National Aeronautics and Space Administration
Office of Education
Higher Education Division

Experimental Program to Stimulate Competitive Research (EPSCOR)

Research Infrastructure Development (RID) Announcement

Release Date:	**December 21, 2006**
Proposals Due:	**February 26, 2007**
Announcement of Selections:	**March 30, 2007**
Start Date:	

NASA Headquarters
Office of Education
Higher Education Division
300 E. Street, SW
Washington, DC 20546

Summary and Supplemental Information

Program: NASA EPSCoR
Experimental Program to Stimulate Competitive Research
Research Infrastructure Development

NASA's Office of Education solicits proposals for the NASA EPSCoR Research Infrastructure Development program. Proposals are due no later than 4:30 p.m., Eastern, Monday, February 26, 2007. Each funded NASA EPSCoR proposal will focus on building the core strength needed to develop competitive research and technology development methods and activities for the solution of scientific and technical problems of importance to NASA as defined by one or more of the four Mission Directorates and/or one or more of the ten NASA Field Centers (including JPL). The proposals will also contribute to the overall research infrastructure, science and technology capabilities, higher education, and/or economic development of the EPSCoR jurisdiction.

Selection Official
The selection official for this announcement is the Associate Administrator, Office of Education.

Point of Contact:
Diane D. DeTroye
NASA EPSCoR
Office of Education, Room 2K17
NASA Headquarters
300 E Street, SW
Washington, DC 20024-3210
(202) 358-1069
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Number and Size of Award
It is anticipated that approximately twenty-five (25) awards may be made under this Notice pursuant to the authority of 1260.12(d) of the NASA Grant and Cooperative Agreement Handbook: nineteen awards of $125,000/year not to exceed a 3-year period of performance and six awards of $150,000 for the first year and $125,000 for the next two years, not to exceed a 3-year period of performance.

NASA Safety Policy
Safety is the freedom from those conditions that can cause death, injury, occupational illness, damage to or loss of equipment or property, or damage to the environment. NASA's safety priority is to protect: (1) the public, (2) astronauts and pilots, (3) the NASA workforce (including contractor employees working on NASA award instruments), and (4) high-value equipment and property.

Proposal Submission
Proposers must submit one original proposal with the signature of the Organization's Authorizing Official, plus five copies. An electronic version of the proposal package in a single pdf formatted document is also required. The complete proposal package (original, copies, and CD) must be received at NASA Headquarters no later than 4:30 p.m. Eastern, **February 26, 2007.**

Regular U.S. Post Office mail addressed to NASA Headquarters continues to be subjected to irradiation and significant delivery delays. Proposals should be submitted through an express or commercial carrier or courier service to:

Diane D. DeTroye
NASA EPSCoR
Office of Education, Room 2K17
NASA Headquarters
Attn: Receiving and Inspection (Rear of Building)
300 E. St. SW
Washington, DC 20024-3210

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The National Aeronautics and Space Administration
Experimental Program to Stimulate Competitive Research
EPSCoR Phase III

Research Infrastructure Development (RID) Announcement

I. Summary Information

A. Technical Description

NASA's Office of Education solicits proposals for the NASA EPSCoR Phase III Research Infrastructure Development program. Proposals are due no later than 4:30 p.m., Eastern, February 26, 2007. Each funded NASA EPSCoR proposal will focus on building the core strength needed to develop competitive research and technology development methods and activities for the solution of scientific and technical problems of importance to NASA as defined by one or more of the four Mission Directorates and/or one or more of the ten NASA Field Centers. The proposals should demonstrate contribution to the overall research infrastructure, science and technology capabilities, higher education, and economic development of the EPSCoR jurisdiction.

The program parameters, outlined in more detail below, are:

- Only one proposal per jurisdiction will be accepted;
- Maximum annual funding per jurisdiction proposal: $125,000 (with exception noted in Section III.B. Funding and Cost Sharing/Matching below);
- All NASA EPSCoR funds must be matched 1:1 (in-kind matches are allowable)

This announcement will be available at http://calspace.ucsd.edu/epscor.

B. EPSCoR Background

Public Law 102-58, passed in 1992, authorized the National Aeronautics and Space Administration to initiate the NASA EPSCoR program to strengthen the research capability of jurisdictions that have not in the past participated equably in competitive aerospace research activities. The goal of NASA EPSCoR is to provide seed funding that will enable jurisdictions to develop an academic research enterprise directed toward long-

term, self-sustaining, nationally-competitive capabilities in aerospace and aerospace-related research. This capability will, in turn, contribute to the jurisdiction's economic viability and expand the nation's base for aerospace research and development. Since its inception, NASA EPSCoR has been closely linked to the NASA Space Grant Program.

Based on the availability of funding, NASA will continue to help jurisdictions achieve these goals through the NASA EPSCoR program. Funded jurisdictions will be selected through a merit-based, peer-reviewed competition.

The following are the specific objectives of the NASA EPSCoR program:

- Contribute to and promote the development of research infrastructure in NASA EPSCoR jurisdictions in areas of strategic importance to the NASA mission;
- Improve the capabilities of the NASA EPSCoR jurisdictions to gain support from sources outside the NASA EPSCoR program;
- Develop partnerships between NASA research assets, academic institutions, and industry;
- Contribute to the overall research infrastructure, science and technology capabilities, higher education, and/or economic development of the jurisdiction; and
- Work in close coordination with the NASA Space Grant program to improve the environment for science, mathematics, engineering, and technology education in the jurisdiction.

