

**Request for Proposals:
Suisun Marsh Managed Wetlands BMP Water Quality Improvement
Pilot Project Technical Support**

July 23, 2015

You are invited to submit a proposal in accordance with the attached Statement of Work to assist the San Francisco Estuary Partnership (SFEP) in identifying implementation actions to improve the water quality of Suisun Marsh. Under an interagency agreement with the U.S. Environmental Protection Agency, the Association of Bay Area Governments (ABAG) and SFEP received funding through the San Francisco Bay Water Quality Improvement. SFEP is seeking a contractor to: 1) identify constraints, opportunities and recommendations for managed wetland best management practices (BMPs) in Suisun Marsh that could improve water quality relative to dissolved oxygen (DO) and mercury/methylmercury (Hg/MeHg); (2) build knowledge within the managed wetland landowner community; and (3) develop working relationships between all stakeholders to support attaining long-term water quality improvement objectives. The project will utilize field sampling, models, engineering tools, and peer reviewed literature to accomplish water quality goals. Expected environmental outcomes are reduced occurrences of low DO and high MeHg events in tidal sloughs. Any contract resulting from this solicitation will be negotiated by ABAG and SFEP and be administered by ABAG.

I. Background

Suisun Marsh is one of the largest brackish wetlands in western North America. The marsh serves as a resting and feeding ground for millions of waterfowl migrating on the Pacific Flyway and provides essential habitat for more than 221 bird species, 45 mammal species and more than 40 fish species, including endangered species. Suisun Marsh is listed on the Clean Water Act 303(d) list for impairment by metals, nutrients, organic enrichment/low dissolved oxygen and salinity/total dissolved solids/chlorides. The principal sources of impairment in the marsh are Hg/MeHg and DO. Hg/MeHg poses significant health risks for humans and wildlife, causing reproductive impairment in humans and many bird species. DO is essential for a healthy aquatic ecosystem. Low DO levels are known to adversely affect aquatic organisms and can result in fish kills, fish egg mortality, and growth rate reductions, and may serve as a barrier to migration of anadromous fish such as Chinook salmon.

The Contractor will work closely with the Suisun Resource Conservation District, regulatory agencies (e.g., San Francisco Bay Regional Water Quality Control Board, Bay Conservation and Development Commission) and local stakeholders to develop and test BMPs that can be implemented to address the water quality problems in Suisun Marsh. The project will build on previous studies completed at the marsh and improve the understanding and participation in ongoing Suisun Marsh restoration activities. SFEP is seeking a contractor that brings a high level of technical experience in wetland biogeochemistry, modeling, and restoration that could effectively provide services related to the work described herein.

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II. Services Required

The Contractor shall perform all aspects of the required work as described in the attached Statement of Work providing the resources necessary to complete the tasks under the direction of SFEP.

III. Scope of Work and Time Frame

This is a 4 year contract; all work must be completed by September 30, 2019. Projected starting date is September 2015. The development of a Workplan (as part of Task 1) will need to be completed by the end of October 31, 2015. Refer to attached Statement of Work for detailed description of tasks.

IV. Compensation

Up to \$435,000 is available for this contract. A match of \$220,000 (labor, nonlabor, or a combination) is required for the contract. The Contractor must be an independent contractor. No benefits are provided. Contractor is responsible for payment of applicable state and federal taxes.

V. Selection Procedure

A selection committee will evaluate all submitted proposals. The committee will be comprised of SFEP staff. Each submittal will be evaluated according to the criteria below. The applicant must possess specific, substantive, and demonstrated expertise to address the scope of services. Numerical scores will be tabulated for each submittal.

- 1) **Qualifications and Experience** - The Contractor will be evaluated based on the level of experience and background in performance of similar projects/programs, including past schedule and budget performance.
- 2) **Technical Approach** - The Contractor will be evaluated based on the adequacy of the submitted approach to fulfill the goals and objectives of this Request for Proposal (RFP).
- 3) **Proposal** - Proposals must respond to all the requirements of the RFP, and must include all information specifically required in all sections of the RFP.
- 4) **Other Factors** - Additional factors may be considered in the RFP selection process, which have not been assigned point values, including the stipulation that contract award may not be made to any Contractor unless an agreement can be secured for all general and special contract provisions.

Highest ranking candidates may be invited to interview at San Francisco Estuary Partnership offices, 1515 Clay Street, Suite 1400, Oakland, CA, at their own expense. The interview panel will include SFEP staff.

