

PROJECT ANNOUNCEMENT

**US Army Corps of Engineers (USACE)
Engineer Research and Development Center (ERDC)**

Title: Research and Development for Biological Control of *Arundo donax*

Announcement Type: Initial Announcement

Funding Opportunity Number: W81EWF-25-SOI-0004

Assistance Listing Number: 12.630

Date Issued: 12 February 2025

Key Dates: Phase I announcement will be open to receive statements of interest continuously until 2:00 PM/Central Time (CT), 14 March 2025, at which point all statements of interest must be received.

If invited to Phase II, full proposal applications will be due at 2:00 PM/Central Time (CT), 14 April 2025.

Estimated Award Ceiling: \$120,000.00 for Year 1

Estimated Total Program Funding: \$395,000 Base year will be \$120,000 plus four option years, \$75,000 for optional year 2, \$75,000 for optional year 3, \$75,000 for option year 4 and \$50,000 for optional year 4.

Agency Contact: Stacy Thurman, Stacy.D.Thurman@usace.army.mil

I. Program Description

A. Short Description of Funding Opportunity

ERDC seeks applications for: evaluation of biological control for *Arundo donax* in southern California. There is potential for at least two distinct projects to arise from this opportunity, including determination of optimal release and monitoring strategies for *A. donax* biological controls, and evaluation of the impact of biological control on *A. donax* water-use efficiency, growth, and biomass allocation.

B. Background

Giant cane is a large (4-8m tall) perennial grass native to western Asia and likely introduced into North America from Spain in the early 1500s, but now is widespread with considerable capacity for expansion in North America (Figure 1; Moran and Goolsby 2022). Reproduction is solely clonal in the US and occurs through extensive rhizome networks or fragmentation. Large knotty rhizomes form underground masses up to three feet thick and provide a source of regrowth following management. Giant cane infests disturbed habitats near water and is particularly harmful in arid environments where it outcompetes other species and has extremely high water-use (Figure 2) (Seawright et al. 2009, Racelis et al. 2012, Goolsby et al. 2016). In fact, giant cane was estimated to transpire 56,200 acre-feet of water per year on the Santa Ana River alone, which equates to serving approximately 190,000 people in an area known for droughts and at a potential municipal cost of \$25M in lost water (Iverson 1993).

