD	SRWMD	SRWMD
County	Dixie	Gilchrist	Lafayette
State	FL	FL	FL



The SRWMD is responsible for the implementation of an independent Quality Assurance/Quality Control (QA/QC) plan for all assigned activities. The SRWMD will submit a Summary Report that describes and provides the results of all automated or manual QA/QC review steps. The report should include the process for all assigned activities.

Independent QC review activities may be performed by SRWMD or FEMA's contractor at the discretion of FEMA. If the SRWMD will be utilizing its contractors to do the QC review, this should be identified during scoping. SRWMD will need to submit its QC plan to the Regional Project Officer for approval. Please note FEMA will also be performing periodic audits and overall study/project management to ensure study quality. SRWMD will be responsible for addressing any and all comments resulting from independent QC, including re-submittal of deliverables as needed to pass technical review.

Metadata is required for all activities. Mapping Partners are required to comply with Appendix N (Data Capture Standards, or DCS) and Appendix M (TSDN) of Guidelines and Specifications for Flood Hazard Mapping Partners to completely document the work performed. On July 9, 2008, FEMA provisionally released a revised version of the DCS. FEMA recommends that the new DCS be implemented, in lieu of the current DCS (Appendix N), on any project where it is expected to save time and/or money. The ultimate goal of the new DCS is to consolidate the DCS deliverables and the TSDN to reduce the overlapping requirements for Mapping Partners. Because the newly released revised DCS is not yet complete and the necessary MIP changes have not yet been implemented, in order to ensure that FEMA retains complete documentation of studies, FEMA requires that all FEMA-contracted studies must comply with either the existing or the revised DCS and a complete TSDN be submitted as a final deliverable by the effective date of the project (in addition to uploads to the MIP). Mapping Partners are required to certify their TSDNs by signing the certification of project page to ensure that TSDNs submitted represent the final version of all required documentation or that all MIP uploads represent a complete set of required documentation. The submittal of the TSDN requirement will continue until the revised DCS is finalized

DFIRM-related tasks require a passing QC Report from FEMA's National DFIRM database auto-validation tool for Quality Review (QR) #1, #2, and #5 as described in PM 42. Training materials for this step are available on the Mapping Information Platform (MIP) at MIP User Care>Training Materials.

FEMA will provide download/upload capability for data submittals through the MIP located at <https://hazards.fema.gov>. As each activity is completed, the data must be submitted to the MIP.

Since SRWMD is assigned the activity, they will respond to any comments generated as a result of the mandatory quality control checks by FEMA's Contractor as described in PM 42. The FEMA QC process is nationally funded and required on each FIS. This QC process includes the following activities:

- **Validate Content Submission.** Automatic metadata and visual RMC validation of submitted data for Perform Field Survey, Develop Topographic Data, Develop Hydrologic Data, Develop Hydraulic Data, Perform Coastal Analysis, Acquire Base Map Data, Perform Floodplain Mapping, Develop DFIRM Database, Produce Preliminary Map Products and Final Map Products tasks.
- **QR #1.** Performed after the Develop DFIRM Database task.
- **QR #s 2 and 3.** Performed after the Produce Preliminary Map Products task.
- **QR #4.** Performed after the Create Base Flood Elevation (BFE) Notices step in the MIP workflow during Post Preliminary Processing.

- **QR #5.** Performed after the Produce Final Map Products task during Post Preliminary Processing.
- **QR #6.** Performed after the Prepare LFD Docket step in the MIP workflow during Post Preliminary Processing.
- **QR #7.** Performed after the Submit MSC Deliverable step in the MIP workflow during Post Preliminary Processing.

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

The MIP shall be updated for status reporting of each of the data development activities within the Manage Data Development task, not less than every thirty days, when the activity is complete, and also include leverage data. At minimum, the "As of" date must be updated not less than every thirty days even if the reported percent complete and money spent have not changed from previous month. Similarly the Manage Preliminary Map Production and Manage Post Preliminary Processing tasks shall be updated monthly when the producer is performing work on a task in those modules. The "Manage" tasks will be open and accepting updates for up to 90 days after the completion of the last producer task in each module. The MIP shall also be populated with appropriate leverage information regarding who paid for the data provided and the amount of data used by the Flood Map Project.

## Scoping

Responsible Mapping Partner: SRWMD

Scope: The Project Scoping phase typically begins once some level of a community's mapping needs have been identified and FEMA and the community have decided to initiate a Flood Map Project to create or update the FIRM. The scoping process is divided into three main parts – Pre-Scoping Meeting Activities, the Scoping Meeting Activities, and the Post-Scoping Meeting Activities.

### Pre-Scoping Meeting Activities

- Initiate the Pre-Scoping activities by identifying the PMT, determining the community contacts, and collecting pertinent information about the community. Conduct background research to collect current mapping needs and begin available geospatial data search.
- Obtain spatial data to be used during the meeting preparation effort.
- Acquire the current effective data for the community, such as the flood hazard data shown in effective FIS reports and on effective FIRMs and Flood Boundary and Floodway Maps (FBFMs), and pertinent flood structure data.
- If pre-scoping steps are performed by a separate Contractor, submit a report summarizing the data collection efforts and deliverables.

Preliminary Research Activities can be separated into three categories—researching selected needs, effective information and researching available data for the Flood Map Project. The selected needs data identified during the Mapping Needs Assessment process can be obtained through the FEMA

Region/FEMA's Contractor and plotted on the scoping map for discussion during the scoping meeting. The following tasks shall be completed to research effective information: inventory the FEMA's archives and/or information management systems for effective FIRM panels, FBFM panels, FIS reports, and other flood hazard data or existing study data; summarize the information in the effective streams file and effective coastal study; summarize contiguous community agreement checks; review Community Assistance Visit (CAV) and Community Assistance Contact files; and develop a "scoping map" and an overview of the results of the research. Other data collected during preliminary research activities will include obtaining community information and the best readily available base map materials (political areas, transportation, hydrology, shorelines orthoimagery, and topography data). Stream centerlines should be populated with the limits of the effective FEMA studies and selected needs attributes.

#### Scoping Meeting

- Coordinate, setup, and hold the Scoping Meeting to inform the community of the upcoming flood study and of their responsibilities related to it; this includes identifying a time, place, and participants. The purpose of this meeting is to present the information gathered during the preliminary research activities to the local officials (State, county, and municipal) and coordinate on prioritization and identification of study areas. SRWMD shall be responsible for compiling the necessary information for the meeting.
- Review list of selected needs and capture additional community needs and/or wants in order to determine the level of effort and the extent of any new/updated studies. Review the selected needs list, effective and other data research findings, and make selections of proposed methods for obtaining/producing flood data.
- Compile the information prepared for and recorded during the Scoping Meeting

During the Scoping Meeting, the PMT shall review the needs list. Any additions or changes to the selected needs list shall be discussed with all members.

The SRWMD will be acting as the Consultation Coordination Officer (CCO) for this flood study as identified in 44 CFR Part 66. During the Scoping Meeting, the SRWMD must inform the communities of their responsibilities as described under the above-referenced regulation. Following initial contact with the communities, the SRWMD will prepare and setup the Community Case File and Flood Elevation Determination Docket for the maintenance of all communication and coordination throughout the project as outlined in 44CFR Parts 66 and 67.

#### Post-Scoping Meeting Activities

- Select available and needed geospatial data to be used in the study and update FEMA's geospatial data tracking systems, National Digital Elevation Program (NDEP) and National Digital Orthophoto Program (NDOP) located at <http://hazards.fema.gov/metadata/NDEP> and <http://hazards.fema.gov/metadata/NDOP>.

- Evaluate selected needs and community requests and/or wants to determine the community's unmet needs and develop the final Scope of Project document for delivery to FEMA and the community
- Update FEMA's needs management tracking and other geospatial tracking systems (Mapping Needs Update Support System (MNUSS), NDEP, and NDOP).
- Supply a copy of the approved Scoping Report back to the communities in order to ensure they are aware of which needs were selected to be updated during the flood study.

Based on the discussion of flood data update and base map update requests, SRWMD and the FEMA Project Officer will finalize the areas to be included in the final scope of project (based on recommendations provided by the PMT). Areas to be studied by detailed, limited detailed, redelineation, and approximate methods shall be identified. The following issues will be discussed and refined: Review and Refinement of Flood Hazard Identification Methodologies, Review of Proposed Paneling Scheme, Review and Refinement of Base and Topographic Map Source, and Finalization of Map Production and Database Options.

Identify all stream/coastal reaches where levees are shown as providing protection against the 1-percent-annual-chance flood. SRWMD should work with the FEMA Regional Office to request the information specified in Title 44 Code of Federal Regulations (CFR) 65.10, mapping of areas protected by levee systems, from the community or other party seeking continued recognition of the levee and provide this information to the FEMA Regional Office and/or PMT.

