

Integrated Research, Education, and Extension Competitive Grants Program – National Integrated Water Quality Program

**Evaluating the Effects of Conservation Practices on
Water Quality within the Biophysical Setting of a
Watershed**

Fiscal Year 2004 Supplemental Request for Applications

APPLICATION DEADLINE: July 6, 2004



U.S. Department of Agriculture



Cooperative State Research, Education, and Extension Service

**COOPERATIVE STATE RESEARCH, EDUCATION, AND EXTENSION SERVICE;
U.S. DEPARTMENT OF AGRICULTURE**

**INTEGRATED RESEARCH, EDUCATION, AND EXTENSION COMPETITIVE
GRANTS PROGRAM – NATIONAL INTEGRATED WATER QUALITY PROGRAM**

**EVALUATING THE EFFECTS OF CONSERVATION PRACTICES ON WATER
QUALITY WITHIN THE BIOPHYSICAL SETTING OF A WATERSHED**

SUPPLEMENTAL ANNOUNCEMENT

CATALOG OF FEDERAL DOMESTIC ASSISTANCE: This program is listed in the Catalog of Federal Domestic Assistance under 10.303, Integrated Research, Education, and Extension Competitive Grants Program.

STAKEHOLDER INPUT: The Cooperative State Research, Education, and Extension Service (CSREES) is requesting comments regarding this Request for Applications (RFA) from any interested party. These comments will be considered in the development of the next RFA for the program. Such comments will be used to meet the requirements of section 103(c)(2) of the Agricultural Research, Extension, and Education Reform Act of 1998 (7 U.S.C. 7613(c)(2)). This section requires the Secretary to solicit and consider input on a current RFA from persons who conduct or use agricultural research, education, and extension for use in formulating future RFAs for competitive programs. Comments should be submitted as provided for in the **DATES** portion of this Notice.

Written stakeholder comments should be submitted by mail to: Policy Staff; Office of Extramural Programs; USDA-CSREES; STOP 2299; 1400 Independence Avenue, SW; Washington, DC 20250-2299; or via e-mail to: RFP-OEP@csrees.usda.gov. (This e-mail address is intended only for receiving comments regarding this RFA and not requesting information or forms.) In your comments, please state that you are responding to the Integrated Research, Education, and Extension Program – Conservation Effects Assessment Project RFA.

DATES: Applications must be received by close of business (COB) on July 6, 2004 (5:00 p.m. Eastern Daylight Time). Applications received after this deadline will not be considered for funding. Comments regarding this RFA are requested within six months from the issuance of this notice. Comments received after that date will be considered to the extent practicable.

EXECUTIVE SUMMARY: CSREES requests applications for the Integrated Research, Education, and Extension Competitive Grants Program – Conservation Effects Assessment Project (CEAP) for fiscal year (FY) 2004 to develop research, education, and extension projects aimed at improving the quality of water resources in agricultural watersheds across the Nation. In FY 2004, CSREES anticipates that approximately \$2.7 million will be available to support CEAP projects, including funds contributed by USDA's Natural Resources Conservation Service (NRCS).

CEAP is a program area within the National Integrated Water Quality Program (NIWQP). This RFA is a supplement to the FY 2004 NIWQP RFA. It identifies the objectives for CEAP projects, the eligibility criteria for projects and applicants, and the application forms and associated instructions needed to apply for a CEAP grant.

CEAP seeks to fund projects that evaluate the effects of watershed conservation practices, especially with respect to understanding how the suite of conservation practices, the timing of these activities, and the spatial distribution of these practices throughout a watershed influence their effectiveness for achieving locally defined water quality goals. An extensive body of literature exists that describes plot or field-scale conservation practices aimed at protecting water quality. However, research results from plot- and field-scale studies are limited in that they cannot capture the complexities and interactions of conservation practices within a watershed. CEAP responds to a need to conduct research that evaluates the interactions among conservation practices and their biophysical setting on water quality at the watershed scale and to conduct outreach education to transfer knowledge from this research to farmers, ranchers, community leaders, or other stakeholders.

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PART I—FUNDING OPPORTUNITY DESCRIPTION

A. Legislative Authority and Background

Section 406 of the Agricultural Research, Extension, and Education Reform Act of 1998 (AREERA) (7 U.S.C. 7626) authorized the Secretary of Agriculture to establish a research, education, and extension competitive grants program to provide funding for agricultural activities with a total integrated, multifunctional research, education, and extension approach. Subject to the availability of appropriations to carry out this program, the Secretary may award grants to colleges and universities (as defined by section 1404 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (NARETPA) (7 U.S.C. 3103)) on a competitive basis for integrated research, education, and extension projects. Grants are to be awarded to address priorities in United States agriculture that involve integrated research, education, and extension activities as determined by the Secretary in consultation with the National Agricultural Research, Extension, Education, and Economics Advisory Board (NAREEEAB).

CSREES will administer the Integrated Research, Education, and Extension Competitive Grants Program by determining priorities in U.S. agriculture through Agency stakeholder input processes in consultation with the NAREEEAB. Each RFA will be developed each fiscal year based on these established priorities and approaches to solving critical agricultural issues. While the overall approach to solving critical agricultural issues, priorities, or problems will be through an integration of research, education, and extension activities within each individual program, component RFAs, depending on the priority addressed, may request applications that are research, education, or extension only, or a combination thereof.

