



CARSON WATER SUBCONSERVANCY DISTRICT

NOTICE OF REQUEST FOR PROPOSALS (RFP)

Carson River Regional Flood Forecasting Hydraulic Model For Douglas County, NV

RFP DUE DATE: February 18, 2021

SUBMITTAL LOCATION: Carson Water Subconservancy District
777 E. William St., Suite 110A
Carson City NV 89701
edjames@cwsd.org

QUESTIONS SHALL BE DIRECTED TO: Edwin James, General manager
(775) 887-7456
edjames@cwsd.org

INTRODUCTION/GENERAL

Notice is hereby given that the Carson Water Subconservancy District, hereinafter referred to as "CWSD" is seeking contractor to develop Carson River Regional Flood Forecasting Hydraulic Model.

CWSD invites interested firms to submit written proposal relating to this solicitation. A Screening Committee will evaluate firms' qualifications and experience with similar projects. The firm determined to be best qualified will then be invited to enter negotiations with CWSD for fixed fee.

A complete copy of this Notice and possible amendments may be obtained from CWSD website at: www.CWSD.org. Respondents are invited to review the information and to submit their Statements of Qualifications in accordance with the criteria established within this Notice. Written questions regarding this Notice must be received by CWSD no later than **2:00 PM on February 18, 2021**. Questions may then be responded to by written amendment to this document. Oral statements or instructions shall not constitute an amendment to the Notice. Refer to Project Selection Process Among Consultants section below.

All electronic and paper submittals, as specified below, must be received by the due date and time at the submittal location specified herein. **Any response received at the specified submittal location after the due date and time assigned will be returned unopened.** CWSD reserves the right to reject any or all submittals, or to withhold the award for any reason it may determine, and to waive or not to waive any informalities in any submittal. All information regarding the content of the specific submittals will remain confidential until a contract is finalized or all submittals are rejected.

ISSUE DATE: January 20, 2021

This contract will be considered a “not to exceed – lump sum contract.” The work performed in this contract is intended primarily to be through development and completion of individual work assignments, tasks, and specified deliverables. The selected consultant will work with the Carson Water Subconservancy District and representatives from Douglas County to develop a detailed technical and business proposal prior to entering a professional services contract.

A preliminary project description is provided in Exhibit A.

CONSULTANT SELECTION PROCESS

CWSD and county representatives may select the consulting firm based solely on the RFP or the top firms may be asked to present their qualifications to the selection committee.

INSTRUCTIONS TO CONSULTANTS

1. SUBMITTAL FORMAT: Please provide one **electronic copy by email (edjames@cwsd.org) or on a flash drive.** CWSD will not provide any reimbursement for the cost of developing or presenting proposals in response to this Notice. Failure to include the requested information may have a negative impact on the evaluation of the offeror's submittal.

2. PREPARATION OF SUBMITTAL:

- a. All proposals shall be on the form(s) or in the format provided in this Notice package.
- b. It is the responsibility of all offerors to examine the entire Notice package and seek clarification of any requirement that may not be clear and to check all responses for accuracy before submitting a proposal.

3. SUSPENSION OR DEBARMENT CERTIFICATION: In accordance with Code of Federal Regulations (CFR), public entities are prohibited from contracting with any party that is suspended or debarred or is otherwise excluded from participating in federal assistance programs.

As federal funding may be used for CWSD project; by signing the Offer and Acceptance page, the Consultant certifies that the firm, business, or person submitting the Offer has not been debarred, suspended, or otherwise lawfully precluded from participating in any public procurement activity with any federal, state or local government. Signing the Offer section without disclosing all pertinent information about a debarment or suspension shall result in rejection of the offer or cancellation of a contract.

4. INQUIRIES: Any question related to this Notice shall be directed to the General Manager whose name appears on the front side of this document. Questions should be submitted in writing. Only questions answered by formal written solicitation amendment will be binding.

5. REQUEST FOR ADDITIONAL INFORMATION: CWSD reserves the right to request additional information from Offerors for the purpose of explaining the contents of a submittal. Any such request shall be for informational purposes only.

