

US EPA ARCHIVE DOCUMENT



1998 Research and Monitoring Program on Ecological Effects of Environmental Stressors Using Coastal Intensive Sites

Announcement of Opportunity

Opening Date: December 23, 1997

Closing Date: April 1, 1998



Environmental Protection Agency



National Oceanic and Atmospheric Administration



National Aeronautics and Space Administration

EPA / NOAA / NASA Federal Research Partnership

Announcement of Opportunity

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- **ENVIRONMENTAL PROTECTION AGENCY**
National Center for Environmental Research and Quality Assurance
- **NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**
National Ocean Service
National Sea Grant College Program
- **NATIONAL AERONAUTICS AND SPACE ADMINISTRATION**
Mission to Planet Earth

INTRODUCTION

The U.S. Environmental Protection Agency (EPA), National Oceanic and Atmospheric Administration (NOAA), and National Aeronautics and Space Administration (NASA) announce an opportunity to participate in the establishment of pilot sites for the development of a network of intensive, long-term monitoring and research sites around the U.S. marine and Great Lakes coasts. EPA and NOAA are requesting applications for research and monitoring programs at pilot sites utilizing ecological indicators and investigating the ecological effects of environmental stressors. Indicators are measures that effectively integrate the environmental condition and response. NASA is requesting proposals for research aimed at developing a remote sensing capability that will augment or enhance in situ research and monitoring programs selected by EPA and NOAA under this announcement.

BACKGROUND

In July 1995 the Federal Interagency Committee on Environment and Natural Resources (CENR) convened a team of Federal scientists and program managers to develop a national framework for integrating and coordinating environmental monitoring and related research through collaboration with and building upon existing networks and programs.

In March 1997, this team released a report entitled, "Integrating the Nation's Environmental Monitoring and Research Networks and Programs: A Proposed Framework." A major recommendation of this report calls for the establishment of a nation-wide network of index sites to provide standard information on major environmental variables that are known to influence ecological condition. These sites are to fill a critical gap identified in the nation's capability to integrate the results from environmental monitoring and related research programs and thus to provide an improved basis for development of comprehensive assessments of the condition of the nation's environmental resources.

The development and demonstration of the utility of a network of intensively monitored index sites is one of the four major components of the U.S. EPA's next phase of the Environmental Monitoring and Assessment Program (EMAP). A review by the National Research Council suggested that the EMAP approach could benefit from the strategic placement of long-term monitoring sites that were intensively monitored to establish linkages between observed changes in environmental stressors and concomitant changes in ecological resources. This approach was incorporated into EMAP-Phase II planning in 1994 and led to the development in 1997 of a Memorandum of Understanding among EPA, NOAA, and NASA to establish CISNet (Coastal Intensive Site Network).

CISNet is an interagency effort between EPA, NOAA, and NASA to develop an intensive coastal site network of monitoring and research locations throughout the United States. Many of these Agencies' facilities together with academic research stations will be utilized as "outdoor laboratories" (e.g., EPA's research facilities located in estuarine environments, NOAA's Estuarine Research Reserve system facilities, NASA field centers, numerous academic field stations located in estuarine environments).

CISNet has three objectives:

- (1) To develop a sound scientific basis for understanding ecological responses to anthropogenic stresses in coastal environments, including the interaction of exposure, environment/climate, and biological/ecological factors in the response, and the spatial and temporal nature of these interactions.
- (2) To demonstrate the usefulness of a set of intensively monitored sites for examining short-term variability in long-term trend behavior in the relationships between changes in environmental stressors, including anthropogenic and natural stresses, and ecological response.

- (3) To provide intensively monitored sites for development and evaluation of indicators of change in coastal systems.

The final selection of sites for inclusion in the Coastal Intensive Site Network will be based on the following criteria:

- (1) The site is located where it can be linked to ongoing process-level research programs that provide important supportive data and information;
- (2) The site is located where it can be linked to major ongoing monitoring programs that provide important supportive data and information;
- (3) The site is in proximity to supporting federal, state, or university laboratories or parklands with well-equipped facilities for the support of research and monitoring activities;
- (4) There is a high quality, long-term record of accessible, pertinent data and information from past monitoring and research activities;
- (5) There is a guarantee of long-term accessibility to ensure continued access to the monitoring and research site;
- (6) There is a long-term commitment, federal and/or state, to support monitoring at the site; and
- (7) There is a high likelihood that the data and information obtained at the site can be used to improve the environmental decision-making process.

