

DEPARTMENT OF AGRICULTURE**Cooperative State Research,
Education, and Extension Service****NATIONAL AERONAUTICS AND
SPACE ADMINISTRATION****Application of Geospatial and
Precision Technologies Program;
Interagency Program Announcement;
Request for Proposals and Request for
Input**

AGENCIES: U.S. Department of Agriculture and the National Aeronautics and Space Administration.

ACTION: Notice of request for proposals and request for input.

SUMMARY: As a collaborative, interagency effort, the Cooperative State Research, Education, and Extension Service (CSREES) of the U.S. Department of Agriculture (USDA), and the Earth Science Enterprise (ESE) of the National Aeronautics and Space Administration (NASA) are soliciting proposals for the Application of Geospatial and Precision Technologies Program. Proposals are hereby requested from eligible institutions as identified herein for competitive consideration of awards. By this notice, CSREES additionally solicits stakeholder input from any interested party regarding this request for proposals (RFP) for use in the development of any future RFPs for this Program.

DATES: A "Letter of Intent" is requested and is due close of business (COB) on April 11, 2001 (5:00 p.m. EST). Proposals must be received by COB May 9, 2001 (5:00 p.m. EST). Proposals received after this date will not be considered for funding. Comments regarding this RFP are requested within six months from the issuance of this notice. Comments received after that date will be considered to the extent practicable.

ADDRESSES: Applicants may e-mail the "Letter of Intent" to Dr. J. Preston Jones at jpjones@reeusda.gov or send the letter by mail to Application of Geospatial and Precision Technologies Program; Mail Stop 2220; Cooperative State Research, Education, and Extension Service; U.S. Department of Agriculture; 1400 Independence Avenue, SW., Washington, DC 20250-2220; or fax the Letter to Application of Geospatial and Precision Technologies Program at (202) 401-1602.

The address for hand-delivered proposals or proposals submitted using an express mail or overnight courier service is: Application of Geospatial and Precision Technologies Program; c/o

Proposal Services Unit; Cooperative State Research, Education, and Extension Service; U.S. Department of Agriculture; Room 1307, Waterfront Centre; 800 9th Street, SW., Washington, DC 20024.

Proposals sent via the U.S. Postal Service must be sent to the following address: Application of Geospatial and Precision Technologies 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.

Written user comments should be submitted by mail to: Policy and Program Liaison Staff; Office of Extramural Programs; Cooperative State Research, Education, and Extension Service; U.S. Department of Agriculture; STOP 2299; 1400 Independence Avenue, SW., Washington, DC 20250-2299; or via e-mail to: RFP-OEP@reeusda.gov. In your comments, please include the name of the program and the fiscal year of the RFP to which you are responding.

FOR FURTHER INFORMATION CONTACT: Dr. J. Preston Jones, Initiative for Future Agriculture and Food Systems Program (IFAFS); Cooperative State Research, Education, and Extension Service; U.S. Department of Agriculture, Room 3436, Waterfront Centre; 800 9th Street, SW., Washington, DC; telephone: (202) 401-1990; fax: (202) 401-1602; e-mail: jpjones@reeusda.gov; or Dr. Raymond Knighton, Initiative For Future Agriculture and Food Systems; Cooperative State Research, Education, and Extension Service; U.S. Department of Agriculture, Room 3186, Waterfront Centre; 800 9th Street, SW., Washington, DC; telephone: (202) 401-6417; fax: (202) 401-1706; e-mail: rknighton@reeusda.gov; or Dr. Rodney McKellip, ESE Applications Lead Center; John C. Stennis Space Center; Code MA00 Bldg. 1100; SCC, MS 29529-6000; telephone: (228) 688-2984; fax: (228) 688-7455; e-mail: rmckelli@ssc.nasa.gov; or Dr. Nathan Sovik, ESE Applications Lead Center; John C. Stennis Space Center; MA00 Bldg. 1100; SCC, MS 29529-6000; telephone: (228) 688-7355; fax: (228) 688-7455; e-mail: nsovik@ssc.nasa.gov.

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Stakeholder Input

CSREES is requesting comments regarding this solicitation from any interested party. These comments will be considered in the development of any future RFP for the program. Such comments will be forwarded to the Secretary of Agriculture or her designee for use in meeting 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 RFP from persons who conduct or use agricultural research, education and extension for use in formulating future RFPs for competitive programs. Comments should be submitted as provided for in the Addresses and Dates portions of this Notice.

Catalog of Federal Domestic Assistance

This program is listed in the Catalog of Federal Domestic Assistance under 10.302, Application of Geospatial and Precision Technologies Program, Initiative for Future Agriculture and Food Systems.

Part I—General Information

A. Legislative Authority and Background

Section 401 of the Agricultural Research, Extension, and Education Reform Act of 1998 (AREERA) (7 U.S.C. 7621) established in the Treasury of the United States an Initiative for Future Agriculture and Food Systems (IFAFS) account and authorized the Secretary of Agriculture to establish a research, extension, and education competitive grants program to address critical emerging U.S. agricultural issues related to (1) Future food production, (2) environmental quality and natural resource management, or (3) farm income. Grants are to be awarded in a number of areas including Precision Agriculture. The authority for NASA participation in this program is found in the National Aeronautics and Space Administration Act of 1958, as amended, 42 U.S.C. 2473(c)(5), and section 316 of the National Aeronautics and Space Administration Authorization Act of 2000, Pub. L. No. 106–391 (7 U.S.C. 5935 note).

