# Long Term Ecological Research (LTER)

**National Communications Office** 

# **PROGRAM SOLICITATION**

NSF 15-535



### **National Science Foundation**

Directorate for Biological Sciences Division of Environmental Biology

Directorate for Geosciences Division of Ocean Sciences Division of Polar Programs

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

May 06, 2015

### **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 15-1), which is effective for proposals submitted, or due, on or after December 26, 2014. The PAPPG is consistent with, and, implements the new Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance) (2 CFR § 200).

#### SUMMARY OF PROGRAM REQUIREMENTS

#### **General Information**

#### **Program Title:**

Long Term Ecological Research National Communications Office (LTER-NCO)

#### Synopsis of Program:

NSF invites proposals for a Long Term Ecological Research (LTER) National Communications Office. This office will coordinate research, education, and outreach programs across the current 25 LTER projects, communicate these activities to diverse audiences, and provide centralized representation of the LTER network to the broad scientific community and the public. The lead PI of the successful proposal will serve as the Office Director and will work with the LTER Science Council and research community to develop and implement strategic goals and future initiatives. The Office will serve as the primary point of contact for information about the LTER 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.

- Saran Twombly, Division of Environmental Biology, telephone: (703) 292-8133, email: stwombly@nsf.gov
- Lisa M. Clough, Division of Polar Programs, telephone: (703) 292-4746, email: lclough@nsf.gov
- David L. Garrison, Division of Ocean Sciences, telephone: (703) 292-7588, email: dgarriso@nsf.gov

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

- 47.050 --- Geosciences
- 47.074 --- Biological Sciences

### **Award Information**

Anticipated Type of Award: Cooperative Agreement

Estimated Number of Awards: 1

A single award will be made from this solicitation to establish one LTER National Communications Office.

Anticipated Funding Amount: \$800,000

A single award for a maximum of \$800,000 per year, for up to 4 years, will be made pending availability of funds and the quality of the proposals submitted.

# **Eligibility Information**

### Who May Submit Proposals:

Proposals may only be submitted by the following:

- Universities and Colleges Universities and two- and four-year colleges (including community colleges)
  accredited in, and having a campus located in, the US 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

### Who May Serve as PI:

Only one proposal will be accepted from a lead Principal Investigator (PI). Lead Principal Investigators on active LTER research awards are not eligible to serve as lead PI for this solicitation. Collaborative proposals submitted by PIs from multiple organizations are not allowed for this competition.

### Limit on Number of Proposals per Organization:

There are no restrictions or limits

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

A lead investigator or co-PI is allowed to submit only a single proposal to this solicitation.

# **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, Part I: Grant Proposal Guide (GPG) Guidelines apply. The complete text of the GPG is available electronically on the NSF website at: http://www.nsf.gov/publications/pub\_summ.jsp?ods\_key=gpg.
  - 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: http://www.nsf.gov/publications/pub\_summ.jsp? ods\_key=grantsgovguide).

# **B. Budgetary Information**

- Cost Sharing Requirements: Inclusion of voluntary committed cost sharing is prohibited.
- Indirect Cost (F&A) Limitations: Not Applicable
- · Other Budgetary Limitations: Not Applicable

#### C. Due Dates

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

May 06, 2015

# **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: Standard NSF award conditions apply.

Reporting Requirements: Standard NSF reporting requirements apply.

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### I. INTRODUCTION

NSF established the Long Term Ecological Research Program (LTER) in 1980 to address ecological questions that cannot be resolved with short-term observations or experiments. The central intellectual aim of the program is to understand a) long-term ecological patterns and processes at multiple spatial scales and b) how diverse components of an ecosystem interact to influence ecosystem function. Each LTER site is organized around a scientific theme specific to its location and ecosystem, and all projects must collect long-term data in five core areas: 1) patterns and controls of primary production, 2) spatial and temporal population dynamics and food web interactions, 3) patterns and controls of organic matter accumulation and decomposition, 4) patterns of inorganic inputs and movements of nutrients through soils, groundwater and surface waters, and 5) patterns and frequency of disturbances. Recognizing that the value of long-term data extends beyond use at any individual site, NSF requires that data collected by all LTER sites be broadly accessible.

