Ocean Observatories Initiative Facility Board (OOIFB) Administrative Support Office

PROGRAM SOLICITATION
NSF 18-527

National Science Foundation

Directorate for Geosciences
    Division of Ocean Sciences

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

    March 27, 2018

IMPORTANT INFORMATION AND REVISION NOTES

Any proposal submitted in response to this solicitation should be submitted in accordance with the revised *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) (NSF 18-1), which is effective for proposals submitted, or due, on or after January 29, 2018.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

    Ocean Observatories Initiative Facility Board (OOIFB) Administrative Support Office

Synopsis of Program:

    The OOI is a large scale ocean observing system constructed and deployed under NSF sponsorship and oversight as a Major Research Equipment and Facilities Construction (MREFC) Project. The system includes an integrated network of cabled and uncabled arrays of instrumentation, distributed in various coastal and global ocean locations, to facilitate Ocean Science research. The OOI is managed and operated under a Cooperative Agreement that is currently being re-competed.

    An Ocean Observatories Initiative Facility Board (OOIFB) has been established by the NSF to provide independent, community-based input and guidance to the NSF and the OOI operator relating to OOI operations and maintenance. This solicitation invites proposals for an Administrative Support Office to assist the OOIFB in carrying out its responsibilities to the OOI Program.

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.

- Lisa M. Clough, telephone: (703) 292-4746, email: lclough@nsf.gov

- Bauke Houtman, telephone: (703) 292-7704, email: bhoutman@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: 1

Anticipated Funding Amount: $3,000,000

$3 million total for five years at $600,000 per year. Amount is subject to availability of funds.

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:

Restricted to individuals who are not serving as PI/Co-PI for active or pending OOI Operations and Maintenance Awards or sub-Awards

Limit on Number of Proposals per Organization:

There are no restrictions or limits.

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

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:**

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

C. Due Dates

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

  March 27, 2018

Proposal Review Information Criteria

Merit Review Criteria:

National Science Board approved criteria. Additional merit review considerations 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:

Additional reporting requirements apply. Please see the full text of this solicitation for further information.

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I. INTRODUCTION

The National Science Foundation (NSF) is authorized by the National Science Act of 1950, as amended, to initiate and support basic and applied research and programs to strengthen scientific research potential. To achieve these goals, NSF supports facilities that provide research capabilities in various scientific disciplines. One such facility, the Ocean Observatories Initiative (OOI), provides services and infrastructure to support research and education in the Ocean Sciences.

The OOI consists of an integrated network of cabled and uncabled arrays of instrumentation distributed in various coastal and global ocean locations. Data flow is enabled by an integrated system of hardware and software ("cyberinfrastructure") that receives, processes, and broadly distributes measurements from over 800 instruments in the fixed and mobile locations comprising the observatory. The OOI is designed to accommodate new instruments to support future work proposed by the user community.

This infrastructure facilitates interdisciplinary investigation of short-term meteorological, tectonic, volcanic, geological, geophysical and ecological events, as well as long-term trends in ocean circulation patterns, climate change, ocean acidity, geophysical events, and ecosystems. NSF is in the process of re-competing a new Cooperative Agreement (CA) for OOI Management and Operation (https://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf17524) which would replace the expiring CA. This effort is well underway with an award anticipated in late calendar year 2018.

NSF has also established an independent and robust advisory structure to serve the needs of OOI operation and maintenance, engage and nurture the research community, and to represent and encourage OOI-based science to the national and international community at large. Initial membership of the Ocean Observatories Initiative Facility Board (OOIFB) was appointed following the release of a Dear Colleague Letter (NSF 17-034) by NSF's Division of Ocean Sciences. Subsequent appointments will be made by the OOIFB subject to NSF approval.

This solicitation seeks proposals from organizations that wish to be considered for the Administrative Support Office to assist the OOIFB in carrying out its responsibilities as described herein and in the Ocean Observatories Initiative Facility Board Terms of Reference (https://www.nsf.gov/geo/oce/programs/ooi/ooifb-tor.jsp). The duration of the award is intended to cover a five-year period.