B. Purpose, Priorities and Fund Availability

The purpose of this interagency program announcement is to solicit proposals to support development, validation and application of geospatial and precision technologies that are important to the productivity and sustainability of agriculture, and to the safety and quality of the nation's food supply. Priority will be given to projects that will provide for the application of geospatial and precision technologies to enhance the capacity to integrate site-specific and whole system efficiency and profitability. For the purpose of this announcement, geospatial technologies is defined as the suite of complimentary technologies that includes remote sensing, geographic information systems (GIS), and the Global Positioning System (GPS).

There is no commitment by USDA or NASA to fund any particular proposal or to make a specific number of awards. The participating agencies currently have a total of approximately \$7.5 million available for this Program in fiscal year (FY) 2001. Subject to the availability of funds, the participating agencies anticipate that an additional

\$10 million in funding will be available each year for this program or a successor program in FY 2002, FY 2003 and FY 2004, for an anticipated total level of support of approximately \$38 million over four years.

Applicants may request funding of up to \$2 million over four years. Budgets should be commensurate with activities proposed with most requests expected to fall below the \$2 million level. Awards will be made in the form of grants and cooperative agreements which will be determined at the time of the award. The exact amount of the award will depend on the advice of reviewers, agency priorities, and on the availability of funds. Each participating agency will obligate funds separately. However, a proposal may be funded by one or more of the participating agencies.

C. Eligibility

Proposals may be submitted by colleges or universities, or research foundations maintained by a college or university, non-profit organization or Federal research agencies. The source of USDA funds for the Application of Geospatial and Precision Technologies Program is the IFAFS program. Under the IFAFS program, proposals may be submitted by colleges or universities or research foundations maintained by a college or university. This represents a change from the FY 2000 solicitation. Section 724 of Pub. L. No. 106–389, as amended by section 101(a)(3) of H.R. 566 which was enacted by section 1(a)(4) of Pub. L. No. 106–554, removed Federal research agencies, national laboratories, and private research organizations from eligibility for IFAFS awards.

Other types of institutions are not eligible as direct recipients of IFAFS funds, however they may be included as subcontracts on grants made to eligible institutions. Therefore, applications from academic institutions may be awarded by either USDA or NASA. Direct applications from a non-profit organization or Federal research agencies may be supported solely by NASA funds.

D. Matching Requirements

If a grant provides for applied research that is commodity specific and not of national scope, the recipient will be required to provide funds or in-kind support to match the amount of Federal funds provided.

E. Types of Proposals

In FY 2001, it is anticipated that most projects will be submitted as "New Proposals." However, the USDA held a

Precision Agriculture competition through the IFAFS program in FY 2000. Applicants to that program who were not grantees may choose to submit to the Application of Geospatial and Precision Technologies Program as a resubmission. Therefore two types of applications may be submitted:

1. *New proposal.* This is a project proposal that has not been previously submitted to the Precision Agriculture Program of Initiative for Future Agriculture and Food Systems (IFAFS). All new proposals will be reviewed competitively using the selection process and evaluation criteria described in Part IV—Review Process.

2. *Resubmitted proposal.* This is a proposal that had been previously submitted to the IFAFS but not funded. The resubmitted proposal should clearly indicate the changes that have been made in the project proposal. Further, a clear statement acknowledging comments from the previous reviewers, indicating revisions, rebuttals, etc., can positively influence the review of the proposal. Therefore, for resubmitted proposals, the investigator(s) must respond to the previous panel summary on no more than one page, titled "Response to Previous Review," which is to be placed directly after the Project Summary as described in Part III—Preparation of a Proposal. Resubmitted proposals will be reviewed competitively using the selection process and evaluation criteria described in Part IV—Selection Process.

F. Restrictions on Use of Funds

Application of Geospatial and Precision Technologies Program funds may not be used for the renovation or refurbishment of research spaces; the purchase or installation of fixed equipment in such spaces; or the planning, repair, rehabilitation, acquisition, or construction of buildings or facilities.

Part II—Letter of Intent and Program Description

A. Letter of Intent

Applicants are strongly encouraged to submit a Letter of Intent before submitting a full proposal. This letter should consist of three parts: (1) A descriptive title of the proposed project; (2) names and roles of project directors and other key personnel along with their institutions; and (3) a brief statement of approaches and objectives (500 words or less). This information will be used by CSREES and NASA staff in planning the review process. Because Letters of Intent will not be distributed for peer review, there will be no

feedback from CSREES or NASA staff regarding the content of these letters. See Part III, C., Application Submission Information for specific mailing instructions. *Failure to submit a Letter of Intent will not preclude applicants from submitting full proposals, however a Letter of Intent is nonetheless encouraged.*

B. Program Description

The section below has been developed based on a Memorandum of Understanding between NASA and USDA, which establishes a partnership for the support of development, validation and application of geospatial and precision technologies for agriculture. Successful proposals will be funded by USDA and NASA.

Geospatial and precision technologies can be valuable tools if their applicability to agriculture and natural resource management can be demonstrated and then adopted. The use of these technologies range from defining simple field management zones to complex integration of multiple data sets with the goal of making production and harvesting more efficient and sustainable. Field-scale management using geospatial and precision technologies is needed to address spatial and temporal variability that limits the efficient use of inputs. Farmers, ranchers, and natural resource managers need decision support systems, remote sensing information, and sensors in their work places that quantify complex interactions between profitability and the natural resource base. To encourage development and adoption of operational solutions, multidisciplinary partnerships with industry, producers, and the research/education community are encouraged. Partnerships with other Federal agencies and partnerships addressing the needs of small and medium-sized farms are encouraged.