Coordination among LTER projects to promote large-scale syntheses is another intellectual goal of the LTER program. These syntheses provide new research findings, derived data sets, and new models that establish future research directions and that may guide development of environmental policy. LTER projects have established broad educational programs and training, have implemented outreach to diverse stakeholders, and have established common criteria and protocols for data management.

The twenty-five current projects together constitute the LTER Network, a collaborative effort among more than 1500 scientists and students investigating ecological processes over diverse temporal and spatial scales. The Network extends the opportunities and capabilities of the individual sites to promote synthesis and comparative research across sites. Please refer to <a href="http://www.lternet.edu/">http://www.lternet.edu/</a> for specific information about the current LTER network. The scientific direction and vision of the LTER Network are established by the Science Council, as described in LTER by-laws. This Council has the responsibility to provide leadership and planning for cross-site research and education, to develop proposals for Network-level science, to interact with existing and emerging collaborators, to develop products that synthesize Network-level data and information, and otherwise to manage the science affairs of the LTER Network. The Science Council is composed of a Chair, the lead Principal Investigator from each LTER site or his or her designate, and the Director of the National (currently Network) Office. Other current provisions in the LTER by-laws include a triennial All Scientists' Meeting, designation of Network-wide or targeted committees, and formation of an Executive Board that meets twice a year to implement decisions made by the Science Council. The current LTER Network Office facilitates 1) data and information management and 2) the research, education, and outreach activities developed by individual projects.

The NSF award for the current Network Office expires in April 2015. Transition costs to cover the period from April 2015 until the establishment of a new Communications Office will be negotiated separately between NSF and the current Network Office, and should not be included as part of this request. Data management activities are not part of this solicitation. NSF anticipates supporting LTER information management, data storage, and data access activities via a second solicitation or other, independent mechanism. Data access will continue to be provided by the current Network Office until further notice.

This solicitation invites proposals for a new LTER National Office that will foster and coordinate research, education, and outreach activities across the Network as well as facilitate Network governance. The Office will foster communication among current LTER projects and with the broader scientific community, promote the dissemination of information and resources among LTER projects and to additional stakeholder communities, facilitate meetings and workshops, and promote the LTER program both nationally and internationally. The National Office will serve as the primary point of contact for information about the LTER program and implement scoping workshops to outline future goals and initiatives. The solicitation establishes a new LTER National Office that parallels, at least in part, other NSF-supported national science offices (e.g., Ocean Carbon and Biogeochemistry, www.us-ocb.org; Critical Zone Observatory National Office <a href="http://criticalzone.org/national/news/story/czo-national-office-announced/">http://criticalzone.org/national/news/story/czo-national-office-announced/</a>).

# II. PROGRAM DESCRIPTION

The LTER National Communications Office is expected to work with the LTER and broader research communities to share discoveries, research opportunities, and education and outreach activities. It will have two main responsibilities: A) facilitate communication and coordination among all LTER projects and with a diverse range of stakeholders, and B) foster synthesis through organization of meetings, provide access to synthesis and other meeting products, and facilitate future LTER initiatives and directions in collaboration with the LTER Science Council. It is intended to be a service organization and should not promote its own scientific or outreach agendas. While acknowledging the LTER Science Council's leadership role in guiding current and future Network priorities, NSF welcomes novel and creative approaches to advancing this Network, defining essential activities or committees, and seeking advice from both within and outside the LTER community.