II. PROGRAM DESCRIPTION

A. **Background**

An Ocean Observatories Initiative Facility Board (OOIFB) has been established by a separate NSF action to provide independent input and guidance concerning OOI operations. The OOIFB includes seven non-conflicted members of the oceanographic community, one of whom serves as Chair. The Facility Board includes two representatives from the OOI Operator in addition to the non-conflicted scientists. Meetings of the OOIFB convene annually as a minimum and more frequently as required.

Key responsibilities of the OOIFB are:

- Having the leadership role in community oversight of the OOI Science Plan(http://oceanleadership.org/files/OOI_Science_Plan.pdf) as further amplified in the document titled "Ocean Observatories Initiative (OOI) Scientific Objectives and Network Design: A Closer Look" (http://oceanleadership.org/files/Science_Prospectus_2007-10-10_lowres_0.pdf), including Appendices A-1 through A-10.
  - Annually examining accomplishments of the OOI Operator, in order to provide guidance as to the contributions of the Annual Work Plans (AWPs) to the progress of the OOI Science Plan.
  - Via workshops, community meetings, and/or other mechanisms, stimulating and engaging the user community in keeping the accomplishments of the OOI at the cutting edge of scientific inquiry and technological innovation.
- Serving as the prime scientific and technical conduit between the oceanographic community, NSF, and the OOI Operator.
  - Developing and implementing strategies to expand scientific and public awareness of the unique scientific and technological opportunities of the OOI, and ensuring that the oceanographic community is kept informed of developments in the OOI.
  - Identifying existing and potential end-user communities, their needs for data and meta-data information from the OOI, and providing guidance on the OOI's effectiveness in disseminating this information to end-user communities and the general public.
- Helping to identify collaborative relationships with potential governmental, industrial, educational, and international partners in the OOI, where appropriate.
- Ensuring fair and consistent access to the OOI by all sectors of the user community.
- Monitoring community adherence to applicable NSF policies for data collection, sample archiving, etc. as pertaining to OOI activities.
- Monitoring the appropriateness of existing and/or facilitating the evolution of performance standards for hardware and cyberinfrastructure, and in doing so addressing issues such as short- and long term instrument calibration, incorporation of novel technologies, sampling, expansion of technological upgrades, etc.
- Establishing committees as required for the purpose of obtaining in-depth assessments of highly specialized aspects of OOI components and operations.

B. **Statement of Work**

The **OOIFB Administrative Support Office** will broadly facilitate activities necessary for the OOIFB to successfully accomplish its general purpose of providing independent input and guidance with respect to management and operation of the OOI. The Administrative Support Office will provide the management structure and resources to seamlessly enable the OOIFB and its committees to carry out the mandate as described herein and in the OOIFB Terms of Reference (https://www.nsf.gov/geo/oce/programs/ooi/ooifb-tor.jsp). Specific responsibilities of the prospective Awardee will include:

- Coordinating logistics and travel arrangements needed to schedule and conduct meetings of the OOIFB and its associated committees.
- Recording the minutes of each meeting and issuing publicly available versions within one month of each meeting's occurrence.
- Coordinating and supporting workshops and other community engagement activities requested by the OOIFB , including those separately funded.
- Assisting the OOIFB in preparing reports summarizing actions, findings and recommendations resulting from OOI community-based workshops.
- Providing other assistance as determined by the OOIFB Chair needed to successfully execute OOIFB responsibilities defined in the Terms of Reference.
- Supporting salary requirements of the OOIFB Chair for an interval of one month per year during the period of performance.
- Establishing and maintaining an internet website that disseminates information to the OOI community and general public concerning ongoing activities, policies, planning and accomplishments of the OOIFB.
- Providing Annual Work Plans and the associated costs to NSF to carry out activities of the OOIFB Administrative Support Office.
- Initiating, managing, and overseeing the funding allocations required to support the OOIFB.
- Providing annual reporting of OOIFB Administrative Support Office status in terms of tasks completed, milestones achieved and funds obligated and expended.

