

A REQUEST FOR APPLICATIONS
FOR COOPERATIVE AGREEMENTS

TO

PROVIDE ASSISTANCE

TO

STATE/TRIBAL/OTHER LOCAL ENVIRONMENTAL PROTECTION AGENCIES

TO

**CONDUCT LOCATION-SPECIFIC ASSESSMENTS OF THE
IMPACTS OF CLIMATE CHANGE & VARIABILITY
ON AQUATIC ECOSYSTEMS AND WATER QUALITY**

“NCEA/Global”

Global Change Research Program
National Center for Environmental Assessment (NCEA)
Office of Research and Development (ORD)
United States Environmental Protection Agency (EPA)
Washington, DC 20460

NCEA/Global Research Solicitation - NCEA-01-01

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GLOBAL CHANGE RESEARCH PROGRAM RESEARCH REQUEST

1.0 INTRODUCTION

NCEA/Global is the Global Change Research Program¹ of the National Center for Environmental Assessment, which is part of the Office of Research and Development (ORD) within the U.S. Environmental Protection Agency (EPA). NCEA/Global is issuing this "Request for Applications" (RFA) for cooperative agreements to provide assistance to state/tribal/other local² government environmental protection agencies to conduct location-specific assessments of the impacts of global change on aquatic ecosystems and water quality. In addition, universities and non-profit organizations may apply for assistance under this program if they will use EPA funds to provide support to state/tribal/other local government environmental protection agencies. (See Section 4.1 for information about eligibility.)

The value of each cooperative agreement award is estimated to range from \$25,000 to \$100,000 total over a period of one to three years. Applications must be postmarked by the U.S. Postal Service, dated by a delivery service or marked received by NCEA/Global personnel by **October 18, 2001**. Applications will be reviewed and evaluated by guidelines as set forth in this document. Interested parties are invited to submit a competitive Cooperative Agreement Application, including a full and detailed project application for funding consideration. The availability of this solicitation document is being announced via the *Federal Register* and *Commerce Business Daily*, the NCEA Internet web site: <http://www.epa.gov/ncea/>, the EPA's Global Change Research Program Internet website: <http://www.epa.gov/globalresearch/>, and via e-mail to potentially interested parties.

A list of resources that may be useful to applicants is posted on the EPA's Global Change Research Program Internet website. The EPA reserves the right not to make any awards from this solicitation. Interagency agreements with other federal agencies related to this activity are not solicited. The catalogue of federal domestic assistance number is 66.500.

This document provides information about: NCEA/Global; the research topic for which applications are being solicited; the competitive process for awarding cooperative agreements; and the preparation of applications (see the Table of Contents on the page preceding this section). We urge each applicant to read and consider carefully the information presented in these sections before preparing an application.

¹NCEA/Global is the part of EPA's Global Change Research Program that resides in the National Center for Environmental Assessment. Other parts of EPA's Global Change Research Program reside in four other labs and centers within ORD. NCEA/Global leads the assessment activities, and is the home of the Program's National Director. EPA's Global Change Research Program is part of the U.S. Global Change Research Program (USGCRP), an interagency group established by the Global Change Research Act of 1990.

²See Section 2.2 for the definition of "local" for the purposes of this solicitation.

2.0 MISSION

2.1 Mission of the National Center for Environmental Assessment

EPA's National Center for Environmental Assessment (NCEA) serves as the national resource center for: the overall process of ecological and human health risk assessments; the integration of hazard, dose-response, and exposure data; and models to produce risk characterizations. NCEA occupies a critical position in the science and public policy arena of research and risk management by (1) integrating worldwide research findings and data, and (2) providing regulators with assessments and methodologies that transfer research data into characterizations that address risk management needs. NCEA's activities include:

- ! development of methodologies that reduce uncertainties in current risk assessment practices;
- ! conducting assessments of contaminants of national significance;
- ! providing guidance and support to risk assessors;
- ! acting as a catalyst for advances in the science of risk assessment brought about, for example, by cooperative endeavors;
- ! facilitating an exchange of ideas among environmental professionals in the federal, state, industrial, academic, environmental, public interest, and international communities; and,
- ! characterizing the impacts of environmental receptors whether they result from exposure(s) to single, complex, or multiple physical, chemical, biological, or radiological stressors.

