



DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P.O. BOX 17300
FORT WORTH, TX 76102-0300

28 July 2020

**REQUEST FOR STATEMENTS OF INTEREST
NUMBER W9126G-20-2-SOI-4993
PROJECT TO BE INITIATED IN FY2020**

Project Title: Water Resources Reviews and Research, Hydrology and Hydraulic Studies, Texas.

Responses to this Request for Statements of Interest will be used to identify potential investigators for Daily Reservoir Evaporation Loss Study Analysis project to be funded by the Water Resources Management Operational & Maintenance (O&M) Funds which provides professional and technical support for its Water Resources Program in order to facilitate successful implementation of the Water Resources Reform and Development Act of 2014. Approximately **\$50,000** is available to support this project in the **base period**. Additional funding may be available for optional tasks within the base period time frame to the successful Recipient/Awardee.

Type of Award:

In accordance with section 6305 – *Using cooperative agreements of the Federal Grant and Cooperative Agreements Act of 1977* (31 U.S.C. § 6301 et seq.), all projects must carry out a public purpose of support or stimulation, instead of acquiring goods or services for the exclusive direct benefit of the United States Government.

In accordance with section 6305 – *Using cooperative agreements of the Federal Grant and Cooperative Agreements Act of 1977* (31 U.S.C. § 6301 et seq.), substantial involvement is expected between the federal partner and the nonfederal partner when carrying out the activities specified in the project agreement. The exact nature of the government's involvement will be defined in the statement of objectives, issued with a request for full proposal.

As a result, it is anticipated that a cooperative agreement will be awarded.

Brief Description of Anticipated Work:

This project focuses on the following objectives:

Cooperator will be providing Hydrology and hydraulic studies of importance to the public as well as engineers and scientists involved in designing and operating infrastructure such as: Bridges and culverts for transportation of public and private infrastructure; Flood plain mapping including base flood elevations (BFE); Reservoirs (Flood risk management, recreation, and more); Hydropower facilities (electricity for public use on grid); Water supply infrastructure for

municipalities (public water sources); and any other infrastructure or human habitations located along rivers and creeks.

1. Base Task 1: Daily Reservoir Evaporation Loss Study (Analysis).

The main objective of this project is to develop a 4 km spatial resolution daily gridded reservoir evaporation database which can be freely accessed and visualized by stakeholders in Texas. The database will contain two layers: a daily gridded Penman evaporation product, and a set of daily estimates for each of the major reservoirs. Improve the algorithm for calculating the gridded daily evaporation rate. Generate the fetch length parameter files for all of the reservoirs.

Develop the historical reservoir evaporation dataset (e.g. 1979-2019) and comparing the dataset with estimates from TWDB. Migrate the evaporation software to the Google Earth Engine for Operational Application.

2. Optional Task 2: Daily Reservoir Evaporation Loss Study (Software API focus).

The main objective of this task will build on Task 1 and focus on developing the Application Programming Interface (API) for visualizing and downloading reservoir evaporation data.

Develop the geodatabase and operational software architecture to integrate gridded weather data and simulate evaporation. Build and document the API to allow for machine-to-machine queries via HTML or command line requests. Provide a technical report to explain the algorithm, the inputs/outputs, the API, the database, and the evaluation results.

NOTE: At this time we are only requesting that you demonstrate available *qualifications* and *skills* for performing similar or same type of work. Your response will be evaluated and if acceptable, you will receive a Request for a Full Proposal based on skills and qualifications demonstrated in your statement of interest.

Period of Performance.

Base Task 1 = 12 months from date of award.

Optional Task 2 = 12 months from date exercised.

All optional task(s) are subject to the availability of funds.

Materials Requested for Statement of Interest/Qualifications:

Please provide the following via e-mail attachment to:

Alisa.Marshall@usace.army.mil and Maxwell.R.Strickler@usace.army.mil

(Maximum Length: 2 pages, single-spaced 12 pt. font).

1. Brief Statement of Qualifications (Maximum length: 2 pages, single-spaced 12 pt. font) to include:

- a. Biographical Sketch,
- b. Relevant past projects and clients with brief descriptions of these projects,
- c. Staff, faculty or students available to work on this project and their areas of expertise,
- d. Any brief description of capabilities to successfully complete the project you may wish to add (e.g. equipment, laboratory facilities, greenhouse facilities, field facilities, etc.).

Note: A full study proposal and proposed budget are NOT requested at this time.

Review of Statements Received: All statements of interest received will be evaluated by a board, who will determine which statement(s) best meet the program objectives. Statements will be evaluated based on the investigator's specific experience and capabilities in areas related to the study requirements. The statement or statements selected shall be invited to submit a full proposals. Those not selected to submit full proposals will be notified of the decision in writing.

Please send responses or direct questions to:

USACE, Ft. Worth District
Alisa Marshall
Contract/Agreement Specialist
Email: Alisa.Marshall@usace.army.mil
Office: 817-886-1068

USACE, Ft. Worth District
Max Strickler
Project Manager, Water Management Section
Email: Maxwell.R.Strickler@usace.army.mil
Office: 817-886-1541

Timeline for Review of Statements of Interest: The RSOI is required to be posted for 30 days prior to the Government making a decision and requesting full proposals. Responses due by 5:00 P.M., Central Time, on **28 August 2020**.

[End of RSOI]