

NOTICE OF INTENT TO AWARD

This Funding Announcement is not a request for applications. This announcement is to provide public notice of the Bureau of Reclamation's intention to fund the following project activities without full and open competition.

ABSTRACT	
Funding Announcement	R11AS20023
Project Title	Baseline Assessment of Spring-fed Rivers in the Upper Sacramento River Watershed
Recipient	University of California - Davis
Principal Investigator / Program Manager	Dr. Randy Alan Dahlgren
Anticipated Federal Amount	\$250,000.00
Cost Share	N/A
Total Anticipated Award Amount	\$250,000.00
New Award or Continuation?	New Award
Anticipated Period of Performance	Date of Execution through September 30, 2013
Award Instrument	Cooperative Agreement
Statutory Authority	Public Law 102-575, Title XXXIV - Central Valley Project Improvement Act, Section 3406(b)(1) and 3407(e)
CFDA # and Title	15.512
Single Source Justification Criteria Cited	Continuation/Unique Qualifications
Reclamation Point of Contact	Judy A. Hudson Grants Management Specialist

OVERVIEW

The National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service's (NMFS) 2009 Biological Opinion (BiOp) on long-term operations of the Central Valley Project (CVP) and the State Water Project (SWP) Operational Criteria and Plan (OCAP) includes a Reasonable and Prudent Alternative (RPA) Action (V.NF.2) that requires Reclamation and the California Department of Water Resources (CDWR) to undertake an evaluation of potential salmonid rearing habitat upstream of Shasta Dam. The rationale for this action is described in the RPA as follows:

The condition and suitability of historical habitats located above impassable barriers is likely to have changed considerably since last occupied by anadromous fish. The location, quantity and condition of habitat must be inventoried and assessed in order to evaluate the current carrying capacity and restoration potential. This information is essential to determine where passage and reintroduction, if feasible, are most likely to improve reproductive success for listed fish.

Spring-fed streams are the most critical components of cold-water fish habitat; because, they will provide a refuge from the much higher temperatures predicted by global climate models. A recent assessment performed in the nearby Klamath catchment indicates that spring-fed streams provide excellent habitat for salmonid spawning and rearing. The characteristics of spring-fed streams in the Sacramento River catchment upstream of Shasta Dam have not been documented, however. This information gap creates an ideal opportunity for a cooperative research effort involving University of California (UC)-Davis and Reclamation scientists. This research will be conducted under agreement 3FC810873 of the Cooperative Ecosystem Studies Unit (CESU) Program.

RECIPIENT INVOLVEMENT

Under this cooperative agreement *the University of California-Davis* will perform the following tasks:

Task 1. Conduct a literature review of spring-fed stream systems.

UC-Davis shall compile a literature review of spring-fed stream systems world-wide, but with a particular emphasis on gray literature materials from the Pacific Northwest region. UC-Davis shall synthesize the resulting information into a conceptual model that demonstrates the potential impacts of spring-fed systems on salmonid food-web and habitat dynamics.

Deliverables for Task 1

(1) Annotated bibliography in Word.

(2) Written description of conceptual model in MS Word.

Due date: June 30, 2012.

Task 2. Document water quality conditions.

To document among- and within system variation in nutrients and other water quality conditions, UC-Davis shall collect monthly water samples year-round at six locations within the following systems: upper Sacramento River at Mossbrae Springs, Fall River at Thousand Springs, Hat Creek near Rising River, upper Sacramento River above Mossbrae Springs, McCloud River below McCloud Dam, and Castle Creek.

The constituents to be measured shall include: pH, electrical conductivity (EC), total N, $\text{NO}_3+\text{NO}_2\text{-N}$, NH_4 , total P, soluble-reactive PO_4 (SRP), dissolved organic carbon (DOC), turbidity, and major cations (Ca^{2+} , Mg^{2+} , K^+ , Na^+) and anions (Cl^- , SO_4^{2-} , HCO_3^-). If suspended algae are sufficiently abundant, chlorophyll concentration shall also be measured. UC-Davis shall also document longitudinal variation in the diel variation of water temperature by installing temperature logger strings in each stream.

Deliverables for Task 2:

(1) All data shall be provided to Reclamation in Excel.

Due date: June 30, 2013.

Task 3. Assess benthic invertebrate community.

UC-Davis shall collect invertebrates from spring-fed rivers (upper Sacramento River, McCloud River,

Fall River, and Hat Creek) and surface runoff dominated rivers (upper Sacramento River above spring source and McCloud River below McCloud Dam) to determine benthic invertebrate abundance and taxonomic composition. Temporal and spatial variability of invertebrate assemblages between rivers and sites shall be characterized in terms of their relative abundance (including density: individuals m⁻²) and diversity (richness and evenness).