C. Jurisdiction Eligibility

Per NASA EPSCoR legislation, jurisdictions eligible to compete for this opportunity are those jurisdictions eligible to compete for the National Science Foundation EPSCoR. Based on the most recent 3-year (2003, 2004, 2005) calculations, the 25 eligible jurisdictions are: Alabama, Alaska, Arkansas, Delaware, Hawaii, Idaho, Kansas, Kentucky, Louisiana, Maine, Mississippi, Montana, Nebraska, Nevada, New Hampshire, New Mexico, North Dakota, Oklahoma, the Commonwealth of Puerto Rico, Rhode Island, South Carolina, South Dakota, Vermont, West Virginia, and Wyoming.

D. Period of Performance

The NASA EPSCoR Research Infrastructure Development awards will support a 3-year Cooperative Agreement with an option for a two-year continuation. Continued funding will be based upon evidence of progress towards stated goals and the availability of Agency funds. Following a successful, comprehensive evaluation after the third year of the jurisdiction's NASA EPSCoR Research Infrastructure Development program, a jurisdiction may be invited to submit a proposal for a two-year continuation of its award.

E. Connections between the NASA EPSCoR and NASA Space Grant Programs

The goals of the NASA EPSCoR program closely parallel those of the National Science Foundation EPSCoR and work in partnership with NASA's National Space Grant College

and Fellowship Program. Cooperative Agreements will be awarded to and administered by the jurisdiction's NASA EPSCoR Director, who also serves as the jurisdiction's Space Grant Director. The NASA EPSCoR awards are made to the institution of the NASA EPSCoR/Space Grant Director. Individual institutions participating in a NASA EPSCoR program need not be affiliated with the jurisdiction's Space Grant program.

II. Strategic Framework for NASA

A. National and Agency Priorities

On January 4, 2004, the President announced *A Renewed Spirit of Discovery: The President's Vision for U.S. Space Exploration*, a new directive for the Nation's space program. The fundamental goal of this directive is "to advance U.S. scientific, security, and economic interests through a robust space exploration program." The President committed the Nation to a journey of exploring the solar system and beyond: returning to the Moon in the next decade, then venturing further into the solar system, ultimately sending human to Mars and beyond. The Agency was challenged to establish new and innovative programs to enhance understanding of the planets, to ask new questions, and to answer questions that are as old as humankind.

The Vision for Space Exploration defines NASA's Strategic Goals for the period 2006 through 2016. Jurisdictions responding to this announcement can become familiar with the 2006 NASA Strategic Plan by accessing http://www.nasa.gov. The 2006 Strategic Plan establishes the framework to advance NASA's unique competencies in scientific and engineering systems to fulfill the Agency's purpose and achieve the NASA Mission: *To pioneer the future in space exploration, scientific discovery, and aeronautics research.*

Although NASA will assume the lead for the Nation in the implementation of the exploration vision, this will be a joint journey with contributions from other nations, commercial organizations, and thousands of university researchers, private sector scientists, engineers, and entrepreneurs from around the globe, all committed to the same objective.

B. NASA Education Strategy and Framework

NASA will continue the Agency's tradition of investing in the Nation's education programs and supporting the country's educators who play a key role in preparing, inspiring, exciting, encouraging, and nurturing the young minds of today who will manage and lead the Nation's laboratories and research centers of tomorrow.

A highly-educated and well-prepared workforce has been and continues to be critical to the success of the Agency's mission. NASA's investment in education is directly linked

to inspiring the next generation of explorers and innovators.

Beginning in 2006, NASA will pursue three major education goals:

- **Strengthen NASA and the Nation's future workforce**—NASA will identify and develop the critical skills and capabilities needed to ensure achievement of the Vision for Space Exploration. To help meet this demand, NASA will continue contributing to the development of the Nation's science, technology, engineering, and mathematics (STEM) workforce of the future through a diverse portfolio of education initiatives that target America's students at all levels, especially those in traditionally underserved and underrepresented communities.

- **Attract and retain students in STEM disciplines**—NASA will focus on engaging and retaining students in STEM education programs to encourage their pursuit of educational disciplines and careers critical to NASA's future engineering, scientific, and technical missions.

- **Engage Americans in NASA's mission**—NASA will build strategic partnerships and linkages between STEM formal and informal education providers. Through hands-on, interactive educational activities, NASA will engage students, educators, families, the general public, and all Agency stakeholders to increase Americans' science and technology literacy.

The NASA Education portfolio is guided by three Outcomes:

- **Outcome 1**: Contribute to the development of the STEM workforce in disciplines needed to achieve NASA's strategic goal through a portfolio of investments.

- **Outcome 2**: Attract and retain students in STEM disciplines through a progression of educational opportunities for students, teachers, and faculty.

- **Outcome 3**: Build strategic partnerships and linkages between STEM formal and informal education providers that promote STEM literacy and awareness of NASA's mission.

The Education Outcomes form a critical component of the Education Strategic Coordination Framework (Appendix A). The Framework guides the planning, implementation, and assessment of the NASA Education portfolio; and provides a coordinated tool to describe the Overarching Philosophy and Operating Principles for NASA education. Higher education projects serve as major links in the student pipeline used to address the education outcomes.

Outcome 1 of the NASA Education portfolio includes five objectives. The NASA EPSCoR contributes to the accomplishment of two of these objectives:

> Objective 1.1 – Faculty and Research Support: Provide NASA competency-building education and research opportunities for faculty, researchers, and post-doctoral fellows.

