Ocean Sciences Postdoctoral Research Fellowships (OCE-PRF)

PROGRAM SOLICITATION
NSF 21-538

REPLACES DOCUMENT(S):
NSF 14-607

Full Proposal Target Date(s):
March 03, 2021
November 12, 2021
Second Friday in November, Annually Thereafter

IMPORTANT INFORMATION AND REVISION NOTES
The solicitation has been updated to remove Research Tracks and to allow for grant administration by the host organization. The proposal must be submitted by the Fellowship candidate. If an award is recommended, the proposal will be transferred to the proposed primary host organization where the postdoctoral Fellow will be named as the project's PI. The award will be issued to and administered by the primary host organization.

Any proposal submitted in response to this solicitation should be submitted in accordance with the revised NSF Proposal & Award Policies & Procedures Guide (PAPPG) (NSF 20-1), which is effective for proposals submitted, or due, on or after June 1, 2020.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:
Ocean Sciences Postdoctoral Research Fellowships (OCE-PRF)

Synopsis of Program:
The Division of Ocean Sciences (OCE) offers postdoctoral research fellowships (PRF) to provide opportunities for scientists early in their careers to work within and across traditional disciplinary lines, develop partnerships, and avail themselves of unique research resources, sites and facilities. The fellowship program is intended to provide beginning investigators of significant potential with experiences that will establish them in positions of leadership in the scientific community. During tenure, Fellows affiliate with a host research organization(s) and conduct research on topics supported by OCE. Fellowships will include participation in a professional development program that emphasizes development of mentoring skills and that coordinates the involvement of Fellows in conferences and activities that are focused on increasing the engagement of underrepresented groups in science, technology, engineering, and mathematics (STEM). Applicants who are women, veterans, persons with disabilities, and underrepresented minorities in STEM, or who have attended community colleges and minority-serving institutions (e.g. Historically Black Colleges and Universities, Tribal Colleges and Universities, Hispanic Serving Institutions, Alaska Native Serving Institutions, and Hawaiian Native and Pacific Islander Serving Institutions) are especially encouraged to apply.

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, telephone: (703) 292-7709, email: elrom@nsf.gov
- Henrietta N. Edmonds, telephone: (703) 292-7427, email: hedmonds@nsf.gov
- Joaquin Martinez Martinez, telephone: (703) 292-8580, email: jmartine@nsf.gov
- Daniel C. McCorkle, telephone: (703) 292-4543, email: dmccorkl@nsf.gov
- Dana K. Savidge, telephone: (703) 292-4897, email: dsavidge@nsf.gov
Applicable Catalog of Federal Domestic Assistance (CFDA) Number(s):

- 47.050 --- Geosciences

Award Information

Anticipated Type of Award: Standard Grant or Continuing Grant

Estimated Number of Awards: 15

Total of approximately 15 awards each year are anticipated, subject to availability of funds and the quality of proposals received. Each award has a two-year duration.

Anticipated Funding Amount: $4,000,000

Subject to availability of funds and the quality of proposals received.

Eligibility Information

Who May Submit Proposals:

Proposals may only be submitted by the following:

- Fellowship proposals must be submitted directly by the Fellowship candidate to NSF. Each Fellowship candidate must identify a sponsoring scientist(s) and must affiliate with a U.S. host organization. Appropriate primary host organizations include:
  - Institutions of Higher Education (IHEs) Two-and four-year IHEs (including community colleges) accredited in, and having a campus located in the U.S., acting on behalf of their faculty members.
  - Non-profit, Non-academic organizations -Independent museums, observatories, research laboratories, professional societies and similar organizations located in the U.S. that are directly associated with educational or research activities.
  - For-profit research organizations – U.S. commercial organizations, especially small businesses with strong capabilities in scientific or engineering research or education.

Who May Serve as PI:

To be eligible to submit a proposal to the OCE-PRF Program, an individual must, as of the full proposal target date, meet all the following criteria:

- Be a U.S. citizen, national, or permanent resident (i.e., have a "green card") at the time the proposal is submitted;
- Have earned the doctoral degree (PhD), or expect to have earned the doctoral degree prior to the required start date of the fellowship;
- Not have worked for more than a total of 24 full-time-equivalent months in positions that require the doctoral degree;
- Present a project plan that falls within the purview of NSF's Division of Ocean Sciences oceanographic research priorities; and
- Not have submitted concurrently the same project to another program.

