

**Request for Statements of Interest  
Funding Opportunity Announcement**

**Federal Awarding Agency:**

U.S. Army Corps of Engineers,  
Engineer Research and Development Center  
3909 Halls Ferry Road  
Vicksburg, MS 39180-6199

**Funding Opportunity No:**

**CFDA No:** 12.630

**Statutory Authority:** 10 USC 4001

**Program Title:** “Assured Position, Navigation, and Timing (APNT) Vegetation Analysis and Support for Autonomous Vehicle Testing and GPS evaluation in Mixed Vegetation Terrain”.

**Announcement Type:** Initial announcement

**Issue Date:** 6/24/2022

**Statement of Interest/Qualifications Due Date:** 7/25/2022; 1300 central time zone

**Full Application Package Due Date, if Invited:** 8/15/2022; 1300 central time zone

**Estimated Award Ceiling:** \$75,000

**Estimated Total Program Funding (optional):** \$75,000

**Expected Number of Awards:** 1

## **Section I: Funding Opportunity Description**

### **Background:**

Understanding how Global Positioning System (GPS) signals are influenced by vegetation structure allows for the determination of how specific technologies might be affected in certain forested environments. The work we are seeking shall involve creating detailed vegetation structure models and assessment of GPS coverage to support assured position, navigation, timing (APNT) activities and tests in forested and mixed topographic relief areas.

### **Brief Description of Anticipated Work:**

Provide detailed vegetation data analysis for assessment of loss and degraded GPS signals which could include canopy structure, speciation, and dimensionality. Applicant would create and supply these data prior to APNT field tests and would provide technical assistance in analyzing vegetation during tests.

- 2) Provide field base of operations for position, navigation, and timing experiments including outdoor space, laboratory space (computer, wet, dry), wooded and non-wooded terrain drives, and collaboration space. Facilities must have high speed internet and availability for web conferencing. Local geodetic control monuments to aid in measurements and terrain input for maneuvers are required.
- 3) Provide access to spatial data including current and detailed aerial imagery and other field systems (web based), to assist in identifying and “pre-delineate” areas that would not be suitable for navigation experiments.
- 4) Acquire and provide access to on-site real-time data for experiments including, continually operated reference sites/real-time kinematic (CORS/RTK) GPS and real-time meteorological data with known geodetic control.
- 5) Provide access to dormitory facilities for use in multiday experiments.
- 6) Provide vessel support and crew for testing sensors for aquatic navigation

### **Public Benefit:**

The research accomplished through this partnership will support assured position, navigation, and timing (APNT) activities by assessing GPS coverage / signal degradation using detailed vegetation structure models in forested and mixed topographic relief areas. Furthermore, APNT research will also serve a public purpose by increasing the robustness of our publicly-utilized positioning systems by addressing a common problem with our current GPS system.

## **Section II: Award Information**

Responses to this Request for Statements of Interest will be used to identify potential investigators for studies to be sponsored by the Geospatial Research Laboratory, Engineer Research and Development Center to provide vegetation cover and GPS

assessment in forested environments. The estimated level of funding for FY22 is approximately \$75,000 with total funding that will not exceed \$75,000 over the life of this cooperative agreement.

### **Government Involvement:**

GRL-ERDC will assist in providing field knowledge of APNT use cases and will be available to be onsite for coordination. GRL-ERDC will also be on-site to test vehicles after vegetation analysis is completed.

### **Section III: Eligibility Information**

1. Eligible Applicants – This opportunity is restricted to non-federal partners of the Chesapeake Watershed Cooperative Ecosystems Studies Unit (CESU).
2. Cost Sharing – This action will be 100% funded by USACE.

### **Section IV: Application and Submission Information – Two Phase Process**

#### **Phase I: Submission of a Statement of Work and Qualifications.**

1. Materials Requested for Statement of Interest/Qualifications:
  - a. Please provide the following attachment via e-mail to:  
[Stacy.D.Thurman@usace.army.mil](mailto:Stacy.D.Thurman@usace.army.mil)

(Maximum length: 2 pages, single-spaced 12 pt. font).

1. Name, Organization and Contact Information
2. Brief Statement of Qualifications (including):
  - Biographical Sketch,
  - Relevant past projects and clients with brief descriptions of these projects,
  - Staff, faculty or students available to work on this project and their areas of expertise,
  - Any brief description of capabilities to successfully complete the project you may wish to add (e.g. equipment, laboratory facilities, greenhouse facilities, field facilities, etc.).

Note: A proposed budget is NOT requested at this time.

The administrative point of contact is [stacy.d.thurman@usace.army.mil](mailto:stacy.d.thurman@usace.army.mil)

2. Statement of Interest/Qualifications shall be submitted NO LATER THAN 7/25/2022; 1300 central time zone

Based on a review of the Statements of Interest received, an investigator or investigators will be invited to move to Phase II which is to prepare a full study proposal. Statements will be evaluated based on the investigator's specific experience and capabilities in areas related to the study requirements.

**Phase II: Submission of a complete application package to include a full technical proposal including budget, if invited.**

1. Address to Request Application Package

The complete funding opportunity announcement, application forms, and instructions are available for download at Grants.gov.