Many of the activities at each phase can take place concurrently and are not contingent on the completion of previous tasks. The FEMA Project Officer, working in close coordination with the PMT, has the flexibility of tailoring the Scoping process to best fit the needs of the project. SRWMD will evaluate the effective flood data, available base data and selected needs to determine the scope of project to be approved by FEMA.

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

Deliverables: SRWMD shall make the following products available to FEMA by uploading the digital data to the MIP.

- Final Scope of Project documented in MAS or SOW will be delivered in accordance with the schedule outlined in Section 6 - Schedule to the Regional Project Officer for approval.
- QA/QC Plan for the review of the mapping project outlined in this MAS. This will include the checklists developed for that review in accordance with the schedule included in Section 6 - Schedule.
- Updated list of CEO or local FPA contacts or a report from CIS showing this information has been updated.
- Report documenting levee information transmitted to the FEMA Regional office and/or the PMT.

- Unmet needs should be documented in a geospatial format so they can be input to FEMA's needs management system. If there are not any unmet needs for the study area, this fact should be documented in the scoping report.
- Report showing that, if obtained from non-Federal sources, information on available terrain and ortho-imagery data has been entered into the NDEP and NDOP project tracking Web sites, respectively.
- Other deliverables including reports, correspondence, agenda, meeting summaries, tabular data, and geospatial files to be submitted throughout the scoping process as specified in FEMA's G&S, Appendix I and Appendix M.

## Outreach

*(NOTE: The performance of outreach takes place throughout the life of the flood study project. Therefore, we recommend tracking the outreach budget, in the MIP Workflow, equally between Produce Preliminary Map Products and Post Preliminary Processing. An alternate tracking method is acceptable with approval from the FEMA Regional Office.)*

The outreach activities for a Flood Map Project can best be understood as a process that begins during the Project Scoping phase and continues through the map production and post-preliminary phases.

The overarching goal for conducting outreach is to create a climate of understanding and ownership of the mapping process at the State and local levels. Well-planned outreach activities can reduce political stress, confrontation in the media, and public controversy, which can arise from lack of information, misunderstanding, or misinformation. These outreach activities also can assist FEMA and other members of the PMT in responding to congressional inquiries.

The SRWMD will work with the Regional Office during the initiation of this activity to determine an Outreach Plan for implementation throughout the mapping project. The Regional Office will have access to many outreach tools that have been developed for this process that can be utilized or customized. Volume 1 of the G&S provides specific outreach goals that can be considered.

All communication with local governments will be done in accordance with 44 CFR Part 66.

### Deliverables:

- Upon determination of an Outreach and Coordination Approach, the SRWMD shall deliver the following to the FEMA Regional Project Officer in accordance with the schedule outlined in Section 6 - Schedule:
  - A report detailing outreach and coordination activities
  - Backup or supplemental information used in writing this report

## Field Survey

Responsible Mapping Partner: SRWMD

Scope: To supplement any field reconnaissance conducted during the Project Scoping phase of this project, SRWMD and/or its contractor shall conduct a detailed field reconnaissance of the specific study area to determine conditions along the floodplain(s), types and numbers of hydraulic and/or flood-control structures, apparent maintenance or lack thereof of existing hydraulic structures, locations of cross sections to be surveyed, and other parameters needed for the hydrologic and hydraulic analyses.

SRWMD and/or its contractor shall conduct field surveys, including obtaining channel and floodplain cross sections, identifying or establishing temporary or permanent bench marks, and obtaining the physical dimensions of hydraulic and flood-control structures. If appropriate SRWMD shall also identify items needed for coastal analyses including land cover, vegetation types, housing, dunes, beach nourishment, and coastal structures. SRWMD also shall coordinate with other Mapping Partners that are involved in the Topographic Data Development process regarding ongoing activities and deliverables.

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

Deliverables: SRWMD and/or its contractor shall make the following products available to FEMA by uploading the digital data to the MIP. A metadata file complying with the NFIP Metadata Profiles Specifications, must accompany the G&S compliant digital data. Additionally, the Technical Support Data Notebook (TSDN) format described in the G&S must be delivered in accordance with Section 2 – Technical and Administrative Support Data Submittal.

This submittal will occur in accordance with the schedule outlined in Section 6 - Schedule. 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.

- A report summarizing the findings of the field reconnaissance;
- Maps and drawings that provide the detailed survey results;
- Survey notebook containing cross section and structure data;
- Documentation of the horizontal and vertical datum;
- Digital versions of draft text for inclusion in the FIS report;
- Digital survey data consistent with the DCS as described in the G&S, and
- A Summary Report that describes and provides the results of all automated or manual QA/QC review steps taken during the preparation of the DFIRM as outlined in the approved QA/QC Plan.

## Topographic Data Development

Responsible Mapping Partner: SRWMD

Scope: SRWMD shall obtain additional topographic data of the overbank areas of the flooding sources and coastal floodplains studied. These data will be used for hydrologic analysis, hydraulic analysis, floodplain boundary delineation and/or testing of floodplain boundary standard compliance. SRWMD shall gather information on what topographic data is available for the given community and what accuracy and currency it meets. SRWMD shall use this topographic data that is better than that of the original study. In coordination with the partner who performed scoping, ensure that the FEMA Geospatial Data Coordination Policy and Implementation Guide is followed and the data obtained or to be produced are documented properly.

SRWMD and/or its contractor shall use topographic data for the areas described in the Table 1.4 Summary of Topographic Data table. The source of the topographic data should be indicated as well. SRWMD also shall coordinate with other team members conducting field surveys. Contour interval and/or accuracy for the topographic data shall be selected based on the current FEMA requirements as documented in the G&S. No FEMA funds shall be expended on obtaining new topographic data unless prior approval is received by the Regional Project Officer during the Scoping Process.

For this activity, SRWMD and/or its contractor also shall develop topographic maps and/or DEMs for the subject flooding sources using the data collected under this Topographic Data Development process and via field surveys. In addition, SRWMD shall address all concerns or questions regarding the topographic data development that are raised by SRWMD contractors during the independent QC review, or during the PM 42 defined Validation Process.

**Table 1.4 Summary of Topographic Data**

County	Description	Source
Dixie	USGS	Public Domain
Gilchrist	USGS	Public Domain
Lafayette	USGS	Public Domain
Suwannee	City of Live Oak 2' Contour data	Community Supplied

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

Deliverables: In accordance with the G&S, SRWMD and/or its contractor shall make the following products available to FEMA by uploading the digital data to the MIP and submitting in Technical Support Data Notebook (TSDN) format so that SRWMD contractors can access it for an independent QA/QC review in accordance with the schedule outlined in Section 6 - Schedule. A metadata file complying with the NFIP Metadata Profiles Specifications, must accompany the uploaded G&S compliant digital data. Additionally, the TSDN format described in the G&S must be delivered in accordance with Section 2 – Technical and Administrative Support Data Submittal.

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 contour data;

- Report summarizing methodology and results;
- Mass points and breaklines data;
- Gridded digital elevation model data
- TIN data
- Checkpoint analyses to assess the accuracy of data, including Root Mean Square Error calculations to support vertical accuracy;
- Identification of data voids and methods used to supplement data voids;
- National Geodetic Survey data sheets for Network Control Points used to control remote-sensing and ground surveys;
- Other supporting files consistent with the DCS in the G&S; and
- A Summary Report that describes and provides the results of all automated or manual QA/QC review steps taken during the preparation of the DFIRM as outlined in the approved QA/QC Plan.

### **Independent QA/QC Review of Topographic Data**

Responsible Mapping Partner: SRWMD

Scope: SRWMD shall perform an impartial review of the mapping data generated by contractors under Topographic Data Development to ensure that these data are consistent with FEMA standards and standard engineering practice, and are sufficient to prepare the DFIRM. SRWMD and/or its contractor, if applicable must ensure that independent QA/QC is performed and that organizational conflict of interest issues do not exist with respect to independent QA/QC processes. FEMA may audit or assist in these activities if deemed to be necessary by the Regional Project Officer.

Please note FEMA will also be performing periodic audits and overall study/project management to ensure study quality. SRWMD and/or its contractor will be responsible for addressing any and all comments resulting from independent QC, including re-submittal of deliverables as needed to pass technical review.

Standards: All Topographic Data Development work shall be reviewed in accordance with the standards specified in Section 5 - Standards.

Deliverables: In accordance with the G&S, SRWMD and/or its contractor shall make the following products available to FEMA by uploading the digital data to the MIP. Additionally, the TSDN format described in the G&S must be delivered in accordance with Section 2 – Technical and Administrative Support Data Submittal.

This submittal will occur in accordance with the schedule outlined in Section 6 - Schedule.

- A Summary Report that describes the findings of the independent QA/QC review; and
- Recommendations to resolve any problems that are identified during the independent QA/QC review.