Applicants are encouraged to expand the network of collaborators and implement the fellowship at an organization new to the applicant. However, applicants who choose to carry out the postdoctoral fellowship at the organization where they received their PhD or their current organization at the time of submission must: (1) present a strong justification and clearly explain the benefits of this choice to their research and educational goals; and (2) have two scientific mentors, one at the hosting organization and a second mentor at a different organization who is a new collaborator with the applicant.

Proposals that fail to meet the above eligibility requirements will be returned without review.

Limit on Number of Proposals per Organization:

There are no restrictions or limits.

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

Individuals may submit only one proposal per year.

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- Letters of Intent: Not required
- Preliminary Proposal Submission: Not required
- Full Proposals:
B. Budgetary Information

- Cost Sharing Requirements:
  Inclusion of voluntary committed cost sharing is prohibited.

- Indirect Cost (F&A) Limitations:
  Not Applicable

- Other Budgetary Limitations:
  Other budgetary limitations apply. Please see the full text of this solicitation for further information.

C. Due Dates

- Full Proposal Target Date(s):
  March 03, 2021
  November 12, 2021
  Second Friday in November, 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

The Division of Ocean Sciences (OCE) offers postdoctoral research fellowships (PRF) to provide opportunities for scientists early in their careers to work within and across traditional disciplinary lines, develop partnerships, and avail themselves of unique research resources, sites and facilities. The fellowship program is intended to provide beginning investigators of significant potential with experiences that will establish them in positions of leadership in the scientific community.
During tenure, Fellows affiliate with an appropriate research organization(s) and conduct research on topics supported by OCE. Fellowships will include participation in a professional development program that emphasizes development of mentoring skills and that coordinates the involvement of Fellows in conferences and activities that are focused on increasing the engagement of underrepresented groups in science, technology, engineering, and mathematics (STEM). Applicants who are women, veterans, persons with disabilities, and underrepresented minorities in STEM, or who have attended community colleges and minority-serving institutions (e.g. Historically Black Colleges and Universities, Tribal Colleges and Universities, Hispanic Serving Institutions, Alaska Native Serving Institutions, and Hawaiian Native and Pacific Islander Serving Institutions) are especially encouraged to apply.

The OCE PRF emphasizes strong scientific merit in a field of science supported by the Division of Ocean Sciences (see https://www.nsf.gov/div/index.jsp?div=OCE) and requires letter(s) of support from the identified mentor(s). The purview of OCE includes a diversity of disciplinary and cross-disciplinary areas. Projects that make use of data and samples from OCE-supported data and sample repositories are encouraged. Examples of open data facilities and repositories are the Ocean Observatories Initiative (OOI), the Biological and Chemical Oceanography Data Management Office (BCO-DMO), and the Marine Geoscience Data System (MGDS) and EarthChem (both hosted by the Interdisciplinary Earth Data Alliance, IEDA). Sample repositories include those for the International Ocean Discovery Program and OCE-supported deep sea sample repositories.

The National Science Foundation is charged with ensuring the vitality of the nation's scientific and technological enterprise. OCE offers postdoctoral research fellowships intended to increase the number of scientists from under-represented groups pursuing research careers in the ocean sciences.

II. PROGRAM DESCRIPTION

A. Appropriateness for OCE Priorities

Fellowship projects must fall within the purview of OCE, which includes a diversity of disciplinary and cross-disciplinary areas. OCE programs include Biological Oceanography, Chemical Oceanography, Physical Oceanography, Marine Geology and Geophysics, and Ocean Science and Technology. All proposals must include an ocean science research effort; proposals that are solely focused on education will not be considered. Fellowship awards are limited to the funding levels indicated and do not allow for additional NSF facility support, such as ship time requested through the University-National Oceanographic Laboratories System’s (UNOLS) Shiptime Request System. Applicants are strongly encouraged to contact the Program Director in their area of science (see https://www.nsf.gov/div/index.jsp?div=OCE) discuss the appropriateness of their research for funding.