III. AWARD INFORMATION

Estimated program budget, number of awards and average award size/duration are subject to the availability of funds.

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:

Restricted to individuals who are not serving as PI/Co-PI for active or pending OOI Operations and Maintenance Awards or sub-Awards

Limit on Number of Proposals per Organization:

There are no restrictions or limits.

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

Additional Eligibility Info:

Proposals may only be submitted by the following institutions/organizations

Universities and Colleges - Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in, the U.S. acting on behalf of their faculty members. Such organizations also are referred to as academic institutions.

Non-profit, non-academic organizations: Independent museums, observatories, research labs, professional societies and similar organizations in the U.S. associated with educational or research activities

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 Grants.gov or via the NSF FastLane system.

- 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.

In determining which method to utilize in the electronic preparation and submission of the proposal, please note the following:

Collaborative Proposals. All collaborative proposals submitted as separate submissions from multiple organizations must be submitted via the NSF FastLane system. PAPPG Chapter II.D.3 provides additional information on collaborative proposals.

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.

The Full Proposal shall conform to the guidelines specified in the NSF PAPPG or the NSF Grants.gov Application Guide, except where detailed below.

Proposers are reminded to review procedures under "Proprietary or Privileged Information" in Chapter II.D.1 of the PAPPG and to mark only such information, including patentable ideas, trade secrets, privileged or confidential commercial or financial information, disclosure of which might harm the proposer, with the appropriate legend such as, "The following is (proprietary or confidential) information that (name of proposing organization) requests not be released to persons outside the Government, except for purposes of review and evaluation." Please also see the section entitled "Privacy Act and Public Burden Statements" below.

The following information is required for the Full Proposal:

1. **PI/Co-I Information:** This should follow the standard PAPPG or NSF Grants.gov Application Guide guidelines.
2. **Cover Sheet:** A cover sheet must be submitted and electronically signed by an Authorized Organizational Representative for all full proposals. Proposers should select "Center/Research Infrastructure" for the Type of Proposal.
3. **Project Summary:** This section should provide a summary of the key points of the proposal and should be understandable to a scientifically or technically literate lay reader. This section must follow the standard PAPPG or NSF Grants.gov Application Guide guidelines. Proposals that do not include an overview and separate statements on intellectual merit and broader impacts within the Project Summary will not be accepted by FastLane or will be returned without review.
4. **Program Description (up to 15 pages):** The Program Description section of each proposal should address the qualifications and capabilities of the proposing organization to perform the responsibilities of the OOIFB Administrative Support Office as described in Section II.B. of this solicitation. The Program Description must:

   Clearly present the management structure, capability, experience, and qualifications of the organization proposed to serve as the Administrative Support Office. Include an aggregated description of the internal and external resources (both physical and personnel) that the organization and its collaborators will provide to the program. Explain the roles and responsibilities of each known or planned team entity. Provide biographical sketches of all Key Personnel.

   - Describe how the proposed management structure and PI will interact with and support the OOI Facility Board established by NSF.
   - Describe the approach to accomplishing the tasks necessary to support meetings of the OOIFB and its associated committees.
   - Describe the approach to accomplishing the tasks necessary to conduct workshops and other community engagement activities requested by the OOIFB.
   - Describe how the proposing organization will directly interact with and assist the OOIFB Chair in accomplishing the OOIFB mandate.
   - Describe how the proposed Administrative Support Office will develop and maintain a website that describes and summarizes OOIFB activities completed and in process.
   - Describe how the proposed Administrative Support Office will plan activities and determine budgets needed for submittal of Annual Work Plans to the NSF.
   - Describe the approach to initiating, managing and overseeing the funding allocations required to support the OOIFB.
   - Describe how the reporting requirements required by this solicitation will be accomplished in a timely and efficient manner.

