



NOTICE OF INTENT TO AWARD

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

ABSTRACT	
Funding Announcement	USGS-18-FA-0278
Project Title	Wildfire Probability Mapping Based on Regional Soil Moisture Models
Recipient	University of Oklahoma, Norman, OK
Anticipated Federal Amount	\$283,206.00
Cost Share	\$0
Total Anticipated Award Amount	\$283,206.00
New Award or Continuation?	New Award
Anticipated Period of Performance	10/1/2018 through 9/30/2020
Award Instrument	Cooperative Agreement
CFDA # and Title	15.820 National Climate Change and Wildlife Science Center/Climate Science Centers
USGS Point of Contact	Michael Langston, Acting Director, South Central Climate Science Center, Phone: (405)334-7164, Email: mlangston@usgs.gov

OVERVIEW

The U. S. Geological Survey, National Climate Change and Wildlife Science Center (NCCWSC) and the Department of the Interior South Central Climate Science Center (DOI SC CSC) requests a new grant with the University of Oklahoma, Norman, (OU). The Department of the Interior Climate Science Centers (DOI CSCs) were established by the Department of the Interior Secretarial Order 3289. The DOI SC CSC will synthesize and integrate climate change impact data and develop tools that the Department's managers and partners can use when managing the Department's land, water, fish and wildlife, and cultural heritage resources. Eight Regional DOI CSCs are co-located at cooperating organizations at non-USGS facilities in eight (8) regions; one of these regions is the South Central.

This research project focus is on how soil moisture influences wildfire activity. This project will (1) develop effective soil moisture models for river basins in the South Central US using digital soil maps, gridded climate data, and satellite vegetation indices; (2) quantify the relationships

between modeled soil moisture and wildfire probability; and (3) develop and distribute soil moisture and wildfire probability maps for the Red River (RR) and Rio Grande (RG) basins.

RECIPIENT INVOLVEMENT

The recipient involvement includes the continuation of the OU as the DOI SC CSC's host institution working with its consortium members to conduct research projects in the South Central regions. The activity to be funded is necessary to the satisfactory completion of ongoing research for which competition would have a significant adverse effect on the continuity or completion of the activity. This would include, for example, continuation of data monitoring and collection efforts involving a substantial investment in existing data or equipment belonging to the recipient. The recipient will integrate existing soil and climate data to model the fraction of available water (FAW) present in the root zone at daily time steps and 250-m spatial resolution utilizing existing drought indices re-scaled to track available in situ soil moisture data. This project will ultimately demonstrate how the newly generated FAW maps, along with traditional meteorological variables, can be used to develop dynamic fire probability maps in the RR and RG basins. Products generated will include soil moisture models, FAW and wildfire data sets for the 2000-2016 period, and selected maps of FAW and wildfire probability along with peer-reviewed manuscripts and presentations and a website for distribution.

USGS INVOLVEMENT

Substantial involvement on the part USGS is anticipated for the successful completion of the objectives to be funded by this award. In particular, USGS will be responsible for the following:

- The DOI SC CSC, through scientists from its partner the OU will be substantially involved with OU during the term of the cooperative agreement for assuring that climate research projects are conducted in the locations in the South Central Region.
- The DOI SC CSC will participate with and collaborate with its host institution, OU, scientists, technicians, volunteers, and/or other personnel at the host institution to carry out the scope of work, train personnel, and or identify the need for additional Federal personnel to work on project efforts.

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.
- (6) **Cooperative Agreements** - USGS Unique Authority cited at 43 U.S.C. 36d (Federal, State, and academic partners) or DOI Authority cited at 43 U.S.C. 1457b (not-for-profit organizations).

USGS did solicit competition for this award under the FY 2017 Request for Proposal (RFP) that was open from January 18, 2017 through May 30, 2017 and open to only Institutions that are either Host Institutions or Consortium Members for the DOI South Central Climate Science Center and USGS centers, field stations, laboratories, Cooperative Research Units, etc. Each proposal was required to have a Principal Investigator (PI) from an eligible institution. Parties

from other organizations (Federal, State, Tribal, or other) can participate and receive funds via subaward from the Principal Investigator but the proposal submitter and PI must be from an eligible organization, as described above.

(4) UNIQUE QUALIFICATIONS

Single Source Justification Description:

(4) UNIQUE QUALIFICATIONS - The research conducted under this project is related to the DOI SC CSC supported under an existing Cooperative Agreement G12AC00002 with OU and research conducted by its consortium members.

STATUTORY AUTHORITY

Consolidated Appropriations Act of 2008, Div. F, Title I (P.L. 110-161) and Public Law 115-141
Consolidated Appropriations Act of FY 2018