Antarctic Artists and Writers Program (AAW)

PROGRAM SOLICITATION
NSF 19-568

REPLACES DOCUMENT(S):
NSF 16-542

National Science Foundation

Directorate for Geosciences
    Office of Polar Programs

Full Proposal Deadline(s) (due by 5 p.m. submitter's local time):

    July 01, 2019

    June 01, 2020

    June 1, Annually Thereafter

IMPORTANT INFORMATION AND REVISION NOTES

Applicants selected to participate in the Artists & Writers Program will be considered for field support in Antarctica beginning no sooner than a year after the specific proposal deadline in which they applied (i.e., if you applied for the July 2019 deadline, field support requests would not be considered until at least July 2020). Proposals will be considered for work aboard vessels in the Southern Ocean beginning no sooner than seven months after the June proposal deadline. The Antarctic research season is focused annually between October to February. Deployment dates are dependent on the research project or location where the successful applicant will be placed.

Applicants must be U.S. citizens or permanent residents of the U.S.

Protection of the Antarctic environment is a fundamental consideration in all Antarctic activities as described in the Protocol on Environmental Protection to the Antarctic Treaty. To this end, projects should be planned to limit adverse impacts on the Antarctic environment.

Any proposal submitted in response to this solicitation should be submitted in accordance with the revised *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) (NSF 19-1), which is effective for proposals submitted, or due, on or after February 25, 2019.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

    Antarctic Artists and Writers Program (AAW)

Synopsis of Program:

    The National Science Foundation (NSF) is the lead Federal agency managing the U.S. Antarctic Program (USAP), which supports scientific research and education in the Antarctic and the Southern Ocean. The Antarctic Artists and Writers Program was established to facilitate writing and artistic projects designed to increase the public's understanding and appreciation of the Antarctic and human endeavors on the southernmost continent. The Artist and Writers Program gives priority to projects that focus on interpreting and representing the scientific activities being conducted in the unique Antarctic region. Proposed projects must target audiences in the U.S. and be distributed/exhibited in the U.S. The program does not support site installations or performances in Antarctica. The program also does not support short-term projects that are essentially journalistic in nature (See Section IX. Other Information). Artists and Writers Program field teams should consist of no more than one or two people. Larger projects—such as television or documentary film crews—should contact the cognizant AAW Program Officer.

    Successful projects will be provided with USAP logistical support needed to implement the proposed activity, as well as round-trip economy air tickets between the United States and the Southern Hemisphere. USAP infrastructure available to support projects undertaken by artists and writers consists of three year-round stations, numerous austral summer research camps in Antarctica, two research vessels, and surface and air transportation. The Artists and Writers Program does not provide direct funding to successful applicants for any purpose.

Due to the unique nature of this program, proposers are strongly encouraged to carefully follow the guidelines described in this solicitation and to contact the cognizant Artists and Writers Program Officer prior to submitting a proposal to discuss the unique requirements and restrictions of the Antarctic Artists and Writers Program and Antarctic logistics in general.

If Polar Programs determines, prior to the panel review, that the logistic needs for a project cannot be met in the upcoming field season, the proposal will be returned without review.

Cognizant Program Officer(s):

Please note that the following information is current at the time of publishing. See program website for any updates to the points of contact.

- Elizabeth L. Rom, Program Director, W8132, telephone: (703) 292-7709, email: elrom@nsf.gov

Applicable Catalog of Federal Domestic Assistance (CFDA) Number(s):

- 47.050 --- Geosciences

Award Information

Anticipated Type of Award: Standard Grant

Estimated Number of Awards: 2 to 4

Estimated number of awards is subject to the availability of funds.

Anticipated Funding Amount: $0

(Travel and field support only; refer to the text for additional information.)

Eligibility Information

Who May Submit Proposals:

The categories of proposers eligible to submit proposals to the National Science Foundation are identified in the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG), Chapter I.E.

Who May Serve as PI:

None specified. However, see Section IV, Additional Eligibility Information.

Limit on Number of Proposals per Organization:

There are no restrictions or limits.

Limit on Number of Proposals per PI or Co-PI: 1

(Per annual deadline)

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Letters of Intent:** Not required

- **Preliminary Proposal Submission:** Not required

- **Full Proposals:**

    - Full Proposals submitted via FastLane: *NSF Proposal and Award Policies and Procedures Guide* (PAPPG) guidelines apply. The complete text of the PAPPG is available electronically on the NSF website at: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.
    - Full Proposals submitted via Grants.gov: *NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov* guidelines apply (Note: The *NSF Grants.gov Application Guide* is available on the Grants.gov website and on the NSF website at: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide).

B. Budgetary Information

- **Cost Sharing Requirements:**

    Inclusion of voluntary committed cost sharing is prohibited.

- **Indirect Cost (F&A) Limitations:**

    Not Applicable

Other Budgetary Limitations:

Not Applicable

C. Due Dates

- **Full Proposal Deadline(s)** (due by 5 p.m. submitter's local time):

    July 01, 2019

    June 01, 2020

    June 1, Annually Thereafter

Proposal Review Information Criteria

Merit Review Criteria:

National Science Board approved criteria. Additional merit review criteria apply. Please see the full text of this solicitation for further information.

Award Administration Information

Award Conditions:

Additional award conditions apply. Please see the full text of this solicitation for further information.

Reporting Requirements:

Standard NSF reporting requirements apply.

