Appendix C

Upper Subbasin

Historical Stream Field Survey Notes

Little Van Duzen River

Field Note: July 15, 1985

A stream survey on the Little Van Duzen River from ¼ mile downstream of Blanket Creek (river mile, RM, 15.5) to Bear Creek (RM 16.75) was conducted on July 15, 1985. The survey covered a distance of 1.25 miles. The pool to riffle ratio below Blanket Creek was 1:10 while above Blanket Creek pools were less frequent with a pool to riffle ratio of 1:20. The pools were generally shallow averaging 1 to 2 feet deep with a maximum of six feet in depth reported. The channel bottom was composed mostly of boulders and rubble. Only 15 percent gravel and 10 percent sand and silt. Alders and willows were reported to be coming in well since the 1964 flood. Water temperature in the mouth of Blanket Creek was 65°F at 12:20 and in the LVD it was 67°F at the same time. The flow was estimated at 4-5 cfs. Instream cover was lacking. Spawning gravel was sedimented but suitable for steelhead. Steelhead/rainbow trout were noted as abundant to 9 inches in length, with numerous young of the year (yoy). Three to four year classes present. Generally, the channel was still aggraded, with Bear Creek extremely aggraded.

Field Note: September 26, 2006

California Department of Fish and Wildlife (CDFW) fisheries biologist, Steve Cannata, and Pacific States Marine Fisheries Commission (PSMFC) geologist, Dave Heaton performed a reconnaissance level stream survey on the Little Van Duzen River approximately half a mile downstream of Butte Creek (RM 3.2) on September 26, 2006. This section of river flows through an alluvial valley. The stream threads through alluvium composed of gravel, cobble and small boulders and sand. Section of the stream are bifurcated with a vegetated gravel bars between the two stream flows. Combined flow was about 2cfs. Water temperature was 59° and air temperature was 73° F. It had been cool for about a month especially at night. No salmonids were observed. Only what appeared to be roach. The reach looks highly aggraded with cobble and small boulder sized sediments.

Figure 1. The Little Van Duzen River at confluence with Butte Creek.

Butte Creek

Field Note September 26, 2006

On Sept. 26, 2006 CDFW fisheries biologist, Steve Cannata, visited Butte Creek with PSMFC geologist, Dave Heaton. The surveryors found that the lower 1,000 ft. portion of Butte Creek (Figure 2) to be low gradient and contains about 60% or greater pool habitat by length. Stream flow was barely moving in this reach and discharge at the time was about 1 cfs near the mouth. The creek side vegetation was composed of oak, alder and ash and these tree species provided a good shade canopy (85%). Conifers were rare except for an occasional ponderosa pine. Water temperature was 53°F and air temperature was 62°F. Cool nights have predominated the weather over the last month or two. Butte Creek is thought to be an excellent steelhead stream. The surveyors walked upstream of the confluence about 100 yards and observed only one 7 inch trout and a few juvenile minnows, probably roach.

The surveyors then drove across HWY 36 and briefly surveyed the creek from the road that follows the drainage. The creek flows within a broad valley with a thin riparian belt (about 50% shade over the stream provided by hardwood trees) for about a mile before entering denser forest.

Figure 2. Lower Butte Creek.

The first road crossing (Figures 3 & 4) is composed of two culverts and a high flow wet crossing. Surveyors observed about 25-30 1+ and yoy salmonids at the downstream end. A large store of gravel is located upstream of this culvert, indicating that the culverts are restricting flows and causing sediment deposition in the reach above.

About one mile further upstream is the second stream crossing (Figures 5 & 6) built of two culverts and high water crossing. Eel River Watershed Improvement Group (ERWIG) staff were finishing a series of boulder weirs that were built to facilitate passage through the culverts. A concrete apron was removed. Approximately 35 juvenile salmonids were removed from the work site. We did not observe evidence of sediment accumulations upstream of this crossing.

Figure 3. First road crossing on Butte Creek

Figure 4. Dry channel of Butte Creek looking upstream of arched culvert.

Dry channel and sediment aggradation due to flow constriction at culvert.

Figure 5. Butte Creek looking downstream of second road crossing (arched culvert).

Figure 6. Second road crossing on Butte Creek with arched culvert with jump pool construction by ERWIG 2006.