



## HUMBOLDT BAY MUNICIPAL WATER DISTRICT

### Request for Qualifications (RFQ)

### R.W. Matthews Dam Seismic Stability Project

### Ruth Lake, Trinity County, California

Engineering, Geotechnical, Surveying, Seismic Stability Analysis and Design, Environmental, Permitting, Construction Management, and Grant Assistance

## A. Invitation

The Humboldt Bay Municipal Water District (HBMWD or District) is inviting qualified consultants to submit a Statement of Qualifications (SOQ) and other materials, in accordance with the outline below, to be considered for selection by the District to perform services related to the District's R.W. Matthews Dam Seismic Stability Project as described in this Request for Qualifications (RFQ).

[2 C.F.R. § 200.320 (b) (2)]

***The deadline to submit an SOQ is provided in Table 1 in Section F of this RFQ.***

## B. Project Overview

R.W. Matthews Dam is located on the Mad River in Trinity County approximately 50 miles southeast of Eureka, CA. In the event of dam failure, inundation flooding would affect the entire downstream reach of the Mad River.

The dam is overall in good condition. The proposed project is a seismic retrofit, not a repair. This project will reduce the risk of dam and spillway failure at R.W. Matthews Dam resulting from a seismic event by performing a seismic stability analysis based on the controlling seismic ground motion for the area and developing and implementing the designs for seismic retrofits that result from the analysis. This project will include studies and engineering designs that will be used to characterize conditions at the dam and spillway and determine appropriate actions to make the dam and spillway more resilient to seismic events.

A 2016 study found that the controlling ground motion for the dam is a M9.2 event on the Cascadia Subduction Zone, resulting in an 84th percentile peak ground acceleration (PGA) of 0.70g. The stability of the dam in response to this seismic event has not been analyzed. Due to the nature of the grant funding (see Section C), the project will be completed in two phases: 1) Advance Assistance Phase, and 2) Final Design and Construction Phase.

Provided below in this section is a summary of the major project components. See Section E for more detail on the work to be completed.

The proposed project shall be designed to meet current dam safety and seismic standards, and any proposed retrofit designs will be closely reviewed by the State of California Division of Safety of Dams (DSOD) and the Federal Energy Regulatory Commission (FERC) and will require approval from these agencies.

## **Advance Assistance Phase**

This Phase will include all work required to perform a seismic stability analysis for the dam and spillway, including, but not necessarily limited to, the following:

- Performing a geological/geotechnical assessment of the area.
- Conducting a LiDAR survey and a supplemental ground topographic survey.
- Using the geotechnical and survey data to perform a seismic stability analysis of the dam and spillway in response to the controlling seismic ground motion for the area.
- Developing alternatives for proposed retrofits based on the results of the seismic stability analysis.
- Advancing the preferred alternative to the 65% design level.
- Performing associated environmental studies, permitting, and preparing an associated environmental document.
- Preparing a Hazard Mitigation Grant Program (HMGP) project grant sub-application to the California Office of Emergency Services (Cal OES) for final design and construction funding for the proposed seismic retrofit alternative.

The District's intent is to execute one agreement with a single consultant firm or team to provide the services under this Phase.

## **Final Design and Construction Phase**

If a grant for final design and construction is awarded, the District may elect to award a contract for professional services during the Final Design and Construction Phase to the consultant that is selected out of this RFQ process or go through another RFQ process for this Phase. This Phase will include all work related to preparing final bid documents (plans and specifications), administering the bidding process, and performing construction management and construction inspection duties.

## **C. Funding Sources and SOQ Submission Restrictions**

The District has received partial funding for the Advance Assistance Phase through a Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant being administered by the California Governor's Office of Emergency Services (Cal OES) via the Robert T. Stafford Emergency Assistance and Disaster Relief Act for a FEMA Hazard Mitigation Grant Program (HMGP) project. The Advance Assistance Phase of this project is specifically funded by the HMGP Advance Assistance program. One use of Advance Assistance funding is to develop hazard mitigation projects, including engineering design and feasibility studies for larger or complex critical facility retrofits. The Advance Assistance program does not fund final design or construction; however, the goal of any Advance Assistance project is to lead to a construction project. As such, the final deliverable for the Advance Assistance Phase of the project will be a project sub-application to Cal OES under the HMGP for final design and construction of the proposed project. The Final Design and Construction Phase will be initiated if grant funding is awarded.

