STREAM INVENTORY REPORT

RYAN CREEK UNNAMED TRIBUTARY A

WATERSHED OVERVIEW

Ryan Creek Tributary A is tributary to Ryan Creek, tributary to Freshwater Slough, located in Humboldt County, California (Figure 1). Ryan Creek Tributary A's legal description at the confluence with Ryan Creek is T04N R01E S18. Its location is 40°43′32″ north latitude and 124°06′19″ west longitude. Ryan Creek Tributary A 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. Ryan Creek Tributary A 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 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 R-Line Road.

HABITAT INVENTORY RESULTS AND DISCUSSION

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

Flows were not measured on Ryan Creek Tributary A.

Ryan Creek Tributary A 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 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 would need to be monitored throughout the warm summer months, and more extensive biological sampling would need 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 2 feet.

All of the 12 pool tail-outs measured had embeddedness ratings of 3 or 4. None had a 1 rating. 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 A, 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 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 Ryan Creek Tributary A. The unit was sampled by Gary Flosi (DFG) and Chris Coyle (CCC).

The site sampled was habitat unit 2, a mid-channel pool 65 feet from the confluence with Ryan Creek. This site had an area 135 sq ft and a volume of 202 cu ft. The site yielded six 0+ coho and one 0+ 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.

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. Channel type is F5.

803' Right bank tributary. Flow estimated at <0.1 cfs. Not accessible to fish.

823' Right bank tributary. Flow estimated at <0.1 cfs. Not accessible to fish.

1130' Left bank tributary. Flow estimated at <0.1 cfs. Not accessible to fish.

1139' 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