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VI. Contract Award

Contract award shall be made to the responsible Contractor whose proposal is most advantageous to SFEP evaluation factors, cost, and other factors, considered. Our objective is to obtain the highest qualified contractor to achieve the objectives within the required time frame at a reasonable cost. Qualifications and experience as a whole are more important than cost.

This RFP does not commit ABAG to award a contract. We reserve the right to reject any or all proposals received in response to this request. Contractor is informed that the award of any contract as the result of this solicitation is contingent upon the availability of Federal and State funds.

VII. What to Submit

To provide an objective, fair review of all proposals, the submittals are to include only the following information:

- 1) Transmittal Letter - Normal transmittal letter, covering highlights and unique features of your proposal. Any special terms and conditions of the offer should also be summarized in this portion of the proposal.
Length: One (1) page maximum.

- 2) Office Address - Provide your office address.

- 3) Statement of Work - Provide a definitive proposal to accomplish the requirements as stated in this RFP. This must describe in detail the procedures and methods that will be used to achieve the stated goals of the project, preferably drawing on past experience and work conducted by the applicant. A proposed timeline and clear delineation of general tasks, products, and expected completion dates must also be included.
Length: Five (5) pages maximum.

- 4) Relevant Experiences - Provide a summary of relevant experience over the last 5 years. Describe the nature and quality of projects recently completed. Be specific regarding projects that are the same or similar in nature to that described in the Statement of Work. Demonstration of knowledge of wetland biogeochemistry, modeling, and restoration specific to related projects should be presented. Describe your experience working with stakeholder groups and public agencies.
Length: Three (3) pages maximum.

- 5) Educational and Professional Background- Identification of principal(s) and any subcontractors, including key personnel and lead persons to be assigned to the project. Please be specific about education and background of all principals and subcontractors, as well as current or past participation recently and directly with the primary applicant. Resumes or curriculum vitae of primary lead

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consultants must be included. Please provide estimated time and availability of key staff for when work is to be performed. Also, references for all principals and subcontractors and key personnel must be included.

6) List of Client References - Provide a list of clients to be used as references for your work, including contact name, address, telephone number, nature of job, length of engagement, and amount (e.g. one year, \$30,000).
Length: One (1) page maximum.

7) Standard Billing Information – Must include total funds requested and amount budgeted per task. Provide billing rates for relevant personnel and any subcontractors, including overhead, fringes, and other direct costs (including travel, equipment, etc.)
Length: One (1) page maximum.

8) Standard Form LLL - Disclosure of Lobbying Activities – Please fill out the attached *Disclosure of Lobbying Activities* form. This is required for all submittals to receive EPA funding.

Electronic proposals are due in the SFEP offices no later than Monday, August 24, 2015 at the close of business, 5:00 P.M. Questions may be directed to Ben Livsey at (510) 622-2308 or email: Ben.Livsey@waterboards.ca.gov or Paula Trigueros at 510-622-2499 or email: PTrigueros@waterboards.ca.gov. All proposals must be emailed in pdf to Ben Livsey at the referenced email address.

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Statement of Work

Objectives

This Statement of Work includes model development and data analysis and interpretation tasks to improve the understanding of how BMP implementation affects DO and Hg/MeHg in Suisun Marsh.

Statement of Work

The Contractor will work on the following 4 tasks.

Task 1: Develop Workplan, QAPP, EDMP

The Contractor will develop a detailed Workplan to direct the project. The Workplan will be the basis for project execution and include description of the activities to be carried out, schedule, and budget. The Workplan will include provisions for periodic reporting of information for contract administration to facilitate invoicing, cost tracking, and development of quarterly progress reports and a draft and final project close-out report.

The Contractor will prepare a Quality Assurance Project Plan (QAPP) that will comply with EPA's requirements (EPA QA/R-5¹). The QAPP will describe the design and data collection methods, data quality objectives, data quality assurance/quality control (QA/QC), data review, management/storage protocols, and data reporting procedures. The Contractor will lead the development of the Experimental Design and Modeling Plan (EDMP). The EDMP will be based upon data needed to effectively assess water quality and to provide the necessary data for refinement and testing of a HEC-RAS²/ "Reactor Model" (see Task 4). The EDMP will inform best management practices (BMPs) implementation and guide field data collection efforts and strategies (see Task 3).

