

# STREAM INVENTORY REPORT

## Kitchen Gulch

### WATERSHED OVERVIEW

Refer to the map of Big Salmon Creek for the location of Kitchen Gulch.

Kitchen Gulch is a tributary to Big Salmon Creek, which drains to the Pacific Ocean, located in Mendocino County, California. Kitchen Gulch's legal description at the confluence with Big Salmon Creek is T16N R16W S31. Its location is 39.2006 north latitude and 123.6903 west longitude, LLID number 1236891392006. Kitchen Gulch is an intermittent stream and has 0 miles of blue line stream according to the USGS Elk 7.5 minute quadrangle. Kitchen Gulch drains a watershed of approximately 0.4 square miles. Elevations range from about 160 feet at the mouth of the creek to 600 feet in the headwater areas. Mixed conifer forest dominates the watershed. The watershed is entirely privately owned and is managed for conservation. Vehicle access exists via Highway 1 to Albion Ridge Road.

### HABITAT INVENTORY RESULTS AND DISCUSSION

The habitat inventory of July 17, 2007, was conducted by Corby Hines, and Cynthia LeDoux (DFG). The total length of the stream surveyed was 608 feet.

Stream flow was measured near the bottom of the survey reach with a Marsh-McBirney Model 2000 flowmeter at 0.09 cfs on July 26, 2007.

Kitchen Gulch is an E5 channel type for the entire 608 feet of the stream surveyed (Reach 1). E5 channels are low gradient, meandering riffle/pool streams with low width/depth ratios and little deposition. They are very efficient and stable with a high meander width ratio and sand-dominant substrates.

The suitability of E5 channel types for fish habitat improvement structures is as follows: E5 channel types are good for bank-placed boulders and fair for opposing wing-deflectors.

The water temperature recorded on the survey day July 17, 2007, was 58 degrees Fahrenheit. The air temperature was 70 degrees Fahrenheit.

Based on the total length of this survey, flatwater habitat types comprised 41%, riffles 38%, and pools 14%. Two of the 5 pools (40%) had a maximum residual depth greater than 2 feet.

Three of the 5 pool tail-outs measured had embeddedness ratings of 1 or 2. None of the pool tail-outs had embeddedness ratings of 3 or 4. Two 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 Kitchen Gulch, sediment sources should be mapped and rated according to their potential sediment yields, and control measures should be taken.

Three 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.

The mean shelter rating for pools was 55. The shelter rating in the flatwater habitats was 40. A pool shelter rating of approximately 100 is desirable. The amount of cover that now exists is being provided primarily by small woody debris. Large woody debris is the dominant cover type in pools followed by undercut bank.

The mean percent canopy density for the stream was 98%.

The percentage of right and left bank covered with vegetation was 85% and 90%, 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) Kitchen 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.

### 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	Start of survey at the confluence with Big Salmon Creek.
44	0003.00	There is a 4' diameter culvert with a gravel bottom.
98	0005.00	A 2+ steelhead observed was observed from the bank.
113	0006.00	A young-of-the-year (YOY) steelhead was observed from the bank.
129	0007.00	There is a small debris accumulation that creates possible barrier, and some dry sections above it.

302	0009.00	A 1+ steelhead was observed from the bank.
390	0013.00	There is a 4' bedrock sheet at the top of this unit.
454	0015.00	End of survey. There is a 6' high bedrock sheet with an 85% slope. There is a jump pool below it. It is a possible barrier. No fish are observed above the bedrock sheet.