



## 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                                 |                                                                                                                                                                              |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Funding Announcement</b>              | USGS-20-FA-0109                                                                                                                                                              |
| <b>Project Title</b>                     | Visualizing Sea-level Rise at Puʻuhonua O Hōnaunau National Historic Park with Interactive, Virtual Technology                                                               |
| <b>Recipient</b>                         | University of Hawaii at Manoa                                                                                                                                                |
| <b>Anticipated Federal Amount</b>        | \$47,522                                                                                                                                                                     |
| <b>Cost Share</b>                        | \$0                                                                                                                                                                          |
| <b>Total Anticipated Award Amount</b>    | \$47,522                                                                                                                                                                     |
| <b>New Award or Continuation?</b>        | New                                                                                                                                                                          |
| <b>Anticipated Period of Performance</b> | 12 months from date of signature                                                                                                                                             |
| <b>Award Instrument</b>                  | Cooperative Agreement                                                                                                                                                        |
| <b>CFDA # and Title</b>                  | 15.820 National Climate Adaptation Science Center/Climate Adaptation Science Centers                                                                                         |
| <b>USGS Point of Contact</b>             | Mari-Vaughn Johnson, Director, Pacific Islands Climate Adaptation Science Center, Email: mvjohnson@usgs.gov<br>Rachel Miller, Grant Specialist, Email: rachelmiller@usgs.gov |

## OVERVIEW

This project will create and provide interactive and immersive outreach materials through augmented reality (AR) to better visualize and understand effects of sea level rise. This project will feature an interactive, table-top virtual model of Puʻuhonua O Hōnaunau (PUHO) National Historical Park in which the user will be able to explore the effects of projected sea level rise, assess frequency of inundation, and target specific locations. The resulting product will move beyond graphs and tables, and serve as a tool to better conceptualize the real risk posed to coastal communities.

The advantage of this approach is twofold. First, it could be applied to essentially any locale that is under the risk of impacts from sea level rise. Second, the technology will allow virtually anyone to engage in data exploration, as the technology is freely available on all modern-day mobile devices. The project will also provide an important product for managers to address climate adaptation at the PUHO site.

### **RECIPIENT INVOLVEMENT**

The recipient involvement includes development of the high-resolution virtual 3D model of PUHO National Park. University of Hawai‘i researchers will leverage augmented reality technology and work with USGS to share and process PUHO drone imagery and lidar elevation data. The PIs will work closely with National Park Service staff to co-produce the science and resulting tools.

### **USGS INVOLVEMENT**

USGS is involved to ensure the use of high quality, impartial scientific data in the project and to ensure that the resulting products are produced together with scientific experts and on-the-ground resource managers. The award recipient will work closely with the Pacific Islands Climate Adaptation Science Center (PI CASC) staff to develop a user-friendly interface suitable for use by the general public and resource managers. Together, the researchers and PI CASC staff will identify best methods for communicating and sharing the resulting application.

| <b>DEPARTMENT OF THE INTERIOR<br/>SINGLE SOURCE POLICY REQUIREMENTS</b>                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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.                                    |
| <p>In order for an assistance award to be made without competition, the award must satisfy one or more of the following criteria:</p> <p>(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;</p> |

- (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 on 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** – The project team is uniquely qualified to perform the activities described above based on a variety of demonstrable facts, including technical expertise, leveraged joint investments in sea level rise research in the U.S. Affiliated Pacific Islands (USAPI), and a strong history of PI CASC collaborations. This project specifically calls for a unique set of technological skills and oceanographic expertise, which the applicant possesses. Additionally, the applicant has strong modeling, data analytic, programming, and forecasting capabilities, all related to oceanography and sea level rise. The project team has demonstrated a strong record of performance in developing sea level rise data in collaboration with USGS and the National Park Service.

**STATUTORY AUTHORITY**

Consolidated Appropriations Act of 2008, Div. F, Title I, P.L. 110-161 and

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.