Proposals submitted will enhance the Nation's capacity to integrate site-specific and whole system efficiency and profitability while minimizing deleterious impacts on natural resources and the environment. Proposals are solicited to address site-specific resource management based on an improved understanding of how soils, water, nutrients, climate, landscapes, crops and other natural resources interact to influence productivity and environmental quality, such as: (a) Decision support systems that integrate spatial and temporal variability for management of soils, water, nutrients, crop yield and quality, pests, and natural resources; (b) sensing and modeling of natural resource properties,

using both ground-based and remote technologies, and other geospatial and precision technology applications based on user needs; (c) assessment of user needs and development of on-farm science, economic and environmental cost-benefit analysis, and documentation of adoption of geospatial and precision technologies by land managers; and, (d) training of competent and skilled professionals to transfer geospatial and precision technology to the user community. Proposals that provide short-term, low-risk solutions to the above priority issues are encouraged.

Each proposal should have a clearly written management plan for the proposed applications being developed and evaluated. Proposals should also include a clear plan for evaluating the suitability (feasibility, efficacy, profitability, required infrastructure, and adoption strategies) of applications for the end user. Proposals should include a plan for the sustained use of the project's results (services, models, databases, support groups, training, etc.). Successful applicants may be invited to participate in an annual meeting with USDA and NASA scientists and other grantees to report on research activities and to discuss areas of mutual interest. Travel funds should be budgeted to accommodate that eventuality.

(Additional information on related programs may be found at the USDA website <http://www.reeusda.gov/ifafs> and at the NASA website <http://www.ag2020.org>.)

Part III—Preparation of a Proposal

A. Program Application Materials

Both participating agencies have agreed to use the USDA guidelines for proposal format (see below) and application kit. Other material may be required at the time of funding to facilitate the implementation of the award. Proposals that are funded by NASA may be subject to additional submission and reporting requirements.

Program application materials are available at the CSREES website (www.reeusda.gov/AGPT). If you do not have access to the CSREES web page or have trouble downloading material, you may contact the Proposal Services Unit, Office of Extramural Programs, USDA/CSREES at (202) 401-5048. When calling the Proposal Services Unit, please indicate that you are requesting forms for the Application of Geospatial and Precision Technologies Program. These materials may also be requested via Internet by sending a message with your name, mailing address (not e-mail)

and phone number to psb@reeusda.gov. State that you want a copy of the Program Description and application materials (orange book) for the Fiscal Year 2001 Application of Geospatial and Precision Technologies Program.

B. Content of Proposals

The proposals should be prepared following the guidelines and the instructions below.

Each proposal must contain the following elements in the order indicated:

1. General

The proposal should follow these guidelines, enabling reviewers to more easily evaluate the merits of each proposal in a systematic, consistent fashion:

(a) The proposal should be prepared on only one side of the page using standard size (8½" 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) Each page of the proposal, including the Project Summary, budget pages, required forms, and any appendices, should be numbered sequentially.

(c) The proposal should be stapled in the upper left-hand corner. Do not bind. An original and 14 copies (15 total) must be submitted in one package, along with 10 copies of the "Project Summary" as a separate attachment.

(d) If applicable, proposals should include original illustrations (photographs, color prints, etc.) in all copies of the proposal to prevent loss of meaning through poor quality reproduction.

2. Application for Funding Cover Page (Form CSREES-661)

Each copy of each grant proposal must contain an "Application for Funding", Form CSREES-661. One copy of the application, preferably the original, must contain the pen-and-ink signature(s) of the proposing principal investigator(s)/project director(s)(PI/PD) and the authorized organizational representative who possesses the necessary authority to commit the organization's time and other relevant resources to the project. Any proposed PI/PD or co-PI/PD whose signature does not appear on Form CSREES-661 will not be listed on any resulting grant award. Complete both signature blocks located at the bottom of the "Application for Funding" form.

Form CSREES-661 serves as a source document for the CSREES grant

database; it is therefore important that it be completed accurately. The following items are highlighted as having a high potential for errors or misinterpretations:

(1) Title of Project (Block 6). The title of the project must be brief (80-character maximum), 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.

(2) Program to Which You Are Applying (Block 7). "Application of Geospatial and Precision Technologies."

(3) Type of Award Request (Block 13). Check the block for "new" or "resubmission."

(4) Principal Investigator(s)/Project Director(s) (PI/PD) (Block 15). The designation of excessive numbers of co-PI/PDs creates problems during final review and award processing. Listing multiple co-PI/PDs, beyond those required for genuine collaboration, is therefore discouraged. Note that providing a Social Security Number is voluntary, but is an integral part of the CSREES information system and will assist in the processing of the proposal.

(5) Type of Performing Organization (Block 18). A check should be placed in the box beside the type of organization which actually will carry out the effort. For example, if the proposal is being submitted by an 1862 Land-Grant institution but the work will be performed in a department, laboratory, or other organizational unit of an agricultural experiment station, box "03" should be checked. If portions of the effort are to be performed in several departments, check the box that applies to the individual listed as PI/PD #1 in Block 15.a.

(6) Other Possible Sponsors (Block 22). List the names or acronyms of all other public or private sponsors including other agencies within USDA and other programs funded by CSREES to whom 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 Director as soon as practicable. Submitting your proposal to other potential sponsors will not prejudice its review by CSREES; however, duplicate support for the same project will not be provided. Complete the "Application for Funding," Form CSREES-661, in its entirety.

(7) One copy of the "Application for Funding" form must contain the signatures (in ink) of the PI/PDs and authorized organizational representative for the applicant organization.

