

**STREAM:** Jim Bob Creek

**DRAINAGE:** East Fork Jarbidge River via Robinson Creek

**GAWS COMPUTER NO.:** 170501,05,155,035,025,010,005

**SURVEY DATE:** July 19 and 21, 1993

**REPORT DATE:** February 27, 1996

**WRITTEN BY:** Gary Lee Johnson

**SURVEY METHODOLOGY:** The United States Forest Service Region 4, Level III Fisheries Habitat Survey Method (March, 1989) was utilized at three Sample Sites (SS's) between Robinson Creek and the headwater spring. Each SS was preplotted on the United States Geological Survey, 7½ minute topographic map of the area.

The first 100 feet at each SS was sampled for fish using a downstream positioned ¼-inch mesh block net and a Dirigo backpack electroshocker. Captured trout were measured (fork length), weighed, and returned to the stream following electrofishing.

Aquatic macroinvertebrate type and relative abundance were assessed visually, using random substrate inspection at each SS. The first of five habitat transects began at the end of each fish sample area. Additional transects were placed at 50 foot intervals. Stream discharge was calculated by using timed float velocity measurements and water width and depth measurements over a uniform length of stream. Both air and water temperatures were recorded with a hand held thermometer.

**LAND STATUS AND ACCESS:** The entire Jim Bob Creek drainage is public land administered by the Jarbidge District of the Humboldt National Forest. Vehicular access to the head drainage is possible via 2.0 miles of unimproved road from Pole Creek Ranger station.

**WATERSHED DESCRIPTION:** Jim Bob Creek is a 2.3 mile long northwesterly flowing first order stream within a 1.92 mi' volcanic geologic basin (Million scale Geologic Map of Nevada - 1977). Drainage elevations range from the 8726 foot ridge top peak separating Robinson Creek and Jim Bob Creek to the 7030 foot confluence of the two streams. The head drainage emanates from a gently sloped area. Downstream of the gentle area the stream channel enters a moderately-steep "V" canyon containing talus slopes. Distances from the drainage rims to the stream below reach as far as 1167 feet. Valley bottom width at surveyed sites ranged from 13 feet to 62 feet and averaged 32 feet. Upland vegetation consisted of mountain mahogany, aspen, fir, limber pine, mountain shrubs, annual and perennial grasses and various forbs.

**WATER STATUS:** Flow in Jim Bob Creek ranged from only 0.25 cfs at SS-2 to 0.64 cfs at SS-1 and averaged 0.47 cfs when the 0.53 cfs flow at SS-3 is included. Streamflows appeared to be at a medium flow stage. The majority of stream was classified as riffle

habitat. Percent optimum pool measure averaged 63% across habitat transects and was estimated at only 48% of optimum through fish population sampled areas, respectively. The mean water width and depth was 3.7 ft. and 0.11 ft., respectively. Mean maximum depth across transects was 0.33 ft.

Early evening stream temperature at both 55-1 and 55-3 was 46°F on July 21 and July 19, respectively. The stream was clear and fast.

**STREAM INDEX (HCI):** The mean stream HCI was 68.3 percent of optimum. Bank cover and stability ratings were all "good" or "excellent". Percent optimum pool structure was the lowest of rated HCI parameters (13.3%), followed by percent optimum pool measure which averaged 63.0% of optimum. Quality pools comprised from 0 to 33.3% of the pool area across habitat transects. Larger substrate was the most common pool forming feature.

**STREAM CHANNEL TYPE AND STABILITY:** Jim Bob Creek was steep with a mean measured gradient of 8.0 %. The lowest 55 had a 5.5 % gradient while the remaining two 55's were similar with a mean gradient of 9.25 %. A Rosgen's A-2 type stream channel best describes Jim Bob Creek. The streambottom was composed of boulder (9.4 %) rubble (27.5 %), gravel (50.9 %), sand/silt (3.5 %), and other (8.8 %). Woody debris and sand/silt were only crossed by transects est elevation 55.

