SOLICITATION FOR QUALIFICATIONS

HYDROLOGIC SERVICES FOR
SANTA CRUZ FLOOD RISK MAPPING

FOR

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT

TUCSON, ARIZONA

JUNE 2015

Pima County Procurement Department
Design & Construction Division
130 W. Congress Street, 3rd Floor, Tucson, Arizona 85701
(520) 724-8414 / Fax (520) 724-4434

Solicitation No. 183102

NOTICE OF SOLICITATION FOR QUALIFICATIONS #183102

HYDROLOGIC SERVICES FOR
SANTA CRUZ FLOOD RISK MAPPING

Pima County is seeking Statements of Qualifications to provide Hydrologic Services for the Santa Cruz River Flood Risk Mapping Project.

The project location is the upper Santa Cruz River from approximately one mile upstream (south) of the Santa Cruz County line north to approximately one mile downstream of Pima Mine Road. The project shall include the preparation of the 10-percent, 4-percent, 2-percent, 1-percent, and the 0.5-percent Flood Risk Maps and associated Flood Risk Map Reports. The work is part of a Federal Emergency Management Agency (FEMA) grant. Data submittals will include working within the FEMA Map Information Platform.

The complete scope of work is contained within this solicitation package and includes the Mapping Activity Statement (MAS) associated with the FEMA grant.

The County intends to award a contract to the top ranked firm competing. In the event of a tie or ties, committee consensus may be used to determine final award. The County reserves the right to reject any or all qualification statements or withhold award for any reason.

There will be a pre-submittal meeting July 16, 2015, 2:00 PM. The meeting will be held at the Procurement Department Conference Room, 3rd Floor, County Administration Building, 130 W. Congress Street, Tucson, Arizona. Attendance is optional, but encouraged.

Qualifications Statements are due no later than July 27, 2015, 4:00 PM. No statements will be accepted after the date and time indicated. Certified Small Business Enterprise (SBE) firms are encouraged to participate.

The entire solicitation package can be downloaded from the Pima County website: www.pima.gov/procure/ifbrfp-dc.htm. Information regarding the submittal requirements of this solicitation may be obtained at the Design and Construction Division of the Procurement Department located in the Pima County Administration Building, 130 W. Congress Street, 3rd Floor. Contact Ms. Christy Bustillos regarding documents at phone: (520) 724-8414; fax: (520) 724-4434; or email: Christy.bustillos@pima.gov.

The District reserves the right to reject any or all qualification statements or withhold award for any reason.

PUBLISH: **The Daily Territorial: July 1, 2, 6, and 7, 2015**
The Arizona Daily Star: July 1, 2, 6, and 7, 2015

/s/ Anthony V. Schiavone
Anthony V. Schiavone, Commodity/Contracts Officer
Procurement, Design & Construction Division

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SECTION 1 – GENERAL INFORMATION

SCOPE OF SERVICES:

The project location is the upper Santa Cruz River from approximately one mile upstream (south) of the Santa Cruz County line north to approximately one mile downstream of Pima Mine Road. The project shall include the preparation of the 10-percent, 4-percent, 2-percent, 1-percent, and the 0.5-percent Flood Risk Maps and associated Flood Risk Map Reports. The work is part of a FEMA grant. Data submittals will include working within the FEMA Map Information Platform.

See Appendix "A" for detailed Scope of Services.

See Appendix "B" for Mapping Activity Statement

PRE-SUBMITTAL CONFERENCE

The date and time of a pre-submittal conference, if applicable, is indicated on the notice page of this document. The purpose of this conference will be to clarify the contents of this solicitation in order to prevent any misunderstandings of the District's position. Any questions regarding this solicitation should be presented to the District at this conference.

INQUIRIES

Inquiries shall be written, preferably by email and directed to Anthony V. Schiavone, Commodity/Contracts Officer, Pima County Procurement Department, Design & Construction Division, Fax 520-724-4434, or anthony.schiavone@pima.gov. All questions must be received no later than seven (7) calendar days in advance of the submittal due date.

ADDENDA

Responses to inquiries that materially change the scope or intent of this Statement for Qualifications (SFQ) will be issued via addendum and posted to the Pima County website http://www.pima.gov/procure/ifbrfp-dc.htm. Oral statements or clarifications not in writing shall be non-binding and without legal effect. The County will not notify Respondents of posting of addenda. Therefore, it is the Respondents' sole responsibility to check the website periodically for all issued addenda. Failure to include acknowledgement of all addenda may be cause for rejection of the proposal.

SUBMITTAL

Respondents shall submit one (1) hardcopy original and four (4) hardcopies of their Statement of Qualifications (SOQ) as further described in the Required Submittal Information and Evaluation Criteria Section. The hardcopy original copies shall be delivered in a sealed envelope(s) clearly marked with the Firm Name, Name and Number of the SFQ, Due Date, and Time addressed to: Pima County Procurement Department, Design & Construction Division, Attn: Anthony V. Schiavone, Commodity/Contracts Officer, 130 W. Congress Street, 3rd Floor, Tucson, AZ 85701. Facsimile, telegraphic, or emailed submissions **are not** acceptable.

DUE DATE AND LOCATION FOR SUBMISSIONS

Submittals must be received and time stamped at the Procurement Department, Design & Construction Division, 130 W. Congress Street, 3rd Floor, no later than the date and time indicated on the Notice of Solicitation for Qualifications. Late submittals will NOT be accepted.

ACCEPTANCE OF EVALUATION METHODOLOGY

By submitting its Qualifications in response to this SFQ, respondent acknowledges and accepts the evaluation process, the established criteria and associated point values, and that determination of the "most qualified" firm will require subjective judgments by the District.

PROFESSIONAL SERVICES CONTRACT

These SFQ documents contain a sample copy of the Professional Services Contract that the selected firm will enter into with District. By submission of a qualifications statement, each Firm will be certifying to the District that the contract is acceptable as written, unless exceptions are taken and specific alternate language proposed. The District may consider proposed changes and negotiate terms or conditions if deemed in the interest of the District. However, the District reserves the right to reject any submission that takes exceptions or proposes alternate language unacceptable to the District.

PUBLIC RECORD

Per A.R.S. §34-603(G), only the names of the persons or firms on the shortlist may be disclosed prior to award. After Contract execution, all information provided shall become public record and open for inspection. Any material a respondent wishes to remain confidential shall be indicated in writing to the Contract Officer as part of their submission, including a statement of the basis for the claim of confidentiality.

Responses to this solicitation shall be considered public information after award and execution of the contract. The County is implementing a new procedure for the handling of confidential information that is reflected in Article XXVI of the sample contract included in this solicitation. Respondents must read and familiarize themselves with this Article before submitting a response.

CONSULTANT SELECTION PROCESS

1. A "Consultant Selection Committee" will be comprised of three members from the Pima County Regional Flood Control District. This committee will evaluate submissions, determine the highest ranked firms for the short-list/interviews, conduct interviews, and recommend a firm for award. Interviews are optional and determination will be at the sole discretion of the District.

2. The District will make an award recommendation to the Board of Directors based on the evaluation scores. The District recommendation will be faxed to each participating firm prior to the Board of Directors agenda date for award. Selection of Consultant shall be at the discretion of District and the District reserves the right to reject any or all qualification statements.

3. The District intends to negotiate fees for these services. If agreement cannot be reached with a recommended firm, the District intends to enter into negotiation with the next lower ranked firm or firms or reject all proposals. Following the successful negotiation of fees, a Professional Service Contract will be issued to the selected firm.

TENTATIVE SELECTION SCHEDULE

The following represents anticipated milestone dates for the selection. Any known conflicts with the dates such as holidays, schedule vacations, trade seminars, etc. that could interfere with your participation in the selection should be made known to the Contracts Officer immediately.

Pre-Submittal Meeting:	July 16, 2015
SFQ Proposals due:	July 27, 2015

Short List Notice:	August 10, 2015
Interviews (Optional)	August 17, 2015
Award by Pima County Board of Directors:	September 8, 2015
Fee Negotiations / Agreement Executed:	September 18, 2015

ACCEPTANCE OF EVALUATION METHODOLOGY

By submitting Qualifications in response to this SFQ, respondent acknowledges and accepts the evaluation process, the established criteria and associated point values, and that determination of the "most qualified" firm will require subjective judgments by the District.

COST OF PROPOSALS

This solicitation does not commit District to pay any costs incurred in the preparation, presentation or return of submittal including interview time.

WAIVER OF CLAIMS

Each Respondent, in submitting a proposal is deemed to have waived any claims for damage by reason of the selection of another proposal and/or the rejection of his proposal.

SUSPENSION/DEBARMENT

By submitting its Qualifications in response to this SFQ, respondent is certifying that neither it nor any of its principals are debarred or suspended or under consideration for suspension or debarment by any federal, state or local government or agency. If a respondent is not able to so certify, the respondent must submit a letter that identifies the agency involved and a contact and explains why respondent is suspended or debarred or being considered for suspension or debarment.

JOINT VENTURES

Respondents that submit an SOQ as a Joint Venture must include a copy of the Joint Venture Agreement at the time of submittal. This Agreement is NOT included in the page-count limitation. The Introductory Letter must be executed by the Joint Venture Partners or by one Joint Venturer with a letter of authorization from the other Joint Venture Partners.

ELIGIBLE RESPONDENTS

Only individual firms or lawfully formed business organizations may apply. (This does not preclude a respondent from using consultants.) The County will contract only with the individual firm(s) or formal organization that submits a Qualification.

VENDOR REGISTRATION

Pima County has implemented an internet-based vendor registration system for Pima County Vendor Self Service (VSS). This system allows Vendors to create and maintain their own Vendor record online using a standard internet browser. The internet link for Vendor Registration is http://www.pima.gov/procure/venreg.htm All Consultants must register in VSS.

PIMA COUNTY ONE-STOP

Pima County One Stop often has experienced design, professional and administrative staff available for immediate hire. Call (520) 243-6700 or contact One Stop at http://www.pima.gov/CED/CS/OneStop/EmployerServ.html.

SMALL LOCAL PREFERENCE

On March 6, 2012, Pima County Board of Supervisors passed and adopted Ordinance Number 2012-10 amending Section 2 of the Pima County Procurement Code, Title 11, Chapter 11.12 to establish a means to provide a preference for small, local Architectural and Engineering firms in the award of County Architectural and Engineering Contracts. See Section 3 – Requirements for Statement of Qualification, Paragraph H – Small Local Preference and APPENDIX 3 – Small Local Preference Certification Form.

PROTESTS

The Pima County protest procedures are in Chapter 11.20 of the Pima County Procurement Code, available through http://www.pima.gov/cob/code/. The five-day period to file a protest of the award will be measured from the date the Notice of Recommendation for Award is posted on the Pima County Procurement website at http://www.pima.gov/procure/awards/ without regard to whether individual notices were issued. It is the responsibility of interested parties to check the website.

