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Cooperative Training Partnership in Aquatic Toxicology and Ecosystem Research

U.S. Environmental Protection Agency
Office of Research and Development
National Health and Environmental Effects Research Laboratory
Mid-Continent Ecology Division

Cooperative Training Partnership in Aquatic Toxicology and Ecosystem Research

This is the initial announcement of this funding opportunity.

Funding Opportunity Number: EPA-G2017-ORD-E1

Catalog of Federal Domestic Assistance (CFDA) Number: 66.511 - Office of Research and Development Consolidated Research/Training/Fellowships

Solicitation Opening Date: March 16, 2017
Solicitation Closing Date: May 16, 2017, 11:59:59 pm Eastern Time

Technical Contact: Brian Hill (hill.brian@epa.gov); phone: 218-529-5224
Eligibility Contact: Ron Josephson (josephson.ron@epa.gov); phone: 202-564-7823
Electronic Submissions: Debra M. Jones (jones.debram@epa.gov); phone: 202-564-7839

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SUMMARY OF PROGRAM REQUIREMENTS

Synopsis of Program:
The mission of the U.S. Environmental Protection Agency (EPA) is to protect human health and the environment. The EPA's Office of Research and Development (ORD) conducts timely, mission-relevant, solution-oriented research based on the principles of integrity, sustainability, and responsiveness to the needs of the Nation. ORD's National Health and Environmental Effects Research Laboratory's (NHEERL's) research portfolio spans the five goals outlined in EPA's Strategic Plan, and directly supports efforts to improve air quality, manage chemical risks, and protect America's water.

EPA-ORD seeks applications from eligible entities to enter into a cooperative agreement with EPA that will provide training opportunities for undergraduate, graduate, and post-doctoral trainees on-site at ORD's Mid-Continent Ecology Division (MED) research facilities located in Duluth, Minnesota. It is envisioned that the training program will increase both the effectiveness and number of future environmental scientists. The recipient is responsible for arranging training projects under the mentorship of EPA scientists that complement and extend the trainees' academic coursework and research experience. Appropriate fields of study for trainees include, but are not limited to, biology, chemistry, computer science, ecology, economics, engineering, environmental science, physical science, social science, toxicology and water policy.

Award Information:
Anticipated Type of Award: Cooperative Agreement
Estimated Number of Awards: 1
Anticipated Funding Amount: Approximately $1,200,000 total
Potential Funding per Grant: Up to a total of $1,200,000, including direct and indirect costs, with a maximum duration of 3 years. Cost-sharing is not required. Proposals with budgets exceeding the total award limits will not be considered.

Eligibility Information:
This solicitation is available to each State, territory and possession, and Tribal nation of the U.S., including the District of Columbia, public and private universities and colleges, hospitals, laboratories, State and local government departments, other public or private nonprofit institutions, and foreign entities. Profit-making firms are not eligible to receive assistance agreements from the EPA under this program. See full announcement for more details.

Application Materials:
To apply under this solicitation, use the application package available at Grants.gov (for further submission information see Section IV.F. "Submission Instructions and other Submission Requirements"). Note: With the exception of the current and pending support form (available at How to Apply and Required Forms), all necessary forms are included in

the electronic application package. Make sure to include the current and pending support form in your Grants.gov submission.

If your organization is not currently registered with Grants.gov, you need to allow approximately one month to complete the registration process. Please note that the registration process also requires that your organization have a unique entity identifier (formerly 'DUNS number') and a current registration with the System for Award Management (SAM) and the process of obtaining both could take a month or more. Applicants must ensure that all registration requirements are met in order to apply for this opportunity through Grants.gov and should ensure that all such requirements have been met well in advance of the submission deadline. This registration, and electronic submission of your application, must be performed by an authorized representative of your organization.

If you do not have the technical capability to utilize the Grants.gov application submission process for this solicitation, see Section IV.A below for additional guidance and instructions.

Agency Contacts:
Technical Contact: Brian Hill (hill.brian@epa.gov); phone: 218-529-5224
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I. FUNDING OPPORTUNITY DESCRIPTION

A. Introduction

EPA's ORD seeks to support a Cooperative Training Partnership in Aquatic Toxicology and Ecosystem Research to provide environmental research training for college and university students and postdoctoral researchers. The goal of the Cooperative Training Partnership in Aquatic Toxicology and Ecosystem Research is to increase both the effectiveness and number of future environmental scientists and technicians by allowing trainees to collaborate with and be mentored by senior EPA-ORD scientists while working in a fully operational federal research laboratory. Ultimately, this program is expected to assist in developing the next generation of environmental scientists and engineers to further the Agency's mission to protect human health and the environment by improving air quality, managing chemical risks, and protecting America's water. Research training will be conducted at EPA's facility in Duluth, Minnesota. Appropriate fields of study for trainees include, but are not limited to, biology, chemistry, computer science, ecology, economics, engineering, environmental science, physical science, social science, toxicology, and water policy.

EPA recognizes that it is important to engage all available minds to address the environmental challenges the nation faces. At the same time, EPA seeks to expand the environmental conversation by including members of communities which may have not previously participated in such dialogues to participate in EPA programs. For this reason, EPA strongly encourages all eligible applicants identified in Section III, including minority serving institutions (MSIs), to apply under this opportunity.

For purposes of this solicitation, the following are considered MSIs:

1. Historically Black Colleges and Universities, as defined by the Higher Education Act (20 U.S.C. § 1061). A list of these schools can be found at White House Initiative on Historically Black Colleges and

Universities;

2. Tribal Colleges and Universities, as defined by the Higher Education Act (20 U.S.C. § 1059(c)). A list of these schools can be found at American Indian Tribally Controlled Colleges and Universities;
3. Hispanic-Serving Institutions (HSIs), as defined by the Higher Education Act (20 U.S.C. § 1101a(a)(5)). There is no list of HSIs. HSIs are institutions of higher education that, at the time of application submittal, have an enrollment of undergraduate full-time equivalent students that is at least 25% Hispanic students at the end of the award year immediately preceding the date of application for this grant; and
4. Asian American and Native American Pacific Islander-Serving Institutions; (AANAPISIs), as defined by the Higher Education Act (20 U.S.C. § 1059g(a)(2)). There is no list of AANAPISIs. AANAPISIs are institutions of higher education that, at the time of application submittal, have an enrollment of undergraduate students that is not less than 10 % students who are Asian American or Native American Pacific Islander.

B. Background

The U.S. Environmental Protection Agency (EPA), Office of Research and Development, National Health and Environmental Effects Research Laboratory (NHEERL), Mid-Continent Ecology Division's (MED) functional identity is rooted in freshwater ecotoxicology and in watershed and coastal ecology. MED's ecotoxicology functions are translational and predictive. Translational toxicology uses physiologically based pharmacokinetic (PBPK) and toxicokinetic (PBTK) modeling, population modeling, and xenobiotic metabolism at environmental/biological interfaces to inform ecological risk assessments of chemicals, as needed by EPA's Program Offices and Regions. Predictive toxicology uses the adverse outcome pathways (AOP) framework and systems biology approaches to better understand and characterize the consequences of toxic chemical perturbation of biological systems to reduce uncertainties in chemical risk assessments. Predictive toxicology develops extrapolations across chemicals, species and biological levels of organization with which to support risk assessment of chemicals when few empirical data are available.

MED's functional identity in freshwater watershed and coastal ecology focuses on the development of environmental, social, and public health indicators for assessing and predicting the impacts of anthropogenic land use, contaminant remediation, ecosystem service restoration, and community revitalization. We use natural and social science approaches to develop innovative strategies that integrate the ecological and socioeconomic dynamics of coastal systems into sustainability decisions made by impacted communities, including advanced coastal observing and assessment systems that link conditions in coastal waters to antecedent watershed conditions. By linking the ecological condition and ecosystem services of watersheds and coastal environments with human benefits, we gain important insights into the interdependencies of ecologic, economic, and human health that are fundamental to EPA's science and regulatory mission.

MED seeks to establish a cooperative partnership with an eligible applicant capable of managing an environmental training program. One (1) cooperative agreement will be awarded to an eligible applicant or consortium of eligible applicants from this solicitation. The cooperative agreement should provide a training partnership with MED scientists. The purpose of this cooperative agreement is to stimulate interest among undergraduate, graduate, and post-doctoral trainees in careers involving environmental research, to provide hands-on experience to these trainees

in MED's research facilities, and to promote career development for university faculty via the collaborative training and mentoring of these student and postdoctoral trainees. It is envisioned that this training program will involve the active participation of EPA scientists as co-mentors with university scientists, and that the trainees will be trained at MED's research facility.