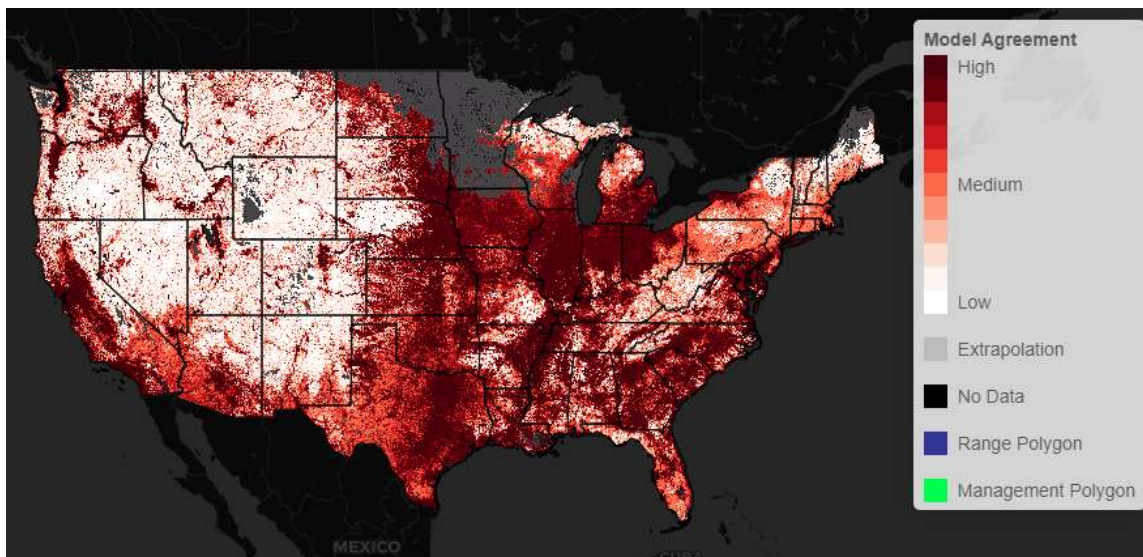


Figure 1. Habitat suitability for *Arundo donax* in the US, based on model outputs from INHABIT (USGS).

Costs of giant cane management near Los Angeles can exceed \$250K per acre, due to the effort required for repeated herbicide applications, then subsequent biomass and sediment management. Giant cane infestations have reduced the channel conveyance capacity of the Los Angeles River (at the Glendale neighborhood) from a 25-year storm event to a 2-year storm event where it impacts over 6000 people and risks \$1B in property value. There is interest in using biological control as a

sustaining management tool for giant cane in California, but a lack of information about whether agents could be used under the conditions present in project areas has prevented its widespread implementation.



Figure 2. Representative giant cane infestations within the SPL AOR A) Los Angeles River at Glendale Narrows, B) Whittier Narrows, C) Santa Ana River, D) Rio Hondo.

Two biological control agents are approved to manage giant cane in California (Figure 3): *Tetramesa romana*, the Arundo gall wasp, and *Rhizaspidiotus donacis*, the Arundo armored scale (CAL-IPC 2020). Both agents are established in the US and have been used to successfully control giant cane infestations in Texas (Goolsby et al. 2014, Goolsby et al. 2016). Additional releases and control monitoring is ongoing in northern California but, to date, there is insufficient data to inform their use in Southern California. It has been suggested that biological control of giant cane will be most successful in areas with sufficient warming days (Marshall et al. 2018). A previous assessment found Ventura/ Oxnard, CA to have relatively low number of warming days compared to locations in south Texas where control has been successful, but other warmer locations in California, such as parts of Los Angeles County, may be better suited for a biological control program.

C. Program Description/Objective: (brief description of the anticipated work)

The following objectives summarize the work for a maximum of three (3) unique, stand-alone projects. Over the life of the cooperative agreement (5 years), it is anticipated that 3 projects would be completed.

Objective 1: Investigator will collaborate with ERDC researchers to develop a biological control plan to investigate the types and magnitudes of control for giant cane.

Objective 2: Determine best *Arundo donax* biological control release and establishment approach through either 1) natural increase of incidental populations, 2) traditional release-and-wait types of programs, or 3) inundative releases.

Objective 3: Determine impact of biological control on *Arundo donax* metrics that are relevant to invasive species management and flood conveyance, to potentially include giant cane stem density, water use / transpiration, vegetation diversity, plant stature, and control agent dispersal related to flooding. Partner will work with ERDC to compile results, conduct statistical analysis, and synthesize into guidance document.

D. Public Benefit

These data will benefit the public through development of effective management tools for the reduction of invasive grass *Arundo donax*. Reduction of this invasive plant will increase beneficial uses of waterbodies, such as recreation, drinking water supply, and flora and fauna habitat, long after the initial program phases are complete. Success in these studies will provide biological control mechanisms that reduce *Arundo donax*, thereby improving water quality, habitat, and access for native aquatic organisms. In addition, open water areas without invasive plants will allow greater public recreational and sport use of these water resources.

E. Authorization: 10 USC 4001

F. Legal Requirements

Each Cooperative Agreement awarded under this announcement will be governed by 2 CFR 200, “Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards”, 2 CFR 1100 Subchapter D—Administrative Requirements Terms and Conditions for Cost-Type Grants and Cooperative Agreements to Nonprofit and Governmental Entities and the most current DoD research general terms and conditions located at <https://www.onr.navy.mil/work-with-us/manage-your-award/manage-grant-award/grants-terms-conditions>.

