

Position Title: Graduate Assistantships in Applications of AI for Collaborative Environmental Planning and Governance

Job Category: Graduate Research Assistantship

Start Semester: Fall 2026

Apply By: March 1, 2026

GRA Salary: \$22,584 yearly stipend; health insurance + tuition and fees + research funding | Total Yearly Package: \$36,685

Location: Laramie, Wyoming

Duration: Two-years

Overview: The Haub School of Environment & Natural Resources at the University of Wyoming seeks applicants for a master's level Graduate Research Assistant position to support new/ongoing projects that focus on applications of artificial intelligence and collaboration in conservation and/or risk mitigation. The successful candidate will support one or both of the following projects.

Project A: Using Cognitive Maps and AI for Decision Support in Environmental Management

Drs. Matt Hamilton and Jake Hawes are recruiting an MS student to conduct research on how artificial intelligence can help public decision makers better understand varied perspectives in complex, conflict-prone environmental management settings. Public decisions often involve diverse and competing values, yet the belief systems underlying wide-ranging preferences are rarely captured at scale due to the time and labor required for traditional qualitative methods. This project leverages large language models (LLMs) to address that challenge. The student will help assemble and analyze large text corpora—such as public comments, testimony, media responses, and social media posts—related to a conflict-prone environmental issue (e.g., endangered species management, rules about recreation on public lands). Using LLM-based methods, the project will extract perceived causal relationships embedded in these texts and represent them as cognitive maps that capture how interested parties link management strategies, biophysical processes, and valued outcomes. These maps will then be analyzed to identify areas of consensus and conflict, reveal tradeoffs among values, and compare belief structures across distinct groups. The project combines environmental management, policy analysis, and data science, and is well suited for students interested in human–environment systems, decision support, and applied AI.

Project B: Using AI to Analyze and Improve Community Wildfire Protection Planning

Dr. Matt Hamilton is recruiting an MS student to support a project that focuses on the early development of an AI-enabled framework to support the local risk mitigation planning. Community Wildfire Protection Plans (CWPPs) are a widely used but highly fragmented approach to local wildfire planning in the United States. Although thousands of CWPPs have been developed over the past 25 years, planning strategies and innovations often remain siloed, making it difficult for communities to learn from one another or adapt successful approaches to local contexts. The student will work with a unique, large-scale

database of CWPP documents to help structure, curate, and analyze planning content using large language models. Initial research activities may include organizing and semantically indexing plan components, developing methods to compare strategies across communities, and exploring how AI can surface patterns related to mitigation actions, collaboration, equity, and implementation. The project will also contribute to early evaluation of how AI-enabled tools might support planning innovation, coordination, and plan quality, and the student will also conduct interviews with local planners and others who contribute to collaborative wildfire risk mitigation. This project is well suited for students interested in wildfire governance, community-based planning, human-AI interaction, and applied data science. The work directly supports a multi-institution interdisciplinary project, with opportunities for mentorship from Portland State University professor Dr. Cody Evers (e.g., as a committee member).

Qualifications:

- Bachelor's degree (complete prior to state date) in environmental studies, natural resources, public policy, planning, geography, computer science, data science, or a related field.
- Strong interest in environmental governance and decision-making, particularly in settings involving multiple interests, competing values, and complex social-ecological systems.
- Experience working with qualitative or text-based data, such as interviews, documents, public comments, or media sources (e.g., coding, content analysis, or discourse analysis).
- Foundational data analysis skills and comfort working with structured or unstructured datasets; experience with R, Python, or similar tools is preferred but not required.
- Interest in applied artificial intelligence, including large language models or other computational approaches to analyzing social or policy data.
- Ability to work independently and collaboratively as part of an interdisciplinary research team, including engaging with community partners and practitioners.
- Strong written and verbal communication skills.
- Motivation to contribute to publishable research and problem-driven, real-world applications of science.

The GRA position is for roughly 21-24 months and requires the equivalent of 20 hours of work per week. The GRA will cover a living stipend, 9-12 credits of tuition and fees during the fall/spring semesters, and student health insurance.

Candidates from backgrounds underrepresented in higher education, conservation, and other natural resource fields are especially encouraged to apply. The selected candidate must also meet qualifications for and be successfully admitted to the MS in Environment, Natural Resources, & Society at the University of Wyoming. This is an in-person, on-campus position.

To apply: Send the following materials as one PDF document to Dr. Matt Hamilton at matt.hamilton@uwyo.edu in an email with the subject line “[Your Name] MS Position.”

(1) Two-page cover letter with a narrative explaining your desire to pursue graduate education, research interests, career goals, and relevant experience skills and experience pertaining to the qualifications above. Please also clearly identify the project(s) you are interested in working on.

(2) Resume or CV including contact information for at least three references.

(3) An unofficial copy of relevant transcripts.

Priority deadline: March 1, 2026, at 5:00p.m. MST.