

NEVADA NASA EPSCoR

REQUEST for Letters of Interest and PROPOSALS: National NASA EPSCoR Rapid Response Research Cooperative Agreement Notice (CAN) Amendment

Release Date: October 7, 2019



Announcement for:

**Faculty from University of Nevada, Las Vegas; University of Nevada, Reno;
Nevada State College; College of Southern Nevada; Great Basin College;
Truckee Meadows Community College; Western Nevada College, Desert
Research Institute**

Letter of Interest Due: November 4, 2019, 5:00 pm PT

**Proposal Due: Selected PIs will submit proposals to the NSHE
SPO/EPSCOR Office no later than Dec 18, 2019, 5:00 pm PT**

**Webinar about this solicitation will be held Oct 15, 2019 at 12
pm PT. Use this WebEx link to attend: [JOIN THE MEETING](#)**

To join by phone, call 1-650-429-3300, meeting # 281 983 762

INTRODUCTION

The National NASA EPSCoR Program has announced a new “Rapid Response Research” (or R3) solicitation. The goal of this effort is to develop close collaborations among NASA, industry and university faculty to solve specific current NASA research challenges. It is anticipated that twenty \$100,000 awards for a one-year project duration will be made to address a subset of the NASA topics listed in the National solicitation amendment Appendices A-F (attached). Each jurisdiction may submit one proposal per topic area for a total of 21 new topic areas, i.e., Nevada may submit, through the NV NASA EPSCoR Office, up to 21 proposals, but only one for each topic area. We are therefore requesting that any NSHE faculty member interested in submitting a proposal first submit a letter of interest; see information below. If there are multiple faculty interested in a common topic area, we will request that the faculty consider collaborating on a proposal. If collaboration is not an option, the NV NASA EPSCoR Technical Advisory Committee will review the letters of interest and select the proposal(s) that will be submitted to the National solicitation.

The lead Science PIs must contact the NASA point of contact to talk about their research ideas before submitting a letter of interest (and before proposal submission); this was a specific request from the National NASA EPSCoR Project Manager.

Each funded NASA EPSCoR RRR CAN proposal is expected to establish research activities that will make significant contributions to the strategic research and technology development priorities of NASA’s national program and/or one or more of the ten NASA Field Centers, Mission Directorates or the NASA Office of Chief Technologist. The proposed research should also contribute to the overall research infrastructure, science, and technology capabilities, higher education, and economic development of Nevada.

Topic Areas Include (see attached National NASA EPSCoR RRR CAN for more details; Appendices A-F. Also look at spreadsheet which includes all this information along with an additional contact person per appendix).

Appendix A: NASA SMD Planetary Division (P.16)

Research Topic:

- 1) Extreme Environments applicable to Venus, Io, Earth volcanoes and deep sea vents: 1) High-Temperature Subsystems and Components for Long-Duration (months) Surface Operations (P.16)
- 2) Extreme Environments applicable to Venus, Io, Earth volcanoes and deep sea vents: Aerial Platforms for Missions to Measure Atmospheric Chemical and Physical Properties (P.16)
- 3) Extreme Environments applicable to Venus, Io, Earth volcanoes and deep sea vents: 3) Extreme Environment Aerobot (P.17)

NASA Contacts (P.18): Adriana Ocampo (SMD/Planetary Sciences) 202-358-2152; Adriana.c.ocampo@nasa.gov and Carolyn Mercer (SMD/Planetary Sciences) 216-433-3411; cmercerc@nasa.gov

Appendix B: Commercial Space Capabilities Office (P.19)

Research Topics:

- 4) Renewal of Previously Selected Cycle 1 CSCO R3 (P.19) i.e., Renewals can only be proposed for CSCO selections from Fall 2018 (RAPID RESPONSE RESEARCH – CYCLE 1) selections: 18-EPSCoR R3-0001, 18-EPSCoR R3-0015, 18-EPSCoR R3-0021, 18-EPSCoR R3-0027, and 18-EPSCoR R3-0035.

