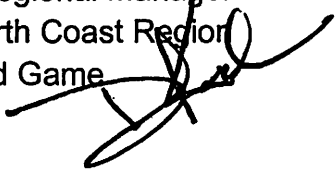


M e m o r a n d u m

To: Ms. Katherine Mrowka, Chief
Watershed Unit 3
Division of Water Rights
P.O. Box 2000
Sacramento, CA 95812-2000

Date: February 7, 2007

From: **DONALD B. KOCH**, Regional Manager
Northern California-North Coast Region
Department of Fish and Game
601 Locust Street
Redding, CA 96001



Subject: Application 29449 of Doug Cole, Marble Mountain Ranch, Stanshaw Creek, Siskiyou County

The Department of Fish and Game has received your December 6, 2006, letter which states there has been recent progress in addressing the public trust resource needs associated with Application 29449. You requested a response within 45 days which states any proposed protest dismissal conditions that have been developed for this matter. The Department is not sure what progress you are referring to. Department staff attempted to call you, however, you have been out of the office for several weeks. An attempt was made by the Department to assist the land owner with grant funding to route diverted water back to the Stanshaw Creek watershed. That grant was not funded due, in part, to the unresolved water right issues relating to this diversion.

This diversion was the subject of a complaint investigation as well as a protest on Water Right Application 29449 by the Department on March 17, 2000. The Department has written several letters which should be in the Board's records. Our latest correspondence was a July 5, 2005, letter to Mr. Doug Cole which outlined our primary concerns with this diversion. Board staff received a copy of that letter.

As we stated in our November 20, 2001, letter to the Board, as well as in our letter to Mr. Cole, our primary concerns are for the coho salmon (*Onchorhynchus kisutch*) which rear in the lower reach of Stanshaw Creek below Highway 96.

We believe the Highway 96 culverts are currently a barrier to upstream migration of fish. The Department, therefore, has focused our concerns and mitigation measures on the 0.25 mile stream reach downstream of these culverts. This stream reach is characterized by deep pools, large woody debris, dense overhanging riparian cover shading the stream, and generally cool water temperatures thus providing good rearing and refuge habitat for juvenile coho salmon and steelhead trout (*Oncorhynchus mykiss*).

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Coldwater habitats such as those provided by Stanshaw Creek are important refuges for juvenile coho salmon which may need to escape the warmer temperatures and low dissolved oxygen levels occasionally found in the Klamath River during the warm summer and early fall months. However, critical coldwater refuge habitats for coho salmon and steelhead in lower Stanshaw Creek need to be accessible to the fish, so sufficient water needs to stay in the stream to maintain connectivity to the Klamath River all year.

The Department currently proposes year-round bypass flows of 2.5 cubic feet per second (cfs) to be measured at the culverts below Highway 96 to mitigate potential impacts from the diversion on Stanshaw Creek. Our objective for these flows is to ensure that existing instream habitat conditions in Stanshaw Creek for coho salmon and steelhead are maintained. Water temperatures should remain cold and year-round access to the stream from the Klamath River is a better guarantee. To accomplish this objective, we recommend the total stream flow be bypassed whenever it is less than the designated amount. Based on field reviews and best professional judgment, it was determined that 2.5 cfs should maintain connectivity and an adequate channel which allows young salmonids access to Stanshaw Creek from the Klamath River. However, the Department may require additional bypass flows in the future if conditions change such that 2.5 cfs is no longer adequate to allow salmonid passage at the mouth of Stanshaw Creek. Future modification of the barriers or more detailed studies may also indicate a need for higher instream flows.

It is our understanding from discussions with Board staff that water is currently diverted from Stanshaw Creek even when there is not enough flow to run the hydroelectric generators. We believe this procedure results in water being wasted and not being put to beneficial use. This procedure typically occurs during critically dry periods when natural flows are needed to maintain salmonid access from the Klamath River to cooler water, rearing, and refuge habitat found in Stanshaw Creek. If the stream flow in Stanshaw Creek is less than the amount needed to run the hydroelectric plant (3 cfs), then water for power generation should not be diverted and the entire natural flow of Stanshaw Creek should be bypassed to maintain the downstream fishery resources.

During both inspections, various options were discussed which could help satisfy the required downstream flow conditions. We believe two options have merit for the Board and the owner to consider. One option would be returning diverted flows back to Stanshaw Creek after the water is used to generate electricity. Currently, tailwater is discharged to the adjacent drainage of Irvine Creek. Second, improvements to the open ditch system and/or updating the hydroelectric generation system may also allow the applicant to divert less water while still meeting the needs for domestic purposes and electric generation.

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If you have any questions or comments regarding this memorandum, please contact Staff Environmental Scientist Jane Vorpapel at (530) 225-2124.

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