

1. Addressing the Impacts of Wildfire on Water Resources

Mentors: [John Sanderson](#), Rob Addington, [Kerri Rollins](#), [Mark Platten](#)

Location(s): Northern Front Range

1. *Mentor team:*

John Sanderson, Director, Ctr. for Collaborative Conservation;

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Rob Addington, Dir. of Forest and Fire Program, The Nature Conservancy in Colorado;

Kerri Rollins, Director, Larimer County Extension, plattenm@co.teller.co.us

Mark J. Platten, Director, Teller County Extension, Mark.platten@colostate.edu

2. *In what region(s) will the student be working (county/region/state)?*

Colorado, most likely watersheds of the northern Front Range

3. *In less than 150 words, please describe the proposed internship goals, scope, and objectives.*

Snowmelt provides most of the water in Colorado. Forest composition and structure, forest management (thinning, prescribed fire), and wildfire affect how snow accumulates and melts, and, ultimately, amount and timing of water supply. Colorado has warmed 2°F during the past 30 years and is expected to warm several degrees more by the end of the century. This change is affecting forest dynamics (e.g., bigger fires, less tree regeneration), precipitation (e.g., more rain versus snow), and hydrology (e.g., earlier, faster runoff). This project will use existing data and stakeholder knowledge to synthesize what we know about these changes and forest management strategies that could offset the impacts of climate change on snowpack and snowmelt. Recommendations will be delivered to The Nature Conservancy and other stakeholders to inform policy and management. During this work, we hope to include the interests of historically marginalized communities.

4. *Which PRU activities are included in the scope of this internship?*

This work complements Natural Resources PRU efforts on the nexus between forest management and water resources, e.g., the development of the Fact Sheet [Addressing the Impacts of Wildfire on Water Resources](#). This fact sheet focuses on water quality issues. The proposed work focuses on forest management as it may affect water quantity, particularly as our climate continues to change.

5. *What student learning outcomes do you anticipate and are there opportunities for professional development?*

The student will acquire technical knowledge related to forest ecology, hydrology, and legal and policy aspects of water law and management. The student will experience working with and communicating to a broad range of stakeholders. By including a focus on marginalized communities, the student will gain experience understanding, working with, and including these communities.

6. *How does this internship support identified stakeholder needs in your county/region?*

The Nature Conservancy, the Colorado Water Conservation Board, the Coalition for the Poudre River Watershed and others have expressed need for more insight on how forest management and wildfire may affect water supply, especially as the climate changes.

7. *What is your experience with mentorship? In less than 100 words, please describe your experience with and approach to mentorship.*

John Sanderson (CCC Director): 20+ years of experience as a supervisor, where I've regularly coached and mentored early career employees. I've served on numerous graduate committees. I regularly accept request from students and recent graduates for informational interviews.

8. *Other faculty who have identified interest:*

Faculty who have already expressed interested in this work include:

- Stephanie Kampf, Associate Professor, Department of Ecosystem Science and Sustainability
 - Tony Cheng, professor in the Department of Forest & Rangeland Stewardship and Director of the Colorado Forest Restoration Institute at Colorado State University
9. Are travel funds available? Opportunities to provide student assistance with housing?
The need for travel and housing will be minimal and no funds are available.