

Big Bar Ranger District
Devils Canyon Creek, T.7N., R.7E., Section 26
July 29-31, 1985
Surveyors: R. Feranna, M. Lau

Devils Canyon Creek was surveyed visually and sampled with hook and line from its confluence with New River to 2.1 miles upstream. This medium sized stream (4.5 c.f.s.) was rated Class II because it supports moderate numbers of anadromous and resident rainbow trout and exerts a moderate flow influence on downstream water quality. Devils Canyon Creek was previously surveyed on October 9, 1974.

Devils Canyon Creek was a medium sized perennial stream originating in the Trinity Alps Wilderness Area. It flows northwest through mountainous terrain dominated by Douglas-fir. Numerous snags remain on the side slopes from Jim Jam ridge fires. Understory growth included brush species of Ceanothus, scrub oak and poison oak, while the stream corridor was dominated by alder, dogwood, maple, and oak. Side slopes were very steep throughout the surveyed section (60%-140%). Stream gradient averaged 5% while stream and channel widths averaged 25 and 50 feet, respectively.

Fish habitat was rated good throughout the surveyed reach. Pool:riffle ratio was 1:1 with abundant spawning riffle areas. Pools were formed primarily by rock and bedrock and averaged 15 feet in diameter and were approximately 30% Class A and 40% Class B. In-pool shelter was rated good and was provided by bedrock, boulder and depth. Shade canopy was medium (25%) and was provided by red alder, dogwood, oak and big leaf maple.

Overall, productivity was rated excellent. Aquatic fish food abundance was (62 ft) with caddisfly larvae dominating; dipteran, mayfly, and stonefly larvae were commonly noted.

Aquatic plants were abundant with Nostoc dominating. Filamentous green algae, Eauistium, Darmera and Aralia were common.

Rainbow trout/steelhead were common (15-25/100 ft.). The trout ranged 2-12 inches and averaged 6 inches in length. Reproduction was rated good with fry common (20-40/100 ft). Gravelly riffle areas and pocket gravels suitable for spawning salmonids were abundant. However, the gravels contained sediments which clouded the water when disturbed. Fines made up approximately 10% of the gravels.

Water temperature was estimated at 65°F (1300, 75°F air). Water quality was excellent with no turbidity at this flow (4.5 c.f.s.). Bank and channel stabilities were rated good-excellent due to the abundance of boulders and bedrock in the channel.

No diversions were seen. Six barriers, one spring and one tributary were identified as follows:

Barriers:

B-1 (see photos) was a 8 foot high alluvial delta approximately 200 feet in length, This was a complete barrier only at low flows. Modification of this

barrier to improve passage is recommended to provide access of 4,000 feet of stream habitat for steelhead.

B-2 is a four foot high log-debris jam partial barrier located approximately 1,500 feet upstream. It is formed by a 28 inch diameter log across the channel which has about five cubic yards of fine sediment stored above it.

B-3 is a complete barrier at low flows created by a series of bedrock-boulder cascades over 400 feet of stream with about a 9% gradient overall. Summer steelhead passage is impossible due to low flows and the number of large boulders. Development of fish passageways is recommended because it would open up 3 miles of stream to summer steelhead, the gradient decreases (2-5%) upstream and excellent spawning areas are available. Location of this barrier is 0.75-1 mile upstream.

B-4 is a partial barrier to resident rainbow trout only. It is formed by bedrock, boulder cascades with an 8% gradient. This barrier is located two miles upstream.

There were several small, nonmeasurable, nonsignificant seeps encountered from 0.75 mile upstream to the end of the survey 4.5. Two tributaries were noted. T-1 is a dry ephemeral located east bank approximately 0.5 mile upstream; T-2 is a perennial entering on the east bank located 1.25 miles upstream. Its flow was estimated at 0.25 c.f.s with water temperature was 56°F. It is a Class IV stream with no fishery potential.

Access to the mouth of Devil's Canyon Creek is good via Forest Service Road 7N01 which parallels the New River. The channel is open enough to allow hiking upstream.

Devils Canyon Creek is located in the Trinity Alps Wilderness Area. Fish habitat for the rainbow trout/steelhead was rated good. Because of the large numbers of summer adult steelhead in the New River, it is recommended that barrier removal work be done in order to improve accessibility.

Management Recommendations:

A high priority fish habitat improvement project should be the construction of a fish passage over B-1 (see photo). This barrier can be easily accessed by the Denny Road. In addition, this barrier lies outside of the border of the Trinity Alps Wilderness Area and thus work on the barrier avoids wilderness restrictions. A passageway would improve access of 4,000 feet of stream which would significantly increase the availability of spawning and rearing habitat to summer steelhead in Devils Canyon Creek. In addition, removal of the large boulders making up B-3 would open up 3 miles of stream to adult summer steelhead.

Any activities that would degrade present water quality and/or increase the existing sediment load should be restricted.

Michael Lau
Biological Technician, Fisheries