6. AWARD OF CONTRACT: Notwithstanding any other provision of the Solicitation, CWSD reserves the right to:

- (1) waive any immaterial defect or informality; or
- (2) reject any or all proposals of work RFPs, or portions thereof; or
- (3) reissue the Notice.

7. LATE SUBMITTALS: Late submittals shall not be considered.

8. PREPARATION OF SUBMITTAL:

A. EVALUATION REQUIREMENTS:

A qualified committee will evaluate the RFP's submitted in accordance with the Consultant Questionnaire.

CWSD reserves the right to make such additional investigations as it deems necessary to establish the competency and financial stability of any party submitting a proposal.

B. INSTRUCTIONS FOR SUBMITTAL:

Submittal for the projects shall be limited to the items listed below. Firms are advised to follow instructions and submit only the requested information. A page is one side of an 8.5" x 11" sheet (minimum font size is 11).

1. COVER LETTER:

The cover letter expresses interest in project. The cover letter shall also identify a single individual as point of contact for any future correspondence. (Suggested 2 page maximum)

2. CONSULTANT QUESTIONNAIRE:

It is preferred that the answers to the Consultant Questionnaire be limited to ten (10) pages including graphs, charts, schedules, and any other associated material, excluding resumes and section dividers.

CONSULTANT QUESTIONNAIRE

Firms will be screened based on evaluation of the Consultant Questionnaire using the following criteria, which are listed in relative order of importance.

The consultant will be selected through a qualifications-based selection process. Firms interested in this project must submit a proposal that addresses the following issues:

1. Firm's Experience on Similar Projects (25%)

- A. Identify at least two comparable projects within the last five years in which the project team has completed of this type or comparable projects. For each comparable project identified, provide the following information:
1. Description of project, including similarities with respect to the technical analysis and the public and stakeholder involvement aspects for this project.
 2. Role of the firm (as a Prime or Sub-consultant)
 3. Firm's partnering efforts and successes.

2. Personnel Availability & Experience (15%)

- A. For each key person identified to work on this study, list at least two comparable projects in which they have played a primary role in the studies. Please provide the following information:
1. Description of project
 2. Key individual's role on the project
 3. Project's original contracted cost & time and final project cost & time with explanation for any variances
 4. Project Owner reference information (two names with telephone numbers per project)
- B. List the current availability of key prime firm personnel for the proposed project time frame and their length of time with the firm.
1. Provide a project organizational chart showing key prime firm personnel and all sub-consultants.
 2. Resumes for key personnel may be attached in accordance with the submittal requirements.
 3. For the prime consultant Project Manager, describe your experience in addressing complex stakeholder issues, such as how or if conflicting goals or objectives were resolved, as well as any experience presenting potential contentious issues to the public.

3. Project Understanding and Approach (35%)

- A. Discuss the major issues your team has identified on this project and how you intend to address those issues. Include proposed model to be used, hydrologic data sources, model validation process, and quality assurance.
- B. Describe your team's project management approach and team organization for planning, managing, scheduling, budgeting, and quality control for this project.

4. MAPPING INFORMATION PLATFORM – 25%:

In addition to tracking Schedule Performance Index (SPI) and Cost Performance Index (CPI), the Mapping Information Platform is becoming an integral part of data submission. FEMA is requiring more extensive requirements for uploading data to the Mapping Information Platform (MIP). CWSD will work with contractor to create tasks for and a baseline for Earned Values.

- A. In relation to similar projects in Section 1, describe firm's performance to maintain a Schedule Performance Index (SPI) and Cost Performance Index (CPI) between 0.92 and 1.08. Describe reason/s for schedule or cost variances.
- B. Please provide a brief write up of your firm's experience uploading data to the MIP related to FEMA flood risk and hazard mitigation projects.
- C. Please provide the contact information of your firm's MIP specialist. Working in the MIP requires submitting a Risk Analysis Management System Access Request (RAMSAR). Has this individual submitted a signed a RAMSAR form, Cybersecurity Certificate, and a privacy certificate? If so, please provide copy of each in appendix.

The selection of the most qualified project teams may be based wholly on an evaluation of the submitted RFP. Consultant costs are not to be included with the RFP and will not be a factor in the evaluation of the RFP.

