STREAM INVENTORY REPORT

Bald Hill Creek Watershed

WATERSHED OVERVIEW

Bald Hill Creek is a tributary to North Fork Ten Mile River, located in Mendocino County, California. Bald Hill Creek's legal description at the confluence with North Fork Ten Mile River is T19N R16W S09. Its location is 39°36'12" N. latitude and 123°38'25" W. longitude according to the USGS Dutchman's Knoll 7.5 minute quadrangle. Elevations range from about 200 feet at the mouth of the creek to 2,000 feet in the headwater areas. Two unnamed tributaries to Bald Hill Creek, commonly know as, and herein after referred to as, East Branch Bald Hill Creek and North East Fork Bald Hill Creek were also surveyed.

HABITAT INVENTORY RESULTS

The habitat inventory of August 17 through 24, 1995, was conducted by Diana Hines, David Lundby and Dave Wright. The results from Bald Hill Creek and its two tributaries are presented as the Bald Hill Creek watershed unless otherwise stated. The total length of stream in Bald Hill Creek surveyed was 14,211 feet with an additional 174 feet of side channel. The total length for East Branch Bald Hill Creek was 5,454 feet. The total length for North East Fork Bald Hill Creek was 3,173 feet. Neither of these tributaries had side channels. The total length of stream surveyed in the Bald Hill Creek watershed, including side channels, was 23,012 feet (4.4 miles) (Table 1).

Flow was measured in the Bald Hill Creek watershed on August 18, 1995. Flow measured at the mouth of Bald Hill Creek was 1.61 cubic feet per second (cfs). Flow measured on East Branch Bald Hill Creek was 0.62 cfs. Flow measured on North East Fork Bald Hill Creek was 0.25 cfs.

Bald Hill Creek is comprised of three reaches. Reach 1 is a B3 channel type for the first 5,677 feet, Reach 2 is an F2 channel type for the next 7,555 feet, and Reach 3 is a B2 channel type for the remaining 979 feet of creek. East Branch Bald Hill Creek consists of one reach and is a B3 channel type for the entire 5,454 feet. North East Fork Bald Hill Creek consists of three reaches. Reach 1 is an F2 channel type for the first 1,292 feet, Reach 2 is a B3 channel type for the next 1,409 feet, and Reach 3 is an F3 channel type for the remaining 472 feet of creek.

Table 1 summarizes the Level II riffle, flatwater, and pool habitat types. By percent occurrence, riffles comprised 28%, flatwater 28% and pools 42% of the habitat types (Graph 1). Riffle habitat types made up 22% of the total survey length, flatwater 47% and pools 26% (Graph 2).

Seventeen Level IV habitat types were identified in the Bald Hill Creek watershed. These data are summarized in Table 2. The most frequently occurring habitat types were

low gradient riffles, 22%, mid-channel pools, 20%, and step runs, 18% (Graph 3). The most prevalent habitat types by percent total length were 39% step runs, 17% low gradient riffles, and 12% mid-channel pools.

Table 3 summarizes main channel, scour and backwater pools, which are Level III pool types. Scour pools were most often encountered at 51% occurrence and comprised 53% of the total length of pools.

Table 4 is a summary of maximum pool depths by pool habitat types. Pools with a depth of two feet or greater are considered optimal for fish habitat. Of the 261 pools, 109 (42%) were two feet or more in depth (Graph 4).

The depth of cobble embeddedness was estimated at pool tail-outs. Of the 261 pool tail-outs measured, 12% had a value of 1, 35% had a value of 2, 34% had a value of 3 and 19% had a value of 4 (Graph 5).

Of the Level II habitat types, pools had the highest mean shelter rating at 68 (Table 1). Of the Level III pool types, backwater pools had the highest mean shelter rating at 77 (Table 3).

Of the 261 pools, 16% were formed by large woody debris (LWD): 7% by logs and 10% by root wads (calculated from table 4).

Table 6 summarizes the dominant substrate by Level IV habitat types. Of the low gradient riffles measured, 75% had gravel as the dominant substrate (Graph 6).

Mean percent closed canopy was 87%: 37% coniferous and 50% deciduous. Mean percent open was 13% (Graph 7).

Table 7 summarizes the mean percent substrate/vegetation types found along the banks of the stream. Mean percent right bank vegetated was 49% while the mean percent left bank vegetated was 50%. Deciduous trees were the dominant bank vegetation type observed in 44% of the units fully measured. Additionally, 39% of the units had coniferous trees as the dominant bank vegetation, including downed trees, logs, and root wads. The dominant substrate composing the structure of the stream banks was sand/silt/clay, found in 45% of the units fully measured.