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I. INTRODUCTION

Through the Antarctic Artists and Writers Program, NSF encourages the production of professional-quality literature and art that complements USAP science, engineering, and education programs to increase public understanding of the Antarctic continent, the surrounding oceans, human endeavors on the continent, as well as the region's unique geopolitical position. The program provides opportunities for artists and writers, whether promising early career practitioners or those of longstanding professional reputation and accomplishment, to make observations at USAP research stations, field camps and/or aboard research vessels necessary to complete projects described in the proposal as awarded by NSF.

II. PROGRAM DESCRIPTION

Antarctica and its environs serve as a platform for scientists to increase understanding of Earth and beyond. This solicitation is one mechanism used by

NSF's Office of Polar Programs (OPP) to achieve the goal of increasing public understanding of science conducted by USAP as well as the uniqueness of the Antarctic continent and surrounding oceans. Specifically, this solicitation provides the opportunity for artists and writers to propose visits to Antarctica to make first-hand observations that will inform their artistic efforts. Priority will be given to projects whose focus is to interpret and represent the scientific activities being conducted in and/or about the unique Antarctic region.

Projects across the range of the humanities are eligible for the Artists and Writers Program, though the program does not support site installations or performances in Antarctica. Integral to achieving the goals of the Antarctic Artists and Writers program is the requirement to broadly disseminate, as a public benefit, works produced by program participants. As such, successful proposals will contain well-developed plans for bringing the artistic or literary works before the widest possible cross-section of the public.

Note: The program does not support short-term projects that are journalistic in nature (See Section IX. Other Information).

The Antarctic Artists and Writers Program has previously supported a broad range of work in areas as diverse as books for children, digital media, film, graphic art, history, history of science, humanities scholarship, illustration, literature, musical composition, painting, photography, poetry, science fiction, science writing, sculpture, toponymy, underwater photography, and web exhibitions. Visit the "Past Participants" page to review descriptions of the most recent participants. Awards since 2004 can also be viewed in the Awards Database *(search element code 5130; the $0 and $1 awards are Antarctic Artists and Writers;* https://www.nsf.gov/awardsearch/simpleSearchResult?queryText=5130&ActiveAwards=true&ExpiredAwards=true*)*. Submissions prior to 2004 can be found at https://www.nsf.gov/geo/opp/aawr.jsp.

The Artists and Writers Program does not award funds, but rather provides in-kind support to participants. Successful applicants are free to seek funds elsewhere, including from other Federal agencies or other NSF solicitations (See Section IX. Other Information).

For approved projects, NSF OPP provides:

- Polar clothing for use in the field as described in the USAP Participant Guide;
- Round-trip economy air travel between a U.S. airport and a port of embarkation for the Antarctic (typically New Zealand or Chile);
- Travel between the embarkation point and the Antarctic field location;
- Room, board, travel between field sites, and other logistical assistance while in the Antarctic or on a USAP research vessel.

Successful Artists and Writers are responsible for:

- Meals and lodging during travel to embarkation points, including their stay in New Zealand or Chile before and after deployment to the Antarctic;
- Incidental expenses in Antarctica (toiletries, etc.);
- Cold weather clothing that might be needed beyond the basic clothing issued by USAP;
- All costs incurred while completing and distributing the proposed work;
- Costs of mandatory pre-travel medical and dental examinations (instructions provided by the USAP) and for any remediation these examinations show to be necessary to physically qualify for deployment.

Note: Failure to meet USAP medical and dental standards prior to deployment results in disqualification from the program and inability to deploy to the Antarctic, regardless of any previous decision by NSF that a proposal merits support.

The selected artist or writer is responsible for completing the project described in the proposal awarded. NSF does not fund, review, or participate in finishing any project once the artist or writer returns from the Antarctic.

III. AWARD INFORMATION

Anticipated Type of Award: Standard Grant

Estimated Number of Awards: 2 to 4

Estimated number of awards is subject to the availability of funds.

Anticipated Funding Amount: $0

Award content. The Antarctic Artists and Writers Program does not provide funds; the financial amount of the NSF award is zero. The award consists of provision, without charge, of USAP field resources in Antarctica and/or the Southern Ocean.

Public record. If you are selected, the NSF award will become a public record. The searchable awards database will contain the award number, name and contact information, and a description of the project along with the reason that it has been supported by NSF.

IV. ELIGIBILITY INFORMATION

Who May Submit Proposals:

The categories of proposers eligible to submit proposals to the National Science Foundation are identified in the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG), Chapter I.E.

Who May Serve as PI:

None specified. However, see Section IV, Additional Eligibility Information.

Limit on Number of Proposals per Organization:

There are no restrictions or limits.

Limit on Number of Proposals per PI or Co-PI: 1

(Per annual deadline)

Additional Eligibility Info:

U.S. residents. The Antarctic Artists and Writers Program is for citizens or permanent residents of the United States who have a substantial record of achievement in the arts and letters or who are in early career and demonstrate exceptional promise. Applicants must be 21 or older.

Individuals may apply directly or through their employing organizations.

Foreign nationals may apply only if they are permanent residents of the U.S.

Physical and Dental Examinations. Medical and dental care in the Antarctic is limited. Field participants must pass medical screenings in the six months prior to the planned deployment. Failure to meet medical and dental criteria results in disqualification for Antarctic travel, regardless of the merits of a particular proposal. NSF does not pay for examinations, follow-up visits, or remediation needed to pass the screenings.

