

# Long Term Research in Environmental Biology (LTREB)

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## Program Solicitation

07-588

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### Replaces Document(s):

NSF 05-583

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National Science Foundation

Directorate for Biological Sciences  
Division of Environmental Biology

### Full Proposal Target Date(s):

January 09, 2008

January 9, Annually Thereafter

July 09, 2008

July 9, Annually Thereafter

## IMPORTANT INFORMATION AND REVISION NOTES

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A revised version of the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) NSF 09-1 was issued on October 1 2008 and is effective for proposals submitted on or after January 5 2009. Please be advised that the guidelines contained in NSF 09-1 apply to proposals submitted in response to this funding opportunity. Proposers who opt to submit prior to January 5<sup>th</sup> 2009 must also follow the guidelines contained in NSF 09-1.

One of the most significant changes to the PAPPG is implementation of the mentoring provisions of the America COMPETES Act. Each proposal that requests funding to support postdoctoral researchers must include as a separate section within the 15-page project description a description of the mentoring activities that will be provided for such individuals. Proposals that do not include a separate section on mentoring activities within the Project Description will be returned without review (see the PAPP Guide Part I: *Grant Proposal Guide* Chapter II.C.2.d for further information).

The LTREB Program now intends to support decadal projects. Funding for the first five years requires a full, 15 page proposal following guidelines outlined in the NSF Grant Proposal Guide. A cogent conceptual framework for the decadal research plan is a required and critical part of the initial proposal. Requests for renewed funding of a second five-year period should be based on progress made towards the decadal research plan and may not be longer than 8 pages. Details are provided below.

## SUMMARY OF PROGRAM REQUIREMENTS

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### General Information

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#### Program Title:

Long Term Research in Environmental Biology (LTREB)

#### Synopsis of Program:

Through the LTREB program, the Division of Environmental Biology encourages the submission of proposals aimed at generating extended time series of biological and environmental data that address ecological and evolutionary processes aimed at resolving important issues in environmental biology.

Researchers must have collected at least six years of previous data to qualify for funding. The proposal also must present a cohesive conceptual rationale or framework for ten years of research. Questions or hypotheses outlined in this conceptual framework must guide an initial 5-year proposal as well as a subsequent, abbreviated renewal. Together, these will constitute a decadal research plan appropriate to begin to address critical and novel long-term questions in environmental biology. As part of the requirements for funding, projects must show how collected data will be shared broadly with the scientific community and the interested public.

All proposals submitted to the LTREB program are co-reviewed by participating Clusters in the Division of Environmental Biology: Ecosystem Science, Ecological Biology, and Population and Evolutionary Processes. Proposals must address topics supported by these programs. Researchers who are uncertain about the suitability of their project for the LTREB Program are encouraged to contact the cognizant program director.

**Cognizant Program Officer(s):**

- Saran Twombly, 635, telephone: (703) 292-8133, email: [stwombly@nsf.gov](mailto:stwombly@nsf.gov)

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

- 47.074 --- Biological Sciences

**Award Information**

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**Anticipated Type of Award:** Standard Grant or Continuing Grant

**Estimated Number of Awards:** 15 to 20 per year

**Anticipated Funding Amount:** \$2,000,000

**Eligibility Information**

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**Organization Limit:**

None Specified

**PI Limit:**

None Specified

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

None Specified

**Limit on Number of Proposals per PI:**

None Specified

**Proposal Preparation and Submission Instructions**

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**A. Proposal Preparation Instructions**

- **Letters of Intent:** Not Applicable
- **Preliminary Proposal Submission:** Not Applicable
- **Full Proposal Preparation Instructions:** This solicitation contains information that supplements the standard NSF Proposal and Award Policies and Procedures Guide, Part I: Grant Proposal Guide (GPG) proposal preparation guidelines. Please see the full text of this solicitation for further information

**B. Budgetary Information**

- **Cost Sharing Requirements:** Cost Sharing is not required under this solicitation.
- **Indirect Cost (F&A) Limitations:** Not Applicable
- **Other Budgetary Limitations:** Other budgetary limitations apply. Please see the full text of this solicitation for further information.