3. Table of Contents

For ease in locating information, each proposal must contain a detailed table of contents just after the proposal Cover Page. The Table of Contents should include page numbers for each component of the proposal. Pagination should begin immediately following the Project Summary (see next section).

4. Project Summary

The proposal must contain a Project Summary of 250 words or less on a separate page which should be placed immediately after the Table of Contents and should not be numbered. The names and institutions of all PI/PDs and co-PI/PDs should be listed on this form, in addition to the title of the project. The summary is not intended for the general reader; consequently, it may contain technical language comprehensible by persons in disciplines relating to the food and agricultural sciences. The project 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 goals of the Application of Geospatial and Precision Technologies Program.

5. Response to Previous Review

This requirement only applies to Resubmitted Proposals as described under Part I, E., Types of Proposals. Resubmitted proposals are proposals that had previously been submitted to the IFAFS Precision Agriculture Program but not funded. For these proposals, the PI/PDs must respond to the previous panel summary on no more than one page, titled Response to Previous Review, which is to be placed directly after the Project Summary. If desired, additional comments and responses to the previous panel summary may be included in the text of the Project Description, subject to the page limitation.

6. Project Description

A description of the project must not exceed 20 pages inclusive of tables, diagrams and other visual material, but excluding citations. The project description should be numbered and single or double-spaced with text on one side of the page using a 12 point (10 cpi) type font size and one-inch margins.

The following points must be addressed in this section.

Each project proposal's Project Description should contain the following:

a. Introduction—A clear statement of the long-term goal(s) and supporting objectives of the proposed activities should be included. Summarize the body of knowledge or other past activities which substantiates the need for the proposed project. Describe ongoing or recently completed significant activities related to the proposed project including the work of key project personnel. Preliminary data/information pertinent to the proposed project should be included;

b. Relevance and Significance—The objectives' specific relationship to the goals of the IFAFS Program and to the Application of Geospatial and Precision Technologies Program in particular should be stated. Include a description of the significance of the activity and its value in improving agriculture through research, education and extension. Clearly describe the potential impact of the project.

c. Approach—The activities proposed or problems being addressed must be clearly stated and the approaches being applied clearly described. The following should be included: (1) A description of the activities proposed; (2) methods to be used in carrying out the project, including the feasibility of the methods; (3) expected outcomes; (4) means by which results will be analyzed, assessed, or interpreted; and (5) how results or products will be used.

d. Time Table—Provide an expected time line for completing the project in the requested duration.

e. Collaborative Arrangements—Identify collaborations and provide a full explanation of the nature of the collaborations.

f. Management Plan—It is expected that larger more complex projects (usually greater than \$1 million) will require more extensive and complicated coordination and collaboration than is typically proposed for more focused projects. Therefore, explain how the project will be managed to ensure efficient administration of the grant and how activities will be integrated most effectively. Place this description after the Project Description.

g. Evaluation and Monitoring of Project—Provide a plan for assessing and evaluating the accomplishments of the stated proposal objectives during the project and describe ways to determine the effectiveness of the end results during and upon termination of the project. In addition to the evaluation and monitoring of accomplishments

associated with the project, evaluation and monitoring of the administration of the project must also be included if the project is complex and requires administrative oversight and extensive management. This description should include how funds and resources will be allocated so that collaborative participation of all parties throughout the duration of the project is ensured.

7. References in Project Description

All references cited should be complete, including titles and all co-authors, and should conform to an accepted journal format.

8. Appendices to Project Description

Appendices to the Project Description are allowed if they are directly germane to the proposed project and are limited to a total of two of the following: reprints (papers that have been published in peer reviewed journals) and preprints (manuscripts in press for a peer reviewed journal; these must be accompanied by a letter of acceptance from the publishing journal).

9. Facilities and Equipment

All facilities and major items of equipment that are available for use or assignment to the proposed research project during the requested period of support should be described. In addition, items of nonexpendable equipment necessary to conduct and successfully complete the proposed project and for which support is requested under this program should be listed in the budget narrative with the amount and justification for each item.

10. Collaborative and/or Subcontractual Arrangements

If it will be necessary to enter into formal consulting or collaborative arrangements with others, such arrangements should be fully explained and justified. In addition, evidence should be provided that the collaborators involved have agreed to render these services. If the need for consultant services is anticipated, the proposal narrative should provide a justification for the use of such services, a statement of work to be performed, and a resume or curriculum vita for each consultant. For purposes of proposal development, informal day-to-day contacts between key project personnel and outside experts are not considered to be collaborative arrangements and thus do not need to be detailed.

All anticipated subcontractual arrangements also should be explained and justified in this section. A proposed statement of work and a budget for each

arrangement involving the transfer of substantive programmatic work or the providing of financial assistance to a third party must be provided.

Agreements between departments or other units of your own institution and minor arrangements with entities outside of your institution (e.g., requests for outside laboratory analyses) are excluded from this requirement.

If you expect to enter into subcontractual arrangements, please note that the provisions contained in 7 CFR part 3019, USDA Uniform Administrative Requirements for Grant and Other Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations, and the general provisions contained in 7 CFR part 3015.205, USDA Uniform Federal Assistance Regulations, flow down to subrecipients. In addition, required clauses from Sections 40—48 ("Procurement Standards") and Appendix A ("Contract Provisions") of 7 CFR part 3019 should be included in final contractual documents, and it is necessary for the subawardee to make a certification relating to debarment/suspension.

