

THE RESOURCES AGENCY OF CALIFORNIA  
Department Of Fish And Game

**STREAM SURVEY**

Date: September 17, 1973

NAME: LITTLE SULPHUR CREEK COUNTY: SONOMA

STREAM SECTION: Entire FROM: Mouth TO: Upper Fisheries Limit LENGTH: 14 miles

TRIBUTARY TO: Big Sulphur Creek TWP: 11N R: 10W SEC: 12

OTHER NAMES: None RIVER SYSTEM: Russian

SOURCES OF DATA: Visual observations - B. Finlayson and J. Nelson

EXTENT OF OBSERVATION
Include: Name of Surveyor, Date, Etc.
LOCATION
RELATION TO OTHER WATERS
GENERAL DESCRIPTION
Watershed
Immediate Drainage Basin
Altitude (Range)
Gradient
Width
Depth
Flow (Range)
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Bottom
Spawning Areas
Pools
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Temperatures
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FISHES PRESENT AND SUCCESS
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RECOMMENDED MANAGEMENT
SKETCH MAP
REFERENCES AND MAPS

**EXTENT OF OBSERVATION** - Little Sulphur Creek was surveyed by foot and from car from its confluence with Big Sulphur Creek to the upper fisheries limit on September 12 and 13, 1973 by B. Finlayson and J. Nelson.

**LOCATION** - Little Sulphur Creek enters Big Sulphur Creek eight miles west of the Geysers Resort on the Geysers Road. The Geysers Resort is 13 miles east on the Geysers Road, which turns off from U. S. Highway 101, 1.6 miles north of Cloverdale.

**RELATION TO OTHER WATERS** - Little Sulphur Creek is one of the most important tributaries to Big Sulphur Creek. It substantially contributes summer and winter flows to the drainage.

**GENERAL DESCRIPTION -**

**Watershed & Immediate Drainage Basin** - Little Sulphur Creek drains a basin of approximately 34 square miles. The immediate drainage can be divided into two habitat types: the lower five miles flows through a barren flat narrow canyon surrounded by oak grassland while the upper nine miles flows through a more vegetated steeper canyon covered with alder, maple, madrone, and pine. A mile section located about one mile downstream from the Healdsburg-Geyser Road Bridge was recently burned by a forest fire.

**Altitude** - Mouth, 800 feet; headwaters, 2,000 feet.

**Gradient** - Lower section: 100 feet/mile. Upper section: 200 feet/mile.

**Width** - Lower section: 10 to 15 feet. Upper section: 2 to 6 feet.

**Depth** - Lower section: up to 6 feet. Upper section: up to 4 feet.

**Flow** - The flow varied from 0.5 c.f.s. in the upper section to 1.0 c.f.s. at the confluence with Big Sulphur Creek.

**Velocity** - Slow to moderately rapid.

**Bottom** - The streambed in the lower five miles was mainly composed of bedrock outcroppings covered with 60% boulder, 20% rubble, 10% gravel and 10% sand and silt. The streambed in the remainder of the creek consisted of 30% boulder, 10% bedrock, 30% gravel, 20% rubble and 10% silt and organic debris.

**Spawning Areas** - About one-tenth of the streambed was suitable for spawning. An exception to this is a two-mile section, four miles above the confluence with Big Sulphur Creek, in which three-quarters of the streambed is suitable for spawning.

**Pools** - Approximately three-quarters of the stream consists of pools which are larger and deeper in the lower stretches. The average pool is 10 feet in diameter and four feet deep.

**Shelter** - Much shelter is provided by many undercut banks and rocks.

**Barriers** - Several roads have been recently placed through the creek one mile downstream from the Healdsburg-Geysers Road Bridge. This road building has created many intermittent merky pools. It is believed that these roads were placed here to better reach a recent fire which has charred the north bank of the creek.

**Diversions** - One diversion was noted (see attached map).

**Temperatures** -

<u>Station Data</u>	<u>Station 1</u>	<u>Station 2</u>	<u>Station 3</u>
Water Temperature (°F)	62	68	58
Air Temperatures (°F)	64	68	64
Weather	Clear	-	-
Time	0830	1330	0830
Flow (C.F.S.)	1.0	1.0	0.5
Altitude (feet)	0800	1100	1500

**Food** - Gastropods were abundant in the upper sections. Abundant numbers of Trichoptera larvae were noted in the lower section. Aquatic Diptera and Hemiptera were also present.

**Aquatic Plants** - Sedge and algae.

**Winter Conditions** - Six feet above summer levels.

**Pollution** - Fire retardant was found in the creek one mile downstream from the Healdsburg-Geysers Road Bridge. This resulted in a few dead fish (20 steelhead trout); however, it was not a total fish kill.

**Springs** - A few noted along the creek.

**FISHES PRESENT AND SUCCESS** - A few steelhead trout were noted near the confluence with Big Sulphur Creek, (5/100 feet of stream) and averaged three inches in length. Steelhead trout were then again seen seven miles upstream from the confluence with Big Sulphur Creek (25/100 feet of stream) to the upper fisheries limit and ranged from two to six inches in length. Roach (80/100 feet of stream) and Sacramento squawfish (25/100 feet of stream) were seen to eight miles upstream. Suckers were seen (20/100 feet of stream) along the entire length surveyed. All the above are visual estimates only.

**OTHER VERTEBRATES** - Snakes and frogs.

**FISHING INTENSITY & OTHER RECREATIONAL USE** - Unknown.

**ACCESSIBILITY** - Access to the lower section may be gained from The Geysers Road, six miles east of U. S. Highway 101. Access to the rest of the creek can be gained from the Healdsburg-Geysers Road Bridge, four miles south of the Geysers Resort.

**OWNERSHIP** - The lower three miles of creek is owned by P. C. Hale, residing at the H-E Ranch, four and a half miles west of U.S. Highway 101 on The Geysers Road. The remainder is unknown.

**POSTED OR OPEN** - Posted.

**IMPROVEMENTS** - None recommended.

**PAST STOCKING** - Unknown.

**GENERAL ESTIMATE** - Little Sulphur Creek at the present time contributes some spawning and nursery area to steelhead trout mainly in the upper sections.

**RECOMMENDED MANAGEMENT** - Nothing can be suggested at this time with the possible exception of cleaning up the area involved in the fire.

**SKETCH MAP** - Attached.

**REFERENCES** - U.S.G.S. 15 minute series (Kelseyville Quad) 1959. Scale 1:62,500