

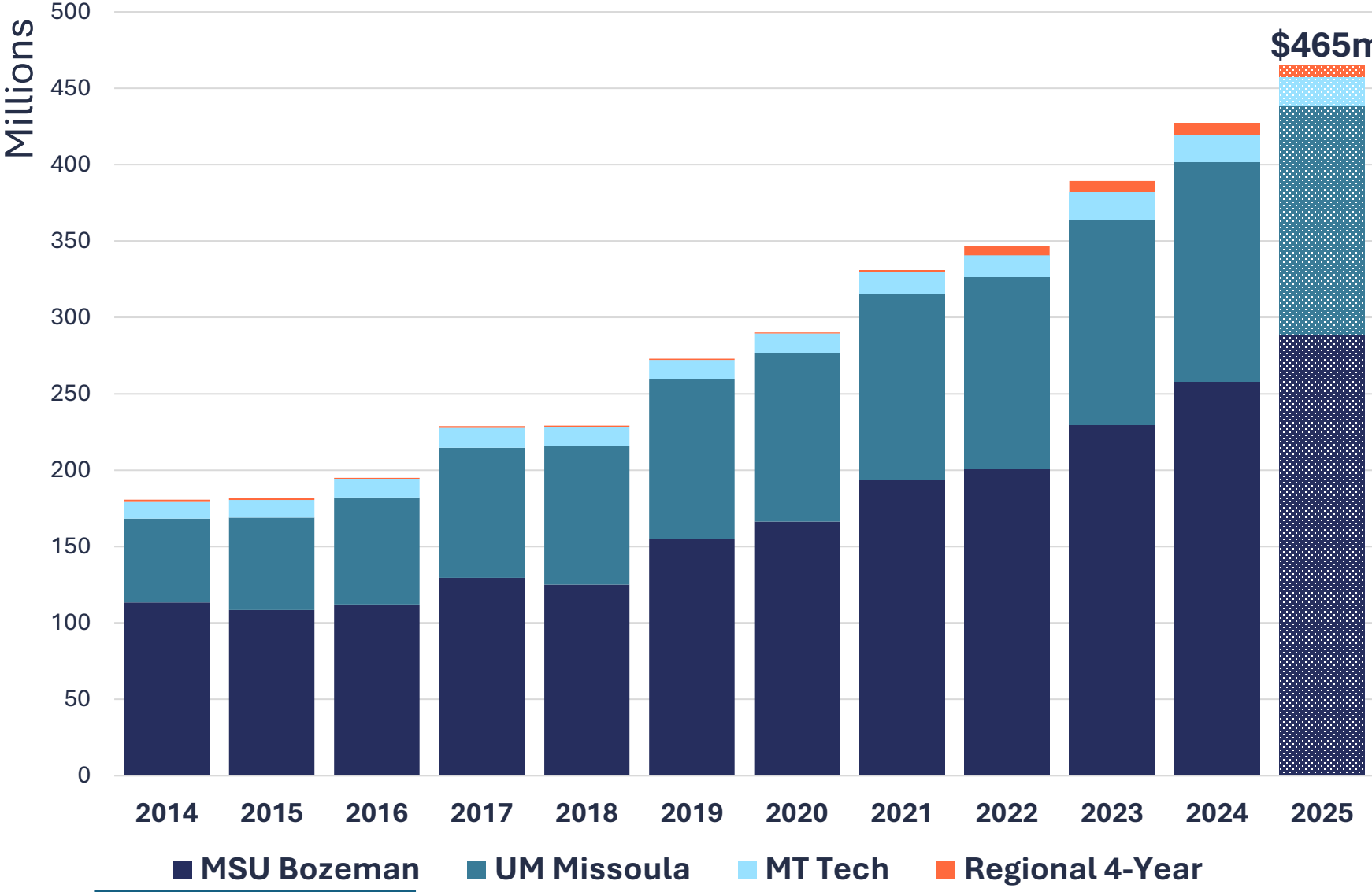
MUS Research and Economic Development



November 2025

The MUS achieved a new record for research activity in 2025

(Research expenditure totals from National Science Foundation HERD survey. values in nominal \$; FY 2025 figures provisional)

