SMART FIRES RESEARCH SEED AWARD PROGRAM
Deadline: September 19, 2025

BACKGROUND

The ***Sensors, Machine Learning, and Artificial Intelligence in Real Time Fire Science*** **(SMART FIRES**) NSF EPSCoR RII Track-1 project is developing and deploying new technologies and research designed to better understand the behavior of prescribed fire and its impacts on Montanans, particularly in rural and tribal communities. The statewide project team includes faculty, staff, and students at Montana State University, University of Montana, Montana Technological University, Salish Kootenai College, Little Big Horn College, and Flathead Valley Community College. The research approach integrates efforts from broadly thematic teams: 1) **Fire and Smoke Science** (FSS); 2) **Smart Optical Sensors** (SOS); 3) **Social Psychology, Economics, and Ethics** (SPEE); and 4) **Artificial Intelligence and Machine Learning** (AIML). The project additionally includes programs in research and data cyberinfrastructure, STEM education, workforce development, science outreach, and broadening participation. More information about the SMART FIRES project can be found here: https://www.mtnsfepscor.org/projects/smart-fires or by reaching out to the Montana NSF EPSCoR office (info@mtnsfepscor.org).

OBJECTIVES

SMART FIRES' Research Seed Award program is designed to support **transformative research and capacity building** in **research that aligns with SMART FIRES project goals**. The awards can be used to purchase research and teaching equipment, pay personnel costs for faculty, postdocs, and student researchers, and to support other aspects of the intended research project such as field data collection and analysis, research travel, and collaboration costs. All supported participants must be from Montana institutions. The intent of these awards is twofold: 1) to pursue novel research activities connected to the prescribed fire theme that lead to increased research productivity and new external funding opportunities and 2) to increase access to research experiences for graduate and undergraduate students.

Faculty from Montana State University (MSU) and University of Montana (UM) are encouraged to submit applications describing novel research proposals within the scope of the SMART FIRES project. Priority will be given to projects that will likely result in publications, follow-on research grants, and/or exceptional education or workforce development outcomes. Proposals will also be assessed for their impact on broadening participation in relevant research areas.

AWARD INFORMATION

Maximum Funding Per Award: **Up to $25,000**. Awards will come directly from either the MSU or UM campus, and budgets do not need to include F&A costs.
Estimated Number of Awards: Minimum of one award per campus; the number of awards will be based on evaluation of proposals and available funding.
Anticipated Award Period: **January 1, 2026 to August 31, 2026**

ELIGIBILITY

Any faculty member at **Montana State University or the University of Montana** is eligible to submit a proposal in response to this announcement. Current participation in a Montana EPSCoR–funded project is not required. Funded participants on the SMART FIRES project are not eligible to apply; however, developing a partnership

The SMART FIRES Seed Award Program is supported by NSF Award No. 2242802

proposal with one of the existing SMART FIRES research teams and activities is allowed. All supported investigators and students must be from Montana institutions.

Please note that Montana NSF EPSCoR has additional SEED funding programs for Montana's 2-4 year primarily undergraduate campuses and tribal colleges. Please contact Montana NSF EPSCoR (info@mtnsfepscor.org) with inquiries regarding these other SEED funding programs.

FORMAT OF PROPOSAL

Proposals must be submitted in digital format in MS Word or as a PDF file, using a standard font in 11 point or larger, with one-inch margins. A *maximum* of 4 pages, not including budget, CV, and appendices, is allowed and must include the information below. Proposals that exceed the page limit will not be reviewed. The budget should be submitted as an Excel file. A budget template can be found here: https://www.mtnsfepscor.org/sites/default/files/opportunity/2024-07/Budget-template-seed-programs_0.xlsx

Proposal Cover Page (1 page)

- Proposal Title
- Lead Investigator, Co-Investigator(s), primary affiliation, and all contact information
- Half-page summary statement appropriate for general audiences (maximum 250 words)

Project Description (maximum 3 pages)

- Objectives of proposed work and how they relate to SMART FIRES priorities and goals.
  Research plan: Describe the research framework, hypothesis, research questions, and methods and procedures for the work.
- Describe the activities and include a timetable for their completion. If relevant, include how any purchased equipment will be used for research and education.
- Outcomes and benefits: State anticipated outcomes and benefits (e.g., knowledge created, anticipated publications or proposals, number and type of undergraduate research opportunities created, number of students impacted.

Additional Required Information (not included in the 4-page limit)

- Budget and 1-page Justification.
  - Budgets are to be submitted in NSF format. Budgets may include equipment; postdoc, undergraduate or graduate student RA support, salaries and tuition (fees are not allowable); supplies; travel; and up to one week of summer salary support for one faculty member. The budgets must include appropriate fringe benefits on all personnel salary.
- Curriculum vitae (NSF SciENcv format) of all investigators (maximum 3 pages per person, not included in the 5 pages).
- Statement agreeing to provide a final report within 2 months of award completion as well as timely responses to additional requests for information from the Montana EPSCoR Office.
- References cited (if applicable).

REPORTING REQUIREMENTS

Grantees are required to provide other information to the Montana EPSCoR State Office when requested, including annual project reporting updates and supported participant information. Grantees are expected to attend SMART FIRES annual meetings during the period of support. Grantees are required to submit a **final report** (1–3 pages) within 2 months of the end of the award period. The report should detail the activities, equipment purchased, publications, new courses developed, extramural grant application(s), and/or extramural

grant awards arising from support. Include names, degrees, and demographic information for any students supported by the award. All supported participants must additionally complete the **About You section of the NSF EDOCS reporting system** (https://edocs.epscor.nsf.gov).

PROPOSAL REVIEW

Members of the Montana NSF EPSCoR office and SMART FIRES Leadership Team will review proposals. Proposals will be reviewed for relevance to NSF merit review criteria (intellectual merit and broader impacts); relevance to SMART FIRES project goals and objectives, justification of budget; institutional diversity; and potential for increasing students' access to research experiences, especially for undergraduates, women, and underrepresented minority students.

PROPOSAL SUBMISSION

Proposals should be submitted as a single complete document with any graphics embedded in the document. Submit the proposal document by email to: info@mtnsfepscor.org.

Proposals must be submitted electronically by **5:00 pm MDT September 19, 2025**.

Proposers are encouraged to contact the Montana NSF EPSCoR office or any of the SMART FIRES team with questions or to explore project linkage opportunities.

The SMART FIRES Seed Award Program is supported by NSF Award No. 2242802