Note that due to the interpretations of 2 CFR § 200.319 by FEMA and Cal OES, consultants that assist in sub-application development for a project funded by the HMGP are precluded from competing for future work associated with the project that is funded by the HMGP. Consequently, GHD, Inc. is precluded from responding to this RFQ.

Project activities must adhere to the requirements of both federal and state agencies related to the Hazard Mitigation Grant Program (HMGP), National Environmental Policy Act (NEPA), and the California Environmental Quality Act (CEQA).

## **D. Selection Process**

The District will establish a Selection Committee to review the SOQ submittals received. The Selection Committee will request a scope of work and fee proposal from the most qualified firm/team that is subject to negotiation of a fair and reasonable price. If negotiations are not successful, the District will terminate negotiations with the selected consultant and will begin to negotiate with other qualified consultants in the order of their respective SOQ ranking (from highest to lowest) until an agreement is reached. The final proposal will be brought to the District's Board of Directors for potential approval.

## **E. Work to be Completed**

See Section C of this SOQ regarding phasing of the project and associated anticipated contract award information.

### **Advance Assistance Phase**

#### **1. Project Management**

- 1.1 Attend and document design meetings
- 1.2 Prepare correspondence
- 1.3 Manage subcontractors
- 1.4 Maintain project files
- 1.5 Manage and direct overall design and environmental teams

#### **2. Quality Control and Quality Assurance of all work products**

#### **3. Grant Administration**

- 3.1 Coordinate the FEMA Hazard Mitigation grant administration with FEMA and/or Cal OES and District staff.
- 3.2 Ensure scope of the project is consistent with scope defined in the grant applications and/or agreements.
- 3.3 Ensure compliance with the grant program requirements and funding agreements.

#### **4. Geotechnical Assessment**

- 4.1 Obtain permits that may be required for geotechnical borings, including, but not limited to, permits from FERC and DSOD. This may include developing a coring and repair plan.
- 4.2 Install borings at the spillway floor to determine how well the concrete spillway is bonded to the underlying bedrock; assess the condition of the bedrock underlying the spillway, flip bucket, and left lower one-third of the spillway chute; and adequately characterize subsurface conditions at the spillway to allow for the development of a seismic stability analysis.

##### Background:

As is common with many spillways of this age, there is not a detailed geological map of the spillway chute. Accordingly, there is an inherent uncertainty characterizing the engineering geological properties of the bedrock below the chute. From the construction photographs, the bedrock generally appears to be of better quality near the ogee weir (upstream end of the spillway) than at the flip bucket (downstream end of the spillway). The construction photographs and the boring data from PH-4 suggest the left lower one-third of the spillway could be grounded on more erodible bedrock.

- 4.3 Install other borings (anticipated to be downstream shell of dam, consultant to confirm) and assess the regional geology to evaluate the likelihood of a global stability failure of the area encompassing the dam and spillway that could result from seismic activity. A calibrated Becker hammer drill or cone penetration testing (CPT) rig may be required to get adequate in place densities in the river alluvium under the dam shells that may not have been removed during construction to see if it is potentially liquefiable.
- 4.4 Prepare a draft geotechnical report for HBMWD review detailing the findings of the investigation and providing conclusions and recommendations, with an analysis of feasibility for seismic retrofit work at the spillway and dam. The report will specifically analyze the composition of the dam itself and materials underlying the dam and spillway. Results of this comprehensive geotechnical assessment will include information on how cohesive the materials are that compose the dam and implications for slope stability, whether the dam and spillway are founded on bedrock material (and if so, how well the concrete of the spillway is bonded to the underlying bedrock and an assessment of the condition of the bedrock/materials), whether the materials underlying the dam are prone to liquefaction, and other information relevant to performing a seismic stability analysis for a 9.2M event.
- 4.5 Prepare a final geotechnical report.