- 5) Landed Sensing of Mars Ice (P.21)
- 6) Improvement of Space Suit State of Art (P.23)

NASA Contact: Warren Ruemmele (Commercial Space Capabilities Office (CSCO)/UA3) 281-483-3662, warren.p.ruemmele@nasa.gov (P. 20, 22, 24)

Appendix C: SMD Earth Sciences Division (P.26)

Research Topic:

- 7) Earth System Response to Natural Disasters (which may include oil spills, hurricanes, wildfires, harmful algal blooms and volcanic eruptions)

NASA Contact: Allison Leidner 202-358-0855 allison.k.leidner@nasa.gov

Appendix D: NASA Space Life and Physical Sciences and Research Applications (P.28)

Research Topics:

- 8) Dusty Plasmas (P.28) NASA Contact: Bradley Carpenter (NASA Hq Space Life and Physical Sciences Research and Applications -SLPSRA) (202) 358-0826; bcarpenter@nasa.gov
- 9) Drop Tower Studies (P.29) NASA Contact: Francis Chiaramonte (NASA Hq SLPSRA) 202-358-0693; francis.p.chiaramonte@nasa.gov
- 10) Transcritical Combustion (P. 30) NASA Contact: Francis Chiaramonte (NASA Hq SLPSRA) 202-358-0693; francis.p.chiaramonte@nasa.gov
- 11) Quantum Effects (P. 33) NASA Contact: Bradley Carpenter (NASA Hq SLPSRA) (202) 358-0826; bcarpenter@nasa.gov
- 12) Flow Boiling in Reduced Gravity (P. 34) NASA Contact: Francis Chiaramonte (NASA Hq SLPSRA) 202-358-0693; francis.p.chiaramonte@nasa.gov
- 13) Physical Sciences Informatics System (P. 36) NASA Contact: Francis Chiaramonte (NASA Hq SLPSRA) 202-358-0693; francis.p.chiaramonte@nasa.gov
- 14) Bioinformatic Analysis of Space Biology Data in the NASA GeneLab Data System (P.41) NASA Contact: Jonathan Galazka (GeneLab Project Scientist, NASA Ames) 650-604-3950; jonathan.m.galazka@nasa.gov
- 15) Biofilms and the Built Environment (P.42) NASA Contact: David Tomko (NASA Hq Space Life and Physical Sciences Space Biology Program) 202-358-2211; dtomko@nasa.gov
- 16) Plant and Microbial Interactions (P.44) NASA Contact: David Tomko (NASA Hq Space Life and Physical Sciences Space Biology Program) 202-358-2211; dtomko@nasa.gov
- 17) Extraction of Materials from Regolith (P.46) NASA Contact: Francis Chiaramonte (NASA Hq SLPSRA) 202-358-0693; francis.p.chiaramonte@nasa.gov
- 18) In-Situ Food Safety Monitoring (P.48) NASA Contact: David Tomko (NASA Hq Space Life and Physical Sciences Space Biology Program) 202-358-2211; dtomko@nasa.gov

Appendix E: KSC Partnerships Office (P.51)

Research Topic:

- 19) Conversion of CO₂ into Fuel (P.50) NASA Contact: Anne J. Meier (NASA Kennedy) 321-861-9315; anne.meier@nasa.gov
- 20) Evaluation of Low Pressure Air Plasma for Passivation of Metal Components (P.51) NASA Contact: Paul E. Hintze (NASA Kennedy) 321-867-3751; paul.e.hintze@nasa.gov

Appendix F: GSFC Computational and Information Sciences and Technology Office (CISTO) (P.53)

- 21) Computational and Technological Advances for Scientific Discovery (P.53) NASA Contacts: James Harrington (Computational and Information Sciences and Technology Office – CISTO) 301-286-

4063; james.l.harrington@nasa.gov; Daniel Duffy (CISTO) 301-286-8830; daniel.q.duffy@nasa.gov; Nargess Memarsadeghi (CISTO) 301-286-2938; nargess.memarsadeghi@nasa.gov; and Mark Carroll (CISTO) 301-614-6974; mark.carroll@nasa.gov

Important Notes:

- 1) There is no requirement for matching funds. The total amount to be awarded is up to \$100,000 Federal with full indirect cost recovery.
- 2) There is no cost-share required for this opportunity (no institutional or state match).
- 3) The lead administrative PI will be Dr. Lynn Fenstermaker, the NV NASA EPSCoR Project Director. The lead research faculty member will be listed as the Science PI. The proposals will be submitted through the NSHE SPO/EPSCoR Office; the same as the NASA EPSCoR Research CAN.
- 4) A letter of interest stating the specific topic of the proposal must be submitted by **November 4, 2019, 5:00 pm PT** at the website listed in the instructions below.
- 5) **NASA EPSCoR RRR CAN proposals may be from a single NSHE institution; there is no requirement for collaboration among NSHE institutions.**
- 6) The period of performance shall not exceed one year.
- 7) There will be no administrative fees attached to the budget, but there will be NSHE SPO/EPSCoR Office F&A (ICR) on the total amount. (Work with Gibran Chavez-Gudino on the budget.)
- 8) Please read the National solicitation and Appendices A-F (attached) for specifics about the proposal and research topics.
- 9) **The National NASA EPSCoR Project Manager has stated that the Science PI must contact the NASA point-of-contact listed for each topic area prior to proposal preparation and submission. We request that the Science PI communicate with the NASA contact prior to submission of a letter of interest to ensure that your proposal idea will meet NASA expectations.**
- 10) The National NASA EPSCoR RRR CAN requires submission of the brief 2-3 page proposals no later than January 6, 2020, 11:59 PM ET. The NSHE SPO/EPSCoR Office therefore requires that the final selected proposals be submitted to the NSHE SPO/EPSCoR Office by **December 18, 2019, 5:00 pm PT**. This will give us time to ensure that the budget is correct, all solicitation requirements are met, and we have time to upload up to 20 proposals. NOTE: there has always been a need for budget corrections, so the Dec 18 cut-off for delivering a complete draft of all proposals is firm. PLEASE NOTE: due to the potential number of proposals being submitted, the Science PI will be responsible for seeking the help of an editor at their institution to review the proposal text.

RRR CAN SOLICITATION INFORMATION AND INSTRUCTIONS

A. Eligibility

Faculty at NSHE institutions, particularly junior faculty, women, and members of other underrepresented populations are encouraged to apply. Faculty who have a current National NASA EPSCoR Research CAN project are not eligible to apply while their project is on-going. There is no requirement that Science PIs be U.S. citizens, however, foreign nationals (i.e., non-U.S. citizens who do not have a green card) will likely not be permitted access to NASA Centers. This may or may not be important to the research being proposed. Faculty may submit as many Letters of Intent (LOI) as Topic Areas they wish to be considered to propose to. Having an ongoing RRR project award will not be factored into the decision to green-light an LOI for full proposal development. Please keep in mind that Nevada will only be allowed to submit a single proposal per Topic Area (as many as 21 in total, 1 per Topic Area).

B. Award: Funding Information

The NASA EPSCoR RRR CAN will provide an award of up to \$100,000 total for a one-year project period with no match requirement. The federally negotiated indirect cost recovery (ICR) rate for each NSHE institution must be included in the budget, including NSHE SPO/EPSCoR

C. Award Obligations (If selected for Full proposal submission and receive a National award)

Award recipients are required to prepare final reports and respond to any other reporting requirements provided by the National NASA EPSCoR Office. It is anticipated that this will include quantitative information on participant demographics, project role, number/type of products and a research highlight. The final report must be made publically available either through NASA's *PubSpace* or any other university provided public database. The final report includes: grant proposals submitted; grant proposals funded; papers submitted and/or published in refereed journals; presentations or abstracts at professional meetings, and collaborations with NASA centers and institutions across the state. Data must be archived and adhere to a data management plan (NV NASA EPSCoR has a generic data management plan that will be provided for consideration). In addition, as part of an award term and conditions, researchers submitting NASA-funded articles in peer-reviewed journals or papers from conferences now shall make their work accessible to the public.

D. Letter of Interest Preparation

Complete the online form (URL listed below) to provide the following information by 5:00 pm PT on November 4, 2019. You must communicate with the appropriate NASA Topic Area Point of Contact prior to submission of the LOI.

- Lead PI name, email address and institution
- Working title for the pre-proposal
- Research topic from NASA solicitation provided list
- Research abstract / brief explanation of your research idea (3,000 characters or ~500 words)

Go to: <https://nasa.epscorspo.nevada.edu/funding/2020-rrr-can/>

LOI Review

LOIs will be reviewed in a timely manner and PIs will be informed whether they can proceed with proposal development. In instances where a common topic is stated for two or more LOIs, the PIs will be asked if they would be willing to collaborate. If collaboration is not possible, the LOIs will be reviewed by the NV NASA EPSCoR Technical Advisory Committee (and perhaps others). The most relevant and well-written LOI will be selected for proposal development. LOI teams will be notified as soon as possible.

E. Full Proposal Preparation (merge requirements 1-4 into a single PDF)

Proposals must be typed, single-spaced, standard one-inch margins and use a Times Roman 12 pt or comparable font with numbered pages. The proposals should be written such that researchers from other scientific disciplines would be able to understand the proposal goals, importance of the research and how the anticipated outcomes will benefit NASA, NV and NSHE.