B. Purpose and Priorities

CEAP is a program area within the NIWQP. The goal of the NIWQP is to contribute to the improvement of the quality of our Nation's surface water and groundwater resources through research, education, and extension activities. Projects funded through this program will facilitate achieving this goal by advancing and disseminating the knowledge base available to agricultural and rural communities. Funded projects should lead to science-based decision-making and management practices that improve the quality of the Nation's surface water and groundwater resources in agricultural and rural watersheds. A description of the purpose and priorities of the CEAP program area follows:

Conservation Effects Assessment Project

(Program Area 110.E)

The long-term goal of this program area is to understand how to optimize the achievement of locally-defined water quality goals through: (1) the selection of a suite of applicable conservation practices, (2) the geographic distribution of these practices throughout a watershed, and (3) the timing of implementation of conservation activities.

An extensive body of literature exists that describes conservation practices aimed at protecting water quality; i.e., the chemical, physical, and biological integrity of a water body. However, much of this work was conducted at the plot- or field- scale and there is little documentation on the effectiveness of these practices in actually restoring water quality. Inferences drawn from plot- and field-scale studies are limited in that they cannot capture the complexities and interactions of conservation practices as applied within various locations throughout a watershed.

There remains a need to conduct research that evaluates the interactions among conservation practices and their biophysical setting on water quality at the watershed scale. This program will sponsor a collection of watershed case studies that will explicitly investigate the linkages among a variety of conservation and land management practices as implemented over space and time and their resultant effects on water quality. Developing these linkages will allow for a synthesis of common principles and lessons learned across watersheds that can be applied to watershed management in the future.

The conservation practices of interest are the NRCS Core 4 practices (conservation buffers, nutrient management, pest management, and tillage management) plus water management (drainage and irrigation), and animal manure management. Websites describing this program and the relevant practices are listed in Part II, C. of this RFA.

This RFA supports USDA's National Resources Inventory (NRI) Conservation Effects Assessment Project (CEAP). The NRI-CEAP addresses the need for determining the environmental benefits and impacts to society of USDA's conservation programs. Because of the broad applicability across USDA, CSREES, NRCS, and the Farm Services Agency have joined together to sponsor this solicitation. This program advances CSREES' mission by providing research and outreach education aimed at improving the quality of our nation's water resources in agricultural and rural watersheds.

PART II—AWARD INFORMATION

A. Available Funding

There is no commitment by USDA to fund any particular application or to make a specific number of awards. In FY 2004, CSREES anticipates that approximately \$2.7 million will be available for support of CEAP projects, including funds contributed by USDA's NRCS. CSREES anticipates making 4 to 5 CEAP awards. The maximum award will be \$220,000 per year, including indirect costs. Total project periods may not exceed 3 years. Applications requesting more than \$660,000, including indirect costs, or proposing projects longer than 3 years will be returned without review.

B. Type of Applications

This is a new program area, so all CEAP applications will be considered new. CEAP applications may not have been submitted to NIWQP previously. They will be reviewed

competitively using the selection process and evaluation criteria described in Part V—Application Review Requirements.

C. Project Types

Program-area-specific priorities and objectives are provided below.

Conservation Effects Assessment Project

Program Area 110.E

The intent of this RFA is to sponsor case studies at intensively studied watersheds in order to investigate the effectiveness of multiple conservation practices when considered over the whole spatial extent of the watershed. Because of the lag time in water quality response and the period of record needed to estimate water quality condition and trends, these case studies will necessarily be based primarily on existing data (see criteria for watershed selection, below). However, applications should bring to the analysis of existing data a full range of quantitative interpretive techniques and geographically-based methods, including physical, statistical, and landscape modeling methods, as appropriate.

Applications also should address limitations in existing data with respect to its effect on quantifying the effectiveness of conservation practices. Applications should discuss not only how existing data will be analyzed, but also should address sampling designs and analytical methods for early detection of water quality trends given the biophysical setting of the watershed(s) proposed for study.

Applications should describe how proposed research will address all the following questions:

1. What are the measurable effects of agricultural conservation and other management practices on patterns and trends in ground and/or surface water quality at the watershed scale? What is the appropriate time scale to expect changes in surface or ground water condition from conservation practices? Are there scientifically credible methods to monitor progress toward water quality goals in the absence of spatially and temporally extensive monitoring data?
2. Within the hydrologic and geomorphic setting of a watershed, how does the timing and location of a suite of conservation practices affect water quality? Similarly, how does the biophysical setting of the watershed influence the design of water quality monitoring sampling design (i.e., methods, locations, and frequency) for documenting the effectiveness of Best Management Practices? What recommendations can be made with respect to future data collection to enable detection of statistically significant changes in water quality at the earliest possible time? How can existing data be used to forecast trends?
3. What are the relationships among agricultural conservation and other management practices implemented in a given watershed with respect to their impact on water quality? Are the effects additive? Multiplicative? Contradictory? Independent?
4. What is the optimal set of conservation practices and what is their optimal placement within a watershed in order to achieve water quality goals? What methods are available or could be

developed to help managers choose among alternative conservation practices for a given watershed, given locally-defined water quality goals and budgetary constraints? What social and economic factors within the study watershed facilitate or impede implementation of conservation practices?