See the “Geotech Borings” outline as shown in the legend in Figure 2 in Tab 6 of Attachment 3 for a general vicinity of proposed geotechnical borings and access.

If geotechnical work is anticipated to be performed during February 1<sup>st</sup> – July 9<sup>th</sup>, bio surveys may need to be performed as described in the Environmental Special Studies task.

## **5. LiDAR Survey**

- 5.1 Obtain survey data sufficient to perform a seismic stability analysis. Sufficient data is anticipated to be a digital terrain model with 1-foot elevation contours.
- 5.2 Establish control points as required.
- 5.3 Perform a supplemental ground topographic survey if required to supplement and rectify LiDAR data.

## **6. Seismic Stability Analysis and Alternatives Analysis**

- 6.1 Analyze the stability of the dam and spillway under seismic loading, including slope stability analyses of the upstream and downstream slopes for static and dynamic (i.e., seismic loading) conditions. Perform slope stability analyses for long-term steady-state, rapid drawdown, pseudo static, and post-earthquake conditions. Use available piezometer data at the dam to select phreatic surfaces for analysis. Consider the potential for soil strength loss due to the design input seismic loading. Evaluate the potential for liquefaction and cyclic softening.
- 6.2 Estimate seismically-induced slope deformations sufficient to satisfy FERC and DSOD requirements for a modern analysis. Consider available freeboard of the dam and character and configuration of the embankment materials when evaluating the severity of the estimated crest and slope deformations.
- 6.3 If excessive deformations are computed, develop and analyze alternatives for potential remedial actions.
- 6.4 Prepare a draft Seismic Stability and Alternatives Analysis report to document the analysis and submit for review and acceptance by HBMWD, and subsequently, FERC and DSOD. Determine the most feasible, constructible, cost-effective, environmentally superior spillway and/or dam seismic retrofit and design that will meet the intent of the grant.
- 6.5 Prepare a final Seismic Stability and Alternatives Analysis.

## **7. 65% Seismic Stability Retrofit Design**

- 7.1 Prepare 30% engineering plans and an opinion of probable construction cost (OPCC) for the preferred alternative developed under Task 6. Submit to HBMWD for review and approval. Provide FERC and DSOD with the option to review and approve. 30% drawings shall be sufficient for establishing a project study boundary for performing NEPA and CEQA special studies.
- 7.2 Prepare draft 65% plans, specifications, contract documents, and OPCC for HBMWD, FERC, and DSOD review.
- 7.3 Incorporate review comments into final 65% plans, specifications, contract documents, and OPCC.

## **8. Environmental Special Studies**

- 8.1 Conduct site-specific botanical, biological, sensitive communities, wetlands, and cultural/archaeological resources studies sufficient to allow for the completion of the NEPA (completed by FEMA) and CEQA processes and other permits that may be required for the project. If geotechnical field work is proposed to occur between February 1<sup>st</sup> and July 9<sup>th</sup>, northern spotted owl surveys will be required following the protocol described in the letter and associated exhibit included as Attachment 4.
- 8.2 Phase I Investigation (if required) – Complete a limited Phase I investigation, if required, to assess whether it is likely that any hazardous materials or impacted soil or groundwater will be encountered during the construction of the proposed project.
- 8.3 Prepare draft and technical memoranda or reports for all studies completed.

## **9. Permitting**

- 9.1 Consultant to confirm which permits are required to allow for construction of the project. It is assumed that the following permits will be required to be prepared by the consultant:
  - i. North Coast Regional Water Quality Control Board 401 Water Quality Certification
  - ii. U.S. Army Corps of Engineers CWA Section 404 permit
  - iii. California Department of Fish and Wildlife 1600 Lake and Streambed Alteration Agreement
  - iv. California Department of Fish and Wildlife Incidental Take Permit (ITP)
  - v. Trinity County Conditional Use Permit
  - vi. Trinity County Encroachment Permit
  - vii. Biological Assessment and Biological Opinion (BABO)
- 9.2 Prepare permit applications, coordinate with and respond to requests of the permitting or regulatory agencies, and acquire all necessary permits.

