

## AQUATIC MONITORING TECHNICIANS, CREW LEADS and RIPARIAN BOTANISTS

### Idaho, Nevada, Wyoming

#### OVERVIEW

The Montana Natural Heritage Program, a program of the Montana State Library's Natural Resource Information System operated by the University of Montana ([mtnhp.org](http://mtnhp.org)), collects and disseminates reliable, objective information and expertise to support stewardship of our native species and habitats, emphasizing those of conservation concern. Our staff scientists and data managers work in Montana and adjacent states to assist our state and federal partners in identifying and managing critical resources on public lands. We are a part of the NatureServe network, a network of over 80 similar programs in states, provinces and nations throughout the Western Hemisphere, bringing decision makers “big picture” information on the true status of species and habitats ([natureserve.org](http://natureserve.org)).

In 2020, we will again partner with the Bureau of Land Management (BLM) to implement their **Aquatic Assessment, Inventory, and Monitoring (AIM)** strategy, which is targeted at collecting standardized data from streams across BLM Districts in the western U.S. Work will focus on wadeable streams and rivers in Idaho, Nevada and Wyoming, but we will also field two crews for the Western Rivers and Streams Assessment (WRSA) project, with points in California, Oregon, Nevada, Utah, Idaho, Montana and Wyoming. Aquatic data collection will follow the [AIM National Aquatic Monitoring Framework: Field Protocol for Wadeable Lotic Systems](#) (TR 1735-2), specifically: 1) site evaluation, 2) water quality, 3) physical habitat and canopy cover, 4) macroinvertebrates, 5) photos, and 6) human influences. We will also implement vegetation assessment elements of the Multiple Indicator Monitoring (MIM) protocol. State-based aquatic field crews will consist of a Crew Lead, a Technician and a Riparian Botanist. WRSA crews will be two-person crews, with one designated as the Lead. All crews will be supported by Aquatic Field Specialists and other professional MTNHP staff who will rotate between crews.

***To assist in this effort, we are recruiting the following field positions:***

1. Aquatic Monitoring Field Technician (8)
2. Aquatic Monitoring Field Crew Lead (8)
3. Riparian Botanist (6)

Our employment policy is straightforward: We hire the strongest candidates, we compensate them fairly, we train them well, we support them throughout the season, and we provide them with opportunities to interact with professionals in our partner agencies. In return, we expect seasonal staff to commit to the entire field season, to practice safety awareness, including vehicle safety procedures, and to contribute to building a healthy and fun work team environment.

All positions are field-based and require primitive camping. Sampling sites may sometimes be near a town, but often the towns will have few amenities or entertainment, and crew members should plan to bring all their food with them each hitch. Cell phone service from any carrier is poor to non-existent in many areas. Applicants should also understand that this is physically demanding work. Crews typically work eight consecutive 10-hour days, followed by a 6-day break, in all kinds of weather, and frequently have to navigate sketchy roads before lugging awkward and heavy equipment across uneven terrain to access a site. The “wadeable streams” we sample range from a few inches deep to fast-flowing small

rivers that require good balance, a stout stadia rod, and a willingness to be waist or chest deep in water. A loss of footing means you will be submerged, and will generally need to self-rescue.

Nevada crews will likely be based in Elko, NV, or another northern Nevada location to be determined. One Idaho crew will be based in Pocatello, ID while the other will be in Northern Idaho or Missoula, MT. The Wyoming crew base will be determined in February, once sampling locations are known. WRSA crew members must be willing to travel throughout the West with no fixed base. Work will begin with trainings in June and will continue until September, with the exact end date being flexible to accommodate those with academic commitments. However, it is difficult for us to work around school obligations that begin before September. The work schedule runs from Wednesday to Wednesday. MTNHP supplies all necessary equipment, including vehicles, to carry out the work. We provide some group camping gear (stoves, coolers) but technicians are responsible for their personal camping gear (tents, sleeping bags).

## **QUALIFICATIONS:**

### **ALL POSITIONS REQUIRE THE FOLLOWING:**

- Experience following established field protocols to conduct sampling and field data collection on new and existing monitoring sites;
- Experience with data entry and management using electronic devices;
- Experience navigating and collecting coordinates with hand-held GPS units;
- Experience with Microsoft Office (Word, Excel, Access);
- Experience driving and maintaining 4WD trucks and other vehicles, especially in off-road situations. Valid driver's license and clean driving record (DUI or other serious convictions need not apply);
- Demonstrated ability to work productively as part of a team to accomplish mutual goals and to work independently as required;
- Experience in and willingness to spend multiple days camping in the field where multiple hazards (snakes, bears, deadfall, lightning, poison ivy, flash floods, fires, etc.) may be encountered;
- Willingness to work irregular hours in harsh environments and challenging weather, and carry 40-50 pounds in a backpack over uneven terrain;
- Willingness to stay in frequent communication with MTNHP staff;
- Wilderness First Aid a plus; CPR and First Aid Certification expected.