### C. Due Dates

- **Full Proposal Target Date(s):**

January 09, 2008

January 9, Annually Thereafter

July 09, 2008

July 9, Annually Thereafter

### Proposal Review Information Criteria

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**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

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**Award Conditions:** Standard NSF award conditions apply.

**Reporting Requirements:** Standard NSF reporting requirements apply.

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## I. INTRODUCTION

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Many important questions in ecology, population biology, and ecosystem science can only be addressed with long-term data. Research areas include, but are not limited to, populations or predator-prey systems that oscillate over decades, communities of organisms that have extended life spans and long turnover times, pools of materials such as nutrients in soils that turn over at intermediate to longer time scales, external forcing functions such as climatic cycles that operate over long return intervals, and abiotic conditions such as sea-level rise or global warming that are changing slowly but in a particular direction. Investigators often are constrained in addressing questions in these areas or studying these phenomena by the relatively short support periods associated with typical research awards. In recognition of this problem, the Division of Environmental Biology (DEB) encourages investigators to apply for LTREB awards. These awards are designed to provide the funding to maintain an ongoing, long-term research project for a period of a decade or longer.

Because the usefulness of long-term data sets extends beyond typical scientific publications, a means of sharing data with other investigators should stimulate synthesis and generation of novel ideas. The results also should be of interest to the general public. To take advantage of the unique informational aspects of long-term projects, LTREB investigators will be required to implement mechanisms of data sharing in the broadest manner possible.

## II. PROGRAM DESCRIPTION

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The NSF seeks to stimulate and enhance long-term perspectives on problems in environmental biology. Long-term environmental research is funded through two NSF programs – Long-term Ecological Research (LTER) and LTREB. The two programs are different. LTER projects are funded in response to calls for specific proposals, are evaluated by a special panel, and are characterized by multiple investigators conducting multi-disciplinary investigations at large temporal and spatial scales. In contrast, LTREB projects are submitted at semi-annual target dates, evaluated by appropriate programmatic panels (Population and Evolutionary Processes, Ecology, Ecosystem Studies) and are initiated by one or a few investigators. Examples of current LTREB awards can be viewed at <http://www.nsf.gov/awardsearch/> by including “LTREB” in a title search.

The LTREB Program now intends to support decadal projects. Funding for an initial, 5-year period requires a full 15 page proposal following the guidelines in the Grant Proposal Guide. A cogent conceptual framework for a decadal research plan is a required and a critical part of the initial proposal. Proposals for renewal of support for a second 5-year period are limited to 8 pages in length and will be evaluated using the standard NSF Merit Review Criteria and three additional criteria: 1) progress made toward long-term goals during the initial 5-year award, 2) a brief description of planned research activities and 3) evidence that previous data are available to the broader research community.

Two major components are required in a project submitted for LTREB funding: 1. Long-term research; and 2. Explicit plan for data dissemination.

**Long-Term Research:** The Division of Environmental Biology recognizes that five years is not adequate to address many pressing questions in environmental biology. In response, the LTREB Program now encourages decadal research projects. This decadal perspective requires that proposers develop a conceptual framework that spans at least ten years. This framework will be a critical component of an initial 5-year proposal, and questions or hypotheses outlined in this framework must guide any subsequent renewal. At least six years of data must have been collected continuously at an appropriate time interval (for example, monthly or annually) and must be documented to seek LTREB funding. Justification must be provided for continuing data collection for at least ten years beyond the initial six-year period. Although most LTREB projects involve field studies, some laboratory projects (for example, long-term selection experiments) may also be suitable for LTREB funding. The approach to data collection must be hypothesis driven. The LTREB Program does not support basic monitoring efforts.

**Plan for Data Dissemination:** Data from long-term research projects have value beyond the peer-reviewed and other publications generated by the investigators collecting the data. Other researchers may develop new perspectives on the same long-term data or new ideas may arise from a combination of long-term data sets. Also, long-term data are expected to be of special interest to the public. Therefore, all proposals must describe details of information management and plans for data sharing with the broader research community and the interested public.

