STREAM INVENTORY REPORT

"Moe Gulch"

WATERSHED OVERVIEW

Moe Gulch is a tributary to Parlin Creek,a tributary to the South Fork Noyo River, located in Mendocino County, California (Figure 1). Moe Gulch's legal description at the confluence with Parlin Creek is T18N R16W S28. Its location is 39°23'06" north latitude and 123°38'30" west longitude. Moe Gulch is an intermittent stream according to the USGS Noyo Hill 7.5 minute quadrangle. Moe Gulch drains a watershed of approximately 0.5 square miles. Summer base runoff is approximately 0.03 cubic feet per second (cfs) at the mouth. Elevations range from about 260 feet at the mouth of the creek to 1100 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 2,355 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.

Moe Gulch is an F4 channel type for the entire 2,355 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 temperatures recorded on the survey day October 4, 1995, ranged from 52 to 53 degrees Fahrenheit. Air temperatures ranged from 56 to 70 degrees Fahrenheit. This is a very 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 30% flatwater units, 26% riffle units, and 40% pool units. The pools are relatively shallow, with only 5 of the 65 pools having a maximum depth greater than 2 feet.

Eight of the 59 pool tail-outs measured had embeddedness ratings of 3 or 4. Seventeen 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 Moe 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 42. The shelter rating in the flatwater

habitats was 30. A pool shelter rating of approximately 100 is desirable. The relatively small amount of cover that now exists is being provided primarily by large woody debris 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 seven 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 98%. This is a 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 72% and 79%, 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 coho were observed or sampled upstream of unit 58, 968' above the confluence with Parlin Creek, where a log and debris accumulation (LDA) appears to impede further passage. Steelhead were observed through unit 148, an additional 1,323 feet upstream. At that point, access for anadromous fish is blocked by a bedrock sheet and an additional LDA.

BIOLOGICAL INVENTORY RESULTS

Three sites were electrofished on October 2, 1995, in Moe Gulch. The units were sampled by Kyle Young and Jeffrey Jahn (WSP/AmeriCorps).

The first site sampled included habitat units 12-17, a series of pools, runs, and a riffle 148 feet from the confluence with Parlin Creek. This site had an approximate length of 80 feet. The site yielded one 0+ steelhead, one 1+ steelhead, one 0+ coho, and two Pacific giant salamanders.

The second site included habitat units 58-70, a series of pools, runs, and riffles 968 feet above the creek mouth. This site had a length of approximately 174 feet. Seven 0+ steelhead and five Pacific giant salamanders were found.

The third site began at unit 149 and extended upstream past the end of the surveyed reach, a series of alternating pool/run combinations and dry units located 2,235 feet from the stream mouth. This site had an approximate length of 164 feet. No fish were present.

RECOMMENDATIONS

1) Moe 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 is locally available.

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

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):	Comment:
0'	Begin survey at confluence with Parlin Creek. Channel type is an F4.
396'	Bridge 18' long x 12' wide x 7' clearance.
775'	LDA 4' high x 15' wide x 20' long retaining an unspecified amount of gravel and silt. Possible barrier.
968'	LDA 6' high x 20' wide x 15' long. No gravel retention. Present end of coho access.
978'	LDA. No gravel retention.
2291'	Present end of anadromous fish access at bedrock sheet/LDA combination.
2345'	LDA 5' high x 15' wide x 10' long retaining an unspecified amount of sediment.
2355'	Right bank tributary. End of survey due to absence of fish and diminished habitat.