

STREAM INVENTORY REPORT

Campbell Creek

WATERSHED OVERVIEW

Campbell Creek is a tributary to South Fork Ten Mile River. Elevations range from 40 feet at the mouth of the creek to 1,500 feet in the headwater areas. Campbell Creek confluence location is T19N R17W S14, 39° 30'43" N. latitude, 123°43'15" W. longitude on the USGS Dutchmans Knoll 7.5 minute quadrangle.

HABITAT INVENTORY RESULTS

The habitat inventory of August 15 through August 16, 1994, was conducted by Warren Mitchell and David Lundby. The total length of surveyed stream in Campbell Creek was 19,193 feet (3.6 miles) (Table 1). Side channels comprised 162 feet of this total.

Campbell Creek is comprised of two reaches: B4 for 11,623 feet and C4 for 7,408 feet.

Table 1 summarizes the Level II habitat types. Of the Level II habitat types, riffles comprised 26%, flatwater 30% and pools 42% (Graph 1). Of the total survey length, riffles comprised 19%, flatwater 53% and pools 25% (Graph 2).

Thirteen Level IV habitat types were identified (Table 2). Of the Level IV habitat types, the most frequently occurring were low gradient riffles, 26%, step runs, 16%, and runs, 14% (Graph 3). Of the total survey length, step runs comprised 42%, low gradient riffles 19% and runs 11% (Table 2).

Table 3 summarizes main channel, scour and backwater pools which are Level III pool habitat types. Scour pools were most often encountered at 76% occurrence and comprised 73% of the total length of pools.

Table 4 is a summary of maximum pool depths by Level IV pool habitat types. Pools with depths of two feet or greater are considered optimal for fish habitat. In Campbell Creek, 52 of the 149 pools (35%) had a depth of two feet or greater (Graph 4).

The depth of cobble embeddedness was estimated at pool tail-outs. Of the 149 pool tail-outs measured, 0% had a value of 1, 0% had a value of 2, 13% had a value of 3 and 87% had a value of 4 (Graph 5).

Of the Level II habitat types, pools had the highest mean shelter rating at 29 (Table 1). Of the Level III pool habitat types, scour pools had the highest mean shelter rating at 33 (Table 3).

Of the 149 pools, 51% were formed by large woody debris: 32% by logs and 18% by root wads (calculated from Table 5).

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Table 6 summarizes dominant substrate by Level IV habitat types. Of the low gradient riffles fully measured, 98% had gravel as the dominant substrate (Graph 6).

Mean percent closed canopy was 83%: 31% coniferous trees and 52% deciduous trees. Mean percent open canopy was 17% (Graph 7, calculated from Table 7).

Mean percent right bank vegetated was 71% while mean percent left bank vegetated was 73%. Brush occurred most often as bank vegetation at a mean percent of 40 (of units fully measured). Sand/silt/clay occurred most often as bank substrate with a mean percent of 95 (of units fully measured) (Table 7).

COMMENTS AND LANDMARKS

The following landmarks and possible problem sites were noted. All distances are approximate and taken from the beginning of the survey reach.

Position (ft):	Comments:
236	First bridge crossing.
771	Second bridge crossing.
3222	RBA site 1.
3253	Hobo temperature monitor site.
5999	Large debris accumulation (LDA) retaining gravel.
7083	Fallen alder retaining woody debris, cobble and gravel.
8380	Left bank failure measures 60' long x14' high.
8961	LDA measures 15' long x 25' long x 4' high.
10245	LDA measures 40' long x12' wide x5' high, retaining gravel.
12013	Railroad trestles holding fallen bay, forcing flow to scour left bank.
12486	LDA measures 20' wide x7' long x5' high, retaining gravel and sand.
18306	Two LDAs, both measure 20' wide x12' long x 5' high, retaining small woody debris (SWD) and gravel.

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- 18395 Log retaining gravel and cobble.
- 18440 Collapsed Humboldt crossing is forming LDA measuring 36' long x 19' wide x 6' high, retaining sand, gravel and SWD.
- 19031 End of survey. Creek splits in two equal forks. Right fork: no fish observed, channel narrows and gradient increases. Left fork had YOY scattered throughout until gradient increased, flow goes intermittent. No spawning habitat past this point.

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