

12-15-2008

I am writing to express my support of the proposed Kilarc Reconstruction Alternative. This alternative addresses Kilarc portion of the Kilarc-Cow Creek project.

This project includes ceasing the decommission proposed by Pacific Gas and Electric, converting the Kilarc facility to hydropower, and provides addition of rearing and spawning habitat for Steelhead Trout (*Oncorhynchus mykiss*) which are found as either threatened or endangered on the Federal list of endangered and threatened wildlife and plants (<http://www.fws.gov/Endangered/listing/Index.html>).

I was given a tour of various sites of the Kilarc-Cow Creek project by Dick Ely, Ph.D. of Davis Hydro, LLC. I was shown the Kilarc reservoir as well as the proposed rearing and spawning channels for Steelhead Trout.

The needed enhancements to the spawning and rearing channels include adding various gravel sizes along with larger cobble or boulder to provide more water flow dynamics and flow variation. Vegetative cover should be added along the banks to increase shade and add to microbiological activity. The addition of netting screen at appropriate canal sites will help to reduce predation from fish in the forebay and shuttle fish into the bypass. Disease and predation management could provide an advantage to fish reared in these canals. The addition of Steelhead Trout via production at the Kilarc facility could provide for increased numbers of anadromous fish and/or increased numbers of fish that remain in the Kilarc reservoir as resident Rainbow Trout.

It is unclear; however, if anadromous Steelhead Trout have actually populated South Cow Creek. Differentiation between a resident Rainbow Trout and a sea-run anadromous Steelhead Trout is difficult since there are no major phenotypic differences between the two. Chemical analysis of otoliths can determine this; however, it is unclear if such analysis has been done on populations of *O. mykiss* within the Cow Creek drainage.

Another limiting factor for persistence of a self-sustaining population of anadromous Steelhead Trout is the existence of Whitmore Falls (downstream of the Kilarc facility). NOAA and CDFG biologist have assessed that the falls are passable during high flow events. It is difficult to determine whether or not Steelhead Trout could get past the Whitmore Falls during "normal" flow conditions.

Prior to acceptance or implementation of the Kilarc project should be further study towards the downstream effects of the projects. My recommendations are to determine the effects upon water temperature (if any) to downstream resident populations of fish, invertebrates, and aquatic plants. Further study is needed to determine that the *O. mykiss* populations are actually Steelhead Trout and not resident Rainbow Trout. Implementation of a fish ladder at the Whitmore Falls site could have a significant advantage to anadromous salmonids.

On a personal note, the loss of Kilarc Reservoir through decommissioning of the Kilarc facility would be a terrible loss. The reservoir provides bank fishing from all sides and is assessable by seniors and the disabled (ADA). The damage done downstream by the creation of a dam has already been done when the Kilarc facility was first implemented over a century ago. Conversion of Kilarc to a green, hydro-electric facility would have positive effects for fish and for the environment.

Sincerely,

Ryan Fogerty
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