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SECTION 2 – REQUIRED SUBMITTAL INFORMATION

Respondents shall submit **one signed original and three (3) copies** of the proposal.

Responses should be prepared SIMPLY AND ECONOMICALLY, providing a straightforward, CONCISE description of the respondent's ability to meet the requirements of this SFQ. Emphasis shall be on the QUALITY, completeness, clarity of content, responsiveness to the requirements, and an understanding of District's needs. Additional information other than that requested *shall not be included* or the proposal may be rejected.

Evaluation Criteria	**Page Limit**
Introductory Letter	1-2 pages
Firm's Capabilities	3 pages or less
Firm's Key Personnel	3 pages or less
Method of Approach	3 pages or less
Total Pages per SOQ	11 pages max, not including Appendices
Appendix 1 (resumes only)	1-2 pages per resume
Appendix 2 (Non-Discrimination / SBE Utilization)	
Appendix 3 (Small Local Certification)	

- Qualifications shall be a MAXIMUM OF **ELEVEN (11)** PRINTED PAGES. The following do not count toward the page count limitation: Front and back cover, Table of Contents, divider sheets, Resumes, Affirmative Action Statement, Project Team Member Utilization Form, and Small Local Preference Certification Form.

- **Appendix 1** – submit Resumes (not more than 2 pages each) of key personnel, and any subconsultants who will perform these services.

- **Appendix 2** – submit Non-Discrimination Statement and the Project Team Member Utilization Form.

- **Appendix 3** – submit Small Local Preference Certification Form.

- The District reserves the right to accept or reject proposals that deviate from the preferred page count.

Qualifications and any other information submitted by respondents in response to this SFQ shall become the property of the District.

Qualifications shall consist of answers to questions identified in Section 3 of the SFQ. It is not necessary to repeat the question in the Qualifications; however, it is essential to reference the question number with the corresponding answer. Respondents shall carefully read the information contained in this SFQ and submit a complete response to all requirements and questions as directed. Incomplete Qualifications will be considered non-responsive and subject to rejection. Qualifications that are qualified with conditional clauses, alterations, items not called for in the SFQ documents, or irregularities of any kind are subject to rejection by the District, at its option.

The District makes no representations of any kind that an award will be made as a result of this SFQ. The District reserves the right to accept or reject any or all Qualifications, waive any informalities or minor technical inconsistencies, or delete any item/requirements from this SFQ when deemed to be in District's best interest.

Failure to comply with all requirements contained in this SFQ may result in the rejection of the Qualifications.

PAGE SIZE, BINDING, DIVIDERS, AND INDEX TABS

Qualifications shall be printed on letter-size (8-1/2" x 11") paper and assembled with comb or spiral-type bindings or staples. DO NOT USE METAL-RING HARD COVER BINDERS. Larger sheets may be used if they are folded to not larger than 81/2 x 11 inches. For typewritten pages, the minimum font size is 10, and black ink is preferred.

Additional attachments shall NOT be included with the Qualifications. Only the responses provided by the respondent to the questions identified in Section 3 of this SFQ will be used by the District for evaluation.

Separate and identify each criteria response to Section 3 of this SFQ by use of a divider sheet with an integral tab for ready reference.

TABLE OF CONTENTS

Submittals shall include a "Table of Contents" and give page numbers for each part the Qualifications.

PAGINATION

Number all pages of the submittal sequentially using Arabic numerals (1, 2, 3, etc).

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SECTION 3 – EVALUATION CRITERIA *(90 POINTS)*

Respondents shall carefully read the information contained in the following criteria and submit a complete Statement of Qualifications to all questions in Section 3 formatted as directed above. The following evaluation criteria will be used in the evaluation of firms. The response should address each item in the order presented below. The SOQ shall include a brief narrative describing the firm's qualifications as it relates to each criterion.

1. Introductory Letter *(1-2 pages)*

The introductory letter should be approximately one (1) to two (2) pages (8.5 X 11 inches). The letter shall be on company letterhead including the company name, address, phone number and fax number. The letter should be addressed to: Pima County Procurement Department, Design & Construction Division, Attn: Anthony V. Schiavone, Subject: Solicitation No. 183102 – Hydrologic Services for Santa Cruz Risk Mapping. The letter must be signed in an original ink signature, by an authorized officer of the firm and should contain the following:

a. City and state of firm's corporate headquarters;

b. A statement of interest for the Project including a summary of key points describing the respondent's unique qualifications as they pertain to this particular Project;

c. A statement regarding acknowledgement of all issued addenda, if any, and agreement or exception to the terms contained in the Sample Professional Services Contract. (See Exhibit '1', "Sample Professional Services Contract".)

d. A statement that the consultant currently maintains or is capable of obtaining insurance in the amounts shown in the Sample Professional Services Contract, and that DISTRICT will be *endorsed* as additional insured on respondent's insurance policy or policies.

e. Contact information regarding questions about the proposal and the person authorized to contractually bind the firm into a written contract. Include names, phone and email.

2. Firm's Capabilities *(20 points)* ***3 pages or less***

a. Years of experience the *firm* has with Flood Risk Mapping; (***1 point)***

b. Provide a statement as to the firm size and average workload; ***(2 points)***

c. Provide a listing of relevant examples of Flood Risk Mapping services provided by the firm in the last three to five years in Pima County or southern Arizona for other entities.

d. Include the following: ***(10 points)***

- Name of Owner/Client
- Name/Description of project, including location (City, State)
- Total approximate project construction cost (to indicate scale of project)
- Services provided by the firm (inspection, surveillance, testing, etc.)
- Whether firm was prime or subconsultant in that project
- Start date and end date of services
- Your original contract amount, and your final contract amount
- Contact information of Owner/Client for further information

PLEASE NOTE: if the referenced project was completed by a staff member while that person was employed by another firm, you must note the name of the firm that employee conducted the work under;

e. References - **List THREE (3) references** that can verify satisfactory performance on the above projects **completed within the past three to five years.** Include the following: ***(3 points)***

- Firm Name
- Point of contact
- Address
- Telephone
- Fax
- Email address
- Key personnel that performed the work

f. Capability and commitment of the firm to accept District's Professional Services Contract in addition to other on-going projects and priorities – identify methods and tools used to report on backlogs and available staff capacity in relation to current and upcoming workload; ***(2 points)***

g. Describe Firm's action plan/personnel depth to replace personnel should identified key personnel become unavailable for any reason. ***(2 points)***

3. Firm's Key Personnel *(35 points)* **3 pages or less (not including resumes)**

a. As an Appendix, submit brief resumes for the Resident Engineer and Hydrologists (no more than 2 pages each person), and include current copies of their relevant Arizona Professional Registration, and/or Arizona and National materials testing and related certifications. ***(5 points)***

b. Name the lead Project Manager/Firm Representative that will manage the Contract and be the point of contact for coordination of services; ***(3 points)***

c. Describe the Qualifications and Experience of the Inspection Supervisor(s)/Manager(s) proposed to perform the services under this Professional Service Contract. At a minimum, the Engineer must have at least five years of experience in the Flood Risk Mapping Analysis, and possess an engineering background with a Arizona Board of Technical Registration; ***(7 points)***

d. Describe the Qualifications and Experience of the staff anticipated to be utilized under this Contract. ***(7 points)***

e. For each key personnel, identify any major projects they are currently working on that may compete with their time on this project. If possible, represent the percentage of their time devoted to those other projects in comparison with the percentage to be devoted to this project; ***(3 points)***

f. Provide an organization chart (11" x 17" preferred) that depicts the project team organization (including District and subconsultants to the firm) and lines of authority. Clearly indicate superior/subordinate reporting relationships; ***(5 points)***

4. Method of Approach (25 points) **3 pages or less**

a. Describe the communication method used with the Team and District. Describe your various preferred communication methods within your organization (email, fax, phone, letter, etc.); ***(5 points)***

b. Describe your process used to monitor inspectors' performance and rectify deficiencies; ***(5 points)***

c. Describe your process to ensure that services are delivered in the most efficient and cost-effective method; ***(5 points)***

d. Describe your process for providing multiple crews simultaneously; ***(5 points)***

e. Describe the vehicles and equipment available for needed projects, describe any unique technologies used. ***(5 points)***

5. SBE Utilization & Non-Discrimination (submit in Appendix '2')

a. Provide a brief statement describing your firm's Non-Discrimination Policy. ***(1 point)***

b. Percentage of SBE utilization – **Complete Project Team Member Utilization Form (Attachment 1)** ***(9 points)***

Evaluation criteria points for certified Small Business Enterprises (SBE) shall be as set forth by County policy. The City of Tucson's SBE Business Directory is available at and http://www.pima.gov/procure/sbe/SBEdir.pdf and contain the current listing of certified SBE firms that may potentially be used on this project. How the prime Firm utilizes SBE firms from these lists and in what areas is completely at the prime Firm's discretion. Any questions regarding the SBE Program or the Project Team Member Utilization form may be directed to the Pima County SBE Program Coordinator at (520) 724-8260.

6. Small Local Preference (submit in Appendix '3')

Architectural or Engineering Services shall be procured in accordance with Title 34 of Arizona Revised Statutes, except that a preference shall be given for small, local firms pursuant to Pima County Ordinance Number 2012-10 as follows:

a. An Architectural or Engineering firm with fewer than 100 employees in Pima County and headquartered in Pima County shall be deemed an "A" firm and shall receive a preference in the amount of five percent (5%) of the total points available in the evaluation.

b. An Architectural or Engineering firm with fewer than 100 employees in Pima County, headquartered elsewhere, that has maintained an office in Pima County for a minimum of two years and the majority of whose employees reside in Pima County shall be deemed a "B" firm and shall receive a preference in the amount of three percent (3%) of the total points available in the evaluation.

c. Preference points shall be computed and assigned separately for each step in the evaluation.

d. The preference points under this section shall be cumulative and in addition to any other preference points to which a firm may be entitled.

7. Interviews (100 points)

The District may hold interviews with the 3 – 5 top scoring firms based upon the evaluation of the statements of qualifications submitted. If interviews are held the interview evaluation criteria and relative weights will be developed by our Selection Committee during the review of the qualifications statements, however generally, the criteria and weights will be divided between the firms experience and capabilities relative to the project (45%), the qualifications and experience of individuals comprising the project team (45%), and SBE utilization and Affirmative Action plan (9% and 1% respectively), as well as 3-5% of the total available points for Small Local Preference. Specific interview topics/criteria and related scoring weights will be provided to the firms invited to interview for this project at a later date.

If interviews are held, they will be scored at 100 maximum points. The total score for the interview will be added to the written qualifications score to determine the ranking of the final listed firms. If interviews are not held the final ranking will be determined by the scores achieved from evaluations of the statement of qualifications.