SPECIAL TERMS AND CONDITIONS

1. **INSURANCE PROVISIONS AND CONDITIONS:** All consultants must carry the following insurance and agree to the following conditions.

A. COVERAGE AFFORDED

MINIMUM LIMITS OF LIABILITY

Workers' Compensation liability insurance for not less than \$1,000,000

Statute or a State Certificate of self-insurance and employer's

Commercial General Liability

\$1,000,000 each occurrence
\$2,000,000 aggregate

Automobile Liability Insurance

\$300,000 combined single limit to include any vehicle

Professional Liability

\$1,000,000 each occurrence
\$2,000,000 aggregate

B. INSURANCE CONDITIONS

- i. **GENERAL CONDITIONS:** The Contractor agrees to, at its own expense, purchase and maintain at all times during the life of this contract the herein stipulated minimum insurance with companies duly licensed, possessing a minimum current A.M. Best, Inc. Rating of A- FSC VIII, or approved unlicensed companies in the State of Nevada with policies and forms satisfactory to CWSD. All policies will contain an endorsement providing that written notice be given to CWSD at least ten (10) calendar days prior to termination, cancellation, or reduction in coverage in any policy.
- ii. **WAIVER OF SUBROGATION OR TRANSFER OF RIGHTS OF RECOVERY:** The policies required herein, except Professional Liability, shall contain a waiver of subrogation or in the alternative, a waiver of transfer of rights of recovery against CWSD, its agents, representatives, officers, directors, officials, and employees for any claims arising out of the Contractor's work or service.
- iii. **ADDITIONAL INSURED:** The insurance policies required by this Contract, except Workers' Compensation and Professional Liability, shall name CWSD, its agents, representatives, officers, directors, officials, and employees as Additional Insured with a CG 20 10 or similar endorsement. The Contractor agrees that the insurance required herein will be primary and that any insurance carried by CWSD will be excess and not contributing. All insurance policies of the Contractor shall be primary in relation to the Additional Insured.
- iv. **ENDORSEMENTS AND CERTIFICATE:** The following provisions are also required for the insurance(s), and evidence of such shall be satisfied by Certificate(s) and Endorsements. An insurance company authorized to transact business in the State of Nevada shall issue the Certificates. The Contractor shall, within ten (10) days after award of bid, furnish CWSD with Certificates of Insurance for the required insurance coverage. Endorsements for the Waiver of Transfer of Rights and Additional Insured shall be provided as indicated above, unless contained within the basic policy(ies) and then confirmed by written statement signed by the insurance agent, broker and/or underwriter in a form acceptable to CWSD.

CARSON WATER SUBCONSERVANCY DISTRICT

777 E. William St., #110A

Carson City, NV 89701

PH: (775) 887-7450 / FAX: (775) 887-7457

REQUEST FOR QUALIFICATIONS

EDWIN JAMES, GENERAL MANAGER

E-MAIL: edjames@cwsd.org

- v. **SUBCONTRACTORS:** In the event any of the Work is subcontracted, the Contractor shall require the subcontractor to provide Workers' Compensation insurance for all of the subcontractor's employees engaged in the Work, unless such employees are covered by the protection afforded by the Contractor's Workers' Compensation insurance. In case any class of employees engaged in hazardous work under the Contract is not protected under the Workers' Compensation statute, the Contractor shall provide, and shall cause each subcontractor to provide, adequate employer's general liability insurance for the protection of such of their employees as are not otherwise protected.