Applications must describe the specific hypotheses to be investigated, the rationale for selecting the existing data to be used, how existing data on conservation practices and water quality monitoring results will be synthesized and interpreted, and how study results and conclusions will be quantitatively tested. In addition, because conservation practices are inextricably related to activities that occur in space and time, applications must: (1) describe how the spatial and temporal dimensions of each of the practices will be represented in the study methods and analyses; and (2) how the study will incorporate spatial and temporal issues in its conclusions in order to facilitate making recommendations to water quality managers regarding the usefulness of these conservation practices. Applications also must develop an outreach plan to communicate results of this research to appropriate audiences and provide evaluation techniques for outreach efforts.

Criteria for Selection of Study Watersheds

Investigators must demonstrate that the watershed(s) selected for study meets the following criteria:

1. Watersheds must be at least 14-digit Hydrologic Unit Code (HUC) watersheds;
2. Land use history must be documented;
3. The most recent history of conservation practices must be documented. It is desirable to have a 10-year history; and
4. The watershed must have a minimum of 5 years of existing water monitoring data (greater than 10 years is desirable). Priority will be given to those watersheds with longer data records that meet the following criteria:
 - (a) Continuous stream discharge;
 - (b) Measures of nutrient concentrations during both runoff and base flow sediment concentrations;
 - (c) Water quality parameters (biological, chemical, physical);
 - (d) Geo-referenced land use, including specific conservation practices, and terrain features; and
 - (e) Water quality data at locations within the watershed that can support analyses to distinguish the effects of multiple conservation practices and biophysical features on water quality patterns and trends.

Web Resources:

National Agricultural Library

<http://www.nal.usda.gov/wqic/> - Water Quality Information Center

NRCS and FSA

<http://www.nrcs.usda.gov/technical/nri/ceap/> - CEAP website

<http://www.nrcs.usda.gov/about/>

<http://www.nrcs.usda.gov/programs/eqip/index.html>

<http://www.nrcs.usda.gov/programs/wrp/>

<http://www.nrcs.usda.gov/programs/whip/>

<http://www.nrcs.usda.gov/programs/cta/index.html>

<http://www.nrcs.usda.gov/technical/efotg>

<http://www.fsa.usda.gov/dafp/cepd/crp.htm>

CSREES

http://www.csrees.usda.gov/funding/rfas/04_water_quality.html - for the full National Integrated Water Quality Program RFA

<http://www.usawaterquality.org/> - for more information on this program and for integrated projects funded by this program in the past

Special Requirements:

The applicant must:

1. Demonstrate interdisciplinary efforts that include any appropriate combination of: hydrologists, statisticians, ecologists, economists, and social scientists;
2. Include a data coordinator as part of the research team;
3. Include a plan for digital storage and retrieval of all data collected so that data can be delivered regularly to the funding agencies with annual and final reports. Data will be made publicly available at the conclusion of the grant period, in accordance with federal data policy;
4. Provide information on any physical, statistical, or landscape modeling methods used or developed to assist in interpreting the data (e.g., model lineage, data requirements, sensitivity), such that other users could apply these same techniques elsewhere;
5. Demonstrate an existing partnership or collaboration with the appropriate State or local agency responsible for the planning and implementation of agricultural conservation and management practices;
6. Develop an outreach plan to provide results to farmers, ranchers, and appropriate community leaders or other stakeholders to enhance the effectiveness of ongoing or planned watershed management activities; and

7. Participate in the annual all-investigator meetings coordinated by the participating agencies. Project funds should be included in the budget for the principal investigator to attend these annual meetings.

PART III—ELIGIBILITY INFORMATION

A. Eligible Applicants

Applications may be submitted by colleges and universities (as defined in section 1404 of the NARETPA). For purposes of this program, the terms “college” and “university” mean an educational institution in any State which (1) admits as regular students only persons having a certificate of graduation, or the recognized equivalent of such a certificate, from a school providing secondary education; (2) is legally authorized within such State to provide a program of education beyond secondary education; (3) provides an educational program for which a bachelor’s degree or any other higher degree is awarded; (4) is a public or other nonprofit institution; and (5) is accredited by a nationally recognized accrediting agency or association. Applications also may be submitted by 1994 Land-Grant Institutions. A research foundation maintained by a college or university is not eligible to receive an award under this program. Award recipients may subcontract to organizations not eligible to apply provided such organizations are necessary for the conduct of the project.

B. Matching Requirements

If a grant provides a particular benefit to a specific agricultural commodity, the grant recipient is required to provide funds awarded on a dollar-for-dollar basis from non-Federal sources with cash and/or in-kind contributions. See Part IV, B., 13 for details.

CSREES may waive the matching funds requirement for a grant if CSREES determines that: (a) the results of the project, while of particular benefit to a specific agricultural commodity, are likely to be applicable to agricultural commodities generally; or (b) the project involves a minor commodity, the project deals with scientifically important research, and the grant recipient is unable to satisfy the matching funds requirement.