G. Program-Specific Requirements

The resulting agreement will be subject to the following:

1. The award recipient shall be solely responsible for obtaining any necessary licenses

and permits, and for complying with any Federal, State, and municipal laws, codes, and regulations applicable to the performance of the work. The recipient will be expected to comply with all environmental regulations and obtain all necessary licenses and permits for the selected operational setting.

2. All use of vehicles in the performance of this agreement, whether manned or unmanned, shall be in accordance with applicable state, Federal, and local laws, executive orders, rules and regulations, USACE policy, and university policy regarding the use and operation of vehicles. This applies to both recipient(s) and any subrecipients.
3. See Appendix C to Part 1122—Terms and Conditions for NP Article III, “National Policy Requirements Concerning Live Organisms” for requirements regarding research involving human subjects and animals and the following program-specific requirements:
 - a. Prohibition of Human Subjects Research: You will not commence performance of research involving human subjects that is covered under 32 CFR Part 219 or that meets exemption criteria under 32 CFR 219.104, or expend funding on such effort, until and unless the conditions of either the following paragraph (1) or (2) have been met:
 - (1) You furnish to the ERDC liaison to the Human Research Protection Official (HRPO), with a copy to the Grants Officer, an assurance of compliance, Institutional Review Board (IRB) approval, and associated research documents. You receive written notification from the Grants Officer that the HRPO has accepted the assurance as appropriate for the research under the agreement and also that the HRPO has reviewed the research and associated documents and accepted the IRB approval for compliance with the Department of Defense (DoD) component policies.
 - (2) You furnish to the ERDC liaison to the HRPO, with a copy to the Grants Officer, documentation as required by DoD R&D General Terms and Conditions, NP Article III, Section A.1.c., and receive written notification from the Grants Officer that the exemption is determined acceptable. The determination will include citation of the exemption category under 32 CFR 219.104 and associated study documents.
 - (3) The ERDC Liaison to the HRPO is:
 - Name: [To be Provided at Time of Award]
 - Phone: [To be Provided at Time of Award]
 - Email: [To be Provided at Time of Award]
 - b. Prohibition of the Use of Animals: Notwithstanding any other terms and conditions contained in this award or incorporated by reference herein, the recipient is expressly forbidden to use or subcontract for the use of animals in

any manner subject to Department of Defense Instruction 3216.01, Use of Animals in DoD Programs (20 March 2019) and Defense Health Agency-Multi-Service Regulation 6025.02, The Care and Use of Animals in DoD Research, Development, Test, and Evaluation (RDT&E) or Training Programs (1 September 2022), without the express written approval of the Animal Research Compliance & Oversight Office (ARCOO), Office of the Surgeon General, U.S. Army Medical Command. Written authorization to begin research under applicable protocol(s) proposed for this award will be issued in the form of an approval letter from ARCOO to the recipient with a copy to the ERDC Grants Officer. Furthermore, modifications to already approved protocols require approval by ARCOO prior to implementation. For each fiscal year, the recipient must maintain, and upon request from ARCOO, submit animal usage information. The recipient must promptly inform ARCOO of adverse events regarding animals under applicable protocol(s) associated with this award. These requirements are defined in the approval letter from ARCOO. Noncompliance with any of these terms and conditions may result in withholding of funds and/or the termination of the award. Questions regarding ARCOO protocol review processes should be directed to ARCOO at the following:

Phone: [To be Provided at Time of Award]

Email: [To be Provided at Time of Award].

4. Brief progress reports are required to be included with each payment report, on a monthly basis, and all data shall be incorporated in reports using peer-review publication format for Interim and Yearly Reports (see chart for Reporting Requirements in Section VII). Periodic progress updates should be made publicly available through annual conference presentations or by posting on a faculty profile, faculty's lab website or other university webpage. A detailed and publishable report containing a complete interpretation of the data results will be required at the conclusion of each study. PowerPoint slides will be required annually by 15 October; additionally, attendance at annual research program review meetings will be required for the primary university investigator. In addition to publications related to each objective, the partner will collaborate with ERDC to develop a draft guidance document to inform management of giant cane with biological control in arid flood prone habitats such as Southern California.

