

STREAM INVENTORY REPORT

Unnamed Tributary to Bloody Run Creek

WATERSHED OVERVIEW

Refer to the map of Bloody Run Creek for the location of the unnamed tributary.

The unnamed tributary is a tributary to Bloody Run Creek, a tributary to Outlet Creek, a tributary to the Eel River, which drains to the Pacific Ocean. It is located in Mendocino County, California. The unnamed tributary's legal description at the confluence with Bloody Run Creek is T20N R13W S18. Its location is 39.5864 degrees north latitude and 123.3542 degrees west longitude. The unnamed tributary is an intermittent stream according to the USGS Willis Ridge 7.5 minute quadrangle. The unnamed tributary drains a watershed of approximately 3.2 square miles. Elevations range from about 1,300 feet at the mouth of the creek to 2,500 feet in the headwater areas. Mixed conifer forest dominates the watershed, with hardwoods as a secondary component. The watershed is entirely privately owned and is managed for rangeland and private residence. Vehicle access exists via Highway 162 to mile marker 6.68.

HABITAT INVENTORY RESULTS AND DISCUSSION

The habitat inventory of September 9, 1995 was conducted by Brie Darr and Jennifer Terwilliger (CCC/WSP/AmeriCorps). The total length of the stream surveyed was 2,502 feet.

Flow was not measured on the unnamed tributary to Bloody Run Creek.

The unnamed tributary is a B3 channel type for the entire 2,502 feet of stream surveyed. The suitability of B3 channel types for fish habitat improvement structures is described in the main body of this report.

The water temperatures recorded on the survey day September 9, 1995 ranged from 60 to 65 degrees Fahrenheit. Air temperatures ranged from 74 to 89 degrees Fahrenheit. This is a relatively warm temperature range for salmonids. To make any further conclusions, temperatures need to be monitored throughout the warm summer months, and more extensive biological sampling needs to be conducted.

Flatwater habitat types comprised 33% of the total length of this survey, riffles 40%, and pools 21%. The pools are relatively shallow, with only six of the 30 pools having a maximum depth greater than two feet. Primary pool criteria are discussed in the main body of this report.

Seven of the 30 pool tail-outs measured had embeddedness ratings of 3 or 4. Three had embeddedness ratings of 1. Cobble embeddedness measured to be 25% or less, a rating of 1, is considered best for the needs of salmon and steelhead. In the unnamed tributary, sediment sources should be mapped and rated according to their potential sediment yields, and control measures should be taken.

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The mean shelter rating for pools was low with a rating of 13. The shelter rating in the flatwater habitats was slightly lower at 8. A pool shelter rating of approximately 100 is desirable. The relatively small amount of cover that now exists is being provided primarily by boulders 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 three low gradient riffles had large cobble or boulders as the dominant substrate. This is generally considered to be not suitable for spawning salmonids.

The mean percent canopy for the stream was 70%. This is a relatively high percentage of canopy, since 80% is generally considered optimum in these north coast streams.

The percentage of right and left bank covered with vegetation was moderate at 24% and 25%, respectively. In areas of stream bank erosion or where bank vegetation is at unacceptable levels, planting endemic species of coniferous and deciduous trees, in conjunction with bank stabilization, is recommended.

No steelhead were observed upstream of Habitat Unit #033, 513' above the confluence with Bloody Run Creek, a group of large boulders appears to impede further passage.

RECOMMENDATIONS

- 1) The unnamed tributary to Bloody Run Creek should be managed as an anadromous, natural production stream.
- 2) Where feasible, design and engineer pool enhancement structures to increase the number of 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. Most of the existing cover is from boulders. Adding high quality complexity with woody cover is desirable and in some areas the material is at hand.
- 4) Temperatures in this section of the unnamed tributary, as well as upstream, should be monitored to determine if they are having a deleterious effect upon juvenile salmonids. To achieve this, biological sampling is also required.
- 5) Increase the canopy on the unnamed tributary by planting willow, alder, and Douglas fir along the stream where shade canopy is at unacceptable levels. The reaches above this survey section should be inventoried and treated as well, since the water flowing here is affected from upstream. In many cases, planting will need to be coordinated to follow bank stabilization or upslope erosion control projects.
- 6) There are several log debris accumulations present on the unnamed tributary that are retaining large quantities of fine sediment. The modification of these debris

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accumulations is desirable, but must be done carefully, over time, to avoid excessive sediment loading in downstream reaches.

- 7) There is at least one section where the stream is being impacted from cattle trampling the riparian zone and defecating in the water. Alternatives should be explored with the grazer and developed if possible.
- 8) Due to the high gradient of the stream, access for migrating salmonids is an ongoing potential problem. Good water temperature and flow regimes exist in the stream and it offers good conditions for rearing fish. Fish passage should be monitored and improved where possible.

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.

Position Comments:
(ft):

0'	Start of survey at confluence with Bloody Run Creek. Channel type is a B3 for entire 2,502 feet of stream surveyed.
49'	Evidence of cattle grazing in stream.
80'	Begin fractional sample survey.
105'	Several young-of-the-year (YOY) steelhead/rainbow trout observed.
513'	Change in elevation of streambed, approximately 23 foot drop within 70 diagonal feet. Gravel and cobble collected between bedrock and large boulders, creating a dry unit.
722'	Evidence of cattle grazing in stream.
890'	No fish observed since 513'.
1093'	Log debris accumulation (LDA) measures approximately 12' long x 5' wide x 3' high.
1647'	Old car bridge is falling down and unusable.
2502'	End of survey.