PART IV—APPLICATION AND SUBMISSION INFORMATION

A. Address to Request Application Package

Program application materials are available at the CSREES Funding Opportunities web site (<http://www.csrees.usda.gov/funding/forms.html>). If you do not have access to the web page or have trouble downloading material and you would like a hard copy, you may contact the Proposal Services Unit, Competitive Programs, USDA/CSREES at (202) 401-5048. When calling the Proposal Services Unit, please indicate that you are requesting the RFA and associated application forms for the Integrated Research, Education, and Extension Program – Conservation Effects Assessment Project. These materials also may be requested via Internet by sending a message with your name, mailing address (not e-mail) and phone number to psb@csrees.usda.gov. State that you want a copy of the RFA and the associated application forms for the Integrated Research, Education, and Extension Program – Conservation Effects Assessment Project.

B. Content and Form of Application Submission

The applications should be prepared following the guidelines and the instructions below. Each application must contain the following elements in the order indicated:

1. General

Use the following guidelines to prepare an application. Proper preparation of applications will assist reviewers in evaluating the merits of each application in a systematic, consistent fashion:

(a) Prepare the application on only one side of the page using standard size (8 1/2" x 11") white paper, one-inch margins, typed or word processed using no type smaller than 12 point font, and single or double spaced. Use an easily readable font face (e.g., Geneva, Helvetica, Times Roman).

(b) Number each page of the application sequentially, starting with the Project Description, including the budget pages, required forms, and any appendices.

(c) Staple the application in the upper left-hand corner. Do not bind. An original and nine (9) copies (10 total) must be submitted in one package, along with ten (10) additional copies of the "Project Summary," Form CSREES-2003, as a separate attachment.

(d) Include original illustrations (photographs, color prints, etc.) in all copies of the application to prevent loss of meaning through poor quality reproduction.

(e) The contents of the application should be assembled in the following order:

- (1) Proposal Cover Page (Form CSREES-2002)
- (2) Table of Contents
- (3) Project Summary (Form CSREES-2003)

- (4) Project Description
- (5) References
- (6) Appendices to Project Description
- (7) Key Personnel
- (8) Collaborative Arrangements (including letters of support)
- (9) Conflict-of-Interest List (Form CSREES-2007)
- (10) Budget (Form CSREES-2004)
- (11) Budget Narrative
- (12) Matching
- (13) Current and Pending Support (Form CSREES-2005)
- (14) Assurance Statement(s) (Form CSREES-2008)
- (15) Compliance with the National Environmental Policy Act (NEPA) (Form CSREES-2006)
- (16) Page B, Proposal Cover Page (Form CSREES-2002), Personal Data on Project Director

2. Proposal Cover Page (Form CSREES-2002)

Page A

Each copy of each grant application must contain a “Proposal Cover Page”, Form CSREES-2002. One copy of the application, preferably the original, must contain the pen-and-ink signature(s) of the proposing PDs and the authorized organizational representative (AOR), the individual who possesses the necessary authority to commit the organization's time and other relevant resources to the project. If there are more than three co-PDs for an application, please list additional co-PDs on a separate sheet of paper (with appropriate information and signatures) and attach to the Proposal Cover Page (Form CSREES-2002). Any proposed PD or co-PD whose signature does not appear on Form CSREES-2002 or attached additional sheets will not be listed on any resulting grant award. Complete both signature blocks located at the bottom of the “Proposal Cover Page” form. Please note that Form CSREES-2002 is comprised of two parts - Page A, which is the “Proposal Cover Page”, and Page B, which is the “Personal Data on Project Director.”

Form CSREES-2002 serves as a source document for the CSREES grant database; it is therefore important that it be accurately completed in its entirety, especially the e-mail addresses requested in Blocks 4.c. and 18.c. However, the following items are highlighted as having a high potential for errors or misinterpretations:

(a) Type of Performing Organization (Block 6.a. and 6.b.). For Block 6.a., a check should be placed in the appropriate box to identify the type of organization which is the legal recipient named in Block 1. Only one box should be checked. For Block 6.b., please check as many boxes that apply to the affiliation of the PD listed in Block 16.

(b) Title of Proposed Project (Block 7.). The title of the project must be brief (140-character maximum, including spaces), yet represent the major thrust of the effort being proposed. Project titles are read by a variety of nonscientific people; therefore, highly technical

words or phraseology should be avoided where possible. In addition, introductory phrases such as “investigation of,” “research on,” “education for,” or “outreach that” should not be used.

(c) Program to Which You Are Applying (Block 8.). Enter “National Integrated Water Quality Program”. Include the Program Area and Number (e.g., National Facilitation Project 110.A).

(d) DUNS NO. (Data Universal Numbering System) (Block 11.). A DUNS number must be included for the legal recipient named in Block 1. (except applications from individuals). See Part VIII, G. of the National Integrated Water Quality Program RFA.

(e) Type of Request (Block 14.). Check the block for “New,” “Renewal,” “Resubmission,” or “Resubmitted Renewal”.

(f) Project Director (PD) (Blocks 16.-19.). Blocks 16.-18. are used to identify the PD and Block 19. to identify co-PDs. If needed, additional co-PDs may be listed on a separate sheet of paper and attached to Form CSREES-2002, the Proposal Cover Page, with the applicable co-PD information and signatures. Listing multiple co-PDs, beyond those required for genuine collaboration, is discouraged.

