



NATIONAL SCIENCE FOUNDATION  
2415 EISENHOWER AVENUE  
ALEXANDRIA, VIRGINIA 22314

NSF 19-080

## Dear Colleague Letter: Notice of Intent to Compete the Management of the National Ecological Observatory Network Operations and Maintenance

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7/26/2019

Dear Colleagues:

The Division of Biological Infrastructure (DBI) in the Directorate for Biological Sciences (BIO) of the National Science Foundation (NSF) intends to carry out a competition to manage the operations and maintenance of the National Ecological Observatory Network (NEON or “the Observatory”), <http://www.neonscience.org/>, through an open, merit-based, peer-reviewed process. The anticipated solicitation is expected to result in an initial award of a five-year Cooperative Agreement (CA) with the possibility of a five-year continuation for the management of NEON which is expected to start late in the Calendar Year 2021. Cooperative Agreements of this type are governed in part under [2 CFR, part 200: “Uniform Administrative Requirements, Cost Principles, and Audit Requirement for Federal Awards”](#) (Uniform Guidance), in addition to NSF standard and award-specific terms and conditions.

NSF is an independent Federal agency created by the National Science Foundation Act of 1950, as amended (42 USC 1861 *et seq.*). The Act states, in part, that 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.” In support of these goals, the NSF funds major facilities that provide research capabilities in various scientific disciplines.

This letter provides general information on NEON, communicates that NSF anticipates initiating the aforementioned competition, provides information on provisional goals and a timeline for that competition, and invites comments and questions from eligible organizations interested in this competition. Note that such comments and questions will not bind an entity to participate in any subsequent competition.

### NEON PROGRAM DESCRIPTION

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The National Ecological Observatory Network is an NSF-funded major facility. NEON comprises a continental-scale terrestrial, aquatic, atmospheric, and remote sensing measurement and sampling infrastructure supported by a robust cyberinfrastructure that delivers standardized, calibrated data and samples to the scientific community through an openly accessible data portal and biorepository. NEON infrastructure is geographically distributed across the United States, including Alaska, Hawaii and Puerto Rico, and is intended to generate data for ecological research over a 30-year period. NEON is designed to enable the research community to ask and address scientific questions regarding biological responses to environmental change from a regional to continental scale.

Environmental change, land-use change, and the introduction of invasive species act alone or in concert to affect living systems by altering the fundamental relationships between life and the non-living environment that sustains it. Understanding and predicting biological responses to environmental change is one of the major challenges that confront scientists and society now and in the coming decades. Meeting this challenge requires the availability of high-quality data, samples, and specimens collected using standardized protocols at strategically selected sites distributed at a continental scale. NEON supports these requirements.

The Observatory provides standardized data on a comprehensive suite of 179 data products. These data products include measurements of atmospheric processes; biogeochemistry; ecohydrology; biological organisms/populations/communities; and changes in land use at 81 sites distributed in 20 eco-climatic domains across the United States. NEON data from sites and airborne observations, along with protocols and documentation, are available on the [NEON Data Portal](#). In addition, NEON-collected specimens and samples are available and can be requested for research purposes. The data provided are being served freely to the scientific community and the public.

Proposing organizations will be expected to address the full suite of operations and maintenance including, but not limited to, data collection, processing, curation, and access; sample collection, storage, and archiving; engagement and training of the scientific community in NEON protocols and operations including promotion of the use of NEON data; education and outreach to K-12, undergraduate, and graduate students, as well as postdoctoral and early career scientists and the public; observatory maintenance, and the business systems (people, processes, and technologies) required to meet administrative responsibilities of managing an NSF major facility and satisfying federal regulatory and NSF policy requirements including those listed in NSF's *Proposal & Award Policies & Procedures Guide* ([PAPPG](#)) and the Uniform Guidance. NSF anticipates that cost estimates will need to be submitted in accordance with Section 4.2 of the NSF [Major Facilities Guide](#) now available in draft form and anticipated to be finalized in September 2019.

## **NSF'S CONCEPT OF FUTURE MANAGEMENT OF NEON OPERATIONS AND MAINTENANCE**

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The future recipient will work closely with NSF and the ecological community to ensure, within the budgetary constraints, that NEON advances the ability of scientists to examine and understand the interactions between life and the environment at regional to continental scales. Also, the recipient will ensure that NEON continues to support a large and diverse group of stakeholders – ecologists, environmental scientists, educators, policy makers, engineers, and citizens – who use the NEON data in their research, management, training, and education programs.

The future recipient will be responsible for the overall management and operation of the Observatory, including the physical infrastructure, cyber-infrastructure, instrumentation and personnel, through a strategically planned scope of activities. A principal activity will be routine field sampling and executing the maintenance of, and periodic replacement or refurbishment of, instruments and equipment. Given the importance of a centralized cyberinfrastructure to NEON, the recipient will be expected to continue to provide NEON users a consistent and reliable user interface and access to all data products. In discharging these responsibilities, the recipient will ensure that it capitalizes on the distributed nature of the Observatory and the expertise at the various Domains, to promote broad community engagement.