2.2 Mission of EPA's Global Change Research Program³

EPA's Global Change Research Program is an assessment-oriented research program within ORD. The mission of EPA's Global Change Research Program is to:

- ! improve the scientific basis for evaluating effects of global change in the context of other stressors and human dimensions;
- ! conduct assessments of the consequences of global environmental change; and,
- ! improve society's ability to effectively respond to the risks and opportunities presented by global change as they emerge.

The Program is actively engaged in providing scientific information to decision makers as they plan whether and how to respond to the risks and opportunities presented by global change. The following description of EPA's recent work and ongoing activities identifies potentially useful reports and provides context that may help applicants to determine what types of technical assistance EPA would be able to provide. EPA's program and its academic partners contributed to the First National Assessment and the synthesis report: *Climate Change Impacts on the United*

³EPA is a member of the U.S. Global Change Research Program (USGCRP), which was created as a Presidential Initiative in 1989 and formalized in 1990 with congressional passage of the Global Change Research Act of 1990. The global change research activities of all participating federal agencies are coordinated to ensure that the overall goals of the USGCRP are achieved (<http://www.usgcrp.gov>). Within this larger USGCRP framework, EPA focuses on assessing the potential consequences of global change for human health, ecosystems, air quality and water quality. The effects of global change on ecosystems and water quality are the focus of this solicitation.

States: The Potential Consequences of Climate Variability and Change, 2000

(<http://www.nacc.usgcrp.gov>). Reports have been completed from the following EPA-sponsored assessments: the Mid-Atlantic states, the Upper Great Lakes, and the U.S. Health Sector. For more information and links to these assessments: <http://www.epa.gov/globalresearch/>. Reports from NCEA/Global on the impacts of global change on drinking water and wastewater treatment will be completed in 2001. These reports will assess the impacts of altered temperature, precipitation, sea level rise, and land use change on treatment processes and on source water (e.g., changes in salinity of source water due to sea level rise, changes in concentrations of pollutants and pathogens due to changes in watershed hydrology and nonpoint source pollution). Reports from NCEA/Global are in preparation on the effects of global change on threatened and endangered species, on a framework that can be applied to examine how global change could affect aquatic ecosystem services in pilot watersheds, and on the effects of global change on aquatic ecosystem services in watersheds in the DC metropolitan area, the San Francisco Bay and Basin, and the San Pedro River Basin.

EPA's Global Change Research Program seeks to build capacity at the *local* level by enabling local authorities to conduct their own local-scale assessments that link to or extend the information generated by regional- or national-scale assessments conducted by EPA and other USGCRP participants. (For the purposes of this solicitation, "*local*" describes any entity that operates at a smaller spatial scale than the regional or national scale. Examples include states, tribes, U.S. territories, counties, municipalities, and watersheds.) In general, capacity is a broad term that can refer to physical resources (money, personnel, equipment, etc.) or intellectual resources (conceptual understanding, methodological skills, access to information and professional networks, etc.). In this solicitation, NCEA/Global seeks to build capacity by providing physical resources (through cooperative agreement funding) and intellectual resources (through technical assistance from federal employees) necessary to conduct pilot assessment projects. These pilot projects will help groups that receive funds to develop the capacity to conduct additional assessments on their own and will generate methods and approaches that can be applied by other local authorities.

EPA's Global Change Research Program focuses on the following global change stressors and interactions:

- ! the potential consequences of climate change and climate variability
- ! the effects of UV radiation
- ! the effects of land-use changes

Applicants are required to address climate change and climate variability in their proposals. While they are encouraged to also address interactive effects of climate variability and change with UV radiation and/or the effects of land use changes, this is not required.