B. Host Organizations

The fellow must affiliate with a primary host organization. Appropriate primary organizations include U.S. IHEs, non-profit, non-academic organizations, or for-profit research organizations that are eligible to receive NSF funding. Federally Funded Research and Development Centers (FFRDCs) and NSF-funded FFRDCs, are ineligible as primary host organizations. Government agencies and national centers, facilities or institutes funded by other federal agencies, such as NASA, NOAA, EPA or the U.S. Department of Energy, and foreign organizations are also ineligible as primary host organizations. Multiple host organizations are permitted, and may be particularly appropriate to pursue interdisciplinary work, collaborative opportunities, and activities related to broadening participation. Regardless of the number of host organizations proposed, a primary U.S. host organization, which will receive and administer the award, must be identified.

In general, NSF expects that the fellowship will support work at an organization(s) other than the Fellow’s graduate institution or organization of current affiliation because the Fellowship objectives include broadening the perspectives and experiences of the Fellows and promoting interdisciplinary research careers. Consequently, candidates proposing to be hosted by their graduate/current organization must present strong justification and must clearly explain the benefits of this choice to their research and to their professional development goals. Such proposals will be evaluated in the context of the potential benefits of this choice versus benefits that might be expected from expanding professional contacts and diversifying professional experience at a new organization.

Documentation required from host organizations is described in Section V below. It is important that the primary host organization’s letter(s) specifically acknowledge that the organization will accept responsibility for administering the award and that the Fellow will be named as the PI on the award and receive salary and benefits as an organizational employee.

C. Sponsoring Scientist(s)

In addition to affiliation with a host organization(s), the candidate must identify a sponsoring scientist(s) who will provide mentoring and guidance for the research and broader fellowship goals. The sponsoring scientist(s) must provide a letter of collaboration, as described in Section V below. The support of the sponsoring scientist(s) and their plan for mentoring the Fellow will be part of the evaluation of the proposal.

If more than one sponsor is proposed, one must be named lead sponsor and the roles of the other sponsors must be clearly stated in the project description. The candidate is responsible for making all arrangements with the host organization(s) and sponsoring scientist(s).

III. AWARD INFORMATION

Duration and Tenure: Up to 24 full-time-equivalent months of support may be requested. The March 3, 2021 target date is for Fellowships that begin between July 1 to December 1, 2021. The November 12, 2021 target dates are for Fellowships that begin between July 1 and December 1, 2022. For target dates beyond 2021, Fellows must begin their Fellowship between July 1 to December 1 in the year following the submission target date.

Within the fellowship period, one month per year of fellowship duration may be used for paid leave, including parental or family leave. The paid leave cannot be used to increase the level of NSF support beyond the duration of the fellowship. NSF enables career-life balance through a variety of mechanisms. For more information, please see https://www.nsf.gov/career-life-balance/.

Candidates selected to receive fellowships will be contacted by NSF and asked to provide additional information, such as forms required for a pre-award transfer to the initial (primary) host organization. Successful candidates who have not completed the PhD at the time of proposal submission must provide certification of the completion of all PhD degree requirements before the start date of the award. Normally fellowships will be held at the primary host organization specified in the proposal, but under certain circumstances and with suitable justification, fellows may transfer the award during the tenure of the fellowship to a new organization upon approval by NSF.
Fellowships are not renewable and are subject to availability of funds.

During the period of the fellowship, no additional appointment or fellowship may be held without prior permission of the cognizant NSF program officer.

If a Fellow chooses to accept employment (i.e. a tenure-track position) during the first year of the Fellowship, the fellowship award will be terminated upon the start of the new position. In such cases, the primary host organization is responsible for initiating procedures for a termination by mutual agreement in accordance with Chapter XII of the NSF PAPPG. Fellows are encouraged to consult with the OCE PRF program officer if they choose to accept a tenure-track position during the second year of the Fellowship.

Salary and Allowances:

The annual fellowship amount of $79,000 in Year 1 and $81,000 in Year 2 consists of two types of direct costs:

- A $64,000 salary in Year 1 and $66,000 in Year 2; and
- Up to $15,000 a year in Year 1 and Year 2 to cover expenses directly related to the conduct of the proposed research and professional development goals, including but not limited to, materials and supplies, equipment, computing resources, access to databases, domestic and international travel, publication charges, and subscription fees.