It is also intended that the entire set of sites include locations that are representative of: (a) various levels and kinds of human impacts to estuarine and coastal environments; (b) the major biogeographical regions associated with the coasts of the United States; and (c) important habitats occurring in and along the estuaries and coasts of the United States (e.g., coral reefs, sea grass beds, rocky fjords). Appendix I lists 41 coastal sites (and the biogeographical provinces they represent) which have been identified as appropriate candidates for inclusion in CISNet based on these criteria. Almost all of the 41 sites are readily accessible, have a history of being monitored for environmental information, and are locations where much environmental research has been conducted. The sites on the list cover a broad spectrum of ecological communities and landscapes. They have been judged to reflect the above criteria and to be representative of the above needs and so are strong candidates for siting of CISNet index sites. Additional sites can also be proposed, however, but should be thoroughly justified in the application on the basis of the above criteria.

SOLICITATION DESCRIPTION

CISNet has been developed as a network of long-term trend monitoring sites where research will be supported to examine the interactions of environmental stressors, climate factors, and environmental effects in a well-characterized field setting. The research focus will be on ecological effects of air or water pollution known or determined for the sites (i.e., specific relationships between stressors and effects), as well as the broader regional- and national-scale ecological effects research issues (e.g., air deposition patterns and their effects on coastal ecosystems), and indicators of change/condition in ecological resources.

Therefore, the EPA, NOAA, and NASA request applications for support to: (1) conduct research to address fundamental concepts of environmental stressor-ecological response relationships at coastal monitoring sites, (2) conduct new and additional monitoring at these sites, and (3) develop the capability to use remote sensing as part of an ongoing operational monitoring program.

This solicitation complements ongoing research programs in EPA Laboratories and NOAA and NASA facilities and is consistent with the goals and objectives of their ecologically-based research and monitoring programs. Applications are encouraged that present plans for the establishment of index sites for a three-year period to test the capability and utility of such sites in meeting these objectives. The funded projects are expected to include both the establishment, continuation, or utilization of a set of core monitoring measurements and the carrying out of related research activities directed at one or more of the objectives listed below.

Proposed research projects should be developed for proposed sites to address any or all of the following research areas:

- (1) Development of indicators of coastal ecosystem integrity and sustainability: research would focus primarily on the development, testing, and validation of indicators that could be incorporated into a nationwide coastal intensive site monitoring network to evaluate and track changes in system integrity and sustainability.
- (2) Problems of temporal and spatial variability in environmental measurements: research would focus primarily on assessing and quantifying gradients of environmental exposure in complex estuarine systems. Characterization of the gradients and modeling the "exposure surfaces" for a coastal system based on multiple sites will increase the ability to extrapolate

stressor effects across a landscape or region. Important anthropogenic stressors include UV-B, point and non-point source deposition of contaminants and nutrients, and the distribution of habitats. Important natural stressors include temperature, salinity, climate, hydrodynamic mixing, and interactions with the ocean.

- (3) Nitrogen and phosphorus effects on coastal systems: examination of the effects of addition of nitrogen and phosphorus on the biogeochemical cycles and organisms in coastal waters, in particular the effects of atmospheric deposition of N and P on coastal eutrophication.
- (4) Stressor effects on coastal systems: examination and evaluation of the effects of anthropogenic stressors on coastal systems. Example: UV-B effects on coral ecosystems and near-coastal plankton communities.
- (5) Development of remote sensing capability: research focused on the development of algorithms for applying aircraft or satellite remote sensing data to provide synoptic information that complements and substantially augments the in-situ monitoring program. Once this capability is developed, the long-term support for the operational use of remote sensing as part of a continuing, monitoring program must be obtained from other sources. Remote sensing must be coordinated with proposals for in-situ monitoring programs.

This solicitation seeks applications for research on important scientific principles related to ecological response and/or exposure, as well as applications for the establishment of monitoring activities based on sound scientific principles. It encourages a diversity of research approaches and collaborations among federal, state, and academic scientists. All applications should include a description of ongoing monitoring at the proposed site and any proposed initiation of additional monitoring. It is expected that, within each funded site, monitoring for a suite of core properties will be continued or initiated at several depths at each of several locations. Applications need not include a remote sensing component. However, if there is a remote sensing component proposed, that aspect of the overall site proposal must be described in detail in a separate project description (see instructions below).

Properties such as water temperature, salinity/conductivity, ambient light, turbidity, dissolved oxygen, chlorophyll, and nutrient concentrations, measures of water movements, resource harvest, and contaminant levels as well as indicators of ecosystem condition are expected to be directly observed or otherwise made available for each site. It is also expected that meteorological properties such as air temperature, precipitation, and humidity will be available or

measured for at least one location within or adjacent to the defined site. The application should indicate how, where, and at what frequency such core properties will be measured. The application should also indicate what additional properties, if any, will be monitored and how, where, and at what frequency these will be measured.

The application should contain specific plans for making results and data available. Operational monitoring data obtained at each funded site, accompanied by appropriate metadata, must be made available electronically within 3 months after being collected. Research results must be published in the refereed literature, and research data made available electronically by the end of the grant.