II. Federal Award Information

The following information applies to awards issued under this announcement:

- This is a new program
- The Government anticipates 1 Federal awards from this announcement, but reserves the right to award more or less
- The total amount of funding expected to be awarded through this announcement is \$395,000.00
- The expected amount of funding for each award is \$120,000.00 for Year 1, \$75,000.00, \$75,000 for year 3, \$75,000 for year 4 and \$50,000 for Year 5.
- Award(s) from this announcement will be Cooperative Agreement(s)

- The anticipated period of performance is 5 years.
- Applications for renewal or supplementation of existing projects are eligible to compete with applications for new Federal awards
- The government reserves the right to accept only portions of an application and to negotiate with potential awardees
- Government’s substantial involvement includes EL biological control subject matter experts working with the selected investigator in protocol development, designing treatment scales that provide optimal information regarding operational biological management of Giant Cane, and troubleshooting throughout the project period of performance. EL will host monthly virtual project meetings with the partner to identify and troubleshoot project challenges and will participate in a minimum of two field campaigns at southern California field sites with the university partner annually.

III. Eligibility Information

A. Eligible Applicants

This opportunity is restricted to non-federal partners of the Californian Cooperative Ecosystems Studies Unit (CESU).

Disclosures of current and pending support made in this application may render an applicant ineligible for funding. Prior to award and throughout the period of performance, ERDC may continue to request updated continuing and pending support information, which will be reviewed and may result in discontinuation of funding.

Religious organizations are entitled to compete on equal footing with secular organizations for Federal financial assistance as described in E.O. 13798, “Promoting Free Speech and Religious Liberty.”

B. Cost Sharing or Matching

This action will be 100% funded by USACE.

C. Conflict of Interest

a) General Requirement for Disclosure

You and your organization must disclose any potential or actual scientific or nonscientific conflict of interest(s) to us. You must also disclose any potential or actual conflict(s) of interest for any identified sub recipient you include in your application. We may have to ask you more questions if we need more information.

At our discretion, we may ask you for a conflict-of-interest mitigation plan after you submit your application. Your plan is subject to our approval. Refer to 2 CFR §§ 200.112 and 200.318.

b) Scientific Conflict of Interest

Scientific collaborations on research and development projects are generally the result of close collaboration prior to the submission of applications for support. Accordingly, these collaborations should be considered when considering potential conflicts of interest. The potential conflict is mitigated by the disclosure of these collaborations, and the list of current and pending support you provide for senior and key researchers. Therefore, you must include in your list of current and pending support all collaborators, even if they did not formally provide support.

D. Certifications, Representations, and Assurances

1. To apply for grants and other funding opportunities the applicant entity must have an active registration in the System for Award Management (SAM). Applications will not be accepted through Grants.gov or other methods unless the entity is registered in SAM. Registration in SAM now includes the acceptance of Certifications and Assurances. See <https://www.grants.gov/web/grants/grantors/grantor-standard-language.html> for details on how to register in SAM, and Grants.gov
2. The Federal Assistance Certifications Report is an attestation that the entity will abide by the requirements of the various laws and regulations; therefore, as applicable, you are still required to submit any documentation, including the SF-LLL Disclosure of Lobbying Activities (if award value exceeds \$100,000.00), and, if applicable, informing DoD of unpaid delinquent tax liability or a felony conviction under any Federal law.
3. Certification Regarding Disclosure of Funding Sources. By checking "I Agree" on the SF 424 (R&R) block 17 you agree to abide by the following statement: "By signing this application, I certify the proposing entity is in compliance with Section 223(a) of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 which requires that: (a) the PI and other key personnel certify that the current and pending support provided on the proposal is current, accurate and complete; (B) agree to update such disclosure at the request of the agency prior to the award of support and at any subsequent time the agency determines appropriate during the term of the award; and (c) the PI and other key personnel have been made aware of the requirements under Section 223(a)(1) of this Act. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. code, Title 218, Section 1001)."