**LTREB Renewals:** To implement the decadal time frame intended for LTREB projects, proposals for renewed support during a second, five-year period will be evaluated using the standard NSF Merit Review Criteria and three additional criteria: 1) progress made toward long-term goals during the initial five-year award, 2) a brief description of planned research activities, and 3) evidence that previously-collected data (at least 6-11 years) are available to the broader research community. Research activities must address questions or hypotheses that are consonant with the initial decadal research plan. Renewal proposals are limited to 8 pages (project description). Renewal of LTREB projects beyond ten-years will follow this same sequence: a proposal of 15 pages, followed by a renewal proposal of 8 pages. Titles for renewal proposals must begin with “LTREB Renewal:” The only proposals eligible for submission as an LTREB Renewal are those that continue projects that began via an LTREB award with a decadal research plan.

All proposals submitted to the LTREB Program are co-reviewed by participating Clusters in the Division of Environmental

Biology: Ecosystem Science, Ecological Biology, and Population and Evolutionary Processes. Proposals must address topics supported by these programs:

**Ecological Biology** supports research on natural and managed terrestrial, wetland and freshwater habitats, focusing on studies of community ecology, species interactions, species diversity and coevolution at diverse spatial and temporal scales.

**Ecosystem Science** supports investigations of whole-system ecological processes and relationships in ecosystems (primarily terrestrial, freshwater and wetland) across a diversity of spatial and temporal scales, including biogeochemistry; decomposition of organic matter; below-ground nutrient cycling and energy flow; element budgets on watershed, regional, continental or global scales; relationships between diversity and ecosystem function; ecosystem services; and landscape dynamics.

**Population and Evolutionary Processes** focuses on population properties that lead to variation within and among populations and funds research in population dynamics, evolutionary ecology, evolutionary genetics and molecular population biology.

Research on marine populations, communities and ecosystems is not supported by LTREB and should be directed to the Biological Oceanography Program: ([http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=11696&org=OCE](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=11696&org=OCE)).

### III. AWARD INFORMATION

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LTREB awards are not to exceed \$90,000 per year (direct and indirect costs) and \$450,000 over a 5-year (60 month) effort. NSF anticipates making 15-20 awards annually for a total of \$2,000,000. Involvement of undergraduate and graduate students is encouraged. Researchers may request up to one month of salary per year. These requests must be justified carefully and proposers are encouraged to contact the cognizant program officer prior to proposal development. Because data management is a key aspect of these research projects, it is expected that the proposed budget will reflect the establishment or periodic upgrading of information technology to provide for data sharing with other researchers and the general public. In general, funds will not be provided to purchase major equipment. Under unusual circumstances, the purchase of major equipment (over \$5,000) will be entertained if these expenses are well justified. Support from the LTREB Program does not preclude support from other NSF programs.

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

### IV. ELIGIBILITY INFORMATION

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The categories of proposers eligible to submit proposals to the National Science Foundation are identified in the [Grant Proposal Guide](#), Chapter I, Section E.

**Organization Limit:**

None Specified

**PI Limit:**

None Specified

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

None Specified

**Limit on Number of Proposals per PI:**

None Specified

### V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

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#### A. Proposal Preparation Instructions

**Full Proposal Instructions:** Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the guidelines specified in the NSF Grant Proposal Guide (GPG). 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](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg). Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-PUBS (7827) or by e-mail from [nsfpubs@nsf.gov](mailto:nsfpubs@nsf.gov).

The following information provides instructions that supplement the GPG and the NSF Grants.gov Application Guide.

**Program Solicitation Number:** FastLane Users: Select the LTREB program solicitation from the drop-down menu. Note: solicitation number is found on the coversheet of this document. Grants.gov Users: The program solicitation number will be pre-populated by Grants.gov on the NSF Grant Application Cover Page.

**Project Title:** The project title must begin with 'LTREB:', followed by the substantive title.

**Project Description** (maximum 15 pages, including Results from Prior NSF Support for PI and all co-PIs): The proposal should address the following three themes in the Project Description or where otherwise indicated.