Objective 1.5 – Targeted Institution Research and Academic Infrastructure: Improve the ability of targeted institutions to compete for NASA research and development work.

III. Project Overview and Guidelines

A. General

Each NASA EPSCoR RID program must perform scientific research and/or technology development in areas that support the strategic research and technology development priorities of one or more of NASA's four Mission Directorates and/or one or more of the ten NASA Field Centers. An emphasis should be placed on developing a core expertise capable of successfully competing for funds from NASA and non-NASA sources outside of the EPSCoR program. The programs should move progressively toward gaining support from sources outside the NASA EPSCoR program by aggressively pursuing additional funding opportunities offered by NASA, industry, other federal agencies, and other sources.

B. Funding and Cost-Sharing/Matching

The maximum funding level that can be requested by a jurisdiction is $125,000 per year for up to three years ($375,000 total).

Newly eligible jurisdictions (Alaska, Delaware, Hawaii, New Hampshire, New Mexico, and Rhode Island) may propose for an additional $25,000 – in Year One only – to be used to develop a management structure for NASA EPSCoR. Proposed activities may include, but are not limited to: establishing connections with the jurisdiction EPSCoR committee, identifying and developing collaborations with existing EPSCoR and EPSCoR-like programs from other federal agencies within the jurisdiction, and conducting EPSCoR workshops, conferences, and other community-based endeavors.

A cost-sharing match of 1:1 is required for all NASA EPSCoR funds. Each proposal must provide, from non-federal sources, either a cash or in-kind contribution equal to the total amount requested from NASA. Cost sharing by each participating institution is strongly encouraged. Although the method of match is flexible, NASA encourages the EPSCoR jurisdiction committees to consider methods that would add value to the jurisdiction's existing research capabilities. It is strongly urged that indirect costs be waived or reduced by the university; the waived indirect costs can be used as match.

The following restrictions exist on the use of the NASA EPSCoR RID funds:

- NASA EPSCoR RID funds cannot be used for equipment.
- NASA EPSCoR RID funds cannot be used for foreign travel.
- NASA EPSCoR funds cannot be used for civil service personnel travel.

C. Use of Research Infrastructure Development Funds

The purpose of the RID competition is to build the core strength needed to develop competitive research and technology development methods and activities for the solution of scientific and technical problems of importance to NASA. RID proposals should focus on project elements that develop collaborative activities and contribute to the strategy for building future research and innovative activities. Jurisdictions should consider formulation of a documented vision and implementation design for their research, education, and innovation strategies including such activities as EPSCoR workshops, conferences, and other community-based endeavors. RID funding is intended to provide partial support for overall program management and jurisdiction research activities. The bulk of resources from RID funding, however, must be reserved for general research and/or technology infrastructure development elements. Examples include (but are not limited to):

- development of new contacts and collaborative research ties with the NASA Field Centers and/or Mission Directorates,
- seed grants/research initiation grants,
- partnership development travel grants for jurisdiction researchers,
- student research support,
- promote the redirection of non-aerospace research assets to efforts toward addressing research and technology development needs of NASA,
- development of new or continuing collaborations among colleges and universities in the jurisdiction that will enhance the jurisdiction's abilities to respond to the research and technology development needs of NASA.

Research Infrastructure Development funding is not appropriate for augmentation of existing funded research projects.

D. Research Student Support

There is no requirement that NASA EPSCoR funds be used for student support. However, the use of NASA EPSCoR funds for this purpose is allowable. Funds that are used for student support must be fully matched (cash or in-kind). Use of NASA EPSCoR funds for student support must be described in Section 2 of the proposal. (See V.B. Proposal Preparation and Submission below.)

E. Collaborations and Interactions

Jurisdictions are strongly encouraged to submit proposals that develop partnerships or cooperative arrangements among academia, government agencies, and business and industry within the jurisdiction. Jurisdictions are strongly encouraged to

(1) establish partnerships and collaborations with minority-serving institutions,
(2) create linkages with industry, private research foundations, and jurisdiction and local agencies,
(3) include faculty and students from underrepresented and underserved groups in the proposal.

Services provided by NASA installations or JPL should be identified as NASA responsibilities in the proposals. Institutions submitting proposals should contact, in advance, NASA installations from which services will be requested in order to ascertain the availability and anticipated costs of such services. All costs incurred by JPL and costs incurred at NASA installations by the EPSCoR program for the use of facilities and contracted technical work should be identified in the funding request. Civil service personnel salaries and travel as well as other in-house research provided by NASA installations cannot count as part of the required 1:1 match. These costs should be identified as "Federal Match" in a separate section of the budget.

IV. Project Management

A. NASA Headquarters

The NASA EPSCoR is administered by the Office of Education at NASA HQ. NASA EPSCoR management is closely coordinated with the Mission Directorates and the Field Centers. NASA Headquarters has overall responsibility for policy, project management, and oversight. NASA Headquarters is also responsible for reporting evaluation and, outcomes and results, to the appropriate program-level entity. The NASA Center University Affairs Officers are the primary points of contact at the Centers.

B. Jurisdiction Level

The NASA Space Grant Director also serves as the jurisdiction's NASA EPSCoR Director. The jurisdiction Director is responsible for the overall development and direction of the program and ensuring dissemination of research results. Jurisdiction Directors are expected to coordinate their EPSCoR and Space Grant programs closely. Education and public service activities of benefit to EPSCoR should be coordinated through Space Grant. Each jurisdiction must propose measures and metrics against which the jurisdiction will evaluate the performance and overall success of its program. NASA EPSCoR funds are awarded to the institution of the NASA EPSCoR Director.