## **10. CEQA Document**

- 10.1 Prepare an appropriate CEQA document for the project, which is assumed to be an Environmental Impact Report. Consultant to confirm.
- 10.2 Coordinate with all relevant agencies and stakeholders.
- 10.3 Prepare a Notice of Preparation (NOP).
- 10.4 Preliminary Draft EIR (DEIR).
- 10.5 Participate in and lead Draft EIR review meeting.
- 10.6 Prepare public DEIR .
- 10.7 Prepare a Notice of Completion (NOC) and Notice of Availability (NOA).
- 10.8 Prepare draft final EIR, response to comments, and coordinate and lead a review meeting with relevant agencies.
- 10.9 Prepare a draft Mitigation Monitoring and Reporting Program (MMRP) based on the impact analysis and comments on the DEIR.
- 10.10 Prepare a Final EIR and Final MMRP.

10.11 Prepare Notice of Determination (NOD).

## **11. Project Sub-application and Final Benefit-Cost Analysis**

11.1 After completion of all the other tasks under the Advance Assistance Phase, the selected consultant will complete a project sub-application that meets HMGP requirements for final design and construction of the proposed seismic stability retrofit. This will include an application, Benefit-Cost Analysis (BCA), and other attachments and supporting documents that comprise a complete HMGP project sub-application and that meet the Cal OES / FEMA requirements for HMGP project grant applications at the time of submission.

## **Final Design and Construction Phase (Award not Guaranteed)**

### **12. Project Management**

- 12.1 Attend and document design meetings
- 12.2 Prepare correspondence
- 12.3 Manage subcontractors
- 12.4 Maintain project files
- 12.5 Manage and direct overall design and environmental teams

### **13. Quality Control and Quality Assurance of all work products**

### **14. Grant Administration**

- 14.1 Coordinate the FEMA Hazard Mitigation grant administration with FEMA and/or Cal OES and District staff.
- 14.2 Ensure scope of the project is consistent with scope defined in the grant applications and/or agreements.
- 14.3 Ensure compliance with the grant program requirements and funding agreements.

### **15. Final Design**

- 15.1 Advance the design from the Advance Assistance Phase and prepare 90% engineering drawings, specifications, contract documents, and OPCC for HBMWD, FERC, and DSOD review.
- 15.2 Prepare a bid set of engineering drawings, specifications, contract documents, and OPCC.

### **16. Bid period assistance**

- 16.1 Assist the District with distributing and advertising the plans, specifications, and project documents for a competitive sealed bid process for project construction.
- 16.2 Respond to contractor questions during the bid phase in the form of formal addenda.
- 16.3 Review and evaluate construction bids for compliance with project specifications. Confirm that the low-cost bidder is responsible and responsive per CA state law, meets the project bond requirements, holds a valid contractor license, is registered with the California Department of Industrial Relations, and is not ineligible for participation in federal assistance programs.
- 16.4 Following review of contractor bids, prepare a recommendation of award memorandum to HBMWD staff and Board of Directors.

### **17. Construction management and inspection services**

- 17.1 Provide construction inspection services to monitor contractor compliance with the plans and specifications. This will include daily inspections, reports, photo documentation, and other standard construction inspection tasks.

- 17.2 Consult and coordinate with the District throughout construction. Continually provide the District with ongoing construction documentation.
- 17.3 Develop agendas and minutes for and coordinate and conduct project construction meetings.
- 17.4 Receive, log, and respond to Contractor’s submittals. Engage the District as necessary and include District staff on correspondence.
- 17.5 Receive, log, and respond to Contractor’s Requests for Information (RFIs). Engage the District as necessary and include District staff on correspondence.
- 17.6 Receive, log, review, and assist the District with processing legitimate change orders.
- 17.7 Receive, log, review, and assist the District with processing pay requests.
- 17.8 Confirm that the contractor provides as-built drawing markups and review for adequacy and accuracy.
- 17.9 Provide one clean, complete, set of as-built drawing markups that incorporate redlines from the contractor, construction manager, and owner and rectify any conflicts. Prepare final as-built drawings for submission to the District.
- 17.10 Prepare contract closeout documents and prepare the Notice of Completion.
- 17.11 Prepare grant closeout documents.
- 17.12 Provide the District with a compiled package of all construction management documentation to be used for District records and for grant closeout purposes.