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Full Proposal Preparation Instructions: Proposers may opt to submit proposals in response to this Program Solicitation via FastLane or Grants.gov.

- Full proposals submitted via FastLane: Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the general guidelines contained in the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG). The complete text of the PAPPG is available electronically on the NSF website at: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg. Paper copies of the PAPPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from nsfpubs@nsf.gov. Proposers are reminded to identify this program solicitation number in the program solicitation block on the NSF Cover Sheet For Proposal to the National Science Foundation. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.

- Full proposals submitted via Grants.gov: Proposals submitted in response to this program solicitation via Grants.gov should be prepared and submitted in accordance with the *NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov*. The complete text of the *NSF Grants.gov Application Guide* is available on the Grants.gov website and on the NSF website at: (https://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide). To obtain copies of the Application Guide and Application Forms Package, click on the Apply tab on the Grants.gov site, then click on the Apply Step 1: Download a Grant Application Package and Application Instructions link and enter the funding opportunity number, (the program solicitation number without the NSF prefix) and press the Download Package button. Paper copies of the Grants.gov Application Guide also may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from nsfpubs@nsf.gov.

See PAPPG Chapter II.C.2 for guidance on the required sections of a full research proposal submitted to NSF. Please note that the proposal preparation instructions provided in this program solicitation may deviate from the PAPPG instructions.

Additional Guidance for Preparing Your Proposal

Preparing the Proposal. Before starting a proposal, please consult the Proposal & Award Policies & Procedures Guide (PAPPG) and/or the NSF Grants.gov Application Guide, which explain how to write and submit a proposal to NSF. When developing the proposal, knowing the character, scope, and mission of USAP is critical. Resources found on the NSF Antarctic Research web page should be helpful in this regard.

A fundamental requirement of a successful proposal is to describe how your plan meets NSF's Merit Review Principles and Solicitation Specific Review Criteria specified in Section VI.A of this solicitation. To meet this requirement, a theme for your proposed activity is required. You must convince the Foundation that your work will provide new understanding of Antarctic science or the region itself. The organization, clarity, and content of your proposal will reveal much about your abilities and the likelihood that the proposed project will be completed.

Before starting proposal preparation, **if you are applying as an unaffiliated individual**, you must register as a new individual in Research.gov and/or as a new individual in Grants.gov.

Successful submission of an NSF proposal requires the items below. However, for the Antarctic Artists and Writers Program, some of these requirements may be met by using language as specified below:

- *Type of Proposal* - The "Research" type of proposal should be selected.
- *Cover Sheet* - Required
- *Project Summary* - Required
- *Project Description* – Required. Note: The Project Description must contain separate sections, clearly labeled, "Intellectual Merit" and "Broader Impact."
- *References Cited* - If desired, references can be added in support of a project. If not used, insert text or upload a document that states "This information is not required by the Antarctic Artists & Writers Program."
- *Biographical Sketch(es)* - Required
- *Budget* - In accordance with the Budget Preparation Instructions in Section V.B of this solicitation, populate the Proposal Budget Summary page

with zeros. Since funding for salary is not being provided, the PI's name should be removed from Section A of the budget. Field support and airline tickets are issued directly; do not budget for these items.

- *Budget Justification*- Insert text or upload a document that states "This information is not required by the Antarctic Artists & Writers Program."
- *Current and Pending Support* - Insert text or upload a document that states "This information is not required by the Antarctic Artists & Writers Program."
- *Facilities, Equipment & Other Resources* - Insert text or upload a document that states "This information is not required by the Antarctic Artists & Writers Program."
- *Data Management Plan* - Insert text or upload a document that states "Because participants will not gather data as part of their projects and are not engaged in scientific research, the Antarctic Artists & Writers Program does not require them to submit a data management plan."
- *Logistical Requirements and Field Plan* – Required. Include in Supplementary Documents a brief summary of the scope and breadth of requested fieldwork. This document must contain sufficient information for reviewers and NSF to understand the scope of the fieldwork and to determine if fieldwork is justified.
- *Additional Supplementary Documents (Not required).* If used, limit 25 pages.
- *Single Copy Documents: Collaborators and Other Affiliations Information* - Proposers should follow the guidance specified in Chapter II.C.1.e of the NSF PAPPG.

Supporting materials. Include in the proposal samples of your work, published reviews of it, and/or letters of commitment for the proposed work (e.g., publishers or exhibit venues) to help reviewers appreciate your achievements and your ability to disseminate your work. These materials should be regarded as an electronic portfolio demonstrating the scope, quality, and impact of your work that puts your proposal into context, whether or not that work is specifically related to your proposed Antarctic project. Include the portfolio and supporting materials in the Supplementary Documents or Project Description, as appropriate.

Letters of collaboration. Letters of collaboration, e.g., with researchers or others, should be uploaded in the Supplementary Documentation section. Do not mail or e-mail them to the Program Officer. Do not allow authors of these letters to send them directly to NSF. **Letters of support, recommendation or endorsement are not permissible per NSF policy.**

Fieldwork. Resources for support of both science and the arts are limited and time-constrained, especially during the brief austral summer. Even if you enjoy a well-established reputation and can almost guarantee an audience, you need to articulate a specific need to carry out your proposed project "on the ground" in Antarctica or its surrounding waters in your project description, explaining specifically why and where you need to be in the field and for how long. There is no set minimum or maximum amount of time in the field for your project; you should focus your request for field support only on what your proposed project needs.