C. Technical Advisory Committee (TAC)

Evidence of assessment of jurisdiction research priorities by consultation with appropriate organizations such as economic development commissions, state EPSCoR Committee, etc., is essential for a successful NASA EPSCoR program. Each jurisdiction's NASA EPSCoR program must establish and utilize a Technical Advisory Committee (TAC) to provide assistance, consultation, evaluation, and advice to the

jurisdiction's NASA EPSCoR Director. The purposes of the TAC are to:

- Advise on jurisdiction research and economic priorities;
- Assist in planning research areas that align with jurisdiction priorities;
- Provide technical guidance to the jurisdiction's NASA EPSCoR program; and
- Review program progress and accomplishments.

The TAC, which is chaired by the jurisdiction's NASA EPSCoR Director, must consist of at least eight members. Required on the committee are:

- the jurisdiction's NASA EPSCoR Program Director (Committee Chair),
- at least one member of the jurisdiction's EPSCoR Committee,
- at least one representative from jurisdiction industry,
- at least one representative from jurisdiction government, and
- one member each from at least three affiliates of the jurisdiction's NASA Space Grant Program.

The jurisdiction is free to complete the membership of the TAC with at-large representation from industry, jurisdiction government and agencies, and other institutions. Jurisdictions are encouraged to have at least one member from outside the jurisdiction. While the at-large members of the TAC need not necessarily be from within the jurisdiction, NASA civil servants and employees of JPL may not to be included on the TAC. The TAC must meet at least once each year.

D. Annual Progress Report

An annual report is required each year no later than 60 days prior to the anniversary date of the award. The report should document program activities over the period of performance of the grant, and overall progress towards project objectives, including (but not limited to):

1. Research success of individual investigators as measured by:
    1. articles submitted to or published in refereed journals,
    2. talks, presentations or abstracts at professional meetings,
    3. patents/patent applications,
    4. follow-on grant proposals submitted/funded including funding amounts and funding entities,
    5. improvements in jurisdiction research and development infrastructure.
2. Extent to which collaborations with jurisdiction agencies, industry, research and academic institutions, and with NASA have evolved.
3. Evidence of how EPSCoR activities have furthered jurisdiction priorities.
4. Discussion of interaction between and cooperation with the jurisdiction Space Grant program.
5. Demographic (ethnicity/race and gender) information on participants
    - faculty – including names and institutions
    - post-doctoral, graduate, and undergraduate students

Additionally, the annual progress report should contain a budget for the next 12-month period, and a schedule of program goals, activities, and milestones. Continued funding will depend upon satisfactory performance during the previous 12-month period and evidence of a satisfactory plan for the next 12-month period.

At the end of the third year of funding, an in-depth cumulative third-year report is required that summarizes the three-year progress of the program. Continuation of funding beyond the third year will depend strongly upon the extent to which the jurisdiction's program goals and objectives as stated in the original proposal have been achieved. Progress toward these goals will be evaluated by reference to indicators such as, but not limited to, the metrics outlined above.

E. Inquiries

Questions about this project announcement should be directed to:

Diane D. DeTroye
NASA EPSCoR
Office of Education, Room 2K17
NASA Headquarters
300 E Street, SW
Washington, DC 20024-3210
(202) 358-1069
E-mail: Diane.D.DeTroye@nasa.gov

V. Proposal Preparation and Submission

A. General Instructions

The proposal must be typed single-spaced, printed no smaller than 12-point font on standard 8.5" x 11" paper, and in the order described in this announcement. All pages of the proposal must be numbered.

Material submitted that exceeds the specified page limits will not be reviewed. Appendices and attachments, other than those specified in this announcement, will not be reviewed.

Submit one original proposal with original signatures and five copies. To facilitate the recycling of proposals after review, proposals should be submitted on plain, white paper only. The use of notebooks, cardboard stock, plastic covers, and colored paper is not allowed. An electronic version of the proposal package in a single pdf formatted document is also required. The complete package (original proposal, copies, and CD) must be received at NASA Headquarters by 4:30 p.m., Eastern, February 26, 2007.

B. Proposal Format and Content

Proposals should be submitted in the following format.

Section 1: General Information (not included in page limit)

- Cover/Signature page must include the following:
  - Program Title;
  - Lead Institution;
  - Name, phone and fax numbers, e-mail, and signature of the jurisdiction's NASA EPSCoR Director;
  - Name, phone and fax numbers, and signature of Authorizing Official of the lead institution;
  - Total dollar amount requested;
- Signature/Statement Page with signature and the following statement from jurisdiction EPSCoR Committee chair:

  The jurisdiction EPSCoR Committee Chairman has had an opportunity to review this proposal and discuss it with the NASA EPSCoR Director.

  Signature: _____
  Jurisdiction EPSCoR Committee Chair Date
- Table of Contents
- Vita: A curriculum vita of no longer than one page is required for the jurisdiction NASA EPSCoR Program Director.
- Certifications: Each proposal must be accompanied by the following institutional certifications expressing compliance with federal regulations:
  - Debarment, Suspension, and other Responsibility Matters;
  - Assurance for Nondiscrimination Compliance;
  - Certification Regarding Lobbying.