Fellowship budgets can be increased to include a Facilitation Award for Scientists and Engineers with Disabilities (FASED). When requesting FASED funding, applicants should contact the OCE-PRF program officer prior to applying.

OCE would like to encourage a close partnership between the Fellow and the primary host organization, allow the Fellow access to organizational benefits such as healthcare, and decrease the burden of grant management that is placed on the Fellow when an award is made directly to an individual. Therefore, OCE will review proposals as submitted by individuals, but all awards will be made to the primary host organization, using the Pre-award Transfer Process, after the review process is complete. Budgets and award documents will be adjusted to include organizational fringe benefits and overhead costs as part of the Pre-award Transfer Process described below. The Fellow must be listed as the project PI.

Pre-Award Transfer Process: To process the Pre-award Proposal Transfer, the Fellow, acting as the original proposing organization's Authorized Organizational Representative (AOR), must submit to the cognizant OCE PRF Program Officer (PO) an e-mail concurring with the transfer of the proposal to the primary host organization. This documentation will be added to the files by the PO as correspondence associated with the proposal. The cognizant PO then will request that the host organization's Sponsored Projects Office submit to NSF a revised:

- Cover Sheet (with the Fellow named as the PI) and Certification pages signed by the AOR; and
- Budget and Budget Justification. The Fellow must be named as the PI and receive a monthly or bi-weekly salary equal to $64,000 in Year 1 and $66,000 in Year 2 plus organizational employee benefits. The primary host organization's budget is expected to include fringe benefit costs for the Fellow. The $15,000 per year for research costs may be distributed in the budget to cover other direct research costs, including but not limited to, materials and supplies, equipment, computing resources, access to databases, domestic and international travel, publication charges, and subscription fees. The applicable U.S. Federally negotiated indirect cost rate(s) must be used in computing indirect costs (F&A). Organizations that do not have a current negotiated rate agreement with a cognizant Federal agency may request indirect cost recovery up to the de minimis rate of 10% of modified total direct costs.

The PO will update the proposal system with the new organizational and budget data so that processing of the proposal award to the primary host organization can proceed. The Fellow's original Cover Sheet and Certification pages will not be modified and will be retained for the historical record of how the proposal was submitted to NSF.

IV. ELIGIBILITY INFORMATION

Who May Submit Proposals:

Proposals may only be submitted by the following:

- Fellowship proposals must be submitted directly by the Fellowship candidate to NSF. Each Fellowship candidate must identify a sponsoring scientist(s) and must affiliate with a U.S. host organization. Appropriate primary host organizations include:
  - Institutions of Higher Education (IHEs) Two-and four-year IHEs (including community colleges) accredited in, and having a campus located in the U.S., acting on behalf of their faculty members.
  - Non-profit, Non-academic organizations -Independent museums, observatories, research laboratories, professional societies and similar organizations located in the U.S. that are directly associated with educational or research activities.
  - For-profit research organizations – U.S. commercial organizations, especially small businesses with strong capabilities in scientific or engineering research or education.

Who May Serve as PI:

To be eligible to submit a proposal to the OCE-PRF Program, an individual must, as of the full proposal target date, meet all the following criteria:

- Be a U.S. citizen, national, or permanent resident (i.e., have a "green card") at the time the proposal is submitted;
- Have earned the doctoral degree (PhD), or expect to have earned the doctoral degree prior to the required start date of the fellowship;
- Not have worked for more than a total of 24 full-time-equivalent months in positions that require the doctoral degree;
- Present a project plan that falls within the purview of NSF's Division of Ocean Sciences oceanographic research priorities; and
- Not have submitted concurrently the same project to another program.

Applicants are encouraged to expand the network of collaborators and implement the fellowship at an organization new to the applicant. However, applicants who choose to carry out the postdoctoral fellowship at the organization where they received their PhD or their current organization at the time of submission must: (1) present a strong justification and clearly explain the benefits of this choice to their research
and educational goals; and (2) have two scientific mentors, one at the hosting organization and a second mentor at a different organization who is a new collaborator with the applicant.

Proposals that fail to meet the above eligibility requirements will be returned without review.

Limit on Number of Proposals per Organization:
There are no restrictions or limits.

Limit on Number of Proposals per PI or Co-PI: 1
Individuals may submit only one proposal per year.