The Principal Investigator (PI) will serve as Director of the office and will work closely with all LTER PIs and co-PIs to achieve the

#### following goals:

- · Foster communication and collaboration across all projects
- · Foster the development of strategic plans and future LTER visioning
- Promote the dissemination of information and resources among projects and to additional stakeholder communities, including outreach to local, regional, national, and international audiences of scientists, educators, students, landowners, policymakers, and the general public
- · Identify opportunities to leverage resources
- Foster synthesis activities across research communities using a variety of means that could include small workshops, larger working groups, or postdoctoral research initiatives
- Organize a limited number of scoping workshops, short courses, or sessions at international and national meetings, and support the Network's committees and working groups
- Organize regular meetings of the LTER Science Council, an LTER advisory board, and the All Scientists' Meeting
- Serve as the liaison among LTER and other scientific groups or organizations as well as NSF
- Represent the LTER program at research and educational conferences, and at public outreach events
- · Maintain and update LTER websites, a centralized personnel database, and a cumulative catalogue of LTER products
- Serve as the primary source for communication (e.g., research highlights, press releases, media coverage, research
  opportunities) with diverse communities on behalf of the LTER Network

Please see the Budget section of the Proposal Preparation Instructions (Section V.B) below for additional guidance about activities that the National Office should anticipate supporting.

#### Structure of the National Office:

NSF anticipates that successful operation and management of an LTER National Office will require a senior-level scientist (the proposal PI) who is familiar with the LTER program as well as with ecological and ecosystem science or environmental biology across habitats, ecosystems, and biomes. This individual will have a part-time appointment as the office Director with responsibility for oversight and management of all office activities. Additional personnel may include part- or full-time positions for office management, an education and outreach coordinator, and staff who will maintain websites and provide logistical and administrative support.

### III. AWARD INFORMATION

A maximum of \$800,000 annually for up to 4 years, and a total of \$3,200,000, is available for this award, pending availability of funds. Only a single award will be made. Please see additional budget comments below.

#### IV. ELIGIBILITY INFORMATION

### Who May Submit Proposals:

Proposals may only be submitted by the following:

- Universities and Colleges Universities and two- and four-year colleges (including community colleges)
  accredited in, and having a campus located in, the US 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.

# Who May Serve as PI:

Only one proposal will be accepted from a lead Principal Investigator (PI). Lead Principal Investigators on active LTER research awards are not eligible to serve as lead PI for this solicitation. Collaborative proposals submitted by PIs from multiple organizations are not allowed for this competition.

#### Limit on Number of Proposals per Organization:

There are no restrictions or limits.

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

A lead investigator or co-PI is allowed to submit only a single proposal to this solicitation.

### Additional Eligibility Info:

Collaborative Proposals submitted from multiple organizations are not allowed for this solicitation.

### 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 Grant Proposal Guide (GPG). The complete text of the GPG is available electronically on the NSF website at: <a href="http://www.nsf.gov/publications/pub\_summ.jsp?cds\_key=gpg">http://www.nsf.gov/publications/pub\_summ.jsp?cds\_key=gpg</a>. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by email 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: (<a href="http://www.nsf.gov/publications/pub\_summ.jsp?">http://www.nsf.gov/publications/pub\_summ.jsp?</a> ods\_key=grantsgovguide). To obtain copies of the Application Guide and Application Forms Package, click on the Apply tab on the Grants.gov site, then click on the Apply Step 1: Download a Grant Application Package and Application Instructions link and enter the funding opportunity number, (the program solicitation number without the NSF prefix) and press the Download Package button. Paper copies of the Grants.gov Application Guide also may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from nsfpubs@nsf.gov.

See Chapter II.C.2 of the GPG 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 GPG instructions.

Proposals should include the following information as part of the 15-page Project Description:

- 1. Evidence that the lead PI and the institution have experience managing large, distributed projects.
- 2. Evidence that the lead PI is familiar with the LTER program and with other long-term environmental research.
- 3. Evidence that the lead PI is an effective leader.
- 4. A plan for developing a broadly inclusive and cooperative community that will advance the network of LTER sites.
- 5. A plan for effective communication with diverse audiences.
- 6. Demonstrated institutional capacity for the proposed efforts.
- 7. A management plan for the office.

Collaborative proposals submitted as separate submissions from multiple organizations are not allowed for this solicitation and will be returned without review.

Applicants must complete the Proposal Classification Form. The Proposal Classification Form is required for all submissions to BIO; FastLane will not allow processing of the proposal without it.