(g) Other Possible Sponsors (Block 21.). List the names or acronyms of all other public or private sponsors including other agencies within USDA to which your application has been or might be sent. In the event you decide to send your application to another organization or agency at a later date, you must inform the identified CSREES program contact as soon as practicable. Submitting your application to other potential sponsors will not prejudice its review by CSREES; however, submitting the same (i.e., duplicate) application to another CSREES program is not permissible.

Page B

Page B should be submitted only with the original signature copy of the application and should be placed as the last page of the original copy of the application. This page contains personal data on the PD(s). CSREES requests this information in order to monitor the operation of its review and awards processes. This page will not be duplicated or used during the review process. Please note that failure to submit this information will in no way affect consideration of your application.

3. Table of Contents

For consistency and ease in locating information, each application must contain a detailed Table of Contents immediately following the proposal cover page. The Table of Contents should contain page numbers for each component of the application. Page numbering should begin with the first page of the Project Description.

4. Project Summary (Form CSREES-2003)

The application must contain a “Project Summary,” Form CSREES-2003. The summary should be approximately 250 words, contained within the box, placed immediately after the Table of

Contents, and not numbered. The names and affiliated organizations of all PDs and co-PDs should be listed on this form, in addition to the title of the project. The summary should be a self-contained, specific description of the activity to be undertaken and should focus on: overall project goal(s) and supporting objectives; plans to accomplish project goal(s); and relevance of the project to the purpose of the CEAP. The importance of a concise, informative Project Summary cannot be overemphasized. If there are more than three co-PDs for an application, please list additional co-PDs on a separate sheet of paper (with appropriate information) and attach to the Project Summary (Form CSREES-2003).

5. Project Description

PLEASE NOTE: For all applications, the **Project Description shall not exceed twenty (20) total pages of written text, figures, and tables.** This page limit has been established to ensure fair and equitable competition. The Project Description must include all of the following:

(a) Introduction: Include a clear statement of the long-term goal(s) and supporting objectives of the proposed activities. Summarize the body of knowledge or past activities that substantiate the need for the proposed project. Describe ongoing or recently completed significant activities related to the proposed activity, including the work of key project personnel. Include preliminary data/information pertinent to the proposed project.

(b) Objectives: Include clear, concise, complete, and logically arranged statement(s) of specific aims of the proposed effort in all proposals.

(c) Methods: Explicitly state the procedures or methods to be applied to the proposed effort. Include, but do not necessarily limit to:

- (1) Description of the proposed project activities and the sequence planned to carry them out;
- (2) Techniques to be employed, including their feasibility and rationale for their use in this project;
- (3) Kinds of results expected;
- (4) Means by which extension activities will be evaluated;
- (5) Means by which data will be analyzed and interpreted;
- (6) Details of plans to communicate results to stakeholders and the public;
- (7) Pitfalls that might be encountered; and
- (8) Limitations to proposed procedures.

(d) Cooperation and Institutional Units Involved: Cooperative, multi-institutional and multi-disciplinary applications are encouraged. Identify each institutional unit contributing to the project and designate the lead institution or institutional unit. When appropriate, coordinate the project with the efforts of other State and/or national programs. Clearly define the roles and responsibilities of each institutional partner.

(e) Facilities and Equipment: Report and briefly describe all facilities that are available for use or assignment to the project during the proposed project period. Itemize all major equipment

or instrumentation available for use or assignment to the proposed project. In addition, list all items of nonexpendable equipment needed to conduct and bring the project to a successful conclusion, include dollar amounts and, if funds are being requested for their acquisition, justify.

(f) Project Timetable: Outline all important phases as a function of time, year by year, for the entire project, including periods beyond the grant-funding period. Include specific, measurable accomplishments for each year of CEAP funding.

6. References

All references to works cited should be complete, including titles and all co-authors, and should conform to an acceptable journal format. References are not considered in the page-limitation for the Project Description.

7. Appendices to Project Description

Appendices to the Project Description are allowed if they are directly germane to the proposed project. The addition of appendices should not be used to circumvent the page limit.

8. Key Personnel

The following should be included, as applicable:

(a) The roles and responsibilities of each PD and/or collaborator should be clearly described; and

(b) The vitae of the PD and each co-PD, senior associate, and other professional personnel. This section should include vitae of all key persons who are expected to work on the project, whether or not CSREES funds are sought for their support. The vitae should be limited to two (2) pages each in length, excluding publications listings. The vitae should include a presentation of academic and research credentials, as applicable, e.g., earned degrees, teaching experience, employment history, professional activities, honors and awards, and grants received. A chronological list of **all** publications in **refereed journals** during the past **four (4) years**, including those in press, must be provided for each project member for whom a curricula vitae is provided. Also list only those **non-refereed** technical publications that have **relevance** to the proposed project. All authors should be listed in the same order as they appear on each paper cited, along with the title and complete reference as these usually appear in journals.

9. Collaborative Arrangements

If it will be necessary to enter into formal consulting or collaborative arrangements with others, such arrangements should be fully explained and justified. If the consultant(s) or collaborator(s) are known at the time of application, vitae or resume should be provided. In addition, evidence (e.g., letter of support) should be provided that the collaborators involved have agreed to render these services. The applicant also will be required to provide additional information on

consultants and collaborators in the budget portion of the application. See instructions in the application forms for completing Form CSREES-2004, Budget.