Additional Eligibility Info:
Each Fellowship candidate must identify a sponsoring scientist(s) and must affiliate with a U.S. host organization. Appropriate primary host organizations include: Appropriate primary host organizations include:

- Institutions of Higher Education (IHEs) Two-and four-year IHEs (including community colleges) accredited in, and having a campus located in the U.S., acting on behalf of their faculty members.
- Non-profit, Non-academic organizations -Independent museums, observatories, research laboratories, professional societies and similar organizations located in the U.S. that are directly associated with educational or research activities.
- For-profit research organizations – U.S. commercial organizations, especially small businesses with strong capabilities in scientific or engineering research or education.

FFRDCs, including NSF-funded FFRDCs, are ineligible as primary host organizations. Government agencies and national centers, facilities or institutes funded by other federal agencies, such as NASA, NOAA, EPA or the U.S. Department of Energy, and foreign organizations are also ineligible as primary host organizations.

If an award is recommended, the proposal will be transferred to the proposed primary host organization where the postdoctoral Fellow will be named as the project's PI. The award will be issued to and administered by the primary host organization. See Section III for additional information about the Pre-Award Transfer Process.

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) 292-8134 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) 292-8134 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.

Registration for Fellowship Candidates:

Before starting proposal preparation, the proposer must be registered as an individual. Proposers must register as a new individual in Research.gov and/or as a new individual in Grants.gov. Fellowship proposals must be submitted by the Fellowship proposer, not by the proposer's current or proposed primary organizational host Sponsored Projects Office (SPO). At the proposal submission stage, the proposer serves as his/her own SPO and Authorized Organizational Representative (AOR) for the purposes of any research administration functions in FastLane or Grants.gov. Submission through NSF FastLane is strongly recommended because these are Fellowships with unique requirements. If the proposer elects to submit through Grants.gov, notification that ALL required documents have been successfully uploaded into FastLane by the deadline date must be affirm.

Proposal Preparation:

A full proposal consists of many parts and requires input from the Fellowship proposer, the proposed sponsoring scientist(s), and the proposed primary host organization. Partially completed proposals may be saved in FastLane or Grants.gov for future completion and submission.

Proposals must include all of the following items. In cases where requirements given in this document differ from those given in the PAPPG or Grants.gov Application Guide, this solicitation takes precedence.
1. NSF Cover Sheet. FastLane Users: Select the OCE-PRF program solicitation number shown at the beginning of this solicitation from the drop-down menu. Grants.gov Users: The program solicitation number will be pre-populated by Grants.gov on the NSF Grant Application Cover Page. The title must start with “OCE-PRF,” followed by a descriptive title of the research. If the project will involve international partners, check the “International Cooperative Activities” box and identify the country/countries involved.

2. Information about Principal Investigator/Project Director.
   - Co-Pls - No co-Pls are permitted on the Cover Sheet.

3. Table of Contents. This form will be automatically generated by FastLane or Grants.gov.

4. Project Summary, not more than one page in length, that includes an overview of the project and separate statements that clearly address the intellectual merit and broader impacts of the proposed activity. In addition, the Project Summary must also identify (in the overview section):
   - Proposed sponsoring scientist(s) and
   - Proposed host organization(s).

5. Project Description, not to exceed 10 single-spaced pages (including any figures, pictures and tables), which must include the following:
   - Research plan:
     - Justification for the choice of the host organization(s) and sponsoring scientist(s) that relates the proposed fellowship work to available expertise, facilities and resources;
     - Statement about the array of expected broader impacts, including a specific statement of commitment to broadening participation in science;
     - Description of the candidate's long-term career goals and the role of this postdoctoral experience in achieving them; and
     - Description of Eligibility for Fellowship - including identification of U.S. citizenship or permanent resident status, and the month and year when PhD was (or is expected to be) received. If more than 24 months have elapsed between the date that the doctoral degree was conferred and the OCE-PRF proposal target date, include the following statement: "I affirm that I have not worked for more than 24 full-time-equivalent months in positions for which the doctoral degree was a requirement." Do not include personal information such as birth date or place of birth.

Special certifications and permits may be required when projects involve human subjects, vertebrate animals, endangered species, hazardous materials, collecting in foreign countries, or other elements. The research plan should provide general information on these matters and address feasibility. If selected, candidates must submit required documentation to the NSF program officer before an award can be made.