The District reserves the right to make such additional investigations as it deems necessary to establish the competence and financial stability of any Respondent.

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EXHIBIT "1" – SAMPLE PROFESSIONAL SERVICES CONTRACT

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT **PROJECT** **Santa Cruz Flood Risk Mapping** **CONSULTANT** **NOT TO EXCEED** **FUNDING:** **FEMA Grant**	(STAMP HERE)

CONSULTANT SERVICES CONTRACT

THIS Contract is entered into between Pima County Regional Flood Control District, a special taxing District under A.R.S. Title 48, hereinafter called DISTRICT, and <Consultant>, hereinafter called CONSULTANT, collectively referred to as the Parties.

W I T N E S S E T H

WHEREAS, DISTRICT requires the services of a CONSULTANT registered in the State of Arizona and qualified to provide Hydrologic Services for Santa Cruz Flood Risk Mapping Project; and,

WHEREAS, CONSULTANT is qualified and willing to provide such services; and

WHEREAS, based on CONSULTANT'S representations in response to Pima County Solicitation No. 183102, CONSULTANT was determined to be the most qualified for this Project, and

WHEREAS, CONSULTANT has proposed to perform the work at a price acceptable to DISTRICT.

NOW, THEREFORE, in consideration of the foregoing recitals and other valuable and good consideration the Parties agree as follows:

ARTICLE 1 – TERM AND EXTENSION/RENEWAL/CHANGES

This Contract as approved by the Board of Directors commences on the <BOD Approval Date> date, and terminates on <Termination Date>, unless sooner terminated or further extended pursuant to the provisions of this Contract.

DISTRICT has the option to extend the Contract termination date for project completion. Any modification or extension of the Contract termination date will be by formal written amendment executed by the Parties. The Procurement Director or the DISTRICT Board of Directors, as required by the Pima County Procurement Code, must approve change orders to this Contract or the Scope of Services before CONSULTANT performs the work authorized by the change order.

ARTICLE 2 – SCOPE OF SERVICES

CONSULTANT agrees to provide Consultant Professional Services for the Project for the DISTRICT as described in **APPENDIX A: SCOPE OF SERVICES** (5 pages), attached to this Contract.

ARTICLE 3 – COMPENSATION AND PAYMENT

In consideration of the services specified in this Contract, DISTRICT agrees to pay CONSULTANT Not to Exceed <Estimate from Consultant ($XX,XXX.00)>. CONSULTANT'S fees will be as stated in **APPENDIX C: CONSULTANT FEE PROPOSAL** <(# of Pages)>, attached to this Contract. Hourly rates and all other rates included under this Contract will remain fixed throughout the term of the Contract. DISTRICT may consider adjustments to rates in connection with any extensions of the Contract term.

Unless otherwise agreed, CONSULTANT will submit invoices monthly. All invoices will be accompanied by a narrative description of the work performed during the period covered by the invoice, time accounting information, and an allocation of all direct costs, including reimbursable costs and SUBCONSULTANT charges, to the tasks identified in the Scope of Work for which those costs were incurred. The time accounting information should be sufficient to show the workers and hours worked by day for the period covered by the invoice. SUBCONSULTANT charges will be supported by appropriate documentation with each separate invoice submitted.

For the period of record retention required under Article 23, DISTRICT reserves the right to question any payment made under this article and to require reimbursement therefor by setoff or otherwise for payments determined to be improper or contrary to the Contract or law.

CONSULTANT will not perform work in excess of the Contract Amount without prior authorization by an amendment executed by DISTRICT. Work performed in excess of the Contract Amount without prior authorization by amendment is at CONSULTANT'S own risk.

ARTICLE 4 – INSURANCE

The Insurance Requirements herein are minimum requirements for this Contract and in no way limit the indemnity covenants contained in this Contract. DISTRICT in no way warrants that the minimum limits contained herein are sufficient to protect the CONSULTANT from liabilities that arise out of the performance of the work under this Contract. The CONSULTANT is free to purchase additional insurance.

CONSULTANT'S insurance will be placed with companies licensed in the State of Arizona or hold approved non-admitted status on the Arizona Department of Insurance List of Qualified Unauthorized Insurers. Insurers will have an "A.M. Best" rating of not less than A- VII. DISTRICT in no way warrants that the above-required minimum insurer rating is sufficient to protect the CONSULTANT from potential insurer insolvency.

4.1 Minimum Scope and Limits of Insurance:

CONSULTANT will procure and maintain, until all of their obligations have been discharged, coverage with limits of liability not less than those stated below.

4.1.1 Commercial General Liability (CGL) – Occurrence Form with limits of $1,000,000 Each Occurrence and $2,000,000 General Aggregate. Policy will include bodily injury, property damage, and broad form contractual liability coverage, and products – completed operations.

4.1.2 Business Automobile Liability – Bodily Injury and Property Damage for any owned, hired, and/or non-owned automobiles used in the performance of this Contract with a Combined Single Limit (CSL) of $1,000,000.

4.1.3 Workers' Compensation and Employers' Liability - Statutory requirements and benefits. Coverage is compulsory for employers of one or more employees. Employer's Liability - $500,000.
Note: The Workers' Compensation requirement will not apply to a CONSULTANT that is exempt under A.R.S. § 23-901, and when such CONSULTANT executes the appropriate DISTRICT Sole Proprietor or Independent CONSULTANT waiver form.

4.1.4 Professional Liability (Errors and Omissions) Insurance – This insurance is required when soliciting work from licensed professionals. The policy limits will be not less than $2,000,000

Each Claim and $2,000,000 Annual Aggregate. The policy will cover professional misconduct or negligent acts for those positions defined in the Scope of Work of this contract.
In the event that the Professional Liability insurance required by this Contract is written on a claims-made basis, CONSULTANT warrants that any retroactive date under the policy will precede the effective date of this Contract and, either continuous coverage will be maintained, or an extended discovery period will be exercised, for a period of two (2) years beginning at the time work under this Contract is completed.

Examples of Profession Services requiring E&O insurance: Accounting, Architecture, Asbestos Design, Inspection or Abatement Contractors, Licensed Health Care Practitioners, Legal Services, Engineering Services, or Surveying

4.2 Additional Insurance Requirements:

The policies will include, or be endorsed to include, as required by this written agreement, the following provisions:

4.2.1 Additional Insured Endorsement: The General Liability and Business Automobile Liability Policies will each be endorsed to include DISTRICT, its departments, districts, boards, commissions, officers, officials, agents, and employees as additional insureds with respect to liability arising out of the activities performed by or on behalf of the CONSULTANT.

4.2.2 Subrogation Endorsement: The General Liability, Business Automobile Liability and Workers' Compensation Policies will each contain a waiver of subrogation endorsement in favor of DISTRICT, and its departments, districts, boards, commissions, officers, officials, agents, and employees for losses arising from work performed by or on behalf of the CONSULTANT.

4.2.3 Primary Insurance Endorsement: The CONSULTANT'S policies will stipulate that the insurance afforded the CONSULTANT will be primary and that any insurance carried by the Department, its agents, officials, employees or DISTRICT will be excess and not contributory insurance, as provided by A.R.S. § 41-621 (E).

4.2.4 Insurance provided by the CONSULTANT will not limit the CONSULTANT'S liability assumed under the indemnification provisions of this Contract.

4.3 Notice of Cancellation:

For each insurance policy required by the insurance provisions of this Contract, the CONSULTANT must provide to DISTRICT, within two (2) business days of receipt, a notice if a policy is suspended, voided, or cancelled for any reason. Such notice will be mailed, emailed, hand-delivered or sent by facsimile transmission to Pima County Procurement, 130 W. Congress, 3rd Floor, Tucson, AZ 85701, Fax: (520) 724-4434.

4.4 Verification of Coverage:

CONSULTANT will furnish DISTRICT with certificates of insurance (valid ACORD form or equivalent approved by DISTRICT) as required by this Contract. An authorized representative of the insurer will sign the certificates.

4.4.1 All certificates and endorsements, as required by this written agreement, are to be received and approved by DISTRICT before work commences. Each insurance policy required by this Contract must be in effect at, or prior to, commencement of work under this Contract. Failure to maintain the insurance coverages or policies as required by this Contract, or to provide evidence of renewal, is a material breach of contract.

4.4.2 All certificates required by this Contract will be sent directly to the Pima County Procurement, 130 W. Congress, 3rd Floor, Tucson, AZ 85701. DISTRICT project or contract number and project description will be noted on the certificate of insurance. DISTRICT reserves the right to require complete copies of all insurance policies required by this Contract at any time.

4.5 Approval and Modifications:

DISTRICT Risk Management reserves the right to review or make modifications to the insurance limits, required coverages, or endorsements throughout the life of this contract, as deemed necessary. Such action will not require a formal Contract amendment but may be made by administrative action.

ARTICLE 6 – INDEMNIFICATION

To the fullest extent permitted by law, CONSULTANT indemnifies and holds harmless DISTRICT and its officers, employees and agents from and against any and all suits, actions, legal administrative proceedings, claims or demands and costs attendant thereto, including reasonable attorney's fees and court costs, to the extent caused by any negligent, reckless or intentionally wrongful act or omission of CONSULTANT, its agents, employees or anyone acting under its direction or control or on its behalf in connection with performance of this Contract. The obligations under this Article do not extend to the negligence of DISTRICT, its agents, employees or indemnities.

All warranty and indemnification obligations under this Contract survive expiration or termination of the Contract, unless expressly provided otherwise. Any indemnification provision inconsistent with A.R.S. § 34-226 is, in all cases, not void, but will be interpreted and applied as if it were consistent with A.R.S. § 34-226.

Upon request, CONSULTANT may fully indemnify and hold harmless any private property owner granting a right of entry to CONSULTANT for the purpose of completing the project.

ARTICLE 7 – COMPLIANCE WITH LAWS

CONSULTANT will comply with all applicable federal, state, and local laws, rules, regulations, standards and Executive Orders, without limitation to those designated within this Contract. The laws and regulations of the State of Arizona govern the rights of the Parties, the performance of this Contract, and any disputes hereunder. Any action relating to this Contract will be brought and maintained in Superior Court in Pima County. Any changes in the governing laws, rules, and regulations during the term of this Contract apply, but do not require an amendment.

ARTICLE 8 – STATUS OF CONSULTANT

The status of the CONSULTANT is that of an independent contractor and CONSULTANT is not considered an employee of Pima County and is not entitled to receive any of the fringe benefits associated with regular employment, and is not subject to the provisions of the merit system. CONSULTANT is responsible for payment of all Federal, State and Local taxes associated with the compensation received by CONSULTANT from DISTRICT. CONSULTANT is responsible for program development and operation without supervision by DISTRICT.