Research Facilities:
MED's research facility in Duluth is located on a 13-acre campus adjacent to Lake Superior, the source of water for its aquatic organism cultures and ecotoxicology facilities. This facility comprises 107,000 sq. ft. of laboratories, offices, and research support and maintenance operations. MED maintains state-of-the-science laboratories and facilities, including advanced analytical capabilities for cellular, molecular, biochemical and chemical analyses of water, sediments and biological materials. MED maintains a complement of research vessels to support field research on the Great Lakes and adjacent watersheds, including the 90-foot RV Lake Explorer II and an autonomous underwater glider for unmanned sampling of physical and chemical conditions of the Great Lakes.

The specific Strategic Goal(s) and Objective(s) from the EPA's Strategic Plan that relate to this solicitation are:

Goal 2: Protecting America's Waters
Objective 2.1: Protect Human Health

Objective 2.2: Protect and Restore Watersheds and Aquatic Ecosystems

Goal 3: Cleaning Up Communities and Advancing Sustainable Development
Objective 3.1: Promote Sustainable and Livable Communities

Goal 4: Ensuring the Safety of Chemicals and Preventing Pollution
Objective 4.1: Ensure Chemical Safety

The EPA's FY 2014-18 Strategic Plan can be found at:
EPA Strategic Plan

The Cooperative Training Partnership in Aquatic Toxicology and Ecosystem Research provides opportunities for undergraduate, graduate, and post-doctoral trainees to collaborate with and be mentored by EPA scientists at MED in Duluth, Minnesota. The ultimate goal is to produce environmental scientists and technicians who not only have relevant classroom experience, but who also have research field and laboratory experience.

The purpose of this announcement is to request applications to competitively select a technically and administratively qualified recipient to develop and administer a year-round research training program. The Cooperative Training Partnership in Aquatic Toxicology and Ecosystem Research will supplement the academic education of the trainees by enabling them to complete mentored projects on-site with EPA scientists at MED's federal research laboratories located in Duluth, Minnesota. The training can begin at any time during the calendar year and will be structured to occur in conjunction with the trainees' academic studies. Training is to be conducted on-site at MED's facilities in Duluth, Minnesota, and the applicant should describe its approach for managing logistics that are necessary to meet this objective.

The Cooperative Training Partnership in Aquatic Toxicology and Ecosystem Research is expected to include collaborative training opportunities by MED scientists (mentors) and university scientists for undergraduate, graduate, and post-doctoral trainees. Trainees will gain research experience by working under the mentorship of MED scientists in their EPA laboratory throughout the academic year and may continue their training during the summer session. Applications should propose a balanced approach to include undergraduate, graduate (Masters and Doctoral), and postdoctoral trainees in a manner to meaningfully meet the program's objective of increasing both the effectiveness and number of future environmental scientists. While actual hours spent at MED's facilities is likely to vary (e.g., depending on class schedule, hours needed to complete the research project), it is expected that a typical undergraduate or graduate student trainee will spend 10-20 hours per week during the academic year at MED's facility and 20 or more hours per week at the MED facility if participating in the summer session. Post-doctoral trainees are expected to spend approximately 40 hours per week in the program, with the majority of that time at the MED facility.

Research themes for training opportunities will be identified, collaboratively, by the recipient and MED, and will reflect MED's Branch missions:

- **Systems Toxicology Branch (STB)** conducts research in pathway-based approaches to predicting toxic effects of chemicals in ecological receptors. Areas of emphasis include adverse outcome pathway development and quantification, extrapolation across chemicals, species and biological levels of organization and development of quantitative structure activity models.
- **Translational Toxicology Branch (TTB)** conducts research using models for determining chemical effects in ecological receptors, and interpreting those effects within the context of ecological risk assessment and other regulatory applications. Areas of emphasis include dosimetry prediction and modeling, bioavailability, bioaccumulation, development of toxicity test methods, synthesis of toxicity test results, and population level effects of chemicals.
- **Ecosystem Services Branch (ESB)** conducts research quantifying the outputs of freshwater ecosystems and how they contribute to human well-being and social welfare. Areas of emphasis include developing ecological, biophysical and socioeconomic indicators of ecosystem services, creating models for translating ecosystem structure and function into services and thence to human benefits, and developing methods to quantify tradeoffs among services resulting from management actions including environmental remediation and restoration.
- **Watersheds and Water Resources Branch (WWRB)** conducts research that links the ecological sustainability of receiving waters to watershed integrity. WWRB uses a systems approach to understanding the impacts of anthropogenic stressors on diverse water body types at multiple spatial scales. Areas of emphasis include conceptual foundations, modeling frameworks, assessment and monitoring methods, biological response functions, and operational tools needed to manage ecosystems, forecast outcomes management decisions, and sustain public benefits from water resources and watersheds.

Projects that are consistent with MED's research priorities and are suitable for trainees will be coordinated with the EPA mentor(s) and developed by the recipient. Appropriate fields of study for trainees include, but are not limited to, biology, chemistry, computer science, ecology, economics, engineering, environmental science, physical science, social science,

toxicology, and water policy. The objective of the training program is not to provide products or services for EPA's direct use or to augment its workforce.

It is envisioned that the training program will increase both the effectiveness and number of future environmental scientists. The recipient is responsible for ensuring that the training undergraduate and graduate student trainees receive under the mentorship of MED scientists complements the trainees' ongoing academic coursework. Additionally, the recipient must ensure that the training experience builds upon any prior training the undergraduate, graduate and post-doctoral trainees may have received. Training in professional scientific ethics and quality assurance is expected to be provided by both the recipient and EPA. The MED on-site cooperative training experience will be conducted with MED scientists and includes problem and hypothesis formulation, experimental design, sample collection and analysis, data evaluation, quality assurance, reporting and presenting results, manuscript development and publication, and participation in relevant seminars, research discussions, and training sessions. It is envisioned that trainees would incorporate aspects of their training at EPA into scientific presentations and honors projects, theses and dissertations, and publications. For graduate student trainees, it is envisioned that MED mentors would participate on their advisory committees

C. Authority and Regulations
The authority for this RFA and resulting awards is contained in the Clean Water Act, 33 U.S.C. 1254, Section 104 (b)(3).

For research with an international aspect, the above statutes are supplemented, as appropriate, by the National Environmental Policy Act, Section 102(2)(F).

Note that a project's focus is to consist of activities within the statutory terms of EPA's financial assistance authorities; specifically, the statute(s) listed above. Generally, a project must address the causes, effects, extent, prevention, reduction, and elimination of water pollution, toxic substances control, or pesticide control depending on which statute(s) is listed above. Further note applications dealing with any aspect of or related to hydraulic fracking will not be funded by EPA through this program.

Additional applicable regulations include: 2 CFR Part 200, 2 CFR Part 1500, and 40 CFR Part 45 (Training Assistance).

D. Program Components-Specific Areas of Interest & Expected Outputs and Outcomes
Note to applicant: The term "output" means an environmental activity, effort, and/or associated work products related to an environmental goal or objective, that will be produced or provided over a period of time or by a specified date. The term "outcome" means the result, effect or consequence that will occur from carrying out an environmental program or activity that is related to an environmental or programmatic goal or objective.

Program Components
The applicant's proposed Cooperative Training Partnership in Aquatic Toxicology and Ecosystem Research should address the following components:

1. The educational and technical merit of the training program should support EPA's goal and objective of training the next generation of

environmental scientists. The program should provide for a partnership between a successful institution or consortium of institutions and MED in Duluth, Minnesota for on-site training of a new generation of undergraduate, graduate, and post-doctoral trainees who will pursue careers in environmentally-related fields. For students, the training/mentorship will occur during the academic year with the option for continued training/mentorship during the summer session, while for postdoctoral trainees, the training/mentorship is expected to occur on a year-round basis.

2. The applicant is expected to describe the process for matching the identified trainees with the available training opportunities related to MED's research themes. MED will designate mentors through the EPA Project Officer. After award, the MED mentors will provide research themes for potential projects to ensure a fit between the trainees' interests and qualifications and the training and research opportunities available at the MED laboratory.
3. The applicant should propose how it will provide and manage financial support to trainees. Training will be conducted on-site at MED's facilities in Duluth, Minnesota, and the applicant must describe its approach for managing any logistics that are necessary to meet this objective. The typical post-doctoral trainee will spend approximately 40 hours per week under the training program year-round, with the majority of that time expected to be at the MED facility. The typical undergraduate and graduate student trainee will spend approximately 10-20 hours per week during the academic year and 20-40 hours per week if participating in the summer session at MED's research facilities. Graduate student trainees will typically undertake research projects that are more substantial (and thus take more hours) than those of undergraduates. The applicant should explain how it will provide scientific oversight for the selected trainees' research proposals, as well as development of personal training plans which outline their anticipated learning objectives and the anticipated benefits to their career.
4. The applicant should propose how it will 1) disseminate guidance and direction to trainees to ensure they are following the health and safety and quality assurance requirements as described by MED Mentors while working at the EPA laboratory; 2) evaluate training/research plans to ensure human subjects research is identified and properly managed according to EPA's Human Subject Research Regulations and Policies; 3) assist trainees to accomplish the required coursework for their chosen degree without undue interference from their research responsibilities; and 4) provide the necessary resources for the trainees to accomplish their proposed research.
5. The applicant should describe how the program will advertise the training opportunity in as wide a manner as practicable and on a competitive basis, and how it will receive and manage applications from prospective students and postdocs. The applicant should describe the review criteria to be used in the evaluation of potential trainees, and discuss the rationale for making selections.
6. The applicant should identify an individual who will be designated to serve as the Project Manager. This individual should have the background capable of managing a research training program including administrative experience.