10. Conflict-of-Interest List (Form CSREES-2007)

A “Conflict-of-Interest List,” Form CSREES-2007, must be provided for all individuals who have submitted vitae in response to item 8.(b) of this part. Each Form CSREES-2007 should list alphabetically, by the last names, the full names of the individuals in the following categories: (a) all co-authors on publications within the past four years, including pending publications and submissions; (b) all collaborators on projects within the past four years, including current and planned collaborations; (c) all thesis or postdoctoral advisees/advisors within the past four years; and (d) all persons in your field with whom you have had a consulting or financial arrangement within the past four years, who stand to gain by seeing the project funded. This form is necessary to assist program staff in excluding from application review those individuals who have conflicts of interest with the personnel in the grant application. The program contact must be informed of any additional conflicts of interest that arise after the application is submitted.

11. Budget

(a) Budget Form (Form CSREES-2004)

Prepare the Budget, Form CSREES-2004, in accordance with instructions provided with the application forms. A budget form is required for each year of requested support. In addition, a cumulative budget is required detailing the requested total support for the overall project period. Applicants should include in the requested budget reasonable travel expenses for appropriate personnel to attend annual all-investigator meetings. Indirect costs should be calculated as specified under Part IV, D., and identified on Line L. of Form CSREES-2004. The budget form may be reproduced as needed by applicants. Funds may be requested under any of the categories listed on the form, provided that the item or service for which support is requested is allowable under the authorizing legislation, the applicable statutes, regulations, and Federal cost principles, and these program guidelines, and can be justified as necessary for the successful conduct of the proposed project. Applicants also must include a budget narrative to justify their budget requests (see section (b) below.)

(b) Budget Narrative

All budget categories, with the exception of Indirect Costs, for which support is requested, must be individually listed (with costs) in the same order as the budget and justified on a separate sheet of paper and placed immediately behind the Budget form.

12. Matching

If an applicant concludes that matching funds are not required (as specified under Part III, B.), a justification should be included in the Budget Narrative. CSREES will consider this justification when ascertaining final matching requirements or determining if required matching can be waived. CSREES retains the right to make final determinations regarding matching requirements.

For those grants where matching funds are required as specified under Part III, B., applications should include written verification of commitments of matching support (including both cash and in-kind contributions) from third parties. Written verification means:

For any third party cash contributions, a separate pledge agreement for each donation, signed by the authorized organizational representative of the donor organization and the applicant organization, which must include: (1) the name, address, and telephone number of the donor; (2) the name of the applicant organization; (3) the title of the project for which the donation is made; (4) the dollar amount of the cash donation; and (5) a statement that the donor will pay the cash contribution during the grant period.

For any third party in-kind contributions, a separate pledge agreement for each contribution, signed by the authorized organizational representatives of the donor organization and the applicant organization, which must include: (1) the name, address, and telephone number of the donor; (2) the name of the applicant organization; (3) the title of the project for which the donation is made; (4) a good faith estimate of the current fair market value of the third party in-kind contribution; and (5) a statement that the donor will make the contribution during the grant period.

The sources and the amount of all matching support from outside the applicant institution should be summarized on a separate page and placed in the application immediately following the Budget Narrative. All pledge agreements must be placed in the application immediately following the summary of matching support.

The value of applicant contributions to the project shall be established in accordance with the applicable cost principles. Applicants should refer to OMB Circular A-21, Cost Principles for Educational Institutions, for further guidance and other requirements relating to matching and allowable costs.

13. Current and Pending Support (Form CSREES-2005)

All applications must contain Form CSREES-2005 listing other current public or private support (including in-house support) to which personnel (i.e., individuals submitting a vitae in response to item 8.(b) of this part) identified in the application have committed portions of their time, whether or not salary support for person(s) involved is included in the budget. Please follow the instructions provided on this form. Concurrent submission of identical or similar applications to the possible sponsors will not prejudice application review or evaluation by the CSREES. However, an application that duplicates or overlaps substantially with an application already

reviewed and funded (or to be funded) by another organization or agency will not be funded under this program. **Please note that the project being proposed should be included in the pending section of the form.**

14. Assurance Statement(s) (Form CSREES-2008)

A number of situations encountered in the conduct of projects require special assurances, supporting documentation, etc., before funding can be approved for the project. In addition to any other situation that may exist with regard to a particular project, applications involving any of the following elements must comply with the additional requirements as applicable.

(a) Recombinant DNA or RNA Research

As stated in 7 CFR Part 3015.205 (b)(3), all key personnel identified in the application and all endorsing officials of the proposing organization are required to comply with the guidelines established by the National Institutes of Health entitled, "Guidelines for Research Involving Recombinant DNA Molecules," as revised. If your project proposes to use recombinant DNA or RNA techniques, you must so indicate by checking the "yes" box in Block 20. of Form CSREES-2002 (the Proposal Cover Page) and by completing Section A of Form CSREES-2008. For applicable applications recommended for funding, Institutional Biosafety Committee approval is required before CSREES funds will be released. Please refer to the application forms for further instructions.