6. References cited. See guidance contained in the PAPPG.


8. NSF Budget and Budget Justification. Enter the Fellow's name and salary amounts of $64K in Year 1 and $66K in Year 2 on Line A.1 Senior Personnel, and enter the $15K per year on Line G.6 Other Direct Costs. Co-Pls and other senior personnel are not allowed in OCE PRF proposals.

A budget justification of no more than two pages must list and justify estimated expenditures under the annual fellowship allowance.

Should a proposal be recommended for award, the primary host organization will be required to submit a revised budget and budget justification that allocates the proposed direct costs to the appropriate NSF budget line item(s). Organizational fringe benefits and indirect costs will also be added to the budget prior to award in accordance with the guidance provided in Section III above.

9. Current and Pending Support. Include current support for research and training. Under pending support, include this proposal, as well as pending and planned applications to other fellowship or research programs. The project submitted to this solicitation should not be concurrently under review by another program. This information is to be submitted only for the applicant; not for the sponsoring scientist(s).

10. Facilities, Equipment and Other Resources, as applicable. Insert text or upload a document that states: "See Letter(s) of Collaboration from the prospective host organization(s)."

The following must be submitted as Supplementary Documentation:

11. Abstract of the candidate's PhD thesis (limited to one page).

12. Data Management Plan, not to exceed two pages, that describes plans for data management and sharing of the products of research, or asserts the absence of the need for such plans. See OCE guidelines at https://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf17037.

13. Letter(s) of Collaboration from the prospective host organization(s), signed by the department chair (or equivalent) and the Sponsored Research Office, certifying that adequate facilities and support will be provided for the fellow to accommodate the proposed activities and certifying plans to appoint the Fellow as project PI if an award is recommended. Should the candidate propose to hold the fellowship concurrently or sequentially at more than one organization during the two-year tenure, letters of collaboration must be provided from all organizations. The primary host organization’s letter must specifically acknowledge that 1) the organization is aware that award recommendations will require a pre-award transfer of the proposal to the primary host organization, 2) the organization will submit all documents required for a pre-award transfer, including a new cover page that lists the Fellow as the PI and a budget that adds funding for organizational fringe and overhead costs to support the Fellow’s benefits, and 3) the organization will administer the award to provide the Fellow’s salary, benefits and proposed research activities. If a host organization is not the primary host organization and if the organization is eligible to receive NSF funding, the letter must acknowledge that the organization is willing to administer the award if the Fellow transfers to the organization. Awards cannot be transferred to foreign organizations or government agencies. If the host organization has not received prior NSF funding, the organization will need to submit “New Awardee” documentation, which will be subject to NSF’s evaluation before an award can be made or transferred.

A signed letter(s), not to exceed two pages each and uploaded to the Supplementary Documents, from the proposed sponsoring scientist(s) certifying that the fellowship proposal has been read and approved, and including discussion of:
   - The role the proposed scientific mentor(s) will play in the professional development of the fellow; and
   - The opportunities for research and professional development at the host organization that will be of particular benefit to the fellow.

15. A Biographical Sketch(es), not to exceed two pages and conforming to the NSF Proposal & Award Policies & Procedures Guide (PAPPG), of the sponsoring
16. For individuals who have not completed the PhD at the time of proposal submission, a signed letter from the graduate advisor or Dean confirming the expectation that the candidate will receive the degree within 5 months of the full proposal target date.

Letters of recommendation will not be considered. Letters from the proposed host organization(s), sponsoring scientist(s) and, as needed, the candidate’s current graduate advisor, should not reflect a letter of recommendation and should make no subjective statements regarding either the candidate or their proposed activities. Signed letters should be scanned into Portable Document Format (PDF) and uploaded as supplementary documentation.

B. Budgetary Information

Cost Sharing:

Inclusion of voluntary committed cost sharing is prohibited.

Other Budgetary Limitations:

Other budgetary limitations apply. Please see the full text of this solicitation for further information.