ARTICLE 9 – CONSULTANT'S PERFORMANCE

CONSULTANT will perform the work in accordance with the terms of the Contract and with the degree of care and skill required of any similarly situated Arizona registrant. CONSULTANT will employ suitably trained and skilled professional personnel to perform all required services under this Contract. Prior to changing any key personnel, especially those key personnel DISTRICT relied upon in making this Contract, CONSULTANT will obtain the approval of DISTRICT.

CONSULTANT is responsible for the professional quality, technical accuracy, timely completion, and the coordination of all its effort and other services furnished by CONSULTANT under this Agreement. Without additional compensation, CONSULTANT will correct or revise any errors, omission, or other deficiencies in all products of its efforts and other services provided. This includes resolving any deficiencies arising out of the acts or omissions of CONSULTANT found during or after the course of the services performed by or for CONSULTANT under this Agreement, regardless of DISTRICT having knowledge of or condoning or accepting

the products or the services. Correction of such deficiencies will be at no cost to DISTRICT.

ARTICLE 10 – NON-WAIVER

The failure of DISTRICT to insist in any one or more instances upon full and complete compliance with any of the terms and provisions of this Contract or to take any action permitted as a result thereof is not a waiver or relinquishment of the right to insist upon full and complete performance of the same or any other covenant or condition either in the past or in the future. The acceptance by either party of sums less than may be due and owing it at any time is not an accord and satisfaction.

ARTICLE 11 – SUBCONSULTANT

CONSULTANT is fully responsible for all acts and omissions of its SUBCONSULTANT and of persons directly or indirectly employed by SUBCONSULTANT and of persons for whose acts any of them may be liable to the same extent that CONSULTANT is responsible for the acts and omissions of persons directly employed by it. Nothing in this Contract creates any obligation on the part of DISTRICT to pay or see to the payment of any money due any SUBCONSULTANT, except as may be required by law.

ARTICLE 12 – NON-ASSIGNMENT

CONSULTANT may not assign its rights to this Contract in whole or in part, without prior written approval of DISTRICT. DISTRICT may withhold consent to assignment at its sole discretion, provided that DISTRICT will not unreasonably withhold such approval.

ARTICLE 13 – NON-DISCRIMINATION

CONSULTANT will comply with all provisions and requirements of Arizona Executive Order 2009-09 which is hereby incorporated into this Contract as if set forth in full herein **including flow down of all provisions and requirements to any SUBCONSULTANTS.** During the performance of this Contract, CONSULTANT will not discriminate against any employee, client or any other individual in any way because of that person's age, race, creed, color, religion, sex, disability or national origin.

ARTICLE 14 – AMERICANS WITH DISABILITIES ACT

CONSULTANT will comply with all applicable provisions of the Americans with Disabilities Act (Public Law 101-336, 42 U.S.C. 12101-12213) and all applicable federal regulations under the Act, including 28 CFR Parts 35 and 36. If CONSULTANT is carrying out government programs or services on behalf of DISTRICT, then CONSULTANT will maintain accessibility to the program to the same extent and degree that would be required of the DISTRICT under 28 CFR Sections 35.130, 35.133, 35.149 through 35.151, 35.160, 35.161 and 35.163. Failure to do so could result in the termination of this Agreement.

ARTICLE 15 – CANCELLATION FOR CONFLICT OF INTEREST

This Contract is subject to the provisions of A.R.S. §38-511 which provides in pertinent part:

"The state, its political subdivisions or any department of either may, within three years after its execution, cancel any contract, without penalty or further obligation, made by the state, its political subdivisions, or any of the departments or agencies of either if any person significantly involved in initiating, negotiating, securing, drafting or creating the contract on behalf of the state, its political subdivisions or any of the departments or agencies of either is, at any time, while the contract or any extension of the contract is in effect, an employee or agent of any other party to the contract in any capacity or a consultant to any other party to the contract with respect to the subject matter of the contract."

ARTICLE 16 – TERMINATION OF CONTRACT FOR DEFAULT

A. Upon a failure by CONSULTANT to cure a default under this Contract within ten (10) days of receipt of notice from DISTRICT of the default, DISTRICT may, in its sole discretion, terminate this Contract for default by written notice to CONSULTANT. In this event, DISTRICT may take over the work and complete it by Contract or otherwise. The CONSULTANT and its sureties, if any, will be liable for any damage to the DISTRICT resulting from CONSULTANT'S default, including any increased costs incurred by DISTRICT in completing the work.

B. The occurrence of any of the following constitutes an event of default:
   1. Abandonment of or refusal or failure to prosecute the work or any separable part thereof with the diligence that will insure completion within the time specified in this Contract, including any extension, or a failure to complete the work (or the separable part of the work) within the specified time;
   2. Persistent or repeated refusal or failure to supply enough properly skilled workers or materials to perform the work on schedule;
   3. Failure to provide competent supervision at the site;
   4. Failure to take down, rebuild, repair, alter or amend any defective or deficient work, or remove any defective or deficient Material
   5. Failure to make prompt payment to subconsultants or suppliers for material or labor;
   6. Loss of CONSULTANT'S business or other required license or authority, or any curtailment or cessation for any reason of business or business operations that would substantially impair or preclude CONSULTANT'S performance of this Contract;
   7. Disregard of laws, ordinances, or the instructions of DISTRICT or its representatives, or any otherwise substantial violation of any provision of the Contract; or
   8. If a voluntary or involuntary action for bankruptcy is commenced with respect to CONSULTANT, or CONSULTANT becomes insolvent, makes a general assignment for the benefit of creditors, or has a receiver or liquidator appointed in respect of its assets.

C. In the event of a termination for default:
   1. All finished and unfinished as-builts, shop drawings, documents, data, studies, surveys, drawings, photographs, reports and other information in whatever form, including electronic, acquired or prepared by CONSULTANT for this project become DISTRICT'S property and will be delivered to DISTRICT not later than five (5) business days after the effective date of the termination;
   2. DISTRICT may withhold payments to CONSULTANT arising under this or any other Contract for the purpose of set-off until such time as the exact amount of damage due DISTRICT from CONSULTANT is determined; and
   3. Subject to the immediately preceding subparagraph (2), DISTRICT'S liability to CONSULTANT will not exceed the reasonable value of work satisfactorily performed prior to the date of termination for which payment has not been previously made.

D. The Contract will not be terminated for default nor CONSULTANT charged with damages under this Article, if—
   1. Excepting item (8) in paragraph B above, the event of default or delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the CONSULTANT. Examples of such causes include—
      (i) Acts of God or of the public enemy,
      (ii) Acts of DISTRICT in either its sovereign or contractual capacity,
      (iii) Acts of another consultant in the performance of a Contract with the DISTRICT,
      (iv) Fires,
      (v) Floods,
      (vi) Epidemics,
      (vii) Quarantine restrictions,
      (viii) Strikes,
      (ix) Freight embargoes,
      (x) Unusually severe weather, or

(xi) Delays of subconsultants or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both CONSULTANT and the subconsultants or suppliers; and

2. CONSULTANT, within three (3) days from the beginning of any event of default or delay (unless extended by DISTRICT), notifies DISTRICT in writing of the cause(s) therefor. In this circumstance, DISTRICT will ascertain the facts and the extent of the resulting delay. If, in the judgment of DISTRICT, the findings warrant such action, DISTRICT may extend the time for completing the work.

E. For the purposes of paragraph A above, "receipt of notice" includes receipt by hand by CONSULTANT'S onsite project manager, facsimile transmission, or under the Notices clause of this Contract.

F. If, after termination of the Contract for default, it is determined that CONSULTANT was not in default, or that the delay was excusable, the rights and obligations of the Parties will be the same as if the termination had been issued for the convenience of DISTRICT.

G. The rights and remedies of DISTRICT in this Article are cumulative and in addition to any other rights and remedies provided by law or under this Contract.

ARTICLE 17 – TERMINATION FOR CONVENIENCE OF DISTRICT

DISTRICT may terminate this Contract at any time by giving written notice to CONSULTANT of such termination and specifying the effective date thereof, at least fifteen (15) days before the effective date of such termination. In that event, all finished or unfinished documents and other materials will, at the option of the DISTRICT, become its property. If DISTRICT terminates the Contract as provided herein, DISTRICT will pay CONSULTANT an amount based on the time and expenses incurred by CONSULTANT prior to the termination date. However, DISTRICT will make no payment for anticipated profit on unperformed services.

ARTICLE 18 – NON-APPROPRIATION OF FUNDS

Notwithstanding any other provision in this Contract, this Contract may be terminated if for any reason the Pima County Regional Flood Control District Board of Directors does not appropriate sufficient monies for the purpose of maintaining this Contract. In the event of such termination, DISTRICT will have no further obligation to CONSULTANT, other than payment for services rendered prior to termination.

ARTICLE 19 – NOTICES

Any notice required or permitted to be given under this Contract will be in writing and will be served by delivery or by certified mail upon the other Party as follows:

DISTRICT:
<Project Manager>
<Requesting Department>
<Building Location>
<Address>
<City, State Zip>
<Tel: (XXX) XXX-XXXX>
<Fax: (XXX) XXX-XXXX>

CONSULTANT:
<Consultant Contact, Position>
<Consultant Name>
<Consultant Address>
<City, State Zip>
<Tel: (XXX) XXX-XXXX>
<Fax: (XXX) XXX-XXXX>

ARTICLE 20 – OTHER DOCUMENTS

CONSULTANT and DISTRICT in entering into this Contract have relied upon information provided in CONSULTANT'S response to a request for fee proposal. These documents are hereby incorporated into and made a part of this Contract as if set forth in full herein, to the extent not inconsistent with the provisions of this Contract. CONSULTANT will perform services in accordance with the terms of the Contract and at a level of care consistent with prevailing industry standards. In the event any provision of this Contract is inconsistent with those of any other document, the Contract provisions will prevail.

ARTICLE 21 – REMEDIES

Either Party may pursue any remedies provided by law for the breach of this Contract, provided, however, that the procedures in ARTICLE 25 are first exhausted. No right or remedy is intended to be exclusive of any other right or remedy and each is cumulative and in addition to any other right or remedy existing at law or at equity or by virtue of this Contract.

ARTICLE 22 – SEVERABILITY

Each provision of this Contract stands alone, and any provision of this Contract found to be prohibited by law will be ineffective to the extent of such prohibition without invalidating the remainder of this Contract.

ARTICLE 23 – BOOKS AND RECORDS

CONSULTANT will keep and maintain proper and complete books, records and accounts, which will be open at all reasonable times for inspection and audit by duly authorized representatives of DISTRICT.

CONSULTANT will retain all records relating to this Contract at least five (5) years after its termination or cancellation or until any related pending proceeding or litigation has been closed, if later. Alternatively, CONSULTANT may, at its option, deliver such records to DISTRICT for retention.

ARTICLE 24 – DELAYS

Neither Party hereto will be in default in the performance of its obligations hereunder to the extent that the performance of any such obligation is prevented or delayed by any cause, existing or future, which is beyond the reasonable control of such Party.

