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-19-FA-0199
Project Title	Economic Assessment and Capacity Building for Optimization of Water Resources Development and Use in Kenya
Recipient	New Mexico State University
Anticipated Federal Amount	$95,000.00
Cost Share	N/A
Total Anticipated Award Amount	$95,000.00
New Award or Continuation?	New award
Anticipated Period of Performance	9/4/2019 through 9/3/2021
Award Instrument	Cooperative agreement
CFDA # and Title	15.808 – Research and data collection
USGS Point of Contact	Saud Amer (samer@usgs.gov); Sara Roser (sroser@usgs.gov)

OVERVIEW

Water supply as well as sanitation in Kenya have weak levels of access in both urban slums and in rural areas. Kenya also faces low service quality, with unreliable and intermittent water supply. Regional and seasonal water shortages increase the difficulty of improving water supply. A large percentage of Kenyans consume water of the wrong quality and are also affected by quantity, timing, location, cost, and price. This project will produce a detailed economic analysis on two high-priority "type sites." The analysis will be based on an empirical economic optimization model to inform ongoing policy debates dealing with the effectiveness of various patterns of crop irrigation and other water uses in the study areas. The analysis anticipates conducting "with versus without new water" comparisons for the various uses of water resources in the "type site" areas.

RECIPIENT INVOLVEMENT

The recipient will:

- Assess costs of delivery and sustainable quantities of groundwater that can be supplied at several remotely sensed-identified sites in the study area where successful wells have recently been drilled.
- Assemble data on local water consumption, irrigable land, crop prices, production constraints, costs of production, and water use per unit land by crop for major crops in the study area.
- Construct a preliminary conceptual model describing economically sustainable water resources based on costs of delivery and supplies of water available. The model will be a conceptual framework to identify the economically optimized sustainable use(s) of water resources.
- Transfer optimization techniques to counterparts in Kenya. One week training will be conducted and a copy of the model will be given to the appropriate GOK ministry.
- Prepare a report illustrating findings and recommendations made.

USGS INVOLVEMENT

Substantial involvement is anticipated through the terms of this Agreement between the USGS and the Recipient. A summary of the USGS involvement is as follows:

- Assist with economic assessment and optimization model training, software installation, and model construction.
- Coordinate with the Government of Kenya Ministry of Agriculture and other water-related agencies on assessment strategies using geospatial hydrologic analysis, and algorithm development.
- Prepare written reports and online data dissemination.
- Collect ancillary data, including agro-meteorological data, topographical maps, water use, yield data, cropping pattern, aquifer capacity, and crop prices.
- Coordinate research activities with Kenyan partners.

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

(4) Unique Qualifications
(6) Cooperative Agreements - USGS Unique Authority cited at 43 U.S.C. 36d

Single Source Justification Description:

(4) Unique Qualifications: New Mexico State University (NMSU) possesses unique experience, expertise, and skills in water economic assessment and applying models to optimize the competing sources for water uses. NMSU has been working for the last tweny years on similar applications in various countries, including Kenya. NMSU developled a model that will be used to aid Kenyan professionals to develop a well-informed policy decisions on the optimal sustainable use of water resources and will apply the model to assess their current and future needs of water resources under various competing senarios. NMSU also has a long history of working with Kenyan engineers to develop a quality database to run a more accurate optimization model. Additionally, NMSU knows Kenya's water resources condition, needs, and technical capacity of Kenyan engineers, which is a critical element in the implementation. Taken together, NMSU's long-establised experience in conducting economic assessments of water in developing countries, expertise in working with the Kenyan engineers, and technical skill in developing models to assess water uses position it to be uniquely qualified to conduct this project.

STATUTORY AUTHORITY

USGS Unique Authority cited at 43 U.S.C. 36d (Federal, State and academic partners)

§ 36d. Cooperative agreements: Notwithstanding the provisions of the Federal Grant and Cooperative Agreement Act of 1977 (31 U.S.C. 6301–6308), the United States Geological Survey is authorized to continue existing, and on and after November 10, 2003, to enter into new cooperative agreements directed towards a particular cooperator, in support of joint research and data collection activities with Federal, State, and academic partners funded by appropriations herein, including those that provide for space in cooperator facilities.