The future recipient will develop Annual Work Plans consistent with the objectives and priorities of the NSF and the U.S. ecological community. The recipient will be expected to meet the highest standards for service to the scientific community and to demonstrate proactive and effective approaches to facility technical and cost performance. Progress and performance will be monitored through routine reporting and other oversight activities specified in the terms and conditions of the cooperative agreement.

## **GOALS OF THE COMPETITION**

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In order to support the mission of NEON, NSF anticipates the following programmatic goals for the NEON competition. The successful proposal will show evidence of:

1. Continued commitment to timely and open access to NEON standardized data and assets by a broad user base of researchers and educators,
2. Excellent and efficient leadership, business practices, performance self-assessment, and user support,
3. Ability to provide safe and secure operations and maintenance of NEON's resources and infrastructure,
4. Ability to provide effective management of NEON's data and infrastructure, enabling NEON to operate as an integrated, cohesive, and transparent national facility in service to the biological sciences community,
5. Ability to promote active involvement of the research community in an advisory capacity to inform operations and maintenance,

6. Participation in the development of the current and next-generation workforce to conduct regional- to continental-scale research, and to support the use of NEON in educational activities, and
7. Ability to develop strategic partnerships that bring additional value through collaboration with national and international resources that complement NEON.

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## **ANTICIPATED COMPETITION SCHEDULE**

This notice does not constitute a solicitation. Proposals are not yet sought, and no award of any kind will result from this notice. NSF anticipates that a program solicitation will be issued in the last quarter of Calendar Year 2019. The anticipated due date for full proposals in response to the program solicitation is expected to be approximately 5-6 months following its publication.

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## **ELIGIBILITY INFORMATION**

NSF anticipates that the competition for management and operation of NEON will be open to all U.S. institutions of higher education (IHE) (two- and four-year IHEs (including community colleges) accredited in, and having a campus located in the U.S., acting on behalf of their faculty members)

and U.S. non-profit, non-academic organizations with strong capabilities in scientific or engineering research and education for award of financial assistance in the form of a cooperative agreement. In addition to research capabilities, potential recipients must clearly demonstrate through their proposal their organization's ability to quickly transition to assume and manage the business aspects of a geographically dispersed major facility. NEON presently operates with over 500 employees and is the result of a \$460 million construction investment by the NSF. NSF requires that proposing organizations identify an individual employed by that organization to serve as the Principal Investigator (PI).

NEON must be managed in the public interest, and with full disclosure to the NSF of the successful recipient's program-related affairs, including technical, financial and programmatic performance. The recipient will have full responsibility for day-to-day management of the Observatory. NSF will have overall responsibility for award oversight and anticipates that regular programmatic and annual performance reviews will be conducted, as will periodic business and financial reviews. NSF's NEON Program within the BIO/DBI provides direct oversight for the NEON project with support from the Large Facilities Office (LFO) and the Division of Acquisition and Cooperative Support (DACs).

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## **REQUESTS FOR INFORMATION**

NSF invites initial written comments and questions by September 30, 2019, from eligible organizations interested in this future competition. Following release of the solicitation,

interested parties will be encouraged to request clarification of general aspects of the competition or identify any information they feel would be needed for proposal preparation. Informational webinars for interested parties are anticipated. Registration will be required for all participants.

Any questions regarding this Dear Colleague Letter or the forthcoming solicitation should be directed to NSF and not to the incumbent managing organization. Information provided to NSF prior to issuance of the program solicitation will be kept confidential to the extent permitted by law. Written comments should be submitted via email to the Primary Contact listed below.

## **SOURCES FOR ADDITIONAL INFORMATION**

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NSF National Ecological Observatory Network (NEON) Program Website:  
[https://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=13440&org=DBI&from=home](https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13440&org=DBI&from=home)

National Ecological Observatory Network (NEON) Website:  
<http://www.neonscience.org/>

Draft NSF Major Facilities Guide (MFG):  
[https://www.nsf.gov/bfa/lfo/docs/Exhibit 1 - Major Facilities Guide May 2019\\_Final Draft.pdf](https://www.nsf.gov/bfa/lfo/docs/Exhibit%201%20-%20Major%20Facilities%20Guide%20May%202019_Final%20Draft.pdf)

NSF Business Systems Review (BSR) Guide (NSF 13-100):  
[https://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=nsf13100](https://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf13100)

## **PRIMARY CONTACT**

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If you have any questions or comments, please contact the cognizant program officer (Dr. Roland P. Roberts) at [neon-bot@nsf.gov](mailto:neon-bot@nsf.gov).

Sincerely,

Dr. Joanne S. Tornow  
Assistant Director, Directorate for Biological Sciences  
National Science Foundation