



U.S. Fish and Wildlife Service
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October 19, 2000

To: Andy Hamilton, FWS, SFWO
Gary Taylor, FWS, SFWO
Matt Brown, FWS, NCVFWO

From: Mark Gard, Sacramento Fish and Wildlife Office

A handwritten signature in black ink that reads "Mark Gard".

Subject: Monitoring Of Restoration Projects In Clear Creek Annual Report

Attached for your information is a copy of the second annual report for the U.S. Fish and Wildlife Service's Clear Creek Restoration Project Investigations. During the past year, we began modeling work on chinook salmon juvenile rearing and spawning habitat modeling sites on Clear Creek below Saeltzer Dam within the restoration area. Restoration activities are scheduled to take place in summer 2002 after which time data will again be collected at each of the modeling sites. These data will be used to evaluate whether the restoration activities are successful at increasing the quality and quantity of chinook salmon rearing and spawning habitat in Clear Creek.

If you have any comments or questions about the attached report or our investigations, please feel free to contact me at (916) 414-6588.

Attachment

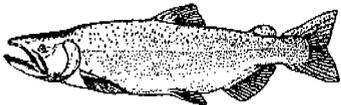
**MONITORING OF RESTORATION PROJECTS
IN CLEAR CREEK, CALIFORNIA**

**Annual Progress Report
Fiscal Year 2000**

U.S. Fish and Wildlife Service
Sacramento Fish and Wildlife Office
Room W-2605
2800 Cottage Way
Sacramento, CA 95825



Prepared by staff of
The Energy, Power and Instream Flow Assessments Branch



PREFACE

The following is the second annual progress report prepared as part of the Clear Creek Restoration Project Monitoring Investigations, a four year effort which began April 1999. Title 34, Section 3406(b)(12) of the Central Valley Project Improvement Act, P.L. 102-575, authorizes funding for channel restoration of Clear Creek to provide spawning, incubation, and rearing habitat for salmon and steelhead. The purpose of this investigation is to evaluate the success of these restoration activities.

To those who are interested, comments and information regarding this program and the habitat resources of Central Valley rivers are welcomed. Written comments or information can be submitted to:

Mark Gard, Senior Fish and Wildlife Biologist
Energy, Power and Instream Flow Assessments Branch
U.S. Fish and Wildlife Service
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Introduction

The decline of spring and fall-run chinook salmon and steelhead trout in Clear Creek over the last decade is attributed to many factors including habitat degradation. The existing habitat appears inadequate for either spawning or rearing. The Central Valley Project Improvement Act (CVPIA), section 3406(b)(12), authorizes funding for channel restoration of Clear Creek to provide spawning, incubation, and rearing habitat for salmon and steelhead. In response to this authorization, in 1998 the USFWS developed the Lower Clear Creek Flood Plain Restoration Project to increase spawning success on the section of Clear Creek below Saeltzer Dam. Part of this study proposal included the use of the Service's Instream Flow Incremental Methodology to compare total weighted usable area of salmonid habitat before and after channel restoration utilizing 2-D modeling. The Clear Creek Study is a four year effort to be completed in two phases (pre-restoration and post-restoration) by 2003, depending on the schedule of restoration construction. All field work for the pre-restoration evaluation was completed in FY99.

Hydraulic Model Construction and Calibration

All data for the spawning and juvenile habitat has been compiled and checked. PHABSIM data decks have been created and hydraulic calibration is underway for the upstream and downstream boundary transects. Input files for the 2-D modeling program have been prepared and hydraulic calibration is in progress for the pre-restoration sites. Progress during FY-2000 was limited due to not receiving funding until close to the end of the fiscal year. After post-restoration data collection in fall 2002, 2-D modeling files will be developed again and a final report evaluating the success of restoration activities in providing more spawning and rearing habitat for salmon will be completed by May 2003.

Habitat Suitability Criteria (HSC) Development

Habitat Suitability Criteria data will not be collected during this study. HSC previously developed on Clear Creek or other streams, will be used to predict the amount of spawning and rearing habitat present over a range of discharges in the restoration site prior to and after restoration actions.