(b) Animal Care

Responsibility for the humane care and treatment of live vertebrate animals used in any grant project supported with funds provided by CSREES rests with the performing organization. Where a project involves the use of living vertebrate animals for experimental purposes, all key personnel identified in an application and all endorsing officials of the proposing organization are required to comply with the applicable provisions of the Animal Welfare Act of 1966, as amended (7 U.S.C. 2131 et seq.), and the regulations promulgated thereunder by the Secretary in 9 CFR Parts 1, 2, 3, and 4 pertaining to the care, handling, and treatment of these animals. If your project will involve these animals, you should check "yes" in Block 20. of Form CSREES-2002 and complete Section B of Form CSREES-2008. In the event a project involving the use of live vertebrate animals results in a grant award, funds will be released only after the Institutional Animal Care and Use Committee has approved the project. Please refer to the application forms for further instructions.

(c) Protection of Human Subjects

Responsibility for safeguarding the rights and welfare of human subjects used in any grant project supported with funds provided by CSREES rests with the performing organization. Guidance on this issue is contained in the National Research Act, Pub. L. No. 93-348, as amended, and implementing regulations promulgated by the Department under 7 CFR Part 1c. If you propose to use human subjects in your project, you should check the "yes" box in Block 20. of Form CSREES-2002 and complete Section C of Form CSREES-2008. In the event a project

involving human subjects at risk is recommended for award, funds will be released only after the Institutional Review Board (IRB) has approved the research plan and CSREES has accepted documentation of the IRB approval. Please refer to the application forms for additional instructions.

15. Certifications

Note that by signing Form CSREES-2002 the applicant is providing the certifications required by 7 CFR Part 3017, regarding Debarment and Suspension and Drug-Free Workplace, and 7 CFR Part 3018, regarding Lobbying. The certification forms are included in the application package for informational purposes only. These forms should not be submitted with the application since by signing Form CSREES-2002 your organization is providing the required certifications. If the project will involve a subcontractor or consultant, the subcontractor/consultant should submit a Form AD-1048, Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions, to the grantee organization for retention in their records. This form should not be submitted to USDA.

16. Compliance with the National Environmental Policy Act (NEPA) (Form CSREES-2006)

As outlined in 7 CFR Part 3407 (the CSREES regulations implementing NEPA), the environmental data for any proposed project is to be provided to CSREES so that CSREES may determine whether any further action is needed. In some cases, however, the preparation of environmental data may not be required. Certain categories of actions are excluded from the requirements of NEPA.

In order for CSREES to determine whether any further action is needed with respect to NEPA, pertinent information regarding the possible environmental impacts of a particular project is necessary; therefore, Form CSREES-2006, "NEPA Exclusions Form," must be included in the application indicating whether the applicant is of the opinion that the project falls within a categorical exclusion and the reasons therefore. If it is the applicant's opinion that the proposed project falls within the categorical exclusions, the specific exclusion(s) must be identified.

Even though a project may fall within the categorical exclusions, CSREES may determine that an Environmental Assessment or an Environmental Impact Statement is necessary for an activity, if substantial controversy on environmental grounds exists or if other extraordinary conditions or circumstances are present which may cause such activity to have a significant environmental effect.

C. Submission Dates and Times

Applications must be received by COB July 6, 2004 (5:00 p.m. Eastern Daylight Time). Applications received after this deadline will not be considered for funding.

D. Funding Restrictions

CSREES has determined that grant funds awarded under this authority may not be used for the renovation or refurbishment of research, education, or extension space; the purchase or installation of fixed equipment in such space; or the planning, repair, rehabilitation, acquisition, or construction of buildings or facilities.

Pursuant to Section 710 of the General Provisions of the FY 2004 Consolidated Appropriations Act (Public Law 108-199), indirect costs are limited to 20 percent of the total Federal funds provided under each award. Therefore, the recovery of indirect costs under this program area may not exceed the lesser of the institution's official negotiated indirect cost rate or the equivalent of 20 percent of total Federal funds awarded. Another method of calculating the maximum allowable is 25 percent of the total direct costs.

E. Other Submission Requirements

1. What to Submit

An original and nine (9) copies of the application must be submitted (10 total). In addition, ten (10) copies of the application's Project Summary must be submitted. All copies of the application and the Project Summary must be submitted in one package.

2. Where to Submit

Applicants are strongly encouraged to submit completed applications via overnight mail or delivery service to ensure timely receipt by the USDA. The address for hand-delivered applications or applications submitted using an express mail or overnight courier service is:

Conservation Effects Assessment Program
c/o Proposal Services Unit
Cooperative State Research, Education, and Extension Service
U.S. Department of Agriculture
Room 1420, Waterfront Centre
800 9th Street, SW
Washington, DC 20024

Telephone: (202) 401-5048

Applications sent via the U.S. Postal Service may incur significant delivery delays. Applications sent via the U.S. Postal Service must be sent to the following address:

Conservation Effects Assessment Program
c/o Proposal Services Unit
Cooperative State Research, Education, and Extension Service
U.S. Department of Agriculture
STOP 2245
1400 Independence Avenue, SW
Washington, DC 20250-2245

The receipt of all applications will be acknowledged by e-mail. Therefore, applicants are strongly encouraged to provide accurate e-mail addresses, where designated, on the Form CSREES-2002. If the applicant's e-mail address is not indicated, CSREES will acknowledge receipt of the application by letter.

