STREAM INVENTORY REPORT

UNNAMED PARLIN CREEK TRIBUTARY (WALDO GULCH)

WATERSHED OVERVIEW

Unnamed Parlin Creek Tributary, locally known and hereafter referred to as Waldo Gulch, is tributary to Parlin Creek, tributary to the South Fork Noyo River, located in Mendocino County, California (Figure 1). Waldo Gulch's legal description at the confluence with Parlin Creek is T18N R16W S33. Its location is 39°22'44" north latitude and 123°38'48" west longitude. Waldo Gulch is an ephemeral stream according to the USGS Noyo Hill 7.5 minute quadrangle. Waldo Gulch drains a watershed of approximately 0.3 square miles. Summer base runoff is approximately 0.03 cubic feet per second (cfs) at the mouth. Elevations range from about 210 feet at the mouth of the creek to 800 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. Foot access exists by crossing Parlin Creek from California Department of Forestry and Fire Protection (CDF) Road 340 to the mouth of Waldo Gulch.

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 1,064 feet.

Flow was measured at the bottom of the survey reach with a Marsh-McBirney Model 2000 flowmeter at 0.03 cfs on October 4, 1995.

Waldo Gulch is an F4 channel type for the entire 1,064 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 53 degrees Fahrenheit. Air temperatures ranged from 48 to 54 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 18% flatwater units, 20% riffle units, and 52% pool units. The pools are relatively shallow, with only 6 of the 34 pools having a maximum depth greater than 2 feet.

Six of the 19 pool tail-outs measured had embeddedness ratings of 3 or 4. Only 2 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 Waldo Gulch, 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 38. The shelter rating in the flatwater

habitats was 5. A pool shelter rating of approximately 100 is desirable. The relatively small amount of cover that now exists is being provided primarily by large and small woody debris and undercut banks 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.

Three of the four 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 96%. 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 65% and 76%, 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.

No fish were observed or sampled upstream of unit 69, 869' above the confluence with Parlin Creek, where a log and debris accumulation (LDA) appears to impede further passage.

BIOLOGICAL INVENTORY RESULTS

Two sites were electrofished on October 3, 1995, in Waldo Gulch. The units were sampled by Kyle Young and Jeffrey Jahn (WSP/AmeriCorps).

The first site sampled included habitat units 1-10, a series of pools, runs, riffles, and a bedrock sheet extending 104 feet from the confluence with Parlin Creek. The site yielded three 0+ steelhead and one 0+ coho.

The second site included habitat unit 72 to beyond the end of the surveyed reach, a series of alternating riffle/pools and dry units located approximately 902 feet above the creek mouth. This site had a length of approximately 310 feet. No fish were sampled.

RECOMMENDATIONS

1) Waldo Gulch should be managed as an anadromous, natural production stream.

2) 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 locally available.

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.

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.
686'	LDA 5' high x 10' wide x 11' long retaining sediment.
869'	LDA retaining silt. Probable present end of anadromous fish access.
1064'	End of survey due to absence of fish and lack of suitable 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