11. Key Personnel

All senior personnel who are expected to be involved in the effort should be clearly identified. For each person the following should be included:

- a. The roles and responsibilities of each PI/PD should be described;
- b. An estimate of time commitment for each PI/PD; and
- c. Vitae of each PI/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 funding is sought for their support. The vitae should be limited to two (2) pages in length, excluding publication lists. 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 which a curriculum vitae is provided. Also list those non-refereed technical publications which 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.

12. Conflict-of-Interest List

A Conflict-of-Interest List must be provided for all individuals involved in the project (identified as key personnel). Each list should be on a separate page and include alphabetically the full

names of the individuals in the following categories: (a) All collaborators on projects within the past four years, including current and planned collaborations; (b) all co-authors on publications within the past four years, including pending publications and submissions; (c) 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; and (d) all thesis or postdoctoral advisees/advisors within the past four years (some may wish to call these life-time conflicts). This form is necessary to assist program staff in excluding from proposal review those individuals who have conflicts-of-interest with the personnel in the grant proposal.

13. Budget

Prepare the budget, Form CSREES-55, in accordance with instructions provided. Budgets of up to a total of \$2 million over four years may be requested. Budgets should be commensurate with activities proposed with most requests expected to fall below the \$2 million level. 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. A copy of the form, which must be used for this purpose, along with instructions for completion is included in the Application Kit and 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 Federal cost principles, and these program guidelines, and can be justified as necessary for the successful conduct of the proposed project. Applicants must also include a Budget Narrative to justify their budgets (see paragraph 13 below.)

The following guidelines should be used in developing your proposal budget(s):

- a. *Salaries and Wages.* Salaries and wages are allowable charges and may be requested for personnel who will be working on the project in proportion to the time such personnel will devote to the project. If salary funds are requested, the number of Senior and Other Personnel and the number of CSREES/NASA-Funded Work Months must be shown in the spaces provided. Grant funds may not be used to augment the total salary or rate of salary of project personnel or to reimburse them for time

in addition to a regular full-time salary covering the same general period of employment. Salary funds requested must be consistent with the normal policies of the institution.

b. Fringe Benefits. Funds may be requested for fringe benefit costs if the usual accounting practices of your organization provide that organizational contributions to employee benefits (social security, retirement, etc.) be treated as direct costs. Fringe benefit costs may be included only for those personnel whose salaries are charged as a direct cost to the project.

c. Nonexpendable Equipment. Nonexpendable equipment means tangible nonexpendable personal property including exempt property charged directly to the award having a useful life of more than one year and an acquisition cost of \$5,000 (or lower, depending on institutional policy) or more per unit. As such, items of necessary instrumentation or other nonexpendable equipment should be listed individually by description and estimated cost in the Budget Narrative. This applies to revised budgets as well, as the equipment item(s) and amount(s) may change.

d. Materials and Supplies. The types of expendable materials, supplies, and data which are required to carry out the project should be indicated in general terms with estimated costs in the Budget Narrative.

e. Travel. The type and extent of travel and its relationship to project objectives should be described briefly and justified. If foreign travel is proposed, the country to be visited, the specific purpose of the travel, a brief itinerary, inclusive dates of travel, and estimated cost must be provided for each trip. Airfare allowances normally will not exceed round-trip jet economy air accommodations. U.S. flag carriers must be used when available. See 7 CFR 3015.205(b)(4) for further guidance.

f. Publication Costs/Page Charges. Include anticipated costs associated with publications in a journal (preparing and publishing results including page charges, necessary illustrations, and the cost of a reasonable number of coverless reprints) and audio-visual materials that will be produced. Photocopying and printing brochure, etc., should be shown in Section I, "All Other Direct Costs" of Form CSREES-55.

g. Computer (ADPE) Costs. Reimbursement for the costs of using specialized facilities (such as a university- or department-controlled computer mainframe or data processing center) may be requested if such

services are required for completion of the work.

h. All Other Direct Costs. Anticipated direct project charges not included in other budget categories must be itemized with estimated costs and justified in the Budget Narrative. This also applies to revised budgets, as the item(s) and dollar amount(s) may change. Examples may include space rental at remote locations, subcontractual costs, and charges for consulting services, telephone, facsimile, shipping costs, and fees necessary for laboratory analyses. You are encouraged to consult the "Instructions for Completing Form CSREES-55, Budget," of the Application Kit for detailed guidance relating to this budget category. Form AD-1048 must be completed by each subcontractor or consultant and retained by the grantee.

i. Indirect Costs. When submitting a proposal, institutions should use their current Federal negotiated rate for indirect costs. Please note that indirect costs for all competitive proposals funded by CSREES are capped at 19% of total Federal funds provided under the award by section 1462 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3310). Therefore, awards made by CSREES for the Application of Geospatial and Precision Technologies Program are subject to 19 percent indirect costs limitation. (This limitation also applies to the recovery of indirect costs by any subawardee or subcontractor, and should be reflected in the subrecipient budget.) A method for calculating the maximum allowable amount of indirect costs for an USDA award is by multiplying total direct costs by 0.23456. To accommodate the differences in allowable indirect costs between USDA and NASA, the applicant may be required at the time of award to submit a separate budget with indirect cost rates appropriate to each agency.

14. Budget Narrative

A budget narrative should be included which discusses how the budget specifically supports the proposed project activities. Except for indirect costs for which support is requested, the budget narrative should explain how each budget item (such as salaries and wages for professional and technical staff, student workers, travel, equipment, etc.) is essential to achieving project objectives. Funds may be requested under any of the categories listed on the budget form, provided that the item or service for which support is sought is allowable under the enabling

legislation and the applicable Federal cost principles.

