

BATTLE CREEK DAM REMOVALS

A. Introduction

Battle Creek is a cold water, mountain stream located to the west of Lassen Peak, in northern California. The creek joins the Sacramento River about midway between Redding and Red Bluff, near the location of the Coleman National Fish Hatchery (see Project Location Map, Appendix A-1). It is largely fed by rainfall and snowmelt from along the western slope of the Cascade Mountain Range, and is supplemented by natural springs. Battle Creek is recognized as one of three remaining Sacramento River tributaries in which spring-run and winter-run chinook salmon, and steelhead trout continue to exist. Its remote, deep-shaded gorges are similar to the once-productive salmon streams now blocked by Shasta Dam to the north.

Development of Battle Creek for hydroelectric power by the Northern California Power Company resulted in the construction during the early 1900's of five diversion dams on the North Fork and three diversion dams on the South Fork, along with a complex canal system, to support five separate powerplants [1,2]. Pacific Gas and Electric (PG&E) has owned and operated the Battle Creek Hydroelectric Project since 1919. The project was initially licensed by the Federal Power Commission in 1932 and was relicensed by the Federal Energy Regulatory Commission (FERC) in 1976 for a period of 50 years (License No. 1121) [3].

Declining salmonid populations in the Sacramento River system have resulted in increased restoration efforts to preserve and enhance current populations, while addressing the needs of various stakeholders. Numerous recent fishery restoration plans have identified the restoration of fish passage in Battle Creek as a top priority. Studies are currently underway to address water quality concerns at the Coleman National Fish Hatchery, and to improve anadromous fish populations on 39 miles of Battle Creek above the fish hatchery and below natural barrier falls. A salmon and steelhead restoration plan is currently being developed by Kier Associates of Sausalito, California [3]. The California Department of Water Resources (DWR) is developing reconnaissance-level designs and cost estimates for various fish ladder and fish screen locations, which will provide reliable upstream passage for adult salmon and steelhead, and downstream passage for juvenile fish [4]. The Bureau of Reclamation (Reclamation) was requested to develop reconnaissance-level designs and cost estimates for the removal of two diversion dams on the North Fork, and one diversion dam on the South Fork, in concert with these studies.

B. Project Objectives

Stated project objectives are to open up 39 miles of Battle Creek above the Coleman National Fish Hatchery to spring-run and winter-run chinook salmon and steelhead trout, by correcting problems associated with ineffective fish ladders, unscreened diversions, and inadequate streamflows. Selected habitats could also be made available to fall-run and late fall-run chinook salmon, once populations of the more sensitive species are protected. Historical records document Battle Creek's potential as prime habitat for anadromous fish. Proposed actions were initially expected to increase usable instream habitat between 300 and 500 percent, and increase the total anadromous fish runs by nearly 20,000 [1]. Revised estimates will be prepared based on current studies.