# **B. Budgetary Information**

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

#### **Budget Preparation Instructions:**

In addition to support, including travel, required for operation of the National Office, the budget should request support for the following LTER activities:

- One Science Council meeting per year, to include travel and per diem expenses for approximately 60 participants, venue rotates among LTER sites.
- 2. Synthesis working groups and scoping workshops, to include travel and per diem expenses for 8-10 participants, for at least 2 activities per year.
- 3. Meetings of LTER Committees, such as the Information Managers, or to coordinate educational activities, as needed. Travel and per diem expenses for participants.
- Meetings of an LTER advisory board to include travel and per diem expenses for approx. 10 individuals drawn from the LTER community and from broader scientific communities, for 1-2 meetings/year.
- A triennial All Scientists' Meeting, to include partial support for meeting venue and travel and per diem expenses for plenary speakers and a limited number of graduate student participants.

Meetings may be in person or virtual, as appropriate.

NSF recognizes that exact levels of support for these activities likely cannot be determined in advance. We expect to accommodate adjustments as needed via budget reallocations, supplemental support, or other available mechanisms.

### C. Due Dates

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

May 06, 2015

# D. FastLane/Grants.gov Requirements

## For Proposals Submitted Via FastLane:

To prepare and submit a proposal via FastLane, see detailed technical instructions available at: <a href="https://www.fastlane.nsf.gov/a1/newstan.htm">https://www.fastlane.nsf.gov/a1/newstan.htm</a>. 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 the GPG as Exhibit III-1.

A comprehensive description of the Foundation's merit review process is available on the NSF website at: http://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. (GPG 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 GPG 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

Each proposal will be evaluated on the following, additional criteria:

- Do the Lead PI, team, and institution have demonstrated expertise in managing large, distributed projects?
- Does the Lead PI have demonstrated familiarity with LTER and with long-term environmental research?
- · Does the Lead PI show evidence of effective leadership?
- How well will the proposed activities foster the continued development of a broadly inclusive and cooperative LTER community?
- Do the Lead PI and other personnel have experience communicating with diverse audiences?
- Is there sufficient institutional capacity for the proposed effort?
- Is a clear and convincing management plan presented?
- Are novel or creative activities proposed that will advance the LTER Network?

# **B. Review and Selection Process**

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

Following panel review, including evaluation of ad hoc reviews submitted, site reviews may be conducted for one or more finalists. A comprehensive report submitted to NSF by the site review team will inform NSF's final award recommendation.

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 be completed and submitted by each reviewer. 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 http://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 Award & Administration Guide (AAG) Chapter II, available electronically on the NSF Website at <a href="http://www.nsf.gov/publications/pub\_summ.jsp?ods\_key=aag">http://www.nsf.gov/publications/pub\_summ.jsp?ods\_key=aag</a>.

### 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 at least 90 days prior to the end of the current budget period. (Some programs or awards require submission of more frequent project reports). Within 90 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 Pls and co-Pls on a given award. Pls should examine the formats of the required reports in advance to assure availability of required data.

Pls 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 Award & Administration Guide (AAG) Chapter II, available electronically on the NSF Website at <a href="http://www.nsf.gov/publications/pub\_summ.jsp?ods\_key=aag">http://www.nsf.gov/publications/pub\_summ.jsp?ods\_key=aag</a>.

# **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:

- Saran Twombly, Division of Environmental Biology, telephone: (703) 292-8133, email: stwombly@nsf.gov
- Lisa M. Clough, Division of Polar Programs, telephone: (703) 292-4746, email: lclough@nsf.gov
- David L. Garrison, Division of Ocean Sciences, telephone: (703) 292-7588, email: dgarriso@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 at <a href="https://public.govdelivery.com/accounts/USNSF/subscriber/new?topic\_id=USNSF\_179">https://public.govdelivery.com/accounts/USNSF/subscriber/new?topic\_id=USNSF\_179</a>.

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 <a href="http://www.grants.gov">http://www.grants.gov</a>.

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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.

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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:

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