The administrative point of contact is [stacy.d.thurman@usace.army.mil](mailto:stacy.d.thurman@usace.army.mil)

2. Content and Form of Application Submission

All mandatory forms and any applicable optional forms must be completed in accordance with the instructions on the forms and the additional instructions below.

- a. SF 424 R&R - Application for Federal Assistance
- b. Full Technical Proposal – Discussion of the nature and scope of the research and technical approach. Additional information on prior work in this area, descriptions of available equipment, data and facilities, and resumes of personnel who will be participating in this effort should also be included.
- c. Cost Proposal/Budget – Clear, concise, and accurate cost proposals reflect the offeror's financial plan for accomplishing the effort contained in the technical proposal. As part of its cost proposal, the offeror shall submit cost element breakdowns in sufficient detail so that a reasonableness determination can be made. The SF 424 Research & Related Budget Form shall be used if the subrecipient uses it. The cost breakdown should include the following, if applicable:
  1. Direct Labor: Direct labor should be detailed by level of effort (i.e. numbers of hours, etc.) of each labor category and the applicable labor rate. The source of labor rates shall be identified and verified. If rates are estimated, please provide the historical basis used and clearly identify all escalation applied to derive the proposed rates.
  2. Fringe Benefit Rates: The source of fringe benefit rate shall be identified and verified.
  3. Travel: Travel costs must include a purpose and breakdown per trip to include destination, number of travelers, and duration and supporting documentation.
  4. Materials/Equipment: List all material/equipment items by type and kind with associated costs and advise if the costs are based

- on vendor quotes and/or engineering estimates; provide copies of vendor quotes and/or catalog pricing data.
5. Subrecipient costs: Submit all subrecipient proposals and analyses. Provide the method of selection used to determine the subrecipient.
  6. Tuition: Provide details and verification for any tuition amounts proposed.
  7. Indirect Costs: Currently the negotiated indirect rate for awards through the CESU is 17.5%.
  8. Any other proposed costs: The source should be identified and verified.
3. Application package shall be submitted NO LATER THAN 15 August 2022; 1300 hours central time zone
4. Submission Instructions
- Applications may be submitted by e-mail or Grants.gov. Choose ONE of the following submission methods:

a. E-mail:

Format all documents to print on Letter (8 ½ x 11") paper. E-mail proposal to [Stacy.d.thurman@usace.army.mil](mailto:Stacy.d.thurman@usace.army.mil)

b. Grants.gov: <https://www.grants.gov/>:

Applicants are not required to submit proposals through Grants.gov. However, if applications are submitted via the internet, applicants are responsible for ensuring that their Grants.gov proposal submission is received in its entirety.

All applicants choosing to use Grants.gov to submit proposals must be registered and have an account with Grants.gov. It may take up to three weeks to complete Grants.gov registration. For more information on registration, go to <https://www.grants.gov/web/grants/applicants.html>.

## Section V: Application Review Information

1. **Peer or Scientific Review Criteria:** In accordance with DoDGARs 22.315(c), an impartial peer review will be conducted. Subject to funding availability, all proposals will be reviewed using the criteria listed below (technical and cost/price). All proposals will be evaluated under the following two criteria which are of descending importance.
  - a. **Technical (items i. and ii. are of equal importance):**
    - i. Technical merits of proposed R&D.
    - ii. Potential relationship of proposed R&D to DoD missions.

b. **Cost/Price:** Overall realism of the proposed costs will be evaluated.

## 2. Review and Selection Process

a. **Categories:** Based on the Peer or Scientific Review, proposals will be categorized as Selectable or Not Selectable (see definitions below). The selection of the source for award will be based on the Peer or Scientific Review, as well as importance to agency programs and funding availability.

i. **Selectable:** Proposals are recommended for acceptance if sufficient funding is available.

ii. **Not Selectable:** Even if sufficient funding existed, the proposal should not be funded.

Note: The Government reserves the right to award some, all, or none of proposals. When the Government elects to award only a part of a proposal, the selected part may be categorized as Selectable, though the proposal as a whole may not merit such a categorization.

b. No other criteria will be used.

c. Prior to award of a potentially successful offer, the Grants Officer will make a determination regarding price reasonableness.

## Section VI: Award Administration Information

### 1. Award Notices

Written notice of award will be given in conjunction with issuance of a cooperative agreement signed by a Grants Officer. The cooperative agreement will contain the effective date of the agreement, the period of performance, funding information, and all terms and conditions. The recipient is required to sign and return the document before work under the agreement commences. **Work described in this announcement SHALL NOT begin without prior authorization from a Grants Officer.**

### 2. Administrative Requirements

The cooperative agreement issued as a result of this announcement is subject to the administrative requirements in 2 CFR Subtitle A; 2 CFR Subtitle B, Ch. XI, Part 1103; and 32 CFR Subchapter C, except Parts 32 and 33.

### 3. Reporting

See 2 CFR Sections 200.327 for financial reporting requirements, 200.328 for performance reporting requirements, and 200.329 for real property reporting requirements.

## Section VII: Agency Contact

Stacy Thurman, Grants Specialist  
US Army Corps of Engineers

Engineer Research and Development Center  
3909 Halls Ferry Road  
Vicksburg, MS 39180  
[Stacy.D.Thurman@usace.army.mil](mailto:Stacy.D.Thurman@usace.army.mil)