ARTICLE 25 – DISPUTES

In the event of a dispute between DISTRICT and CONSULTANT regarding any part of this Contract or the Parties' obligations or performance hereunder, either Party may request a special meeting between their respective representatives to resolve the dispute. If the dispute remains unresolved, then either Party may request escalation of the issue to a meeting between the Director of the Pima County Regional Flood Control District and CONSULTANT'S counterpart official, such meeting to be held within one week of the request, unless otherwise agreed. If the dispute is still not resolved after that meeting, then either Party may pursue such remedy or remedies as may be available to them under the laws of the State of Arizona.

The Parties will continue performance of their respective obligations under this Contract notwithstanding the existence of any dispute.

ARTICLE 26 – OWNERSHIP OF DOCUMENTS

All original drawings, field data, estimates, field notes, plans, specifications, documents, reports, calculations, and other information developed by CONSULTANT under this Contract vest in and become the property of DISTRICT and will be delivered to DISTRICT upon completion or termination of the services, but CONSULTANT may retain and use copies thereof. DISTRICT agrees that the material will not be used for any

project other than the project for which it was designed without the express permission of CONSULTANT.

ARTICLE 27 – PUBLIC INFORMATION

Pursuant to A.R.S. § 39-121 et seq., and A.R.S. §§ 34-603(H), 604(H), in the case of construction or Architectural and Engineering services procured under A.R.S. Title 34, Chapter 6, all information submitted by CONSULTANT in any way related to this Contract, including, but not limited to, pricing, product specifications, work plans, and any supporting data becomes public information and upon request, is subject to release and/or review by the general public including competitors.

Any information submitted related to this Contract that CONSULTANT believes constitutes proprietary, trade secret or otherwise confidential information must be appropriately and prominently marked as CONFIDENTIAL prior to submittal to DISTRICT and be accompanied by an index specifically identifying and describing the general contents of each page so marked. The index is a public record and should not include any information considered confidential.

Notwithstanding the above provisions, in the event records marked CONFIDENTIAL are requested for public release pursuant to A.R.S. § 39-121 et seq., DISTRICT will release records marked CONFIDENTIAL ten (10) business days after the date of notice to CONSULTANT of the request for release, unless CONSULTANT has, within the ten (10) day period, secured a protective order, injunctive relief or other appropriate order from a court of competent jurisdiction, enjoining the release of the records. For the purposes of this paragraph, the day of the request for release is not counted in the time calculation. CONSULTANT will be notified of any request for such release on the same day of the request for public release or as soon thereafter as practicable.

DISTRICT will not, under any circumstances, be responsible for securing a protective order or other relief enjoining the release of records marked CONFIDENTIAL, nor will DISTRICT be in any way financially responsible for any costs associated with securing such an order.

ARTICLE 28 – LEGAL ARIZONA WORKERS ACT COMPLIANCE

CONSULTANT will at all times during the term of this Contract comply with all federal immigration laws applicable to CONSULTANT'S employment of its employees, and with the requirements of A.R.S. § 23-214 (A) (together the "State and Federal Immigration Laws"). CONSULTANT will further ensure that each SUBCONSULTANT who performs any work for CONSULTANT under this Contract likewise complies with the State and Federal Immigration Laws.

DISTRICT has the right at any time to inspect the books and records of CONSULTANT and any SUBCONSULTANT in order to verify such party's compliance with the State and Federal Immigration Laws.

Any breach of CONSULTANT'S or any SUBCONSULTANT'S warranty of compliance with the State and Federal Immigration Laws, or of any other provision of this section, is a material breach of this Contract subjecting CONSULTANT to penalties up to and including suspension or termination of this Contract. If the breach is by a SUBCONSULTANT, and the subcontract is suspended or terminated as a result, CONSULTANT will be required to take such steps as may be necessary to either self-perform the services that would have been provided under the subcontract or retain a replacement SUBCONSULTANT (subject to DISTRICT approval if SBE or DBE preferences apply), as soon as possible so as not to delay project completion.

CONSULTANT will advise each SUBCONSULTANT of DISTRICT'S rights, and the SUBCONSULTANT'S obligations, under this Article by including a provision in each subcontract substantially in the following form:

"SUBCONSULTANT hereby warrants that it will at all times during the term of this contract comply with all federal immigration laws applicable to SUBCONSULTANT's employees, and with the requirements of A.R.S. § 23-214 (A). SUBCONSULTANT further agrees that DISTRICT may inspect the SUBCONSULTANT's books and records to insure that SUBCONSULTANT is in compliance with these requirements. Any breach of this paragraph by SUBCONSULTANT is a material breach of this Contract subjecting SUBCONSULTANT to penalties up to and including suspension or termination of this Contract."

Any additional costs attributable directly or indirectly to remedial action under this Article is the responsibility of CONSULTANT. In the event that remedial action under this Article results in delay to one or more tasks on the critical path of CONSULTANT'S approved construction or critical milestones schedule, such period of delay will be excusable delay for which CONSULTANT will be entitled to an extension of time, but not costs.

ARTICLE 29 – ENTIRE AGREEMENT

This document constitutes the entire agreement between the Parties pertaining to the subject matter hereof, and all prior or contemporaneous agreements and understandings, oral or written, are hereby superseded and merged herein. This Contract may be modified, amended, altered or extended only by a written Amendment signed by the Parties.

IN WITNESS WHEREOF, the Parties have affixed their signatures to this Contract on the dates written below.

APPROVED:

_____
Chair, Board of Directors

_____
Date

ATTEST:

_____
Clerk of the Board

APPROVED AS TO FORM:

_____
Deputy County Attorney

_____
Name (Please Print)

CONSULTANT:

_____
Signature

_____
Name and Title (Please Print)

_____
Date

APPENDIX 'A' - SCOPE OF SERVICES

Background

The upper Santa Cruz River floodplains, as mapped by the Federal Emergency Management Agency (FEMA) on the Flood Insurance Rate Maps (FIRMs), do not reflect changes in channel geometry, do not include multiple profiles in all the reaches, and were generated with outdated modeling. This Scope of Work (SOW) will outline the development of flood risk mapping products. It will be administered by the Pima County Regional Flood Control District (District) and coordinated with FEMA under a Cooperative Technical Partnership Agreement (CTP) to prepare Flood Risk Maps and Flood Risk Map Report. The information platform for the flood risk mapping process is FEMA's Mapping Information Platform (MIP). This SOW is a supplement to the attached Mapping Activity Statement (MAS) developed for the CTP partnership with FEMA.

Location\Project Description

The project location is the upper Santa Cruz River from approximately one mile upstream (south) of the Santa Cruz County line north to approximately one mile downstream of Pima Mine Road. The project shall include the preparation of the 10-percent, 4-percent, 2-percent, 1-percent, and the 0.5-percent Flood Risk Maps and associated Flood Risk Map Reports.

TASK 1: Data Collection\Discovery

1.1 Obtain and review a copy of the Discovery Report for the Upper Santa Cruz River Watershed (HUC-8-15050301), FEMA June 2013. Consult with the project manager regarding how to incorporate the recommendations and conclusions of the report as part of a Watershed Management Plan.

1.2 Obtain information from the District and the Town of Sahuarita (Town) regarding corporate limits, developments, channel modifications, bridge and culvert plans, and other data relevant to completing the study as described herein.

1.3 Obtain information from FEMA, the US Army Corps of Engineers (Corps), and other federal agencies necessary for the completion of this study.

1.4 Review FEMA's Guidelines and Standards for Flood Risk Analysis regarding preparation of products associated with this SOW. This SOW does not include the revisions to the FIRMs.

1.5 Collect and review field data to establish roughness, contraction, expansion and other loss coefficients. Photographic documentation of Manning's roughness coefficient "n" factors must be included in a summary.

1.6 Submit electronic and written copies of a report to the District summarizing the data collected. This summary report will be submitted within eight (8) weeks from receipt of the Notice to Proceed. Once finalized, a copy of the data collection report will be placed in the Technical Data Notebook (TDN).

TASK 2: Field Survey

2.1 The District will supply the LiDAR and aerial photography which is to be used as the basis for the floodplain modeling.

2.2 Unless otherwise produced under the separate LiDAR contract, the consultant is to produce 2-foot contour topography from the LiDAR data with 10 and 100-foot index contours. Contours are to be on NAVD-88.

2.3 The consultant shall determine any areas that need supplemental data. If additional topographic surveys are needed, the consultant shall determine if private properties must be accessed in order to complete the survey.

2.4 When additional field surveys are necessary, the consultant will be responsible for obtaining any and all Rights of Entry to survey private property. The consultant will provide to the District a sample Right of Entry Letter for review and comment, a list of all notified property owners, and copies of all signed Rights of Entry.

TASK 3: Hydrologic Assessment

3.1 The consultant is to determine if FEMA or the Corps have developed discharge values for 10-percent, 2-percent, 1-percent, and the 0.5-percent events on the Santa Cruz River that are different form discharge values in the Flood Insurance Study (FIS) for Pima County.

3.2 If Task 3.1 determines the current discharge values in the FIS are valid, those values shall be used in the modeling. Upstream of Continental Road, the consultant shall use the discharge values shown in Table 1 below to supplement the Pima County FIS data. Note in the table below, some FIS discharge values are from the Santa Cruz County FIS.

TABLE 1
Discharge Values Upstream of Continental Road

Return Frequency	Discharge (cfs)
10-percent	15,750
2-percent	32,400
1-percent	45,000
0.5-percent	93,000

TASK 4: Risk Map Delineation

4.1 Perform a detailed hydraulic floodplain model of the Santa Cruz River for the 10-percent, 4-percent, 2-percent, 1-percent, and the 0.5-percent flood events. Floodplain delineations are to follow FEMA Flood Risk Map guidelines.

4.2 Flood profiles are to be determined for the 10-percent, 2-percent, 1-percent, and the 0.5-percent year return frequencies.

4.3 There are occasions where flow reach may have divided flow or distributary flow. In those reaches, the consultant may use a two-dimensional model such as FLO-2D or the soon to be approved RAS-2D model from the US Army Corps of Engineers, Hydrologic Engineering

Center. Such modeling must be pre-approved by the District. The consultant is responsible for ensuring that the version of the model is FEMA approved.

4.4 Verify the input data for the hydraulic model based on field reconnaissance and/or aerial photography of the study reach. Note that Google Earth's historical aerial photographs indicate that large events have removed established vegetation within the channel. Therefore, modifications to roughness coefficients may be warranted for different return events.

4.5 All cross sections will be plotted from left to right looking downstream. The cross section plots will show water surface elevations (including base flood elevations or BFEs), main channel bank stations left and right, ineffective flow areas, Manning's roughness coefficient "n" values, encroachments and other pertinent information. All plots will be labeled.