  See Appendix E for additional information regarding certifications.

Section 2: Research Infrastructure Development Project Plan – 65 Points (15 pages maximum)

Research Infrastructure Development funding is intended to provide support for building and strengthening jurisdiction research capacity and capability. This section should describe the overall RID project, including (but not limited to):

- Goals, objectives, and priorities of the jurisdiction's program
- Project elements that will be conducted
- Alignment with jurisdiction priorities or agendas
- Alignment with NASA research or technology development priorities

Note: NASA EPSCoR RID elements should not augment existing funded research projects. RID activities should target unique activities that increase jurisdiction competitiveness.

Section 3: Project Management, Coordination, and Evaluation – 20 Points (5 pages maximum)

A. Project Management

Describe the proposed program management structure, including interactions between the lead institution, the jurisdiction NASA EPSCoR Program Director, and the participating institutions.

- Use of RID funding to provide partial support for overall project management costs is allowable. A discussion of the RID costs being used to support program management must be included.
- Include a list of names, institutions, and roles of key personnel involved in project management activities.

B. Project Coordination

- Discuss how the program will coordinate and interact with the NASA Field Centers and/or the Mission Directorates at NASA Headquarters. If appropriate, list NASA contacts already established.
- Summarize the coordination and synergy with the jurisdiction EPSCoR Committee and similar research infrastructure-building efforts in the jurisdiction, including NASA Space Grant and other federal EPSCoR programs. Describe the role of the NASA EPSCoR Research Infrastructure Development project within this broader context.
- Describe the composition of the Technical Advisory Committee, and policies concerning interaction with the jurisdiction NASA EPSCoR Program management. Outline a tentative schedule for regular meetings (at least once per year) of the Technical Advisory Committee.

C. Project Evaluation

- Describe key metrics used for program evaluation, including plan for acquiring and aggregating data to which the pre-award baseline data will be compared. Identify quantitative metrics where appropriate. Discuss other means by which the jurisdiction's EPSCoR progress will be evaluated, including the approach to reporting information required in the annual progress report (see IV.B. Annual Progress Report above). Proposal must include a formative and summative evaluation plan (with measurable metrics).

Section 4: Budget – 15 Points (not included in page limit)

Provide detailed budgets for the first three years of the $125,000/year RID funding as well as a Summary Budget which aggregates total funding for the three year period. All sources of matching should be described and documented. A short budget narrative must be included that discusses other budgetary issues such as the extent and level of jurisdiction, industrial, and institutional commitment and financial support, including resources (staff, facilities, laboratories, indirect support, waiver of

indirect costs, etc.) The budget will be evaluated based upon the clarity and reasonableness of the funding request.

A suggested format to use in preparing the proposed budget can be found at http://genesis.gsfc.nasa.gov/grants/grants.htm#Grant (click on Grant Budget Outline).

Notes on Budget:

- The total funds requested must be no greater than $125,000 per year. (Except for Year One supplement for 6 new NASA EPSCoR jurisdictions as described in Section III.B. Funding and Cost Sharing/Matching above.)
- The proposed budget must contain sufficient cost detail and supporting information. Dollar amounts proposed with no explanation (e.g., Labor: $35,000) may reduce proposal acceptability, or cause delays in funding should the proposal be selected. Each item should be explained in reasonable detail.
- Direct labor costs must be separated by titles or disciplines (e.g., Program Director, graduate research assistant, clerical support, etc.) with estimated percentages, hours, hourly rates, and total amounts of each. Indirect costs should be explained so that evaluators can understand the basis of the proposed costs. Any waived indirect costs used as match should be noted.
- Other costs, with each significant category detailed, must be explained and substantiated. Requested travel allowances should include the number of trips and expected location, duration of each trip, estimated airfare, and per diem.

VI. Proposal Evaluation and Selection Process

A. Evaluation Criteria

The proposals will be evaluated through a merit review process that includes the NASA EPSCoR staff and other representatives of the NASA Education program based on the following criteria:

Proposal Element	Point Value
1. Intrinsic Merit of Proposed Project Plan	65
2. Management, Coordination and Evaluation	20
3. Budget	15
Total	**100**

In addition, all NASA education programs are evaluated according to the NASA Operating Principles (see Appendix A).

Successful research infrastructure improvement proposals are likely to be those that provide sound platforms and opportunities for enhanced academic research and development competitiveness by a jurisdiction's universities, including pragmatic plans

for generation of sustained non-EPSCoR support.

1. **Intrinsic Merit, Quality, and Feasibility of Project Plan (65 points)**

The proposal should have clear goals and objectives that are aligned with the guiding NASA documents (see Appendix B), NASA Education, and NASA EPSCoR. The proposed elements represent a well-developed, coordinated, cohesive, and integrated program.

The proposal should

- address the expectations described in the announcement;
- provide a succinct summary of jurisdiction's goals and priorities for development of competitive research and technology development;
- demonstrate a workable, clearly-organized plan for achieving the stated goals and objectives;
- describe each element of the program in sufficient detail to demonstrate probability of success;
- be consistent with the budget, effectively utilizes the program management, and demonstrate a high probability for successful implementation.

2. **Project Management, Coordination, and Evaluation (20 points)**

A. Project Management
The proposed program management structure should be described in reasonable detail. Identification of and interactions among key management personnel should be described. Use of RID funding to provide partial support for overall project management costs should be reasonable and explained succinctly.

