

ASSESSING AND COMMUNICATING THE TECHNICAL AND ECONOMIC FEASIBILITY OF EFFICIENT IRRIGATION TECHNOLOGY WELD AND LARIMER COUNTIES

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INTRODUCTION

At the start of this internship, the goal was to learn about alternatives to the buy-and-dry system, where developers buy priority water rights from agricultural land and transfer them to municipalities. The land remains completely fallow and without access to irrigation. This included creative water sharing solutions across Colorado: augmentation plans, rotational fallowing and lease-back agreements, alternative cover crops that require less water, and different forms of efficient irrigation types.

As the project continued, focus shifted to new and beginning farmers, and the role water-sharing solutions might play as possible tools to break down the barriers to entry. The goal is to make water rights more attainable for those unable to get traditional capital to make land and water purchases. This is especially the case with rising development and population growth along the Front Range and Eastern parts of Colorado.

This project culminated in looking at three case studies: collective augmentation plans from the San Luis Valley, municipal water sharing agreements from Colorado Springs, and development strategies in Weld county. Identifying them as solutions to keeping water in agriculture and improving access for new and beginning farmers..

GOALS

In addition to the case studies, a goal of the internship was to create a summary paper of the findings, focusing on ways in which new and beginning farmers could reduce barriers to entry through water sharing. Like all CSU Extension internships, there is an education component, which led to the overall goal of a report that could be sent to individuals attempting to break into the agricultural industry without a generational inheritance.

APPLICATION TO EDUCATION

Currently, I am in my third year studying Environmental and Natural Resource Economics with a minor in Restoration Ecology. I am very interested in natural resource management, specifically land and water.

This internship directly applies to my education because there is a strong focus on past management solutions and their failure to regulate water in the West, along with new and creative solutions that can help to find sustainable rates of utilization, while supporting the ecosystems and economies. Group augmentation projects and lease-back programs are the future, as water resources run lower, and water-sharing becomes necessary. It was very insightful and beneficial to my future career to get hands-on experience with these programs this summer.

INTERNSHIP ACTIVITIES

This internship was very outreach and research focused, I conducted interviews with several project leaders from municipalities, met with farmers that were decreasing their consumptive use through creative regenerative and sustainable farming efforts, and studied Colorado water rights systems, both the legality and the feasibility.

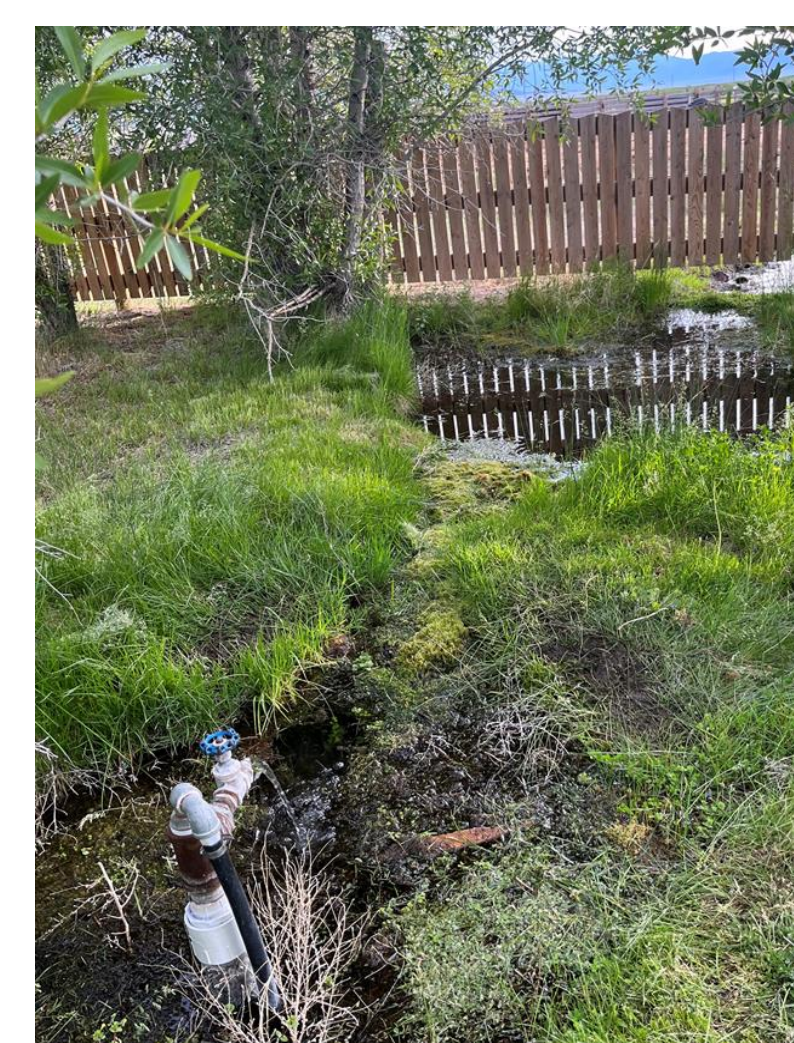
I met with individuals around the state who have used creative solutions to combat the water crisis in Colorado, from the San Luis Valley, to Weld County and Colorado Springs, while crafting an economic analysis. The focus was to observe solutions for encouraging new and beginning farmers to enter the agriculture market with water sharing solutions.

Some wonderful opportunities that this internship created for me:

- Attended a Rio Grande Conservation Board meeting and met with representatives, specifically with Amber Pacheco.
- Met the San Luis Valley Extension team, specifically Larry Brown.
- Toured Weld County Augmentation plans and water Infrastructure created Platte River Water Development Authority [PRWDA] and ran by Jason VonLembke.
- Attended a Holistic Management International [HMI] Retreat, focusing on regenerative agricultural practices at the San Juan Ranch in the San Luis Valley.
- Spend time on the San Juan Ranch with ranch owners George Whitten and Julie Sullivan, who have managed, through regenerative practices, to decrease their historic pumping levels by 50%.

Through these experiences, I gained knowledge of different water issues across the state and the ways in which individuals are using creative solutions to overcome the effects of drought while also having a viable business. While also having the opportunity to meet water leaders across the state.

San Juan Ranch: Water Source and Land



WHAT I LEARNED

I learned a much deeper understanding of Colorado Water Rights and the current water crisis that is happening in the Western United State. Along with the tools and institutions that operate and control the water allocations. Through my research, I have a better understanding of water court proceedings, state and national regulations, and even development and agricultural water right law.

Not only did I learn about the issues, but also about differing water sharing solutions depending on the location, climate, and culture of the municipalities and farmers. I learned a lot about water sharing agreements, between municipalities and farmers, including interruptible water leasing agreements, collaborative water augmentation plans, 3/10-year leasing agreements. Alternative Water Transfers are the most viable way to increase the community benefit, even with decreasing water supplies. I also learned how the state and federal government are changing to allow for easier water changing agreements.

Diversion Point: PRWDA Weld County



NEXT STEPS

I am hoping to continue this project into the Fall Semester, working on a final and polished economic report that can be used as a road map for new and beginning farmers to view the available programs to support entry and some possible solutions to the water barrier to entry. I will continue to work on this final paper, with the support and help of Dr. Dan Mooney and Dr. Rebecca Hill.

Young farmers are the future of Agriculture in Colorado. They should be well supported by the government and by local communities, providing them with education and access to land and water. I hope to continue to focus on this issue, no matter what direction I take with my future career.

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