C. Due Dates

- Full Proposal Target Date(s):
  - March 03, 2021
  - November 12, 2021
  - Second Friday in November, Annually Thereafter

D. FastLane/Grants.gov Requirements

For Proposals Submitted Via FastLane:

Before starting proposal preparation, the proposer must register as a new individual in Research.gov: https://www.research.gov/accountmgmt/assets/welcomeunaffiliated.html. Detailed instructions regarding the technical aspects of preparation and submission via FastLane are available at: https://www.fastlane.nsf.gov/a1/newstan.htm. For FastLane user support, call the FastLane Help Desk at 1-800-673-6188 or e-mail fastlane@nsf.gov. The FastLane Help Desk answers general technical questions related to the use of the FastLane system. 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.

Submitting the Proposal: Fellowship proposals must be submitted by the individual, not by the individual's current or proposed organizational Sponsored Projects Office (SPO). The individual serves as his/her own SPO and Authorized Organizational Representative (AOR) for the purposes of any research administration functions in FastLane. As such, the proposer, serving as the SPO/AOR must electronically sign and submit the proposal using the Sign and Submit button in FastLane. The individual is signing on his/her own behalf and by signing the proposal NSF is in no way inferring that the individual has assumed organizational status. Further instructions regarding this process are available on the FastLane Website at: https://www.fastlane.nsf.gov/fastlane.jsp.

For Proposals Submitted Via Grants.gov:

Before starting proposal preparation, the proposer must register as a new individual in Research.gov and Grants.gov. To register as a new individual in Research.gov go to: https://www.research.gov/accountmgmt/assets/welcomeunaffiliated.html and to register in Grants.gov go to: https://www.grants.gov/web/grants/applicants/registration.html. Once registered, the proposer can then apply for grant opportunities which indicate “Individual” eligibility 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 provides additional technical guidance regarding 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: Fellowship proposals must be submitted by the individual, not by the individual's current or proposed organizational Sponsored Projects Office (SPO). Once all documents have been completed, the individual must submit the proposal to Grants.gov and verify the desired funding opportunity and agency to which the proposal is submitted. The individual 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 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 applicant 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
The programs, projects, and activities it considers and supports. 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 NSF's mission calls for the broadening of opportunities and expanding participation of groups, institutions, and geographic regions that are underrepresented in (STEM) workforce by investing in building the knowledge that informs improvements in STEM teaching and learning.

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)?

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/.
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

In addition to the standard NSF review criteria for 1) Intellectual Merit and 2) Broader Impacts, the following review criteria will be used in evaluation of the fellowship proposals:

- Qualifications of the candidate and their potential for continued professional growth and leadership in the field;
- Previous work and/or commitment to efforts to broaden participation in science;
- Suitability of the sponsoring scientist(s) and available facilities, equipment and other resources.

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 are also 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.


Special Award Conditions:

Additional award conditions apply.

Co-PIs and other senior personnel are not allowed in OCE PRF proposals.

A Fellow may transfer to another eligible host organization at any time during the award period. The primary host organization will facilitate the transfer of the award using NSF's standard PI Transfer process. Before such a transfer will be approved by NSF, the Fellow's new organization must supply to the cognizant NSF Program Officer documentation required of a primary host organization that is detailed in Section V of this solicitation. Transfer of an award issued under this solicitation to a substitute PI is not permissible, and the awardee cannot terminate the award without NSF's concurrence.

If a Fellow chooses to accept employment (i.e. a tenure-track position) during the first year of the Fellowship, the fellowship award will be terminated upon the start of the new position. In such cases, the primary host organization is responsible for initiating procedures for a termination by mutual agreement in accordance with Chapter XII of the NSF PAPPG.

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.


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, telephone: (703) 292-7709, email: elrom@nsf.gov
- Henrietta N. Edmonds, telephone: (703) 292-7427, email: hedmonds@nsf.gov
- Joaquin Martinez Martinez, telephone: (703) 292-8580, email: jmartine@nsf.gov
- Daniel C. McCorkle, telephone: (703) 292-4543, email: dmcorkl@nsf.gov
- Dana K. Savidge, telephone: (703) 292-4897, email: dsavidge@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.

For questions about the OCE Postdoctoral Fellowship program, please send a message to: OCE_PRF@nsf.gov.

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

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 (NSF Information Center): (703) 292-5111 |
| TDD (for the hearing-impaired): (703) 292-5090 |
| To Order Publications or Forms: Send an e-mail to: nsfpubs@nsf.gov or telephone: (703) 292-8134 |
| 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