3.0 RESEARCH FOR WHICH APPLICATIONS ARE BEING SOLICITED

3.1 Background/Project Description

The *primary purpose* of the research solicited by this document is to build **local capacity** for location-specific assessments of the impacts of global change on aquatic ecosystems and water quality. (For the purposes of this solicitation, “**local**” describes any entity that operates at a smaller spatial scale than the regional or national scale. Examples include states, tribes, U.S. territories, counties, municipalities, watersheds. See Section 2.2 for more discussion of “local capacity.” Also for the purposes of this solicitation, EPA considers a location to consist of an area with boundaries chosen to facilitate the assessment [e.g., an area with ecological or political boundaries such as a watershed, ecoregion, county, or state].) The *secondary purpose* is to generate insights at the local scale that can be used to inform larger-scale assessments. An improved understanding of the following will be of great value to future assessments at larger scales:

- ! local conditions (natural and social),
- ! how local conditions mediate potential global change impacts on water quality and aquatic ecosystems,
- ! which impacts are of most concern to which decision- makers, and
- ! what options are available to local decision-makers to cope with/adapt to/prepare for global change.

Applicants are encouraged to cooperate with other organizations, educational institutions, citizens groups, water quality authorities (e.g., water suppliers, treatment plants) and/or other non-federal governmental entities to achieve these purposes. Any transactions with such groups involving transfer of EPA funds must comply with applicable regulations. Applicants may cooperate with federal agencies, provided such an effort is consistent with that agency’s authority. (See Section 4.1 for information about eligibility.)

Local capacity-building is needed because larger-scale assessment reports (such as those developed for the First National Assessment (<http://www.nacc.usgcrp.gov>) may not provide the specific information that is needed by state/tribal/other local government environmental protection programs to enable them to prepare effectively for the local impacts of global change. States, tribes, U.S. territories and localities vary in their environmental characteristics, their databases, regulations and programs, and predictions for global change vary by region.

This solicitation provides an opportunity for local groups to work with NCEA/Global to develop information products that are specific to the needs of local entities. Applicants may focus on global change impacts on water quality, aquatic ecosystems, or both. Aquatic ecosystems include streams, rivers, lakes, wetlands (tidal and nontidal), estuaries, and coral reefs. Other marine (i.e., open ocean) ecosystems are beyond the scope of this solicitation. Applicants must consider the effects of climate change and variability, and may consider the effects of land use change and UV radiation. Cooperative agreements awarded under this solicitation will provide these groups with funding and technical assistance to assess the local consequences of global change and develop adaptation strategies that will address their specific management concerns.

Funds shall be used to build capacity to conduct assessments of the *effects of climate change and variability on*:

(1) the ability of the local entity (e.g., state, tribe, municipality, county, territory) to meet water quality standards⁴ for drinking water, wastewater, surface water, and/or groundwater,

AND/OR

(2) aspects of aquatic ecosystems that are ...

(a) of concern because the local entity (e.g., state, tribe, municipality, county, territory) has responsibilities⁵ to protect them (e.g., effects on wetlands, protected aquatic species, coral reefs, estuaries, lakes, streams, rivers may be regulated),

AND/OR

(b) of concern to location-specific stakeholders. (These may be effects on aquatic organisms, aquatic ecosystem functioning and/or aquatic ecosystem services⁶. Some of these effects need to be identified in the application. Additional effects of concern could be identified in the course of the proposed work.)