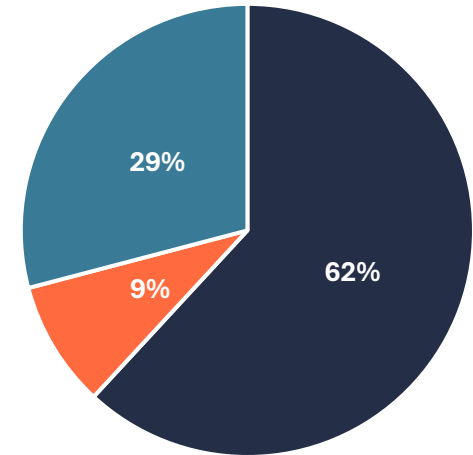


Montana ranks 5th in the nation for the growth of its university research enterprise in the most recently released national data.

External research funding directly supports employment of:

- ~1400 staff annually
- ~900 students annually

Expenditures by Funding Source, FY24



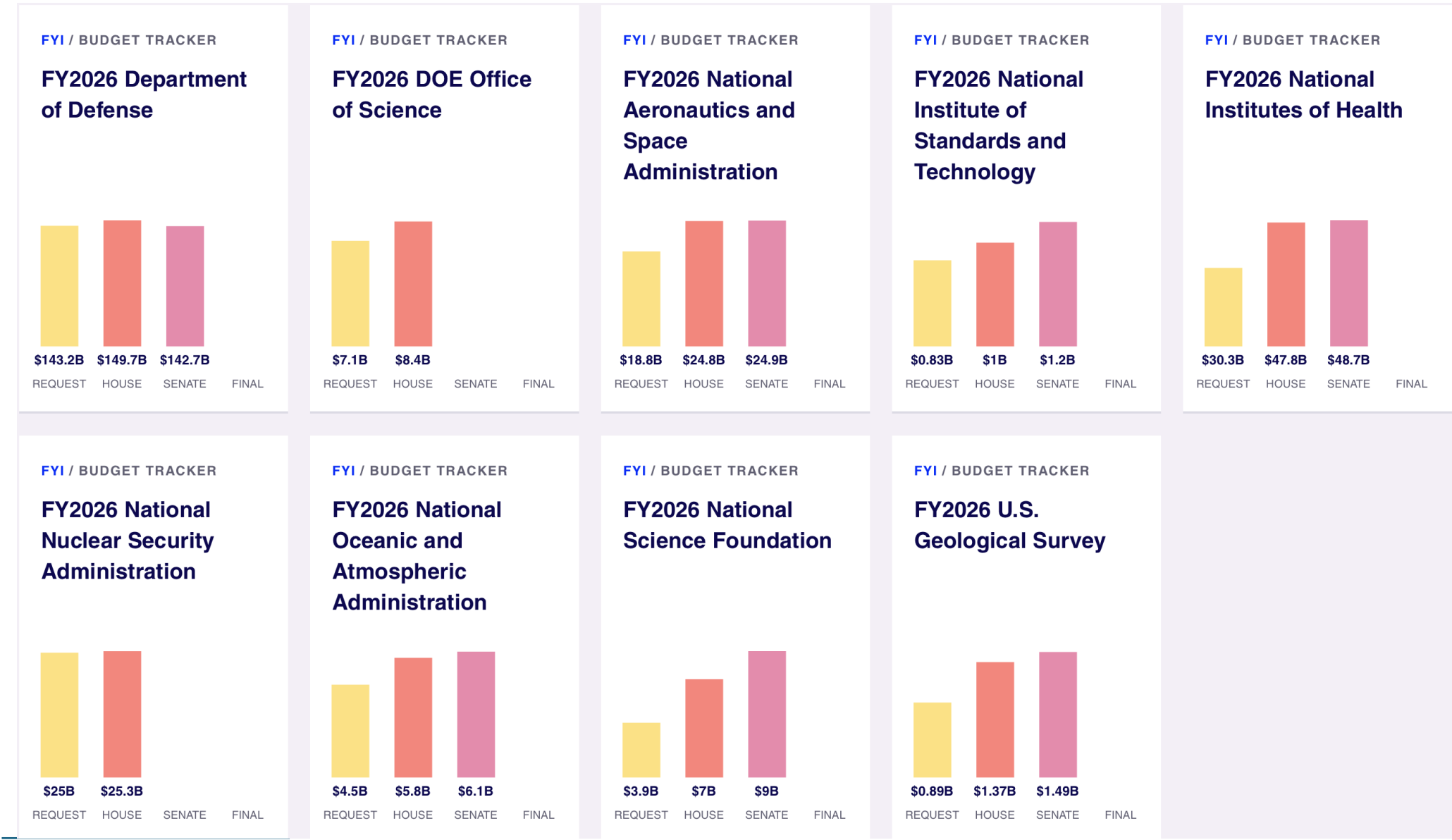
■ Federal ■ Non-Federal ■ Institutional

Leading indicators of MUS research activity

MSU-Bozeman, UM-Missoula, and Montana Tech

	FY 25	Y/Y Change
# of Proposals	1393	-13%
Proposal \$	\$686m	-13%
New Awards	859	-17%
\$ New Awards	\$332m	+8%
Expenditures	\$457m	+10%
IDC Recovery	\$57m	+1%

Federal scientific agencies budget outlook



Montana NSF EPSCoR RII Track-1



SMART FIRES



Sensors

Machine Learning &

Artificial Intelligence in

Real Time for

Fire Science

Develop the knowledge and tools needed to assess the impact of prescribed fire on Montana's landscapes & communities

NSF EPSCoR In Montana

Long-term success: NSF EPSCoR RII Track-1
(2001 – present across the Montana University System)



