Invasive Grass Species Mapping (Field Work and Image Processing)

The Spatial Analysis Lab (SAL) of the MT Natural Heritage Program, University of Montana is currently recruiting for a **Lead Field Technician with Remote Sensing or Digital Image Processing** experience to help survey 1) parts of the Charles M. Russell National Wildlife Refuge (CMR NWR) for Japanese brome (*Bromus japonicas*), downy brome (*Bromus tectorum*), medusahead (*Taeniatherum caput-medusae*), and African wiregrass (*Ventenata dubia*); and 2) mapping downy brome (*Bromus tectorum*) distributions in the Centennials using satellite imagery. The technician will be part of a two to four person survey team that will use adaptive sampling to characterize the distribution and abundance of invaders and inform presence/absence image classifications. The work is **ideally suited for a graduate student** and provides experience collecting data in the field to support time-series image classification objectives using Worldview 3 and Sentinel 2 collections. The person selected for this position will be trained to integrate data collected from 6-day sampling “hitches” throughout the growing season with the development of image processing workflows that map invasion patterns for two collection sites that total ~ 287,000 acres.

**Job Length:** Seasonal support is available from late May to late August (05/2019 to 08/2019) for approximately 48 days (~24 days in the field and ~24 days processing imagery and helping to develop map products at SAL). If desired, additional mapping resources are available to fund the position full-time over the summer.

**Compensation:** $16 - $20 per hour. Transportation is provided from Helena, MT to field site locations and a travel allowance is provided during field data collection.

**Required Qualifications**
- Bachelor’s degree in geography, ecology or a related natural resources field
- Completion of at least three upper level courses in GIS and Remote Sensing or Digital Image Processing
- Excellent organizational and communication skills, attention to detail and ability to follow protocol
- Valid driver’s license with a good driving record
- Professionalism, flexibility, and a positive attitude
- Current first aid / CPR certification

**Preferred Qualifications**
- Previous field research experience, preferably in rangeland ecosystems
- Prior experience identifying rangeland vegetation and insect species
- Prior experience with field techniques, including GPS operations, transect sampling and vegetation cover estimation, and invertebrate surveys
- Experience working on vegetation classification projects and an interest in imaging spectroscopy

If you do not have current First Aid/CPR certification, you must become certified before field sampling begins. The field work schedule is subject to the weather, which may cause unpredictable days off and require some scheduling flexibility. Data collection may also require hiking up to several miles each day through sagebrush, over uneven terrain, and in very hot temperatures to reach some sampling sites; and driving a few hours each day in trucks over low maintenance roads.

**To apply,** please send a current resume and letter of interest to Jessica Mitchell (jessica.mitchell@mso.umt.edu) with the subject line “Invasive grass species mapping CMR NWR”. Applications will be considered until the position is filled. For more information about the Spatial Analyst Lab, please visit [http://www.umt.edu/spatial-analysis-lab/](http://www.umt.edu/spatial-analysis-lab/).