### **Base Map Acquisition and Preparation**

Responsible Mapping Partner: SRWMD

Scope: Base Map Acquisition consists of obtaining the digital base map, Department of Revenue aerials, for the project and as necessary, preparing the base map for use. SRWMD and/or its contractor shall provide the digital base map. The required activities are as follows:

- Obtain digital files (raster or vector) of the base map. In coordination with the partner who performed scoping, ensure that the FEMA Geospatial Data Coordination Policy and Implementation Guide is followed.
- Secure necessary permissions from the map source to allow FEMA's use and distribution of hardcopy and digital map products using the digital base map, free of charge.
- Review and supplement the content of the acquired base map to comply with the requirements of the G&S.
- For the base map components that have a mandatory data structure, convert the base map data to the format required in the G&S.
- Certify that the digital data meets the minimum standards and specifications that FEMA requires for DFIRM production.

In addition, SRWMD shall address all concerns or questions regarding the base map that are raised during the Independent QC review performed by SRWMD contractors, or during the NSP's Validate Content Submission Process. Optional Table 1.5 Summary of Base Map is useful if multiple counties are involved with this map update. SRWMD shall summarize the base map that will be used for each county in optional Table 1.5 Summary of Base Map

**Table 1.5 Summary of Planned Base Map (if known): Update Scoping Report**

<b>County</b>	<b>Description</b>	<b>Source</b>
Dixie	2007 Aerial Photographs	Florida Department of Revenue
Gilchrist	2007 Aerial Photographs	Florida Department of Revenue
Lafayette	2007 Aerial Photographs	Florida Department of Revenue
Suwannee	2007 Aerial Photographs	Florida Department of Revenue

Standards: All Base Map Acquisition work shall be performed in accordance with the standards specified in Section 5 - Standards. The DCS must be met for this deliverable to be acceptable.

Deliverables: In accordance with the G&S, SRWMD shall make the following products available to FEMA by uploading the digital data to the MIP so that SRWMD contractors can access it for an independent QA/QC review in accordance with the schedule outlined in Section 6 - Schedule. A

metadata file complying with the NFIP Metadata Profiles Specifications, must accompany the uploaded digital data. Additionally, the TSDN format described in the G&S must be delivered in accordance with Section 2 – Technical and Administrative Support Data Submittal.

- Digital base map files that comply with the G&S requirements
- Written certification that the digital data meet the minimum standards and specifications;
- Digital versions of draft text for inclusion in the FIS report;
- Documentation that FEMA can use the digital base map; and
- Documentation of the Datum, if appropriate.

### **Independent QA/QC Review of Base Map**

Responsible Mapping Partner: SRWMD

Scope: SRWMD shall perform an impartial review of the base map acquired by SRWMD contractors to ensure it includes data consistent with FEMA standards and sufficient to include on the DFIRM. Any needed edits should be made to the product to comply with FEMA standards. SRWMD and/or its contractor, if applicable must ensure that independent QA/QC is performed and that organizational conflict of interest issues do not exist with respect to independent QA/QC processes.

Please note FEMA will also be performing periodic audits and overall study/project management to ensure study quality. SRWMD and/or its contractor will be responsible for addressing any and all comments resulting from independent QC, including re-submittal of deliverables as needed to pass technical review.

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

Deliverables: In accordance with the G&S, SRWMD and/or its contractor shall make the following products available to FEMA by uploading the digital data to the MIP. Additionally, the TSDN format described in the G&S must be delivered in accordance with Section 2 – Technical and Administrative Support Data Submittal.

This submittal will occur in accordance with the schedule outlined in Section 6 - Schedule.

- 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; and
- If the data is changed during review, then updated deliverables from previous tasks will be submitted at this time.

### **Hydrologic Analyses**

Responsible Mapping Partner: SRWMD

**Scope:** SRWMD and/or its contractor shall perform hydrologic analyses for approximately 5.2 square miles of drainage area for the flooding source(s) listed earlier in Table 1.1. SRWMD and/or its contractor shall calculate peak flood discharges for the 10-, 2-, 1-, and 0.2-percent-annual-chance storm events using the ICPR computer program. These flood discharges will be the basis for subsequent Hydraulic Analyses performed under this MAS. In addition, SRWMD and/or its contractor shall address all concerns or questions regarding the hydrologic analyses that are raised during the independent QA/QC review performed by SRWMD contractors during the QA/QC review.

If GIS-based modeling is used, SRWMD and/or its contractor shall document automated data processing and modeling algorithms, and provide the data to FEMA to ensure these are consistent with FEMA standards. Digital datasets (such as elevation, basin, or land use data) are to be documented and provided to FEMA for approval before performing the hydrologic analyses to ensure the datasets meet minimum requirements. If non-commercial (i.e., custom-developed) software is used for the analysis, then SRWMD and/or its contractor shall provide full user documentation, technical algorithm documentation, and the software to FEMA for review before performing the hydrologic analyses.

Table 1.6 Summary of Hydrologic Analysis is useful when multiple counties are involved in a project. The table to summarize the hydrology analysis that will be used for each county and is useful to define the scope. SRWMD and/or its contractor shall summarize the hydrologic analysis for each county in optional Table 1.6 Summary of Hydrologic Analysis.

**Table 1.6 Summary of Hydrologic Analysis**

County Name	Method	Square Miles of New Detailed Hydrology
Dixie	ICPR-NRCS	1.3
Gilchrist	ICPR-NRCS	2.0
Lafayette	ICPR-NRCS	0.8
Suwannee	ICPR-NRCS	1.1

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

**Deliverables:** In accordance with the G&S, SRWMD and/or its contractor shall make the following products available to FEMA by uploading the digital data to the MIP so that contractors can access it for an independent QA/QC review in accordance with the schedule outlined in Section 6 - Schedule. A metadata file complying with the NFIP Metadata Profiles Specifications, must accompany the uploaded digital data. Additionally, the TSDN format described in the G&S must be delivered in accordance with Section 2 – Technical and Administrative Support Data Submittal.

- Digital copies of all hydrologic modeling (input and output) files for the 10-, 2-, 1-, and 0.2-percent-annual-chance storm events;
- Digital Summary of Discharges Tables presenting discharge data for the flooding sources for which hydrologic analyses were performed;
- Digital versions of draft text for inclusion in the FIS report;
- Digital versions of all backup data used in the analysis including work maps;
- Format Hydrology Database or Data Delivery consistent with the DCS–in the G&S; and

- A Summary Report that describes and provides the results of all automated or manual QA/QC review steps taken during the preparation of the DFIRM as outlined in the approved QA/QC Plan.
- For GIS-based modeling, deliverables shall include all input and output data, intermediate data processing products, and GIS data layers.
- 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.

### **Independent QA/QC Review of Hydrologic Analyses**

Responsible Mapping Partner: SRWMD

Scope: SRWMD shall perform an impartial review of the technical, scientific, and other information submitted by the contractor specific to the hydrologic analyses to ensure that the data and modeling are consistent with FEMA standards and standard engineering practice, and are sufficient to prepare the DFIRM. SRWMD and/or its contractor, if applicable must ensure that independent QA/QC is performed and that organizational conflict of interest issues do not exist with respect to independent QA/QC processes. FEMA may audit or assist in these activities if deemed to be necessary by the Regional Project Officer. This work shall include, at a minimum, the activities listed below.

Please note FEMA will also be performing periodic audits and overall study/project management to ensure study quality. The CTP will be responsible for addressing any and all comments resulting from independent QC, including re-submittal of deliverables as needed to pass technical review.

- Review the submittal for technical and regulatory adequacy, completeness of required information, and supporting data and documentation. The technical review is to focus on the following:
  - Use of acceptable models;
  - Use of appropriate methodology(ies);
  - Correctly applied methodology(ies)/model(s), including QC of input parameters;
  - Comparison with gage data and/or regression equations, if appropriate; and
  - Comparison with discharges for contiguous reaches or flooding sources.
- Maintain records of all contacts, reviews, recommendations, and actions and make the data readily available to FEMA; and
- If data changed during review, then updated deliverables for previous tasks will be submitted at this time.

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

Deliverables: In accordance with the G&S, SRWMD and/or its contractor shall make the following products available to FEMA by uploading the digital data to the MIP. Additionally, the TSDN format described in the G&S must be delivered in accordance with Section 2 – Technical and Administrative Support Data Submittal.

This submittal will occur in accordance with the schedule outlined in Section 6 - Schedule.

- A Summary Report that describes the findings of the independent QA/QC review and
- Recommendations to resolve any problems that are identified during the independent QA/QC review.
- 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.

### Hydraulic Analyses

Responsible Mapping Partner: SRWMD

Scope: SRWMD and/or its contractor shall perform hydraulic analyses for approximately 5.2 square miles of the flooding sources listed earlier in Table 1.1. The modeling will include the 10-, 2-, 1-, and 0.2-percent-annual-chance events based on peak discharges computed under Hydrologic Analyses. The hydraulic methods used for this analysis will include ICPR.