Overall, the recipient, through the activities of the Project Manager (PM), will be expected to be responsible for:

- Providing a single point of contact for the EPA Project Officer for all administrative and technical requirements of the cooperative agreement;
- Ensuring compliance with the agreement's terms and conditions;

- Competitively advertising training opportunities;
- Managing the evaluation and selection process for the trainees and providing relevant information (e.g., areas of study for selected trainees) for the EPA Project Officer to identify a suitable MED mentor;
- Providing scientific oversight for training plans in collaboration with the MED mentor;
- Developing the research projects (in collaboration with the MED mentor) and ensuring trainees achieve anticipated benefits;
- Providing comments to the EPA Project Officer regarding progress of research, problems encountered, and solutions taken;
- Providing guidance and instruction, as necessary, ensuring the trainees follow acceptable scientific methods;
- Providing budget accounts and progress reports to the EPA Project Officer on an agreed-upon schedule;
- Ensuring training results are incorporated in a final report that summarizes all trainees' project objectives, approaches, outcomes, and learning experiences;
- Providing guidance and assistance in the preparation of scientific presentations and publications arising from the traineeships;
- Managing all human-resource and supervisory functions for trainees, including but not limited to: compensation and benefits, time and attendance tracking, and record keeping.

Outputs and Outcomes

Outputs from the Research Training Program funded under this RFA are expected to include, but are not limited to:

- The training of approximately 8 trainees per year;
- Reports that summarize the trainees' projects, objectives, approaches, learning experiences, and budget allocations;
- Honors/capstone projects, theses, and dissertations that fulfill requirements for undergraduate or advanced degrees
- Scientific and technical publications authored or co-authored by trainees;
- Attendance and presentations of research results by the trainees at scientific meetings;
- Generation of data and information essential to conducting environmental studies.

Examples of expected outcomes include, but are not limited to:

- Increase in the number of environmental scientists and technicians that have the training and experience to immediately enter the workforce upon graduation;
- Increase in the number of environmental scientists who can productively contribute to the understanding of the science needed to manage environmental risks;
- Increase in the overall knowledge and experience of the trainees being mentored and trained.

E. Special Requirements

Agency policy and ethical considerations prevent EPA technical staff and managers from providing applicants with information that may create an unfair competitive advantage. Consequently, EPA employees will not review, comment, advise, and/or provide technical assistance to applicants preparing applications in response to EPA RFAs. EPA employees cannot endorse any particular application.

Groups of two or more eligible applicants may choose to form a consortium and submit a single application for this assistance agreement. The

application must identify which organization will be the recipient of the assistance agreement and which organizations(s) will be sub-awardee(s) of the recipient.

II. AWARD INFORMATION

It is anticipated that a total of approximately $1,200,000 will be awarded under this announcement, depending on the availability of funds, quality of applications received, and other applicable considerations. The EPA anticipates funding one award under this RFA. Requests for amounts in excess of a total of $1,200,000, including direct and indirect costs, will not be considered. The total project period requested in an application submitted for this RFA may not exceed 3years.

The EPA reserves the right to reject all applications and make no awards under this RFA. The EPA reserves the right to make additional awards under this announcement, consistent with Agency policy, if additional funding becomes available after the original selections are made. Any additional selections for awards will be made no later than six months after the original selection decisions.

EPA expects the funding for the selected applicant to be incremental, as suitable trainees are identified and brought on, and reserves the right to partially fund proposals/applications by funding discrete portions or phases of proposed projects. If EPA decides to partially fund a proposal/application, it will do so in a manner that does not prejudice any applicants or affect the basis upon which the proposal/application, or portion thereof, was evaluated and selected for award, and therefore maintains the integrity of the competition and selection process.

EPA will award a cooperative agreement under this announcement. EPA will negotiate the terms and conditions relating to its substantial involvement in this training partnership and anticipates this involvement to include, but not be limited too, the following:

- MED mentors will collaborate with recipient staff in identifying suitable trainee opportunities;
- MED mentors will review the trainees' proposed projects to ensure a fit between the trainees' interests and qualifications and the training and research opportunities available at the MED laboratory and may therefore decline taking on mentorship of trainees deemed to be poorly matched with the available opportunities;
- MED mentors will provide assistance with the development of the research project(s) and be responsible for ensuring that research activities performed by the trainees at MED facilities in Duluth, Minnesota fulfill the requirements of the research projects and are a beneficial learning experience for the trainees;
- MED staff will train the trainees in field and laboratory health and safety and quality assurance;
- MED mentors will provide on-site training in laboratory and/or field techniques, theory and operation of advanced laboratory and/or field instrumentation, experimental design, data evaluation, computer data base management, computer applications, library database search techniques, sample preparation and analysis, computer model application, as appropriate, as well as many other areas related to field and laboratory research;
- MED mentors and staff will provide trainees with opportunities to learn about current environmental issues, research, and career options;
- MED mentors will provide guidance and assistance in the preparation of scientific publications, as appropriate; and

- MED mentors may serve as thesis and dissertation advisors or committee members for student trainees.

Proposals may not identify specific EPA cooperators, although they should describe in general terms how they envision the cooperation working; specific interactions between EPA's investigators and those of the cooperative agreement recipient will be negotiated at the time of award.

III. ELIGIBILITY INFORMATION

A. Eligible Applicants

This solicitation is available to each State, territory and possession, and Tribal nation of the U.S., including the District of Columbia, public and private universities and colleges, hospitals, laboratories, State and local government departments, other public or private nonprofit institutions, and foreign entities. Profit-making firms are not eligible to receive assistance agreements from the EPA under this program.

Non-profit organization, as defined by 2 CFR Part 200, means any corporation, trust, association, cooperative or other organization that: (1) is operated primarily for scientific, educational, service, charitable or similar purposes in the public interest; (2) is not organized primarily for profit; and (3) uses its net proceeds to maintain, improve and/or expand its operations. Note that 2 CFR Part 200 specifically excludes the following types of organizations from the definition of "non-profit organization" because they are separately defined in the regulation: (i) institutions of higher education; and (ii) state, local and federally-recognized Indian tribal governments. While not considered to be a "non-profit organization(s)" as defined by 2 CFR Part 200, Institutions of Higher Education and state, local and federally-recognized Indian tribal governments are, nevertheless, eligible to submit applications under this RFA. Hospitals operated by state, tribal, or local governments or that meet the definition of nonprofit at 2 CFR 200.70 are also eligible to apply. For-profit colleges, universities, trade schools, and hospitals are ineligible. Nonprofit organizations described in Section 501(c) (4) of the Internal Revenue Code that lobby are not eligible to apply.

National laboratories funded by Federal Agencies (Federally-Funded Research and Development Centers, "FFRDCs") may not apply. FFRDC employees may cooperate or collaborate with eligible applicants within the limits imposed by applicable legislation and regulations. They may participate in planning, conducting, and analyzing the research directed by the applicant, but may not direct projects on behalf of the applicant organization. The institution, organization, or governance receiving the award may provide funds through its assistance agreement from the EPA to an FFRDC for research personnel, supplies, equipment, and other expenses directly related to the research. However, salaries for permanent FFRDC employees may not be provided through this mechanism. Federal Agencies may not apply. Federal employees are not eligible to serve in a principal leadership role on an assistance agreement, and may not receive salaries or augment their Agency's appropriations in other ways through awards made under this program.

The applicant institution may enter into an agreement with a Federal Agency to purchase or utilize unique supplies or services unavailable in the private sector to the extent authorized by law. Examples are purchase of satellite data, chemical reference standards, analyses, or use of instrumentation or other facilities not available elsewhere. A written justification for federal involvement must be included in the application. In

addition, an appropriate form of assurance that documents the commitment, such as a letter of intent from the Federal Agency involved, should be included.

Potential applicants who are uncertain of their organizational eligibility should contact Ron Josephson (josephson.ron@epa.gov); phone: 202-564-7823.

B. Cost sharing

Institutional cost-sharing is not required.

C. Other

Applications must substantially comply with the application submission instructions and requirements set forth in Section IV of this announcement or they will be rejected. In addition, where a page limitation is expressed in Section IV with respect to parts of the application, pages in excess of the page limit will not be reviewed. Applications must be submitted through Grants.gov as stated in Section IV of this announcement (except in the limited circumstances where another mode of submission is specifically allowed for as explained in Section IV) on or before the application submission deadline published in Section IV of this announcement. Applicants are responsible for following the submission instructions in Section IV of this announcement (see Section IV.F. "Submission Instructions and Other Submission Requirements" for further information) to ensure that their application is timely submitted. Applications submitted after the submission deadline will be considered late and deemed ineligible without further consideration unless the applicant can clearly demonstrate that it was late due to EPA mishandling or because of technical problems associated with Grants.gov or relevant SAM.gov system issues. An applicant's failure to timely submit their application through Grants.gov because they did not timely or properly register in SAM.gov or Grants.gov will not be considered an acceptable reason to consider a late submission.