4.6 Work product data is to include photography and topography. Aerial photography and LiDAR data is to be supplied in digital format by Pima County as the basis for the work map data. Topographic data is to be on the North American Vertical Datum of 1988.

4.7 When it is practicable, the consultant will take cross sections at the same location as the lettered cross section as shown on the FIRMs.

4.8 Bridges and culverts will be modeled with specific routines consistent with HEC-RAS requirements. It is noted that the District reserves the right to have the consultant verify the HEC-RAS modeling results for bridges, culverts, and other hydraulic structures using an independent method approved by the District.

4.9 Electronic draft work maps are to be submitted in Adobe Acrobat format to the District for review within 180 days from receipt of the LiDAR data from the District. Electronic draft map data is also to be submitted as ESRI shape files. Shape files are to be in the local county projection. The consultant will follow FEMA's guidelines for file names and attributes as outlined in Appendix L of FEMA's Guidelines and Specifications unless Risk Map standards require different approaches.

4.10 The District will provide review comments to the consultant within one month from receipt of the draft work maps.

4.11 The consultant will refine the models and draft work maps based on review comments by the District within two months from receipt of the District's comments.

4.12 The consultant is to follow FEMA's draft Data Capture Standards (May 2013) for Flood Risk Map products.

TASK 5: Flood Risk Report

5.1 The consultant is to develop a Flood Risk Map Report to address the: 1) changes in the regulatory floodplain determined by this SOW as compared to the existing regulatory maps; b) changes in channel geometry; and c) changes associated with unmapped drainage infrastructure.

5.2 The consultant is to develop a Flood Risk Database to be used by the District and impacted communities to assist in assessing flood risk.

5.3 The consultant is to develop Flood Risk Maps as part of the Flood Risk Map Report.

TASK 6: Agency Review

6.1 The consultant will complete the work map data, hydraulic models and prepare the draft reports within 180 days from receipt of the LiDAR data.

6.2 The District will coordinate the review comments from District staff. The consultant will respond to review comments within 60 days from receipt of the comments.

6.3 Upon the completion of the District's review, electronic copies of the report are to be submitted to the Town for their comments. The Town is to be given two months for review and comments are to be submitted to the District. The District will provide direction to the consultant when responding to the reviews.

TASK 7: Public Notification and Open House

7.1 Upon completion of the final report and acceptance by the District, the consultant will pay for and place a legal advertisement in local newspapers notifying the public that a study has been completed on the Santa Cruz River. The consultant shall work with the District on providing a narrative of the study along with PDF copies that can be downloaded from an Internet website.

7.2 The consultant shall work with the District to provide an open house meeting of the findings of this study.

TASK 8: Deliverables

The primary deliverable data will be digital products. Upon approval of the report by the District and FEMA, the consultant will submit the following deliverables to the FEMA MIP Data Center, to the District, FEMA and the Town:

1. Four (4) digital copies of the photo-topographic base maps (work maps) with the cross sections flood Risk Map delineations; and
2. Four (4) digital copies of the final report. Each report shall be in Adobe Acrobat unless otherwise directed by FEMA. Digital report data shall include all modeling data and shapefiles.

TASK 9: Additional Services

9.1 This SOW has been written with the intent that the contract will not be considered complete until FEMA has approved the Flood Risk Map products. At the request of the District, the consultant will provide additional services to respond to any comments FEMA may have during their review.

9.2 The consultant shall assist the District in updating and reporting the grant status with FEMA.

TASK 10: Billing and Reporting

10.1 Billing and status reports shall be done each month.

APPENDIX "B" MAPPING ACTIVITY STATEMENT

FEMA

PIMA COUNTY
REGIONAL FLOOD CONTROL DISTRICT
COOPERATING TECHNICAL PARTNERS
FLOOD RISK PROJECT
MAPPING ACTIVITY STATEMENT

Mapping Activity Statement No. FY14 Pima CTP

The Flood Risk Project described in this Mapping Activity Statement (MAS) dated September 20, 2014 shall be completed in accordance with the Cooperating Technical Partner (CTP) Partnership Agreement dated August 20, 2014, between Pima County Regional Flood Control District (herein referred to as "CTP") and the Federal Emergency Management Agency (FEMA).

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SECTION 1—OBJECTIVE AND SCOPE

The Santa Cruz River floodplains as mapped on the Flood Insurance Rate Maps (FIRMs) produced by the Federal Emergency Management Agency (FEMA) do not reflect changes in channel geometry, do not include multiple profiles in all the reaches, and were generated with outdated modeling. This MAS will outline the development of flood risk mapping. It will be administered by the Pima County Regional Flood Control District (District) and coordinated with FEMA under a Cooperative Technical Partnership (CTP) agreement. The objective of the Flood Risk Project Is to develop a Flood Risk Report and/or support flood hazard data and program-related tasks through completing technical risk analysis and mapping activities. These activities may or may not result in a new or updated Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS) report for one or more communities within the project area.

The project location is the Santa Cruz River from just upstream (south) of the Santa Cruz County line north to just north of Pima Mine Road. The project shall include the delineation of the 10-percent, 4-percent, 2-percent, 1-percent, and the 0.2-percent Risk Map products and delineate floodway boundaries at a work map resolution.

The watersheds and jurisdictions in which Flood Risk Projects will be performed, as well as their applicable project type/activities, are summarized in Table 1.1 *Flood Risk Project Watersheds and Jurisdictions*. All applicable project activities should be identified in the last column of the table for each watershed, county/parish or community listed in Table 1.1 (e.g., Discovery only, Discovery and Non-Reg Products, FIRM/FIS updates, Prelim Distribution, Post-Preliminary Processing). Watershed Reports will be created and distributed to counties/parishes and communities identified as including Discovery in the Project Type (refer to PM 41 for exceptions).

Table 1.1 – Flood Risk Project Watersheds and Jurisdictions

Watershed	HUC-8 Code	Counties/Parishes and Communities Included in Project	Project Type
Upper Santa Cruz	15050301	Town of Sahuarita, Unincorporated Pima County	Flood Risk Report

Additionally, the CTP involved in this project will develop new and/or updated flood hazard data as summarized in Table 1.2, Total Stream Mile Counts by Type of Study. The FIRM and FIS report for the watersheds and areas identified in Table 1.2 will be produced in the North American Vertical Datum of 1988 (NAVD88).

Table 1.2 – Total Stream Mile Counts by Type of Study

Task	Miles	Type of Mapping	Watershed	Community
Create risk map products	~23	Risk Map	Santa Cruz River	Town of Sahuarita, Unincorporated Pima County

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

- Pima County Regional Flood Control District;

The CTP shall notify FEMA and all applicable parties of all meetings with community officials, and other relevant meetings, at least two weeks prior to the meeting (with as much notice as possible). FEMA and/or its contractor may or may not attend the community meetings.

The CTP shall maintain an archive of all data submitted. All supporting data must be retained for three years from the date a funding recipient submits its final expenditure report to FEMA.

Metadata is required for certain activities. The Date Capture Standards are to follow FEMA's draft "Data Technical Standards Reference (May 2013). Coordination with FEMA Region IX is required in that not all data standards are applicable to this MAS.

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.

In cooperation with the FEMA Project Officer, a Project Management Team (PMT) will be established by the CTP consisting of representatives from the CTP, FEMA's regional engineer, and other appropriate parties (e.g., FEMA contractors) at the discretion of FEMA. 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.

Develop Non-Regulatory Products

Responsible Mapping Partner: Pima County Regional Flood Control District

The Santa Cruz River floodplains as mapped on the Flood Insurance Rate Maps (FIRMs) produced by the Federal Emergency Management Agency (FEMA) do not reflect changes in channel geometry, do not include multiple profiles in all the reaches, and were generated with outdated modeling. This MAS will outline the development of flood risk mapping. It will be administered by the Pima County Regional Flood Control District (District) and coordinated with FEMA under a Cooperative Technical Partnership (CTP) agreement. The objective of the Flood Risk Project Is to develop a Flood Risk Report and/or support flood hazard data and program-related tasks through completing technical risk analysis and mapping activities. These activities may or may not result in a new or updated Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS) report for one or more communities within the project area.

The project location is the Santa Cruz River from just upstream (south) of the Santa Cruz County line north to just north of Pima Mine Road. The project shall include the delineation of the 10-percent, 4-percent, 2-percent, 1-percent, and the 0.2-percent Risk Map products and delineate floodway boundaries at a work map resolution.

Task 1: Perform Field Reconnaissance and Survey

Scope: The CTP shall conduct a supplemental 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.

The CTP shall conduct field surveys, including obtaining channel and floodplain cross sections and obtaining the physical dimensions of hydraulic and flood-control structures.

Perform Field Reconnaissance and Survey Deliverables:

- A report summarizing the findings of the field reconnaissance, and
- A report summarizing the findings of the Field Survey activities

Task 2: Assessment of Hydrologic Data

Scope: Obtain the FEMA discharge values for the 10%, 2%, 1%, and 0.2% annual chance events from the Flood Insurance Studies for Pima and Santa Cruz Counties. Assess if those discharge values meet FEMA's mapping criteria. Develop discharge values for the 4% chance event. Determine the 10%, 4%, 2%, 1%, and 0.2% annual discharge values for the reach bounded by the Santa Cruz County line to the south and Continental Road to the north.

Assessment of Hydrologic Data Deliverables:

- A report summarizing the hydrologic assessment

Task 3: Develop Hydraulic Data

Scope: The hydraulic modelling developed will be used to inform communities of their flood risk and as a basis for the development of non-regulatory map products. FEMA mapping standards will be closely adhered to in order to support potential follow-on mapping activities through a separate funding and study effort.

The CTP will be performing the hydraulic analysis as described in Table 1.8. The modeling will include the 10%, 4%, 2%, 1%, and 0.2% annual chance events based on peak discharges computed under Task 4: Assessment of Hydrologic Data. The hydraulic methods used for this analysis will include base level and enhanced level hydraulic modeling. The base level will use an automated hydraulic model, and use the best available elevation data. It will not include floodways,

The CTP shall use the field survey data collected during Task 2. Perform Field Reconnaissance and Survey and the topographic data provided by the CTP, when appropriate, to perform the hydraulic analyses. The hydraulic analyses will be used for flood risk assessment.

Table 1.3 – Summary of Hydraulic Data

Study Area/Flooding Source	Method	Total Miles of New Base level or Enhanced Level Hydraulics
Santa Cruz River	Multiple Profile	~23

Deliverables: The CTP shall make the following products available to FEMA

- A report summarizing the hydraulic assessment
- All studied streams hydraulic model results for all frequencies (as required)

Task 4: Non-Regulatory Products

Scope: Risk assessment data and analyses are defined as processes for analyzing or evaluating the risk associated with a hazard, and using that information to make informed decisions on the appropriate ways to reduce the impacts of the hazard on people and property. As part of the Risk MAP Program, non-regulatory Flood Risk Products shall be developed for study areas.