15. Matching Funds

(a) If an applicant concludes that matching funds are not required as specified in Part I, D., a justification should be included in the Budget Narrative. CSREES and NASA will consider this justification when ascertaining final matching requirements. CSREES and NASA retain the right to make final determinations regarding matching requirements.

For those grants requiring matching funds as specified in Part I, D., proposals should include written verification of commitments of matching support (including both cash and in-kind contributions) from third parties. Written verification means:

(i) For any third party cash contributions, a separate pledge agreement for each donation, signed by the authorized organizational representatives of the donor organization and the applicant organization, which must include: (A) the name, address, and telephone number of the donor; (B) the name of the applicant organization; (C) the title of the project for which the donation is made; (D) the dollar amount of the cash donation; and (E) a statement that the donor will pay the cash contribution during the grant period; and

(ii) 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: (A) the name, address, and telephone number of the donor; (B) the name of the applicant organization; (C) the title of the project for which the donation is made; (D) a good faith estimate of the current fair market value of the third party in-kind contribution; and (E) a statement that the donor will make the contribution during the grant period.

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

(c) The value of applicant contributions to the project shall be established in accordance with applicable cost principles. Applicants should refer to OMB Circulars A-21, Cost Principles for Educational Institutions, A-87, Cost Principles for State, Local, and Tribal Governments,

A-122, Cost Principles for Non-Profit Organizations, and for for-profit organizations, the cost principles in the Federal Acquisition Regulation at 48 CFR Subpart 31.2 (see 7 CFR 3015.194).

16. Current and Pending Support

All proposals must contain Form CSREES-663 listing other current public or private support (including in-house support) to which key personnel identified in the proposal have committed portions of their time, whether or not salary support for person(s) involved is included in the budget. Analogous information must be provided for any pending proposals that are being considered by, or that will be submitted in the near future to, other possible sponsors, including other USDA and NASA Programs or agencies. Concurrent submission of identical or similar proposals to the possible sponsors will not prejudice proposal review or evaluation by the CSREES and NASA for this purpose. However, a proposal that duplicates or overlaps substantially with a proposal already reviewed and funded (or to be funded) by another organization or agency will not be funded under this program. Note that the project being proposed should be included in the pending section of the form.

17. Assurance Statement(s), (Form CSREES-662)

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, it is expected that some applications submitted in response to these guidelines will involve the following:

a. Recombinant DNA or RNA Research—As stated in 7 CFR Part 3015.205(b)(3), all key personnel identified in the proposal 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 19 of Form CSREES-661 (the Cover Page) and by completing Section A of Form CSREES-662. For applicable proposals recommended for funding, Institutional Biosafety Committee approval is required before CSREES or NASA funds will be released.

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 or NASA rests with the performing organization. Where a project involves the use of living vertebrate animals for experimental purposes, all key project personnel identified in a proposal 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" on block 20 of CSREES-661 and complete Section B of Form CSREES-662. 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.

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 or NASA 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 for experimental purposes in your project, you should check the "yes" box in Block 21 of Form CSREES-661 and complete Section C of Form CSREES-662. In the event a project involving human subjects results in a grant award, funds will be released only after the appropriate Institutional Review Board has approved the project.

18. Certifications

Note that by signing Form CSREES-661 the applicant is providing certifications required by 7 CFR part 3017, as amended, 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 proposal since by signing form CSREES-661 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 to the grantee organization for retention in their

records. This form should not be submitted to USDA.

19. Compliance With the National Environmental Policy Act (NEPA)

As outlined in 7 CFR part 3407 (the Cooperative State Research, Education, and Extension Service regulations implementing NEPA) and 14 CFR part 1216 (the NASA regulations regarding compliance with NEPA), the environmental data for any proposed project is to be provided to CSREES and NASA so that the Federal agency 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 (e.g., preparation of an environmental assessment (EA) or environmental impact statement (EIS)), pertinent information regarding the possible environmental impacts of a proposed project is necessary; therefore, Form CSREES-1234, "NEPA Exclusions Form," must be included in the proposal 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 must be identified. Form CSREES-1234 and supporting documentation should be included as the last page of this proposal.

Even though a project may fall within the categorical exclusions, CSREES may determine that an EA or EIS 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. Application Submission Information

1. When to Submit

A "Letter of Intent" must be received by COB April 11, 2001 (5:00 p.m. EST). Proposals must be received by COB on May 9, 2001 (5:00 p.m. EST). Proposals received after this date will not be considered for funding.

2. What to Submit

For full proposals, an original and 14 copies must be submitted. Also submit 10 copies of the proposal's Project Summary. All copies of the proposals and the Project Summaries must be submitted in one package.

3. Where to Submit

Applicants should e-mail the "Letter of Intent" to Dr. J. Preston Jones at jjp Jones@reeusda.gov or send the letter by mail to Application of Geospatial and Precision Technologies Program; Mail Stop 2220; Cooperative State Research, Education, and Extension Service, U.S. Department of Agriculture; 1400 Independence Avenue, SW., Washington, DC 20250-2220; or fax the letter at (202) 401-1602.

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

Application of Geospatial and Precision Technologies Program, c/o Proposal Services Unit, Cooperative State Research, Education, and Extension Service, U.S. Department of Agriculture, Room 1307, Waterfront Centre 800 9th Street, SW., Washington, DC 20024.

Proposals sent via the U.S. Postal Service must be sent to the following address:

Application of Geospatial and Precision Technologies Program, c/o Proposal Services Unit, Cooperative State Research, Education, and Extension Service, U.S. Department of Agriculture, STOP 2220, 1400 Independence Avenue, SW., Washington, DC 20250-2220.