FUNDING

Up to about \$2 million will be made available for this competition in FY 1998 with the same amount in the following two fiscal years. NOAA's National Sea Grant College Program will support one site at a level not to exceed \$100,000 per year for three years; matching funds equivalent to 50% of the Federal award are required for this project. The projected award range for the remaining sites is anticipated to be between \$100,000 to \$200,000 per year. All awards will be for a duration of three years, but awards are subject to the availability of funds and satisfactory performance. This funding will support the establishment of a program of monitoring and associated research activities at potential core index sites in selected coastal locations. The establishment of up to about 10 sites is anticipated.

ELIGIBILITY

Interested applicants must be eligible to receive Federal assistance under the acts giving Statutory authority for research funding by EPA, NOAA, or NASA. Statutory authority for EPA funding of this research is found in Section 103 of the Clean Air Act and Section 104 of the Clean Water Act. Not-for-profit scientific research and educational institutions located in the United States, and State or local governments, are eligible to apply under this solicitation. Profit-making firms are not eligible to receive assistance under this program.

Researchers in Federal agencies may submit applications directly, but are strongly encouraged to participate as part of a research/monitoring team working with an academic or state partner. Federal employees may cooperate or collaborate with other eligible applicants within the limits imposed by applicable legislation and regulations. Federal employees may not request salary reimbursement and cannot request funding for other than extramural uses.

EPA, NOAA, and NASA welcome applications on behalf of all qualified scientists, engineers, and other professionals, and strongly encourage women, minorities, and persons with disabilities to compete fully in this program.

In accordance with Federal statutes and regulations and EPA, NOAA, and NASA policies, no person on grounds of race, color, age, sex, national origin, or disability shall be excluded from participation in, denied the benefits of, or be subjected to discrimination under any program or activity receiving federal assistance from EPA, NOAA, or NASA.

SORTING CODE

At various places within the application, applicants will be asked to identify this topic area by using the Sorting Code. The Sorting Code for this solicitation is 98-NCERQA-R1.

The Sorting Code must be placed at the top of the abstract (as shown in the abstract format), in Box 10 of Standard Form 424 (as described in the section on SF424), and should also be included in the address on the package that is sent to EPA (see the section on how to apply).

INSTRUCTIONS FOR APPLICATION

Studies focused on a particular site may consist of several collaborative proposals, or an omnibus proposal that contains various interdisciplinary components. In either case, a common overview statement of monitoring and research objectives and approach should be prepared, and a brief statement provided describing the role of each component.

Letter of Intent to Apply

A Letter of Intent to Apply of no more than 2 pages should be submitted giving the title and a brief summary of the proposed project with sufficient detail to identify potential reviewers. These letters will not be used for screening applications, but rather for planning the peer review process. Letters should be submitted by February 2, 1998, to:

Dr. Robert E. Menzer
U.S. Environmental Protection Agency
ORD/NCERQA (8701R)
401 M Street, SW
Washington DC 20460

Full Application Submission

The initial application is made through the submission of the materials described below. It is essential that the application contain all the information requested and be submitted in the formats described. If it is not, the application may be rejected on administrative grounds. If an application is considered for award, (i.e., after external peer review and internal review) additional forms and other information will be requested by the Project Officer. The application should not be bound or stapled in any way. The Application contains the following:

A. Standard Form 424: The applicant must complete Standard Form 424 (see attached form and instructions). This form will act as a cover sheet for the application and should be its first page. Instructions for completion of the SF424 are included with the form. Applications should be clearly identified by a project title starting with the acronym "CISNet" and a short title (<50 characters). The form must contain the original signature of an authorized representative of the applying institution. Please note that both the Principal Investigator and an administrative contact should be identified in Section 5 of the SF424.

B. Key Contacts: The applicant must complete the Key Contacts Form (attached) as the second page of the submitted application.

C. Abstract: The abstract is a very important document. Prior to attending the peer review panel meetings, some of the panelists may read only the abstract. Therefore, it is critical that the abstract accurately describe the research being proposed and convey all the essential elements of the research. Also, in the event of an award, the abstracts will form the basis for an Annual Report of awards made under this program. The abstract should include the following information:

1. Sorting Code: 98-NCERQA-R1
2. Title: Use the exact title as it appears in the rest of the application.
3. Investigators: List the names and affiliations of each investigator who will significantly contribute to the project. Start with the Principal Investigator.
4. Project Summary: This should include a brief description of the site, the rationale for the monitoring and research approach, the scientific objectives and/or hypotheses to be tested, and a brief summary of work to be completed.

5. **Supplemental Keywords:** A list of suggested keywords is provided for your use. Do not duplicate terms already used in the text of the abstract.

