

STREAM INVENTORY REPORT

“West Branch Hazel Gulch”

WATERSHED OVERVIEW

A stream inventory was conducted on an unnamed tributary to Hazel Gulch commonly known and hereinafter referred to as West Branch Hazel Gulch. Refer to the map of Hazel Gulch for the location of West Branch Hazel Gulch.

West Branch Hazel Gulch is a tributary to Hazel Gulch, tributary to Big Salmon Creek, which drains to the Pacific Ocean. It is located in Mendocino County, California. West Branch Hazel Gulch's legal description at the confluence with Hazel Gulch is T16N R16W S29. Its location is 39.2208 degrees north latitude and 123.6680 degrees west longitude, LLID number 1236668392208. West Branch Hazel Gulch is a first order stream and has approximately 0.48 miles of blue line stream according to the USGS Elk 7.5 minute quadrangle. West Branch Hazel Gulch drains a watershed of approximately 0.73 square miles. Elevations range from about 250 feet at the mouth of the creek to 700 feet in the headwater areas. Redwood forest and mixed hardwood forest dominate the watershed. The watershed is entirely privately owned and is managed for timber production. Vehicle access exists off of Albion Ridge Road.

HABITAT INVENTORY RESULTS AND DISCUSSION

The habitat inventory of June 27, 2007 was conducted by C. Navarro (WSP) and M. Reneski (PSMFC). The total length of the stream surveyed was 803 feet.

Stream flow was not measured on West Branch Hazel Gulch.

West Branch Hazel Gulch is a G4 channel type for 803 feet of the stream surveyed. G4 channels are entrenched “gully” step-pool channels on moderate gradients with low width/depth ratios, very stable with gravel-dominant substrates.

The water temperatures recorded on the survey day of June 27, 2007, ranged from 51 to 52 degrees Fahrenheit. Air temperatures ranged from 57 to 58 degrees Fahrenheit.

Based on the total length of this survey, pools comprised 59%, flatwater units 21%, and riffles 18%. Three of the 9 (33%) pools had a maximum residual depth greater than 2 feet.

One of the 9 pool tail-outs measured had embeddedness ratings of 1 or 2. Two of the pool tail-outs had embeddedness ratings of 3 or 4. Six of the pool tail-outs had a rating of 5, which is considered unsuitable for spawning. Cobble embeddedness of 25% or less, a rating of 1, is considered best for the needs of salmon and steelhead. In West Branch Hazel Gulch, sediment sources should be mapped and rated according to their potential sediment yields, and control measures should be taken.

Eight of the pool tail-outs had silt, sand, large cobble, boulders or bedrock as the dominant substrate. This is generally considered unsuitable for spawning salmonids.

West Branch Hazel Creek

The mean shelter rating for pools is 34. The shelter rating in the flatwater habitats is 5. A pool shelter rating of approximately 100 is desirable. The amount of cover that now exists is being provided primarily by undercut banks. Undercut banks are the dominant cover type in pools followed by small woody debris.

The mean percent canopy density for the stream was 88%.

The percentage of right and left bank covered with vegetation was 81% and 81%, respectively. In areas of stream bank erosion or where bank vegetation is sparse, planting endemic species of coniferous and hardwood trees, in conjunction with bank stabilization, is recommended.

RECOMMENDATIONS

- 1) West Branch Hazel Gulch 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) 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):	Habitat Unit #:	Comment:
0	0001.00	Start of survey at the confluence with Hazel Gulch. The channel type is a G4.
47	0003.00	There is a 10' high waterfall.
469	0009.00	Young-of-the-year steelhead observed above the waterfall.
503	0010.00	There is a rootwad and an erosion site on the right bank.

West Branch Hazel Creek

521 0011.00 Algae growing in the channel.

803 0017.00 End of survey. There is a trench pool with highly vegetated grass banks.