

RECLAMATION

Managing Water in the West

U.S. Department of the Interior
Bureau of Reclamation

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. This funding opportunity is a continuation of an existing agreement.

ABSTRACT	
Funding Announcement	BOR-PN-17-N008
Project Title	Lake Roosevelt Model Update (PNW CESU)
Recipient	Portland State University
Principal Investigator / Program Manager	Dr. Scott Wells
Anticipated Federal Amount	\$130,597
Cost Share	Not Required
Total Anticipated Award Amount	\$130,597
New Award or Continuation?	Continuation
Anticipated Period of Performance	September 1, 2016 through September 30, 2017
Award Instrument	Grant
Statutory Authority	Omnibus Public Land Management Act of 2009, Sec. 9509, P. L. No. 111-11, dated March 30, 2009
CFDA # and Title	15.560, Omnibus Public Land Management Act of 2009
Single Source Justification Criteria Cited	Continuation
Reclamation Point of Contact	Melinda Ritacco Lead Grants Management Specialist 208-378-5103

OVERVIEW

Water temperature and total dissolved gas (TDG) in the Columbia River is strongly influenced by the storage and release of water from projects like Grand Coulee Dam. Previous work has produced a public domain temperature model, known as “CE- QUAL-W2”, of Lake Roosevelt for the purpose of informing in-season watershed management decisions to reduce take and to allow the evaluation of various operational and structural alternatives that can influence the regulation of water flow and temperature.

CE-QUAL-W2 is a 2-dimensional (longitudinal-vertical) hydrodynamic and water quality model capable of predicting water surface, velocity, temperature, nutrients, multiple algae, zooplankton, periphyton, and macrophyte species, dissolved oxygen, pH, alkalinity, multiple CBOD groups, multiple suspended solids groups, multiple generic constituents (such as tracer, bacteria, toxics), and multiple organic matter groups, both dissolved and particulate. The model is set up to predict these state variables at longitudinal segments and vertical layers.

Typical model longitudinal resolution is between 100-1000 m; vertical resolution is usually between 0.5 m and 2 m. The model can also be used in quasi-3-D mode, where embayments are treated as separate model branches off the main stem of the reservoir.

The user manual and documentation can be found at our PSU website for the model: <http://www.cee.pdx.edu/w2>. We have been the primary developing group for this Waterways Experiments Station Corps of Engineers model for the last 10 years. Since 2000, this model has been used extensively throughout the world in 116 different countries.

The objective of this project is to improve TDG modeling of Lake Roosevelt using the existing water quality model CE-QUAL-W2 and provide a peer review in a white paper describing temperature regimes and operational influence on release temperatures. Tasks include extending the model downstream six miles to the Hydromet gage near Barry, WA, add three additional simulation years to the model, and to perform analyses that evaluate the sensitivity of model predictions to reaeration, wind, bottom friction, and the upstream boundary.

RECIPIENT INVOLVEMENT

A repetition of the year-round field sampling and laboratory processing required to complete such a before-after comparison and evaluate the ATP model is necessary. To take full advantage of this opportunity for learning within the adaptive management process, the following objectives must be addressed: 1) complete calculations and analysis of fish production and its trophic basis at the restoration site and other habitats that were not treated, 2) quantify food webs associated with these sites and conduct analyses like those completed in previous study, 3) conduct the BACI analysis to evaluate responses to side channel restoration, and provide key results against which to calibrate the ATP model.

RECLAMATION INVOLVEMENT

No Substantial Involvement from Reclamation is anticipated.

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:

Single Source Justification Description:

- (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;

STATUTORY AUTHORITY

Omnibus Public Land Management Act of 2009, Sec. 9509, P. L. No. 111-11, dated March 30, 2009

SEC 9509. RESEARCH AGREEMENT AUTHORITY.

The Secretary may enter into contracts, grants, or cooperative agreements, for periods not to exceed 5 years, to carry out research within the Bureau of Reclamation.

END OF ANNOUNCEMENT