Applications exceeding the funding limits or project period term described herein will be rejected without review. Further, applications that fail to demonstrate a public purpose of support or stimulation (e.g., by proposing research which primarily benefits a Federal program or provides a service for a Federal agency) will not be funded.

Consistent with Agency regulatory obligations, applicants for and/or recipients of EPA financial assistance are prohibited from discriminating on the basis of race, color, national origin, sex or disability in their programs or activities. Therefore, applications that contain provisions wherein decisions about how to structure and manage a trainee program, including the selection process, based on race, color, national origin, sex or disability will not be considered.

Applications deemed ineligible for funding consideration will be notified within fifteen calendar days of the ineligibility determination.

IV. APPLICATION AND SUBMISSION INFORMATION

Additional provisions that apply to this solicitation and/or awards made under this solicitation, including but not limited to those related to confidential business information, contracts and sub-awards under grants, and proposal assistance and communications, can be found at EPA Solicitation Clauses.

These, and the other provisions that can be found at the website link, are important, and applicants must review them when preparing applications for this solicitation. If you are unable to access these provisions electronically at the website above, please communicate with the EPA contact listed in this solicitation to obtain the provisions.

Formal instructions for submission through Grants.gov are in Section F.

A. Grants.gov Submittal Requirements and Limited Exception Procedures

Applicants, except as noted below, must apply electronically through Grants.gov under this funding opportunity based on the Grants.gov instructions in this announcement. If an applicant does not have the technical capability to apply electronically through Grants.gov because of limited or no internet access which prevents them from being able to upload the required application materials to Grants.gov, the applicant must contact OGDWaivers@epa.gov or the address listed below in writing (e.g., by hard copy, email) *at least 15 calendar days prior to the submission deadline under this announcement* to request approval to submit their application materials through an alternate method.

Mailing Address:
OGD Waivers
c/o Barbara Perkins
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Ave., N. W.
Mail Code: 3903R
Washington, DC 20460

Courier Address:
OGD Waivers
c/o Barbara Perkins
Ronald Reagan Building
1300 Pennsylvania Ave., N.W.
Rm # 51267
Washington, DC 20004

In the request, the applicant must include the following information:
Funding Opportunity Number (FON)
Organization Name and DUNS
Organization's Contact Information (email address and phone number)
Explanation of how they lack the technical capability to apply electronically through Grants.gov because of: 1) limited internet access or 2) no internet access which prevents them from being able to upload the required application materials through Grants.gov.

EPA will only consider alternate submission exception requests based on the two reasons stated above and will timely respond to the request -- all other requests will be denied. If an alternate submission method is approved, the applicant will receive documentation of this approval and further instructions on how to apply under this announcement. Applicants will be required to submit the documentation of approval with any initial application submitted under the alternative method. In addition, any submittal through an alternative method must comply with all applicable requirements and deadlines in the announcement including the submission deadline and requirements regarding proposal content and page limits (although the documentation of approval of an alternate submission

method will not count against any page limits).

If an exception is granted, it is valid for submissions to EPA for the remainder of the entire calendar year in which the exception was approved and can be used to justify alternative submission methods for application submissions made through December 31 of the calendar year in which the exception was approved (e.g., if the exception was approved on March 1, 2016, it is valid for any competitive or non-competitive application submission to EPA through December 31, 2016). Applicants need only request an exception once in a calendar year and all exceptions will expire on December 31 of that calendar year. Applicants must request a new exception from required electronic submission through Grants.gov for submissions for any succeeding calendar year. For example, if there is a competitive opportunity issued on December 1, 2016 with a submission deadline of January 15, 2017, the applicant would need a new exception to submit through alternative methods beginning January 1, 2017.

Please note that the process described in this section is only for requesting alternate submission methods. All other inquiries about this announcement must be directed to the Agency Contact listed in Section VII of the announcement. Queries or requests submitted to the email address identified above for any reason other than to request an alternate submission method will not be acknowledged or answered.

B. Application Package Information
Use the application package available at Grants.gov (see Section IV.F. "Submission Instructions and Other Submission Requirements"). Note: With the exception of the current and pending support form (available at How to Apply and Required Forms), all necessary forms are included in the electronic application package. Make sure to include the current and pending support form in your Grants.gov submission.

An email will be sent by EPA to the Project Manager and the Administrative Contact (see below) to acknowledge receipt of the application and transmit other important information. The email will be sent from receipt.application@epa.gov; emails to this address will not be accepted. *If you do not receive an email acknowledgement within 10 calendar days of the submission closing date, immediately inform the Electronic Submissions Contact shown in this solicitation. Failure to do so may result in your application not being reviewed.* See Section IV.F. "Submission Instructions and Other Submission Requirements" for additional information regarding the application receipt acknowledgment.

C. Content and Form of Application Submission
The application is made by submitting the materials described below. **Applications must contain all information requested and be submitted in the formats described.**

1. **Standard Form 424**

   The applicant must complete Standard Form 424. Instructions for completion of the SF424 are included with the form. (However, note that EPA requires that the entire requested dollar amount appear on the SF424, not simply the proposed first year expenses.) The form must contain the signature of an authorized representative of the applying organization.

   Applicants are required to provide a unique entity identifier (formerly 'DUNS number') when applying for federal grants or cooperative agreements. Organizations may receive a unique entity identifier, at no

cost, by calling the dedicated toll-free request line at 1-866-705-5711, or visiting the website at: Dun & Bradstreet EXIT .

Executive Order 12372, "Intergovernmental Review of Federal Programs," does not apply to the Office of Research and Development's research and training programs unless EPA has determined that the activities that will be carried out under the applicants' proposal (a) require an Environmental Impact Statement (EIS), or (b) do not require an EIS but will be newly initiated at a particular site and require unusual measures to limit the possibility of adverse exposure or hazard to the general public, or (c) have a unique geographic focus and are directly relevant to the governmental responsibilities of a State or local government within that geographic area.

If EPA determines that Executive Order 12372 applies to an applicant's proposal, the applicant must follow the procedures in 40 CFR Part 29. The applicant must notify their state's single point of contact (SPOC).). OMB may be in the process of updating the SPOC list. Until it is updated or further guidance is provided by OMB, for informational purposes only you may access a prior listing of SPOC.

If an applicant is in a State that does not have a SPOC, or the State has not selected research and development grants for intergovernmental review, the applicant must notify directly affected State, area wide, regional and local entities of its proposal.

EPA will notify the successful applicant(s) if Executive Order 12372 applies to its proposal prior to award.

2. **Key Contacts**

The applicant must complete the "Key Contacts" form found in the Grants.gov application package. An "Additional Key Contacts" form is also available at How to Apply and Required Forms. The Key Contacts form should also be completed for major sub-agreements (i.e., primary investigators). Do not include information for consultants or other contractors. Please make certain that all contact information is accurate.

3. **Table of Contents**

Provide a list of the major subdivisions of the application indicating the page number on which each section begins.

4. **Abstract** (1 page)

The abstract is a very important document in the review process. Therefore, it is critical that the abstract accurately describes the training effort being proposed and conveys all the essential elements of the training.

The abstract should include the information described below (a-g).

a. Funding Opportunity Title and Number for this proposal.
b. Project Title: Use the exact title of your project as it appears in the application. The title must be brief yet represent the major thrust of the project. Because the title will be used by those not familiar with the project, use more commonly understood terminology. Do not use general phrases such as "research on."
c. Personnel: List the name of the Project Manager, then the name(s) of additional identified personnel who will significantly contribute to

the program.

d. Institution(s): In the same order as the list of personnel, list the name, city and state of each participating institution. The institution applying for assistance must be clearly identified.
e. Project Period and Location: Show the proposed project beginning and ending dates and the performance site(s)/geographical location(s) where the work will be conducted.
f. Project Cost: Show the total funding requested from the EPA (include direct and indirect costs for all years).
g. Project Summary: Provide three subsections addressing: (1) the objectives of the program, (2) the expected results (outputs/outcomes) of the program and how they address the needs identified in the solicitation, and (3) the typical amount of time a trainee will spend at MED's research facilities **(Note: A typical undergraduate or graduate student trainee should spend approximately 10-20 hours per week during the academic year and 20 to 40 hours per week if participating in the summer session on-site at MED's Duluth, Minnesota research facilities; postdoctoral trainees are expected to spend 40 hours per week on the traineeship with the majority of that time spent at MED).**

5. **Project Narrative**

The Project Narrative is the technical proposal that discusses the approach and organizational capabilities for accomplishing the objectives stated under Section I.D of this solicitation. It must also address all of the review criteria described in Section V of the announcement.

