STREAM INVENTORY REPORT SUBSECTION

Unnamed Tributary to Hayworth Creek

WATERSHED OVERVIEW

The unnamed tributary is a tributary to Hayworth Creek, a tributary to the North Fork Noyo River, a tributary to the Noyo River, located in Mendocino County, California (Map 1). The unnamed tributary's legal description at the confluence with Hayworth Creek is T19N R15W S24. Its location is 39°29′09″ north latitude and 123°28'05″ west longitude. The unnamed tributary is an intermittent stream according to the USGS Burbeck and Longvale 7.5 minute quadrangles. The unnamed tributary drains a watershed of approximately 1.7 square miles. Elevations range from about 800 feet at the mouth of the creek to 2,800 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 Highway 20 to Irmulco Road (approximately six miles west of Willits), which ends on Mendocino Redwood Company land.

HABITAT INVENTORY RESULTS AND DISCUSSION

The habitat inventory of July 27 to 28, 1999 was conducted by Ethan Jankowski and Toni Beaumont (WSP/AmeriCorps). The total length of the stream surveyed was 5,646 feet with an additional 133 feet of side channel.

Flow was measured at the bottom of the survey reach with a Marsh-McBirney Model 2000 flow meter at 0.32 cfs on August 23, 1999.

The unnamed tributary is a B4 channel type for the entire 5,646 feet of stream surveyed. The suitability of B4 channel types for fish habitat improvement structures is as follows: excellent for low-stage plunge weirs, boulder clusters bank placed boulders, single and opposing wing-deflectors, and log cover.

The water temperatures recorded on the survey days of July 27 and 28, 1999 ranged from 58 to 60 degrees Fahrenheit. This is an acceptable water temperature range for salmonids. Air temperatures ranged from 64 to 75 degrees Fahrenheit. 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 27% flatwater units, 59% riffle units, and 14% pool units. Sixty-two percent of the pools had a maximum depth greater than 2 feet.

Eight of the 26 pool tail-outs had embeddedness ratings of 2; 16 had embeddedness ratings of 3; and 2 had embeddedness ratings of 4. None of the pool tail-outs had embeddedness ratings of 1. Cobble embeddedness of 25% or less, a rating of 1, is considered to indicate good quality spawning substrate for salmonids. In the unnamed tributary to Hayworth 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 riffles was 18. The mean shelter rating in the flatwater habitats was 10. The mean shelter rating for pools was 90. A pool shelter rating of approximately 100 is desirable. Log and root wad cover structure in the pool and flatwater habitats would enhance both summer and winter salmonid habitat.

Sixteen of the 26 pool tail-outs measured had gravel or small cobble as the dominant substrate. This is generally considered good for spawning salmonids.

The mean percent canopy density for the stream was 82%. The percentage of right and left bank covered with vegetation was 77% and 75%, 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

Four sites were electrofished for species composition and distribution in the unnamed tributary to Hayworth Creek on October 20, 1999. The water temperature taken during the electrofishing period of 11:00 to 11:30am was 50 degrees Fahrenheit. The air temperature was 48 degrees Fahrenheit. The sites were sampled by Michelle Gilroy (DFG) and Toni Beaumont (WSP/AmeriCorps).

The first site sampled included habitat unit 3, a lateral-scour pool - bedrock formed, with log cover, located approximately 348 feet from the start of survey. The site yielded 2 young-of-the-year and 1 one-plus age class steelhead.

The second site sampled included habitat unit 5, a mid-channel pool with log cover, located approximately 584 feet above the start of survey. The site yielded 1 one-plus age class steelhead and 1 sculpin.

The third site sampled included habitat unit 8, a lateral scour pool - root wad enhanced, with bedrock cover, located approximately 908 feet above the start of survey. The site yielded 1 young-of-the-year and 1 one-plus age class steelhead.

The fourth site sampled included habitat unit 10, a plunge pool with root wad cover, located approximately 1,010 feet above the start of survey. The site yielded 1 young-of-the-year age class steelhead and 1 sculpin.

The following chart displays the information yielded from these sites:

Date	Site #	Approx. Dist. from mouth (ft.)	Hab. Unit #	Hab. Type	Reach #	Channel type	Steelhead		
							YOY	1+	2+
10/20/99	1	348	3	LSBk	1	B4	2	1	0
10/20/99	2	584	5	MCP	1	B4	0	1	0

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Date	Site #	Approx. Dist. from mouth (ft.)	Hab. Unit #	Hab. Type	Reach #	Channel type	Steelhead		
							YOY	1+	2+
10/20/99	3	908	8	LSR	1	B4	1	1	0
10/20/99	4	1,010	10	PLP	1	B4	1	0	0

RECOMMENDATIONS

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

2) The limited water temperature data 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 extreme temperature 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.

Position (ft):	Comment:
0'	Begin survey at the confluence with Hayworth Creek. Channel type is B4.
1,539'	Log debris accumulation, 52 feet long x 40 feet wide x 5 feet high.
1,705'	Log debris accumulation, 15 feet long x 20 feet wide x 7 feet high, retaining sediment and gravel.
1,741'	Six foot plunge over log.
1,938'	Log debris accumulation, 15 feet long x 15 feet wide x 4 feet high, not retaining sediment.
2,813'	Log debris accumulation, 10 feet long x 20 feet wide x 7 feet high, not retaining sediment.
2,882'	Dry tributary enters.

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2,907'	Log debris accumulation, 15 feet long x 25 feet wide x 5 feet high, retaining sediment/gravel.
3,018'	Log debris accumulation with large woody debris, retaining gravel.
3,725'	Subsurface stream flow into short side channel. Debris accumulating.
4,243'	Log debris accumulation, 45 feet long x 45 feet wide x 10 feet high, retaining sediment.
4,332'	Log debris accumulation, 40 feet long x 30 feet wide x 17 feet high, retaining gravel.
4,415'	Tributary enters from right bank, 56 degrees Fahrenheit water temperature, high gradient with debris.
4,779'	Log debris accumulation, 10 feet long x 20 feet wide x 5 feet high, retaining gravel.
4,815'	Tributary enters from right bank.
5,182'	Log debris accumulation, 50 feet long x 20 feet wide x 9 feet high, retaining gravel.
5,330'	Large woody debris in channel, not retaining sediment/gravel.
5,646'	End of survey due to 20’ high bedrock waterfall, approximately 44 percent gradient, with no pools along the way. Left bank tributary enters.