D. Project Description: This description must not exceed fifteen (15) consecutively numbered (center bottom), 8.5x11-inch pages of single-spaced standard 12-point type with 1-inch margins, inclusive of figures and other visual materials, but exclusive of references. The description must provide the following information:

1. **Objectives:** The proposed project must be completely described, including identification of the site (with justification if it is not on the approved list [see Appendix 1]), scientific objectives, proposed methodology, relevance to the goals of CISNet and its scientific priorities. Include: (i) the monitoring and research objectives for the period of proposed work and their expected significance, (ii) the relation to the present state of knowledge about the site, and relation to previous work and work in progress by the proposing principal investigator(s), and (iii) a discussion of how the proposed project lends value to the CISNet goal.
2. **Approach:** Outline the methods, approaches, and techniques that you intend to employ in meeting the objective stated above.
3. **Expected Results or Benefits:** Describe the results you expect to achieve during the project, the benefits of success as they relate to the topic under which the proposal was submitted, and the potential recipients of these benefits. This section should also discuss the utility of the research project proposed for addressing the environmental problems described in the solicitation (one to two pages recommended).
4. **Milestone chart:** Project management should be clearly delineated, with the roles and responsibilities of each investigator described. A year-by-year summary of proposed work must be included with intermediate outcomes and a time line of major tasks covering the duration of the proposed project.
5. **General Project Information:** Discuss other information relevant to the potential success of the project. This should include facilities, personnel, project schedules, proposed management, interactions with other institutions, etc. (one to two pages recommended).
6. **Important Attachments:** Appendices and/or other information may be included but must remain within the 15 page limit. References cited are in addition to the 15 pages.

E. Project Description for Remote Sensing Component: (optional) If a remote sensing component is proposed, an additional section (up to 15 pages in length) must be included giving similar details for the remote sensing component. This section should include (i) goals and objectives, (ii) approach to algorithm development and relation to previous work in this field, (iii) description of data to be collected, (iv) relationship and expected benefit to the in-situ monitoring program described in 1 and 2 above.

F. Resumes: The resumes of all principal investigators and important co-workers should be presented. Resumes must not exceed two consecutively numbered (bottom center), 8.5x11-inch pages of single-spaced standard 12-point type with 1-inch margins for each individual.

G. Current and Pending Support: The applicant must identify any current and pending financial resources that are intended to support research related to that included in the proposal or which would consume the time of principal investigators. This should be done by completing the appropriate form (see attachment) for each investigator and other senior personnel involved in the proposal. Failure to provide this information may delay consideration of your proposal.

H. Budget: The applicant must present a detailed, itemized budget for the entire project. This budget must be in the format provided in the example (see attachment) and not exceed two consecutively numbered (bottom center), 8.5x11-inch pages with 1-inch margins. A brief statement concerning cost sharing can be added to the budget justification.

If a remote sensing component is proposed, present a separate budget for the additional funding related to the remote sensing component. Use the same format provided in the example.

I. Budget Justification: This section should describe the basis for calculating the personnel, fringe benefits, travel, equipment, supplies, contractual support, and other (including computer) costs identified in the itemized budget and explain the basis for their calculation (special attention should be given to explaining the travel, equipment, and other categories). This should also include an explanation of how the indirect costs were calculated. This justification should not exceed two consecutively numbered (bottom center), 8.5x11-inch pages of single-spaced standard 12-point type with 1-inch margins.

J. Quality Assurance Narrative Statement: Provide a statement on how quality processes or products will be assured. This statement should not exceed two

consecutively numbered, 8.5x11 inch pages of single-spaced standard 12-point type with 1-inch margins. This is in addition to the 15 pages permitted for the Project Description. The Quality Assurance Narrative Statement should, for each item listed below, either present the required information or provide a justification as to why the item does not apply to the proposed research. For awards that involve environmentally related measurements or data generation, a quality system that complies with the requirements of ANSI/ASQC E4, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," must be in place.

1. The activities to be performed or hypothesis to be tested (reference may be made to the specific page and paragraph number in the application where this information may be found); criteria for determining the acceptability of data quality in terms of precision, accuracy, representativeness, completeness, comparability.
2. The study design including sample type and location requirements and any statistical analyses that were used to estimate the types and numbers of samples required for physical samples or similar information for studies using survey and interview techniques.
3. The procedures for the handling and custody of samples, including sample identification, preservation, transportation, and storage.
4. The methods that will be used to analyze samples or data collected, including a description of the sampling and/or analytical instruments required.
5. The procedures that will be used in the calibration and performance evaluation of the sampling and analytical methods used during the project.
6. The procedures for data reduction and reporting, including a description of statistical analyses to be used and of any computer models to be designed or utilized associated with verification and validation techniques.
7. The intended use of the data as they relate to the study objectives or hypotheses.
8. The quantitative and or qualitative procedures that will be used to evaluate the success of the project.
9. Any plans for peer or other reviews of the study design or analytical methods prior to data collection.

