

Issued: July 15, 2020

Proposals due: Noon, Aug. 17, 2020 **POP:** Sept. 16, 2020 – Aug. 15, 2021

ND NASA EPSCOR RESEARCH SEED GRANTS REQUEST FOR PROPOSALS (RFP)

Overview:

North Dakota NASA EPSCoR (Established Program to Simulate Competitive Research) is soliciting research proposals from faculty at affiliate institutions for Research Seed Grant funding to conduct NASA relevant research designed to promote and expand particular NASA research sub disciplines in North Dakota.

The purpose of the ND NASA EPSCoR Research Seed Grant program is to promote, develop, and expand NASA research in North Dakota aligned with NASA priorities and Mission Directorates as outlined in the following sources:

NASA Priorities:

- o NASA 2017 Strategic Technology Investment Plan
- o NASA 2018 Strategic Plan
- NASA 2020 <u>Technology Taxonomy</u>

NASA Mission Directorates:

- o Science Mission Directorate (SMD)
- o Aeronautics Research Mission Directorate (ARMD)
- Space Technology Mission Directorate (STMD)
- o Human Exploration and Operations Mission Directorate (HEOMD)

Eligibility:

- Faculty PI must be from an ND NASA EPSCoR affiliate institution: http://ndnasaepscor.und.edu/affiliate-members.aspx
- Research must be in STEM (science, technology, engineering, or mathematics) and demonstrate alignment with NASA priorities and one or more NASA Mission Directorates.



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Funding:

Effort by the PI or other allowable match is required on proposals. The matching requirement is .5:1. Cash and non-cash contributions from NASA EPSCoR is contingent whether dollars are received from the state or not. PIs may also provide their own match funding. The amount awarded, as well as any required match, will be governed by NASA EPSCoR federal guidelines.

Proposal budgets can include funding for faculty salary and benefits, undergraduate and graduate student research assistantships, project relevant supplies, research equipment, and faculty and student travel to NASA field centers for direct collaborations with NASA researchers. Funds cannot be used for computers, furniture, filing cabinets, wall cabinets, office supplies, (including copy paper, pens, sticky notepads), telephone lines, lab renovations, building renovations, moving expenses, expenditures for teaching classes, honorariums, subscription fees, membership fees, or tuition waivers. Funds must be spent between the period of performance dates listed in the header of this document.

It is anticipated that awards may be made to a maximum of \$40,000 each.

Proposal Checklist:*

- Cover Sheet
 - o Proposal Title
 - PI contact information
 - Funding Requested
 - Department Chair Signature
- CV of PI and Co-PIs
- Research Narrative, Budget, and Budget Justification
- All materials must be uploaded as **fully searchable pdf** documents.

This solicitation and budget form can be found online here: http://blogs.und.edu/jdosas/2020/07/nd-nasa-epscor-research-rfp-july-2020/

^{*}Proposers are **strongly** encouraged to combine all forms into one pdf document.



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Proposal Guidance:

All proposals must be routed through the Department Chair, Dean's office, and Grants and Contracts/Sponsored Programs Administration (or equivalent office) for signatures. PIs must also complete proposal transmittal forms specific to their universities (if applicable).

One of the primary goals of the Research Seed Grant program within NASA EPSCoR is to assist faculty in developing research initiatives that can be funded outside of the NASA EPSCoR program in the future. Therefore, proposers should specifically include a plan to develop and expand their proposal into an independently funded research group beyond the timeframe of this funding opportunity. An additional goal of ND NASA EPSCoR is to assist the development of multiple NASA relevant research clusters in North Dakota. Proposals involving collaboration across departments, universities, and research groups/scientists at NASA Centers, are strongly encouraged.

The following items/headers must be included in the final proposal narrative, in the order indicated.

1. CV of PI (and Co-PIs)

- a. Relevant Research, Teaching, and Service Experience
- **2.** Research Narrative (Use the following headings in ≤ 10 pages for a h. Page limit does not apply to references and any letters of collaboration.)
 - a. Introduction
 - Overview of the scope of work, including description of the NASArelevance, nature of collaborations
 - b. Background
 - Description of how the proposed work fits into your overall research plans and the field of study at large
 - Preliminary research results (if applicable)
 - c. Research Objectives
 - Clear identification of all science and technical objectives