1. **Flood Risk Products:** The CTP will develop the following standard non-regulatory products for the watersheds, as identified in Table 1.4:

- Flood Risk Database - The Flood Risk Database will enable the creation of other products including the Flood Risk Map and Flood Risk Report. The CTP must deliver Flood Risk Datasets that are compliant with the Flood Risk Database Technical Reference.
- Flood Risk Report - The Flood Risk Map activity includes developing exhibits that depict non-regulatory flood risk dataset and base mapping information. This is a standard non-regulatory product.
- Flood Risk Map - The Flood Risk Report activity includes documenting and delivering local communities a summary of their watershed and local flood risk information along with best practices for risk reduction. This is a standard non-regulatory product.

2. **Flood Risk Datasets:** The CTP will also develop the following Flood Risk Datasets, as identified in Table 1.4:

- Flood Risk Assessment dataset - This activity includes the delivery of Average Annualized Loss (AAL) for areas within the watershed or project area. This standard dataset is to be included and delivered within the Flood Risk Database product.
- Areas of Mitigation Interest (AOMI) - This activity includes the creation of the Areas of Mitigation Interest for areas receiving updated flood study information. This standard dataset is to be included and delivered within the Flood Risk Database product.
- Flood Risk Assessment Datasets shall be incorporated into the standard Flood Risk Products.

Table 1.4 – Risk Assessment Product Development Table

Watershed(s) and/or Project Areas	Flood Risk Products	Flood Risk Datasets				
		CSLF	Depth & Analysis Grids	Flood Risk Assessment	AOMI	Other (add description)
Santa Cruz River	X			X	X	

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

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

- Flood Risk Report, Map, and Database,
- Flood Risk Assessment dataset, and
- Areas of Mitigation Interest dataset (standard; required).

Task 5: Community Engagement

Scope: The activities listed below are intended to support on-going project efforts that foster working relationships between federal, state, and local governments with private and public interests in order to reduce the frequency of natural disasters where a community's interaction with a natural hazard may be altered or averted.

It is expected that including these approaches will develop actionable measures within the Flood Risk Project footprints.

1. **Action Identification and Planning.** Support for communities to identify and/or advance mitigation opportunities, and/or select amongst alternatives, through the provision of data, analysis and/or strategic support. Based on information learned from conversations with community influencers, as well as the mitigation plan, and previous Discovery Meetings and report, identify the top 2-3 actions to focus on advancing within each community, and create a plan to advance them.

2. **Meetings.** This Flood Risk Project will include in-person opportunities to engage communities, build risk awareness, increase capabilities for risk communication, and stimulate mitigation action at the local level. Provisions may be made for remote access video/audio feeds for those that cannot attend in person.

   Meeting 1: Flood Risk Review Meeting. This meeting will serve to provide communities with engineering data and drafts of flood risk (non-regulatory) products, collect feedback, and revise as needed. It will also provide the opportunity to show how the datasets and outreach tools can help communities become more resilient by understanding risk data, communicating about risk, prioritizing mitigation actions and improving mitigation plans, especially risk assessments and mitigation strategies. Activities include planning, presenting, and facilitating discussions of data inputs and

engineering models used for flood studies with community officials. In addition, draft work maps showing initial study results will be presented during the meeting.

Additional meetings will be determined based on the risk and need at the local level.

3. **Status Reports.** In order to facilitate information sharing and a continuing dialogue between the PMT and the community, the CTP will provide communities with regular status reports outlining the current project status, key accomplishments to date, identified risks, if any, and next steps including estimated next meeting date and meeting content (template to be provided from FEMA or can be created by Mapping Partner). These status reports will be provided to FEMA for review before electronic distribution. Project update status reports will be distributed to communities at mid-points between each of the meetings, and between the Final Meeting and effective date (if included in this MAS), to help introduce and prepare the communities for upcoming discussions.

Community Engagement Deliverables:

- Logs of Pre-Call Screenings (if applicable),
- Meeting invitation, agenda, presentation slides (as requested), and meeting notes for FEMA review, and
- Project update status reports for project communities.

Project Risk Identification and Mitigation

Responsible Mapping Partner: Pima County Regional Flood Control District

The project map be at risk should there be delays with the LiDAR, Photography and topography production.

SECTION 2—TECHNICAL AND ADMINISTRATIVE SUPPORT DATA SUBMITTAL

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

All supporting documentation for the activities in this MAS shall be submitted according to FEMA standards and requirements, and will include a flood elevation determination docket (FEDD) folder.

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

Information supporting FEMA standards and requirements regarding the TSDN and FEDD file may be found in Procedure Memorandum 62 *TSDN and FEDD File Protocol for Mapping Projects*.

SECTION 3—PERIOD OF PERFORMANCE

The mapping activities outlined in this MAS will be completed as specified in the Cooperative Agreement Funding Opportunity Announcement, Award Notice and/or Articles of Agreement. The Mapping Activities may be terminated at the option of FEMA or the CTP in accordance with the provisions of the Partnership Agreement dated September 20, 2014 If these mapping activities are terminated, all products produced to date must be submitted and updated into the MIP (if applicable) and the remaining funds, provided by FEMA for this MAS, from uncompleted activities will be returned to FEMA.

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

FEMA is providing funding, in the amount of $200,000 through a Cooperative Agreement to Pima County Regional Flood Control District for the completion of this Flood Risk Project. Pima County Regional Flood Control District shall provide any additional resources required to complete the assigned activities for this Flood Risk Project as outlined in Table 4.1 Contribution and Leverage. During the discovery process, additional needs may be identified. Activities associated with any additional needs would be performed based on availability of additional funds. The leverage listed below includes in-kind services and blue book values for obtained existing information from the CTP or communities associated with the project (i.e. base map data, hydrologic and hydraulic analyses, etc.). These values must also be reported in the MIP by the CTP during the appropriate task. The current Blue Book (3.0) is dated January 2011 and can be downloaded from FEMA's Information Resource Library at http://www.fema.gov/library/viewRecord.do?id=2473.

Table 4.1 – Contribution and Leverage

Project Task	FEMA Contribution	Partner Contribution	% Partner Leverage (of total project task cost)	Total Project Task Cost (FEMA + Partner)
Project Management	0	$6,000	100%	$6,000
Develop LiDAR, photography	0	$72,225	100%	$72,225
Community Engagement	0	$16,000	100%	$16,000
Develop Non-Regulatory Products	$84,835	$4,465	5%	$89,300
Develop Topographic Data	$5,915	0	0	$5,915
Develop Hydraulic Data	$109,085	$5,750	5%	$115,500
TOTAL FUNDING AMOUNTS	$200,000	$104,440	34.3%	$304,440

Leverage data provided in the table above is an estimate of available leverage data at the time the MAS is prepared and may be further defined in progress reports. Final leverage dollars or units will be entered, as applicable, within the Manage Data Development task in the MIP workflow.

SECTION 5—STANDARDS

All processes and deliverables shall be completed in accordance with the Federal Emergency Management Agency (FEMA)'s Standards for Flood Risk Analysis and Mapping, dated August 22, 2013, located on FEMA's website at http://www.fema.gov/guidelines-and-standards-flood-risk-analysis-and-mapping. These guidelines and standards (http://www.fema.gov/media-library/assets/documents/35313) define the specific implementation of the statutory and regulatory requirements for NFIP flood risk analysis and mapping, and address the performance of flood risk projects, processing of letters of map change and related Risk MAP activities. The guidelines and standards are organized in a hierarchy:

> **Program Standards** – Program standards is a required element of the Risk MAP program. Exceptions to program standards can only be granted by program leadership through an exemption process.
>
> **Working Standards** – Working standards is a required element usually at a higher level of specificity than the program standards. Working standards are applied by specialists (engineers, planners, technicians, scientists, etc.) and have minimal ethical, political and legal impacts to the program. FEMA Regional offices may occasionally grant exceptions to these requirements.
>
> **Guidance** – A recommended approach to meet the standard. Accepted approaches are not limited to this recommended approach; mapping partners may use other methods to meet or exceed the standards.
>
> **Best Practices/Lessons Learned** – Any method, in addition to guidance, that meets or exceeds the standard. Best practices are shared by regions and mapping partners following successful approaches to program activities.

All the standards for the Risk MAP program have been published as a FEMA policy. This policy supersedes all of the standards included in the previous *Guidelines And Specifications For Flood Hazard Mapping Partners* and associated procedure memorandums. However, useful guidance is still available in these documents (http://www.fema.gov/media-library/assets/documents/34953). Additional information can be found on FEMA's website at http://www.fema.gov/guidelines-and-standards-flood-risk-analysis-and-mapping.

The standards relevant to this MAS are available in FEMA's *Guidelines and Standards Policy Memo* located at http://www.fema.gov/media-library/assets/documents/35313. Additional information, along with links to Guidance, Technical References, Templates and other resources that support these standards, may be accessed and/or downloaded from the FEMA Flood Hazard Mapping website at http://www.fema.gov/guidelines-and-standards-flood-risk-analysis-and-mapping. The Geospatial Data Coordination Policy and the Geospatial Data Coordination Implementation Guide are located at https://hazards.fema.gov under "Tools & Links."

FEMA is in the process of updating existing guidance. In the meantime, CTPs may refer to historical documents for assistance. Table 5.1 *Applicable Standards for Project Activities* and Table 5.2 *Project*

Activities and Applicable Portions of FEMA Guidelines and Specifications are provided to assist the CTP in determining the relevant historic guidance for tasks available in this MAS. CTPs (and their contractors) working on a Flood Risk Project are responsible for complying with all appropriate requirements in FEMA's standards and guidelines.

Additionally, CTPs and their sub-awardees must comply with FEMA's Federal Regulation 44 CFR and the appropriate year CTP Funding Opportunity Announcement and Agreement Articles. CTPs shall also coordinate with their Regional office to determine additional standards that should be met.