D. Acknowledgment of Proposals

The receipt of proposals will be acknowledged by e-mail. Therefore, applicants are encouraged to provide e-mail addresses, where designated, on the Form CSREES-661. If the applicant's e-mail address is not indicated, CSREES will acknowledge receipt of the proposal by letter.

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

Part IV—Review Process

A. General

All proposals, will be reviewed together by a panel in the pertinent program area. Prior to technical examination, a preliminary review will be made for responsiveness to the program area. Proposals that do not fall within the guidelines of this Program will be eliminated from Program competition and will be returned to the applicant.

Individual written comments and in-depth discussions will be provided by a peer review panel prior to recommending applications for funding. Peer review panel members will be selected based upon their training and experience in relevant scientific, extension, or education fields taking into account the following factors: (a) The level of formal scientific, technical education, and extension experience of the individual, as well as the extent to which an individual is engaged in relevant research, education or extension activities; (b) the need to include as peer reviewers experts from various areas of specialization within relevant scientific, education, and extension fields; (c) the need to include as reviewers other experts (producers, range or resource managers/operators, consumers, etc.) who can assess relevance of the proposals to targeted audiences and to program needs; (d) the need to include as peer 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; (e) the need to maintain a balanced composition of peer review groups with regard to minority and female representation and an equitable age distribution; and (f) the need to include members that can judge the effective usefulness to producers and the general public of each proposal.

B. Evaluation Factors

Priority will be given to projects that integrate agricultural research, education and extension and projects that have included the appropriate team to achieve the goals of the project, notably teams that are multi-state, multi-institutional or multi-disciplinary.

The following evaluation factors apply to all proposals.

1. Relevance

All proposals will be judged as to their relevance to critical emerging agricultural issues related to future food production; environmental quality, and natural resource management; or farm income. Further factors include:

(a) Documentation that the research, extension and education activities are directed towards current or likely future problems or problems identified in this document;

(b) Linkage of research, extension and education functions.

(c) Involvement of stakeholders and/or communities of interest.

2. Merit

All proposals will be judged on their scientific, extension, or education merit including:

(a) Novelty, innovation, uniqueness, and originality;

(b) Conceptual adequacy of the research, extension and education components;

(c) Clarity and delineation of objectives;

(d) Adequacy of the description of the undertaking and suitability and feasibility of methodology;

(e) Demonstration of feasibility;

(f) Probability of success of the project;

3. Quality

All proposals will be judged on their quality including:

(a) Selection of most appropriate and qualified individuals to address the problem;

(b) Training and demonstrated awareness of previous and alternative approaches to the problem identified in the proposal, and performance record or potential for future accomplishments;

(c) Time allocated for systematic attainment of objectives;

(d) Institutional experience and competence in subject area;

(e) Adequacy of available or obtainable support personnel, facilities, and instrumentation;

(f) Adequacy of plans for reporting, assessing and monitoring of results of the project over its duration.

(g) The planned administration of the project and its maintenance, partnerships, collaborative efforts, evaluation and monitoring efforts, and the planned dissemination of information over the duration of the project.

Part IV—Award Administration

The Application of Geospatial and Precision Technologies Program will be administered and managed as an interagency program involving both participating agencies throughout the entire process from the development of the program announcement to the review and selection, and monitoring of awards. The interagency program managers will coordinate program administration activities such as review of periodic reporting of project evaluations and annual investigator team meetings.

USDA and NASA will fund awards separately. The amount of each award will be determined jointly by USDA and NASA and their representatives after the panel review process has been completed. Other material may be

required at the time of funding to facilitate the implementation of the award from participating agencies.

A. General

Within the limit of funds available for such purpose, the awarding official shall make awards to those responsible, eligible applicants whose proposals are judged most meritorious in the announced program area by procedures set forth in this request for proposals. The date specified as the effective date of the award shall be no later than September 30, of the Federal fiscal year in which the project is approved for support and funds are appropriated for such purpose, unless otherwise permitted by law. It should be noted that the project need not be initiated on the award effective date, but as soon thereafter as practicable so that project goals may be attained within the funded project period. All funds awarded under this request for proposals shall be expended solely for the purpose for which the funds are awarded in accordance with the approved application and budget, the terms and conditions of the award, the applicable Federal cost principles, and the applicable participating agency assistance regulations.

B. Organizational Management Information

Specific management information relating to an applicant shall be submitted on a one-time basis as part of the responsibility determination prior to the award of an award if such information has not been provided previously under this or another program for which the sponsoring agency is responsible. Copies of forms recommended for use in fulfilling the requirements contained in this section will be provided by the awarding agency as part of the pre-award process.

C. Award Document

The award document shall include at a minimum the following:

1. Legal name and address of performing organization or institution to whom the funding agency has awarded an award under this program;
2. Title of Project;
3. Name(s) and address(es) of principal investigator(s) chosen to direct and control approved activities;
4. Award identification number assigned by the funding agency;
5. Project period, specifying the amount of time the funding agency intends to support the project without requiring recompetition for funds;

6. Total award amount approved by the funding agency during the project period;

7. Legal authority(ies) under which the award is made;

8. Approved budget plan for categorizing project funds to accomplish the stated purpose of the award; and

9. Other information or provisions deemed necessary by the funding agency to carry out its respective awarding activities or to accomplish the purpose of a particular award.

D. Notice of Award

The notice of award, in the form of a letter, will be prepared and will provide pertinent instructions or information to the awardee that is not included in the award document.

