STREAM INVENTORY REPORT

UNNAMED DUNN CREEK TRIBUTARY

WATERSHED OVERVIEW

Unnamed Dunn Creek Tributary is tributary to Dunn Creek, tributary to Cottaneva Creek, located in Mendocino County, California (Figure 1). Unnamed Dunn Creek Tributary's legal description at the confluence with Dunn Creek is T23N R18W S35. Its location is 39°48′03″ north latitude and 123°49′ 46″ west longitude. Unnamed Dunn Creek Tributary is a first order stream and has approximately 0.5 miles of blue line stream according to the USGS Hales Grove 7.5 minute quadrangle. Unnamed Dunn Creek Tributary drains a watershed of approximately 0.9 square miles. Elevations range from about 350 feet at the mouth of the creek to 1600 feet in the headwater areas. Redwood and Douglas fir forest dominates the watershed. The watershed is privately owned and is managed for timber production. Foot access is available from a private road by crossing Dunn Creek to the mouth of Unnamed Dunn Creek Tributary.

HABITAT INVENTORY RESULTS AND DISCUSSION

The habitat inventory of June 13, 1995, was conducted by Craig Mesman (CCC) and Kyle Young (WSP/AmeriCorps). The total length of the stream surveyed was 3,364 feet with an additional 16 feet of side channel.

Flows were not measured on Unnamed Dunn Creek Tributary.

Unnamed Dunn Creek Tributary is an F4 channel type for the entire 3,364 feet of stream surveyed. The suitability of F4 channel types for fish habitat improvement structures is described in the main body of this report.

The water temperatures recorded on the survey day June 13, 1995, ranged from 54 to 56 degrees Fahrenheit. Air temperatures ranged from 55 to 61 degrees Fahrenheit. This is a good water temperature range for salmonids, but water temperature data for the warm summer months are lacking. For a more complete and accurate water temperature profile, 24-hour temperatures would need to be monitored throughout the warm summer months.

Based on the total **length** of this survey, Level II habitat units consisted of 52% riffle units, 25% flatwater units, and 21% pool units. The pools are relatively shallow, with only 8 of the 49 pools (16%) having a maximum depth greater than 2 feet.

Fifteen of the 47 pool tail-outs measured had an embeddedness rating of 1. Only 11 had ratings of 3 or 4. Cobble embeddedness of 25% or less, a rating of 1, is considered to indicate good quality spawning substrate for salmon and steelhead.

The mean shelter rating for pools was low with a rating of 35. The shelter rating in the flatwater habitats was 20. A pool shelter rating of approximately 100 is desirable. Log and root wad cover structures in the pool and flatwater habitats are needed to improve both summer and winter salmonid habitat.

All of the 8 low-gradient riffles measured had gravel as the dominant substrate. This is generally considered good for spawning salmonids.

The mean percent canopy density for the stream was 93%. This is a relatively high percentage of canopy. In general, revegetation projects are considered when canopy density is less than 80%.

The percentage of right and left bank covered with vegetation was high at 87% and 77%, respectively. In areas of stream bank erosion or where bank vegetation is not at acceptable levels, planting endemic species of coniferous and deciduous trees, in conjunction with bank stabilization, is recommended.

BIOLOGICAL INVENTORY RESULTS

One site was electrofished on August 3, 1995, in Unnamed Dunn Creek Tributary. The site was sampled by Craig Mesman (CCC) and Kyle Young (WSP/AmeriCorps).

The site sampled included habitat units 13-17, a series of runs, riffles, and a mid-channel pool approximately 380 feet from the confluence with Dunn Creek. This site had an approximate length of 99 feet. The site yielded three Pacific giant salamanders.

RECOMMENDATIONS

1) Unnamed Dunn Creek Tributary should be managed as an anadromous, natural production stream.

2) Where feasible, design and engineer pool enhancement structures to increase the number of pools or deepen existing pools. This must be done where the banks are stable or in conjunction with stream bank armor to prevent erosion.

3) Increase woody cover in the pools and flatwater habitat units. Adding high quality complexity with woody cover is desirable and in some areas the material is at hand.

4) Inventory and map sources of stream bank erosion and prioritize them according to present and potential sediment yield. Identified sites, like the site at 3,088', should then be treated to reduce the amount of fine sediments entering the stream.

5) The limited water temperature available suggest that the maximum temperatures are within the acceptable range for juvenile salmonids. To establish more complete and meaningful temperature regime information, 24-hour monitoring during the July and August temperature extreme period should be performed for 3 to 5 years.

PROBLEM SITES AND LANDMARKS

The following landmarks and possible problem sites were noted. All distances are approximate and

taken from the beginning of the survey reach.

0' Begin survey at confluence with Dunn Creek. Channel type is F4.

301' Relic trestle.

340' Eight foot diameter x 40' long round metal culvert. No baffles. Passable.

2451' Seven foot diameter x 60' long round metal culvert. No baffles.

2672' Four foot plunge over bedrock constriction blocked by woody debris. Possible barrier.

2776' Left bank tributary.

2820' Last noted observation of fish presence.

2872' Cascade over embedded wood. Possible barrier.

3088' Right bank erosion 4' high x 25' long contributing fines.

3178' Log debris accumulation 4' high x 10' wide x 10' long.

3364' End of survey due to increasing gradient and diminished habitat.

LEVEL III and LEVEL IV HABITAT TYPE KEY

HABITAT TYPE	LETTER	NUMBER
RIFFLE		
Low Gradient Riffle	[LGR]	1.1
High Gradient Riffle	[HGR]	1.2
CASCADE		
Cascade	[CAS]	2.1
Bedrock Sheet	[BRS]	2.2
FLATWATER		
Pocket Water	[POW]	3.1
Glide	[GLD]	3.2
Run	[RUN]	3.3
Step Run	[SRN]	3.4

Edgewater	[EDW]	3.5

MAIN CHANNEL POOLS

Trench Pool	[TRP]	4.1
Mid-Channel Pool	[MCP]	4.2
Channel Confluence Pool	[CCP]	4.3
Step Pool	[STP]	4.4

SCOUR POOLS

Corner Pool	[CRP]	5.1
Lateral Scour Pool - Log Enhanced	[LSL]	5.2
Lateral Scour Pool - Root Wad Enhanced	[LSR]	5.3
Lateral Scour Pool - Bedrock Formed	[LSBk]	5.4
Lateral Scour Pool - Boulder Formed	[LSBo]	5.5
Plunge Pool	[PLP]	5.6

BACKWATER POOLS

Secondary Channel Pool	[SCP]	6.1
Backwater Pool - Boulder Formed	[BPB]	6.2
Backwater Pool - Root Wad Formed	[BPR]	6.3
Backwater Pool - Log Formed	[BPL]	6.4
Dammed Pool	[DPL]	6.5