**Additional qualifications are specific to each position, and include:**

### **1. Aquatic Monitoring Field Technician**

- A Bachelor's Degree in Aquatic Ecology, Fisheries, Hydrology, Water Resources or related subject. Experience may be substituted for up to two years of education on a one-to-one basis;
- A minimum of one season of field data collection. Several lab courses with extensive field work can satisfy this requirement. However, preference will be given to people who have collected aquatic or hydrologic data in a work setting.

## **2. Aquatic Monitoring Field Crew Lead**

- A Bachelor's Degree or higher in Aquatic Ecology, Fisheries, Hydrology, Water Resources or related subject;
- A minimum of one full year or two full seasons of fish, macroinvertebrate, hydrology or water quality field data collection. A completed Master's or Ph.D. degree with field work can satisfy this requirement;
- Experience characterizing aquatic habitats in the field using standardized protocols, including establishing transects and thalweg profiles, determinations of bankfull width, stream classification (Rosgen or other), habitat complexity, and riparian vegetation;
- Experience with macroinvertebrate collection and water quality sampling, including sample processing;
- Experience supervising technicians, volunteers or undergraduate students. Leadership in a volunteer or community organization, or in the military, can satisfy this requirement;
- Experience managing gear and equipment for a crew, lab class, team, or other organizational unit.

## **3. Riparian Botanist**

- A Bachelor's Degree or higher in Botany, Ecology, Wetland Ecology or closely related subject. Coursework in Plant Taxonomy and/or Systematics with additional training in wetland/riparian plant identification. Herbarium experience may substitute for coursework;
- A minimum of one full year or two full seasons of botany field work in wetland or riparian habitats;
- Ability to identify riparian graminoids, forbs, shrubs and trees to species using dichotomous keys;
- Good familiarity with commonly accepted plant nomenclature;
- Familiarity with wetland and riparian plants of the Rocky Mountains and/or Intermountain West;
- Experience preparing voucher and herbarium specimens.

## **POSITION LOCATIONS**

- Nevada crews will likely be based in Elko, NV;
- One Idaho crew will be based in Pocatello, ID, while the other will be in Missoula, MT;
- The Wyoming crew base will be determined in February, once sampling locations are known;
- WRSA crew members must be willing to travel throughout the West with no fixed base.

## **TRAINING**

These positions are ideal for people who are committed to ongoing learning and development. You will receive extensive, paid training on the AIM protocols and associated methodology; plant identification training for the area in which you will be working; and ongoing field-based support and training from specialists during the field season. You will also have the opportunity to interact with seasoned staff scientists from both the BLM and MTNHP throughout training and field work.

## COMPENSATION

Salary is based on qualifications and experience, with the Aquatic Monitoring Technician starting at \$14 an hour and the Aquatic Monitoring Crew Leads and Riparian Botanist starting at \$18 an hour. All positions include a tax-free \$30 per diem for each field day. While the University of Montana does not provide health insurance to seasonal employees, we do offer Worker's Compensation coverage and other benefits. Crew members will be responsible for arranging their own housing.

## HOW TO APPLY

Please submit the following to Dr. Linda Vance ([linda.vance@mso.umt.edu](mailto:linda.vance@mso.umt.edu)) with the subject line **MTNHP 2020 Aquatic AIM Application**:

1. Letter of interest. In this letter, please describe your background, including any military and volunteer service; professional experience, recreational interests or hobbies that help demonstrate your suitability for work in harsh and challenging conditions; and your reasons for pursuing this opportunity.
2. Curriculum vitae, including all degrees and related coursework.
3. Names of three (3) references. While we prefer professional references who can attest to your work ethic and technical abilities, we will accept academic references or references from organizations.
4. Please rank your location preference; based in ID, NV, WY or roaming with the WRSA crew.

Application review will begin December 1, and will continue until all positions are filled. We expect to complete hiring no later than February 1, 2020. All applicants will be notified of receipt of their application, and the results of the preliminary review (rejected due to failure to meet minimum qualifications or transmitted to hiring team). If you qualify for an interview, you will have an opportunity to speak with staff who worked as Aquatic AIM crew leads and botanists last year.

## ADDITIONAL INFORMATION

Additional information on the Montana Natural Heritage Program can be found on our [website](#).

Additional information on the [AIM](#) strategy, including the protocols.

Additional information on the [AIM](#) strategy, including the protocols.

Map of BLM Field Office locations in [Idaho](#).

Map of BLM Field Office locations in [Nevada](#).

Map of BLM Field Office locations in [Wyoming](#).