E. Funding Mechanisms

The two mechanisms by which grants may be awarded are as follows:

1. *Standard Grant*—This is a funding mechanism whereby the Federal Government agrees to support a specified level of effort for a predetermined time period without the announced intention of providing additional support at a future date.

2. *Continuation Grant*—This is a funding mechanism whereby the Federal Government agrees to support a specified level of effort for a predetermined period of time with a statement of intention to provide additional support at a future date, provided that performance has been satisfactory, appropriations are available for this purpose, and continued support will be in the best interests of the Federal government and the public. This kind of mechanism normally will be awarded for an initial one-year period, and any subsequent continuation project grants will be awarded in one-year increments. The award of a continuation project grant to fund an initial or succeeding budget period does not constitute an obligation to fund any subsequent budget period. Unless prescribed otherwise by CSREES or NASA, a grantee must submit a separate application for continued support for each subsequent fiscal year. Requests for such continued support must be submitted in duplicate at least three months prior to the expiration date of the budget period currently being funded. Decisions regarding continued support and the actual funding levels of such support in future years usually will be made administratively after consideration of such factors as the grantee's progress and management practices and the availability of funds. Since initial peer reviews are based upon the full term

and scope of the original application, additional evaluations of this type generally are not required prior to successive years' support. However, in unusual cases (e.g., when the nature of the project or key personnel change or when the amount of future support requested substantially exceeds the grant application originally reviewed and approved), additional reviews may be required prior to approving continued funding.

F. Use of Funds; Changes

Unless otherwise stipulated in the terms and conditions of the award, the following provisions apply:

1. *Delegation of Fiscal Responsibility*: The awardee may not in whole or in part delegate or transfer to another person, institution, or organization the responsibility for use or expenditure of funds.

2. *Changes in Project Plans*: a. The permissible changes by the awardee, principal investigator(s), or other key project personnel in the approved research project award shall be limited to changes in methodology, techniques, or other aspects of the project to expedite achievement of the project's approved goals. If the awardee and/or the principal investigator(s) are uncertain as to whether a change complies with this provision, the question must be referred to the CSREES Authorized Departmental Officer (ADO) or NASA Procurement Officer for a final determination.

b. Changes in approved goals, or objectives, shall be requested by the awardee and approved in writing by the CSREES ADO or NASA Procurement Officer prior to effecting such changes. In no event shall requests for such changes be approved which are outside the scope of the original approved project.

c. Changes in approved project leadership or the replacement or reassignment of other key project personnel shall be requested by the awardee and approved in writing by the awarding official prior to effecting such changes.

d. Transfers of actual performance of the substantive programmatic work in whole or in part and provisions for payment of funds, whether or not Federal funds are involved, shall be requested by the awardee and approved in writing by the CSREES ADO or NASA Procurement Officer prior to effecting such transfers.

e. *Changes in Project Period*: The project period may be extended by the awarding agency without additional financial support, for such additional period(s) as the CSREES ADO or NASA

Procurement Officer determines may be necessary to complete or fulfill the purposes of an approved project. Any extension of time shall be conditioned upon prior request by the awardee and approval in writing by the CSREES ADO or NASA Procurement Officer, unless prescribed otherwise in the terms and conditions of an award.

f. *Changes in Approved Budget:* Changes in an approved budget must be requested by the awardee and approved in writing by the CSREES ADO or NASA Procurement Officer prior to instituting such changes if the revision will involve transfers or expenditures of amounts requiring prior approval as set forth in the applicable Federal costs principles, Agency regulations, or in the award document.

G. Applicable Federal Statutes and Regulations

Several other Federal statutes and regulations apply to proposals considered for review and to projects awarded under this program. For CSREES awards, the applicable regulations are those cited in Part V. E. of the IFAFS RFP published in the **Federal Register** on February 23, 2001,

66 FR 11507. The CFDA numbers are as follows: USDA—10.206; NASA—43.002. The Office of Management and Budget (OMB) number for NASA is OMB No. 3145-0058. For specific information on policies and procedures relating to the award and administration of NASA grants and cooperative agreements, refer to the Grant and Cooperative Agreement Handbook (NPG 5800.1) which can be found at <http://ec.msfc.nasa.gov/hq/grcover.htm>.

H. Confidential Aspects of Proposals and Awards

When a proposal results in an award, it becomes a part of the record of the Agency's transactions, available to the public upon specific request. Information that the CSREES or NASA Administrator determines to be of a confidential, privileged, or proprietary nature will be held in confidence to the extent permitted by law. Therefore, any information that the applicant wishes to have considered as confidential, privileged, or proprietary should be clearly marked as such and sent in a separate statement, two copies of which should accompany the proposal. The original copy of a proposal that does not

result in an award will be retained by the Agency for a period of one year. Other copies will be destroyed. Proposals that do not receive an award will be released to others only with the consent of the applicant or to the extent required by law. If such a request is made, the applicant will be consulted prior to release of the proposal. A proposal may be withdrawn at any time prior to the final selection action thereon.

Potential applicants are strongly encouraged to contact a program official and discuss their plans. Inquiries regarding the announcement can be directed to any one of the agency representatives identified at the beginning of this RFP.

Done at Washington, D.C., on this 13th day of March 2001.

Colien Hefferan,

Administrator, Cooperative State Research, Education, and Extension Service.

Michael R. Thomas,

Acting Director, Applications Division, Office of Earth Science, National Aeronautics and Space Administration.

[FR Doc. 01-6573 Filed 3-15-01; 8:45 am]

BILLING CODE 3410-22-P