JOB ANNOUNCEMENT: UNDERGRADUATE RESEARCH OPPORTUNITY

Project Title: “Creating a Database of Montana Water Institutions”

Project Advisor: Dr. Brian C. Chaffin

Position Description:

This is an opportunity for (1) undergraduate research assistant to assist in building a relational database for what will likely become an online, spatially-referenced map of water governance and management in Montana. The purpose of the project is to identify and catalog in a single database, the relationships between water institutions (laws, policies, regulations, social norms); organizations that manage water or govern its use; and the flow of the resource, through actual water use. This database will then be used to determine critical opportunities for adaptation given future biophysical and social pressures on Montana’s water supplies including those induced by climate change. The information gathered in this database will be incorporated in future research including a potential network analysis of water governance actors and water use in Montana. If interested, there is potential for the undergraduate research assistant to engage in this research beyond the scope of this position.

Scope of Work:

Through the mentorship of Dr. Brian Chaffin, Assistant Professor of Water Policy (College of Forestry & Conservation), the undergraduate research assistant will:

- Compile a database of all organizations involved in water management, planning, or advocacy in Montana, including: public agencies, NGOs, utilities, Tribes, irrigation districts, private organizations with co-management responsibilities, and others.
- Compile a list of major state- and local-level water laws that dictate how organizations, individuals, and water relate to each other.
- Relate institutions and organizations in the database through water allocation, management, and use; how do organizations, laws, and individuals interact to determine water movement; map this spatially using ArcGIS or through a decision tree framework.
- Through this initial analysis of water relations, identify other organizations, individuals and laws that indirectly affect water allocation, management, and use decisions; many of these will be agricultural, natural resources, Tribal, or federal in nature.
- The end product of this research will be a spreadsheet or access database of Montana water institutions, organizations, and user groups, including discrete, network-based relations between database components (based on management and use of shared water resources).
Required Work and Compensation:

This position requires 10 hours of work per week during the Fall Semester 2016, but hours and workload are flexible. The proximate duration of the project is 12 weeks and students will be paid a $1200 stipend for work performed. Students will be encouraged to take on additional tasks in this research for academic credit, presentation at the UM undergraduate research symposium, and/or potential publication.

Desired Qualifications:

Ideally, the undergraduate research assistant will be of junior or senior standing at the University of Montana, interested in water resources broadly, and water use in Montana more specifically. Familiarity with western water law is required and a working knowledge of water management in Montana is preferred. This knowledge can be demonstrated by the completion of many UM undergraduate courses including (but not limited to) NRSM 422, NRSM 391, or GEOG 335, as well as a variety of other professional experiences. ArcGIS skills are preferred, but not required.

If interested, email a resume to brian.chaffin@umontana.edu. You can also direct questions to this email address. In your resume document, please highlight experiences, skills, and coursework relevant to this position description. Please title your email “UNDERGRADUATE JOB – MT Water.”