B. Project Coordination
The proposal should describe

- how the project will coordinate with the jurisdiction EPSCoR Committee and similar research infrastructure-building efforts within the jurisdiction, including (but not limited to) NASA Space Grant and other federal EPSCoR and EPSCoR-like programs;
- how the project will coordinate and interact with the NASA Centers and/or Mission Directorates;
- the role of the RID within the broader context of the jurisdiction;
- the composition of the TAC and the policies concerning interaction with the jurisdiction NASA EPSCoR Program management and provide a tentative meeting schedule.

C. Project Evaluation

The proposal should describe an appropriate evaluation plan/process to document outcomes and demonstrate progress toward achieving objectives of proposed project elements. The forms of evaluation and metrics proposed are based upon reputable models and techniques appropriate to the content and scale of the program. Evaluation methods provide useful information on the effectiveness and/or impact of the proposed activity, and the program implements improvements based on evaluation evidence.

Of particular importance to the NASA EPSCoR program is a reliable method for tracking student progress. If the proposal includes a plan for student support, the proposal should provide for gathering student performance data both for determining a student's continued eligibility for EPSCoR funding and for evaluating the effectiveness of the NASA EPSCoR program.

3. Budget (15 points)

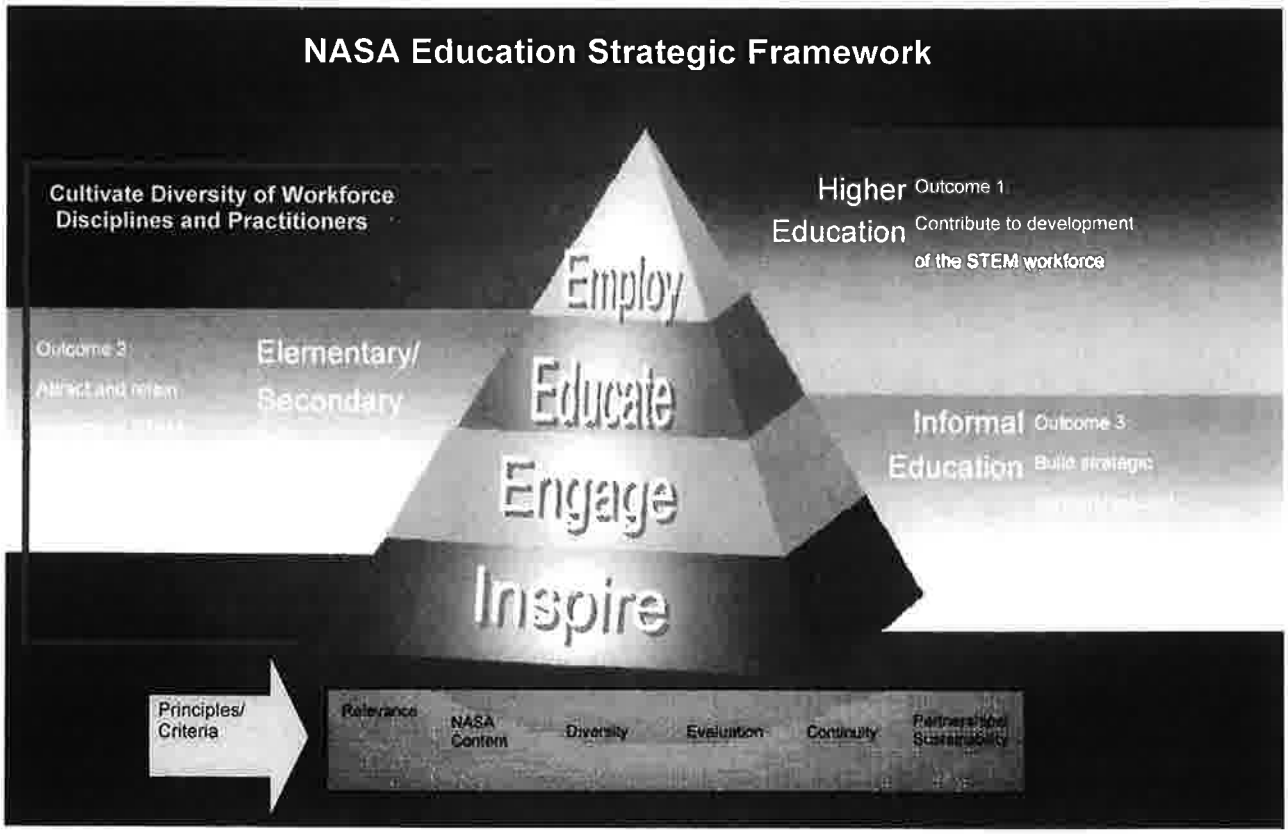
The proposed budget should be adequate, appropriate, reasonable, and realistic, and demonstrate the effective use of funds in alignment with the proposed program. This section should include detailed budgets for the first three years of the $125,000 per year Research Infrastructure Development funding and a Summary Budget for all three years. All sources of matching should be described and documented. The proposed budget reflects clear alignment with the content and text of the proposal. The budget contains sufficient cost detail and supporting information to facilitate evaluation.

A short budget narrative should be included that discusses other budgetary issues such as the extent and level of jurisdiction, industrial, and institutional commitment and financial support, including resources (staff, facilities, laboratories, indirect support, waiver of indirect costs, etc.) The budget will be evaluated based upon the clarity and reasonableness of the funding request.

