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Why did you become a scientist?

I grew up in southern Idaho doing a lot of outdoor activities which inspired me to study geology. I always really wanted to understand why landscapes are what they are and how they evolve over human and geologic timescales. As I observed changes in our environment later on, I wanted to study something that would help us better manage our changing climate.

What do you study for DUST²? Why is this important?

I study how dust darkens snow, which causes it to melt earlier and faster. Throughout Utah and the Intermountain West, we are very dependent on our snowpack for water, especially in the summer months when we rely on our reservoirs to have stored the season's snowmelt. When snow is gone earlier, it can stress vegetation and make it more difficult to manage reservoirs. I work to incorporate the dust-on-snow effect into models which forecast when the snowpack will melt so that we can better optimize our water resources.



What do you do day-to-day in your work?

I do a combination of field work, lab work, remote sensing data analysis, and modeling. In the field I measure snow properties by digging snow pits and collecting samples of dust layers which I analyze in the lab. These field data, along with satellite observations, inform my modeling efforts where I quantify the impact of dust on snow.

What is your favorite part of what you do?

I love doing field work. It gets me outside and allows me to observe the processes I study first hand.

What advice do you have for students interested in science?

Study something you feel a personal connection with and are passionate about. Don't be afraid to reach out to others.



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