**Conceptual Issues.** Proposals must address critical concepts in understanding long-term (decadal or longer) patterns and processes in environmental biology. Clearly defined hypotheses must guide the research.

**Core Data Set.** A feature central to all successful LTREB projects is a set of core data that are already being collected continually in the laboratory or at an existing site or sites. Proposed modifications to these core data – for example, the addition of new sites or the initiation of a new manipulation – must be consistent with and complementary to the long-term data collection. New study sites or new manipulations will be considered if they do not compromise the integrity of the long-term data set, and if their justification is consonant with the original, long-term rationale for the study. New manipulations or investigations are encouraged if they test new hypotheses or refine existing theories. Questions concerning the appropriateness of an existing data set as the basis for an LTREB proposal should be discussed with the cognizant NSF Program Officer prior to proposal development.

**Dissemination of Results.** Dissemination of results must go beyond typical peer-review publications. With respect to LTREB, it is NSF's policy that within no more than two years after collection, data collected as part of an LTREB-funded project must be made available to researchers and the general public. Longer intervals will be acceptable if sufficiently justified. Data should be made available in a secure repository with a suitable internet interface to allow easy access to data by interested researchers. Metadata should be provided that clearly describe data. This will be an iterative process, so the utilized information technology (data base software and internet interface) should have sufficient flexibility to allow periodic updates. In addition, textual and graphical summaries should be developed for researchers and the informed public. Proposers may consult with the cognizant program officer on the best manner in which to achieve this component of the project.

**Renewal.** To implement the decadal time frame intended for LTREB projects, proposals for renewed support during a second, five-year period will be evaluated using the standard NSF Merit Review Criteria and three additional criteria: 1) progress made toward long-term goals during the initial five-year award, 2) a brief description of planned research activities, and 3) evidence that previously-collected data (at least 6-11 years) are available to the broader research community. Research activities must address questions or hypotheses that are consonant with the initial decadal research plan. Renewal proposals are limited to 8 pages (project description). Renewal of LTREB projects beyond ten-years will follow this same sequence: a proposal of 15 pages, followed by a renewal proposal of 8 pages. Titles for renewal proposals must begin with "LTREB Renewal:" The only proposals eligible for submission as an LTREB Renewal are those that continue projects that began via an LTREB award with a decadal research plan.

Proposers are reminded to identify the program solicitation number (Populated with NSF Number at Clearance) 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.

## B. Budgetary Information

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**Cost Sharing:** Cost sharing is not required under this solicitation.

**Other Budgetary Limitations:** Proposals will be limited to \$90,000 per year and a total of \$450,000 over five years.

## C. Due Dates

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- **Full Proposal Target Date(s):**

January 09, 2008

January 9, Annually Thereafter

July 09, 2008

July 9, Annually Thereafter

## D. FastLane Requirements

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Proposers are required to prepare and submit all proposals for this program solicitation through use of the NSF FastLane system. Detailed instructions regarding the technical aspects of proposal preparation and submission via FastLane are available at: <http://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](mailto: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.

*Submission of Electronically Signed Cover Sheets.* The Authorized Organizational Representative (AOR) must electronically sign the proposal Cover Sheet to submit the required proposal certifications (see Chapter II, Section C of the [Grant Proposal Guide](#) for a listing of the certifications). The AOR must provide the required electronic certifications within five working days following the electronic submission of the proposal. Further instructions regarding this process are available on the FastLane Website at: <https://www.fastlane.nsf.gov/fastlane.jsp>.

## VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES

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Proposals received by NSF are assigned to the appropriate NSF program where they will be reviewed if they meet NSF proposal preparation requirements. 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 who are experts in the particular fields represented by the proposal. These reviewers are selected by Program Officers charged with the 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.

### A. NSF Merit Review Criteria

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All NSF proposals are evaluated through use of the two National Science Board (NSB)-approved merit review criteria: intellectual merit and the broader impacts of the proposed effort. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

The two NSB-approved merit review criteria are listed below. The criteria include considerations that help define them. These considerations are suggestions and not all will apply to any given proposal. While proposers must address both merit review criteria, reviewers will be asked to address only those considerations that are relevant to the proposal being considered and for which the reviewer is qualified to make judgements.