   Please note that all information relevant to determining the quality of the proposed work must be included as part of the Project Description, unless otherwise directed in this solicitation.

5. **References Cited:** This section should follow the standard PAPPG or NSF Grants.gov Application Guide guidelines.
6. **Biographical Sketches:** A resume, limited to 2 pages, must be provided for the PI, each co-PI, all Key Personnel, and any other senior personnel as required in PAPPG Chapter II.C.2.f
7. **Budget:** See the instructions in Section B, below.
8. **Current and Pending Support:** This section should follow the standard PAPPG or NSF Grants.gov Application Guide guidelines.
9. **Supplementary Documentation:** Except as specified in this item or in the NSF PAPPG (see Chapter II.C.2.j), special information relevant to determining the quality of the proposed work must be included either as part of the Project Description or as part of the budget justification.
   a. **Documentation of collaborative arrangements of significance to the proposal:** Proposers should document with formal memoranda/letters of collaboration any collaborative arrangements of significance in performing the proposed work. Letters of support are not permitted under this solicitation, and proposals containing such letters may be returned without review. Please see the NSF PAPPG Chapter II.C.2.d (iv) for further details.
10. **Single Copy Documents:** Information for the items below should be entered via the Single Copy Documents section in FastLane.
    a. **Collaborators and Other Affiliations Information:** For all PIs, co-PIs, named senior personnel, and/or contractors (including for subAwardees), provide the names of all persons, participants and affiliates with potential conflicts of interest, with format as specified in Chapter II.C.1.e of the NSF PAPPG. For each person, be sure to include information for all collaborators and other affiliations as specified in Chapter II.C.1.e of the NSF PAPPG, as well as for all known individuals who would act as external advisory committee members for OOI; and all subcontractors who would receive funds through the award.
11. **Facilities, Equipment and Other Resources:** This section should follow the standard PAPPG NSF Grants.gov Application Guide guidelines. A summary of the applicable guidelines is as follows:

    This section of the proposal is used to assess the adequacy of the resources available to perform the effort proposed to satisfy both the Intellectual Merit and Broader Impacts review criteria. Proposers should include an aggregated description of the directly applicable internal and external resources (both physical and personnel) that the organization and its collaborators will provide to the project, should it be funded. Such information must be provided in this section, in lieu of other parts of the proposal (e.g., Budget Justification, Project Description). The description should be narrative in nature and must not include any quantifiable financial information.

General Information:

For additional information on this competition, including NSF practices and policies, proposing organizations should contact the Cognizant Program Officers, Lisa Clough (lcough@nsf.gov) and Bob Houtman (bhoutman@nsf.gov). The following publicly available documents will be informative:

- Investing in Science, Engineering, and Education for the Nation's Future: NSF Strategic Plan for 2014-2018 https://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14043.
- Sea Change, 2015-2025 Decadal Survey of Ocean Sciences Sea Change: 2015-2025 Decadal Survey of Ocean Sciences |The National Academies Press.
- NSF Reply to Sea Change https://www.nsf.gov/geo/oce/pubs/nsf-oce-sea-change-reply-may-11-2015.pdf.

- Ocean Observatories Initiative Science Plan, Revealing the Secrets of Our Ocean Planet, January 2005 http://oceanleadership.org/files/OOI_Science_Plan.pdf .
- Ocean Observatories Initiative (OOI) Scientific Objectives and Network Design: A Closer Look (http://oceanleadership.org/files/Science_Prospectus_2007-10-10_lowres_0.pdf), including Appendices A-1 through A-10.
- Ocean Observatories Initiative Website http://oceanobservatories.org.
- Dear Colleague Letter: Nominations for Participation on "Ocean Observatories Initiative Facility Board" (OOIFB) https://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf17034 .
- Ocean Observatories Initiative Facility Board: Terms of Reference https://www.nsf.gov/geo/oce/programs/ooi/ooifb-tor.jsp .