SRWMD and/or its contractor shall use the cross-section and field data collected during Field Survey and the topographic data collected during the Topographic Data Collection, when appropriate, to perform the hydraulic analyses. The hydraulic analyses will be used to establish flood elevations and regulatory floodways for the subject flooding sources.

SRWMD and/or its contractor shall verify the reasonableness of the hydraulic analyses. In addition, SRWMD and/or its contractor shall address all concerns or questions regarding the hydraulic analyses that are raised by contractors during the independent QA/QC review.

SRWMD and/or its contractor shall document automated data processing and modeling algorithms for GIS-based modeling and provide the data to FEMA for review to ensure these are consistent with the standards outlined above. Digital datasets are to be documented and provided to FEMA for approval before performing the hydraulic analyses to ensure the datasets meet minimum requirements. If non-commercial (i.e., custom-developed) software is used for the analyses, then SRWMD and/or its contractor shall provide full user documentation, technical algorithm documentation, and software to FEMA for review before performing the hydraulic analyses

In cases where the MAS/SOW includes multiple counties it is beneficial to summarize the hydraulic analysis that will be used for each county in Table 1.7 Summary of Hydraulic Analysis. SRWMD and/or its contractor shall summarize the hydrologic analysis for each county in optional Table 1.7 Summary of Hydraulic Analysis.

**Table 1.7 Summary of Hydraulic Analysis**

County Name	Method	Total Miles of New Detailed or Approximate Hydraulics
Dixie	ICPR	1.3
Gilchrist	ICPR	2.0
Lafayette	ICPR	0.8

Suwannee	ICPR	1.1
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**Standards:** All Hydraulic Analyses work shall be performed in accordance with the standards specified in Section 5 - Standards.

**Deliverables:** In accordance with the G&S, SRWMD and/or its contractor shall make the following products available to FEMA by uploading the digital data to the MIP so that contractors can access it for an independent QA/QC review in accordance with the schedule outlined in Section 6 - Schedule. A metadata file complying with the NFIP Metadata Profiles Specifications, must accompany the uploaded compliant digital data. Additionally, the TSDN format described in the G&S must be delivered in accordance with Section 2 – Technical and Administrative Support Data Submittal.

- Digital profiles of the 10-, 2-, 1- and 0.2-percent-annual-chance water-surface elevations representing existing conditions using the FEMA RASPLOT program or similar software;
- Digital Floodway Data Tables for each flooding source that is compatible with the DFIRM database;
- Digital hydraulic modeling (input and output) files;
- Digital tables with range of Manning’s “n” values;
- Digital versions of all backup data used in the analyses;
- Digital versions of draft text for inclusion in the FIS report;
- Format Hydraulic Database or Data Delivery consistent with the Data Capture Standards–in the G&S; and
- A Summary Report that describes and provides the results of all automated or manual QA/QC review steps taken during the preparation of the DFIRM as outlined in the approved QA/QC Plan.
- For GIS-based modeling, deliverables include all input and output data, intermediate data processing products, GIS data layers, and final products in the format of the DFIRM database structure;
- 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. Appropriate leverage information includes who paid for the data and the amount of data used by the Flood Map Project.

### **Independent QA/QC Review of Hydraulic Analyses**

**Responsible Mapping Partner:** SRWMD

**Scope:** SRWMD shall perform an impartial review of the technical, scientific, and other information submitted by contractors under Hydraulic Analysis to ensure that the data and modeling are consistent with FEMA standards and standard engineering practice, and are sufficient to revise the FIRM. SRWMD and/or its contractor, if applicable must ensure that independent QA/QC is performed and that organizational conflict of interest issues do not exist with respect to independent QA/QC processes. FEMA may audit or assist in these activities if deemed to be necessary by the Regional Project Officer. This work shall include, at a minimum, the activities listed below.

Please note FEMA will also be performing periodic audits and overall study/project management to ensure study quality. SRWMD and/or its contractor will be responsible for addressing any and all comments resulting from independent QC, including re-submittal of deliverables as needed to pass technical review.

- Review the submittal for technical and regulatory adequacy, completeness of required information, and supporting data and documentation. The technical review is to focus on the following:
  - Use of acceptable model(s);
  - Starting water-surface elevations;
  - Cross-section geometry;
  - Manning's "n" values and expansion/contraction coefficients;
  - Bridge and culvert modeling;
  - Flood discharges;
  - Regulatory floodway computation methods; and
  - Tie-in to upstream and downstream non-revised Flood Profiles.
- Maintain records of all contacts, reviews, recommendations, and actions and make the data readily available to FEMA.
- Maintain an archive of all data submitted for hydraulic modeling review. (All supporting data must be retained for three years from the date a funding recipient submits its final expenditure report to FEMA, and once the study is effective all associated data should be submitted to the FEMA library); and
- If data changed during review, then updated deliverables for previous tasks will be submitted at this time.

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

Deliverables: In accordance with the G&S, SRWMD and/or its contractor shall make the following products available to FEMA by uploading the digital data to the MIP. Additionally, the TSDN format described in the G&S must be delivered in accordance with Section 2 – Technical and Administrative Support Data Submittal.

This submittal will occur in accordance with the schedule outlined in Section 6 - Schedule.

- 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; and
- If the data changed during the Hydrologic and/or Hydraulic Analyses QA/QC process, then the updated and verified deliverables from these activities will be resubmitted at this time.

## Coastal Flood Hazard Analyses

Responsible Mapping Partner: N/A

### Independent QA/QC Review of Coastal Hazard Analyses

Responsible Mapping Partner: N/A

## Floodplain Mapping

Responsible Mapping Partner: SRWMD

**Scope for Detailed Riverine or Coastal Analysis:** SRWMD and/or its contractor shall delineate the 1- and 0.2-percent-annual-chance floodplain boundaries and the regulatory floodway boundaries (if required) and any other applicable elements for the flooding sources for which detailed hydrologic, hydraulic, and/or coastal analyses were performed. SRWMD and/or its contractor shall incorporate all new or revised hydrologic, hydraulic, and/or coastal modeling and shall use the topographic data acquired under Topographic Data Development to delineate the floodplain and regulatory floodway boundaries on a digital work map.

**Scope of Redelineation of Detailed Floodplain Boundaries Using Updated Topographic Data:** SRWMD and/or its contractor shall delineate the 1- and 0.2-percent-annual-chance floodplain boundaries, regulatory floodway boundaries, and coastal high hazard zones (if required) for the flooding sources listed earlier in Table 1.1. SRWMD and/or its contractor shall use the topographic data acquired under Topographic Data Development to delineate the floodplain and regulatory floodway boundaries, as appropriate, on a digital work map. If the new topographic data do not reflect the same hydraulic characteristics as in the effective study, SRWMD and/or its contractor shall evaluate the topographic data to determine if changes are significant enough to invalidate the floodplain boundary and regulatory floodway boundary redelineations. If so, SRWMD and/or its contractor shall contact the FEMA Regional Project Officer, identified in Section 12 – Points of Contact, with a recommendation.

**Scope for Limited Detail Study:** N/A

**Scope for Refinement or Creation of Zone A:** SRWMD and/or its contractor shall delineate the 1-percent-annual-chance floodplain boundaries for the flooding sources listed earlier in Table 1.1 or in the subsequent Scoping Report. SRWMD and/or its contractor shall use existing topographic data or the topographic data acquired under Topographic Data Development to delineate the floodplain boundaries on a digital work map. SRWMD and/or its contractor may expand on the approaches for analyzing Zone A areas outlined in G&S and in FEMA 265, *Managing Floodplain Development in Approximate Zone A Areas* (April 1995), and/or develop new approaches. Such approaches must be coordinated with and approved by the FEMA Regional Project Officer identified in Section 12 – Points of Contact, before analysis and mapping begin.

**Scope for Non-revised Areas:** N/A

**Scope for Merging Revised and Non-Revised Information:** Upon completion of the floodplain mapping activities for the revised and non-revised areas, SRWMD shall merge the digital floodplain data into a single, updated DFIRM. This work is to include tie-in of flood hazard information for areas that were not studied as part of the Flood Map Project documented in this MAS. SRWMD and/or its contractor also shall tie in the revised and non-revised Flood Profiles, floodplain boundaries, coastal

gutters, and regulatory floodway boundaries with contiguous communities that were not studied as part of the Flood Map Project documented in this MAS. SRWMD and/or its contractor shall coordinate with FEMA and any additional Mapping Partners responsible for other components of Floodplain Mapping, as necessary, to resolve any potential tie-in issues.

SRWMD and/or its contractor shall incorporate the results of all effective Letters of Map Change (LOMCs) for all affected communities on the DFIRM. Also, SRWMD and/or its contractor shall address all concerns or questions regarding Floodplain Mapping that are raised by contractors during the independent QA/QC review.