IV. Application and Submission Information (2 Phase Process)

A. Phase I: Submission of Statement of Interest (SOI)

1. Materials Requested for Statement of Interest/Qualifications:

a. Please provide the following via e-mail attachment to: Stacy Thurman, Stacy.D.Thurman@usace.army.mil (Maximum length: 2 pages, single-spaced 12 pt. font).

i. Name, Organization and Contact Information

ii. 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 Thurman, Stacy.D.Thurman@usace.army.mil

2. ERDC will only accept SOIs submitted on or before 14 March 2025, 2:00 PM/Central Time (CT).

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.

B. Phase II (if invited): Submission of Full Application Package

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 Thurman, 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. In addition, a data management plan is required to be included.

Data Management Plan:

A data management plan is a document that describes which data generated through the course of the proposed research will be shared and preserved, how it will be done, or explains why data sharing or preservation is not possible or scientifically appropriate, or why the costs of sharing or preservation are incommensurate with the value of doing so. See also: DoD Instruction 3200.12. <https://www.esd.whs.mil/Directives/issuances/dodi/>

Data management plans are generally 2 pages in length, and must include the following considerations:

- (1) The types of data, software, and other materials to be produced.
- (2) How the data will be acquired.
- (3) Time and location of data acquisition, if scientifically pertinent.
- (4) How the data will be processed.
- (5) The file formats and the naming conventions that will be used.
- (6) A description of the quality assurance and quality control measures during collection, analysis, and processing.
- (7) A description of dataset origin when existing data resources are used.
- (8) A description of the standards to be used for data and metadata format and content.
- (9) Appropriate timeframe for preservation.
- (10) The plan may consider the balance between the relative value of data preservation and other factors such as the associated cost and administrative burden. The plan will provide a justification for such decisions.
- (11) A statement that the data cannot be made available to the public when there are national security or controlled unclassified information concerns (e.g., “This data cannot be cleared for public release in accordance with the requirements in DoD Directive 5230.09.”)

When preparing the Data Management Plan, it must be numbered to coincide with the above criteria that shall 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 a full budget in sufficient detail so that a reasonableness determination can be made. A recommended template will be included in the invitation to Phase II. The SF 424 Research & Related Budget Form can be used as a guide but is required if the sub-recipient 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 based 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.
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.

d. R&R Senior/Key Person Profile

1. Biographical Sketch
2. Disclosure of Current and Pending Support:
 - i. A list of all current projects the individual is working on, in addition to any future support the individual has applied to receive, regardless of the source.
 - ii. Title and objectives of the other research projects.
 - iii. The percentage per year to be devoted to the other projects.
 - iv. The total amount of support the individual is receiving in connection to each of the other research projects or will receive if other applications are awarded.
 - v. Name and address of the agencies and/or other parties supporting the other research projects.
 - vi. Period of performance for the other research projects.

e. SF-LLL Disclosure of Lobbying Activities (if award value exceeds \$100,000.00)

f. R&R Other Project Information

3. ERDC will only accept full application packages submitted on or before 14 April 2025, 2:00 PM/Central Time (CT).

4. Submission Instructions

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 Thurman, 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>.

Organizations must have a Unique Entity Identifier (UEI) and active System for Award Management (SAM) registration to apply for Federal financial assistance.

C. Application Withdrawal:

An applicant may withdraw an application at any time before award by written notice via email. Notice of withdrawal shall be sent to the agency point of contact identified in this announcement and are effective upon receipt.

