

Annual Report

Study 3b1

Iron Gate Hatchery Steelhead Residualism Study

2000

**California Department of Fish and Game
Steelhead Research and Monitoring Program
Yreka, CA.**

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Background

Iron Gate Hatchery (IGH), a mitigation facility, was completed in 1966 as fulfillment of federal license requirements. The California Department of Fish and Game (Department) operates IGH with PacifiCorp funding 80 percent of the hatchery's operation and maintenance. Three species of anadromous salmonids are spawned and reared at IGH. They include fall chinook or king salmon (*Oncorhynchus tshawytscha*), coho or silver salmon (*O. kisutch*), and fall run steelhead (*O. mykiss*). Hatchery mitigation roles require the rearing of 200,000 yearling steelhead. Other mitigation goals include 6 million chinook and 75,000 yearling coho.

Since 1991, returns of adult steelhead to IGH have been insufficient to meet the 200,000 yearling release goal. In addition, Department fishery biologists and hatchery personnel have noted that over the past several years adult steelhead in the Klamath River upstream of the Interstate 5 bridge have begun to appear and behave more like resident trout. These changes have not gone unnoticed by local anglers and river guides who are developing a fairly popular fishery around these fish. Limited scale analysis performed in 1993 by the Department, indicated that of the 12 scale sets examined, only 3 could be interpreted as possessing any ocean growth patterns. This information has led to concerns regarding hatchery steelhead remaining in the river and competing with or preying on naturally produced salmonids. To date, no rigorous study has been performed to evaluate this perceived problem.

In FY 2000 the fishery biologist position became vacant at the start of the field season and therefore no further work was not started. Currently the biologist position is filled and this winter will begin the study. The project will proceed as documented in the original proposal. Any changes in protocol will be presented in progress reports.

Project Update

Similar work on residualism of hatchery steelhead is occurring in other systems (see References). These projects will be contacted to gather information on their findings. Applicable methods will be incorporated as needed.

Initial electrofishing trials determined that sampling the Klamath River with an aluminum boat would be difficult. The rocky nature of the channel within the study area is better sampled with an inflatable raft. We are constructing an electrofishing raft similar to one effectively used by EPA crews this past summer.

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