

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Developing a Debris Flow Chronology and Assessing Controls on Debris Flow Occurrence Along the Upper Colorado River in Rocky Mountain National Park

Discipline: Natural
Type of Project: Research
Funding Agency: National Park Service
Other Partners/Cooperators: Colorado State University
Effective Dates: 4/15/2010 to 6/30/2013
Funding Amount: \$18,000

Investigators and Agency Representative:

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Project Abstract: CSU researchers will develop a debris flow chronology for the Upper Colorado River Valley to include historic and prehistoric events. A series of debris flows caused by breaches in Grand Ditch, the most recent of which occurred in May 2003, raises the fundamental question of how these human-induced events compare to naturally occurring events. The proposed research will map the extent of surface debris flow deposits, trace material to source areas, collect tree cores to complete a dendrochronologic analysis of disturbance history, and relate debris flow occurrence to the distribution of hydrothermally-altered rocks and other potential control variables within the watershed. We will conduct this research using a combination of field-based mapping, aerial photographic interpretation, and possible cosmogenic radionuclide sampling to temporally constrain the depositional history of debris flows.

Outcomes with Completion Dates: Final Report and/or Other Products: December 31, 2012

Keywords: Rocky Mountain National Park, Colorado State University, Upper Colorado River, debris flows