B. Cancellation of Notice

NASA Office of Education reserves the right to make no awards under this Notice and to cancel this Notice. NASA assumes no liability (including bid and proposal costs in case of cancellation) for canceling the Notice or for anyone's failure to receive actual notice of cancellation.

Appendix A: NASA Education Strategic Coordination Framework



Categories of Involvement

Successful proposals will demonstrate how the development funds will enhance the capability of the existing consortium program to successfully ***Employ*** and/or ***Educate*** the next generation of explorers.

Employ – Targeted development of individuals who prepare for employment in disciplines needed to achieve NASA's mission and strategic goals. Through internships, fellowships, and other professional training, individuals become participants in the *Vision for Space Exploration* and NASA science and aeronautics research. At the apex, they have acquired sufficient mastery of knowledge for employment with NASA, academia, industry, or within STEM fields of teaching.

Educate – Focused education support that promotes learning among targeted populations. Education activities focus on student learners, or pre-and in-service educators, and are designed to develop and/or enhance specific STEM knowledge and skills using NASA resources. *Educate* activities promote new knowledge acquisition and strengthen an individual's skills. NASA's elementary and secondary education efforts are supplementary to formal classroom instruction.

Philosophy and Principles that Guide the Portfolio

Overarching Philosophy: Cultivate Diversity

The cultivation of diversity is both a management philosophy and a core value for all NASA education efforts. Diversity of skills and talents needed in our future workforce is critical to our success. Potential at both the individual and organizational levels will be maximized by fostering awareness, understanding, and respect for individual differences. The knowledge, expertise, and unique background and life experiences – including ethnic, gender, racial, religious, and cultural identity – of each individual strengthen the Agency,

Operating Principles

All NASA education programs are evaluated according to the NASA's Office of Education Operating Principles. Therefore, all proposals will be reviewed against these principles.

- ***Relevance:*** The proposed program must be relevant to and align with the jurisdiction's goals and aerospace research, structure, and technology priorities. Proposal must include a discussion of the jurisdiction's economic, science, and technology goals and priorities and demonstrate how the proposed program is relevant to and aligns with these goals and priorities.

- ***Content:*** Programmatic content proposed for development should help further the attainment of NASA's goals and objectives. As necessary, the proposal should describe the use of NASA content, people or facilities in the execution of the activities.

- ***Diversity:*** NASA strives to ensure that underrepresented and underserved students participate in NASA education and research programs to encourage more of these students to pursue STEM careers. Programs and projects are representative of American demographics; engage underrepresented and underserved minorities, women, and persons with disabilities; and reflect an atmosphere of equity balance, and inclusiveness. Proposals should contain plans to effectively recruit underrepresented and underserved students and researchers, including women, and persons with disabilities. Jurisdictions are encouraged to seek ongoing opportunities to develop relationships between minority-serving institutions and majority research universities within the jurisdiction, NASA Mission Directorates and Field Centers, and industry, as appropriate. Diversity also includes research capability; RID proposal may contain programmatic efforts directed at encouraging development of expertise across the wide range of NASA science, technology, and engineering interests.

- ***Evaluation:*** Proposals should document the intended outcomes and use metrics to demonstrate progress toward and achievements of these outcomes and annual performance goals. Evaluation methodology should be based on reputable models and techniques appropriate to the content and scale of the targeted activity, product, or program. Proposals should outline a plan and schedule for pursuing research competitiveness to include metrics, goals, and a specific timeline for achieving the goals.
- ***Continuity:*** Projects and activities draw from audiences that have already demonstrated interest in NASA and connect participants to the next level of engagement. Proposals should describe the role of the EPSCoR program in connecting to other NASA education projects. It should include effective methods for effecting the transition of participants to succeeding levels of involvement by facilitating student success and placement in continued study in STEM fields or STEM careers. Possible (but not exclusive list) NASA programs for connectivity are Graduate Student Researcher Program, Space Grant, and University Research Centers. This principle also refers to continuity in research capability. The proposal may contain programmatic efforts directed particularly at involving young researchers and new fields of research that have promise to provide NASA with long-term quality research and development.
- ***Partnership/Sustainability:*** Proposals should delineate mechanisms for building collaborations with NASA Centers, universities, industry, and other government agencies that enhance the ability of the jurisdiction to achieve its objectives, to obtain and leverage sources of additional funding, and/or to obtain essential services not otherwise available.

Appendix B: Relevant reference documents

For additional information on the background, purpose, intent, and scope, refer to the following:

- The *Vision for Space Exploration*
  http://www.nasa.gov/missions/solarsystem/explore_main.html

- 2006 NASA Strategic Plan
  http://www.nasa.gov/pdf/142302main_2006_NASA_Strategic_Plan.pdf

- NASA Education Strategic Coordination Framework
  http://education.nasa.gov/about/strategy/

Appendix C: Definitions

- Mission Directorate - One of NASA's four Mission Directorates – Aeronautics Research, Exploration Systems, Science, and Space Operations.
- Field Center - The ten NASA Field Centers including the Jet Propulsion Laboratory (JPL). For purposes of collaboration in the NASA EPSCoR Phase III, Research Infrastructure Development announcement, JPL is considered a NASA Field Center.
- Research Student - A student (undergraduate, graduate, or postdoctoral) who receives a research appointment in direct support of the NASA EPSCoR research.
- Jurisdiction - For the purpose of this Program Announcement, the term jurisdiction will refer to the 25 jurisdictions eligible to participate in the NASA EPSCoR program. This includes 24 states and the Commonwealth of Puerto Rico (see Section 1C. Jurisdiction Eligibility).

