



Instructions

Citizen Science Competitive Funding Program

U.S. Forest Service – Ecosystem Management Coordination

Project Design Requirements

The Citizen Science Competitive Funding Program (*CitSci Fund* herein after) is a U.S. Forest Service (USFS) funding program open to all USFS units and partners. This is a collaborative approach to resource management – all proposals must identify a Forest Service Project Lead and a Partner Project Lead and clearly identify how volunteers will be engaged in the project. Some type of agreement (e.g. Participating Agreement, Challenge Cost-share Agreement) must be in place by April of 2018 so that the Forest Service lead unit can transfer funds to the lead partner. Each project may request up to \$25,000. For Frequently Asked Questions, visit the website: <https://www.fs.fed.us/blogs/forest-service-announces-competitive-funding-citizen-science-projects>.

This pilot program is being used to demonstrate how citizen science can help the Agency deliver mission results including the increased collection and analysis of usable data for resource management. Successful proposals will clearly state the nature of the work to be accomplished and how the proposed citizen science project will add value and efficiency in realizing needed work. Projects can be on any topic including biological, social, cultural, economic, infrastructure, etc. Projects can take many forms from large-scale data collection using apps, to site-specific long-term research, to classroom curricula that immerse students in monitoring and evaluation. Projects will fall into one of two categories¹: Data Gathering OR Classification/Problem Solving (see Definitions). Priority will be given to projects where volunteers are engaged over a continuous period of time – single event projects will not be accepted. For example, a 24 hour bioblitz would not be a competitive project, but a bioblitz that takes place over an entire calendar year would be. Projects should either take place on National Forest System lands or the data and information collected must be used to meet a Forest Service information need (see Definitions).

Competitive projects will have a genuine scientific and/or management outcome **and** address two or more of the following objectives:

1. Provide meaningful public engagement, learning opportunities, and follow up
3. Proactively engage youth, minority, and/or low-income communities
4. Establish, strengthen, and sustain strategic and innovative partnerships and collaboration
5. Manage data and data quality, apply open data principles, and seek opportunities for data sharing with partners and the public
6. Utilize innovative applications and technologies

¹ Typology adapted from: Teresa Scassa and Haewon Chung. 2015. Typology of citizen science projects from an intellectual property perspective: Invention and authorship between researchers and participants. Wilson Center, Commons Lab, Case Study Series, Vol. 5.



In addition, projects should follow these citizen science project design principles:

- Projects are low-burden for participants.
- Projects are opt-in, have no cost to participants, and participants have full control over the extent that they participate.
- Participants receive feedback on how their contribution adds to the project, e.g. how their data will be used and what the findings are.
- Project leads will evaluate scientific output, data quality, and the impact on participants.
- Projects are designed to contribute to Agency research and science, not to determine Agency regulations or policies.

Outcomes, Roles and Responsibilities

The CitSci Fund is a program that builds on existing efforts to expand the use and practice of citizen science in the Agency. These include the Crowdsourcing and Citizen Science Community of Practice, Forest Service Citizen Science Toolkit, Citizen Science [webpage](#), and Federal Crowdsourcing and Citizen Science [Catalog](#). This means that in addition to receiving funds toward their project, participants of the CitSci Fund program have the opportunity to learn and network, and provide valuable lessons learned and best practices for the benefit of other Forest Service units and partners.

Project Lead Commitments:

- Transfer of funds – Funds will be transferred from the Washington Office to the Forest Service unit. They will then be dispersed by the Forest Service unit to the partner through an agreement or contract. This must happen no later than April 30th, 2018 in order to avoid conflicts with budget deadlines. If there are any questions about this, they will be discussed once projects are selected.
- Partnership agreements – the correct instrument and agreement type will be determined and implemented by the unit and partner(s).
- Refine the project proposal using the Citizen Science Toolkit – selected projects will further refine their project proposals into a succinct Project Plan. The Toolkit provides guidance and best practices developed by citizen science practitioners and addresses Agency-specific policies and resources. By using the Toolkit early in the process, projects may have more successful outcomes and by providing feedback, they can improve the effectiveness of this tool for others.
- Participate as part of a Learning Journey Cohort – all selected projects will have a Forest Service Project Lead and a Partner Project Lead. Both will attend quarterly calls with the other project leads in order to share project progress, discuss issues and solutions, and explore innovations.
- Share lessons learned and best practices with the Community of Practice – at meaningful time points determined by the Project Leads, they will share the story of their project and their best practices learned along the way. This provides an opportunity for the community to learn from your experience and ask questions.



- Utilize the Forest Service and USDA logos on outreach, training, and communication materials where appropriate – work with the Forest Service unit’s public affairs officer or similar position to identify how and when to use these.
- Submit an end of project or end of year evaluation – a report will be completed that describes the project, how funding was used, key accomplishments, and next steps based on the evaluation criteria described in the Project Plan. These reports will help the Forest Service to describe the benefits of citizen science to accomplishing the Forest Service Mission (<https://www.fs.fed.us/about-agency/meet-forest-service>).
- Report accomplishments in the appropriate corporate database (e.g. Volunteer Services Reporting (VSReports) database, NatureWatch, Interpretation, and Conservation Education (NICE) database, etc.). This will help us to track national accomplishments and further tell the story of the benefits of citizen science to accomplishing the Forest Service Mission.

