

A Geomorphic Assessment of the Eagle River at Camp Hale

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Abstract.

Colorado State University is conducting an inventory and assessment of potential watershed restoration projects in the Eagle River Basin of Colorado. A popular project among stakeholders in the basin is the restoration of Camp Hale, the former military base of the legendary 10th Mountain Division. In 1942, the U.S. Army began constructing Camp Hale in a glacial valley previously known as Eagle Park. Rising from a base elevation of over 9,200 feet, the rugged terrain surrounding the valley was an ideal environment for training ski troops in mountain warfare. Although it was largely abandoned after WWII, Camp Hale was one of the largest cities in Colorado during the war with nearly 16,000 people living in a valley just over 4 miles long and 0.5 mile wide. To construct the facility, the Eagle River was channelized and centered in the valley. Wetlands in the valley bottom were drained and covered with approximately two million cubic yards of fill material. Today, the river is incised throughout much of the segment, leaving the channel hydrologically disconnected from the floodplain and lacking a functional riparian corridor. Native riparian vegetation has not re-colonized the floodplain and the valley is covered in upland and invasive plant species. The instream habitat is generally poor and homogeneous. Restoring the Eagle River at Camp Hale would involve reestablishing a meandering channel and reconnecting it to floodplain wetlands. Historical and aerial photos taken prior to construction are being used with site surveys, geomorphic analysis, and a variety of other information to examine the feasibility of restoring the river channel to some semblance of its pre-channelized state. Restoration alternatives under consideration include re-creating a sinuous planform, instream habitat enhancements, streambank bioengineering and riparian plantings, as well as educational and historical improvements. Because Camp Hale is on the National Register of Historic Places, any changes must be sensitive to the historical value of the site. The goal of this study is to identify stable and functional site design alternatives that simultaneously enhance the ecological and historical value of the site.

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