3.2 The EPA Collaborative Role

The fundamental role of collaboration with EPA scientists in the research activity contemplated by the agreement makes the cooperative research mechanism a distinctly different one from a grant mechanism, in which no collaboration is permitted. Examples of substantial involvement with EPA scientists include: (1) collaboration in the design, measurement, analysis, and interpretation of the research activity; (2) collaboration in publishing articles or reports about the research; (3) technical assistance in carrying out the work under the agreement. EPA intends to be “substantially involved” in this project. EPA’s collaboration is negotiated with the applicant and included in the cooperative agreement. EPA involvement with the research team could take the following forms:

- ! **Supplying expertise and collaborating in the areas of projecting global change, assessing the vulnerability of aquatic ecosystems and water quality, engaging stakeholders, and assessing options for enhancing resilience.** The multi-disciplinary staff of EPA’s Global Change Research Program consists of Ph.D./M.S./B.S.-level expertise across several specialty areas that include:
 - < - climate change and variability (and its impacts),
 - land use change (and its impacts),

⁴ Applicants may consider effects on water quality for which standards may not currently exist if these aspects of water quality affect the water’s suitability for human use or the water’s ability to support aquatic life.

⁵ Responsibilities might include implementation of environmental laws and/or regulations.

⁶ The term “ecosystem services” describes both the conditions and the processes through which ecosystems sustain and fulfill human life. For example, investigators could examine effects on flood mitigation, fishing, recreational diving, water purification, birdwatching, wildlife habitat, and entities or ecological processes valued for aesthetic, cultural, spiritual and/or religious reasons.

- UV radiation (exposure and impacts),
- human dimensions of global change:
 - > assessing how human activities contribute to global change,
 - > assessing how humans respond to global change and its impacts,
- aquatic ecology (expertise in streams, rivers, lakes, wetlands, coral reefs, and estuaries),
- hydrology,
- pollutant fate and transport,
- drinking water infrastructure,
- waste water treatment, and
- engaging and working with stakeholders and research teams:
 - > to set assessment priorities,
 - > to share data and expertise,
 - > to develop conceptual models and analysis plans,
 - > to provide information tools,
 - > to develop reports and customized products.

! Providing access to data and information. For example, EPA can help recipients to select/develop/adapt scenarios of climate change and variability, land use change, and UV radiation. EPA can help recipients to locate and synthesize relevant data sources, peer-reviewed journal articles, national and regional global change assessment reports, and other information.

! Collaborating on development of assessment objectives, conceptual models, analysis plans, and assessment products (e.g., reports, tools, presentations).

! Providing information that will help recipients to develop stakeholder networks.

! Participating in co-authorship of publications under applicable EPA policies.

Note: Federal assistance funds must not be used to fund the travel and expenses of any federal participants or collaborators.

4.0 FUNDING

4.1 Eligibility

Applicants must be eligible to receive federal assistance under Section 104 of the Clean Water Act (CWA), Section 1442 of the Safe Drinking Water Act (SDWA), or Section 103 of the Clean Air Act (CAA). EPA will consider applications from states, tribes, tribal consortiums, U.S. territories, and local government agencies. In addition, universities and non-profit organizations may apply for assistance under this program if they will use EPA funds to provide support to state/tribal/other local government environmental protection agencies. Universities and non-profit organizations must include with their application documentation that a state, tribal, territorial, or local government environmental protection agency is willing to participate in

their project. The funds available for this project will be awarded using a cooperative agreement funding instrument. EPA will not consider applications for collaborative research from other federal agencies. Organizations that engage in lobbying are ineligible for funding under this solicitation⁷. Please indicate your eligibility in your application.

The application must demonstrate that the proposed work will principally benefit a non-federal institution with authority to implement, or responsibilities for compliance with, the CWA or the SDWA. The benefitting institution must have some responsibility for protecting or managing aquatic ecosystems and/or water quality. The institution may have a wide array of responsibilities, or may focus specifically on rivers, lakes, streams, wetlands, estuaries, or coral reefs; or drinking water, wastewater treatment, or source water protection.

