

# STREAM INVENTORY REPORT

## Ketty Gulch

### WATERSHED OVERVIEW

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

Ketty Gulch is a tributary to Big Salmon Creek, which drains to the Pacific Ocean, located in Mendocino County, California. Ketty Gulch's legal description at the confluence with Big Salmon Creek is T16N R16W S31. Its location is 39.2000 north latitude and 123.6878 west longitude, LLID number 1236866392001. Ketty Gulch is a first order stream and has approximately 1.0 miles of blue line stream according to the USGS Elk 7.5 minute quadrangle. Ketty Gulch drains a watershed of approximately 0.7 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 Navarro Ridge Road.

### HABITAT INVENTORY RESULTS AND DISCUSSION

The habitat inventory of July 18, 2007, was conducted by C. LeDoux (DFG) and C. Hines (PSMFC). The total length of the stream surveyed was 356 feet.

Stream flow was measured near the bottom of the survey reach with a Marsh-McBirney Model 2000 flowmeter at 0.02 cfs on July 18, 2007.

Ketty Gulch is an A4 channel type for 356 feet of the stream surveyed (Reach 1). A4 channels are steep, narrow, cascading, step-pool, high energy debris transporting channels associated with depositional soils, and gravel-dominant substrates.

Fish habitat improvement projects are not recommended for A4 channel types due to their high gradient.

The water temperature recorded on July 18, 2007 was 59 degrees Fahrenheit. Air temperature was 64 degrees Fahrenheit.

Based on the total length of this survey, flatwater habitat types comprised 36%, riffles 43%, pools 19%, and dry 2%. None of the 4 pools had a maximum residual depth greater than 2 feet.

Two of the 4 pool tail-outs measured had embeddedness ratings of 1 or 2. Two 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 Ketty Gulch, sediment sources should be mapped and rated according to their potential sediment yields, and control measures should be taken.

All 4 pool tail-outs measured had gravel or small cobble as the dominant substrate. This is generally considered good for spawning salmonids.

The mean shelter rating for pools was 20. The shelter rating in the flatwater habitats was 20. 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 boulders.

The mean percent canopy density for the stream was 95%.

The percentage of right and left bank covered with vegetation was 100% and 95%, 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) Ketty 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 confluence with Big Salmon Creek.
110	0004.00	There is an old road on the left bank.
184	0006.00	There is a small woody debris jam. Stream goes subsurface with gravel retention above.
356	0011.00	End of survey. The stream goes subsurface above this unit due to fine sediment retention. The creek becomes marshy further upstream. There was a 1+ steelhead observed from the bank during the survey.