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.

Budget Preparation Instructions:

The full proposal should include a budget on the budget form in FastLane or the R&R Budget Form in Grants.gov for each year of the proposed operational period from August 1, 2018 through July 31, 2023. The budget should be based on total funding of no more than $600,000 per year. Fastlane and Grants.gov will automatically provide a cumulative budget. The proposal should provide all staffing and budgeting information needed to describe how the organization would fulfill the Awardee responsibilities in Section II of this solicitation. Requested budget amounts for each year of the proposal should reflect the level considered necessary to perform the NSF-funded activities described in the proposal.

Organizations that have not previously received NSF awards should review the NSF Prospective New Awardee Guide (https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pnag161&org=NSF) for additional guidance in preparing their budget submission.

C. Due Dates

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

    March 27, 2018

D. FastLane/Grants.gov Requirements

For Proposals Submitted Via FastLane:

To prepare and submit a proposal via FastLane, see detailed technical instructions 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.

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: http://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 are strongly encouraged to use FastLane 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 *Investing in Science, Engineering, and Education for the Nation's Future: NSF Strategic Plan for 2014-2018*. 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

Review criteria will also include an assessment of the proponent organization's structure, capability and experience in supporting the administrative needs of scientific boards. The proposed approach to accomplishing each of the requirements listed in the Statement of Work (Section II.B.) and to be addressed by the proponent in the Program Description (Item 4, Section V) of this Solicitation will be specifically evaluated in terms of understanding of the requirement, comprehensiveness of approach and likelihood of successful performance.

B. Review and Selection Process

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

The Review Panel will be convened as soon as practicable following the deadline for proposal submission.

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) 292-7827 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:

The award associated with this solicitation will be a standard or continuing grant that will fund the OOIFB Administrative Support Office in accordance with approved Annual Work Plans. The following are some of the measures NSF uses to conduct oversight:

- Review of Annual Project Reports, Annual Performance Reports including Metrics, and Annual Work Plans

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.

In addition to the Annual Project Report, Final Project Report, and Project Outcomes Report the Awardee will provide the following:

A Draft Annual Work Plan (AWP), to be submitted annually a minimum of 60 days prior to August 1, which establishes the technical approach to fulfilling NSF goals, requirements and cost targets for expenditures. (Timeline adjustments will be made for the first year of performance as needed). The AWP will cover the upcoming operational year and will address, but not be limited to, Programmatic Goals, Metrics and Milestones, Staffing and Organization Plans and Major Planning Activities. AWP contents will reflect the schedules, funding levels, guidelines and formats approved by the NSF Program Officer. The draft approved Annual Work Plans will serve to guide OOIFB Administrative Support Office activities for each respective year during the period of performance. The draft AWP will be refined and submitted to the NSF Program Officer for approval a minimum of 30 days prior to the start of the new program operational year.

Regular Informal Reports including communication with the NSF Program Officer(s)

The Awardee will acknowledge the support of the NSF on any signs identifying the OOIFB at its various locations. An acknowledgement of NSF support and disclaimer must appear in any publication of any material based upon or developed under this contract in substantially the following terms:

"The Ocean Observatories Initiative Facility Board and Administrative Support Office is sponsored by the National Science Foundation. Any opinions, findings and conclusions or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of the National Science Foundation." (The preceding sentence may be omitted from scientific articles or papers published in scientific journals.) Also, support of other agencies or international contributors shall be acknowledged as appropriate.

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:

- Lisa M. Clough, telephone: (703) 292-4746, email: lclough@nsf.gov

- Bauke Houtman, telephone: (703) 292-7704, email: bhoutman@nsf.gov

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 1-800-673-6188; e-mail: fastlane@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 http://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**   (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 Systems of Records, NSF-50, "Principal Investigator/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004), and NSF-51, "Reviewer/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004). 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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