ANSI/ASQC E4, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs" is available for purchase from the American Society for Quality Control, phone 1-800-248-1946, item T55. Only in exceptional circumstances should it be necessary to consult this document.

K. Postcard: The Applicant must include with the application a self addressed, stamped 3x5-inch post card. This will be used to acknowledge receipt of the application and to transmit other important information to the applicant.

How to Apply

The original and ten (10) copies of the fully developed application and five (5) additional copies of the abstract (15 in all), must be received by NCERQA no later than 4:00 P.M. EST on the closing date April 1, 1998.

The application should not be bound or stapled in any way. The original and copies of the application should be secured with paper or binder clips. Completed applications should be sent via regular mail to:

**U.S. Environmental Protection Agency
Peer Review Division (8703R)
Sorting Code: 98-NCERQA-R1
401 M Street, SW
Washington DC 20460**

For express mail or courier-delivered applications, the following address must be used:

**U. S. Environmental Protection Agency
Peer Review Division (8703R)
Sorting Code: 98-NCERQA-R1
1300 Pennsylvania Avenue, NW
Room B-10105
Washington, DC 20004
Phone: (202) 564-6939 (for express mail applications)**

Applications received after the deadline and applications that deviate from the format described below will be returned to the sender without review. If you have any questions or require further information, contact one of the agency coordinators listed below.

Application Review And Selection

Review of applications will be handled cooperatively by EPA, NOAA, and NASA. All applications will be reviewed by an appropriate technical peer review group. This review is designed to evaluate each proposal according to its scientific merit. In general, each review group is composed of scientists, engineers, social scientists, and/or economists who are experts in their respective disciplines and are proficient in the technical areas they are reviewing. The reviewers use the following criteria to help them in their reviews:

1. The originality and creativity of the proposed research and monitoring, the appropriateness and adequacy of the methods proposed, and the appropriateness and adequacy of the Quality Assurance Narrative Statement. Is the research approach practical and technically defensible, and can the project be performed within the proposed time period? Will the proposed research and monitoring contribute to the objectives of CISNet? Is the application well-prepared with supportive information that is self-explanatory and understandable?
2. The qualifications of the principal investigator(s) and other key personnel, including research training, demonstrated knowledge of pertinent literature, experience, and publication records. Will all key personnel contribute a significant time commitment to the project?
3. The availability and/or adequacy of the facilities and equipment proposed for the project. Are there any deficiencies that may interfere with the successful completion of the research?
4. The responsiveness of the application to the research and monitoring needs identified for the topic area. Is the proposed effort integrated with ongoing activities at the site, including the provision of matching funds?
5. Although budget information is not used by the reviewers as the basis for their evaluation of scientific merit, the reviewers are asked to provide their view on the appropriateness and/or adequacy of the proposed budget and its implications for the potential success of the proposed research. Input on requested equipment is of particular interest.

Applications that receive scores of excellent and very good from the peer reviewers are subjected to a programmatic review within EPA, NOAA, and NASA. Upon conclusion of all reviews, meritorious applications may be recommended for funding by either EPA, NOAA, or NASA, at the agencies' option. Subsequent grant administration procedures will be in accordance with the individual policies of the awarding agency. A summary statement of the scientific review by the peer panel will be provided to each applicant.

Applications selected for funding will require additional certifications, possibly a revised budget, and responses to any comments or suggestions offered by the peer reviewers. Project officers will contact principal investigators to obtain these materials.

Proprietary Information

By submitting an application in response to this solicitation, the applicant grants EPA, NOAA, and NASA permission to share the application with technical reviewers both within and outside the Agencies. Applications containing proprietary or other types of confidential information will be returned to the applicant without review.

Funding Mechanism

The funding mechanism for all awards issued under this solicitation will consist of grants from EPA, NOAA, and NASA and depends on the availability of funds. In accordance with Public Law 95-224, the primary purpose of a grant is to accomplish a public purpose of support or stimulation authorized by Federal statute rather than acquisition for the direct benefit of the government.

Contacts

Additional general information on the grants program, forms used for applications, etc., may be obtained by exploring our Web page at <http://www.epa.gov/ncerqa>. EPA does not intend to make mass mailings of this announcement. Information not available on the Internet may be obtained by contacting:

**U.S. Environmental Protection Agency
National Center for Environmental Research
and Quality Assurance (8703R)
401 M Street, S.W.
Washington, DC 20460**

Phone: 1-800-490-9194

In addition, Agency contact persons listed below can respond to any technical questions related to your application.

