**Associated Mentors:**

Christina Welch, Soil and Crop Sciences, Research and Outreach Coordinator, Agricultural Water Quality Program, c.welch@colostate.edu

Erik Wardle, Agricultural Water Quality Program Director, Soil and Crop Sciences

Todd Hagenbuch, Routt County Director, CSU Extension

Troy Bauder, Assistant Deputy Director Agricultural Experiment Station

**Location:**

The position is based in Fort Collins, CO. The option to travel to field sites throughout Colorado is a possibility. Pending COVID protocols, travel will likely be day trips with no more than 3 overnight trips.

**Description:**

The primary internship goal is for the student to contribute to a scientifically sound sampling and data collection process for the summer 2022 field season. This internship will involve both field work and laboratory work. This includes supporting the installation, sample collection and maintenance for edge-of-field water quality monitoring equipment. The student will have the opportunity to gain work experience conducting research in irrigated agriculture and water quality monitoring as well as Extension practices.

The scope includes the student technician assisting in laboratory, office and field tasks for water quality monitoring projects. Lab activities will include testing and preparation of sensors and data loggers, processing soil, water, and plant samples, data entry, general cleaning/lab upkeep, website maintenance, and other tasks as needed. Field activities include installation/removal of water quality sampling instruments, soil moisture sensors and precipitation/irrigation gauges, soil sampling, and plant growth measurement. In addition, the student may assist with some basic farming operations, work with Extension educational materials, conduct literature reviews and help with outreach activities, writing and other project needs. A literature review and data organization related to harmful algal blooms in the Yampa River basin will be one of the deliverables.

Additionally, the student will participate in shadow days. The student will make a day trip to visit one of the nine CSU Agricultural Experiment Stations and shadow a staff member *or* visit and shadow members of CSU County Extension. Todd Hagenbuch, Routt County Director will be first on the list. The student can then select the two additional visit sites according to their own research interests. This is a unique opportunity to learn about the current research that is happening across the state. The geographic area of this internship will cover the state of Colorado with a primary focus in the Front Range. The intern will work with a large network of external stakeholders, including but not limited to: CSU Extension**,** CSU Agriculture Experiment Stations**,** Colorado Department of Agriculture**,** and local farmers and producers.

Student learning outcomes are:hands-on opportunity to gain research experience in both the laboratory and in the field; professional development opportunities available through networking with stakeholders, and outreach opportunities; improved knowledge and experience with scientific protocols for water, plant and soil sampling. While there are specific job tasks associated with this position, there is also room for the student to explore projects related to their own research interests as they relate to soil and water health. The AWQP program is eager to incorporate policy, economics or other related fields into this research.

Students will be trained and supervised consistently with the potential for independent work later in the season. All program members are treated as equals and creative input, energy and ideas are strongly encouraged. The intern will be expected to work both in a team and independently as needed. The team is focused on interns leaving with significant skill and experience in agronomic research and outreach related to water and soil. No student housing assistance provided. However, travel funds are available if travel is approved and necessary.

**Preferred Qualifications:**

* Hard working, ambitious, self-starter
* Curiosity and willingness to learn about water quality monitoring
* Willingness to post work photos on AWQP social media accounts bi-weekly
* Valid driver’s license