

THE RESOURCES AGENCY OF CALIFORNIA
CALIFORNIA DEPARTMENT OF FISH AND GAME

STREAM SURVEY

File form No _____ Date: 1968

NAME: LITTLE SULPHUR CREEK COUNTY: Sonoma

STREAM SECTION: Partial FROM: Confluence with Big Sulphur Creek TO: Pine Flat Road LENGTH: 15 mi.

TRIBUTARY TO: Big Sulphur Creek TWP: 11 No. R: 10 W. SEC: 12

OTHER NAMES: None known RIVER SYSTEM: Russian River

SOURCES OF DATA: Personal observation and information from local residents

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)
Velocity
Bottom
Spawning Areas
Pools
Shelter
Barriers
Diversions
Temperatures
Food
Aquatic Plants
Winter Conditions
Pollution
Springs
FISHES PRESENT AND SUCCESS
OTHER VERTEBRATES
FISHING INTENSITY
OTHER RECREATIONAL USE
ACCESSIBILITY
OWNERSHIP
POSTED OR OPEN
IMPROVEMENTS
PAST STOCKING
GENERAL ESTIMATE
RECOMMENDED MANAGEMENT
SKETCH MAP
REFERENCES AND MAPS

EXTENT OF OBSERVATION - The stream was surveyed on August 14, 15, 27 and 28[th, 1968] by Seasonal Aides Bruce Thomson and Jim Michaels. The survey as conducted on foot.

RELATION TO OTHER WATERS - This stream is the largest and most important tributary to Big Sulphur Creek, both in area drained, amount of water it contributes and spawning and nursery areas provided.

GENERAL DESCRIPTION - (Watershed - Immediate Drainage Basin)

Little Sulphur Creek drains about 30 square miles of rugged mountainous terrain. The rocky soil is covered by a dense stand of chaparral; conifers are found along the sheltered canyon and in ridge tops. Grass is present in isolated areas and as associated with oaks. The stream flows in a Northwesterly direction through a steep, V-shaped canyon. Streamside vegetation was found to be abundant throughout the upper portion of the drainage. [The] Vegetative canopy in the lower portion of the stream was partially open.

Altitude - 650 feet at the confluence with Big Sulphur Creek. 2,000 feet at the headwaters on Pine Flat.

Gradient - About 5 feet per 100 feet of stream.

Width - The average of riffles was about 7 feet, the pools averaged about 20 feet wide. The stream consistently becomes narrower as one approaches the headwater.

Depth - The average of riffles was about 6 inches. The pools averaged 3 feet at maximum depth. The following flows were recorded: 2.5 c.f.s. near the confluence with Big Sulphur Creek; 1.8 c.f.s. upstream from the confluence to the North Branch; 1.7 c.f.s. at the Auger hole on the Pocket Ranch, and 0.5 c.f.s. upstream from the Healdsburg Geyser Road. All flows were measured by the float method.

Velocity - Rapid, over 75% of its length. Pools were sluggish.

Bottom - Average for entire stream was approximately 5% bedrock, 10% boulders, 10% course rubble, 15% fine rubble, 15% course gravel, 15% fine gravel, 15% sand and 15% mud and silt. The riffles were generally composed of rubble and gravel, while the bottom of the pools was generally mud and bedrock.

Spawning Areas - Approximately 5% of the stream gravel appears suitable for steelhead spawning and less than 5% for king salmon spawning. Most gravel were loose and considered excellent for spawning purposes.

Pools - Excellent pool development is [was found in] the upper portion of the surveyed area. Pools found above the pocket ranch road were generally large and deep. Pools downstream from this road were generally long, narrow and shallow.

Shelter - Most of the stream has good shelter. Most of the shelter is [was] provided by undercut rocks and banks. Upstream from the Pocket Ranch Road, 25% of the stream bank was found to be undercut.

Barriers - Two barriers in the form of water falls were observed about 2 miles downstream from the Healdsburg Geysers Road, The two falls are located within 100 ft. of each

other, and appeared to present a complete barrier to fish.

Diversions - A small temporary earth dam located about 1 mile downstream from the Pine Flat on the Cinnabar Ranch is currently washed out.

Temperatures - Air temperatures were recorded as follows: 60°F at 9:20 on August 27; 69° at 9:15 on August 15; 73°F at 4:00 pm on August 14; and 90°F at 2:30 on August 28. Corresponding water temperatures were 57°F, 68°F, 69°F, and 76°F, respectively.

Food - Caddisfly larvae were found in excess of 4 per square foot of stream bottom throughout the surveyed area. Stonefly and mayfly larvae were also found on 50% of the rocks over 3 inches in diameter.

Aquatic Plants - Abundant, green algae was found downstream from the Pocket Ranch as well as in the Pine Flat area.

Winter Conditions - Winter high water marks indicate [an increase] a decrease in depth of about 3 feet and an increase in width of about 20 feet near the confluence with Big Sulphur Creek.

Pollution - None observed.

Springs - Two small springs were found about 2 miles downstream from the Healdsburg-Geysers Road. Spring-fed tributaries are numerous along the upper portion of the stream.