The project narrative must not exceed twenty (20) consecutively numbered (bottom center), 8.5x11-inch pages of single-spaced, standard 12-point type with 1-inch margins. While these guidelines establish the minimum type size requirements, applicants are advised that readability is of paramount importance and should take precedence in selection of an appropriate font for use in the proposal. The page limitation for the project narrative shall include all text, tables, figures, references, attachments, and appendices. Do not refer to institutional websites to address content in the Project Narrative. All sections listed below must be adequately described within the twenty (20) page Project Narrative page limit.

The project narrative should provide the following information (Please use section headings provided below):

a. Educational and Technical Merit: Describe the educational and technical merit of the research training program being proposed for undergraduate, graduate, and post-doctoral trainees. Describe how a partnership with MED in Duluth, Minnesota will support EPA's goal and objective of training the next generation of environmental scientists and engineers.
b. Management of Training Program: The proposed approach for managing the training program, including providing financial support to trainees, processes and procedures for identifying and matching undergraduate, graduate, and post-doctoral trainees with the available training opportunities related to MED's research themes, and providing scientific oversight for the selected trainees' development of personal training plans and research projects to be conducted at EPA MED facilities should be described. The proposed training program should describe how it will disseminate guidance and direction to trainees to ensure they are following the health and safety and quality assurance requirements as described

by MED mentors while working at the EPA laboratory, evaluating training/research plans to ensure human subjects research is identified and properly managed, assisting trainees to accomplish the required coursework for their chosen degree without undue interference from their research responsibilities, and providing the necessary resources for the trainees to accomplish their proposed research. The approach shall provide information on any anticipated differences in managing undergraduate, graduate, and post-doctoral trainees including the impact of potentially more complex research projects being identified by graduate student and postdoctoral trainees. Applicants should address logistical issues necessary to achieve these and the other objectives of this announcement as described in Section I.

c. Recruitment: The proposed approach for competitively advertising the training program in as wide a manner as practicable and approach for recruiting undergraduate, graduate, and post-doctoral trainees of high quality and ability.
d. Trainee Review/Selection: The rationale and process for selecting trainees. The process for receiving, managing, and objectively reviewing applications from students for training. The applicant should describe the review criteria to be used in the evaluation of potential trainees. Note that applications must not contain provisions wherein decisions about how to structure and manage a trainee program, including the selection process, based on race, color, national origin, sex or disability.
e. Expected Outputs and Outcomes: Describe the expected outputs and outcomes resulting from the training program. Describe the plan for tracking and measuring progress toward achieving the expected environmental outputs and outcomes including those identified in Section I.D. above.
f. Personnel Expertise: The qualifications and competence of the Project Manager and key personnel and adequacy of their time commitment to the research training program. Include formal education, training, licenses, or other relevant training as it relates to expertise in conducting and/or overseeing activities described in Section I.
g. Financial and Project Management: Describe the approach, procedures, and controls for ensuring that awarded assistance funds will be expended in a timely and efficient manner and how project objectives will be timely and successfully achieved within the project period. Provide program schedules with associated milestones and target dates for completion.
h. Budget: Describe how the program budget makes the most efficient use of Agency funds for the collaborative training of undergraduate, graduate, and post-doctoral trainees, for instance, by providing recorded or on-line training to meet basic health and safety training requirements, thus saving more costly one-on-one training for unique situations.
i. Facilities and Resources: Describe the facilities and resources (e.g., supplies, training tools) available to support the learning experience of participating trainees.
j. Past Performance and Reporting History: Provide information on the proposed Project Manager's (PM's) past performance and reporting history under prior Federal assistance agreements (assistance agreements include grants and cooperative agreements but not contracts) in terms of: (i) the level of success in managing and completing each agreement, and (ii) history of meeting the reporting requirements and documenting progress towards achieving the expected results under each agreement.

The past performance and reporting history information is required only for the proposed PM's performance under federally funded assistance agreements (assistance agreements include grants and cooperative agreements but not contracts) similar in size, scope and relevance to the proposed project that the proposed PM performed within the last three years. Note: If no relevant prior past performance information and/or reporting history exists you will be asked to so state.

The specific information required for each agreement is shown below.

i. Name of Granting Agency.
ii. Grant/Cooperative agreement number.
iii. Grant/Cooperative agreement title.
iv. Brief description of the grant/cooperative agreement.
v. A description of how the agreement is similar in size, scope and relevance to the proposed project and whether or not it was successfully managed and completed; if not successfully managed and completed, provide an explanation.
vi. Information relating to the proposed PM's past performance in reporting on progress towards achieving the expected results (outputs/outcomes) under the agreement and meeting reporting requirements under the agreement. Include the history of submitting acceptable and timely progress/final technical reports, describe how progress towards achieving the expected results was reported/documented, and if such progress was not being made, provide an explanation of whether, and how, this was reported.
vii. Total (all years) grant/cooperative agreement dollar value.
viii. Project period.
ix. Technical contact (project officer), telephone number, and Email address (if available).

In evaluating applicants under these factors in Section V, EPA will consider the information provided by the applicant and may also consider relevant information from other sources, including information from EPA files and from current/prior grantors (e.g., to verify and/or supplement the information provided by the applicant). If you do not have any relevant or available past performance or past reporting information, please indicate this in the proposal and you will receive a neutral score for these factors (a neutral score is half of the total points available in a subset of possible points). If you do not provide any response for these items, you may receive a score of 0 for these factors.

6. **Budget and Budget Justification**

a. Budget
Prepare a master budget table using "SF-424A Budget Information for Non-Construction Programs" (aka SF-424A), available in the Grants.gov electronic application package and also at How to Apply and Required Forms. Only complete "Section B-Budget Categories". Provide the object class budget category (a. - k.) amounts for each budget year under the "Grant Program, Function or Activity" heading. Each column reflects a separate budget year. For example, Column (1) reflects budget year 1. The total budget will be automatically tabulated in column (5).

Applicants may not use subagreements to transfer or delegate their responsibility for successful completion of their EPA assistance

agreement. Please refer to EPA Solicitation Clauses if your organization intends to identify specific contractors, including consultants, and subawardees in your proposal.

Please note that institutional cost-sharing is not required.

b. Budget Justification *[3 pages in addition to the Section IV.C.5. page limitations]*

Describe the basis for calculating the personnel, fringe benefits, travel, equipment, supplies, contractual support, and other costs identified in the SF-424A. The budget justification should not exceed three consecutively numbered (bottom center), 8.5x11-inch pages of single-spaced, standard 12-point type with 1-inch margins.

Budget information should be supported at the level of detail described below:

1. Personnel: List all staff positions by title. Give annual salary, percentage of time assigned to the project, total cost for the budget period, and project role. Compensation paid for employees engaged in grant activities must be consistent with payments for similar work within the applicant organization. Note that for salaries to be allowable as a direct charge to the award, a justification of how that person will be directly involved in the project must be provided. General administrative duties such as answering telephones, filing, typing, or accounting duties are not considered acceptable.

   Below is a sample computation for Personnel:

Position/Title	**Annual Salary**	**% of Time Assigned to Project**	**Cost**
Project Manager	$70,000	50%	$ 35,000
Env. Specialist	$60,000	100%	$ 60,000
Env. Health Tech	$45,000	100%	$ 45,000
Total Personnel			**$140,000**

   Note this budget category is limited to persons employed by the applicant organization ONLY. Those employed elsewhere are classified as subawardees, program participants, contractors or consultants. Contractors and consultants should be listed under the “Contractual” budget heading. Subawards made to eligible subrecipients are listed under the “Other” budget heading. Participant support costs such as stipends or travel assistance for trainees (e.g. interns or fellows) are listed under the “Other” budget heading.

2. Fringe Benefits: Identify the percentage used and the basis for its computation. Fringe benefits are for the personnel listed in

budget category (1) above and only for the percentage of time devoted to the project. Fringe benefits include but are not limited to the cost of leave, employee insurance, pensions and unemployment benefit plans. The applicant should not combine the fringe benefit costs with direct salaries and wages in the personnel category.

3. Travel: Specify the estimated number of trips, purpose of each trip, number of travelers per trip, destinations, and other costs for each type of travel. Explain the need for any travel, paying particular attention to travel outside the United States.

   Below is a sample computation for Travel:

Purpose of Travel	**Location**	**Item**	**Computation**	**Cost**
EPA Progress Meeting	Duluth, MN	Lodging	4 people x $100 per night x 2 nights	$800
		Airfare	4 people x $500 round trip	$2,000
		Per Diem	4 people x $50 per day x 2 days	$400
Total Travel				**$3,200**

4. Equipment: Identify all tangible, non-expendable personal property to be purchased that has an estimated cost of $5,000 or more per unit and a useful life of more than one year. It does not include: (1) equipment planned to be leased/rented, including lease/purchase agreements; or (2) equipment service or maintenance contracts. Details such as the type of equipment, cost, and a brief narrative on the intended use of the equipment for project objectives are required. Each item of equipment must be identified with the corresponding cost. General-purpose equipment (office equipment, etc.) must be justified as to how it will be used on the project. (Property items with a unit cost of less than $5,000 are considered supplies.)