Support for
90+
New Faculty
Hires



\$88M
Track -1 Awards
Received



\$240M+
New Grant
Funding



R1
status at MSU &
UM



370+
Graduate Student
Support



1500+
Undergraduate
experiences*

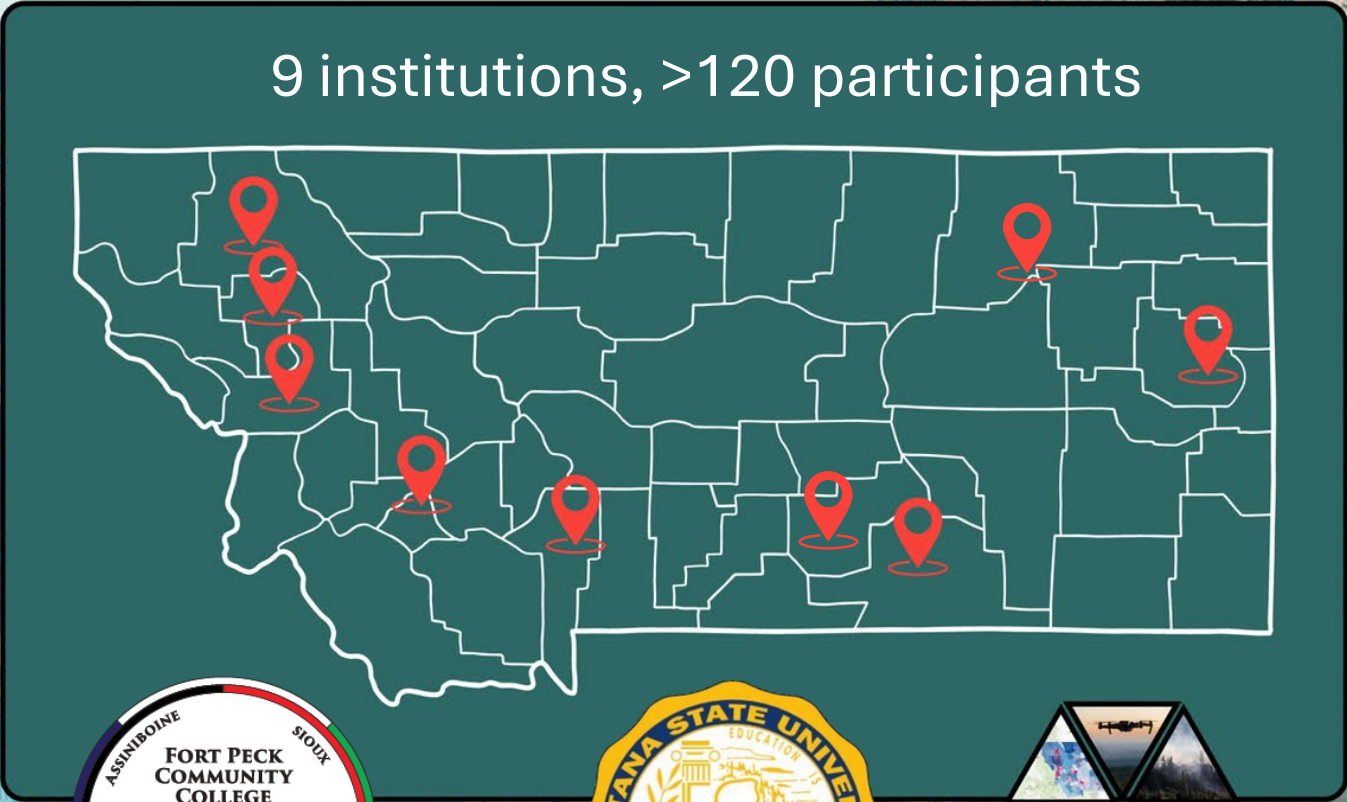


** non-unique count*





Participating Institutions



SMART FIRES New Faculty Hires



Lucy Owen
Assistant Professor
UM Computer Science



Michael Wojnowicz
Assistant Professor
MSU Computer Science



Jacob Downs
Assistant Professor
UM Computer Science

- **Three of four positions have been filled**
- **Two at UM and one at MSU**
- **Both Lucy Owen and Michael Wojnowicz have been written into the most recently updated strategic plan with research activities that align with their respective areas of expertise.**
- **MSU is actively hiring for the fourth position for Fall 2026**



Early Career Faculty & Trainee Professional Development Awards

Obj. 2.3.2



Lucia Williams
Assistant Professor
UM Computer Science



Justin Gay
Assistant Teaching Professor
UM Ecology & Env. Science



Lauren McKeague
Assistant Professor
UM Public & Comm. Health

Provide financial support to four junior, mid-career, or non-tenure track faculty or postdocs in departments with project-related disciplines;

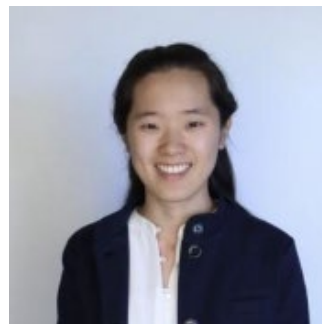