As noted above, non-governmental applicants must document that a state, tribal, territorial, or local government environmental protection agency is willing to participate in their project. All applicants may include a letter(s) of endorsement from a relevant institution(s) if they feel this would strengthen their application or clarify how the proposed work will benefit such an institution(s). These letters may be particularly helpful for proposals that focus on smaller spatial scales (e.g., areas that are smaller than a state, tribe, or territory), or that involve substantial participation from non-governmental entities.

4.2 Award Value

Awards are estimated to range from \$25,000 to \$100,000 total over a one to three year period. Depending on the availability of funds, up to approximately \$300,000 will be available to fund approximately three to six awards.

4.3 Period of Performance

The period of performance could be one to three years, depending upon the applicant's project. Funding to begin work under the cooperative agreement will not be available until after the award is made. Any costs incurred before the award is issued are at the applicant's risk. EPA anticipates making awards in the period between **October 2001 and January 2002**.

⁷ In accordance with Section 18 of the Lobbying Disclosure Act of 1995, PL. No. 105-65, 109 Stat. 691, a recipient must affirm that: (1) it is not a nonprofit organization described in Section 501(c)(4) of the Internal Revenue Code of 1986; or (2) it is a nonprofit organization described in Section 501(c)(4) of the Internal Revenue Code of 1986 but does not and will not engage in lobbying activities as defined in Section 3 of the Lobbying Disclosure Act of 1995.

5.0 INFORMATION FOR INVESTIGATORS PREPARING APPLICATIONS

This section contains information of importance to research investigators preparing cooperative agreement full applications. Information about the full application process and application forms are found in the "Application Kit for Assistance." Information about eligibility can be found in Section 4.1 of this solicitation. A list of resources that may be useful to applicants is posted on the EPA's Global Change Research Program Internet website: <http://www.epa.gov/globalresearch/>. Additional information can be found about legislation and regulations for assistance programs at the following internet web sites: <http://www.epa.gov/ogd/grants.htm> (select "Grants Administration Division"), <http://www.epa.gov/indian/tgrant.htm>, and <http://www.whitehouse.gov/omb/grants/index.html>.

5.1 General Application Description

Applicants are strongly encouraged to prepare the application in such a way as to ensure that reviewers will be able to address the Review Criteria (described in Section 5.2).

The project narrative section of the application **may not exceed 25 pages** (on 8 ½ x 11-inch paper, consecutively numbered pages, and of standard type [10-12] characters per inch), including tables, graphs, and figures. For purposes of this solicitation, the "project narrative section" of the application must include all of the following items:

- (1) Executive Summary of Project
- (2) Relevance to this Solicitation's Objectives
- (3) Results or Benefits Expected
(*Please note that cooperative agreements are not for the direct use or benefit of EPA.*)
- (4) Detailed Project Description
- (5) Collaboration with NCEA/Global Staff

Attachments, appendices, and reference lists for the narrative section may be attached, but are included in the 25-page limitation.

Additional items **not included in the 25-page limitation** are the SF-424 and other forms; resumé's; the abstract; and the cover sheet. Itemized budgets, including justifications, are not included in the 25-page limitation, but must not exceed five consecutively numbered pages (excluding budget information on SF-424.) The cover sheet must contain the following information:

- 1) Title of the application
- 2) Name of the institution or individual
- 3) Mailing address for disposition of the application
- 4) Name, phone, fax, and e-mail information for the principal investigator

All applications received by the due date will be date-stamped and reviewed to ensure that all forms and documents have been appropriately prepared. Incorrectly prepared forms and inadequate documentation can be grounds for rejection of the application.

5.2 Review Criteria

5.2.1 Screening Questions

The following screening questions will be used by the Review Panel (RP). If the answer to any of these questions is no, the proposal will be rejected.