Deliverables for Task 3:

(1) All data shall be provided to Reclamation in Excel.

Due date: June 30, 2013.

Task 4. Synthesize and report results.

UC-Davis shall prepare a report presenting an analysis of results of the literature review and the assessments of water quality and benthic invertebrate abundance and taxonomic composition. The report shall serve as the basis for a manuscript to be submitted for peer review in a scientific journal.

Deliverables for Task 3:

(1) Written report presenting results of project.

(2) Manuscript to be submitted to a peer-reviewed scientific publication.

Due date: September 30, 2013.

RECLAMATION INVOLVEMENT

Reclamation anticipates substantial involvement for the successful completion of the tasks to be funded by this award. In particular, Reclamation will be responsible for the following:

1. Reclamation will work closely with UC-Davis to ensure the successful completion of all tasks as well as ensuring the terms of the agreement are fully met.
2. Reclamation will be responsible for developing study designs and sampling protocols, assisting with field sampling and co-authoring peer-reviewed journal articles.

SINGLE-SOURCE JUSTIFICATION

DEPARTMENT OF THE INTERIOR SINGLE SOURCE POLICY REQUIREMENTS
Department of the Interior Policy (505 DM 2) requires a written justification which explains why competition is not practicable for each single-source award. The justification must address one or more of the following criteria as well as discussion of the program legislative history, unique capabilities of the proposed recipient, and cost-sharing contribution offered by the proposed recipient, as applicable.
In order for an assistance award to be made without competition, the award must satisfy one or more of the following criteria: (1) Unsolicited Proposal – The proposed award is the result of an unsolicited assistance application which represents a unique or innovative idea, method, or approach which is not the subject of a current or planned contract or assistance award, but which is deemed advantageous to the program objectives;

- (2) **Continuation** – The activity to be funded is necessary to the satisfactory completion of, or is a continuation of an activity presently being funded, and for which competition would have a significant adverse effect on the continuity or completion of the activity;
- (3) **Legislative intent** – The language in the applicable authorizing legislation or legislative history clearly indicates Congress' intent to restrict the award to a particular recipient of purpose;
- (4) **Unique Qualifications** – The applicant is uniquely qualified to perform the activity based upon a variety of demonstrable factors such as location, property ownership, voluntary support capacity, cost-sharing ability if applicable, technical expertise, or other such unique qualifications;
- (5) **Emergencies** – Program/award where there is insufficient time available (due to a compelling and unusual urgency, or substantial danger to health or safety) for adequate competitive procedures to be followed.

Reclamation did not solicit full and open competition for this award based on the following criteria:

Continuation and Unique Qualification

Single Source Justification Description:

This study is a continuation of a broader effort to evaluate salmonid habitat conditions in the upper Sacramento River catchment. Much of the study area is in private ownership. The cooperator has made special arrangements with the landowners to gain access to the study area. The cooperator is thus uniquely qualified to carry out this study.

STATUTORY AUTHORITY

Section 3406. Fish, Wildlife, Improved Water Management & Conservation

(b) Fish and Wildlife Restoration Activities.--The Secretary, immediately upon the enactment of this title, shall operate the Central Valley Project to meet all obligations under state and federal law, including but not limited to the federal Endangered Species Act, 16 U.S.C. s 1531, et seq., and all decisions of the California State Water Resources Control Board establishing conditions on applicable licenses and permits for the project. The Secretary, in consultation with other State and Federal agencies, Indian tribes, and affected interests, is further authorized and directed to:

- (1) Develop within three years of enactment and implement a program which makes all reasonable efforts to ensure that, by the year 2002, natural production of anadromous fish in Central Valley rivers and streams will be sustainable, on a long-term basis, at levels not less than twice the average levels attained during the period of 1967-1991; Provided, That this goal shall not apply to the San Joaquin River between Friant Dam and the Mendota Pool, for which a separate program is authorized under subsection 3406(c) of this title; Provided further, That the programs and activities authorized by this section shall, when fully implemented, be deemed to meet the mitigation, protection, restoration, and enhancement purposes established by subsection 3406(a) of this title; And provided further, That in the course of developing and implementing this program the Secretary shall make all reasonable efforts consistent with the requirements of this section to address other identified adverse environmental impacts of the Central Valley Project not specifically enumerated in this section.

Section 3407. Restoration Fund

(e) Funding to Non-Federal Entities.--If the Secretary determines that the State of California or an agency or subdivision thereof, an Indian tribe, or a non-profit entity concerned with restoration, protection, or enhancement of fish, wildlife, habitat, or environmental values is able to assist in implementing any action authorized by this title in an efficient, timely, and cost effective manner, the Secretary is authorized to provide funding to such entity on such terms and conditions as he deems necessary to assist in implementing the identified action.