6 awards to early career faculty and trainees at UM, total \$23k support



Anh Nguyen
Assistant Professor, UM
UM Computer Science



Alina Cansler
Assistant Professor, UM
UM Forestry & Conservation



Ava Orr
Postdoctoral Researcher
UM Public & Comm. Health



BROADENING PARTICIPATION



MONTANA NSF EPSCoR
SMART FIRES

Early Career Faculty & Trainee Professional Development Awards

Obj. 2.3.2



Travis Belote
Assistant Professor
Ecology



Faraz Dadgostari
Assistant Professor
Mechanical and
Industrial Engineering



Georgia Harrison
Assistant Professor
Animal and Range Sciences

Provide financial support to four junior, mid-career, or non-tenure track faculty or postdocs in departments with project-related disciplines;

7 awards to early career faculty and trainees at MSU, total \$28.4k support



Neda Nazemi
Assistant Professor
Computer Science



Fangtian Zhong
Assistant Professor
Computer Science



Dana Skorupa
Assistant Research Professor
Chemical and Biological
Engineering



Rebecca Hoover
Assistant Professor
College of Nursing



Statewide Seed and Tribal Awards – Y2



Jon Fitch
Professor
Dawson Community College

Project topic:
Integrating Native American
technologies into STEM
curricula for Montana's
Indian Education for All