Planning the Approach to your work in the Antarctic

1. If you are focused on a single research project, you can propose to be an embedded member of that project. This approach requires that you have a preliminary agreement with the leader of the project. Explain this agreement in the project description and include a letter from the leader of the project as a Supplementary Document to the proposal.

2. If you wish to visit several research teams or sites over the course of your stay in the Antarctic, contact leaders of those teams and discuss with them how your project will interact with theirs. Describe the planned interactions in the project description, ask the research leaders to give you letters indicating their willingness to collaborate with you and submit them as Supplementary Documents to the proposal.

3. If you plan to operate independently, your ability to work outside of established stations may be limited. Safety considerations do not allow you to work alone outside of established stations or field camps. NSF has limited resources to furnish field safety escorts.

Team Size - The Antarctic Artists and Writers Program is intended for field teams of one or two people requiring visits to research stations, ships, and/or to existing research camps. Projects requiring larger teams should contact the cognizant AAW Program Officer.

Field Locations and Timing - Any USAP facility may host an artist or writer. The three year-round stations are Amundsen-Scott South Pole Station, McMurdo Station on Ross Island, and Palmer Station on Anvers Island in the Antarctic Peninsula. In addition, two USAP research vessels operate nearly year-round in the Southern Ocean and Antarctic Peninsula. Palmer Station is accessible year-round, as are the two ice-capable research ships. Amundsen-Scott South Pole Station and temporary field camps are accessible only during the austral summer. Accommodation at Amundsen-Scott South Pole station is always greatly limited. As such, only brief visits can generally be accommodated. Access to McMurdo Station for parts of the winter may be possible. Access to McMurdo and Amundsen-Scott South Pole Stations is through Christchurch, New Zealand, while access to Palmer Station is through Punta Arenas, Chile. It is extremely difficult, if not impossible, to support a project that attempts to span these two gateway cities in the same season, whereas working at both McMurdo and South Pole is operationally feasible in the same season. Access to most field camps is through McMurdo Station.

Unmanned Aircraft Systems - Field use of autonomous platforms (Unmanned Aircraft Systems, Unmanned Aerial Vehicles, and Remotely Piloted Aircraft), regardless of size, weight or forms, requires explicit approval by NSF prior to use in the USAP. Use of unmanned aerial vehicles requires operators with an FAA-certified UAV pilot license.

Environmental Stewardship - The U.S. Antarctic Conservation Act (ACA) requires an environmental impact assessment (EIA) in advance of USAP research and operational activities. Permits are required for the taking of fauna and flora, entry into protected areas, introduction of non-native species, waste disposal, use of designated pollutants, and other actions. For further information contact the ACA Permit Officer at acapermits@nsf.gov or visit the U.S. Antarctic Environmental Stewardship web page. Permits are not required at the time of proposal submission, but investigators are responsible for obtaining the necessary permits if an award is made.

For additional information on fieldwork, see the USAP web portal page "Information for Proposers" and "USAP Proposal Preparation Information" on the NSF web site.

Note: If Polar Program determines, prior to the panel review, that the logistic needs for a project cannot be met in the upcoming field season, the proposal will be Returned Without Review. If the proposal is ranked highly (see Section VI.B, Review and Selection Process), then additional detailed information about fieldwork will be solicited before a final decision is made by NSF.

B. Budgetary Information

Cost Sharing:

Inclusion of voluntary committed cost sharing is prohibited.

Budget Preparation Instructions:

Populate the Proposal Budget Summary page with zeros. Since funding for salary is not being provided, the PI's name should be removed from Section A of the budget. Field support and airline tickets are issued directly; do not budget for these items. The Antarctic Artists and Writers Program does not directly award funds.

C. Due Dates

- **Full Proposal Deadline(s)** (due by 5 p.m. submitter's local time):

    July 01, 2019

    June 01, 2020

    June 1, Annually Thereafter

Proposals will be considered for field support in Antarctica beginning no sooner than a year after the proposal deadline in which funding was requested (i.e., if applying to the July 2019 deadline, requests for field support would be considered no sooner than July 2020). Proposals will be considered for work aboard ship in the Southern Ocean beginning no sooner than seven months after the original proposal deadline.

D. FastLane/Research.gov/Grants.gov Requirements

For Proposals Submitted Via FastLane or Research.gov:

To prepare and submit a proposal via FastLane, see detailed technical instructions available at: https://www.fastlane.nsf.gov/a1/newstan.htm. To prepare and submit a proposal via Research.gov, see detailed technical instructions available at: https://www.research.gov/research-portal/appmanager/base/desktop?_nfpb=true&_pageLabel=research_node_display&_nodePath=/researchGov/Service/Desktop/ProposalPreparationandSubmission.html. For FastLane or Research.gov user support, call the FastLane and Research.gov Help Desk at 1-800-673-6188 or e-mail fastlane@nsf.gov or rgov@nsf.gov. The FastLane and Research.gov Help Desk answers general technical questions related to the use of the FastLane and Research.gov systems. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this funding opportunity.

