

THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF FISH AND GAME

STREAM SURVEY

Date: September 8, 1977

NAME: Holmes Canyon COUNTY: Sonoma

STREAM SECTION: entire FROM: Mouth TO: Headwaters LENGTH: 1.1 miles

TRIBUTARY TO: Big Austin Creek TWP: 8N R: 11W SEC: 5

OTHER NAMES: none known RIVER SYSTEM: Russian

SOURCES OF DATA: Personal observation

EXTENT OF OBSERVATION
Include: Name of Surveyor, Date, Etc.
LOCATION
RELATION TO OTHER WATERS
GENERAL DESCRIPTION
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Immediate Drainage Basin
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Gradient
Width
Depth
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EXTENT OF OBSERVATION - Holmes Canyon was surveyed on foot from its mouth to its headwaters by Valli Boccone and Bill Rowser on September 8, 1977.

LOCATION - Holmes Canyon is located in western Sonoma County. It enters Big Austin Creek approximately 3 miles north of the town of Cazadero.

RELATION TO OTHER WATERS - Holmes Canyon contributes year-round flow to Big Austin Creek. It also provides spawning and nursery habitat for steelhead.

GENERAL DESCRIPTION -

Watershed - Holmes Canyon flows through steep mountainous terrain. The vegetation is dominated by oak, bay, and annual grasses. Other vegetation includes douglas fir, redwood, maple, poison oak, ferns, wild grape, manzanita, and sedges. The drainage area from 0.1 mile downstream from unnamed tributary S-1 to the area of the headwater shows signs of recent logging.

Immediate Drainage Basin - The drainage basin is approximately 0.9 square miles. The creek runs in an easterly direction. The lower 0.2 miles of the creek flows through a narrow steep area over a series of boulder falls. The vegetation in the lower area includes those found in a mixed conifer, hardwood forest. Located directly below tributary S-1 is a cement and flashboard dam. A house and barn is located along the stream above the dam. The creek above the house flows through a narrow gorge and at the headwaters the creek flows down a

steep gulch. The streamside vegetation from the dam to the headwaters is dominated by oak, bay, sedges, and annual grasses, other vegetation includes maple, redwood, douglas fir, equisetum, berry bushes, and wild grape.

Altitude - At the mouth; 225 feet MSL and at the headwaters; 1000 feet MSL.

Gradient - The gradient was moderate to steep from the mouth to 0.2 miles upstream (7.1 feet/ 100 feet). From 0.2 miles upstream to 0.5 miles upstream the gradient is slight to moderate (3.0 feet/100 feet). Above this point the gradient becomes very steep, (22.8 feet/100 feet).

Width - Average 1 foot, range 3 inches to 3 feet.

Depth - Average 3 inches, range L 1 inch to 4 feet.

Flow - Holmes Canyon was intermittent from unnamed tributary S-1 to 0.1 miles downstream from the upper fish limit. No flows were observed, standing pools only. All other areas were dry with the exception of one large pool, (15'x10'x4') located at the mouth directly below the Kings Ridge Road culvert.

Velocity - None at time of survey.

Bottom Type - Bottom type from the mouth to the dam was 35% boulders, 40% large rubble, 15% small rubble, 10% gravel and 10% sand, in the middle section 25% boulder, 40% rubble, 20% gravel, and 15% sand, and in the upper section 25% bedrock, 15% boulder, 30% rubble, 15% gravel, 15% sand, mud and detritus.

Spawning Areas - An estimated 10% of Holmes Canyon is considered good spawning habitat. This 10% is located in the area from 0.1 mile above unnamed tributary S-1 to 0.4 miles upstream of that point. Gravel is loose and fairly clean.

Pools - There were approximately 6 pools per 500 feet in the area where water was observed. Pool size averaged 9"x16'x3". The pools were formed by undercut banks, depressions in the streambed, bedrock and log jams.

Shelter - The pools observed had very little shelter. The shelter was created by logs and boulders.

Barriers - Partial Barriers - A total of 3 log jams are located in the upper mid-section, ranging from 4 to 6 feet in height (see sketch map). From the mouth to 0.2 miles upstream steep gradient and bottom type dominated by boulders creates a series of falls that hinders fish movement at low flows. A cement and flashboard dam used for swimming and domestic water use is located 1000 feet below unnamed tributary S-1. A culvert located at the mouth under Kings Ridge Road creates a high velocity area.

Complete Barrier - A boulder and log falls along with very steep gradient located 0.7 miles upstream from unnamed tributary S-1 creates the upper fish limit.

Diversions - A well is located 400 feet downstream from unnamed tributary S-1.

Aquatic Plants - Green filamentous algae was observed in several pools.

Temperatures - 100 yards upstream from unnamed tributary S-1, air temperature 90°F., water temperature 65°F. at 1200, 200 yards above unnamed tributary S-1, air temperature 90°F., water temperature 70°F. at 1330.

Winter Conditions - This drainage is subject to heavy winter run-off. The winter water-line averaged 1 - 6 feet above the streambed.

Pollution - None observed.

FISHES PRESENT AND SUCCESS - No fish observed.

OTHER VERTEBRATES - Frogs, western fence lizard, feral pigs, cows, and domestic dogs.

FISHING INTENSITY - Light.

OTHER RECREATIONAL USE - Swimming.

ACCESSIBILITY - Holmes Canyon is accessible at its mouth from Kings Ridge Road via the Cazadero Highway. A private dirt road parallels the creek from Kings Ridge Road to 0.7 mile upstream from the mouth.

OWNERSHIP - Private.

POSTED OR OPEN - Posted.

IMPROVEMENTS - The removal of the 3 log jams in the upper mid-section would improve the streambed and increase the spawning habitat, along with improving fish distribution. A culvert approximately 100 feet long and 8 feet in diameter located at the mouth beneath Kings Ridge Road is creating a problem for migrating adult steelhead according to local residents. Investigation into the culvert creating a velocity barrier is advised.

GENERAL ESTIMATE - Holmes Canyon is a small yet significant tributary to Big Austin Creek. The creek provides spawning and nursery habitat for steelhead. During the time of the survey no nursery habitat remained due to the extremely low rainfall in the past 2 years. During normal years the creek flows year-round and nursery habitat is plentiful. Spawning habitat is minimal but with the removal of the log jams spawning habitat will increase possibly 5%.

RECOMMENDED MANAGEMENT - Holmes Canyon should be managed as steelhead spawning and nursery habitat.

SKETCH MAP - attached

REFERENCES AND MAPS - U.S.G.S. 7½ minute series, Cazadero Quad, 1943.

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Region 3
AWB/klS

HOLMES CANYON

T 8 N , R 11 W , Sec. 5