Stream channel stability (5C5) scores all rated as "good" stability with an average score of 69. Streambottom embeddedness increased in a downstream order and averaged 19.2 % or "light". Undercut streambanks were present at 46.6 % of the transect locations. The mean 55 undercut bank measure was 0.24 feet.

**RIPARIAN DESCRIPTION:** The riparian overstory consisted of alder, willow, various other shrubs, and an occasional aspen or fir tree. The understory was lush with a variety of mesic forbs. Riparian condition scores ranged from "fair" at 55-13 to "good" at the other two 55's. Shrub density was less than 30 % at all 55's hence, this riparian parameter scored "poor". Riparian vegetation extended above the valley bottom at two of three 55's and averaged 37 feet wide. Streamside vegetation provided a good stream canopy averaging 55.5 % of the stream area.

**HABITAT VULNERBILITY:** The Index of Habitat Vulnerability (HVI) to management activities was "high" at 55-2 and "moderate" at the other two 55's. Streambank sensitivity ratings as determined from the combined 5C5 scores for upperbank vegetative protection and lowerbank rock content averaged a score of 9.7 (9-11). All 55's had "good" to "excellent" lowerbank rock content and only 55-2 had a less than "good" rating for upperbank vegetative protection. A bank sensitivity score of >13 indicates that one season of moderate livestock grazing can result in damaged streambanks. Only a "light" amount of ungulate streambank damage was noted along Jim Bob Creek. Jim Bob Creek is within the USF5 designated Pole Creek C&H grazing allotment. The headwater area because of its openness

appeared to be the primary cattle use area in the drainage.

FISH POPULATION: Rainbow/redband trout occupied the estimated lower 0.8 mile of stream at a density of 211.2 fish per mile. The three captured fish at 55-1 were all subcatchables « 153 mm) and averaged 114 mm long (81-135 mm). There were two age classes of trout present in the sample. Electrofishing efficiency was deemed "fair". No obvious fish barrier was seen however, the gradient would likely be suspected as creating a barrier between 55-1 and 55-2.

ANGLER USE: By virtue of it's smaller size and proximity of other fishable waters and remoteness, Jim Bob Creek was never reported as being fished on NDOW's 10% angler questionnaire or during any random angler field contacts.

AQUATIC HACROINVERTEBRATES: Mayflies were abundantly represented by two families (Heptageniidae and Baetidae). Limnephilid larval stone houses were occasional to mostly abundantly represented. Planaria were occasional to commonly present throughout the stream as were Perlidae larvae at only 55-2 and 55-3. Earthworms were occasional to abundant at 55-2 and 55-3, respectively. Fly larvae were rarely seen.

Aquatic plants consisted of moss, bentgrass, clinging and globular algae, sedge, and an unknown lettuceleaf-like plant.

BEAVER STATUS: No sign of beaver activity was noted. The narrow valley bottom, steep gradient, and lack of a dominant supply of willow and aspen would make Jim Bob Creek unsuitable and hence, undesirable for beaver occupancy.

### CONCLUSIONS

STREAM'S IMPORTANCE: Jim Bob Creek supports a small native population of the primary gamefish species in the Nevada portion of the Snake River Drainage. The good quality of the stream and riparian habitat should insure good flow contributions to downstream waters.

RECOMMENDATION: The fencing around the Jim Bob Creek headspring should be repaired to exclude cattle.

<b>TEXT</b> .....	3
<b>MAP</b> .....	1
GAWS LEVEL I STREAM HABITAT INVENTORY - IDENTIFICATION LEVEL.....	1
GAWS LEVEL III .....	1
GAWS LEVEL III HABITAT CONDITION INDEX OUTPUT FORMAT.....	3
GAWS LEVEL III STREAM HABITAT INVENTORY FORM.....	3
<b>STREAM POPULATION SAMPLING FORM</b> .....	3
SPECIES POPULATION INVENTORY SUMMARY.....	1
INVERTEBRATE DATA SHEET.....	1
VEGETATIVEANALYSIS.....	1
KODACHROME COLOR SLIDES.....	7