- ! Does the applicant propose to assess the impacts of climate change and variability on water quality and/or aquatic ecosystems?
- ! Is the primary intent of the proposed cooperative agreement to build state, tribal, territorial or other local governmental capacity to conduct assessments of the impacts of climate change and variability on water quality and/or aquatic ecosystems?
- ! Does the project principally benefit a non-federal institution with authority to implement, or responsibilities for compliance with, the CWA or the SDWA?
- ! Is the applicant eligible to receive assistance under this solicitation?
- ! Has the applicant agreed that EPA will be substantially involved in the project? (See Section 3.2 for guidance about EPA's collaborative role and what constitutes substantial involvement.)

5.2.2 Weighted Criteria

The following criteria (with the quantitative weight for each criterion given in parenthesis) will be used in the review of the applications:

A. Relevance to the Objectives of this Solicitation (30 points total)

1. (10 points) Reviewers will consider the significance of the threat posed by climate change and variability, on (a) water quality, and/or (b) aquatic ecosystems and the importance of the threatened resource⁸. (Applicants should specifically identify the threat, and explain the importance of the resource.) Specifically applicants should discuss:

⁸The resource could be a drinking water aquifer, a stream, wetland, or estuary, a fishery, etc.

(a) Water Quality⁹: assess how climate change and variability might affect the ability of the entity (e.g., state, tribe, municipality, county, or territory) to meet water quality standards¹⁰ for drinking water, surface water, and/or groundwater.

(b) Aquatic Ecosystems¹¹: assess how climate change and variability might affect aquatic ecosystems. The proposal should identify aspects of aquatic ecosystems that are potentially vulnerable to climate change and variability and are of local concern. The concern could arise from regulatory responsibilities (e.g., responsibilities of a state, tribal or other local government to protect aquatic species, habitats, and organisms) or from other stakeholder interests (e.g., economic, recreational, spiritual, or cultural).

2. (10 points) Reviewers will consider the extent to which the proposed work will assist states, tribes, U.S. territories and/or localities to assess and prepare for, or adapt to, the consequences of climate change and variability. Management needs for information should be clearly articulated, and the application should describe how the proposed work will meet those needs. Applicants should demonstrate how the expected products are scientifically valid and will provide needed information in useful formats to managers, policy-makers or other public stakeholders; and will achieve a public benefit. Applicants should clearly explain how the proposed work is likely to increase the capacity of local groups to assess and prepare for impacts of global change on aquatic ecosystems and/or water quality.

⁹For example, applicants could propose to examine one or more of the follow effects:

- effects of changes in temperature on water treatment,
- effects of changes in runoff (from climate change, climate variability, land use change) on treatment requirements for drinking water or wastewater,
- effects of sea level rise on a coastal aquifer used for drinking water,
- effects of global change on pathogen concentrations in recreational waters,
- effects of global change on surface water or groundwater quality,
- effects of global change on attainment of biocriteria (e.g., effects of temperature and altered streamflow on an index of biotic integrity for fish).

¹⁰Applicants may consider effects on water quality for which standards may not currently exist if these aspects of water quality affect the water's suitability for human use or the water's ability to support aquatic life.

¹¹For example, applicants could propose to examine one or more of the following effects:

- effects of changing temperatures, pollution loads, and UV radiation on coral reefs,
- effects of sea level rise on coastal wetlands and implications for species & habitats that are protected by law, and/or of concern to local people,
- effects of climate change and variability on aquatic ecosystems that result in cultural, health and economic impacts on native tribes,
- effects of climate change & variability, and land use change on a local stream with implications for recreational fishing and flood mitigation,
- effects of global change on an estuary with commercial and cultural value,
- effects of climate change & land use change on inland wetlands that provide migratory bird habitat.

To aid reviewers' evaluation, applicants are strongly encouraged to address the following questions in their application, and to be as specific as possible:

Who will use the information?

Identify managers/decision-makers/policy-makers/other stakeholders who could use the information.

How will they use the information?

Explain how assessment information will be used to enhance managers' or policy-makers' abilities to protect water quality and aquatic ecosystems. If decision-makers are able to articulate the decisions that will be influenced, and to describe the potential management options they will consider, please include this information.