## **F. Consultant Selection Schedule**

The following schedule has been established for the consultant selection process. The District reserves the right to modify this schedule as required.

*Table 1 Consultant selection schedule*

Issue RFQ	December 26, 2024
Deadline to submit questions	January 20, 2025 (5:00 pm PST)
Deadline for addenda to be issued	January 24, 2025
<b>Deadline to submit SOQ</b>	<b>February 5, 2025 (3:00 pm PST)</b>
Selection committee review	February 6 to February 12, 2025
Notify apparent most qualified consultant	February 13, 2025
Selected consultant submits scope of work and fee	February 20, 2025
Scope and fee negotiation	February 20 to February 27, 2025
District Board considers contract approval	March 13, 2025
Execute consultant contract if approved by Board	March 14, 2025

## G. Project Schedule

The following is an estimated schedule for the project. The Advance Assistance Phase deliverables submission date provided is firm. If consultant believes that this date cannot feasibly be met, justification shall be provided as described in Section H.1. Dates provided after the Advance Assistance Phase completion date are estimates and depend on the timing for release of grant funding for the Final Design and Construction Phase.

Table 2 *Estimated project schedule*

Execute consultant contract if approved by Board	March 14, 2025
Submit Advance Assistance Phase deliverables to Cal OES	April 1, 2026
Funding awarded for Final Design and Construction Phase	September 2027
Final Design completed and approved by FERC and DSOD	October 2027
Project issued for bid	November 2027
Construction bids due	January 2028
Construction contract awarded	February 2028
Construction begins	May 2028
Construction complete	October 2029
Grant closed out	February 2030

This estimated project schedule is subject to change and may be modified by the District if required.

## H. SOQ Requirements

### H.1 SOQ Contents

Firms or teams who are interested in providing the consultant services described herein are to submit a Statement of Qualifications. The SOQ shall include the following:

1. Table of Contents
2. Cover Letter

Provide a cover letter, maximum length of 1 page, indicating the Consultant's interest and summary of qualifications. Include Consultant's name, office location, and years in operation. Include name and contact information for the officer authorized to represent the firm for any correspondence and negotiations.

3. Project Understanding and Approach

Summarize the Consultant's understanding of the services to be performed and specific challenges that are related to the delivery of the anticipated Scope of Services. The Approach section should include the following:

- How the Consultant will address the identified project challenges.
- Project management plan highlighting communication plan, schedule management, and how the consultant will integrate the District into the process.
- Schedule for the Advance Assistance Phase of the project showing dates for major deliverables and a completion date of the Advance Assistance Phase as shown in Table 2 in Section G. If the Advance



Assistance Phase completion date is not feasible to achieve, Consultant shall explain the reasoning in their SOQ.

4. Experience and Qualifications of Firm

Provide a project organization chart showing each team member who would be assigned to the project. Identify prime and subconsultants. Identify key team members who Consultant feels would be critical to the success of the project and describe how each will contribute to the project. Provide examples of project assignments in which they have played a similar role. Short resumes of key team members shall be included.

Describe qualifications of Consultant's firm and specific experience within the last ten years providing similar services to those anticipated for this project. Include information related to Consultant's firm with state and federal grant funded projects, with a particular emphasis on knowledge of FEMA's Hazard Mitigation Grant Program as it relates to this project.

Demonstrate Consultant's knowledge of Federal, State, and local laws, rules, regulations, or ordinances relevant to this project.

Provide descriptions (size, type, year, amount, and location) of three similar projects completed by the proposed staff within the last ten years. Provide contact information (name, title, phone number, and e-mail address) for each reference project provided. Cross reference key team members to the listed projects.