EPA:

Ms. Barbara Levinson

Phone: 202-564-6911

E-mail: levinson.barbara@epamail.epa.gov

NOAA:

Dr. Andrew Robertson

Phone: 301-713-3032 x162

E-mail: andrew.robertson@noaa.gov

NASA:

Dr. Janet Campbell

Phone: 202-358-0310

E-mail: jcampbe1@hq.nasa.gov

APPENDIX I

Coastal Sites included in CISNet

Great Lakes Province

Old Woman Creek, Ohio
South Green Bay, Wisconsin
Lake Michigan/Grand River, Michigan
West Lake Superior, Minnesota

Virginian Province

Narragansett Bay, Rhode Island
New York/New Jersey Harbor, NY/NJ
Chesapeake Bay:
 Hampton Roads-York River, VA
 Choptank River-Severn River, MD
Waquoit Bay, Massachusetts

West Indian Province

Florida Keys Marine Sanctuary, Florida
Florida Bay, Florida
Tampa Bay, Florida
Rookery Bay NERR, Florida
Jobos Bay, Puerto Rico

Californian Province

San Pablo Bay, California
Elkhorn Slough NERR, California
Santa Monica Bay, California
Tijuana River Estuary NERR, CA

Insular Province

Kaneohe Bay, Hawaii
Guam

Acadian Province

Boston Harbor, Massachusetts
Great Bay, New Hampshire
Wells Bay, Maine

Carolinian Province

North Inlet/Winyah Bay, SC
Doboy Sound, Georgia
Charleston Harbor, SC
Rachel Carson NERR, NC
Neuse River Estuary, NC
North Indian River Lagoon, FL

Louisianian Province

Apalachicola Bay, FL
Atchafalaya Bay, Louisiana
Pensacola Bay, FL
Galveston Bay, Texas
Barataria Bay, Louisiana
Corpus Christi Bay, Texas

Columbian Province

South Slough NERR, Oregon
Columbia River Estuary, OR/WA
Commencement Bay, WA
Padilla Bay, Washington

Alaskan Provinces

Valdez, Alaska
Point Barrow, Alaska

APPLICATION FOR FEDERAL ASSISTANCE

1. TYPE OF SUBMISSION <i>Application</i> ☐ Construction ☐ Non-Construction		2. DATE SUBMITTED		Applicant Identifier	
		3. DATE RECEIVED BY STATE		State Applicant Identifier	
<i>Preapplication</i> ☐ Construction ☐ Non-Construction		4. DATE RECEIVED BY FEDERAL AGENCY		Federal Identifier	
5. APPLICANT INFORMATION IS THIS PROPOSAL BEING SUBMITTED TO ANOTHER FEDERAL AGENCY? ☐ YES ☐ NO IF YES, LIST ACRONYM(S)					
Legal Name:			Organizational Unit:		
Address (<i>give city, county, state, and zip code</i>):			Name and telephone and E-mail number of the person to be contacted on matters involving this application (<i>give area code</i>) PI: ADMIN. CONTACT:		
6. EMPLOYER IDENTIFICATION NUMBER (EIN): 			7. TYPE OF APPLICANT: (<i>enter appropriate letter in box</i>) 		
8. TYPE OF APPLICATION: ☐ New ☐ Continuation ☐ Revision If Revision, enter appropriate letter(s) in box(es): A. Increase Award B. Decrease Award C. Increase Duration D. Decrease Duration Other (<i>specify</i>): _____			A. State B. County C. Municipal D. Township E. Interstate F. Intermunicipal G. Special District H. Independent School Dist. I. State Controlled Institution of Higher Learning J. Private University K. Indian Tribe L. Individual M. Profit Organization N. Other (Specify) _____		
			9. NAME OF FEDERAL AGENCY: U.S. Environmental Protection Agency - ORD - NCERQA		
10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: 6 6 . 5 0 0 TITLE: 98-NCERQA - _ _ _			11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT: 		
12. AREAS AFFECTED BY PROJECT (<i>cities, counties, states, etc.</i>): 					
13. PROPOSED PROJECT:		14. CONGRESSIONAL DISTRICTS OF:			
Start Date	Ending Date	a. Applicant		b. Project	
15. ESTIMATED TOTAL PROJECT FUNDING:		16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?			
a. Federal	\$.00	a. YES. THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON: DATE _____ b. NO. ☐ PROGRAM IS NOT COVERED BY E.O. 12372 ☐ OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW			
b. Applicant	\$.00				
c. State	\$.00				
d. Local	\$.00				
e. Other	\$.00				
f. Program Income	\$.00	17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT? ☐ Yes If "Yes," attach an explanation. ☐ No			
g. TOTAL	\$.00				
18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT. THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.					
a. Typed Name of Authorized Representative			b. Title		c. Telephone number
d. Signature of Authorized Representative					e. Date Signed

INSTRUCTIONS FOR THE SF 424

This is a standard form used by applicants as a required facesheet for preapplications and applications submitted for Federal Assistance. It will be used by Federal agencies to obtain applicant certification that States which have established a review and comment procedure in response to Executive Order 12372 and have selected the program to be included in their process, have been given an opportunity to review the applicant's submission.

