

Agricultural Water Use in the Upper Colorado Basin

1. *Faculty mentor name, department, college, and contact information.*
2. *Other identified mentors (e.g. field-based Extension agent) associated with this project*

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3. *Regions where the student will be working.* The student will split their time between the CSU Western Colorado Campus (locations in Grand Junction and Fruita) and the Kremmling, Colorado site of a major project on assessing consumptive use on irrigated fields in the headwaters of the Colorado River. These are both beautiful areas that will be attractive to students who enjoy the amenities of Western Colorado during the summer.
4. *Description of proposed internship goals, scope and objectives.* The scope of our project is to design an internship model during which the student can utilize their skills to undertake dynamic, detailed and interesting work that reflects the changing nature of CSU's statewide engagement mission, availing ourselves of video and social media platforms that have not been effectively utilized by the Western Colorado Research Center units. Our goal is for the student to complete their internship having gained experience in field research on a water resources project of statewide importance, while also taking on a supporting role for extension outreach through various forms of social media. Additional opportunities will allow the student to participate in planting, irrigation management and data collection at the CSU Western Colorado Campus unities devoted to agricultural research. The objectives will be structured around utilizing data collection equipment for soil moisture, evapotranspiration, flow measurement and forage sampling in Kremmling, CO, as well as promoting greater visibility of our research projects and engagement efforts through a variety of website and social media platforms by documenting the daily ongoings of our various projects.
5. *Identification of applied research project.* An overall understanding of the project on which the student will partner can be gleaned from Snider, A. (2020). The Rancher Trying to Solve the West's Water Crisis. Politico. Dec. 4, 2020. This internship will support a project focused on evaluating the consumptive use rates of irrigated fields, where one of the largest curtailments of water application has been undertaken in Colorado for the purpose of sharing water in the Upper Colorado Basin. The need for water sharing is in response to an irreversible trend in reduced water supplies, drought and competing pressures among domestic, industrial and agricultural water users.
6. *Stakeholder groups with which the intern will work.* Trout Unlimited, The Nature Conservancy, Grand County ranchers and irrigators, Colorado Water Conservation Board.
7. *Student learning outcomes and professional development opportunities.* The intern will learn data collection techniques using field instrumentation for collecting information on assessing

consumptive use for water leasing programs. The student will also perform QA/QC of raw field data for the purpose of later publication in fact sheets, technical reports or publications. The student will have the experience of working with a diverse group of stakeholders, all of whom are interested in addressing structural policy problems on the Colorado River. Other students who have participated in similar projects have obtained positions in consulting, government agencies and graduate programs.

8. *Specific mentor style.* Our team will mentor the student as a collaborative team member, from whom we want to hear new ideas and approaches that are reflective of next generation consumers of scientifically based information, distilled for broader public consumption. After a few sessions of collaborative strategizing, we will agree on concrete tasks that the intern can accomplish weekly, with the expectation that obstacles will be problem-solved as a group. Given the nature of the team that reside in three locations, the intern will be a self-starter, who is deliverable-oriented and passionate about the issues being studied.
9. *Availability of travel funds and student assistance with housing.* There are travel funds available for the project (use of personal vehicle with reimbursable mileage). There is student housing available at the CSU Western Colorado campus.