How will the information be presented and shared?

Describe the various forms (e.g., types of reports, presentations, brochures, computer tools, and how they will be disseminated) in which results will be vetted to appropriate stakeholders,

Were the users involved?

Demonstrate that information-users/decision-makers/water quality managers/aquatic ecosystem managers were involved in developing the application.

Will it make a difference?

Explain how the proposed activities will enhance local capacity to assess and prepare for, or adapt to, the consequences of global change.

3. (10 points) Reviewers will consider the extent to which the proposed work is likely to generate insights, methods, and approaches that are transferable to similar efforts. Applicants should demonstrate how the proposed work is likely to contribute to the understanding of impacts in other areas, and help other state/tribal/territorial/local decision-makers to protect water quality and/or aquatic ecosystems.

B. Scientific Merit/ Proposal Quality (30 points total)

1. (10 points) Reviewers will evaluate the extent to which the proposed work is likely to yield insights that are relevant and useful to stakeholders (locally, and in other locations), and whether the insights will contribute to assessments at larger spatial scales. Applicants are encouraged to articulate how results from the proposed work will advance public understanding of potential impacts of global change, and potential adaptation options. Applicants should describe how proposed methods will gain wide stakeholder participation and contribute to local decisionmaking.

2. (10 points) Reviewers will consider the scientific merit of the proposed approach to addressing the topic, including the soundness of fundamental scientific and technical approaches, unique or innovative approaches evident in the application. Applicants should demonstrate an understanding of the state of science on the proposed topic, and the contribution of the applicant's proposed approach to advancing the state of the

science. In addition applicants should demonstrate that proposed products will be scientifically sound.

3. (10 points) Reviewers will consider the overall quality and clarity of the application regarding its objectives, proposed methods, ability to achieve these goals, and the adequacy and clarity of the proposed budget and schedule (total dollar estimate over the proposed time period) to achieve the proposed research objectives within the time frame.

C. Applicant Capabilities (20 points total)

(20 points) Reviewers will consider the extent to which (a) the applicants have the necessary experience and qualifications to perform the work, (b) key personnel have made the necessary time commitment to support the proposed work, (c) the investigators will be able to provide technical support, facilities, equipment, data and other tools and information relevant to the successful completion of the work, and they have an organizational structure that will facilitate the work. Past experience in managing federal funds will be considered, including adverse audit findings, if any.

Applicants should fully describe the experience and qualifications of the staff who will be engaged in the work. Different proposals may require different mixes of qualifications and experience. Depending on the proposal, experience may be needed in the following areas: assessing climate change impacts; involving stakeholders in research design, implementation and communication; aquatic ecology; water quality; statutes and regulations. The applicant should describe what data will be needed and how these data will be acquired. Applicants should demonstrate that they have adequate technical support, facilities, equipment, databases/access to information to successfully complete the proposed work. The application should document planning for quality assurance/quality control management of research activities and progress, data generation, data security and accuracy (if applicable), and staff supervision and integrity.

D. Collaborative Role for NCEA/Global (10 points total)

(10 points) Reviewers will evaluate the appropriateness of the applicants' proposal for collaborating with EPA (e.g., in the design, analysis, interpretation, and publication phases of the proposed work). Applicants should demonstrate how the technical assistance that the applicant proposes to receive from EPA is appropriate to NCEA/Global's mission, its technical capabilities, and the expertise of its staff. (Note: The proposal should identify collaboration with NCEA/Global by stated area of expertise [see Sections 2 and 3], not by naming a specific researcher.)

E. Cost Effectiveness (10 points total)

(10 points) Reviewers will evaluate each proposal's merit as an investment for EPA funds. Reviewers will consider how to achieve the greatest public benefit (relative to the

objectives of this solicitation¹²) given limited EPA resources. Reviewers will consider the extent to which each application will result in direct expenditures for activities that benefit a non-federal institution with authority to implement, or responsibilities for compliance with, the CWA or the SDWA.