Standards: All Floodplain Mapping work shall be performed in accordance with the standards specified in Section 5 - Standards. Mapping quality standards must be consistent with PM 38, dated October 17, 2007. SRWMD and/or its contractor will perform self-certification audits for the Floodplain Boundary Standards, as described in PM 38 and all subsequent revisions, for all flood hazard areas. SRWMD and its/or contractor may expand on the approaches for analyzing Zone A areas outlined in G&S and in FEMA 265, *Managing Floodplain Development in Approximate Zone A Areas* (April 1995), and/or develop new approaches. Such approaches must be coordinated with and approved by the FEMA Regional Project Officer before analysis and mapping begin.

The SRWMD and/or its contractor assigned the floodplain mapping task will complete all activities pertaining to levees in accordance with the G&S, PMs 34, 43 and others that may be appropriate.

Deliverables: In accordance with the G&S, and upon completion of floodplain mapping for portions of Dixie, Gilchrist, Lafayette and Suwannee Counties, SRWMD and/or its contractor shall make the following products available to FEMA by uploading the digital data to the MIP so that contractors can access it for the independent QA/QC review in accordance with the schedule outlined in Section 6 – Schedule. A metadata file complying with the NFIP Metadata Profiles Specifications, must accompany the compliant digital data. Additionally, the TSDN format described in the G&S must be delivered in accordance with Section 2 – Technical and Administrative Support Data Submittal. The mapping for the remaining flooding sources including any non-revised digital panels and all merged revised and non-revised floodplain mapping data is to be submitted for the Independent QA/QC review at the completion of this activity.

This submittal will occur in accordance with the schedule outlined in Section 6 - Schedule.

- Digital work map showing the 1- and 0.2-percent-annual-chance floodplain boundary delineations, regulatory floodway boundary delineations, cross sections, BFEs, flood insurance risk zone designation labels, gutters, PFD, and all applicable base map features;
- Draft DFIRM database prepared in accordance with the requirements in G&S;
- Digital versions of input and output for any computer programs that were used consistent with the DCS–in the G&S;
- A Summary Report that describes and provides the results of all automated or manual QA/QC review steps taken during the preparation of the DFIRM as outlined in the approved QA/QC Plan;
- Any backup or supplemental information including supporting calculations and assumptions used in the mapping required for the independent QA/QC review of Hydrologic, Coastal and /or Hydraulic Analyses and Floodplain Mapping consistent with the DCS–in the G&S;
- An explanation for the use of existing topography for the studied reaches, if appropriate.
- Written summary of the analysis methodologies;

- Digital versions of draft FIS report, Floodway Data Tables and updated profiles including all profiles and tables converted appropriate datum, as well as any other necessary items for the finalization of the preliminary FIS;
- If automated GIS-based models are applied, all input data, output data, intermediate data processing products, and GIS data layers shall be submitted consistent with the DCS—in the G&S;
- 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.

### **Independent QA/QC Review of Floodplain Mapping**

Responsible Mapping Partner: SRWMD

Scope: SRWMD and/or its contractor shall perform an impartial review of the floodplain mapping submitted by contractors under Floodplain Mapping to ensure that the results of the analyses performed are accurately represented, the redelineation of existing data on new, updated topography is appropriate, and to ensure that the new DFIRM panels accurately represent the information shown on the effective FIRMs and FBFMs for the unrevised areas that are mapped. SRWMD and/or its contractor, if applicable must ensure that independent QA/QC is performed and that organizational conflict of interest issues do not exist with respect to independent QA/QC processes. FEMA may audit or assist in these activities if deemed to be necessary by the Regional Project Officer. This work shall include, at a minimum, the activities listed below.

Please note FEMA will also be performing periodic audits and overall study/project management to ensure study quality. SRWMD and/or its contractor will be responsible for addressing any and all comments resulting from independent QC, including re-submittal of deliverables as needed to pass technical review.

- Review the cross sections for proper location and orientation on the work map and agreement with the Floodway Data Table.
- Review the regulatory floodway widths for agreement with the widths shown in the Floodway Data Table and the results of the hydraulic modeling.
- Review the floodplain widths at cross sections as shown on the work maps to ensure the data matches the Floodway Data Table.
- Review the floodplain boundaries as shown on the work maps to ensure the data matches the Flood Profiles.
- For non-revised floodplain areas, the 1- 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 DFIRM 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 DFIRM mapping files to ensure the data were prepared in accordance with the requirements in G&S.

- Review the metadata files to ensure the data includes all required information shown in the NFIP Metadata Profiles Specifications.

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

Deliverables: In accordance with the G&S, SRWMD and/or its contractor shall make the following products available to FEMA by uploading the digital data to MIP. Additionally, the TSDN format described in the G&S must be delivered in accordance with Section 2 – Technical and Administrative Support Data Submittal.

This submittal will occur in accordance with the schedule outlined in Section 6 - Schedule.

- A Summary Report that describes the findings of the QA/QC review, noting any deficiencies in or agreeing with the mapping results;
- Recommendations to resolve any problems that are identified during the independent QA/QC review;
- An annotated work map with all questions and/or concerns indicated, if necessary; and
- If data changed during review, then updated deliverables for previous tasks will be submitted at this time.

### **Develop Draft DFIRM Database**

Responsible Mapping Partner: SRWMD

Scope: SRWMD and/or its contractor shall prepare the database in accordance with G&S, for upload to the MIP. SRWMD and/or its contractor shall coordinate with appropriate Mapping Partners, as necessary, to resolve any problems that are identified during development of the DFIRM Database.

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

Deliverables: In accordance with G&S, SRWMD and/or its contractor shall make the following products available to FEMA by uploading the digital data to the MIP. Additionally, the Technical Support Data Notebook format described in G&S must be delivered in accordance with Section 2 – Technical and Administrative Support Data Submittal.

- DFIRM database files prepared in accordance with the requirements in G&S and in the required format(s) and
- A metadata file complying with the FEMA NFIP Metadata Profile Specifications.

### **Produce Preliminary Map Products**

Responsible Mapping Partner: SRWMD

Scope: SRWMD and/or its contractor shall apply the final FEMA DFIRM graphic and database specifications to the DFIRM files produced under Floodplain Mapping. This work shall include adding all required annotation, line pattern, area shading, and map collar information (e.g., map borders, title blocks, legends, notes to user). SRWMD and/or its contractor will be preparing the database for this

project in the Enhanced format. The database shall be produced in accordance with the G&S. SRWMD and/or its contractor shall coordinate with those Mapping Partners responsible for Floodplain Mapping and/or Redelineation, as necessary, to resolve any problems that are identified during development of the DFIRM Database and graphics.

*Preliminary Summary of Map Actions (SOMA) Preparation:* The SRWMD and/or its contractor shall prepare Preliminary SOMAs for all affected communities, if appropriate. The SOMA shall list pertinent information regarding LOMCs that will be affected by the issuance of the DFIRM (i.e., superseded, incorporated, revalidated).

Standards: All DFIRM Database work shall be performed in accordance with the standards specified in Section 5 - Standards. All work must pass the automated and visual "National QA/QC" reviews prior to the distribution of the preliminary copies of the DFIRM and FIS report and the Preliminary SOMA.

Deliverables: In accordance with the G&S, SRWMD and/or its contractor shall make the following products available to FEMA by uploading the digital data to the MIP. A metadata file complying with the NFIP Metadata Profiles Specifications, must accompany the compliant digital data. Additionally, the TSDN format described in the G&S must be delivered in accordance with Section 2 - Technical and Administrative Support Data Submittal.

This submittal will occur in accordance with the schedule outlined in Section 6 - Schedule.

- Preliminary DFIRM database or revised Preliminary DFIRM database prepared in accordance with the requirements in G&S;
- FIS Report and the Preliminary SOMA prepared using the SOMA Tool on the MIP.
- Complete set of plots of DFIRM panels showing all detailed flood hazard information at a suitable scale; and
- A Summary Report that describes and provides the results of all automated or manual QA/QC review steps taken during the preparation of the DFIRM as outlined in approved QA/QC Plan.
- Passing Quality Review report

### **Independent QA/QC Review of Produce Preliminary Map Products**

Responsible Mapping Partner: SRWMD

Scope: Upon completion of the floodplain mapping and redelineation activities, SRWMD and/or its contractor shall perform an impartial review of the DFIRM spatial database to determine if it meets current FEMA database specifications. In addition, SRWMD and/or its contractor shall review the DFIRM to ensure it meets current FEMA graphic specifications. SRWMD and/or its contractor shall coordinate with other Mapping Partners, as necessary, to resolve any problems identified during this QA/QC review. SRWMD and/or its contractor, if applicable must ensure that independent QA/QC is performed and that organizational conflict of interest issues do not exist with respect to independent QA/QC processes. FEMA may audit or assist in these activities if deemed to be necessary by the Regional Project Officer.

Please note FEMA will also be performing periodic audits and overall study/project management to ensure study quality. SRWMD and/or its contractor will be responsible for addressing any and all

comments resulting from independent QC, including re-submittal of deliverables as needed to pass technical review.

This work shall ensure that the requirements below are met.