- | Item: | Entry: | Item: | Entry: |
|-------|--|-------|---|
| 1. | Self-explanatory. | 12. | List only the largest political entities affected (e.g., State, counties, cities.) |
| 2. | Date application submitted to Federal agency (or State, if applicable) & applicant's control number (if applicable). | 13. | Self-explanatory. |
| 3. | State use only (if applicable). | 14. | List the applicant's Congressional Districts and any District(s) affected by the program or project. |
| 4. | If this application is to continue or revise an existing award, enter present Federal identifier number. If for a new project, leave blank. | 15. | Amount requested or to be contributed during the first funding/budget period by each contributor. Value of in-kind contributions should be included on appropriate lines as applicable. If the action will result in a dollar change to an existing award, include <u>only</u> the amount of the change. For decreases, enclose the amounts in parentheses. If both basic and supplemental amounts are included, show breakdown on an attached sheet. For multiple program funding, use totals and show breakdown using same categories as item 15. |
| 5. | Legal name of applicant, name of primary organizational unit which will undertake the assistance activity, complete address of the applicant, and name and telephone number of the person to contact on matters related to this application. | 16. | Applicants should contact the State Single Point of Contact (SPOC) for Federal Executive Order 12372 to determine whether the application is subject to the State intergovernmental review process. |
| 6. | Enter Employer Identification Number (EIN) as assigned by the Internal Revenue Service. | 17. | This question applies to the applicant organization, not the person who signs as the authorized representative. Categories of debt include delinquent audit allowances, loans and taxes. |
| 7. | Enter the appropriate letter in the space provided. | 18. | To be signed by the authorized representative of the applicant. A copy of the governing body's authorization for you to sign this application as official representative must be on file in the applicant's office. (Certain Federal agencies may require that this authorization be submitted as part of the application.) |
| 8. | Check appropriate box and enter appropriate letter(s) in the space(s) provided:

— "New" means a new assistance award.

— "Continuation" means an extension for an additional funding/budget period for a project with a projected completion date.

— "Revision" means any change in the Federal Government's financial obligation or contingent liability from an existing obligation. | | |
| 9. | Name of Federal agency from which assistance is being requested with this application. | | |
| 10. | Use the Catalog of Federal Domestic Assistance number and title of the program under which assistance is required. | | |
| 11. | Enter a brief descriptive title of the project. If more than one program is involved, you should append an explanation on a separate sheet. If appropriate (e.g., construction or real property projects), attach a map showing project location. For preapplications, use a separate sheet to provide a summary description of this project. | | |

KEY CONTACTS FORM

- **Authorized Representative:** *Original awards and amendments will be sent to this individual for review and acceptance, unless otherwise indicated.*

Name: _____
Title: _____
Complete Address: _____

Phone Number: _____

- **Payee:** *Individual authorized to accept payments.*

Name: _____
Title: _____
Complete Address: _____

Phone Number: _____

- **Administrative Contact:** *Individual from Sponsored Programs Office to contact concerning administrative matters (i.e., indirect cost rate computation, rebudgeting requests etc.)*

Name: _____
Title: _____
Complete Address: _____

Phone Number: _____
FAX Number: _____
E-Mail Number: _____

- **Principal Investigator:** *Individual responsible for the technical completion of the proposed work.*

Name: _____
Title: _____
Complete Address: _____

Phone Number: _____
FAX Number: _____
E-Mail Number: _____

EPA STAR Grant Abstract (*Example Format*)

Sorting Code: 98-NCERQA-XX (use the correct code that corresponds to the appropriate RFA topic)

Title: Use the exact title as it appears in the rest of the application.

Investigators: List the names and affiliations of each investigator who will significantly contribute to the project. Start with the Principal Investigator.

Institution: Name of university or other applicant.

Project Period: October 1, 1998--September 30, 2000, for example.

Research Category: Enter your research topic name.

Project Summary:

Objectives/Hypothesis: include a short statement on the context of the proposed research in relation to other environmental research in the particular area of work

Approach: outline the methods, approaches, and techniques you intend to employ in meeting the objectives

Expected Results:

including a brief description of the

Improvements in Risk Assessment or Risk Management

that will be realized if the expected results are achieved

Supplemental Keywords: see attached suggestions. Do not duplicate terms used in the text of the abstract.