If the applicant does not receive an acknowledgment within 60 days of the submission deadline, please contact the program contact. Once the application has been assigned an application number, please cite that number on all future correspondence.

PART V—APPLICATION REVIEW REQUIREMENTS

A. General

Each application will be evaluated in a two-part process. First, each application will be screened to ensure that it meets the administrative requirements as set forth in this RFA. Second, applications that meet these requirements will be evaluated for technical merit by a review panel.

Reviewers will be selected based upon training and experience in relevant scientific, extension, or education fields, taking into account the following factors: (1) the level of relevant formal scientific, technical education, or extension experience of the individual, as well as the extent to which an individual is engaged in relevant research, education, or extension activities; (2) the need to include as reviewers experts from various areas of specialization within relevant scientific, education, or extension fields; (3) the need to include as reviewers other experts (e.g., producers, range or forest managers/operators, and consumers) who can assess relevance of the applications to targeted audiences and to program needs; (4) the need to include as reviewers experts from a variety of organizational types (e.g., colleges, universities, industry, state and Federal agencies, private profit and non-profit organizations) and geographic locations; (5) the need to maintain a balanced composition of reviewers with regard to minority and female representation and an equitable age distribution; and (6) the need to include reviewers who can judge the effective usefulness to producers and the general public of each application.

B. Evaluation Criteria

The following three evaluation criteria will be used in reviewing applications submitted in response to this RFA:

1. Technical merit of **all** aspects of the application, including research and extension components, as appropriate
 - (a) Conceptual adequacy of overall approach;
 - (b) Conceptual adequacy of hypothesis or hypotheses on which plan is based;
 - (c) Suitability and feasibility of methodology for conducting work;

- (d) Reasonability of time allocated for attainment of objectives;
 - (e) Qualifications of key project personnel;
 - (f) Institutional experience and competence in proposed area of work; and
 - (g) Adequacy of available support personnel, equipment, and facilities.
2. Relevance of proposed project to RFA purpose and the stated program goal (see Part I, B.)
- (a) Relationship of project objectives to questions of interest (described in Part II, C.);
 - (b) National, regional, or watershed scale magnitude of problem addressed;
 - (c) Evidence of partnerships with other disciplines and institutions integral to the success of the analysis of conservation practices (Federal, State, other);
 - (d) Probability of success of the project; and
 - (e) Extent to which potential impact(s) can be documented.
3. Review criteria specific to CEAP:
- (a) Extent to which proposed work achieves integration of research and extension;
 - (b) Degree to which spatial and temporal dimensions are incorporated in design of analyses, conclusions, and recommendations;
 - (c) Adequacy of the long-term dataset used, and the data management and analysis plan;
 - (d) Degree to which improvement efforts are monitored and evaluated;
 - (e) Suitability and feasibility of methodology for evaluating extension activities; and
 - (f) Suitability of the evaluation of social and economic factors affecting implementation of the appropriate conservation practices.

C. Conflicts of Interest and Confidentiality

During the peer evaluation process, extreme care will be taken to prevent any actual or perceived conflicts of interest that may impact review or evaluation. For the purpose of determining conflicts of interest, the academic and administrative autonomy of an institution shall be determined by reference to the current version of the Higher Education Directory, published by Higher Education Publications, Inc., 6400 Arlington Boulevard, Suite 648, Falls Church, VA 22042. Phone: (703) 532-2300. Web site: <http://www.hepinc.com>.

Names of submitting institutions and individuals, as well as application content and peer evaluations, will be kept confidential, except to those involved in the review process, to the extent permitted by law. In addition, the identities of peer reviewers will remain confidential throughout the entire review process. Therefore, the names of the reviewers will not be released to applicants. At the end of the fiscal year, names of panelists will be made available in such a way that the panelists cannot be identified with the review of any particular application.

PART VI—AWARD ADMINISTRATION

For award administration information, please see Part VI of the FY 2004 RFA for the Integrated Research, Education, and Extension Program – National Integrated Water Quality Program, which is available online at http://www.csrees.usda.gov/funding/rfas/04_water_quality.html.

PART VII—AGENCY CONTACTS

Applicants and other interested parties are encouraged to contact Dr. Michael P. O’Neill; National Program Leader for Water Quality; Natural Resources and Environment Unit; Cooperative State Research, Education, and Extension Service; U.S. Department of Agriculture; STOP 2210; 1400 Independence Avenue, S.W.; Washington, D.C. 20250-2210; Telephone: (202) 205-5952; Fax: (202) 401-1706; E-mail: moneill@csrees.usda.gov or Ms. Lisa Duriancik, Program Specialist, Natural Resources and Environment Unit; Cooperative State Research, Education, and Extension Service; U.S. Department of Agriculture; STOP 2210; 1400 Independence Avenue, S.W.; Washington, D.C. 20250-2210; Telephone: (202) 401-4141; Fax: (202) 401-1706; E-mail: ldurancik@csrees.usda.gov.

PART VIII—OTHER INFORMATION

For other information including CSREES’ Grants.gov implementation plans, details about obtaining a DUNS Number, and instructions on registering with the Central Contract Registry, please see Part VIII of the FY 2004 RFA for the Integrated Research, Education, and Extension Program – National Integrated Water Quality Program, which is available online at http://www.csrees.usda.gov/funding/rfas/04_water_quality.html.