- All required DFIRM features are accurately and legibly labeled and following the examples shown in the FEMA DFIRM specifications. This includes all flood insurance risk zones, BFEs, gutters, cross sections, transects, studied streams and shorelines, mapped political entities, and all roads within and adjacent to the 1-percent-annual-chance floodplains.
- All DFIRM features are correctly symbolized with the appropriate symbol, line pattern, or area shading and follow the requirements in G&S.
- All map collar information is complete, correct, and follows the requirements specified in G&S.
- Preliminary DFIRM database is in a GIS file and database format as specified in FEMA's G&S, and conform to those specifications for content and attribution.
- DFIRM database files are in one of the database formats specified in FEMA's G&S, and conform to those specifications for content and attribution.

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

Deliverables: In accordance with the G&S, SRWMD and/or its contractor shall make the following products available to FEMA by uploading the digital data to the MIP. Additionally, the TSDN format described in the G&S must be delivered in accordance with Section 2 – Technical and Administrative Support Data Submittal.

This submittal will occur in accordance with the schedule outlined in Section 6 – Schedule.

- A Summary Report that describes the findings of the QA/QC review noting any deficiencies in or agreeing with the mapping results and the results of all automated or manual QA/QC steps taken during the independent QA/QC review;
- Recommendations to resolve any problems that are identified during the independent QA/QC review; and
- An annotated copy of the DFIRM with all questions and/or concerns indicated, if necessary.
- If the data changed during the QA/QC process, then the updated deliverables from Floodplain Mapping and Redelineation will be resubmitted at this time.

### **Distribute Preliminary Map Products**

Responsible Mapping Partners: SRWMD

Scope: Preliminary Map Products consists of the final preparation, review, and distribution of the Preliminary copies of the DFIRM and FIS report and the Preliminary SOMA for community officials and the general public review and comment. FEMA may audit or assist in these activities if deemed to be necessary by the Regional Project Officer. The activities to be performed are summarized below.

*Preliminary Transmittal Letter Preparation:* The SRWMD and/or its contractor shall prepare letters and transmit the Preliminary copies of the DFIRM and FIS report and related enclosures to all affected

communities, all other Project Team members, the State NFIP Coordinator, the FEMA Regional Office, and others as directed by FEMA. This letter may be prepared for FEMA only or for signature by FEMA and SRWMD.

*Distribution of Preliminary DFIRM and FIS Report:* The SRWMD and/or its contractor shall distribute the Preliminary copies of the DFIRM and FIS report to all affected communities, all other Project Team members, the State NFIP Coordinator, the FEMA Regional Office, and others as directed by FEMA.

*News Release Preparation:* The SRWMD and/or its contractor shall use the BFEs on the Web tool in accordance with PM 44 to create BFE notices for studies that result in new or modified BFEs. The SRWMD and/or its contractor shall prepare the BFE determination letters as well as the news release notifications of BFE changes for all affected communities. The SRWMD and/or its contractor shall perform QA/QC reviews of the notices for accuracy and compliance with FEMA format requirements. The SRWMD and/or its contractor shall file the notifications for later submittal to FEMA for review.

Standards: All Preliminary Map Products work shall be performed in accordance with the standards specified in Section 5 - Standards. Mapping quality standards must be consistent with PM 38, dated October 17, 2007. Preliminary DFIRM Maps shall pass the QRs, as outlined in PM 42, before this activity is completed and the maps are issued Preliminary.

Deliverables: In accordance with the G&S, SRWMD and/or its contractor shall make the appropriate deliverables available to FEMA by uploading the digital data to the MIP. Additionally, the TSDN format described in the G&S must be delivered in accordance with Section 2 – Technical and Administrative Support Data Submittal.

This submittal will occur in accordance with the schedule outlined in Section 6 - Schedule. Preliminary transmittal letters shall be prepared and transmitted. These letters and any additional letters requested by FEMA shall be prepared in accordance with the current version of the FEMA *Document Control Procedures Manual* and in conjunction with Guidance provided by the Region and/or its contractor.

- Preliminary copies of the DFIRM and FIS report, including all updated data tables and Flood Profiles shall be mailed to the Chief Executive Officer (CEO) and floodplain administrator of each affected community, all other Project Team members, the State NFIP Coordinator, the FEMA Regional Office, and others as directed by FEMA.
- Preliminary SOMAs, prepared in accordance with FEMA requirements, shall be provided as appropriate.
- A Summary Report that describes and provides the results of all automated or manual QA/QC review steps taken during the final preparation of the preliminary DFIRM shall be provided as outlined in the approved QA/QC Plan.
- SRWMD and/or its contractor will submit a summary of outreach activities and any changes made in the outreach approach based on the actual implementation.

### **Post-Preliminary Processing**

Responsible Mapping Partners: SRWMD and FEMA

Scope: Post-Preliminary Processing includes coordination with FEMA and the Community to schedule a Community Meeting(s) for review of the Preliminary DFIRM, if required. This activity consists of finalizing the DFIRM and FIS report after the Preliminary copies of the DFIRM and FIS report have been

issued to community officials and the public for review and comment. FEMA may audit or assist in these activities if deemed to be necessary by the Regional Project Officer. The activities to be performed are summarized below.

*Community Coordination Meeting:* If a community coordination meeting is required it is recommended that it be held within 60 days of the issuance of the Preliminary DFIRM and, SRWMD and/or its contractor shall arrange for and verify that the following activities are completed:

- Establish invitee list,
- Schedule meeting date and place,
- Complete and Distribute Meeting Notice/Letter,
- Record Meeting Minutes,
- Record follow ups with communities not in attendance, and
- Identify any/all communities with BFE changes for required appeal period.

*Initiation of Statutory 90-Day Appeal Period:* When required, upon completion of a 30-day community comment period and/or final coordination meeting with the affected communities, SRWMD and/or its contractor shall arrange for and verify that the following activities are completed in accordance with the current version of the FEMA G&S, appropriate PMs and Document Control Procedures Manual:

- Proposed BFE determination letters are sent to the community CEOs and floodplain administrators.
- Ensure that news release notifications of BFE changes are published in prominent newspapers with local circulation in accordance with 44 CFR.
- The SRWMD and/or its contractor shall prepare the appropriate notices (Proposed Rules) that are to be published in the *Federal Register*. The SRWMD and/or its contractor shall then deliver those notices to FEMA for publication.
- When SRWMD and/or its contractor hold public meetings to present and discuss the results of this Flood Map Project, FEMA may attend the meetings and assist where possible, if requested.

*Resolution of Appeals and Protests:* SRWMD and/or its contractor shall review and resolve appeals and protests received during the 90-day appeal period. For each appeal and protest, the following activities shall be conducted as appropriate:

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

SRWMD and/or its contractor shall mail all associated correspondence upon authorization by FEMA.

*Preparation of Special Correspondence:* SRWMD and/or its contractor shall support FEMA in responding to comments not received within the 90-day appeal period (referred to as "special correspondence") including drafting responses for FEMA review when appropriate and finalizing responses for co-signature. SRWMD and/or its contractor also shall mail the final correspondence (and enclosures, if appropriate) and distribute appropriate copies of the correspondence and enclosures upon receipt of authorization from FEMA.

*Revision of FIRM and FIS Report:* If necessary, SRWMD and/or its contractor shall work together with FEMA to revise the DFIRM and FIS report and shall distribute revised Preliminary copies of the DFIRM and FIS report to the CEO and floodplain administrator of each affected community, all other Project Team members, the State NFIP Coordinator, the FEMA Regional Office, and others as directed by FEMA.

*Final SOMA Preparation:* SRWMD and/or its contractor shall prepare Final SOMAs for the affected communities with assistance from FEMA, as appropriate.

*Processing of Letter of Final Determination:* The SRWMD and/or its contractor shall work with FEMA to establish the effective date for the DFIRM and FIS report, and shall prepare Letters of Final Determination (LFDs) for each affected community for FEMA review in coordination with the Region and its contractor, and in accordance with the FEMA *Document Control Procedures Manual*. FEMA or its designated contractor shall mail the final signed LFDs and enclosures and distribute appropriate copies of the signed LFDs. All work must pass the automated and visual "National QA/QC" reviews and review of LFD prior to the distribution of the LFD.

- The SRWMD and/or its contractor shall prepare the appropriate notices (Final Rules) that are to be published in the *Federal Register*. The SRWMD and/or its contractor shall then deliver those notices to FEMA for publication.

*Processing of Final DFIRM and FIS Report for Printing:* SRWMD and/or its contractor shall prepare final reproduction materials for the DFIRM and FIS report and provide these materials to FEMA in accordance with PM 42 for printing by the United States Government Printing Office. SRWMD and/or its contractor shall also prepare the appropriate paperwork to accompany the DFIRM and FIS report (including Print Processing Worksheet, Printing Requisition Forms, and Community Map Actions Form) and transmittal letters to the community CEOs.