For Proposals Submitted Via Grants.gov:

Before using Grants.gov for the first time, each organization must register to create an institutional profile. Once registered, the applicant's organization can then apply for any federal grant on the Grants.gov website. Comprehensive information about using Grants.gov is available on the Grants.gov Applicant Resources webpage: https://www.grants.gov/web/grants/applicants.html. In addition, the NSF Grants.gov Application Guide (see link in Section V.A) provides instructions regarding the technical preparation of proposals via Grants.gov. For Grants.gov user support, contact the Grants.gov Contact Center at 1-800-518-4726 or by email: support@grants.gov. The Grants.gov Contact Center answers general technical questions related to the use of Grants.gov. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this solicitation.

Submitting the Proposal: Once all documents have been completed, the Authorized Organizational Representative (AOR) must submit the application to Grants.gov and verify the desired funding opportunity and agency to which the application is submitted. The AOR must then sign and submit the application to Grants.gov. The completed application will be transferred to the NSF FastLane system for further processing.

Proposers that submitted via FastLane or Research.gov may use Research.gov to verify the status of their submission to NSF. For proposers that submitted via Grants.gov, until an application has been received and validated by NSF, the Authorized Organizational Representative may check the status of an application on Grants.gov. After proposers have received an e-mail notification from NSF, Research.gov should be used to check the status of an application.

VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES

Proposals received by NSF are assigned to the appropriate NSF program for acknowledgement and, if they meet NSF requirements, for review. All proposals are carefully reviewed by a scientist, engineer, or educator serving as an NSF Program Officer, and usually by three to ten other persons outside NSF either as *ad hoc* reviewers, panelists, or both, who are experts in the particular fields represented by the proposal. These reviewers are selected by Program Officers charged with oversight of the review process. Proposers are invited to suggest names of persons they believe are especially well qualified to review the proposal and/or persons they would prefer not review the proposal. These suggestions may serve as one source in the reviewer selection process at the Program Officer's discretion. Submission of such names, however, is optional. Care is taken to ensure that reviewers have no conflicts of interest with the proposal. In addition, Program Officers may obtain comments from site visits before recommending final action on proposals. Senior NSF staff further review recommendations for awards. A flowchart that depicts the entire NSF proposal and award process (and associated timeline) is included in PAPPG Exhibit III-1.

A comprehensive description of the Foundation's merit review process is available on the NSF website at: https://www.nsf.gov/bfa/dias/policy/merit_review/.

Proposers should also be aware of core strategies that are essential to the fulfillment of NSF's mission, as articulated in *Building the Future: Investing in Discovery and Innovation - NSF Strategic Plan for Fiscal Years (FY) 2018 – 2022*. These strategies are integrated in the program planning and implementation process, of which proposal review is one part. NSF's mission is particularly well-implemented through the integration of research and education and broadening participation in NSF programs, projects, and activities.

One of the strategic objectives in support of NSF's mission is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions must recruit, train, and prepare a diverse STEM workforce to advance the frontiers of science and participate in the U.S. technology-based economy. NSF's contribution to the national innovation ecosystem is to provide cutting-edge research under the guidance of the Nation's most creative scientists and engineers. NSF also supports development of a strong science, technology, engineering, and mathematics (STEM) workforce by investing in building the knowledge that informs improvements in STEM teaching and learning.

NSF's mission calls for the broadening of opportunities and expanding participation of groups, institutions, and geographic regions that are underrepresented in STEM disciplines, which is essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports.

A. Merit Review Principles and Criteria

The National Science Foundation strives to invest in a robust and diverse portfolio of projects that creates new knowledge and enables breakthroughs in understanding across all areas of science and engineering research and education. To identify which projects to support, NSF relies on a merit review process that incorporates consideration of both the technical aspects of a proposed project and its potential to contribute more broadly to advancing NSF's mission "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense; and for other purposes." NSF makes every effort to conduct a fair, competitive, transparent merit review process for the selection of projects.

1. Merit Review Principles

These principles are to be given due diligence by PIs and organizations when preparing proposals and managing projects, by reviewers when reading and evaluating proposals, and by NSF program staff when determining whether or not to recommend proposals for funding and while overseeing awards. Given that NSF is the primary federal agency charged with nurturing and supporting excellence in basic research and education, the following three principles apply:

- All NSF projects should be of the highest quality and have the potential to advance, if not transform, the frontiers of knowledge.
- NSF projects, in the aggregate, should contribute more broadly to achieving societal goals. These "Broader Impacts" may be accomplished through the research itself, through activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. The project activities may be based on previously established and/or innovative methods and approaches, but in either case must be well justified.
- Meaningful assessment and evaluation of NSF funded projects should be based on appropriate metrics, keeping in mind the likely correlation between the effect of broader impacts and the resources provided to implement projects. If the size of the activity is limited, evaluation of that activity in isolation is not likely to be meaningful. Thus, assessing the effectiveness of these activities may best be done at a higher, more aggregated, level than the individual project.

With respect to the third principle, even if assessment of Broader Impacts outcomes for particular projects is done at an aggregated level, PIs are expected to be accountable for carrying out the activities described in the funded project. Thus, individual projects should include clearly stated goals, specific descriptions of the activities that the PI intends to do, and a plan in place to document the outputs of those activities.

These three merit review principles provide the basis for the merit review criteria, as well as a context within which the users of the criteria can better understand their intent.

2. Merit Review Criteria

All NSF proposals are evaluated through use of the two National Science Board approved merit review criteria. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

The two merit review criteria are listed below. **Both** criteria are to be given **full consideration** during the review and decision-making processes; each criterion is necessary but neither, by itself, is sufficient. Therefore, proposers must fully address both criteria. (PAPPG Chapter II.C.2.d(i). contains additional information for use by proposers in development of the Project Description section of the proposal). Reviewers are strongly encouraged to review the criteria, including PAPPG Chapter II.C.2.d(i), prior to the review of a proposal.

