To : Stanshaw Creek File

May 30, 2000

From: Siskiyou Fisheries Unit

Subject : Survey of Stanshaw Creek Near Somes Bar, California

A stream survey was made on May 25, 2000 in lower Stanshaw Creek from its confluence with the Klamath River upstream to the lower discharge end of the twin concrete box culverts traversing beneath State Highway 96, a distance of 204 yards. The survey was conducted by Dennis Maria, Associate Fishery Biologist, with assistance from DFG warden, Ron Presley, and Annie Manji and Jane Vorpagel (both DFG - ES III's). Others present during the survey included Konrad Fisher (landowner), and his caretaker Michael David Fellows.

The survey was prompted by a water rights application which was filed by Mr. Doug Cole who owns and operates the Marble Mountain Ranch. Mr. Cole filed for a permit which would allow him to divert a total of 3.0 cubic-feet-per-second of water from Stanshaw Creek for power generation and domestic use. The water would be diverted down an existing ditch which has operated since the latter 1860's. The purpose of the survey was to evaluate the aquatic resources supported by Stanshaw Creek and the minimum flow needed to protect these resources.

The stream survey was conducted in the morning and the sky was clear. Water clarity was very good and the stream temperature was 13°C (55.4°F). The total dissolved solids was measured at 60 µS using a Cole-Parmer (TDSTestr 3 w/automatic temperature compensation). Flow in Stanshaw Creek was 2.3 cubic-feet-per-second as measured at the tail-out of the relatively large pool immediately downstream of the Hwy 96 twin box culverts. This amount of flow was barely adequate to sustain fishlife and to maintain unimpeded access for juvenile steelhead in the creek below highway 96. It is anticipated that if the streamflow drops below 2 cfs this would create a low flow barrier near the mouth where the channel is aggraded and wide and stream braiding is occurring.

Settings on the backpack electro-shocker unit (Smith-Root Model 12) were 300 volts with a wavelength frequency setting of 90 cycles-per second. A single pass was made from immediately above the large backwater pool formed near the mouth up to the large pool below the highway culverts, a distance of 204 yards.

Twenty-seven juvenile putative steelhead trout (8 YOY & 18 yearlings and 1 age 2+) ranging between 1.5 and 6 inches were captured and positively identified as to species. Two pacific giant salamanders and one small bullfrog were also observed.

The twin culverts that run under State highway 96 are considered the upper boundary for steelhead in this stream. The greater than 2 feet drop into the pool below present a barrier to

juvenile steelhead not only because of the jump height but because of the unrestricted, relatively high velocity of the water through its entire 111 yard (333 feet) length. In addition, the creek steepens very abruptly about 30 feet upstream of the upper end of the twin culverts starting with a 20-foot long and very steep cascading falls which may be a barrier to adult steelhead. If spawning and/or rearing conditions are favorable for steelhead above the culverts and bedrock falls then it is recommended that the culvert and bedrock falls receive further evaluation in terms of their hindrance to adult steelhead spawners.

Recommendation: Flows be maintained at a level which will provide unimpeded access. The 2.3 cfs measured on May 25, 2000 appears to provide the needs of juvenile steelhead at this time but is close to the minimum flow required to maintain fish access near the mouth. A recommendation will be made to US Forest Service to evaluate in-stream habitat for steelhead above the bedrock chute above the State Hwy 96 crossing. If adequate spawning and/or rearing habitat is found to exist above this bedrock barrier, then efforts should be made to baffle the culverts and remove the bedrock barrier.

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