STREAM INVENTORY REPORT

RYAN CREEK UNNAMED TRIBUTARY B

WATERSHED OVERVIEW

Ryan Creek Tributary B is tributary to Ryan Creek, tributary to Freshwater Slough River, located in Humboldt County, California (Figure 1). Ryan Creek Tributary B's legal description at the confluence with Ryan Creek River is T04N R01W S13. Its location is 40°43′29″ north latitude and 124°07′32″ west longitude. Ryan Creek Tributary B is a second order stream and has approximately 1.6 miles of blue line stream according to the USGS McWhinney Creek and Fields Landing 7.5 minute quadrangles. Ryan Creek Tributary B drains a watershed of approximately 2.9 square miles. Summer base runoff is approximately 0.09 cubic feet per second (cfs) at the mouth. Elevations range from about 110 feet at the mouth of the creek to 440 feet in the headwater areas. Redwood and Douglas fir forest dominates the watershed. The watershed is privately owned and is managed for timber production. Vehicle access exists via Louisiana Pacific Corporation's Road R-13.

HABITAT INVENTORY RESULTS AND DISCUSSION

The habitat inventory of July 7 through 12 and October 30 and 31, 1995, was conducted by Heidi Hickethier, Don Hickethier, and Craig Mesman (CCC). The total length of the stream surveyed was 8,342 feet.

Flow was measured at the bottom of the survey reach with a Marsh-McBirney Model 2000 flowmeter at 0.09 cfs on July 14, 1995.

Ryan Creek Tributary B is an F5 channel type for the entire 8,342 feet of stream surveyed.

The water temperatures recorded on the survey days July 7 through 12 and October 30 and 31, 1995, ranged from 48 to 62 degrees Fahrenheit. Air temperatures ranged from 54 to 70 degrees Fahrenheit. This is a fair water temperature range for salmonids. To make any further conclusions, temperatures would need to be monitored throughout the warm summer months, and more extensive biological sampling would need to be conducted.

Flatwater habitat types comprised 37% of the total **length** of this survey, riffles 1%, and pools 61%. The pools are relatively deep, with 111 of the 208 pools having a maximum depth greater than 2 feet.

Two hundred and seven of the 208 pool tail-outs observed were rated "not suitable." The single tail-out judged suitable for spawning had an embeddedness rating of 2. 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 Ryan Creek Tributary B, 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 41. The shelter rating in the flatwater habitats was lower at 19. 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 improve both

summer and winter salmonid habitat.

All of the three low gradient riffles measured had sand as the dominant substrate. This is generally considered unsuitable for spawning salmonids.

The mean percent canopy for the stream was 88%. 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 93% and 93%, respectively.

BIOLOGICAL INVENTORY RESULTS

Two sites were electrofished on July 14 and November 1, 1995, in Ryan Creek Tributary B. The units were sampled by Gary Flosi (DFG) and Chris Coyle, Craig Mesman, and Heidi Hickethier (CCC).

The first site sampled was habitat unit 9, a mid-channel pool 206 feet from the confluence with Ryan Creek. This site had an area of 590 sq ft and a volume of 885 cu ft. The site yielded three 0+ coho, three 1+ coho, two 1+ coastal cutthroat trout, and three three-spine stickleback.

The second site was habitat unit 303, a step run 8,304 feet above the creek mouth. This site had a length of approximately 30 feet. No fish were sampled.

In addition, five sites on tributaries to Ryan Creek Tributary B (see map) were electrofished. No fish were sampled at any of these sites.

RECOMMENDATIONS

1) Ryan Creek Tributary B 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) 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.

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.

0' Begin survey at confluence with Ryan Creek.

188' Road R13-1 bridge. 10' clearance.

443' LDA 5' high x 13' wide x 15' long. Not a barrier and no gravel retained (NBNG).

726' LDA 12' high x 30' wide x 31' long retaining some sediment. Not a barrier.

1456' LDA 7' high x 25' wide x 11' long retaining unspecified amount of sediment. Not a barrier.

1810' LDA 9' high x 15' wide x 19' long retaining sand 4' deep at base. Not a barrier.

2027' LDA 8' high x 10' wide x 20' long.

2370' LDA 4' high x 25' wide x 39' long. NBNG.

2450' Right bank tributary. Flow estimated at <0.01 cfs. Accessible to fish.

2466' LDA 7' high x 15' wide x 22' long. NBNG.

4110' Partial debris accumulation.

5144' Debris accumulation.

5253' Debris raft 23' long.

6101' Left bank tributary. Flow estimated at <0.1 cfs.

6292' Debris accumulation.

6784' Left bank tributary. Flow estimated at 0.3 cfs. Accessible to fish.

6816' LDA.

7354' Right bank tributary. Flow estimated at <0.1 cfs.

8342' Stream forks. End of survey.

LEVEL III and LEVEL IV HABITAT TYPE KEY

HABITAT TYPE	LETTER	NUMBER
RIFFLE		
Low Gradient Riffle	[LGR]	1.1
High Gradient Riffle	[HGR]	1.2
CASCADE		
Cascade	[CAS]	2.1
Bedrock Sheet	[BRS]	2.2
FLATWATER		
Pocket Water	[POW]	3.1
Glide	[GLD]	3.2
Run	[RUN]	3.3
Step Run	[SRN]	3.4
Edgewater	[EDW]	3.5
MAIN CHANNEL POOLS		
Trench Pool	[TRP]	4.1
Mid-Channel Pool	[MCP]	4.2
Channel Confluence Pool	[CCP]	4.3
Step Pool	[STP]	4.4
SCOUR POOLS		
Corner Pool	[CRP]	5.1
Lateral Scour Pool - Log Enhanced	[LSL]	5.2
Lateral Scour Pool - Root Wad Enhanced	[LSR]	5.3
Lateral Scour Pool - Bedrock Formed	[LSBk]	5.4
Lateral Scour Pool - Boulder Formed	[LSBo]	5.5
Plunge Pool	[PLP]	5.6
BACKWATER POOLS		
Secondary Channel Pool	[SCP]	6.1
Backwater Pool - Boulder Formed	[BPB]	6.2
Backwater Pool - Root Wad Formed	[BPR]	6.3
Backwater Pool - Log Formed	[BPL]	6.4
Dammed Pool	[DPL]	6.5