 - vi. **PROFESSIONAL LIABILITY (Errors & Omissions):** Professional liability insurance carried by the consultant must cover all elements of the project including professional services performed by subcontractors. If the consultant's professional liability insurance does not provided coverage for work performed by subcontractors, separate project insurance will be required to comply with the professional liability insurance requirement. CWSD may require a copy of the professional liability insurance policy to verify coverage.
2. **OWNERSHIP OF WORK:** The originals of all documents provided to the Consultant by CWSD for review and all work product of the Consultant including, without limitation, field review notes, field survey notes, reports, exhibits, computer outputs, calculation sheets, drawings, and all other documents, including recordings, videos and pictures associated herewith are instruments of service, are property of CWSD, and are to be delivered in format requested to CWSD before or as a part of completion of the performance under any phase of the Contract for which compensation and/or payment is requested by the Consultant. Any work produced under the Contract is a work made for hire. To the extent applicable law provides that any Work Product belongs to the Consultant rather than CWSD notwithstanding the preceding sentence, the Consultant assigns to CWSD all rights, title, and interest in and to such Work Product for no consideration other than that which is given in connection with this Agreement. The Consultant must promptly (1) provide CWSD with all information in the possession or under the control of the Consultant and relating to all Work Product and (2) at the request of CWSD, execute and deliver to CWSD each document and other writing, and take each other action, in order to assist CWSD in protecting its interest in any Work Product and otherwise enabling CWSD to use and enjoy any Work Product.
3. **KEY PERSONNEL:** It is essential that the Consultant provide adequate experienced personnel, capable of and devoted to the successful accomplishment of work to be performed under this Contract. The Consultant must agree to assign specific individuals to the key positions.

The Consultant agrees that, once assigned to work under this Contract, key personnel shall not be removed or replaced without express written consent of CWSD.

If key personnel are not available for work under the Contract as initially proposed or are expected to devote substantially less effort to the work than initially anticipated, the Consultant shall immediately notify CWSD, and shall, subject to the acceptance of CWSD, replace such personnel with personnel of substantially equal ability and qualifications.

Failure to comply with this requirement may be grounds for termination.

STANDARD TERMS AND CONDITIONS

1. **INDEPENDENT CONSULTANT:** It is clearly understood that each party shall act in its individual capacity and not as an agent, employee, partner, joint venture, or associate of the other. An employee or agent of one party shall not be deemed or construed to be the employee or agent of the other party for any purpose whatsoever.
2. **NON-EXCLUSIVE CONTRACT:** Any contract resulting from this solicitation shall be awarded with the understanding and agreement that it is for the sole convenience of CWSD. CWSD reserves the right to obtain like goods or services from another source when necessary.
3. **AMERICANS WITH DISABILITIES ACT:** The Consultant shall comply with all applicable provisions of the Americans with Disabilities Act, Public Law 101-336, 42 U.S.C. 12101-12213, and applicable federal regulations under the Act.



Exhibit A

Project Background

The availability of river forecasts from the National Weather Service River Forecast Center (RFC) provides extremely valuable information for emergency response purposes. However, the forecast points are at limited locations and are predominantly limited to forecasted stages at USGS gages. Current technology allows the use of hydraulic models informed by the RFC data to simulate the extents of flooding associated with these forecasted flows. In larger watershed systems there is sufficient warning time afforded by these forecasts to provide emergency responders sufficient time to close roadways, conduct evacuations, and protect infrastructure in the areas forecasted to be impacted. This information is capable of saving lives and significantly reducing flood damages, and also reduces the losses associated with business disruption when flooding can be prevented. A secondary benefit of these efforts is an increase in public awareness and confidence in hazard mapping used for flood planning and flood insurance purposes.

In January and February of 2017 the Carson River watershed experienced two Atmospheric River events causing varying degrees of regional and localized flooding and damages. Several roadways including US-395 in Douglas County, NV were closed due to flooding.

At the USGS stream gage (10311000), "Carson River near Carson City" peaked at 8,550 cfs on January 10th and at 10,100 cfs on February 11th. Although these events were within the 10-percent-annual-chance range, there were some moderate to severe impacts to affected communities.

The National Weather Service's (NWS) Advance Hydrologic Prediction Services maintains flood forecasting at the East Fork of the Carson River at Markleeville, CA (USGS Gage 10308200), West Fork of the Carson River at Woodfords, CA (USGS Gage 10310000), and the Carson River at Carson City, NV (USGS Gage 10311000). These forecasts include observed flow at each location in addition to an estimated "forecast" hydrograph for approximately 5 days.

During the January 2017 events, an engineering firm worked with the NWS data and Douglas County Staff to incorporate these forecasted hydrographs into the Carson River Regional HEC-RAS model to estimate maximum flood inundations for a given forecast. The maps were then used by emergency responders to plan for flood impacts.