5. Supplies: “Supplies” means tangible property other than “equipment.” Identify supplies to be used under the project. This may include: software, office supplies, and laboratory supplies such as reagents, chemicals and glassware. Specifically identify computers to be purchased or upgraded.

6. Contractual: Specify the purpose of the proposed contract/procurement, the proposed duration of the contract/procurement, the estimated cost, and the proposed procurement method (competitive or non-competitive). Any procurement of services from individual consultants or

commercial firms (including space for workshops) must comply with the competitive procurement requirements of 2 CFR Part 200.317-200.326. Please see EPA Solicitation Clauses for more details.

Examples of Contractual costs include:

i. Consultants – Consultants are individuals with specialized skills who are paid at a daily or hourly rate. EPA's participation in the salary rate (excluding overhead) paid to individual consultants retained by recipients or by a recipient's contractors or subcontractors is limited to the maximum daily rate for a Level IV of the Executive Schedule (formerly GS-18), to be adjusted annually.
ii. Speaker/Trainer Fees – Information on speakers should include the fee and a description of the services they are providing.

7. Other: List each item in sufficient detail for the EPA to determine the reasonableness of its cost relative to the research to be undertaken. "Other" items may include publication costs, long distance telephone charges, and photocopying costs. Note that subawards, such as those with other universities or nonprofit research institutions for members of the research team, are included in this category. **Provide the total costs proposed for subawards as a separate line item in the budget justification and brief description of the activities to be supported for each subaward or types of subawards if the subrecipients have not been identified.** Subawards may not be used to acquire services from consultants or commercial firms. Please see EPA Solicitation Clauses for more details. The "Other" budget category also includes participant support costs such as stipends or travel assistance for trainees (e.g. interns or fellows).

8. Indirect Costs: Indirect costs are those incurred by the applicant for a common or joint purpose that benefit more than one cost objective or project, and are not readily assignable to specific cost objectives or projects as a direct cost. In order for indirect costs to be allowable, the applicant must have a negotiated indirect cost rate (e.g., fixed, predetermined, final or provisional), or must have submitted a proposal to their cognizant agency. If indirect costs are included in the budget, identify the cognizant agency and the approved indirect rate. If your organization does not have a cognizant agency, please note that in the budget justification and provide a brief explanation for how you calculated your indirect cost rate.

7. **Resumes**

Provide a resume for the Project Manager and important co-worker(s). You may include resumes from staff of sub-awardees such as universities. Do not include resumes of consultants or other contractors. The resume is not limited to traditional materials, but should provide materials to clearly and appropriately demonstrate that the Project Manager and each co-worker has the knowledge needed to perform their component of the proposed training program. The resume for each individual must not exceed two consecutively numbered (bottom center), 8.5x11-inch pages of single-spaced, standard 12-point type with 1-inch margins.

8. **Current and Pending Support**

   Complete a current and pending support form (provided at How to Apply and Required Forms) for each investigator and important co-worker. Do not include current and pending support for consultants or other contractors. Include all current and pending research regardless of source.

   Note to all prospective applicants requiring multiple Current and Pending Support Form pages: Due to a limitation in Adobe Acrobat's forms functionality, additional pages cannot be directly inserted into the original PDF form and preserve the form data on the subsequent pages. Multiple page form submissions can be created in Acrobat 8 and later using the "PDF Package" option in the "Create PDF from Multiple Files" function. If you have an earlier version of Adobe Standard or Professional, applicants will need to convert each PDF page of the form to an EPS (Encapsulated Post Script) file before creating the PDF for submission. The following steps will allow applicants with earlier versions of Adobe Standard or Professional to create a PDF package:

   1. Populate the first page of the PDF, and save it as an EPS (Encapsulated Post Script) file.
   2. Reopen the form, and populate it with the data for page 2. Save this page as a different EPS file. Repeat for as many pages as necessary.
   3. Use Acrobat Distiller to convert the EPS files back to PDF.
   4. Open Acrobat Professional, and combine the individual pages into a combined PDF file.

9. **Guidelines, Limitations, and Additional Requirements**

   a. Letters of Intent/Letters of Support

      Letters of intent to provide resources for the proposed research or to document intended interactions are limited to one brief paragraph committing the availability of a resource (e.g., use of a person's time or equipment) or intended interaction (e.g., sharing of data, as-needed consultation) that is described in the Research Plan. Letters of intent are to be included as an addition to the budget justification documents. EPA employees are not permitted to provide letters of intent for any application.

      Letters of support do not commit a resource vital to the success of the proposal. A letter of support is written by businesses, organizations, or community members stating their support of the applicant's proposed project. EPA employees are not permitted to provide letters of support for any application.

      Note: Letters of intent or support must be part of the application; letters submitted separately will not be accepted. Any letter of intent or support that exceeds one brief paragraph (excluding letterhead and salutations), is considered part of the Research Plan and is included in the 15-page Research Plan limit. Any transactions between the successful applicant and parties providing letters of intent or support financed with EPA grant funds are subject to the contract and subaward requirements described here EPA Solicitation Clauses.

   b. Funding Opportunity Number(s) (FON)

At various places in the application, applicants are asked to identify the FON.

The Funding Opportunity Numbers for this RFA is:
EPA-G2017-ORD-E1, Cooperative Training Partnership in Aquatic Toxicology and Ecosystem Research

c. Confidentiality

By submitting an application in response to this solicitation, the applicant grants the EPA permission to make limited disclosures of the application to technical reviewers both within and outside the Agency for the express purpose of assisting the Agency with evaluating the application. Information from a pending or unsuccessful application will be kept confidential to the fullest extent allowed under law; information from a successful application may be publicly disclosed to the extent permitted by law.

D. Submission Dates and Times
Solicitation Closing Date: May 16, 2017, 11:59:59 pm Eastern Time (applications must be submitted to Grants.gov on or before this time, see Section IV.F "Submission Instructions and Other Submission Requirements" for further information).

It should be noted that this schedule may be changed without prior notification because of factors not anticipated at the time of announcement. In the case of a change in the solicitation closing date, a new date will be posted on EPA's Research Grants website and a modification posted on Grants.gov.

NOTE: Customarily, applicants are notified about evaluation decisions within six months of the solicitation closing date. Awards are generally made 6-9 months after the solicitation closing date.

E. Funding Restrictions
The funding mechanism for all awards issued under ORD solicitations will consist of assistance agreements from the EPA. All award decisions are subject to the availability of funds. In accordance with the Federal Grant and Cooperative Agreement Act, 31 U.S.C. 6301 et seq., the primary purpose of an assistance agreement is to accomplish a public purpose of support or stimulation authorized by federal statute, rather than acquisition for the direct benefit or use of the Agency.

EPA award recipients may incur allowable project costs 90 calendar days before the Federal awarding agency makes the Federal award. Expenses more than 90 calendar days pre-award require prior approval of EPA. All costs incurred before EPA makes the award are at the recipient's risk. EPA is under no obligation to reimburse such costs if for any reason the recipient does not receive a Federal award or if the Federal award is less than anticipated and inadequate to cover such costs.

If you wish to submit applications for more than one EPA funding opportunity you must ensure that the work proposed in each application is significantly different from any other that has been submitted to the EPA or from any other financial assistance you are currently receiving from the EPA or other federal government agency.

Collaborative applications involving more than one institution must be submitted as a single administrative package from one of the institutions involved.

Each proposed project must be able to be completed within the project period and with the initial award of funds. Applicants should request the entire amount of money needed to complete the project. Recipients should not anticipate additional funding beyond the initial award of funds for a specific project.

F. Submission Instructions and Other Submission Requirements

Please read this entire section before attempting an electronic submission through Grants.gov.

If you do not have the technical capability to utilize the Grants.gov application submission process for this solicitation, see Section IV.A above for additional guidance and instructions.

Note: Grants.gov submission instructions are updated on an as-needed basis. Please provide your Authorized Organizational Representative (AOR) with a copy of the following instructions to avoid submission delays that may occur from the use of outdated instructions.

1. Preparing for Submission. The electronic submission of your application must be made by an official representative of your institution who is registered with Grants.gov and is authorized to sign applications for Federal assistance. For more information on the registration requirements that must be completed in order to submit an application through Grants.gov, go to Grants.gov and click on “Register” at the top right corner of the page. If your organization is not currently registered with Grants.gov, please encourage your office to designate an Authorized Organization Representative (AOR) and ask that individual to begin the registration process as soon as possible. Please note that the registration process also requires that your organization have a unique entity identifier (formerly ‘DUNS’ number) and a current registration with the System for Award Management (SAM) and the process of obtaining both could take a month or more. Applicants must ensure that all registration requirements are met in order to apply for this opportunity through Grants.gov and should ensure that all such requirements have been met well in advance of the submission deadline. Registration on Grants.gov, SAM.gov, and unique entity identifier assignment is FREE.