Heather Bleecker
Secondary Education Chair
Salish Kootenai College

Project topic:
Engineering summer
camp for Native
American students on
Flathead Reservation
focused on
engineering concepts
and hands-on design
activities aligned to
math, science, and
technology standards



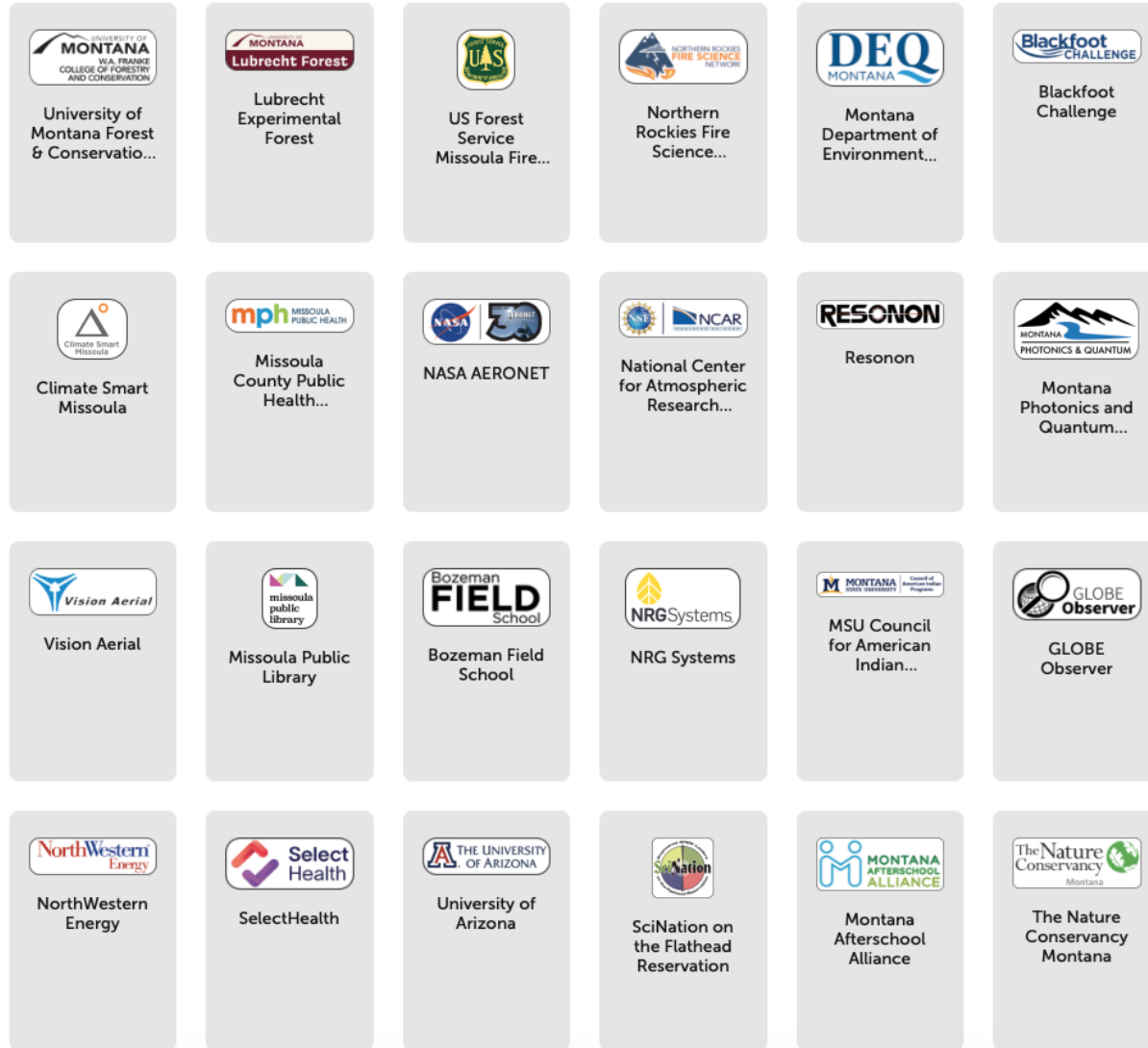
Building Infrastructure and Community Trust