5.3 Review of Applications

The Screening Questions and the Review Criteria (see Section 5.2) will be used to evaluate applications. A Review Panel (RP) will be convened to evaluate the submitted applications. The RP will include at least one EPA and two non-EPA panelists. The panelists will be required to certify that no conflict of interest is created through the individuals' participation in the panel or review process, and that the individual will not benefit, personally or financially, either directly or indirectly, from any aspect of participation in the review process. Panel members will not be permitted to discuss or retain applications after the completion of the review process. The RP will make final recommendations for funding to the Director of the Global Change Research Program. The Director will consider the RP's recommendations in light of the factors set forth in 40 CFR 40.140-1 and make final selection decisions. A letter will be sent to each applicant that submitted an application that indicates whether the application has been selected for funding.

5.4 Other Information for Applicants

5.4.1 Negotiating a Final Cooperative Agreement

Following selection of applications for funding, NCEA/Global will negotiate scopes of work with successful applicants. Care will be taken to avoid making changes to the cooperative agreement that might have significantly affected the outcome of the formal review process, or the evaluation of the application by the RP.

5.4.2 Quality Assurance Requirements

Successful applicants must develop and implement a Quality Assurance Program which is acceptable to the award official to receive an EPA Assistance Award. The Quality Assurance Narrative Statement must be approved by EPA prior to award as being adequate to ensure that the organization is capable of preparing an acceptable Quality Assurance Project Plan (QAPP). While QAPP is not required as part of the application to be submitted for this competition, a QAPP must be prepared by those research organizations with applications selected for awards and submitted to the EPA project officer for approval within 30 days after award, and before initiating data collection activities.

¹²Recall that the *primary purpose* of the research solicited by this document is to build local capacity for location-specific assessments of the impacts of global change on aquatic ecosystems and water quality. (For the purposes of this solicitation, “*local*” describes any entity that operates at a smaller spatial scale than the regional or national scale, e.g., states, tribes, U.S. territories, counties, municipalities, watersheds.)

5.4.3 Award Process

An EPA Award Official in the Grants Operations Branch is responsible for issuing the final award for the cooperative agreement.

5.4.4 Peer Review of Publications

EPA encourages publication of the results of cooperative research agreements. As part of EPA's substantial involvement, reports and informational material prepared under the cooperative agreement must be submitted to NCEA/Global for peer review prior to publication. Cooperating authors must give consideration to any peer review comments from this review. The cooperating party may publish the work, providing the publication includes the appropriate disclaimer statement. This requirement for peer review extends to publications based on research conducted during the period of performance, even if the publication is prepared after the completion of the performance period.

5.5 Communication with EPA Employees During Competition

During the period of competition for cooperative agreements, EPA will not provide information that would confer an unfair competitive advantage to the recipient of such information. To reduce both the potential for inadvertent communication of such information, and the appearance of conferring unfair advantage, it is ORD policy to restrict any communication about cooperative agreements undergoing competition to systematic communication that insures that all competitors have equal access to information. In furtherance of this policy, NCEA/Global will only accept written questions for clarification of this solicitation. Questions may be e-mailed to: kelly.dave@epa.gov. Mr. Kelley's full contact information (including mailing and delivery addresses are given below. Questions and responses will be posted on the EPA's Global Change Research Program Internet website (<http://www.epa.gov/globalresearch/>) with a list of resources that may be useful to applicants.

5.6 Instructions for Submitting Applications

One original and one copy of each full application must be submitted. Completed applications that respond to this solicitation must be mailed by regular, priority, or express U.S. mail or delivered by other delivery service, and received at the address indicated above on or before the deadline indicated in the assistance package. Applications that are postmarked, dated, or marked received after the deadline will not be considered. To request applications or solicitations, e-mail Dave Kelley or contact him by phone: 202-564-3263, or by fax: 202-564-2268.

via regular mail service

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