#### **What is the intellectual merit of the proposed activity?**

How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of the prior work.) To what extent does the proposed activity suggest and explore creative, original, or potentially transformative concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

#### **What are the broader impacts of the proposed activity?**

How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

Examples illustrating activities likely to demonstrate broader impacts are available electronically on the NSF website at: <http://www.nsf.gov/pubs/gpg/broaderimpacts.pdf>.

Mentoring activities provided to postdoctoral researchers supported on the project, as described in a one-page supplementary document, will be evaluated under the Broader Impacts criterion.

NSF staff also will give careful consideration to the following in making funding decisions:

### ***Integration of Research and Education***

One of the principal strategies in support of NSF's goals is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions provide abundant opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the diversity of learning perspectives.

### ***Integrating Diversity into NSF Programs, Projects, and Activities***

Broadening opportunities and enabling the participation of all citizens -- women and men, underrepresented minorities, and persons with disabilities -- 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.

#### **Additional Review Criteria:**

In evaluating proposals against the two standard review criteria established by the National Science Board, reviewers will look for sound responses to the two required components of an LTREB project: (1) Core data with at least six years of data collected at the time of submission and a compelling rationale for continued data collection for ten additional years; and (2) An operational plan for sharing data and metadata with other researchers and the general public.

## **B. Review and Selection Process**

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

Reviewers will be asked to formulate a recommendation to either support or decline each proposal. 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 is striving to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. The time interval begins on the deadline or target date, or receipt date, whichever is later. The interval ends when the Division Director accepts the Program Officer's recommendation.

A summary rating and accompanying narrative will be completed and submitted by each reviewer. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers, 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.

In all cases, 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 and 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.

## **VII. AWARD ADMINISTRATION INFORMATION**

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### **A. Notification of the Award**

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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**

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An NSF award consists of: (1) the award letter, 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 letter; (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 letter. 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](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](mailto: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 [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=aag](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=aag).

## C. Reporting Requirements

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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 before the end of the current budget period. (Some programs or awards require more frequent project reports). Within 90 days after 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 that PI. 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 FastLane, for preparation and submission of annual and final project reports. Such reports provide information on activities and findings, project participants (individual and organizational) publications; and, other specific products and contributions. PIs will not be required to re-enter information previously provided, either with a proposal or in earlier updates using the electronic system. Submission of the report via FastLane constitutes certification by the PI that the contents of the report are accurate and complete. The project outcomes report must be prepared and submitted using Research.gov. This report serves as a brief summary, prepared specifically for the public, of the nature and outcomes of the project. This report will be posted on the NSF website exactly as it is submitted by the PI.

## VIII. AGENCY CONTACTS

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General inquiries regarding this program should be made to:

- Saran Twombly, 635, telephone: (703) 292-8133, email: [stwombly@nsf.gov](mailto:stwombly@nsf.gov)

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 1-800-673-6188; e-mail: [fastlane@nsf.gov](mailto:fastlane@nsf.gov).

## IX. OTHER INFORMATION

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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, National Science Foundation Update is a free e-mail subscription service 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 Regional Grants Conferences. Subscribers are informed through e-mail when new publications are issued that match their identified interests. Users can subscribe to this service by clicking the "Get NSF Updates by Email" link on the [NSF web site](#).

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

## ABOUT THE NATIONAL SCIENCE FOUNDATION

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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 40,000 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 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* provide funding for special assistance or equipment to enable persons with disabilities to work on NSF-supported projects. See Grant Proposal Guide Chapter II, Section D.2 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 <http://www.nsf.gov>

- **Location:** 4201 Wilson Blvd. Arlington, VA 22230
  
- **For General Information** (NSF Information Center): (703) 292-5111
  
- **TDD (for the hearing-impaired):** (703) 292-5090
  
- **To Order Publications or Forms:**
  - Send an e-mail to: [nsfpubs@nsf.gov](mailto:nsfpubs@nsf.gov)
  - or telephone: (703) 292-7827
  
- **To Locate NSF Employees:** (703) 292-5111

## PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

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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

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