Table 5.1 – Applicable Standards for Project Activities

	Activities																	
Applicable Guidance	Perform Discovery	Outreach	Perform Field Survey	Develop Topographic Data	Perform Independent QA/QC: Topographic Data	Acquire Base Map	Coastal Analysis	Perform Independent QA/QC: Coastal Analysis	Develop Hydrologic Data	Perform Independent QA/QC: Hydrologic Data	Develop Hydraulic Data	Perform Independent QA/QC: Hydraulic Data	Perform Floodplain Mapping (inc. Redelineation)	Perform Independent QA/QC: Floodplain Mapping	Develop FIRM Database	Develop Non-Regulatory Products	Produce/Distribute Preliminary Map Products	Post-Preliminary Map Production
Guidelines and Specifications for Flood Hazard Mapping Partners and Procedure Memorandums	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, *Hydrographic Surveys* (USACE), January 1, 2002	X		X															
"Numerical Models Accepted by FEMA for NFIP Usage," Updated April 2003	X						X	X	X	X	X	X						
NFIP Metadata Profile Specifications	X			X	X								X	X	X	X	X	X
Document Control Procedures Manual	X	X														X		X
44 Code of Federal Regulations Parts 65, 66 and 67	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Data Sharing Agreement																		

Table 5.2 – Project Activities and Applicable Portions of FEMA Guidelines and Specifications

Activity Description	Applicable Volume, Section/Subsection, and Appendix
Perform Discovery	Volume 1
	Appendix I
	Discovery Report document
	OG 1-11: Risk MAP Guidance for Incorporating Mitigation Planning Technical Assistance and Training into Flood Risk Projects
	OG 2-11: Operating Guidance for Creation of Risk MAP Products
	OG 4-11: Risk Map Meetings Guidance
	PM 56, 59, 63
	CNMS User's Guide
	CNMS data model
	"NVUE: Calculation Guidance under Risk MAP"
	44 Code of Federal Regulations Part 66 and 67
Outreach	Volume 1
	Appendix I
	OG 4-11: Risk MAP Meetings Guidance
Develop Non-Regulatory Products	Appendices N and O (draft) September 2011
	PM 59 and 65
	OG 1-11: Risk MAP Guidance for Incorporating Mitigation Planning Technical Assistance and Training into Flood Risk Projects
	OG 2-11: Operating Guidance for Creation of Risk MAP Products
	OG 3-11: Communicating Flood Risk with Risk MAP Datasets and Products
	OG 6-11: User Guidance for Flood Risk Datasets and Products

Activity Description	Applicable Volume, Section/Subsection, and Appendix
	"Risk MAP Products in the MIP" (March 4, 2011)
Perform Field Survey	Volume 1
	Appendices A, B, C, F, and M
Develop Topographic Data and Perform Independent QA/QC: Topographic Data	Volume 1,
	Appendices A and M
	PM 61
Acquire Base Map and Perform Independent QA/QC: Base Map	Volume 1
	Appendices A, K, L, N and O
Develop Hydrologic Data and Perform Independent QA/QC: Hydrologic Data	Volume 1
	Appendices A, C, E, F, G, H, and M
	PM 59
Develop Hydraulic Data and Perform Independent QA/QC: Hydraulic Data	Volume 1
	Appendices A, B, C, E, F, G, H, and M
	PM 34, 43, 51, 52, 53, 59, 63
Perform Coastal Analysis Hazard Analyses and Perform Independent QA/QC: Coastal Analysis	Volume 1
	Appendices A, B, C, D, H, and M
	Coastal Guidelines Updates"
	PM 47
	OG 7-11: Application of TAW Runup Methodology to FEMA Needs
	OG 8-11: Joint Probability – Optimal Sampling Method for Tropical Storm Surge Frequency Analysis
Perform Floodplain Mapping and Perform Independent QA/QC: Floodplain Mapping (including Redelineation/Digitization)	Volume 1
	Appendices C, D, E, F, G, H, K, L, and M
	PM 51, 52, 53 and 56
	CNMS User's Guide

Activity Description	Applicable Volume, Section/Subsection, and Appendix
	CNMS data model
	"NVUE: Calculation Guidance under Risk MAP"
Develop FIRM Database	Volume 1
	Appendices K, L and M
	PM 42, 56
Produce Preliminary Map Products and Perform Independent QA/QC: Produce Preliminary Map Products	Volume 1
	Appendices K, L, and M
	PM 50, 51 and 56
	CNMS User's Guide
	CNMS data model
	"NVUE: Calculation Guidance under Risk MAP"
Distribute Preliminary Map Products and Perform Independent QA/QC: Distribute Preliminary Map Products	Volume 1
	Appendices J, K, L, and M
	PM 44, 56 and 57
	CNMS User's Guide
	CNMS data model
	"NVUE: Calculation Guidance under Risk MAP"
Post-Preliminary Map Production	Volume 1
	Appendices J, K, L, and M
	PM 42, 44, 56, 57, 62
	CNMS User's Guide
	CNMS data model
	"NVUE: Calculation Guidance under Risk MAP"

SECTION 6— SCHEDULE

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

Table 6.1 – Project Activities Schedule

ACTIVITIES	RESPONSIBLE PARTNER(S)	Estimated START DATE	Estimated END DATE
Project Management	Pima County RFCD	10-1-2014	10-1-2015
Develop LiDAR, topography and photography	Pima County RFCD	10-1-2014	1-1-2015
Develop Non-Regulatory Products	Pima County RFCD	10-1-2014	10-1-2015

FEMA or its designee shall create the Flood Risk Project in the MIP and baseline the project activities with schedule and cost information within 30 days of the funds being awarded and FEMA's approval of the final cost and schedule.

SECTION 7—CERTIFICATIONS

Data Capture Standards

DCS Certification Form Perform Field Surveys and Develop Topographic Data

A Registered Professional Engineer or Licensed Land Surveyor shall provide an accuracy statement for field surveys and/or topographic data used and shall certify these data meet the accuracy statement provided. Data accuracy should be stated used the Federal Geographic Data Committee National Standards for Spatial Data Accuracy, but the American Society for Photogrammetry and Remote Sensing accuracy reporting standards are acceptable.

Develop Hydrologic Data, Develop Hydraulic Data.

- A Registered Professional Engineer shall certify hydrologic and hydraulic and coastal analyses and data in accordance with 44 CFR 65.6(f).
- Certifications are required at the time the intermediate or final data is submitted.

SECTION 8—TECHNICAL ASSISTANCE AND RESOURCES

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

General technical and programmatic information can be downloaded from the FEMA website at http://www.fema.gov/plan/prevent/fhm/frm_soft.shtm. Specific technical and programmatic support may be provided through FEMA and/or its contractor; such assistance should be requested through the FEMA Project Officer specified in Section 12 – Points of Contact.

Project Team members also may consult with the FEMA Regional Project Officer to request support in the areas of selection of data sources, digital data accuracy standards, assessment of vertical data accuracy, data collection methods or subcontractors, and GIS-based engineering and modeling training.

Please contact the Region to obtain the most recent version of the Risk MAP Timeline.

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

SECTION 9—CONTRACTORS

The CTP intends to use the services of J.E. Fuller as a contractor for this Flood Risk Project. No transfer of funds to agencies other than those identified in the approved cooperative agreement application shall be made without prior approval from FEMA. The CTP shall ensure that the procurement for all contractors used for this Flood Risk Project complies with the requirements of 44 CFR 13.36.

Guidance provided in this part includes, but is not limited to, contract administration and record keeping, notification requirements, review procedures, competition, methods of procurement, and cost and pricing analysis. 44 CFR Part 13 may be downloaded in PDF or text format from the U.S. Government Printing Office web site at http://www.gpo.gov/fdsys/pkg/CFR-2012-title44-vol1/content-detail.html. Additionally, contractors must not pose a conflict of interest issue.

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/waisidx_04/44cfr13_04.html.

SECTION 10—REPORTING

Financial Reporting: Because funding has been provided to the CTP by FEMA, financial reporting requirements for the CTP will be in accordance with the terms of the Cooperative Agreement Funding Opportunity Announcement, Articles of Agreement or Award Notice for this MAS. The CTP shall also refer to 44 CFR 13.41. The CTP shall provide financial reports to the FEMA Regional Project Officer and Assistance Officer in accordance with the terms of the signed Cooperative Agreement for this MAS.

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

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

The CTP shall communicate with communities throughout the life of each project. Continued engagement is necessary and appropriate and will build upon the relationships established or enhanced during Discovery and provide transparency into the Risk MAP process. This may occur through monthly or quarterly updates or project status calls with community leaders, project websites including updates at several milestones or along a specific timeline, or other methods.

Earned Value Data Entry: The MIP Workflow is designed to track the Earned Value of Flood Risk 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 or its 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.

The MIP study workflow allows FEMA and the CTP to manage the status of these projects at a task level. The cost and schedule information, updated monthly by CTP 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 data entry involves updating cost, schedule and performance (physical percent complete) in the MIP by the CTP each month for each assigned task.

The CTP may contact the Region to obtain the guidance document *Risk MAP Products in the MIP* which explains how Non-Regulatory Products shall be submitted through the MIP. The guidance also explains how performance will be tracked for Non-Regulatory Products.

Once the baseline has been established in the MIP, CTP shall input the performance and actual cost to date for all tasks within each project for which the CTP is responsible. This must be completed at a minimum once every thirty days and at the completion of the task. When a task is completed, the CTP 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 tasks as applicable. The "Manage" tasks remain open and accept 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 (CTP or community) paid for the data provided and the amount of data used by the Flood Risk Project. The CTP will maintain a Schedule Performance Index (SPI) and Cost Performance Index (CPI) of at least 0.92. Special Problem Reports (SPRs) explaining any variance must be submitted in a timely manner as required.

The Project Officer, as needed, may request additional information on status of the project 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 may include:

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

SECTION 12—POINTS OF CONTACT

The points of contact for this Flood Risk Project are Robert Bezek the FEMA Regional IX Project Officer; Terry Hendricks the Project Manager for Pima County Regional Flood Control District; or subsequent personnel of comparable experience who are appointed to fulfill these responsibilities. When necessary, any additional FEMA assistance should be requested through the FEMA Regional Project Officer.

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

Bill Zimmerman — 10-9-14

Bill Zimmerman, Deputy Director
Pima County Regional Flood Control District

Date

Robert Bezek
Regional Project Officer
Federal Emergency Management Agency, Region IX

Date

APPENDIX 2 - PROJECT TEAM MEMBER UTILIZATION FORM

Complete and Return with Your Qualifications Statement

Project Name: #183102 – HYDROLOGIC SERVICES FOR SANTA CRUZ FLOOD RISK MAPPING

Firm Name: _____

Prime – Name & Corporate Headquarters Address	Local Address	Discipline/Service	Certified SBE (Y/N)	Estimated % of Total Price
Subconsultants-Name & Corporate Headquarters Address	**Local Address**	**Discipline/Service**	**Certified SBE (Y/N)**	**Estimated % of Total Price**

APPENDIX 3 - SMALL LOCAL PREFERENCE CERTIFICATION FORM

Complete and Return with Your Qualifications Statement

Project Name: #183102 – HYDROLOGIC SERVICES FOR SANTA CRUZ FLOOD RISK MAPPING

Firm Name: _____

I certify that this firm:

☐ Is headquartered in Pima County and maintains an office in Pima County with fewer than 100 employees.

–or-

☐ Is not headquartered in Pima County, but has had an office in Pima County for at least two years with fewer than 100 employees, the majority of whom reside in Pima County.

If neither box is checked, we will presume that your firm does not qualify for the "Small Local Firm Preference."

_____
Signature

_____
Title

_____
Firm Name

_____

_____
Address

_____
Phone

_____
Date