

# **STREAM INVENTORY REPORT**

## **Unnamed Tributary to Ryan Creek A**

### WATERSHED OVERVIEW

The unnamed tributary to Ryan Creek A is a tributary to Ryan Creek, a tributary to Freshwater Slough, a tributary to Eureka Slough, a tributary to Humboldt Bay, which drains to the Pacific Ocean. It is located in Humboldt County, California (Figure 1). The unnamed tributary's legal description at the confluence with Ryan Creek is T04N R01E S18. Its location is 40.7256 degrees north latitude and 124.1053 degrees west longitude. The unnamed tributary is a first order stream and has approximately 0.2 miles of blue line stream according to the USGS McWhinney Creek 7.5 minute quadrangle. The unnamed tributary drains a watershed of approximately 1.5 square miles. Elevations range from about 150 feet at the mouth of the creek to 400 feet in the headwater areas. Redwood forest and Douglas fir forest dominate the watershed. The watershed is privately owned and is managed for timber production. Vehicle access exists via Louisiana Pacific Corporation's R-Line Road.

### HABITAT INVENTORY RESULTS AND DISCUSSION

The habitat inventory of July 5 and July 7, 1995 was conducted by Heidi Hickethier (WSP/AmeriCorps) and Don Hickethier (CCC). The total length of the stream surveyed was 1,139 feet.

Flow was not measured on the unnamed tributary.

The unnamed tributary is an F5 channel type for the entire 1,139 feet of stream surveyed.

The water temperatures recorded on the survey days July 5 and July 7, 1995 ranged from 55 to 58 degrees Fahrenheit. Air temperatures ranged from 58 to 69 degrees Fahrenheit. This is a good 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 16% of the total length of this survey, riffles 3%, and pools 81%. The pools are relatively shallow, with only 11 of the 42 pools having a maximum depth greater than two feet.

All of the 12 pool tail-outs measured had embeddedness ratings of 3 or 4. None had an embeddedness rating of 1. Cobble embeddedness measured to be 25% or less, a rating of 1, is considered to indicate good quality spawning substrate for 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.

The mean shelter rating for pools was low with a rating of 20. The shelter rating in the flatwater habitats was higher at 40. A pool shelter rating of approximately 100 is desirable. The relatively small amount of cover that now exists is being provided primarily by small woody debris in all habitat types. Log and root wad cover structures in the pool and flatwater habitats are needed to

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improve both summer and winter salmonid habitat.

The mean percent canopy for the stream was 90%. 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 high at 98% and 100%, respectively.

### **BIOLOGICAL INVENTORY RESULTS**

One site was electrofished on July 14, 1995 in the unnamed tributary to Ryan Creek A. The unit was sampled by Gary Flosi (DFG) and Chris Coyle (CCC).

The site sampled was Habitat Unit #002, a mid-channel pool 65 feet from the confluence with Ryan Creek. This site had an area 135 square feet and a volume of 202 cubic feet. The site yielded six young-of-the-year (YOY) coho salmon and one YOY coastal cutthroat trout.

### **RECOMMENDATIONS**

- 1) Ryan Creek Tributary A should be managed as an anadromous, natural production stream.
- 2) 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.
- 3) Increase woody cover in the pools and flatwater habitat units. Most of the existing cover is from small woody debris. Adding high quality complexity with woody cover is desirable and in some areas the material is at hand.
- 4) Where feasible, design and engineer pool enhancement structures to deepen the pools. This must be done where the banks are stable or in conjunction with stream bank armor to prevent erosion.
- 5) The limited water temperature data available suggest that maximum temperatures are within the acceptable range for juvenile salmonids. To establish more complete and meaningful temperature regime information, 24-hour monitoring during the July and August temperature extreme period should be performed for 3 to 5 years.

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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    Comments:  
(ft):

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0'	Start of survey at confluence with Ryan Creek. Channel type is F5.
803'	Right bank tributary. Flow estimated to be less than 0.1 cfs. Not accessible to fish.
823'	Right bank tributary. Flow estimated to be less than 0.1 cfs. Not accessible to fish.
1130'	Left bank tributary. Flow estimated to be less than 0.1 cfs. Not accessible to fish.
1139'	End of survey.