When evaluating NSF proposals, reviewers will be asked to consider what the proposers want to do, why they want to do it, how they plan to do it, how they will know if they succeed, and what benefits could accrue if the project is successful. These issues apply both to the technical aspects of the proposal and the way in which the project may make broader contributions. To that end, reviewers will be asked to evaluate all proposals against two criteria:

- **Intellectual Merit:** The Intellectual Merit criterion encompasses the potential to advance knowledge; and
- **Broader Impacts:** The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.

The following elements should be considered in the review for both criteria:

1. What is the potential for the proposed activity to
   a. Advance knowledge and understanding within its own field or across different fields (Intellectual Merit); and
   b. Benefit society or advance desired societal outcomes (Broader Impacts)?
2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
3. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
4. How well qualified is the individual, team, or organization to conduct the proposed activities?
5. Are there adequate resources available to the PI (either at the home organization or through collaborations) to carry out the proposed activities?

Broader impacts may be accomplished through the research itself, through the activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. NSF values the advancement of scientific knowledge and activities that contribute to achievement of societally relevant outcomes. Such outcomes include, but are not limited to: full participation of women, persons with disabilities, and underrepresented minorities in science, technology, engineering, and mathematics (STEM); improved STEM education and educator development at any level; increased public scientific literacy and public engagement with science and technology; improved well-being of individuals in society; development of a diverse, globally competitive STEM workforce; increased partnerships between academia, industry, and others; improved national security; increased economic competitiveness of the United States; and enhanced infrastructure for research and education.

Proposers are reminded that reviewers will also be asked to review the Data Management Plan and the Postdoctoral Researcher Mentoring Plan, as appropriate.

Additional Solicitation Specific Review Criteria

Reviewers and NSF will look for how the proposed project would satisfy the above criteria and those below.

1. **Intellectual Merit**

    In addition to the above:

      - Does the proposal demonstrate the likelihood of significantly advancing public knowledge, understanding, or appreciation of the scientific activities in Antarctica or the Antarctic region itself?
      - Is the requested travel to the Antarctic essential to the completion of the proposed work?
      - Is the required presence in Antarctica, as a practical matter, available only from the USAP?
      - If underwater diving is to be a part of the field program, does the proposal demonstrate a compelling justification for diving? (Read Antarctic Research, Proposal Preparation and Submission, Underwater Diving.)
      - Is the artist or writer prominent in her or his field, with a substantial record of achievement and critical recognition as indicated by prior works, reviews of prior works, academic or professional positions, honors, and awards? Evidence of this accomplishment should be included in the proposal.
      - If in early career, does the artist or writer demonstrate exceptional promise in his or her field?

2. **Broader Impacts**

    In addition to the above:

    Does the proposal provide a concrete plan showing that, as a result of being in Antarctica, a significant body of work will reach a *significant audience,* as that term is generally understood in a specific discipline? "Significant audience" has no firm definition. Large and/or diverse audiences can be significant. Public lectures, shows at galleries, traveling exhibitions, articles in magazines, displays in museums, sculptures in an accessible place, films, or published books can be significant. A scholarly humanities assessment or a published collection of poems can be significant. It is incumbent on the artist to make the case in the proposal that the proposed audience is "significant" enough to merit USAP support.

3. **Operational feasibility**

    In addition to the above**:**

    The proposal must convince reviewers that it is necessary, not simply desirable, to visit Antarctica to produce the work described in the proposal. A project that is otherwise outstanding may not be selected if reviewers judge working in Antarctica to be unnecessary or if the USAP is incapable of supporting it. Operational feasibility includes resource availability, environmental protection and waste management provisions, and safety and health measures. If the proposal is ranked highly (see Section VI.B., Review and Selection Process), additional information about fieldwork will be solicited and reviewed. During this operational review process, specialists may suggest necessary changes to the proposed field plan.

B. Review and Selection Process

Proposals submitted in response to this program solicitation will be reviewed by Ad hoc Review and/or Panel Review.

Reviewers will be asked to evaluate proposals using two National Science Board approved merit review criteria and, if applicable, additional program specific criteria. A summary rating and accompanying narrative will generally be completed and submitted by each reviewer and/or panel. The Program Officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation.

After scientific, technical and programmatic review and consideration of appropriate factors, the NSF Program Officer recommends to the cognizant Division Director whether the proposal should be declined or recommended for award. NSF strives to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. Large or particularly complex proposals or proposals from new awardees may require additional review and processing time. The time interval begins on the deadline or target date, or receipt date, whichever is later. The interval ends when the Division Director acts upon the Program Officer's recommendation.

After programmatic approval has been obtained, the proposals recommended for funding will be forwarded to the Division of Grants and Agreements for review of business, financial, and policy implications. After an administrative review has occurred, Grants and Agreements Officers perform the processing and issuance of a grant or other agreement. Proposers are cautioned that only a Grants and Agreements Officer may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be inferred from technical or budgetary discussions with a NSF Program Officer. A Principal Investigator or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants and Agreements Officer does so at their own risk.

