STREAM INVENTORY REPORT

Alder Creek

WATERSHED OVERVIEW

Refer to the map of Cherry Creek for the location of Alder Creek.

Alder Creek is a tributary to Cherry 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. Alder Creek's legal description at the confluence with Cherry Creek is T20N R14W S03. Its location is 39.6111 degrees north latitude and 123.3864 degrees west longitude. Alder Creek has 3.3 miles of blue line stream according to the USGS Longvale 7.5 minute quadrangle. Alder Creek drains a watershed of approximately 5.2 square miles. Elevations range from about 1,400 feet at the mouth of the creek to 2,960 feet in the headwater areas. Redwood forest and mixed hardwood forest dominate the watershed. The watershed is privately owned and is managed for timber production. Vehicle access exists via Irvine Rest Area on Highway 101.

HABITAT INVENTORY RESULTS AND DISCUSSION

The habitat inventory of September 25 and 26, 1995 was conducted by Jeffrey Jahn and Jennifer Terwilliger (WSP/AmeriCorps). The total length of the stream surveyed was 6,375 feet, with an additional 125 feet of side channel.

Flow was not measured on Alder Creek.

Alder Creek is an A2 channel type for the first 5,492 feet (Reach 1), and a B3 for the remaining 883 feet of stream surveyed (Reach 2). The suitability of A2 and B3 channel types for fish habitat improvement structures is as follows: A2 channels are generally not suitable for fish habitat improvement projects. B3 channel types are excellent for plunge weirs, boulder clusters and bank-placed boulders, single and opposing wing-deflectors, and log cover.

The water temperatures recorded on the survey days September 25 and 26, 1995 ranged from 57 to 67 degrees Fahrenheit. Air temperatures ranged from 64 to 74 degrees Fahrenheit. This is a relatively warm water 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 39% of the total length of this survey, riffles 32%, pools 26%, and dry units 2%. The pools are relatively deep, with 41 of the 76 pools having a maximum depth greater than two feet.

Thirty-seven of the 75 pool tail-outs measured had embeddedness ratings of 3 or 4. Six 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 Alder Creek, 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 moderate with a rating of 46. The shelter rating in the flatwater habitats was slightly lower at 38. 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.

Five 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 for the stream was 84%. This is a relatively high percentage of canopy, since 80% is generally considered optimum in these north coast streams.

The percentage of the right and left banks covered with vegetation was moderate at 38% and 30%, 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.

RECOMMENDATIONS

1) Alder Creek should be managed as an anadromous, natural production stream.

2) Temperatures in this section of Alder Creek, 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.

3) 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.

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 is at hand.

5) Inventory and map sources of stream bank erosion and prioritize them according to present and potential sediment yield. Identified sites, like the site at 3074', should then be treated to reduce the amount of fine sediments entering the stream.

6) Due to the high gradient of the stream, access for migrating salmonids is an ongoing potential problem. Fish passage should be monitored and improved where possible.

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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 (ft):	Comments:
0'	Start of survey at confluence with Cherry Creek. Reach 1 is an A2 channel type.
1325'	Erosion site on the right bank measures 500' long x 100' high.
1488'	Erosion site on the right bank measures 800' long x 100’ high. It is contributing fine sediment to the channel.
2437'	Two waterfalls, the first is 8' high while the second is 5' high.
2701'	Dry tributary enters from the left bank.
3074'	Trail access to the creek.
3074'	Erosion site on the left bank measures 180' long x 120' high.
3440'	Dry tributary enters from the left bank.
3478'	Boulder dam is retaining gravel.
4254'	Large boulder jam is retaining gravel.
5492'	The channel type changes from an A2 to a B3 (Reach 2).
5722'	Dry tributary enters from the left bank.
6033'	A small, dry tributary enters from the right bank.
6178'	Erosion on the right bank measures 130' long x 120' high.
6375'	End of survey due to lack of access.