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.

Bald Hill Creek

Position (ft):	Comments:
754	Channel type measured.
1,871	Bridge crossing.
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1,907	Bridge crossing - artificial boulders, bridge is providing canopy.
2,179	RBA site BH #1.
2,233	Hobo temperature monitor site.
2,375	Hobo temperature monitor site.
3,119	Tan oak left bank failure contributing fines, tree 2' above creek transverse.
3,207	Tan oak bank failure.
4,185	Left bank failure measures 60’ long x 40’ high, contributing fine sediment to the channel.
4,303	Right bank failure contributing fine sediment to the channel.
4,338	Right bank failure measures 80’ long x 30’ high. Eight small tan oaks, four14' long Douglas firs across creek - rootwads creating scour.
5,256	Right bank failure contributing fine sediment, one massive tan oak in creek.
5,412	Left bank failure measures 50’ long x 50’ high, contributing fine sediment to the channel. Douglas fir in creek.
5,558	Confluence with East Branch Bald Hill Creek.
5,827	Left bank failure measures 70’ long x 30’ high, contributing fine sediment to the channel. Douglas fir/tan oak in creek.
5,899	Channel type measured.
6,181	Log jam measures 15' long x 40' wide x 6' high.

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6,238	Probably a plunge in high flow.
6,311	LWD jam over creek, sub surface flow here and there.
6,464	Dry tributary on right bank.
8,668	Right bank tributary.
10,051	Confluence with North East Fork Bald Hill Creek.
10,365	Log jam measures 39’ long x 40’ wide x 7’ high of log jam.
10,492	8’ high plunge.
11,447	Right bank tributary.
11,671	Right bank failure measures 150’ long x 80’ high, contributing fine sediment to the channel. LWD in creek
12,368	6' high plunge.
12,486	Left bank failure measures 40’ long x 50’ high, contributing fine sediment to channel.
13,297	Channel type measured. Lots of fish observed.
13,546	Possible fish barrier: 9' high plunge from a dry unit
13,732	No fish observed.
13,800	No fish observed.
13,923	No fish observed.
13,972	Unit ends at a 5' vertical plunge to a bedrock pool, then a 7' high plunge. Probable barrier.
14,211	End of survey at end of anadromy: 65' vertical bedrock waterfall.

East Branch Bald Hill Creek

Position (ft):	Comments:
300	Log jam measures 6' high x 20' wide x 10' long, mostly LWD.

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636	Right bank failure measures 30' long x 12' high, contributing sand and gravel.
1100	Channel type measured.
1889	Log providing 3' of cover.
2200	Cascade has approximately 70% slope.
2270	11% slope over approximately 70' distance.
2288	Right bank failure measures 60' long x 40' high, contributing sand and cobble to the channel.
2419	Still observing fish.
3244	Road crossing.
3671	Log jam measures 12' wide x 8' high x 6' long, mainly LWD.
3929	Left bank failure measures 14' high x 30' long.
4006	Steelhead observed.
5162	Right bank failure measures 25' high x 40' long, contributing sand and gravel to the channel.
5277	Log jam measures 10' high x 30' wide x 16' long.
5370	Right bank failure measures 10’ high x 35’ long, contributing sand and cobble to the channel.
5454	End of survey due to end of anadromy. 18' high waterfall. No fish observed in 300’ upstream of waterfall.

North East Fork Bald Hill Creek

Position (ft):	Comments:
611	Log jam measures 30' wide x 12' high x 30' long, consists of LWD.
801	Log jam measures 25' wide x 16' high x 20' long. Possible fish barrier.

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1140	Fish have not been seen since unit # 26.
1231	Channel type measured.
1246	Approximately 6' high plunge.
1476	8' high plunge.
1564	Log jam measures 7' high x 15' wide x 12' long.
1784	Log jam measures 17' high x 30' wide x 25' long. Culvert running along unit with 2' diameter, 40’ long.
2005	Log jam measures 12' high x 25' wide x 12' long, consists of LWD.
2796	Dry unit has slope of approximately 20 degrees.
2852	Dry tributary on right bank has approximately 30% slope.
3173	End of survey. Lack of suitable spawning habitat, high embeddedness, highly entrenched channel, slope is 12.8%. No fish observed since unit # 26 or approximately 1,800' upstream from the mouth.

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