

Science Mission Directorate Policy

Citizen Science

SMD Policy Document SPD-33

Recommended by SMD Science Management Council

Approved by SMD Associate Administrator

Responsible SMD Official: Director, Science Engagement and Partnerships (SE&P)

Original: SPD-33

I. BACKGROUND

Citizen Science is defined as a form of open collaboration in which individuals or organizations participate voluntarily in the scientific process in various ways (P.L. No. 114-329). This policy defines "Citizen Science Projects" as science projects that rely on volunteers.

The guidance in this SPD is in conjunction with other policies including Public Law Number 114-329 American Innovation and Competitiveness Act, 14 CFR 1221.110 Use of NASA Insignia, agency Open Data & Information policies (<https://open.nasa.gov/open-gov/>), and NASA Policy Directive 1382.17J NASA Privacy Policy.

II. POLICY

- a) This SPD is applicable to all SMD-funded citizen science projects initiated after the approval date of this document.
- b) SMD citizen science projects shall be held to the same rigorous standards as any SMD science program. Documented project goals must include advances in science, the merit of which shall be determined by peer review. SMD's portfolio of citizen science projects shall contribute to building a scientifically literate nation by:
 - i. Providing opportunities for U.S. citizen scientists;
 - ii. Encouraging highly educated volunteers who can benefit NASA via their expertise;
 - iii. Leveraging existing communities of citizen scientists or other enthusiasts for a variety of projects; and
 - iv. Connecting citizen scientists with NASA Subject Matter Experts who provide role models and mentorship.

III. RESOURCES

- a) Each SMD science Division shall invest in citizen science projects and report annually on their plans for soliciting, selecting, and funding citizen science projects.
- b) Each SMD science Division shall have a process for soliciting, reviewing, and funding citizen science projects. This process may include, but is not limited to:
 - i. Open calls (e.g. through ROSES) for citizen science project proposals, either as a separate ROSES program element, a subset of a more general ROSES program element, or as part of a more general funding announcement;

- ii. Awards of Internal Scientist Funding Model work packages explicitly addressing citizen science;
 - iii. An incentive for inclusion of citizen science projects in PI-led missions;
 - iv. Addition of citizen science projects to strategic missions; and/or
 - v. Acceptance of unsolicited proposals for citizen science projects when not in conflict with submissions to competed calls.
- c) Each SMD science Division may also solicit and select additional investigations that support citizen science projects but that do not themselves involve volunteers (e.g., development of a low-cost sensor for eventual use by citizen scientists). Such investigations shall not themselves be called "Citizen Science Projects" and shall not be subject to the evaluation criteria below.

IV. EVALUATION

Evaluation of all proposed and funded citizen science projects shall include the following elements:

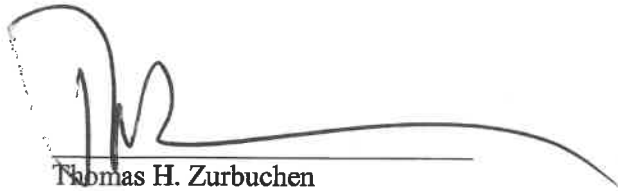
- a) Scientific merit
- b) A team that includes appropriate expertise in order to foster broad participation, communication and dissemination of results (e.g. two-way communication between volunteers and NASA scientists, with scientists giving feedback to and receiving feedback from the volunteers).
- c) A budget that includes appropriate resources to carry out the objectives of the project.
- d) Utilization of existing platforms and/or existing enthusiast communities to maximize collective impact. Development of new platforms and/or building of new communities will be considered on a case by case basis by the review panel.
- e) Use of beta testing: testing the project on a group of citizen scientist volunteers before launch to ensure data quality and positive participant experience.
- f) Inclusion of a sunset plan that ensures:
 - i. Citizen scientist volunteers are informed about the results when the project is completed and are provided opportunities to be retained as part of the larger NASA citizen science community.
 - ii. Inactive websites include a statement: "This site is no longer actively updated..." and provide a link to the project's results and publications and a link to at least one other relevant NASA citizen science project.
- g) Inclusion of a data management plan.

V. PROCEDURE

- a) SE&P shall work with the science Divisions to assess each citizen science project after the first year to ensure compliance with the following standards, as applicable:
 - i. Progress towards science objectives.
 - ii. Positive, meaningful participant experience such as:
 - a. Project websites inform users about hypotheses to be tested and questions to be answered
 - b. Project websites show good design, as evidenced through User Interface/User Experience usability assessments
 - c. Transparency about the use of data created by citizen scientists, intended scientific outcomes and progress
 - d. Evidence of two-way communication and feedback
 - iii. Broad participation, appropriate to the nature of the project, as evidenced by web/user analytics or other data.
 - iv. SMD citizen science project websites include links to the following public NASA websites that share NASA citizen science opportunities:

- e. <https://science.nasa.gov/citizenscientists>
- f. <https://www.nasa.gov/solve>
- b) SMD citizen science projects shall acknowledge the citizen scientists they work with as a collective in publications or include them as named co-authors on these publications when their contributions warrant.

APPROVAL



Thomas H. Zurbuchen
Associate Administrator
for Science Mission Directorate

12/14/18

Date