

New Research Techniques Show Availability of Water Resources

Outcome: New approaches to simulating the impact of mid-winter rain on top of snow in mountain watersheds in southwest Idaho are providing insights into the timing and availability of water resources. Results are providing a better understanding of the relationship between the distributions of snow and melt water to elevation, vegetation, and more.

Impact: This research will help in understanding the hydrology of mountain watersheds. It will also help to understand and predict the impact of snow transitioning to rain due to a changing climate. Early results indicate that more frequent low-snowfall years in the future could significantly affect water resource availability, thermal and biogeochemical processes in soil, and ecosystems as a whole.

Explanation: Simulations of rain-on-snow events are performed using tools developed by the Western Consortium for Watershed Analysis, Visualization and Exploration (WC-WAVE). WC-WAVE is a collaborative program among researchers from many different disciplines in Idaho, Nevada, and New Mexico that seeks to create a Virtual Watershed simulation to more efficiently model and understand actual watershed dynamics.

Highlight provided by James McNamara, Boise State University, JMCNAMAR@boisestate.edu

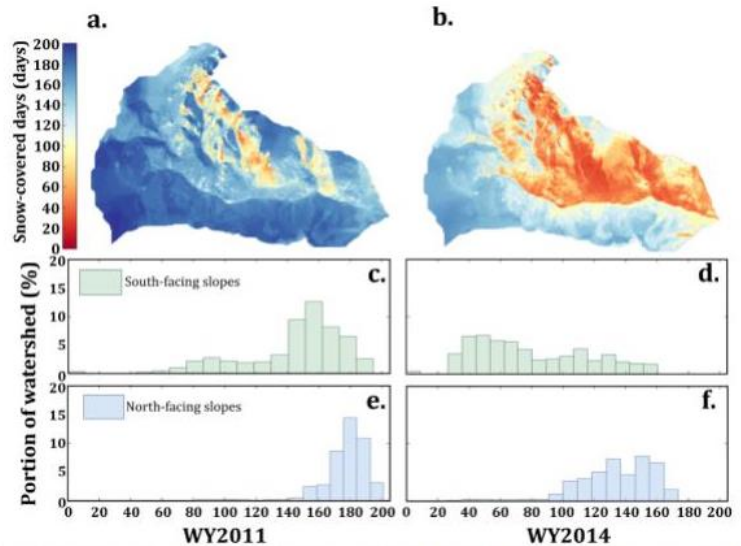


Figure 1: Spatial distribution of days of snow-cover in the Reynolds Creek Watershed, Idaho.