*Revalidation Letter Processing:* SRWMD and/or its contractor shall prepare and distribute letters for FEMA signature to the community CEOs and floodplain administrators to notify the affected communities about LOMCs for which determinations will remain in effect after the DFIRM and FIS report become effective.

*Archiving Data:* SRWMD and/or its contractor shall ensure that technical and administrative support data are packaged in the FEMA required format and stored properly in the library archives until transmitted to the FEMA Engineering Study Data Package Facility. In addition, the SRWMD and/or its contractor will maintain copies of all data for a period of no less than three years.

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

**Deliverables:** In accordance with the G&S, SRWMD and/or its contractor shall make the following products available to FEMA by uploading the digital data to the MIP. A metadata file complying with the

NFIP Metadata Profiles Specifications, must accompany the compliant digital data. Additionally, the TSDN format described in the G&S must be delivered in accordance with Section 2 – Technical and Administrative Support Data Submittal.

This submittal will occur in accordance with the schedule outlined in Section 6 - Schedule.

- Documentation that the news releases were published in accordance with FEMA requirements;
- Documentation that the appropriate *Federal Register* notices (Proposed and Final Rules) were published in accordance with FEMA requirements;
- Draft and final Special Correspondence (and all associated enclosures, backup data, and other related information) for FEMA review and signature, as appropriate;
- Draft and final Appeal and Protest acknowledgment, additional data, and resolution letters (and all associated enclosures, backup data, and other related information) for FEMA review and signature, as appropriate;
- Draft and final LFDs (and all associated enclosures, backup data, and other related information) for FEMA review and signature;
- DFIRM negatives (if applicable) and final FIS report materials including all updated data tables and Flood Profiles;
- Paperwork for the final DFIRM and FIS report materials;
- Transmittal letters for the printed DFIRM and FIS report;
- LOMC Revalidation Letters, if appropriate;
- Completed, organized, and archived technical and administrative support data; and
- Completed, organized, and archived case files and flood elevation docket.

## SECTION 2—TECHNICAL AND ADMINISTRATIVE SUPPORT DATA SUBMITTAL

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

All supporting documentation for the activities in this MAS/SOW shall be submitted in the TSDN format in accordance with the FEMA G&S. Table 2.1 Mapping Activities and Applicable TSDN Sections indicates the sections of the TSDN that apply to each mapping activity.

If any issues arise that could affect the completion of an activity within the proposed scope or budget, the responsible Mapping Partner shall complete a Special Problem Report (SPR) as soon as possible after the issue is identified and submitted to FEMA. The SPR is to describe the issue and propose possible resolutions. (For additional information on SPRs, refer to the G&S.)

**Table 2.1- Mapping Activities and Applicable TSDN Sections**

TSDN Section	Mapping Activities													
	Scoping	Field Survey	Topo Data	QA/QC of Topo	Base Map	Hydrology/Coastal	QA/QC of Hydrology/Coastal	Hydraulic Analysis	QA/QC of Hydraulics	Flood-plain Mapping (and Re-delineation)	QA/QC of FP Mapping	DFIRM Database	Preliminary Map Products	Post-Preliminary
General Documentation														
Special Problem Reports	X	X			X			X	X	X	X	X	X	X
Telephone Conversation Reports	X	X			X			X	X	X	X	X	X	X
Meeting Minutes/Reports	X	X			X			X	X	X	X	X	X	X
General Correspondence	X	X			X			X	X	X	X	X	X	X
Engineering Analyses														
Hydrologic Analyses		X			X			X	X	X	X			
Hydraulic Analyses		X			X			X	X	X	X			

TSDN Section	Mapping Activities													
	Scoping	Field Survey	Topo Data	QA/QC of Topo	Base Map	Hydrology/ Coastal	QA/QC of Hydrology/ Coastal	Hydraulic Analysis	QA/QC of Hydraulics	Flood-plain Mapping (and Re-delineation)	QA/QC of FP Mapping	DFIRM Database	Preliminary Map Products	Post-Preliminary
Key to Cross-Section Labeling		X			X			X	X	X	X			
Key to Transect Labeling		X			X			X	X	X	X			
Draft FIS Report					X			X	X					
Mapping Information	X				X					X	X	X	X	X
Miscellaneous Reference Information	X	X			X			X	X	X	X	X	X	X

### SECTION 3—PERIOD OF PERFORMANCE

The mapping activities outlined in this MAS will be completed as specified in the Agreement Articles of the Cooperative Agreement. The Mapping Activities may be terminated at the option of FEMA or SRWMD in accordance with the provisions of the Partnership Agreement dated December 25, 2002. If these mapping activities are terminated, all products produced to date must be returned and updated into the MIP and the remaining funds from uncompleted activities, provided by FEMA for this MAS, will be returned to FEMA.

### SECTION 4—FUNDING/LEVERAGE

FEMA is providing funding, in the amount of \_\_\_\_\_ to SRWMD for the completion of this Flood Map Project. SRWMD shall provide any additional resources required to complete the assigned activities for this Flood Map Project. During the scoping 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 acquired information (i.e. base map data, hydrologic and hydraulic analyses, etc.). These values should also be reported in the MIP by the appropriate task owner. The current Blue Book is dated January 2009 and can be downloaded from FEMA's Information Resource Library <http://www.fema.gov/library/viewRecord.do?id=2473>. SRWMD shall complete Table 4.1 Contribution and Leverage

Table 4.1 Contribution and Leverage

Project Task	FEMA Contribution	Partner Contribution	% Partner Leverage	Total Project Cost
Map Updates for Dixie, Gilchrist, Lafayette and Suwannee Counties				
TOTAL FUNDING AMOUNTS				

Leverage dollars or units shall be entered as applicable within the Manage Data Development task in the MIP workflow.

## SECTION 5—STANDARDS

The standards relevant to this MAS are provided in Tables 5-1 Applicable Standards for Project Activities and 5-2 Project Activities and Applicable Portions of FEMA Guidelines and Specifications. Information on the correct volume and appendix of the G&S to be referenced for each mapping activity are summarized in Table 5-2 for convenience. However, all mapping partners working on a Flood Map Project are responsible for complying with all appropriate requirements in FEMA's G&S including the Final Draft Guidelines for Coastal Flood Hazard Analysis and Mapping for the Pacific Coast of the United States and Atlantic Ocean and Gulf of Mexico Coastal Guidelines Update Final Draft, collectively referred to as "Coastal Guidelines Updates"; and related PMs published by FEMA as of the date of this agreement.

These guidelines may be downloaded from the FEMA Flood Hazard Mapping website at [http://www.fema.gov/plan/prevent/fhm/dl\\_cgs.shtm](http://www.fema.gov/plan/prevent/fhm/dl_cgs.shtm). The Geospatial Data Coordination Policy and the Geospatial Data Coordination Implementation Guide are located at <https://hazards.fema.gov> under "Tools & Links."

**Table 5-1. Applicable Standards for Project Activities**

Applicable Standards	Activities																
	Scoping	Field Survey	Topo Data	QA/QC Topo Data	Base Map	Coastal	QA/QC Coastal	Hydrology	QA/QC Hydrology	Hydraulic Analysis	QA/QC of Hydraulic Analysis	Floodplain Mapping (inc. Redefinition)	QA/QC Flood-plain Mapping	DIRM Dbase	QA/QC DIRM Database	Preliminary Map Products	Post-Preliminary Processing
<i>Guidelines and Specifications for Flood Hazard Mapping Partners and Procedure Memorandums</i>	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FEMA's Geospatial Data Coordination Policy	X		X		X												
FEMA's Geospatial Data Coordination Implementation Guide	X		X		X												
Engineer Manual 1110-2-1003, <i>Hydrographic Surveys</i> (USACE), January 1, 2002	X	X															

Applicable Standards	Activities																
	Scoping	Field Survey	Topo Data	QA/QC Topo Data	Base Map	Coastal	QA/QC Coastal	Hydrology	QA/QC Hydrology	Hydraulic Analysis	QA/QC of Hydraulic Analysis	Floodplain Mapping (inc. Redelineation)	QA/QC Flood-plain Mapping	DFIRM Dbase	QA/QC DFIRM Database	Preliminary Map Products	Post-Preliminary Processing
"Numerical Models Accepted by FEMA for NFIP Usage," Updated April 2003	X					X	X	X	X	X			X	X	X	X	X
NFIP Metadata Profile Specifications	X		X													X	X
<i>Document Control Procedures Manual</i>	X																
<i>44 Code of Federal Regulations Parts 65, 66 and 67</i>	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X