During the January 2017 event, there were several challenges with the use of the HECRAS model for updated forecasts. The NWS updated the forecasted storm hydrograph approximately every six hours with some updates resulting in relatively significant changes to the peak estimates. The model runtimes for the current configuration of the model are in the range of 25 to 35 hours making the use of this model for updated predictions during an event difficult.

The current model also uses 18 tributary inflow locations to add volume to the system to account for runoff from the Sierra Nevada and Virginia Ranges. There are currently no estimates from the NWS for these tributary inputs. Estimating these volumes is challenging and time consuming during a flood event.

Even with these challenges to the use of the HEC-RAS model, Douglas County staff still found the output useful during their emergency management efforts. Douglas County staff would like to have model that will forecast flood inundation in a timely manner. Modifying the new HEC-RAS floodplain model for Carson Valley is preferred but other 2D models are acceptable.

Model Development

It is the goal of Douglas County to develop a hydraulic model that can run between RFC outputs ~ for the entire Carson PMR area for use in Flood Forecasting. It is important that this model be able to simulate potential flood hazards for the study area with reasonable accuracy given the limitations on run times and study area size. This model is conceptualized to be a 2D model for hydraulic connectivity and ease of use. The goal is to have a model for the entire area with adequate grid cell resolution that can run in 3-4 hours.



National Weather Service Coordination

In order for this model to work as a predictive tool, it is imperative that the tributary inflow hydrographs be available and derived from the NWS hydrologic model predicted storm hydrographs.

Technical Memorandum

The final product will be a working model that Douglas County staff can run during flood events. Included with the model will be a technical memorandum describing the development of the terrain, model, and validation process. It is anticipated that this will be a basic document with enough detail to outline the process used to develop the model but will not be suitable for regulatory purposes. The memo will also provide sufficient guidance for an experienced HEC-RAS user to update the hydrologic inputs to the model and run simulations of forecasted flood events.

SECTION 2 – TECHNICAL AND ADMINISTRATIVE SUPPORT DATA SUBMITTAL

CWSD, in conjunction with the Project Team members and FEMA representatives, shall comply with the data submittal requirements summarized below and in appropriate guidance.

All supporting documentation for the activities in this MAS shall be submitted according to FEMA standards and requirements and will include a FEDD folder. Submittals must be made to the appropriate PTS for a review of required materials. CWSD will respond to requests from FEMA or its contractors for additional information and ensure that all required documents are included in the TSDN.

If any issues arise that could affect the completion of an activity within the proposed scope or budget, CWSD 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 FEMA Regional Office.

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

Table 2.1: TSDN Section Mapping Activities

Mapping Activities	TSDN Section												
	General Documentation	Amendments	Telephone Conversation	Meeting Minutes/ Reports	General Correspondence	Hydrologic Analyses	Engineering Analyses	Hydraulic Analyses	Key to Cross-Section Labeling	Key to Transect Labeling	Draft FIS Report	Mapping Information	Miscellaneous Reference
Perform Field Survey		X		X	X	X		X	X				X
Develop Topographic Data		X		X	X							X	X
Acquire Base Map		X		X	X	X		X	X			X	X
Develop Hydrology/		X		X	X	X	x	X	X				X
Develop Hydraulic Data		X		X	X	X	x	X	X				X
Perform Flood-plain Mapping (and Re-delineation)		X		X	X	X		X	X			X	X
Develop Flood Risk Products		X		X	X							X	X

SECTION 5 – STANDARDS

CWSD and contractors hired under MAS #11 will be responsible for complying with all related Procedure Memorandums and Operating Guidance published by FEMA as of the date of this agreement. CWSD will also coordinate with the Region IX office to determine if any additional standards should be met. CWSD will also review and consider the best practices provided in FEMA's Operating Guidance documents at <http://www.fema.gov/guidance-cooperating-technical-partners-program/operating-guidance-documents>. All work products will comply with FEMA G&S and PMs.

The standards relevant to this MAS are presented in FEMA Policy 204-078-1 Standards for Flood Risk Analysis and Mapping, Revision 8, dated February 2019, located at <http://www.fema.gov/media-library/assets/documents/35313>.

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