   Applicants need to ensure that the AOR who submits the application through Grants.gov and whose DUNS number is listed on the application is an AOR for the applicant listed on the application. Additionally, the DUNS number listed on the application must be registered to the applicant organization’s SAM account. If not, the application may be deemed ineligible.

   To begin the application process under this grant announcement, go to Grants.gov and click on “Applicants” on the top of the page and then “Apply for Grants” from the drop-down menu and then follow the instructions accordingly. Please note: To apply through Grants.gov, you must use Adobe Reader software and download the compatible Adobe Reader version. For more information about Adobe Reader, to verify compatibility, or to download the free software, please visit Grants.gov Adobe Software Compatibility

   You may also be able to access the application package for this announcement by searching for the opportunity on Grants.gov. Go to Grants.govand click “Search Grants” at the top of the page and enter

the Funding Opportunity Number, EPA-G2017-ORD-E1, or the CFDA number that applies to the announcement (66.511), in the appropriate field under “Basic Search Criteria”.

Please note that Grants.gov is strongly encouraging users to sign up for and use their “Workspace” feature when applying for opportunities. Grants.gov will be phasing out the “legacy” application process, so EPA recommends that all applicants begin using Workspace as soon as possible so they are prepared when the “legacy” application process is no longer available.

2. Acknowledgement of Receipt. The complete application must be transferred to Grants.gov no later than 11:59:59 pm Eastern Time on the solicitation closing date (see “Submission Dates and Times”). Applications submitted through Grants.gov will be time and date stamped electronically. Grants.gov provides an on-screen notification of successful initial transfer as well as an email notification of successful transfer from Grants.gov to EPA. While it is advisable to retain copies of these Grants.gov acknowledgements to document submission, the only official documentation that the application has been received by EPA is the email acknowledgement sent by EPA to the PM and the Administrative Contact. This email will be sent from receipt.application@epa.gov; emails to this address will not be accepted. ***If an email acknowledgment from receipt.application@epa.gov has not been received within 10 calendar days of the solicitation closing date, immediately inform the Electronic Submissions Contact shown in this solicitation. Failure to do so may result in your application not being reviewed.***

3. Application Package Preparation. Your organization’s AOR must submit your complete application package electronically to EPA through Grants.gov (Grants.gov) no later than May 16, 2017, 11:59:59 pm Eastern Time. Please allow for enough time to successfully submit your application and allow for unexpected errors that may require you to resubmit.

   Please submit all of the application materials described below using the Grants.gov application package that you downloaded using the instructions above. For additional instructions on completing and submitting the electronic application package, click on the “Show Instructions” tab that is accessible within the application package itself.

   The application package consists of the following mandatory documents.

   a. Application for Federal Assistance (SF 424): Complete the form except for the “competition ID” field.
   b. EPA Key Contacts Form 5700-54: Complete the form. If additional pages are needed, see (d) below.
   c. SF-424A Budget Information for Non-Construction Programs: Only complete “Section B-Budget Categories”. Provide the object class budget category (a. - k.) amounts for each budget year under the “Grant Program, Function or Activity” heading. Each column reflects a separate budget year.
   d. Project Narrative Attachment Form (click on “Add Mandatory Project Narrative”): Attach a single electronic PDF file labeled “Application” that contains the items described in Section IV.C.3. through IV.C.9.a [Table of Contents, Abstract, Project Narrative, Budget Justification, Resumes, Current and Pending Support, and Letters of Intent/Support] of this solicitation. *In order to maintain format*

integrity, this file must be submitted in Adobe Acrobat PDF. Please review the PDF file for conversion errors prior to including it in the electronic application package; requests to rectify conversion errors will not be accepted if made after the solicitation closing date and time. If Key Contacts Continuation pages (see How to Apply and Required Forms) are needed, place them before the Table of Contents (Section IV.C.3.).

Once the application package has been completed, the "Submit" button should be enabled. If the "Submit" button is not active, please call Grants.gov for assistance at 1-800-518-4726. Applicants who are outside the U.S. at the time of submittal and are not able to access the toll-free number may reach a Grants.gov representative by calling 606-545-5035. Investigators should save the completed application package with two different file names before providing it to the AOR to avoid having to re-create the package should submission problems be experienced or a revised application needs to be submitted. Note: Revised applications must be submitted before the solicitation closing date and time.

4. Submitting the application. The application package must be transferred to Grants.gov by an AOR. The AOR should close all other software before attempting to submit the application package. Click the "submit" button of the application package. Your Internet browser will launch and a sign-in page will appear. ***Note: Minor problems are not uncommon with transfers to Grants.gov. It is essential to allow sufficient time to ensure that your application is submitted to Grants.gov BEFORE 11:59:59 pm Eastern Time on the solicitation closing date.*** The Grants.gov support desk operates 24 hours a day, seven days a week, except Federal Holidays.

   A successful transfer will end with an on-screen acknowledgement. For documentation purposes, print or screen capture this acknowledgement. If a submission problem occurs, reboot the computer – turning the power off may be necessary – and re-attempt the submission.

   Note: Grants.gov issues a "case number" upon a request for assistance.

5. Transmission Difficulties. If transmission difficulties that result in a late transmission, no transmission, or rejection of the transmitted application are experienced, and following the above instructions do not resolve the problem so that the application is submitted to Grants.gov by the deadline date and time, follow the guidance below. The Agency will make a decision concerning each late submission on a case-by-case basis as to whether it should be forwarded for peer review. All emails, as described below, are to be sent to Debra M. Jones with the FON in the subject line.

   Be aware that EPA will only consider accepting applications that were unable to transmit due to Grants.gov or relevant Sam.gov system issues or for unforeseen exigent circumstances, such as extreme weather interfering with internet access. Failure of an applicant to submit timely because they did not properly or timely register in SAM.gov or Grants.gov is not an acceptable reason to justify acceptance of a late submittal.

   Please note that if the application you are submitting is greater than 70 MB in size, please call or send an email message to the Electronic Submissions Contact listed for this RFA. The Agency may experience

technical difficulty downloading files of this size from Grants.gov. Therefore, it is important that the Agency verify that the file can be downloaded. The Agency will provide alternate submission instructions if the file cannot be downloaded.

a. If you are experiencing problems resulting in an inability to upload the application to Grants.gov, it is essential to call Grants.gov for assistance at 1-800-518-4726 before the application deadline. Applicants who are outside the U.S. at the time of submittal and are not able to access the toll-free number may reach a Grants.gov representative by calling 606-545-5035. Be *sure* to obtain a case number from Grants.gov. If the problems stem from unforeseen exigent circumstances unrelated to Grants.gov, such as extreme weather interfering with internet access, contact Debra M. Jones.
b. Unsuccessful transfer of the application package: If a successful transfer of the application cannot be accomplished even with assistance from Grants.gov due to electronic submission issues or unforeseen exigent circumstances, send an email message to Debra M. Jones by 11:59:59 pm Eastern Time on the solicitation closing date. The email message must document the problem and include the Grants.gov case number as well as the entire application in PDF format as an attachment.
c. Grants.gov rejection of the application package: If a notification is received from Grants.gov stating that the application has been rejected for reasons other than late submittal, promptly send an email to Debra M. Jones with the FON in the subject line within one business day of the closing date of this solicitation. The email should include any materials provided by Grants.gov and attach the entire application in PDF format.

Please note that successful submission through Grants.gov or via email does not necessarily mean your application is eligible for award.

V. APPLICATION REVIEW INFORMATION

A. Technical Review

All eligible applications will be evaluated by EPA reviewers based on the criteria and process described below. The review purpose is to evaluate the technical merit of the proposal and the capability of the applicant to complete the project as proposed. Each application will be rated under a points system, with a total of 100 points possible. The individual scores of the EPA reviewers will be added up and averaged for the final application score. Applications will be ranked in accordance with the final score. Preliminary funding recommendations will be provided to the selection official based on this ranking.