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

Activity Description	Applicable Volume, Section/Subsection, and Appendix
Scoping	Volume 1 Appendix I Scoping Report document 44 Code of Federal Regulations Part 66 and 67
Outreach	Volume 1 Appendix I
Field Survey	Volume 1 Appendices A, B, C, F, and M
Topographic Data Development and Independent QA/QC Review of Topographic Data	Volume 1, Appendices A and M
Base Map Acquisition and Preparation And Independent QA/QC Review of Base Map	Volume 1 Appendices A, K, L, and M
Hydrologic Analyses and Independent QA/QC Review of Hydrologic Analyses	Volume 1 Appendices A, C, E, F, G, H, and M
Hydraulic Analyses and Independent QA/QC Review of Hydraulic Analyses	Volume 1 Appendices A, B, C, E, F, G, H, and M
Coastal Hazard Analyses and Independent QA/QC of Coastal Hazard Analyses	Volume 1

Activity Description	Applicable Volume, Section/Subsection, and Appendix
	Appendices A, B, C, D, H, and M Coastal Guidelines Updates”
Floodplain Mapping and Independent QA/QC	Volume 1
Floodplain Mapping (including Redelineation/Digitization)	Appendices C, D, E, F, G, H, K, L, and M
Produce Preliminary Map Products and Independent QA/QC Review of Produce Preliminary Map Products	Volume 1 Appendices K, L, and M
Distribute Preliminary Map Products and Independent QA/QC Review of Distribute Preliminary Map Products	Volume 1 Appendices J, K, L, and M
Post-Preliminary Processing	Volume 1 Appendices J, K, L, and M

## SECTION 6— SCHEDULE

The activities documented in this MAS shall be completed in accordance with Table 6.1 Mapping Activities Schedule. If changes to this schedule are required, the responsible Mapping Partner shall coordinate with FEMA and the other Mapping Partners in a timely manner. Please also identify to whom the products associated with each task are to be submitted to (i.e. the MIP, FEMA Regional Office, etc.).

**Table 6.1 Mapping Activities Schedule**

ACTIVITIES	RESPONSIBLE PARTNER(S)	START DATE	END DATE	COST
Scoping	SRWMD	Date of signed MAS	3 months	To be determined
Field Surveys	SRWMD		6 months	
Topographic Data Development	SRWMD		6 months	
Independent QA/QC Review of Topographic Data	SRWMD		6 months	
Base Map Acquisition	SRWMD		4 months	
Independent QA/QC Review of Base Map	SRWMD		4 months	
Hydrologic Analyses	SRWMD		7 months	
Independent QA/QC Review of Hydrologic Analyses	SRWMD		8 months	
Hydraulic Analyses	SRWMD		9 months	
Independent QA/QC Review of Hydraulic Analyses	SRWMD		10 months	
Coastal Flood Hazard Analyses	N/A		N/A	
Independent QA/QC Review of Coastal Hazard Analyses	N/A		N/A	

ACTIVITIES	RESPONSIBLE PARTNER(S)	START DATE	END DATE	COST
Floodplain Mapping: Detailed Riverine or Coastal Analysis	SRWMD		10 months	
Floodplain Mapping: Refinement or Creation of Zone A	SRWMD		10 months	
Floodplain Mapping: Merging Revised and Unrevised Areas	SRWMD		10 months	
Floodplain Mapping: Redelineation	SRWMD		10 months	
Independent QA/QC Review of Floodplain Mapping	SRWMD		11 months	
Develop Draft DFIRM Database	SRWMD		13 months	
Produce Preliminary Map Products (including Graphic Specifications)	SRWMD		14 months	
Independent QA/QC Review of Produce Preliminary Map Products	SRWMD		15 months	
Distribute Preliminary Map Products	SRWMD		16 months	
Post-Preliminary Processing	SRWMD		30 months	
<b>TOTAL COST</b>				

SRWMD shall update the MIP workflow tasks with schedule and cost information within 30 days once funds are awarded and on a monthly basis thereafter.

## SECTION 7—CERTIFICATIONS

### Data Capture Standards

- **DCS Certification Form** : The Mapping Partner will comply with the revised DCS standards as outlined in revised version of Appendix M, including the certification requirements. A PDF of the form with the signature, data, and seal affixed to the form must be submitted digitally. This form must be signed by a registered Professional Engineer (or Surveyor if appropriate) from the firm contracted to perform the work, or by the responsible official of a government agency. A digital version of this form is available at [www.fema.gov](http://www.fema.gov).

### Field Surveys and Topographic Data Development

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.

### Base Map Acquisition and Preparation

- A community official or responsible party shall provide written certification that the digital data meet FEMA 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 is still 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.

### Hydrologic Analyses, Hydraulic Analyses, Coastal Analyses, and 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 in accordance with 44 CFR 65.10.

## SECTION 8—TECHNICAL ASSISTANCE AND RESOURCES

Project Team members may obtain copies of FEMA-issued LOMCs, archived engineering backup data, and data collected as part of the Mapping Needs Assessment Process from FEMA and/or your Regional Project Officer.

General technical and programmatic information, such as FEMA 265 and the Quick-2 computer program, can be downloaded from the FEMA website at [http://www.fema.gov/plan/prevent/fhm/frm\\_soft.shtml](http://www.fema.gov/plan/prevent/fhm/frm_soft.shtml). 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.

Assistance with the MIP may be requested at [miphelp@mapmodteam.com](mailto:miphelp@mapmodteam.com).

## SECTION 9—CONTRACTORS (CTP)

SRWMD intends to use the services of URS TEAM as a contractor for this Flood Map Project. SRWMD shall ensure that the procurement for all contractors used for this Flood Map Project complies with the requirements of 44 CFR 13.36.

Part 13 may be downloaded in PDF or text format from the United States Government Printing Office website at [http://www.access.gpo.gov/nara/cfr/vaisidx\\_04/44cfr13\\_04.html](http://www.access.gpo.gov/nara/cfr/vaisidx_04/44cfr13_04.html).

## SECTION 10—REPORTING

Financial Reporting: Because funding has been provided to SRWMD by FEMA, financial reporting requirements for SRWMD will be in accordance with Cooperative Agreement Articles. SRWMD shall also refer to 44 CFR 13.41.

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

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

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

Earned Value Reporting: The MIP Workflow is designed to track the Earned Value of mapping projects. This information is automatically calculated by the MIP, using the Actual cost and schedule of work performed, or "actuals" and comparing them to the expected cost and schedule of work performed, or "baseline".

Once the FEMA Regional office has funded a project, FEMA's Contractor, will complete the "Obligate Project Funds" screen in the MIP. This step establishes the baseline for the project in the MIP, using the cost and schedule information for each task as outlined in this document and agreed to at the completion of the scoping process.

The MIP study workflow allows SRWMD to report on the status of these projects at a task level. The cost and schedule information, updated by the SRWMD for each contracted task, is compared to the baseline established for those tasks. This information is rolled up to a project level and monitored by the FEMA Region to assess progress and Earned Value.

Earned Value reporting involves the reporting of cost, schedule and performance (physical percent complete) in the MIP by the SRWMD.

Once the baseline has been established in the MIP, the SRWMD shall input the performance and actual cost to date for each contracted task for each project. This must be completed at minimum every thirty days and at the completion of the task. The "As of" date must be updated not less than every thirty days even if the reported percent complete and money spent have not changed from previous month. When a task is completed, including all QA/QC activities in this MAS plus the Quality Control Reviews established in PM 42. The SRWMD shall enter 100% complete; enter the actual completion cost, and the actual completion date within the Manage Data Development, Manage Preliminary Map Production, or Manage Post Preliminary Processing, as applicable.

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

### Section 11—Project Coordination

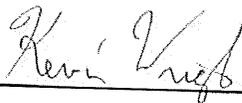
Throughout the project, all members of the Project Team will coordinate, as necessary, to ensure the products meet the technical and format specifications required and contain accurate, up-to-date information. Coordination activities shall include:

- Meetings, teleconferences, and video conferences with FEMA and other Project Team members monthly;
- Telephone conversations with FEMA and other Project Team members on a scheduled basis monthly and an ad hoc basis, as required;
- Updates to the MIP and other FEMA status information systems in accordance with requirements in Volumes 1 and 3 of G&S; and
- E-mail, facsimile transmissions, and letters, as required.

### SECTION 12—POINTS OF CONTACT (CTP)

The points of contact for this Flood Map Project are Laura Algeo, the FEMA Regional Project Officer; Kevin Wright, the Project Manager for SRWMD; 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.



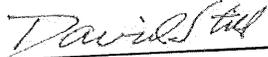
Kevin Wright  
Project Manager  
Suwannee River Water Management District



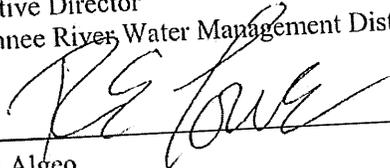
Date

  
\_\_\_\_\_  
Jon Dinges  
Director Resource Management  
Suwannee River Water Management District

6/11/09  
Date

  
\_\_\_\_\_  
David Still  
Executive Director  
Suwannee River Water Management District

6/11/2009  
Date

  
\_\_\_\_\_  
Laura Algeo  
Regional Project Officer  
Federal Emergency Management Agency, Region 4

6/24/09  
Date

