

Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Task Agreement #: G20AC00095

Project Title: Resolving Spatial and Temporal Variability of Snow Accumulation in Mountain and Glacier Environments

Discipline: Natural

Type of Project: Technical Assistance/Research

Funding Agency: United States Geological Survey

Other Partners/Cooperators: COLORADO STATE UNIVERSITY

Student Participation: No

Effective Dates: 03/09/2020 to 03/08/2021

Funding Amount: \$20,000.00

Investigators and Agency Representative:

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Project Abstract:

Project goals: The goal of this research is to advance knowledge around the spatial and temporal variability of snow accumulation in glacier and mountain environments using in situ geophysical observations. These observations will be coupled to complementary glaciological and hydrological datasets to better quantify water fluxes and perform sensitivity experiments to constrain the response of these watersheds to future climate forcing and glacier change.

Project objectives: The proposed work will directly target the following scientific objectives:

- i) Integrate key GPR and hydrological datasets to better quantify water fluxes,
- ii) Perform sensitivity experiments to assess basin-scale to regional hydrological responses to climate forcing and associated glacier change,
- iii) Begin building data visualization tools for glacier-driven changes in ice coverage and hydrology.