The following criteria will be used to evaluate eligible proposals:

1. **Training Program Merits (50 points)**
   a. The degree to which the application demonstrates relevance to Agency objectives, priorities, achievement of national goals and technical merit, see Section I.D and Section IV.C.5. (25 points)
   b. The degree to which the application demonstrates that the training program is feasible and will result in high-quality training for undergraduate and graduate students and postdoctoral researchers. (25 points)
2. **Project Management (40 points)**
   a. The degree to which the application demonstrates the competency (e.g., expertise/qualifications, knowledge, and resources or the ability to obtain them) of the proposed staff (including paid

employees and volunteers) to successfully achieve the goals of the training program. (15 points)

b. The degree to which the application demonstrates that resources, including facilities, equipment, and budget are appropriate, adequate, and available to support the proposed training program. (10 points)

c. The degree to which the application demonstrates that the training program will be managed to ensure the timely and successful achievement of the program's objectives including the plan for tracking and measuring progress toward achieving expected results (outputs and outcomes) and that approaches, procedures and controls are in place to ensure grant funds will be expended in a timely and efficient manner. (15 points)

3. **Past Performance and Reporting History (10 points):** The proposed PM's past performance under Federal agency assistance agreements (assistance agreements include grants and cooperative agreements but not contracts) performed within the last three years that were similar in size, scope and relevance to the proposed project in two areas will be evaluated (subcriteria are equally weighted — 5 points for each area): First, in successfully managing and completing these prior Federal assistance projects, including whether there is a satisfactory explanation for any lack of success. Second, in meeting reporting requirements under the prior agreements and reporting progress toward achieving results (outputs/outcomes) under these agreements, including the proposed PM's history of submitting acceptable and timely progress/final technical reports that adequately describe the progress toward achieving the expected results under the agreements. Any explanation of why progress toward achieving the results was not made will also be considered.

In evaluating applicants under these factors, EPA will consider the information provided by the applicant and may also consider relevant information from other sources, including information from EPA files and from current/prior grantors (e.g., to verify and/or supplement the information provided by the applicant). If you do not have any relevant or available past performance or past reporting information, please indicate this in the proposal and you will receive a neutral score for these factors (a neutral score is half of the total points available in a subset of possible points). If you do not provide any response for these items, you may receive a score of 0 for these factors.

B. Funding Decisions

Final funding decisions are made by the EPA-ORD selection official based on the results of the technical review. In addition, in making the final funding decisions, the EPA-ORD selection official may also consider available funds. The applicant selected for funding will be required to provide additional information listed below under Section VI.A. "Award Notices." The application will then be forwarded to EPA's Grants and Interagency Agreement Management Division for award in accordance with the EPA's procedures.

C. Additional Provisions for Applicants Incorporated into the Solicitation

Additional provisions that apply to this solicitation and/or awards made under this solicitation including the clause on Reporting and Use of Information Concerning Recipient Integrity and Performance can be found at EPA Solicitation Clauses. These, and the other provisions that can be found at the website link, are important, and applicants must review them when preparing proposals for this solicitation. If you are unable to access these provisions electronically at the website above, please communicate

with the EPA contact listed in this solicitation to obtain the provisions.

VI. AWARD ADMINISTRATION INFORMATION

A. Award Notices

Customarily, applicants are notified about evaluation decisions within six months of the solicitation closing date.

Applicants to be recommended for funding will be required to submit additional certifications and an electronic version of the revised project abstract. They may also be asked to provide responses to comments or suggestions offered by the reviewers and/or submit a revised budget. EPA Project Officers will contact the PM to obtain these materials. Before or after an award, applicants may be required to provide additional quality assurance documentation.

The official notification of an award will be made by the Agency's Grants and Interagency Agreement Management Division. Applicants are cautioned that only a grants officer is authorized to bind the Government to the expenditure of funds; preliminary selection by ORD management does not guarantee an award will be made. For example, statutory authorization, funding, or other issues discovered during the award process may affect the ability of EPA to make an award to an applicant. The award notice, signed by an EPA grants officer, is the authorizing document and will be provided through electronic or postal mail.

B. Disputes

Disputes related to this assistance agreement competition will be resolved in accordance with the dispute resolution procedures set forth in 70 FR 3629, 3630 (January 26, 2005) which can be found at Grant Competition Dispute Resolution Procedures. Questions regarding disputes may be referred to the Eligibility Contact identified below.

C. Administrative and National Policy Requirements

Additional provisions that apply to this solicitation and/or awards made under this solicitation, including but not limited to those related to unique entity identifier, SAM, copyrights, disputes, and administrative capability, can be found at EPA Solicitation Clauses

These, and the other provisions that can be found at the website link, are important, and applicants must review them when preparing applications for this solicitation. If you are unable to access these provisions electronically at the website above, please communicate with the EPA contact listed in this solicitation to obtain the provisions.

Expectations and responsibilities of ORD cooperative agreement holders are summarized in this section, although the terms grant and grantee are used.

1. **Meetings:** The Project Manager will be expected to budget for, and participate in, All-Investigators Meetings (also known as progress reviews) approximately once per year with the EPA Project Officer to report on cooperative agreement activities and discuss issues of mutual interest.

2. **Approval of Changes after Award:** Prior written approval of changes may be required from EPA. Examples of these changes are contained in 2 CFR 200.308. Note: prior written approval is also required from the EPA Award Official for incurring costs more than 90 calendar days prior

to award.

3. **Human Subjects:** A grant applicant must agree to comply with all applicable provisions of EPA Regulation 40 CFR Part 26 (Protection of Human Subjects). In addition, grant applicants must agree to comply with EPA's procedures for oversight of the recipient's compliance with 40 CFR Part 26, as given in EPA Order 1000.17A (Policy and Procedures on Protection of Human Research Subjects in EPA Conducted or Supported Research). As per this Order, no human subject may be involved in any research conducted under this assistance agreement, including recruitment, until the research has been approved or determined to be exempt by the EPA Human Subjects Research Review Official (HSRRO) after review of the approval or exemption determination of the Institutional Review Board(s) (IRB(s)) with jurisdiction over the research under 40 CFR Part 26. Following the initial approvals indicated above, the recipient must, as part of the annual report(s), provide evidence of continuing review and approval of the research by the IRB(s) with jurisdiction, as required by 40 CFR 26.109(e).

   Guidance for investigators conducting EPA-funded research involving human subjects may be obtained here:
   Basic Information about Human Subjects Research
   Basic EPA Policy for Protection of Subjects in Human Research Conducted or Supported by EPA

4. **Data Access and Information Release:** After award, all data produced under the award must be made available to the ORD Project Officer upon request without restriction and be accompanied by comprehensive metadata documentation adequate for specialists and non-specialists alike to be able to understand how and where the data were obtained and to evaluate the quality of the data. If requested, the data products and their metadata must be provided to the ORD Project Officer in a standard exchange format no later than the due date of the cooperative agreement's final report or the publication of the data product's associated results, whichever comes first.

   Congress, through OMB, has instructed each federal agency to implement Information Quality Guidelines designed to "provide policy and procedural guidance...for ensuring and maximizing the quality, objectivity, utility, and integrity of information, including statistical information, disseminated by Federal agencies." The EPA's implementation may be found at Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility and Integrity of Information Disseminated by the Environmental Protection Agency. These procedures may apply to data generated by grant recipients if those data are disseminated as described in the Guidelines.

5. **Reporting:** The recipient must agree to provide quarterly performance progress reports and a final report. The reports should be submitted electronically to the Technical Contact named in Section VII of this announcement.

   The recipient must also agree to provide copies of, or acceptable alternate access to (e.g., web link), any peer reviewed journal article(s) resulting from the cooperative agreement during the project period. In addition, the recipient should notify the ORD Project Officer of any papers published after completion of the cooperative agreement that were based on activities supported by the cooperative agreement.

6. **Quality Assurance:** Trainees placed in EPA laboratories will be governed by the EPA quality system, as described in the approved Quality Management Plan (QMP) for the organization in which they are placed. Approved QMPs are in full compliance with the EPA's quality system requirements as expressed in these two documents:
   - Policy and Program Requirements for the Mandatory Agency-wide Quality System, EPA CIO 2105.0, May 2000; and
   - EPA Quality Manual for Environmental Programs, EPA CIO 2105-P-01-0, May 2000.

   Trainees who are engaged in scientific research, including field and laboratory work must:

   - Meet with the organization's Quality Assurance Manager (QAM),
   - Work under an approved quality assurance project plan (QAPP),
   - As appropriate, use standard operating procedures (SOPs).
7. **Acknowledgement of EPA Support:** EPA's full or partial support must be acknowledged in journal articles, oral or poster presentations, news releases, interviews with reporters and other communications. Any documents developed under this agreement that are intended for distribution to the public or inclusion in a scientific, technical, or other journal shall include the following statement:

   This publication [article] was developed under Assistance Agreement No._____ awarded by the U.S. Environmental Protection Agency to [name of recipient]. It has not been formally reviewed by EPA. The views expressed in this document are solely those of [name of recipient or names of authors] and do not necessarily reflect those of the Agency. EPA does not endorse any products or commercial services mentioned in this publication.

VII. AGENCY CONTACTS

Further information, if needed, may be obtained from the EPA contacts indicated below. Information regarding this RFA obtained from sources other than these Agency Contacts may not be accurate. Email inquiries are preferred.

Technical Contact: Brian Hill (hill.brian@epa.gov); phone: 218-529-5224
Eligibility Contact: Ron Josephson (josephson.ron@epa.gov); phone: 202-564-7823
Electronic Submissions: Debra M. Jones (jones.debram@epa.gov); phone: 202-564-7839

Contact Us to ask a question, provide feedback, or report a problem.