Appendix D - NASA Points of Contact

NASA Centers and JPL Contacts

Technical and scientific questions about research opportunities in this announcement may be directed to the appropriate contact below. Discussions of research with appropriate NASA Center or JPL personnel are strongly encouraged.

Ames Research Center Ms. Brenda J. Collins University Affairs Specialist Ames Research Center Mail Stop 226-8 Moffett Field, CA 94035-1000 Phone: (650) 604-3540 Fax: (650) 604-0978 Brenda.J.Collins@nasa.gov	Kennedy Space Center Ms. Berta Alfonso NASA Kennedy Space Center Attn: XA-D Kennedy Space Center, FL 32899 Phone: (321) 861-9083 Fax: (321) 867-2097 Berta.A.Alfonso@nasa.gov
Dryden Flight Research Center Dr. Miriam Rodón-Naveira Education Director Office of Academic Investments Dryden Flight Research Center P.O. Box 273, Mail Stop 2332 Edwards CA 93523-0273 Phone: (661) 276-3647 Fax: (661) 276-2134 Miriam.M.Rodon@nasa.gov	Langley Research Center Mr. Lloyd Evans University Affairs Officer NASA Langley Research Center Mail Stop 400 Hampton, VA 23681-2199 Phone: (757) 864-5209 Fax: (757) 864-8835 Lloyd.B.Evans@nasa.gov
Goddard Space Flight Center Dr. Vigdor (Vic) Teplitz University Affairs Officer Code 603 NASA Goddard Space Flight Center Greenbelt, MD 20771-0001 Phone: (301) 286-0345 Fax: (301) 286-1610 Email: Vigdor.L.Teplitz@nasa.gov	Glenn Research Center Dr. Mark David Kankam University Affairs Officer NASA Glenn Research Center Mail Stop 49-5 Cleveland, OH 44135 Phone: (216) 433-6143 Fax: (216) 433-3687 E-mail: Mark.D.Kankam@nasa.gov

Jet Propulsion Laboratory Ms. Linda Rodgers University Programs Administrator Mail Stop 180-109 NASA Jet Propulsion Laboratory Pasadena, CA 91109-8099 Phone: (818) 354-3274 Fax: (818) 393-4977 Email: linda.rodgers@jpl.nasa.gov	Marshall Space Flight Center Dr. Frank Six University Affairs Officer Office of Academic Affairs (HS30) NASA Marshall Space Flight Center Mail Code HS30 MSFC, AL 35812 Phone: (256) 961-7701 Fax: (256) 544-5862 Norman.F.Six@nasa.gov
Johnson Space Center Mr. Robert Musgrove Higher Education Office Johnson Space Center Code AE2 Houston, TX 77058 Phone: (281) 483-3065 Fax: (281) 483-4876 Robert.P.Musgrove@nasa.gov	Stennis Space Center Mr. Dewey Herring Office of External Affairs & Education Stennis Space Center Code IA20, Bldg.1100 Stennis Space Center, MS 39529 Phone: (228) 688-1329 Fax: (228) 688-1094 Dewey.L.Herring@nasa.gov

NASA Mission Directorate Contacts

Aeronautics Research Mission Directorate Mr. Tony Springer Education Liaison NASA Headquarters Mail Suite 6K39 Phone: (202) 358-0848 Fax: (202) 276-2134 Tony.Springer@nasa.gov	Science Mission Directorate Dr. Ming-Ying Wei Program Manager NASA Headquarters Mail Suite 3F71 Phone: (202) 358-0771 Fax: (202) 358-2770 ming-ying.wei-1@nasa.gov
Exploration Systems Mission Directorate Mr. Jerry Hartman Education Lead NASA Headquarters Mail Suite 2T22 Phone: (202) 358-1451 Fax: (202) 358-2682 Jerry.G.Hartman@nasa.gov	Space Operations Mission Directorate Ms. Carla Rosenberg Education Liaison NASA Headquarters Mail Suite 7H39-A Phone: (202) 358-1734 Fax: (202) 358- carla.b.rosenberg@nasa.gov

Appendix E - Certifications

1) Retrieve the certifications from the Goddard Space Flight Center Grants Office website (http://genesis.gsfc.nasa.gov/grants/grants.htm#Grant Forms) for the following three certifications:
   - Certification for Debarment, Suspension, and other Responsibility Matters
   - Assurance for Nondiscrimination Compliance
   - Certification Regarding Lobbying

   OR

2) If you include the following statement on the front of your package, with a signature from the proper institutional official, you do not need to submit separate certifications:

   Certification of Compliance with Applicable Executive Orders and U.S. Code
   By signing and submitting the proposal identified in this Cover Sheet/Proposal Summary in response to the NASA request for a proposal under the National Space Grant College and Fellowship Program, the Authorizing Official of the proposing institution, as identified below:
   1. certifies that the statements made in this proposal are true and complete to the best of his/her knowledge;
   2. agrees to accept the obligations to comply with NASA award terms and conditions if an award is made as a result of this proposal;
   3. provides certification to the following that have been reviewed on the following NASA website (http://genesis.gsfc.nasa.gov/grants/grants.htm#Grant Forms): (i) Certification for Debarment, Suspension, and other Responsibility Matters; (ii) Certification Regarding Lobbying; (iii) Assurance for Nondiscrimination Compliance.
   Institution Authorization: _____