

ABSTRACT

STREAM CHARACTER, AQUATIC HABITAT, AND RESTORATION PLAN FOR BIG MEADOWS CREEK, SEQUOIA NATIONAL FOREST, TULARE COUNTY, CALIFORNIA

The goal of this project is to design a plan to restore Big Meadows Creek including the aquatic/terrestrial habitat and fishery while maintaining existing land use such as grazing and recreation. Big Meadows Creek flows through a Sierra meadow at 2317 m, from a 28 km² granitic-floored watershed. Hydrologic, fluvial geomorphic, geotechnical, and biologic data were collected along 2.5km of the stream to assess the physical condition, aquatic habitat, and fishery for restoration design. The stream was incising before 1940 due to natural influences and land use, but the specific cause is unknown. The Forest Service installed check dams and arrested incision, but 40% of the stream is still degraded. Restoration will include altering check dams, installing logs in the inset floodplain, and using the “pond and plug” method. Today, grazing and other land uses are probably low impact because most of the stream is stable having good trout/aquatic habitat.

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December 2005