Washington Office Commitments:

- Provide funding for selected projects – these FY ’18 funds will be transferred to the Forest Service unit through the equivalent of a budget execution.
- Support national communications and volunteer recruitment via the Forest Service webpage, social media and other outlets – winning projects will be featured on the national website at www.fs.fed.us/working-with-us/citizen-science. We will share social media messages through national outlets when appropriate.
- Provide policy expertise and support for projects when needed – the USFS Citizen Science Core Team is made up of experts across disciplines that can respond to questions and provide support as the project is implemented. At the national level, we are coordinated with staffs that can provide guidance or support based on the project topic.
- Manage Cohort meetings and collate feedback and best practices – we will coordinate and facilitate Cohort calls. Information that is shared will be collected to improve the Citizen Science Toolkit for the benefit of the agency and partners.
- Program-level report – we will demonstrate the outcomes of the CitSci Fund by collating the results from the project evaluation reports and share these with USFS leadership.
- Develop guidance and policy where appropriate – based on the needs shared by Project Leads and project members we will help to facilitate national guidance or policy to continue to aid in the use of these practices in the agency.

Funding can be requested to support

- Staff/personnel costs including volunteer or project coordinator (e.g. project planning, coordination and evaluation)
- Recruitment and outreach for volunteers
- Development and printing of training and educational materials (e.g. cost to print field manuals, protocol documents, datasheets, etc.)
- Project-specific supplies and materials (e.g. measurement equipment, tablets, software, etc. not large expenses like vehicles, computers and major lab equipment)



- External project evaluation and evaluation of program impacts on volunteers (e.g., learning, conservation attitudes)
- Data quality measures/evaluations
- Travel costs for FS and partner project team members
- Costs for volunteer trainings (e.g. facility fees)
- On-site costs (e.g. transportation, portable restrooms)
- Postage/shipping (e.g. costs to mail volunteers water sample bottles and other supplies)
- Analysis of samples (e.g. water quality samples sent to a lab)
- Other costs – include and we will evaluate

Timeline

Action	Target Date
Proposal process open	November 3, 2017
Project proposals due	January 31, 2018
Project selections announced	February 16, 2018
Project Leads submit refined project plans and funds dispersed	April 2018
Project implementation begins	2018 /2019
Mid-way progress call	6 months from funds dispersal
Final report due	One year from funds dispersal

Definitions

Citizen science is a form of open collaboration in which individuals or organizations participate voluntarily in the scientific process in various ways, including formulating research questions, creating and refining project design, conducting scientific experiments, collecting and analyzing data, interpreting the results of data, developing technologies and applications, making discoveries, and solving problems². It can be used for any field including ecology, archaeology, sociology, and more. With good training and quality assurance processes in place, anyone can be a citizen scientist and contribute meaningful data and information to the agency.

Classification/problem solving projects. Examples of participants' tasks include: 1) observation of recorded materials provided by project organizers (images, video, etc.) through structured data submission forms, surveys or questionnaires in an online or computer program, clicking boxes, highlighting parts of text or image, and providing comments and/or annotations; 2) Classification of images or sounds using structured data submission forms or clicking boxes in an online or computer program; 3) Transcribing information, by typing handwritten logs or notes; 4) Performing a function meant to generate human behavior data; or 5) Problem-solving or manipulation of data. Tasks 1-5 may be conducted via structured actions or instructions or through the use of "human-based computational

² 2017 Citizen Science Act. Sec. 402 of the American Innovation and Competitiveness Act.
<https://www.congress.gov/bill/114th-congress/senate-bill/3084/text>



game” or “game with a purpose”, a human-based computational technique in which a computational process performs its function by presenting certain steps to humans in an entertaining way.

Data gathering projects. Examples of participants’ tasks include: 1) observation, characterization and documentation of natural phenomena or general environmental health observations, opinions, or preferences or 2) surveying participants or screening environmental conditions, including using specialized equipment provided by project leaders to record and submit data, or submitting samples plus descriptors (e.g. of air or water) for testing. Data may be collected through low-cost technologies, structured data forms, surveys, focus groups or interviews, submitting photographs or other media, surveys or questionnaires, or providing written observations.

Forest Service Information Need. A Forest Service information need is defined by the Forest Service unit that is co-leading the project. The information collected or analyzed as part of the project should respond to a need by the unit for scientific information (e.g. how are pollinators responding to changes in climate; what is the response of nesting birds to forest management practices, how has urban tree cover changed over time, etc.) and/or to a management need (e.g. is trail erosion changing water quality for sensitive salamanders; are archaeological sites being vandalized or adequately protected, etc.). The Forest Service unit should be able to describe what the need is and how the information results from the project are being used to address that need.

Learning Journey Cohort is made up of the winning projects’ Forest Service Project Leads and the Partner Project Leads that meet regularly to update the group on the progress of their project, talk about innovations, lessons learned, best practices and any obstacles that have emerged. They will also discuss how the Citizen Science Toolkit is useful and where it can be improved. This is an opportunity for the awardees to network and learn from one another as well as provide input that will inform others in the agency and partners interested in pursuing citizen science.

Volunteer. A person who donates time and talent to advance the mission of the Forest Service and who receives no salary or wages from the Forest Service for the voluntary service.

Contact: FSCCS@fs.fed.us Subject: CitSci Fund Instructions
Website: <https://www.fs.fed.us/working-with-us/citizen-science>