SUGGESTED KEYWORDS

Media: (media, air, ambient air, atmosphere, ozone, water, drinking water, watersheds, groundwater, land, soil, sediments, acid deposition, global climate, indoor air, mobile sources, CASTNET, stratospheric ozone, tropospheric, marine, estuary, precipitation, leachate, adsorption, absorption, chemical transport)

Risk Assessment: (exposure, risk, risk assessment, effects, health effects, ecological effects, human health, bioavailability, metabolism, vulnerability, sensitive populations, dose-response, carcinogen, teratogen, mutagen, animal, mammalian, organism, cellular, population, enzymes, infants, children, elderly, stressor, age, race, diet, metabolism, genetic pre-disposition, genetic polymorphisms, sex, ethnic groups, susceptibility, cumulative effects)

Chemicals, toxics, toxic substances: (chemicals, toxics, particulates, ODS, VOC, CFC, PAH, PNA, PCB, dioxin, metals, heavy metals, solvents, oxidants, nitrogen oxides, sulfates, organics, DNAPL, NAPL, pathogens, viruses, bacteria, acid rain, effluent, discharge, dissolved solids, intermediates)

Ecosystem Protection: (ecosystem, indicators, restoration, regionalization, scaling, terrestrial, aquatic, habitat, integrated assessment)

Risk Management: pollution prevention (green chemistry, life-cycle analysis, alternatives, sustainable development, clean technologies, innovative technology, renewable, waste reduction, waste minimization, environmentally conscious manufacturing); treatment (remediation, bioremediation, cleanup, incineration, disinfection, oxidation, restoration)

Public Policy: (public policy, decision making, community-based, cost-benefit, conjoint analysis, observation, non-market valuation, contingent valuation, survey, psychological, preferences, public good, Bayesian, socio-economic, willingness-to-pay, compensation, conservation, environmental assets, sociological)

Scientific Disciplines: (environmental chemistry, marine science, biology, physics, engineering, social science, ecology, hydrology, geology, histology, epidemiology, genetics, pathology, mathematics, limnology, entomology, zoology)

Methods/Techniques: (EMAP, modeling, monitoring, analytical, surveys, measurement methods, general circulation models, climate models, satellite, landsat, remote sensing)

Geographic Areas: (Northeast, central, Northwest, Chesapeake Bay, Great Lakes, Midwest, Mid-Atlantic, states: {use both full name and two letter abbreviation}, EPA Regions 1 through 10)

Sectors: (agriculture, business, transportation, industry {petroleum, electronics, printing, etc}:{identify 4 digit SIC codes}, service industry, food processing, etc)

Current and Pending Support

The following information should be provided for each investigator and other senior personnel. Failure to provide this information may delay consideration of this proposal.

Investigator:	Other agencies (including NSF) to which this proposal has been/will be submitted.		
Support: ☐ Current ☐ Pending ☐ Submission Planned in Near Future ☐ Transfer of Support Project/Proposal Title:			
Source of Support: Total Award Amount: \$ Total Award Period Covered: Location of Project: Person-Months Per Year Committed to the Project. Cal: Acad: Sumr:			
Support: ☐ Current ☐ Pending ☐ Submission Planned in Near Future ☐ Transfer of Support Project/Proposal Title:			
Source of Support: Total Award Amount: \$ Total Award Period Covered: Location of Project: Person-Months Per Year Committed to the Project. Cal: Acad: Sumr:			
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Source of Support: Total Award Amount: \$ Total Award Period Covered: Location of Project: Person-Months Per Year Committed to the Project. Cal: Acad: Sumr:			

*If this project has previously been funded by another agency, please list and furnish information for immediately preceding funding period.

Itemized Budget for EPA STAR Grant Applications (*Example Format*)

CATEGORIES	YEAR ONE	YEAR TWO	YEAR THREE	TOTAL PROJECT
a. Personnel Principal Investigator Co-PI Research Scientists Postdoctoral Scientists Other Personnel				
TOTAL PERSONNEL COSTS				
b. Fringe Benefits _____ % of _____				
c. Travel Trip 1 Trip 1 Trip 1 ...etc.				
TOTAL TRAVEL COSTS				
d. Equipment Item 1 Item 2 Item 3 ...etc.				
TOTAL EQUIPMENT COSTS				
e. Supplies Item 1 Item 2 Item 3 ...etc.				
TOTAL SUPPLY COSTS				
f. Contracts 1 2 3 ...etc.				
TOTAL CONTRACTUAL COSTS				
g. Other Item 1 Item 2 Item 3 ...etc.				
TOTAL OTHER COSTS				
h. TOTAL DIRECT COSTS (sum of a-g)				
i. Indirect Costs/Charges _____ % of _____ (base)				
j. TOTAL PROJECT COSTS (sum of h & i)				
k. TOTAL REQUESTED FROM EPA				