Position Title: PhD Student – Ecosystem Ecology (fire and drought impacts on forests)

Location: Institute for Innovative Climate Solutions, University of Idaho, Moscow, ID
Start Date: ASAP (can be paid as technician immediately)
Application Deadline: Sept. 30, 2025

Position Summary:
We are seeking a motivated and skilled PhD student to join our multi-disciplinary research team investigating the impacts of fire and drought on forest ecosystems. The successful candidate will use methods in field ecology, environmental sensing, and carbon cycle science to understand how trees respond to disturbance and climate extremes. This position offers the opportunity to contribute to cutting-edge ecosystem science with direct relevance to climate change mitigation, forest management, and carbon sequestration. This student will also have the opportunity to learn to use biogeochemical and process-based modeling if desired.

Research Focus:
The student will lead field and laboratory research quantifying organismal (tree) responses to fire and drought, including measuring water and carbon fluxes, physiological stress responses, and recovery strategies. Research will integrate field-based measurements, environmental sensor networks, and statistical analysis to evaluate ecosystem function under changing disturbance regimes.

Responsibilities:

- Design, install, maintain, and troubleshoot field instrumentation and sensor systems for measuring tree physiology and ecosystem state variables and processes (e.g., sap flow, soil moisture, temperature, and soil respiration).
- Conduct fieldwork in varying and sometimes challenging conditions, including post-fire field plots. Assist with prescribed burning to take place fall 2026.
- Collect, manage, and analyze large datasets from sensors, field measurements, and lab analyses.
- Develop research questions and experimental designs in consultation with advisors. • Prepare manuscripts for peer-reviewed journals and present findings at scientific conferences.
- Collaborate with an interdisciplinary team of ecologists, microbiologists, and ecosystem modelers.

Minimum Qualifications:

- Master of Science (MS) in a STEM field or significant research experience leading to authorship on a publication
- Hands-on experience with environmental instrumentation and sensors for measuring plant and/or soil processes.
- Demonstrated ability to work in remote and physically demanding field settings. •

Strong quantitative and data analysis skills (e.g., R, Python).
• Evidence of independent research, including publications or thesis work.

Preferred Qualifications:

• Experience conducting research in fire-affected or drought-prone ecosystems. • Familiarity with ecosystem modeling, micrometeorological techniques, or remote sensing.
• Experience with data management and statistical analysis of large environmental datasets.

Funding and Support:
The position includes a stipend of $30,000, paid tuition and healthcare, and research support for a period of 3 years, contingent on satisfactory progress and funding.

Application Instructions:
Applicants should submit the following materials as a single PDF:

1. Cover letter describing research interests, relevant experience, and career goals.
2. Curriculum vitae (CV) including three professional references.

Please send applications to **Dr. Tara Hudiburg** via the following link:
PhDStudentRecruitment_2026