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d. NASA Relevance

- Identification of current and potential applications/relevance to NASA
- o NASA mission directorate and NASA priority alignment
- e. Implementation Strategy
 - Expected deliverables: when, and by whom outlined in timetable of milestone completion
- f. Management Plan
 - Hierarchy of individuals/institutions working on the project, details on collaborations, recruitment plan for team members not yet identified, methods for tracking and reporting progress throughout the project
- g. Anticipated Outcomes
 - Expected research outcomes, plans for publications, conference attendance, funding opportunities, future studies and collaborations
 - Plan to secure future external funding
- h. Budget
 - Clear alignment between budget justification and budget table with items such as: faculty salary and fringe benefits, student stipends, research supplies and materials, travel for field research, collaborations, presentations, etc.
- i. References
- i. Letters from Collaborators
 - Collaborator contact information



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Proposal Evaluation:

Collaboration across institutions, industry, and NASA centers, and interdisciplinary teams are highly encouraged. Preference will be given to beginning, untenured faculty who have not yet received an ND NASA EPSCoR award. Proven track record of research capabilities in NASA relevant areas will be an advantage. Any and all proposals may be rejected.

It is a national priority to increase diversity in Science, Technology, Engineering, and Mathematics (STEM) fields. This diversity consideration is included in each of the ND NASA EPSCoR SMART objectives. Traditionally, minority groups and women have been underrepresented in the STEM disciplines as students and faculty as well as in the workplace after graduation. All proposers are encouraged to help recruit diverse participants (underrepresented and underserved populations in gender, race/ethnicity, and disability status) to their proposed projects.

Proposals will be evaluated using the following criteria: NASA relevance, ND relevance, scientific merit, evidence of collaboration, potential for securing future funding, and budget reasonableness.

Proposals **must** align with one or more NASA priorities:

NASA priorities are outlined in the following resources:

- NASA 2020 <u>Technology Taxonomy</u>
- NASA 2017 <u>Strategic Technology Investment Plan</u>
- NASA 2018 Strategic Plan



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Additionally, proposals **must** align with at least one of NASA's Four Mission Directorates:

NASA Mission Directorates (MD):

The **Science Mission Directorate (SMD)** expands the frontiers of Earth science, heliophysics, planetary science, and astrophysics. Using robotic observatories, explorer craft, ground-based instruments, and a peer-reviewed portfolio of sponsored research, SMD seeks knowledge about our solar system, the farthest reaches of space and time, and our changing Earth.

The Aeronautics Research Mission Directorate (ARMD) transforms aviation with research to dramatically reduce the environmental impact of flight, and improves aircraft and operations efficiency while maintaining safety in increasingly crowded skies. ARMD also generates innovative aviation concepts, tools, and technologies for development and maturation by the aviation community.

The **Space Technology Mission Directorate (STMD)** pursues transformational technologies that have high potential for offsetting future mission risk, reducing cost, and advancing existing capabilities. STMD uses merit- based competition to conduct research and technology development, demonstration, and infusion of these technologies into NASA's missions and American industry. This mission directorate is being refocused as a new Exploration Research & Technology (ER&T) organization to support exploration as a primary customer.

The **Human Exploration and Operations Mission Directorate (HEOMD)** leads human exploration in and beyond low Earth orbit by developing new transportation systems and performing scientific research to enable sustained and affordable human life outside of Earth. HEOMD also manages space communication and navigation services for the Agency and its international partners.



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Proposal Submission:

All proposals must be routed through the proposer's home institution Grants and Contracts office for appropriate signatures, prior to submission to ND NASA EPSCoR (e.g. Sponsored Programs Administration, Division of Research & Economic Development, etc.).

All awards require: 1) an end-of-year award report to be filed with the ND NASA EPSCoR office within 30 days of the award end date, and 2) presentation of results at the ND NASA EPSCoR meeting.

All proposals must be submitted via the online submission form no later than: **Noon on Aug. 17, 2020.**

Please note, this online submission form does allow proposers to save progress and continue entering information at a later date. However, it is recommended that proposers do not complete the form until they are ready to submit. Information requested in the form includes: contact information for the PI, Co-PI, and respective departments (Chairs and Administrative Assistants included), information on any previous NASA EPSCoR awards received by the PI or Co-PI in last five years, contact information for any NASA or industry collaborators, and uploads of the requested documents as a single pdf. (Multiple pdfs is acceptable, but documents combined into one pdf is strongly preferred.)

Online Proposal Submission Form:

https://und.qualtrics.com/jfe/form/SV_0CWyd04BSqjBvjn

or

https://tinyurl.com/ND-NASA-EPSCoR-RFP-July-2020

Please direct any **general** questions regarding the RFP to the ND NASA EPSCoR Director, Caitlin Nolby, cnolby@space.edu.

Finance questions regarding the RFP may be directed to UND Aerospace Accountant, Laurie Baumgartner, laurie.baumgartner@und.edu.