Current SMART FIRES Partners:

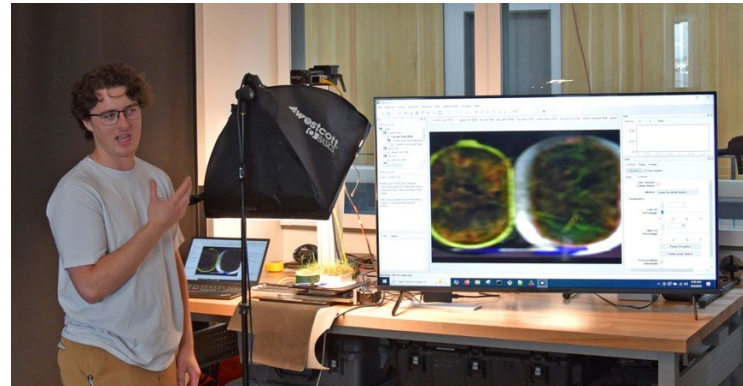
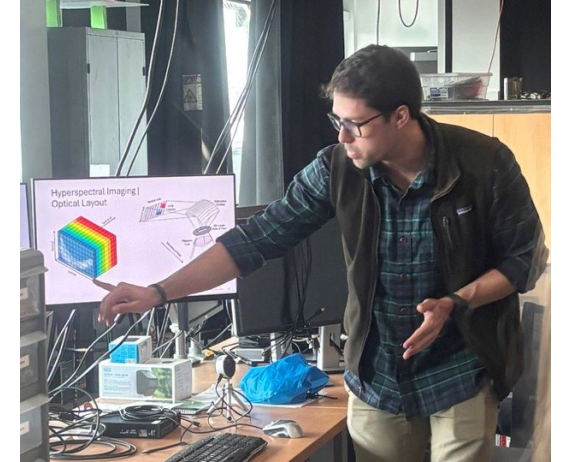
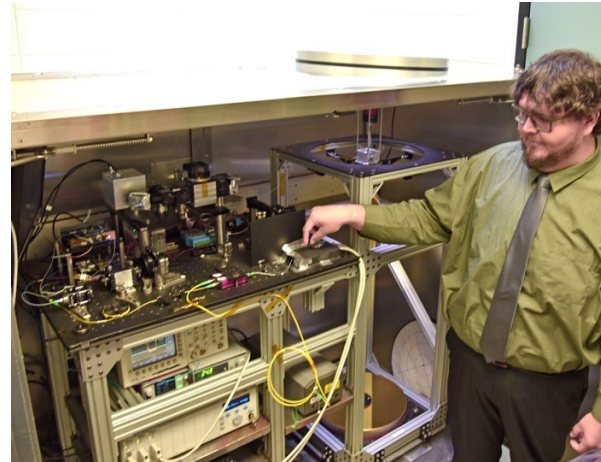
24 partners, including:

- Universities
- Federal and state agencies
- Private companies
- Non-profits
- Tribal organizations



Established partnerships with sensor industry partners and developed commercialization strategies with imaging companies

Obj. 2.4.1



Prescribed fire Training for SMART FIRES participants

Conducted prescribed fires and gathered smoke and fire data in collaboration with partners





Partner Roundtable at 2025 All Hands Meeting

Convened cross-disciplinary partners to explore emerging collaboration opportunities



Two-day summer workshop: Teaching Fire



WiFi → MSL Guest

SMART Fires (SPEE)

Advocacy + Understanding Lesson

Advocate Through Understanding

1. Exposure From Me (Teacher)

- Personal Experience
- Forestry/Fire Units/Lessons
- Guest Speakers
- SMART Fires/Story Maps

2. Town Hall Meeting (Mock)

- Take on different roles (Stakeholders)
 - Fireologist
 - District Ranger
 - Rancher
 - Community Members
 - Fire Fighter
 - Landowners
 - Conservationists
 - Outdoorsmen
 - Forest Service
- Research roles/stances → Personal Economic impact Pros/Cons
- Run meeting (Parli Pro) Share info

