STREAM INVENTORY REPORT

Unnamed Tributary to Pullen Creek

WATERSHED OVERVIEW

Unnamed Tributary to Pullen Creek is tributary to Pullen Creek, tributary to Bear River, tributary to the Pacific Ocean located in Humboldt County, California (Map 1). Unnamed Tributary to Pullen Creek's legal description at the confluence with Pullen Creek is T01S R01E. Its location is 42°24′05″ north latitude and 124°04′39″ west longitude. Unnamed Tributary to Pullen Creek is an ephemeral stream according to the USGS Scotia 7.5 minute quadrangle. Unnamed Tributary to Pullen Creek drains a watershed of approximately 0.6 square miles. Elevations range from 1,520 feet at the mouth of the creek to 2,380 feet in the headwater areas. Mixed conifer forest dominates the watershed. The watershed is entirely privately owned and is managed for timber production. Vehicle access exists via Monument Ridge Road.

HABITAT INVENTORY RESULTS AND DISCUSSION

The habitat inventory of July 1, 1997 was conducted by Bethany Reisberger and David Jones (WSP/AmeriCorps). The total length of the stream surveyed was 1,497 feet with an additional 53 feet of side channel.

Flow was measured at the bottom of the survey reach with a Marsh-McBirney Model 2000 flowmeter at 1.02 cfs on June 30, 1997.

Unnamed Tributary to Pullen Creek is an G4 channel type for the entire 1,497 feet of stream surveyed. The suitability of G4 channel types for fish habitat improvement structures is: good for bank-placed boulders; fair for weirs, opposing wing-deflectors and log cover; and poor for boulder clusters, single wing-deflectors and log cover.

The water temperatures recorded on the survey day July 1, 1997, ranged from 52 to 56 degrees Fahrenheit. Air temperatures ranged from 56 to 62 degrees Fahrenheit. This is a good water temperature range for salmonids, but water temperatures during 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 58% flatwater units, 34% riffle units, and 8% pool units. The pools are relatively shallow, with only 3 of the 10 pools having a maximum depth greater than 2 feet.

Five of the 10 pool tail-outs measured had embeddedness ratings of 3 or 4. Two had a 1 rating. Cobble embeddedness of 25% or less, a rating of 1, is considered best for the needs of salmon and steelhead. In Unnamed Tributary to Pullen 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 75. The shelter rating in the flatwater habitats was 22. A pool shelter rating of approximately 100 is desirable. Log and root wad structure in the pool and flatwater habitats are needed to improve both summer and winter salmonid habitat.

Six of the 10 pool tail-outs measured had gravel or small cobble as the dominant substrate. This is generally considered suitable for spawning salmonids.

The mean percent canopy density for the stream was 95%. The percentage of right and left bank covered with vegetation was moderate at 78% and 77%, 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.

BIOLOGICAL INVENTORY RESULTS

One site was electrofished on June 30, 1997, in Unnamed Tributary to Pullen Creek. The unit was sampled by Ruth Goodfield (DFG) and Jessie Robertson (WSP/AmeriCorps).

The site sampled included habitat units 0002-0003, a series of pools, runs, and a riffle 150 feet from the confluence with Pullen Creek. This site had an approximate length of 40 feet. The site yielded five steelhead.

RECOMMENDATIONS

1) Unnamed Tributary to Pullen Creek should be managed as an anadromous, natural production stream.

2) The limited water temperature available suggest that the 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.

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.

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.

0' Begin survey at confluence with Pullen Creek. The channel type is G4.

143' Jump of 4.6'.

428' Right bank erosion, 57' long x 30' high.

570' LDA, 30' long x 14' wide x 6' high, with associated erosion, 17' long x 20' high.

710' LDA, 21' wide x 9' high, retaining 4.5' of sediment.

1,494' End of survey. Seven foot jump into alder covered riffle.