5. Provide information regarding present workload and staff availability.

6. List any potential conflicts of interest and a strategy for negating them.

## H.2 Page Limit

SOQs shall be limited to a total of 15 pages which shall be numbered in consecutive order. The page limit excludes the SOQ cover page, table of contents, cover letter, section dividers, and resumes. SOQs shall be submitted on 8½ by 11 pages only with each double-sided sheet counted as two pages.

## H.3 SOQ Submittal Requirements

Applicants who are interested in providing the services for this project are required to submit a Statement of Qualifications no later than the time and date noted in Table 1 in Section F. All SOQs and materials submitted in response to this RFQ will become the property of the District and will not be returned. The District is not responsible for any costs incurred in the preparation of a response to this RFQ. Please submit the SOQ to:

John Friedenbach, General Manager  
Humboldt Bay Municipal Water District  
828 7th Street  
Eureka, CA 95501-1114

SOQs received after the deadline, regardless of postmark, will be rejected.

Applicants shall submit five bound copies of their SOQ, one unbound copy, and one electronic pdf copy on a CD or flash drive. All submission materials shall be included in a sealed envelope labeled with the following:

- Submitting firm's name and address
- "Statement of Qualifications for HBMWD R.W. Matthews Dam Seismic Stability Project"

## H.4 Questions and Addenda

Questions regarding this RFQ must be submitted in writing, by e-mail only, to John Friedenbach, General Manager, at [friedenbach@hbmwd.com](mailto:friedenbach@hbmwd.com) by the deadline shown in Table 1 in Section F. Questions will be responded to in writing. Written summaries of all questions and answers will be distributed to each consultant. Addenda will be issued, if necessary, and posted to the District's website ([www.hbmwd.com](http://www.hbmwd.com)).

Site visits are available upon request. Requests shall be in writing via email and directed to John Friedenbach, General Manager, at [friedenbach@hbmwd.com](mailto:friedenbach@hbmwd.com) and Dale Davidsen, Superintendent, at [supt@hbmwd.com](mailto:supt@hbmwd.com).

## **I. Selection Criteria**

The District's Selection Committee will evaluate all submitted SOQs in accordance with the criteria stated below. The District reserves the right to request interviews of the top ranked firms. Should interviews be required, those consultants participating in the interview process will have their SOQs rescored after the interview process, and final rankings will be based on those scores.

The Selection Committee will decide which applicant will be invited to submit a scope and fee proposal. Evaluation and selection criteria will include the following:

1. Consultant's understanding of the project and conceptual approach – 20 points
2. Consultant firm or team's qualifications and experience on similar projects, including seismic stability analysis, dam and spillway seismic retrofit design, and expertise regarding dam structures – 20 points
3. Qualifications and experience of the project manager and key personnel – 20 points
4. Consultant's experience with grant-funded projects, particularly those funded through the FEMA Hazard Mitigation Grant Program – 10 points
5. Consultant Team's present workload, staff availability, and ability to meet established project schedule or justification as to why project schedule is infeasible – 10 points
6. References for prime and key subconsultants – 15 points
7. Consultant Team's ability to negate any identified conflicts of interest – 5 points

## **J. Attachments**

Use the provided web link to obtain the documents listed below: <https://www.hbmwd.com/request-for-qualifications-rfq-r-w-matthews-dam-seismic-stability>

- Attachment 1: RFQ Distribution List
- Attachment 2: Example Professional Services Agreement and applicable required contract provisions under 2 CFR § 200
- Attachment 3: Relevant Documents from HMGP Advance Assistance Grant Application
  - Tab 1: Subapplication
  - Tab 4: Supporting Documents (includes previous related studies)[**Responding firms must sign Confidentiality agreement prior to receiving these documents**]
  - Tab 5: Grant Scope of Work
  - Tab 6: Maps
  - Tab 7: Photos
  - Tab 9: Cost Estimate
- Attachment 4: Northern Spotted Owl Requirements