

# STREAM INVENTORY REPORT

## “Gulch 23”

### WATERSHED OVERVIEW

The unnamed tributary commonly known as, and herein after referred to as, Gulch 23 is a tributary to North Fork Ten Mile River. Elevations range from about 620 feet at the mouth of the creek to 2,600 feet in the headwater areas. Gulch 23's legal description at the confluence with North Fork Ten Mile River is T20N R15W S17. Its location is 39°35'5" N. latitude and 123°32'45" W. longitude according to the USGS Sherwood Peak 7.5 minute quadrangle.

### HABITAT INVENTORY RESULTS

The habitat inventory of November 2, 1995, was conducted by Diana Hines and David Lundby. The total length of stream in Gulch 23 surveyed was 2,454 feet (0.46 miles).

Gulch 23 is comprised of one reach for the entire 2,454 feet of creek and is a B3 channel type.

Table 1 summarizes the Level II riffle, flatwater, and pool habitat types. By percent occurrence, riffles comprised 49%, flatwater 20% and pools 25% of the habitat types in Gulch 23 (Graph 1).

By percent total length, riffles comprised 38% of the total survey length, flatwater 23% and pools 9% (Graph 2).

Nine Level IV habitat types were identified in Gulch 23. The data are summarized in Table 2. The most frequently occurring habitat types were cascades, 20%, step runs, 19%, and low gradient riffles, 17% (Graph 3). The most prevalent habitat types by percent total length were dry units, 30%, step runs, 23%, and high gradient riffles, 15% (Table 2).

Table 3 summarizes main channel, scour and backwater pools, which are Level III pool types. Main channel pools were most often encountered at 67% occurrence and comprised 70% of the total length of pools in Gulch 23.

Table 4 is a summary of maximum pool depths by pool habitat types. Pools with depths of two feet or greater are considered optimal for fish habitat. In Gulch 23, two of the 15 pools (13%) had a depth of two feet or greater (Graph 4).

The depth of cobble embeddedness was estimated at pool tail-outs. Of the 15 pool tail-outs measured in Gulch 23, 0% had a value of 1, 7% had a value of 2, 20% had a value of 3 and 73% had a value of 4 (Graph 5).

Of the Level II habitat types, riffle habitat types had the highest mean shelter rating at 113 (Table 1). Of the Level III pool type, main channel pools had the highest mean shelter rating at 41 (Table 3).

## Gulch 23

Of the 15 pools in Gulch 23, none were formed by large woody debris (LWD).

Table 6 summarizes the dominant substrate by Level IV habitat types. Of the low gradient riffles measured, 100% had boulders as the dominant substrate (Graph 6).

Mean percent closed canopy for Gulch 23 was 90%: 35% coniferous trees and 55% deciduous trees. Mean percent open was 10% (Graph 7).

Table 7 summarizes the mean percent substrate/vegetation types found along the banks of the stream. The mean percent right bank vegetated was 59% while the mean percent left bank vegetated was 48%. Coniferous trees were the dominant bank vegetation type observed in 67% of the units fully measured. Additionally, deciduous trees were the dominant bank vegetation type in 21% of the units fully measured. The dominant substrate composing the structure of the stream banks was cobble/gravel, found in 46% of the units fully measured.

### 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):	Comments:
1011	Cow patties in and along creek, cattle trail crosses creek and runs along creek in this unit and the previous 4 or 5 units.
1114	Cattle trail crosses creek here.
1517	Channel type measured.
1643	Right bank failure measures 12' high x 25' long, contributing sand and LWD to the channel.
2331	Left bank failure measures 15' high x 30' long, contributing fine sediment to the channel.
2454	End of survey. Channel has become a B2 with gradient of over 12%. No fish observed during entire survey. Very little spawning habitat observed. Signs of heavy cattle use throughout creek.

Gulch 23