FISHES PRESENT AND SUCCESS - Species present were steelhead and/or rainbow trout, green sunfish, suckers and roach. Juvenile steelhead and/or rainbow trout ranging from 2 to 10 inches and averaging 3 inches in size were found the entire length of the stream. Numbers [upstream above Pocket Ranch were about 100 fish per 100 feet of stream. Numbers of salmonids were ' [about 50/100' of stream.] ~~slightly less~~ in the section of stream downstream from the Pocket Ranch Road. Green sunfish ranging from 1 to 7 inches, and averaging 3 inches in size were found upstream from the Cinnabar Ranch, Numbers were approximately 50 fish per 100 feet of stream. Roach averaging about 2 inches in length, dominated the stream downstream from the Pocket Ranch. Numbers of roach were estimated at more than 250 fish [per] 100 feet of stream. Suckers averaging 8 inches long were found downstream from the Pocket Ranch in numbers of approximately 150 fish per 100 feet of stream. Green sunfish, suckers and roach were not found upstream above the Pocket Ranch Road.

OTHER VERTEBRATES - Garter snakes, frogs and salamanders.

FISHING INTENSITY - Unknown.

OTHER RECREATIONAL USE - Landowners lease land to hunting clubs and Pocket Ranch (guest ranch) has developed a swimming area in the stream.

ACCESSIBILITY - The stream is crossed in several places by dirt roads, most of which are private. Most of the stream is accessible only by foot.

OWNERSHIP - Private.

POSTED OR OPEN - Posted.

IMPROVEMENTS - Not known. However, the 2 falls considered to be barriers of about 7 foot each in height should be removed to increase stream area available to anadromous species.

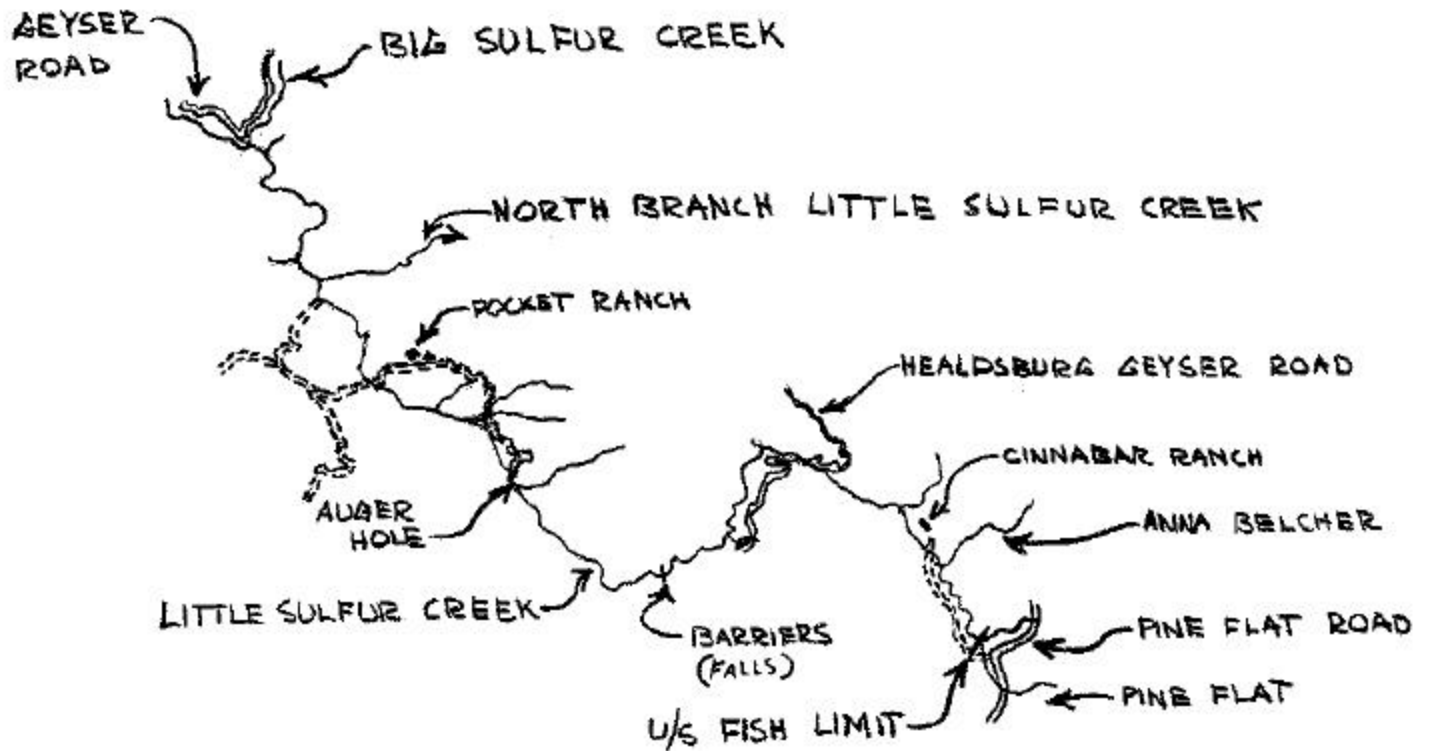
PAST STOCKING - Unknown.

GENERAL ESTIMATE - This stream is a good spawning and nursery stream for steelhead.

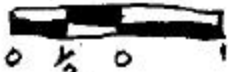
RECOMMENDED MANAGEMENT - Little Sulphur Creek should be managed as a spawning and nursery stream for anadromous salmonid. The natural barriers should be removed, and further road building while not a direct threat, should be restricted to maintain remoteness.

REFERENCES AND MAPS - USGS 15-minute series Kelseyville Quad. 1959, and Healdsburg Quad. 1955

LITTLE SULFUR CREEK



NORTH



MILES