Once an award or declination decision has been made, Principal Investigators are provided feedback about their proposals. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers or any reviewer-identifying information, are sent to the Principal Investigator/Project Director by the Program Officer. In addition, the proposer will receive an explanation of the decision to award or decline funding.

VII. AWARD ADMINISTRATION INFORMATION

A. Notification of the Award

Notification of the award is made to *the submitting organization* by a Grants Officer in the Division of Grants and Agreements. Organizations whose proposals are declined will be advised as promptly as possible by the cognizant NSF Program administering the program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the Principal Investigator. (See Section VI.B. for additional information on the review process.)

B. Award Conditions

An NSF award consists of: (1) the award notice, which includes any special provisions applicable to the award and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the proposal referenced in the award notice; (4) the applicable award conditions, such as Grant General Conditions (GC-1)*; or Research Terms and Conditions* and (5) any announcement or other NSF issuance that may be incorporated by reference in the award notice. Cooperative agreements also are administered in accordance with NSF Cooperative Agreement Financial and Administrative Terms and Conditions (CA-FATC) and the applicable Programmatic Terms and Conditions. NSF awards are electronically signed by an NSF Grants and Agreements Officer and transmitted electronically to the organization via e-mail.

*These documents may be accessed electronically on NSF's Website at https://www.nsf.gov/awards/managing/award_conditions.jsp?org=NSF. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-8134 or by e-mail from nsfpubs@nsf.gov.

More comprehensive information on NSF Award Conditions and other important information on the administration of NSF awards is contained in the NSF *Proposal & Award Policies & Procedures Guide* (PAPPG) Chapter VII, available electronically on the NSF Website at https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.

Special Award Conditions:

1. Acknowledgement of USAP logistics support (ANT awards with fieldwork only): Projects receiving U.S. Antarctic Program support for fieldwork in the Antarctic shall include the following acknowledgement in publications resulting from the project (in addition to acknowledging NSF grant support as described in the NSF Proposal & Award Policies & Procedures Guide Chapter XI.E.4): "Logistical support for this project in Antarctica was provided by the U.S. National Science Foundation through the U.S. Antarctic Program".
2. Antarctic Conservation Act (ANT awards with fieldwork only): This award is subject to the Antarctic Conservation Act (ACA), as amended, 16 U.S.C. § 2401, et seq. Violations of the ACA may result in civil penalties up to approximately $28,000 per occurrence, imprisonment for up to one year, and, where appropriate, administrative sanctions up to and including debarment. Please refer to https://www.nsf.gov/geo/plr/antarct/aca/aca.jsp for general guidance.
3. Code of Conduct (ANT awards with fieldwork only): The Office of Polar Program's U.S. Antarctic Program (USAP) Code of Conduct alerts participants to the National Science Foundation's expectations for professional conduct and acceptable behavior while deployed in Antarctica (https://www.nsf.gov/geo/opp/documents/policy/AIL-POL_1000%2003%20Code%20of%20Conduct.pdf). Participants in research supported by the USAP are required to comply with this Code of Conduct. All USAP participants are required to acknowledge in writing, the receipt, acceptance, and full understanding of its terms and expectations. Violations may result in adverse actions or consequences to the individual including, but not limited to, removal from Antarctica (i.e., USAP stations, field camps, aircraft, or vessels), loss of grant, referral to the home organization for disciplinary action, and referral to law enforcement authorities for criminal prosecution, as appropriate. Violations of this Code of Conduct may be shared with current and future USAP or NSF Arctic program support contractors, federal agency partners, or grantee organizations.

C. Reporting Requirements

For all multi-year grants (including both standard and continuing grants), the Principal Investigator must submit an annual project report to the cognizant Program Officer no later than 90 days prior to the end of the current budget period. (Some programs or awards require submission of more frequent project reports). No later than 120 days following expiration of a grant, the PI also is required to submit a final project report, and a project outcomes report for the general public.

Failure to provide the required annual or final project reports, or the project outcomes report, will delay NSF review and processing of any future funding increments as well as any pending proposals for all identified PIs and co-PIs on a given award. PIs should examine the formats of the required reports in advance to assure availability of required data.

PIs are required to use NSF's electronic project-reporting system, available through Research.gov, for preparation and submission of annual and final project reports. Such reports provide information on accomplishments, project participants (individual and organizational), publications, and other specific products and impacts of the project. Submission of the report via Research.gov constitutes certification by the PI that the contents of the report are accurate and complete. The project outcomes report also must be prepared and submitted using Research.gov. This report serves as a brief summary, prepared specifically for the public, of the nature and outcomes of the project. This report will be posted on the NSF website exactly as it is submitted by the PI.

More comprehensive information on NSF Reporting Requirements and other important information on the administration of NSF awards is contained in the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) Chapter VII, available electronically on the NSF Website at https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.

VIII. AGENCY CONTACTS

Please note that the program contact information is current at the time of publishing. See program website for any updates to the points of contact.

General inquiries regarding this program should be made to:

- Elizabeth L. Rom, Program Director, W8132, telephone: (703) 292-7709, email: elrom@nsf.gov

For questions related to the use of FastLane or Research.gov, contact:

- FastLane and Research.gov Help Desk: 1-800-673-6188

  FastLane Help Desk e-mail: fastlane@nsf.gov.

  Research.gov Help Desk e-mail: rgov@nsf.gov

For questions relating to Grants.gov contact:

- Grants.gov Contact Center: If the Authorized Organizational Representatives (AOR) has not received a confirmation message from Grants.gov within 48 hours of submission of application, please contact via telephone: 1-800-518-4726; e-mail: support@grants.gov.