Task 2: Model Development

The Contractor will develop a hydrodynamic model (based on an existing model developed at the proof-of-concept level) for predicting dissolved oxygen levels in Peytonia and Boynton Sloughs. The model will use the HEC-RAS platform and be used to test a broad range of BMPs. The Contractor will calibrate the model to available data sets (e.g., Siegel et al 2011³; Regional Water Board 2013⁴) and analyze input and

¹ Available online at: <http://www.epa.gov/quality/qs-docs/r5-final.pdf>

² U.S. Army Corps of Engineers Hydrologic Engineering System River Analysis System; information online at: <http://www.hec.usace.army.mil/software/hecras/>

³ Siegel, S., P. Bachand, D. Gillenwater, S. Chappell, B. Wickland, O. Rocha, M. Stephenson, W. Heim, C. Enright, P. Moyle, P. Crain, B. Downing, B. Bergamaschi. 2011. Final Evaluation Memorandum, Strategies for Resolving Low Dissolved Oxygen and Methylmercury Events in Northern Suisun Marsh. Prepared for the State Water Resources Control Board, Sacramento, California. SWRCB Project Number 06-283-552-0. May 2011. Available online at: [http://aquaticcommons.org/6470/1/FinalEvalMemo_MainRpt%2BAppA-G_SuisunLowDO-MeHg_1119_2011-0525\(low-res\).pdf](http://aquaticcommons.org/6470/1/FinalEvalMemo_MainRpt%2BAppA-G_SuisunLowDO-MeHg_1119_2011-0525(low-res).pdf)

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output variables to identify critical data needs that may be collected during field sampling (see Task 3).

The Contractor will develop a Reactor Model for the managed wetlands representing the hydrology and kinetics affecting DO, biological oxygen demand (BOD), and MeHg concentrations or MeHg loading. The Contractor will reference and utilize appropriate materials in development and testing of the Reactor Model (e.g., conceptual models of managed wetlands and tidal slough DO and MeHg processes developed by the Suisun Low DO/MeHg study (Siegel et al. 2011)), other peer reviewed literature. The model will be used to assess how different BMPs affect hydrology and water quality. Input and output variables identified in the model development will inform critical data needs that will be collected during field studies (see Task 3). Refinement of the hydrodynamic Reactor Model may occur in subsequent tasks (see Task 4).

Task 3: BMP Implementation Technical Support

The Contractor will collaborate with the Suisun Resource Conservation District (SRCD) to select BMPs to be field tested at participating managed wetlands. BMPs would be drawn from the recommendations of the previous managed wetlands water quality study (Siegel et al. 2011) and would consist of a mix of physical, operational, and management modifications. Field data and laboratory analysis (for parameters such as temperature, DO, pH, BOD, sulfate) will provide the necessary information to calibrate and verify the Reactor Model and to provide the basis for assessing mechanisms of water quality modification by managed wetlands operations. The BMPs selected, their location, and the planned data collection will be in support of the EDMP (Task 1). The SRCD will conduct and oversee all aspects of field data collection and sample analysis; the Contractor will only provide technical review and assistance.

The SRCD will lead outreach efforts and present findings at public meetings. The Contractor will attend at least two of the public meetings and assist in the preparation and presentation of materials aimed at improving understanding and participation in ongoing Suisun Marsh restoration work.

Task 4: Data Analysis, Interpretation, and Technical Reporting

The Contractor will conduct modeling and data analysis, interpretation, and QA/QC. This task will use the Reactor Model to characterize managed wetland field DO responses to imposed and hypothetical hydrologic and vegetation BMPs. Field data collected in Task 3 will be used to test and validate the integrated Reactor Model. Once validated, the Reactor Model will provide a stand-alone tool to allow a structured approach to assessing BMP effects. This tool will be able to test sensitivity in the slough system to BMPs and their geographical placement; identifies areas where more focused

⁴ San Francisco Bay Regional Water Quality Control Board (Regional Water Board). 2013. Suisun Marsh TMDL for Methylmercury, Dissolved Oxygen and Nutrient Biostimulation. September 2012. Available online at:
http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/suisunmarsh/SM_Project%20Definition&Plan_Sep'12.pdf

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data collection would be helpful; and provides a foundational tool for water quality planning and assessment. A concise Technical Report will be developed with fact sheets and a summary of methods, findings, conclusions, and next steps to focus to all future data collection efforts.

Schedule of Deliverables

The Workplan needs to be completed by October 31, 2015. Model development will occur in the first year (Task 2) and BMP implementation and data analysis and interpretation will occur in the second, third, and fourth years (Task 3 and 4). Quarterly reports are due 30 days following end of calendar quarter. Draft final report due 60 days before contract end date. Final report due 30 days before contract end date.

Relevant Qualifications

The Contractor must have appropriate knowledge of wetland biogeochemistry, modeling, and restoration. The Contractor must also have experience working with diverse groups of stakeholders including government agencies.