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.

ABSTRACT	
Funding Announcement	BOR-LC-17-N010
Project Title	Technical assistance for use of dynamically downscaled climate projections in the Lower Santa Cruz River Basin Study
Recipient	University of Arizona
Principal Investigator / Program Manager	Dr. Hsin-I Chang
Anticipated Federal Amount	$26,575.30
Anticipated Non-Federal Amount	$0.00
New Award or Continuation?	New Award
Anticipated Period of Performance	20 Months
Award Instrument	Cooperative Agreement
Statutory Authority	Section 9504(b) and Section 9509, Omnibus Public Lands Management Act of 2009 (Public Law 111-11)
CFDA # and Title	15.560 SECURE Water Act – Research Agreements
Single Source Justification Criteria Cited	(4) Unique Qualifications
Reclamation Point of Contact	Diana Blake, dmblake@usbr.gov, 702-293-8550

OVERVIEW

In order to incorporate the latest technical information on basin-scale climate projections, partners in the Lower Santa Cruz River (LSCR) Basin Study require technical assistance from subject matter experts skilled in the development and interpretation of dynamically downscaled (DD) climate projections, as well as their integration into hydrologic models.

RECIPIENT INVOLVEMENT

The recipient will (1) obtain and process DD climate projection files developed at (a) the University of Arizona (UofA) and (b) the National Center for Atmospheric Research for use in a weather generator; (2) guide LSCR Basin Study partners in the selection of specific climate variables to use for their water supply and demand scenarios; (3) document these activities in the LSCR Basin Study Climate Technical Memorandum; and (4) perform peer review for portions of the LSCR Basin Study Technical Memorandum authored by others.

RECLAMATION INVOLVEMENT

Substantial involvement on the part Reclamation is anticipated for the successful completion of the objectives to be funded by this award.

Reclamation will be responsible for the following:

- Ensuring technical staff who will be using DD projections receive them in a timely manner and an appropriate computer file format.

- Organizing and conducting meetings at which the use of DD projections for water supply and demand scenarios will be discussed and selected

- Reviewing, editing and publishing the Climate Technical Memorandum that will contain documentation of these activities. The conclusions of the Technical Memorandum will also be included in the LSCR Basin Study Final Report.

- Providing UofA staff with sections of Climate Technical Memorandum written by other authors for their review and comments.

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 the following criteria:

(4) UNIQUE QUALIFICATIONS

Single Source Justification Description:

Dr.'s Hsin-I Chang and Christopher Castro possess a combination of broad subject matter expertise, cutting-edge knowledge of dynamical downscaling techniques and extensive experience in translating their results into practical information for water resource managers.

Dr. Chang is a research faculty member in the University of Arizona Department of Hydrology and Atmospheric Sciences. She has over a decade of experience with climate models, with a focus on monsoon rains, a critical climate feature of the Southwest U.S., including the Tucson, AZ area. She completed her post-doctoral research at the University of Arizona since 2006.

Dr. Castro is a recognized expert in the field of regional atmospheric modeling, having co-authored over 30 papers on the topics of the climate change and drought in the Southwest U.S., as well as the North American monsoon. He has contributed to several official U.S. Government publications, including "Assessment of Climate Change in the Southwest United States: A Report Prepared for the National Climate Change Assessment" as well as "Climate Change and Impact Modeling Experts' Report, TA-8090: Building Capacity for Climate Resilience, Climate and Impact Modeling Advisory Group."

Dr.'s Chang and Castro are leaders in developing approaches to generate dynamically downscaled global climate model data. They generate dynamically downscaled projections for "well performing" models of the Coupled Model Intercomparison Projects, the basis of climate change projections used in Intergovernmental Panel on Climate Change reports. They also have wide-ranging experience translating their research products into operational information for water managers, including Reclamation staff. They work with many regional stakeholders to develop customized climate impacts assessment deliverables, including the United States Air Force, National Weather Service, Central Arizona Project, and the Salt River Project. Their research group recently completed an analysis of Colorado River Basin streamflow using dynamically downscaled projections, sponsored by the Department of Interior, Reclamation, the Central Arizona Project and the Salt River Project.

The specialized expertise of Dr.'s Chang and Castro in the field of dynamical downscaling, combined with their emphasis on outreach and their established relationships with major Southwestern water providers make them uniquely qualified to perform this project. No other experts, in government, academia or the private sector, can offer the mix of expertise and experience in assisting water providers incorporate research into operations.

STATUTORY AUTHORITY

Section 9504(b) and Section 9509, Omnibus Public Lands Management Act of 2009 (Public Law 111-11)

P.L. 111-11, Section 9504(b):

(b) Research Agreements.— (1) Authority of Secretary.—the Secretary may enter into 1 or more agreements with any university, nonprofit research institution, or organization with water or power delivery authority to fund any research activity that is designed— (A) to conserve water resources; (B) to increase the efficiency of the use of water resources; or (C) to enhance the management of water resources, including increasing the use of renewable energy in the management and delivery of water. (2) Terms and Conditions of Secretary.— (A) In General.—an agreement entered into between the secretary and any university, institution, or organization described in paragraph (1) shall be subject to such terms and conditions as the secretary determines to be appropriate.
(B) Availability.—the agreements under this subsection shall be available to all Reclamation projects and programs that may benefit from project-specific or programmatic cooperative research and development.

P.L. 111-11, Section 9509:

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.