3. Run it for real

- Attend real meetings
- Posters
- Information Pamphlets
- Career Exploration
- Advocate!
- Talk to people
- Gather more data

4. Take it further!

- Talk to state reps
- Governor
- Form Bureau/FFA/Farmers Union
- Career Exploration + Advocacy

Apps

Air now.gov

Climate.gov

Weather station



MONTANA

NSF EPSCoR

Erika Hildner
(PA, UM)

Ben Williamson
(PM, MSU)

Libby Metcalf
(Assoc. PD, UM)

Rob Walker
(PD, MSU)

Susie
Fiscal Team

Rayleen
Rhonda
Hicks
Stoddard

Couch



University of Montana / HTH Office



Testbeds

ASSIST COMPONENT PROJECT

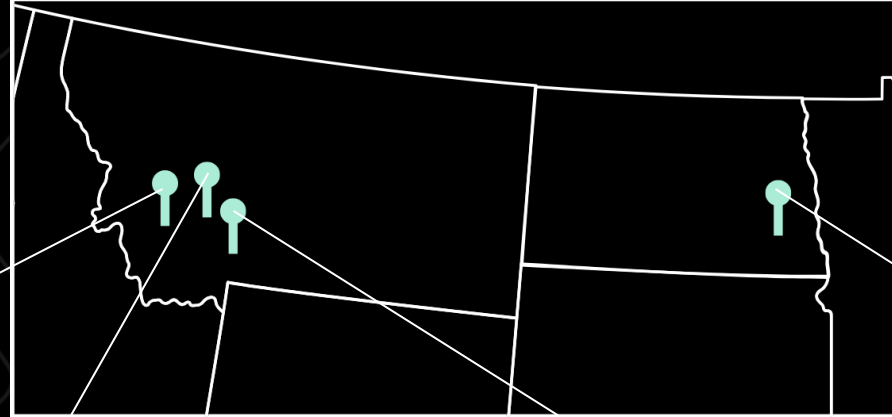




**Lubrecht
Experimental
Forest (LEF)**



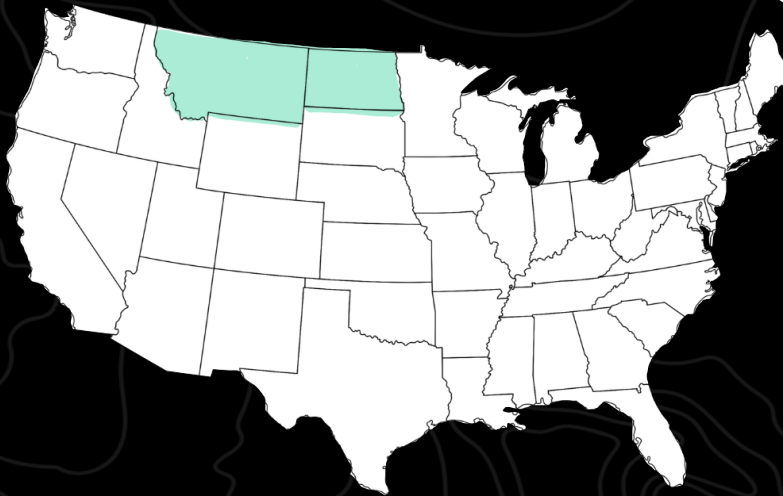
**Underground
Mine
Education
Center
(UMEC)**