IX. OTHER INFORMATION

The NSF website provides the most comprehensive source of information on NSF Directorates (including contact information), programs and funding opportunities. Use of this website by potential proposers is strongly encouraged. In addition, "NSF Update" is an information-delivery system designed to keep potential proposers and other interested parties apprised of new NSF funding opportunities and publications, important changes in proposal and award policies and procedures, and upcoming NSF Grants Conferences. Subscribers are informed through e-mail or the user's Web browser each time new publications are issued that match their identified interests. "NSF Update" also is available on NSF's website.

Grants.gov provides an additional electronic capability to search for Federal government-wide grant opportunities. NSF funding opportunities may be accessed via this mechanism. Further information on Grants.gov may be obtained at https://www.grants.gov.

Other Related NSF Programs

Polar Media Program. The Foundation's Office of Legislative and Public Affairs conducts an annual competition to select television, radio, newspaper, and magazine reporters to visit and report on U.S. facilities in the Antarctic and the Arctic. Contact Peter West (pwest@nsf.gov) in the Office of Polar Programs to find out the specific requirements for and limitations on media visitors. Media visits, in general, are much shorter for example, than deployments under the Artists & Writers program.

The *Advancing Informal STEM Learning (AISL)* **program (**https://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf15593) seeks to: advance new approaches to and evidence-based understanding of the design and development of science, technology, engineering and mathematics (STEM) learning opportunities for the public in informal environments; provide multiple pathways for broadening access to and engagement in STEM learning experiences; and advance innovative research on and assessment of STEM learning in informal environments.

ABOUT THE NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) is an independent Federal agency created by the National Science Foundation Act of 1950, as amended (42 USC 1861-75). The Act states the purpose of the NSF is "to promote the progress of science; [and] to advance the national health, prosperity, and welfare by supporting research and education in all fields of science and engineering."

NSF funds research and education in most fields of science and engineering. It does this through grants and cooperative agreements to more than 2,000 colleges, universities, K-12 school systems, businesses, informal science organizations and other research organizations throughout the US. The Foundation accounts for about one-fourth of Federal support to academic institutions for basic research.

NSF receives approximately 55,000 proposals each year for research, education and training projects, of which approximately 11,000 are funded. In addition, the Foundation receives several thousand applications for graduate and postdoctoral fellowships. The agency operates no laboratories itself but does support National Research Centers, user facilities, certain oceanographic vessels and Arctic and Antarctic research stations. The Foundation also supports cooperative research between universities and industry, US participation in international scientific and engineering efforts, and educational activities at every academic level.

Facilitation Awards for Scientists and Engineers with Disabilities (FASED) provide funding for special assistance or equipment to enable persons with disabilities to work on NSF-supported projects. See the *NSF Proposal & Award Policies & Procedures Guide* Chapter II.E.6 for instructions regarding preparation of these types of proposals.

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Information Relay Service (FIRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation about NSF programs, employment or general information. TDD may be accessed at (703) 292-5090 and (800) 281-8749, FIRS at (800) 877-8339.

The National Science Foundation Information Center may be reached at (703) 292-5111.

The National Science Foundation promotes and advances scientific progress in the United States by competitively awarding grants and cooperative agreements for research and education in the sciences, mathematics, and engineering.

To get the latest information about program deadlines, to download copies of NSF publications, and to access abstracts of awards, visit the NSF Website at https://www.nsf.gov

- **Location:**   2415 Eisenhower Avenue, Alexandria, VA 22314

- **For General Information**   (703) 292-5111
  (NSF Information Center)**:**

- **TDD (for the hearing-impaired):**   (703) 292-5090

- **To Order Publications or Forms:**

    Send an e-mail to: nsfpubs@nsf.gov

    or telephone: (703) 292-7827

- **To Locate NSF Employees:**   (703) 292-5111

PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

The information requested on proposal forms and project reports is solicited under the authority of the National Science Foundation Act of 1950, as amended. The information on proposal forms will be used in connection with the selection of qualified proposals; and project reports submitted by awardees will be used for program evaluation and reporting within the Executive Branch and to Congress. The information requested may be disclosed to qualified reviewers and staff assistants as part of the proposal review process; to proposer institutions/grantees to provide or obtain data regarding the proposal review process, award decisions, or the administration of awards; to government contractors, experts, volunteers and researchers and educators as necessary to complete assigned work; to other government agencies or other entities needing information regarding applicants or nominees as part of a joint application review process, or in order to coordinate programs or policy; and to another Federal agency, court, or party in a court or Federal administrative proceeding if the government is a party. Information about Principal Investigators may be added to the Reviewer file and used to select potential candidates to serve as peer reviewers or advisory committee members. See System of Record Notices, NSF-50, "Principal Investigator/Proposal File and Associated Records," and NSF-51, "Reviewer/Proposal File and Associated Records." Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

An agency may not conduct or sponsor, and a person is not required to respond to, an information collection unless it displays a valid Office of Management and Budget (OMB) control number. The OMB control number for this collection is 3145-0058. Public reporting burden for this collection of information is estimated to average 120 hours per response, including the time for reviewing instructions. Send comments regarding the burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to:

Suzanne H. Plimpton
Reports Clearance Officer
Office of the General Counsel
National Science Foundation
Alexandria, VA 22314

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