1. Cover Page (form provided as "paperclip" attachment to this solicitation)

- Signature of Applicant
- Signature of Office of Sponsored Projects/Programs

2. Required Proposal Constituent Parts

Provide a concise description of the proposed research or research-building activities, including the following required elements from the National solicitation (P. 11)

Proposal Summary (abstract)	4,000 characters including spaces
Data Management Plan	4,000 characters, including spaces
Table of Contents	As needed
Scientific/Technical/Management Plan	2-3*
References and Citations	As needed
Biographical Sketches for:	
-the Science Investigator (Sc-I)	2
-each Co-Investigator (Co-I)	1
Current and Pending Support	As needed
Statements of Commitment and Letters of Support	As needed
Budget Justification: Narrative and Details	As needed
Facilities and Equipment	As needed

*includes all illustrations, tables and figures, where each “n-page” fold-out counts as n-pages and each side of the sheet containing text or an illustration counts as a page.

Scientific/Technical/Management Plan may include the following:

- i. Project goals and research objectives; intrinsic merit of the proposed research
- ii. Brief statement on how the proposed research meets the topic area need identified in the solicitation
- iii. Tasks and methods
- iv. Project management plan (may include a time table for project efforts)
- v. SMART objectives with measurable outcomes (see PDF “paperclip” attachment)
- vi. List of collaborators and expertise they will contribute (including any NASA scientists)
- vii. Brief discussion of likely outcomes (i.e., publications, patents/licenses, technology transfer, new hardware/software, new or revised courses, new proposals with potential program you will apply to, etc.)

3. Budget and Budget Justification (form provided as “paperclip” attachment)

Provide a budget and a detailed budget justification by each institution involved in the project.

PIs are encouraged to work with their Sponsored Programs Office and/or Business Managers well in advance to develop the budget.

- a. Follow NASA budget guidelines as well as the OMB Uniform Guidance when developing the budget.
- b. Include appropriate fringe, ICR, tuition and other costs.
- c. Budget must be signed by Sponsored Projects Office or Business Manager.
- d. Contact Gibran Chavez-Gudino at NSHE SPO/EPSCoR at initial stages of budget development.

4. Appendices

- a. References Cited (the number of pages for citations is not limited)
- b. Biographical Sketch or Curriculum Vitae: limited to two pages for the Science PI and one page for the Co-I
- c. Current and Pending.

- d. Statements of commitment and letters of support. Any NASA collaborators must provide letters of support that specifically state the contribution they will make. (Note: Letters must be recent and dated within 45 days prior to the proposal submission.)
- e. Facilities, equipment and Other Resources: list any existing facilities and major equipment that will be used for the proposed project.

F. Submission Guidelines:

Letters of Interest must be submitted no later than **5:00 pm PT on November 4, 2019**. Use the online form at: <https://nasa.epscorspo.nevada.edu/funding/2020-rrr-can/>

LOIs should be submitted only after communication with the NASA point-of-contact for the topic area of interest. If you are selected to proceed to full proposal, the final date to submit a proposal to the NSHE SPO/EPSCoR Office is **December 18, 2019**. To submit a proposal please submit a word and excel documents using the naming convention: **PI Last Name_First Name_NASA_RRR**. Submissions that are incomplete (see requirements 1-4 above) will not be submitted to the National solicitation.

PROPOSAL REVIEW AND SELECTION

All full proposals submitted will be reviewed by the National NASA EPSCoR Program Office. As stated in the National NASA EPSCoR RRR CAN:

Proposals will be evaluated based on the proposed research approach (intrinsic merit) that addresses the research presented in the appendices, management, and budget.

Successful R3 proposals shall provide sound contributions to both immediate and long-term scientific and technical needs of NASA as explicitly expressed in current NASA documents and communications.

Proposals will be evaluated based on the following criteria: Intrinsic Merit, Management, and Budget Justification: Narrative and Details.

NASA's stated goal is to announce selections as soon as possible. However, NASA does not usually announce new selections until the funds needed for those awards are approved through the Federal budget process. Therefore, a delay in NASA's budget process may result in a delay of the selection date(s).

Contact Information

NV NASA EPSCoR Project Director
Dr. Lynn Fenstermaker
lynn.fenstermaker@dri.edu
702-862-5412

NV NASA EPSCoR Project Administrator
Gibran Chavez-Gudino
gibran@nshe.nevada.edu
702-522-7081

ADDITIONAL LINKS:

A PDF copy of the NASA Guidebook for Proposers may be found at:

<https://www.hq.nasa.gov/office/procurement/nraguidebook/proposer2018.pdf>