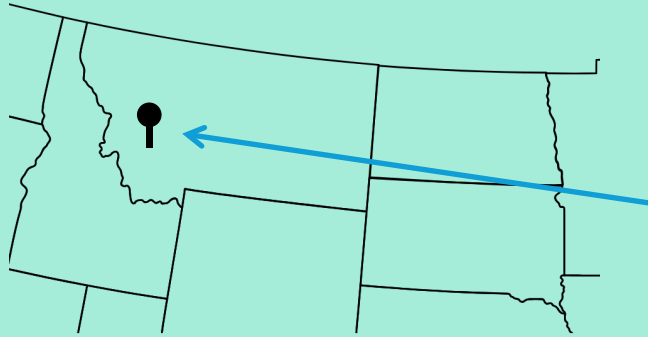


**Grand
Farm**



**Lutz
Farm**



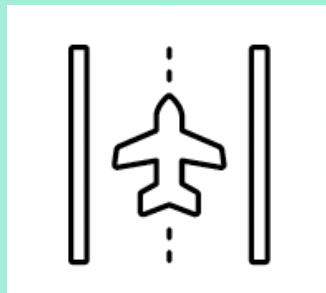


30 miles east of the University of Montana and Missoula, MT

Lubrecht Experimental Forest



Forest Harvesting



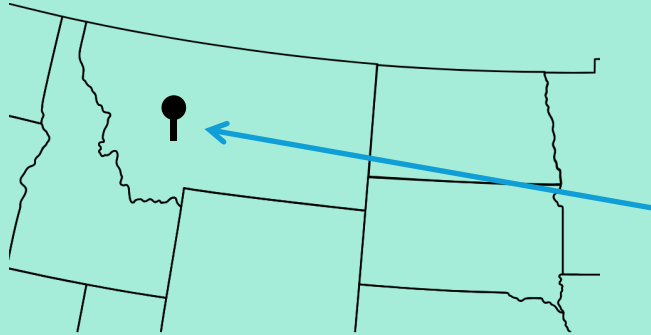
FAA Waivers



Prescribed Burns

RUGGED TERRAIN





Montana Technological
University campus, Butte, MT

Underground Mine Education Center (UMEC)



**3,000 Feet of Wet,
Dry, & Submerged
Mine Tunnels**



**Scheduled
Blasting Access**

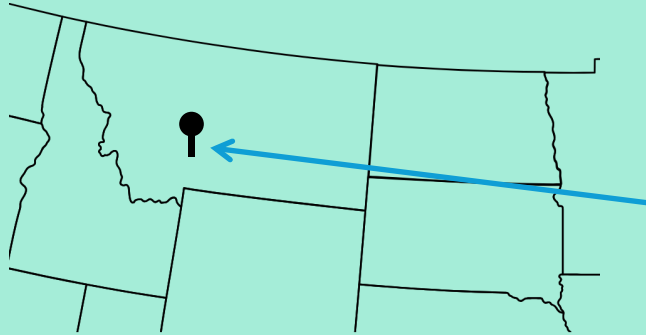


**150 Acres of
Rocky Surface
Terrain**

RUGGED TERRAIN



MONTANA TECH



12 miles north of Montana State University and Bozeman, MT

Lutz Farm



**Controlled-Stress
Crop Environments**



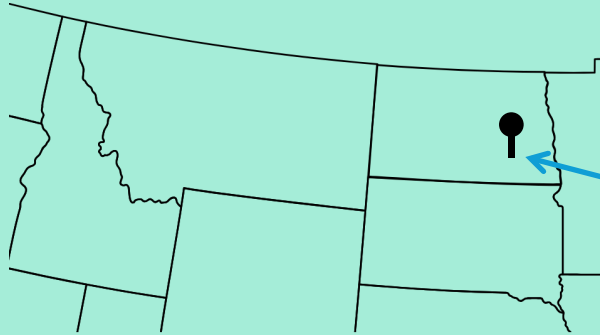
**UAV Remote
Sensing with
Advanced Payloads**



**Montana Ag
Experiment Station
Network Access**

PRECISION AG





24 miles west of Fargo, ND

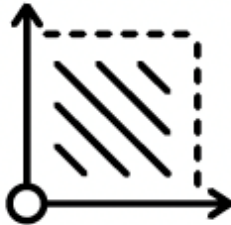
Grand Farm



**Embedded Industry
Collaboration
Opportunities**



**Advanced Data
Collection &
Analytics Tool**



**0.5-100 Acre Custom
Plots in a Public
Living Lab**

PRECISION AG



**GRAND
FARM**

WWW.GRANDFARM.COM