D. Funding Restrictions

Per 2 CFR § 200.216, funds may not be used to procure telecommunications equipment or video surveillance services or equipment identified therein.

Funds from an award may not be used to attain fee or profit.

V. Application Review Information

A. Selection Criteria

Applications will be evaluated using the following criteria, listed in descending order of importance:

- Technical merits of the proposed research and development; and
- Potential relationship of the proposed research and development to Department of Defense missions
- Expertise in plant biological control practices/methodologies; and

- Expert knowledge and work experience with invasive plant species and management practices. Specifically, the successful investigator(s)' experience should include: 1) extensive knowledge pertaining to invasive cane plant management and biological control of these invasive plant species and 2) a keen understanding of experimental design and data collection methodologies associated with invasive plant management and biological control techniques.

B. Review and Selection Process:

Each application will be reviewed based on the selection criteria above rather than against other applications submitted under this Announcement.

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.

In addition to the technical/program review, the DoD performs a budget review and a risk review as directed by 2 CFR 200.206, including a review of the Federal Awardee Performance and Integrity Information System (FAPIIS). Applicants may review information in FAPIIS and comment on any information entered into that system. Comments made by applicants will be taken into account in addition to other information in considering applicants' integrity, business ethics, and record of performance.

VI. Federal Award Administration Information

The notification e-mail regarding a selection is not authorization to commit or expend DoD funds. A DoD grants officer is the only person authorized to obligate and approve the use of federal funds. This authorization is in the form of a signed Notice of Award. Applicants whose applications are recommended will be contacted by a DoD grants officer to discuss any additional information required for award. This may include representations and certifications, revised budgets or budget explanations, or other information as applicable to the proposed award. The award start date will be determined at this time.

VII. Reporting Requirements

The terms and conditions of the award will provide the specifics on how to submit the reports and any required sections for those reports.

The following is required in accordance with 2 CFR 200.328 (Financial Reporting) and 2 CFR 200.329 (Program Performance):

Report	Requirements/Form	Frequency	Means of Submission
ERDC Progress Report	Progress during the period covered by the corresponding SF 270	Upon SF-270 submission	E-mail
Research Performance Progress Reports (Interim and Final)	OMB 0690-0032	Annually	E-mail
Financial Report	SF 425	Quarterly	E-mail
Payment Report	SF 270	Monthly	E-mail
Invention/Patent (IP) Report, if applicable & IAW 37 CFR 401.14 (c)	Form DD882	Annually	E-mail
Annual Inventory of Federally Owned Property, if applicable	See REP Article III.C of DoD R&D General Terms and Conditions	Annually	E-mail
Notification of Loss, Damage or Theft of Federally Owned Property, if applicable	See REP Article III.C of DoD R&D General Terms and Conditions	Upon occurrence	E-mail
Closeout Report	See OAR Article VI of DoD R&D General Terms and Conditions	Once	E-mail

Awardees will need to comply with the reporting requirements in 2 CFR 170: Reporting Subaward and Executive Compensation Information.

The terms and conditions of the award will provide the specifics on how to submit the reports and any required sections for those reports.

VIII. Federal Contacts

Questions should be directed to:

Stacy Thurman
 Grants Specialist
Stacy.D.Thurman@usace.army.mil

Zavien Beal
 Grants Officer
Zavien.T.Beal@usace.army.mil

Questions regarding Grants.gov should be directed to: the toll-free number 1-800-518-4726 and email at support@grants.gov.

IX. Other Information

The Federal government is not obligated to make any Federal award as a result of the announcement. Only grants officers can bind the Federal government to the expenditure of fund.

Applicants are advised to monitor Grants.gov for potential amendments to this Notice of Funding Opportunity. You can also elect to be automatically notified by Grants.gov whenever there is a change to the opportunity.

Applications must not include any information that has been identified as classified national security information under authorities established in Executive Order 12958, Classified National Security Information.