STREAM INVENTORY REPORT

UNNAMED PARLIN CREEK TRIBUTARY B

WATERSHED OVERVIEW

Unnamed Parlin Creek Tributary B is tributary to Parlin Creek, tributary to the South Fork Noyo River, located in Mendocino County, California (Figure 1). Unnamed Parlin Creek Tributary B's legal description at the confluence with Parlin Creek is T18N R16W S35. Its location is 39°22'49" north latitude and 123°37'17" west longitude. Unnamed Parlin Creek Tributary B is an ephemeral stream according to the USGS Northspur 7.5 minute quadrangle. Unnamed Parlin Creek Tributary B drains a watershed of approximately 0.7 square miles. Summer base runoff is approximately 0.02 cubic feet per second (cfs) at the mouth. Elevations range from about 380 feet at the mouth of the creek to 1200 feet in the headwater areas. Redwood and Douglas fir forest dominates the watershed. The watershed is located within Jackson Demonstration State Forest and is managed for timber production. Vehicle access exists via California Department of Forestry and Fire Protection (CDF) Road 340.

HABITAT INVENTORY RESULTS AND DISCUSSION

The habitat inventory of October 4, 1995, was conducted by Kyle Young and Jeffrey Jahn (WSP/AmeriCorps). The total length of the stream surveyed was 1,617 feet with an additional 150 feet of side channel.

Flow was measured at the bottom of the survey reach with a Marsh-McBirney Model 2000 flowmeter at 0.02 cfs on October 4, 1995.

Unnamed Parlin Creek Tributary B is an F4 channel type for the entire 1,617 feet of stream surveyed. The suitability of F4 channel types for fish habitat improvement structures is as follows: good for bank-placed boulders; fair for low-stage weirs, single and opposing wing deflectors, channel constrictors, and log cover; and poor for medium-stage weirs and boulder clusters.

The water temperature recorded on the survey day October 4, 1995, was 54 degrees Fahrenheit. Air temperatures ranged from 67 to 73 degrees Fahrenheit. This is a very good water temperature 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 27% flatwater units, 29% riffle units, and 30% pool units. The pools are relatively shallow, with only 3 of the 37 pools having a maximum depth greater than 2 feet.

Eighteen of the 30 pool tail-outs measured had embeddedness ratings of 3 or 4. Only one had a 1

rating. Cobble embeddedness of 25% or less, a rating of 1, is considered to indicate good quality spawning substrate for salmon and steelhead. In Unnamed Parlin Creek Tributary B, sediment sources should be mapped and rated according to their potential sediment yields, and control measures should be taken.

The mean shelter rating for pools was low with a rating of 33. The shelter rating in the flatwater habitats was 16. A pool shelter rating of approximately 100 is desirable. The relatively small amount of cover that now exists is being provided primarily by terrestrial vegetation in all habitat types. 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 four low gradient riffles measured had gravel or small cobble as the dominant substrate. This is generally considered good for spawning salmonids.

The mean percent canopy density for the stream was 91%. 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 moderate at 67% and 75%, 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.

Unnamed Parlin Creek Tributary B enters Parlin Creek upstream of that section of Parlin Creek presently accessible to coho, however it is accessible to steelhead. Despite severe aggradation throughout the stream and the presence of several potential barriers in the form of log debris accumulations, steelhead were observed upstream of the surveyed reach, suggesting that an undetermined length of stream upstream of the 1,617 feet of stream surveyed are accessible to anadromous fish.

BIOLOGICAL INVENTORY RESULTS

Two sites were electrofished on October 2, 1995, in Unnamed Parlin Creek Tributary B. The units were sampled by Kyle Young and Jeffrey Jahn (WSP/AmeriCorps).

The first site sampled was a 631' reach beginning at the confluence with Parlin Creek. The site yielded one 0+ steelhead, one 1+ steelhead, and two Pacific giant salamanders.

The second site included approximately 200' of each stream fork above the end of the reach surveyed. One 1+ steelhead was sampled.

RECOMMENDATIONS

Unnamed Tributary B

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

2) The culverts under CDF Road 340 need to be maintained or replaced. They are currently clogged, resulting in aggradation of the stream channel upstream of the road, and headward erosion of the roadbed contributing sediment downstream of the road.

3) Active and potential sediment sources related to the road system need to be identified, mapped, and treated according to their potential for sediment yield to the stream and its tributaries.

4) Increase woody cover in the pools and flatwater habitat units. Most of the existing cover is from boulders. Adding high quality complexity with woody cover is desirable and in some areas the material locally available.

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 Parlin Creek. Channel type is F4.
86'	Two 2.5' diameter corrugated metal culverts under CDF road 340. The culverts are clogged, and the resulting sediment accumulation has forced the stream over the roadbed. Downcutting has scoured away most of the road, making it almost impassable, and fish must negotiate one of two poorly scoured plunge pools with 6' jumps to pass the current obstruction.
332'	LDA 5' high x 20' wide x 15' long retaining sediment 4' deep at base.
556'	LDA. Not a barrier and no gravel retained (NBNG).
601'	LDA 5' high x 20' wide x 10' long retaining sediment 3' deep at base.
810'	LDA. NBNG.
964'	LDA 5' high x 10' wide x 4' long retaining gravel 4' deep at base.
1242'	LDA 15' wide x 10' long retaining an unspecified amount of gravel. Possible barrier.
1500'	Right bank erosion contributing gravel and fines.
1617'	End of survey at stream fork. Both forks are accessible to anadromous fish.

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