STREAM INVENTORY REPORT

Unnamed Francis Creek Tributary

WATERSHED OVERVIEW

Refer to the map of Francis Creek for the location of Unnamed Francis Creek tributary.

Unnamed Francis Creek tributary is a tributary to Francis Creek, tributary to Salt River, tributary to Eel River, tributary to Pacific Ocean, located in Humboldt County, California. Unnamed Francis Creek tributary's legal description at the confluence with Francis Creek is T02N R02W S14. Its location is 40°:33':45.0" north latitude and 124°:15':30.0" west longitude, LLID number 1242582405626. Unnamed Francis Creek tributary is an ephemeral stream according to the USGS Ferndale 7.5 minute quadrangle. Unnamed Francis Creek tributary drains a watershed of approximately 0.6 square miles. Elevations range from about 120 feet at the mouth of the creek to 700 feet in the headwater areas. Douglas fir, spruce, and mixed hardwood dominate the watershed. The watershed is entirely privately owned and is managed for timber production, and rangeland. .

HABITAT INVENTORY RESULTS AND DISCUSSION

The habitat inventory of 6/23/2003, was conducted by Sarah Ganas, and Lesley Merrick (WSP/AmeriCorps). The total length of the stream surveyed was 1,209 feet.

Stream flow was measured near the bottom of the survey reach with a Marsh-McBirney Model 2000 flowmeter at 0.4 cfs on 06/23/03.

Unnamed Francis Creek tributary is a F6 channel type for 1,209 feet of the stream surveyed. The suitability of F6 channel types for fish habitat improvement structures is; good for bank placed boulders, fair for plunge weirs, boulder clusters, single and opposing wing deflectors and log cover.

The water temperature recorded on 06/23/03 was 54 degrees Fahrenheit. Air temperatures ranged from 59 to 61 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 65% flatwater units, 25% pool units, 10% riffle units. The pools are relatively shallow, with one of the nine pools having a maximum residual depth greater than 2 feet.

None of the 9 pool tail-outs measured had embeddedness ratings of 1 or 2. All of the pool tail-outs had embeddedness ratings of 3 or 4. Cobble embeddedness of 25% or less, a rating of 1, is considered best for the needs of salmon and steelhead. In Unnamed Francis Creek 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 24. The shelter rating in the flatwater habitats was 5. A pool shelter rating of approximately 100 is desirable.

Two of the 3 low gradient riffles 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 91%. In general, revegetation projects are considered when canopy density is less than 80.

The percentage of right and left bank covered with vegetation was 69% and 69%, respectively. In areas of stream bank erosion or where bank vegetation is not at acceptable levels, planting endemic species of coniferous and hardwood trees, in conjunction with bank stabilization, is recommended.

BIOLOGICAL INVENTORY RESULTS

Biological sampling was not conducted on Unnamed Francis Creek tributary.

RECOMMENDATIONS

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

2) The limited water temperature available suggests 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) Where feasible, design and engineer pool enhancement structures to increase the number of pools. This must be done where the banks are stable or in conjunction with stream bank armor to prevent erosion.

4) Increase woody cover in the pools and flatwater habitat units. Most of the existing cover is from root mass and small woody debris. Adding high quality complexity with woody cover is desirable.

Unnamed Francis Creek tributary

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 (ft)	Habitat Unit #	Comments
0	0001.00	Survey began at the confluence of Unnamed Francis Creek tributary and Francis Creek
0	0001.00	A barbed wire cattle fence with a plywood panel crosses the stream.
64	0005.00	Channel flows through 5' diameter culvert
412	0009.00	A small tributary enters from the right bank.
737	0014.00	A small tributary enters from the right bank
824	0016.00	Log debris accumulation (LDA) crosses the channel
950	0018.00	Right bank erosion, 20' long x 10' high x 8' deep
1107	0022.00	A concrete trough is in the channel.
1209	0024.00	The survey ended at a root wad and boulders that clog the channel. The area may be passable under higher flows. One hundred feet upstream Unnamed Francis Creek tributary goes dry.