

THE RESOURCES AGENCY OF CALIFORNIA
 Department of Fish and Game

STREAM SURVEY

File form No.....

Date _____

NAME Lichau Creek COUNTY Sonoma .
 STREAM SECTION partial FROM mouth To headwater LENGTH 9 miles .
 TRIBUTARY TO Willow Brook, hence Petaluma Creek TWP. 5N R. 7W SEC. 7 .
 OTHER NAMES None known RIVER SYSTEM Petaluma Creek .
 SOURCES OF DATA Personal observation by Bruce Thomson and Jim Michaels as .
well as information obtained 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 - Lichau Creek was surveyed on July 17 & 18, 1968 from a car with frequent stops for closer observation on foot. The headwaters and lower section of the stream was surveyed on foot.

LOCATION - Lichau Creek drains the mountains to the end of Petaluma Creek. The stream flows in a southwesterly direction, merging with Petaluma Creek about 2 miles north of the town of Petaluma.

RELATION TO OTHER WATERS - Lichau Creek is the major tributary to Willow Brook Creek, contributing only winter flow.

Watershed - Lichau Creek heads in the rolling hills of southern Sonoma County and flows in a south-west direction to enter Willow Brook Creek. The lower portion of the stream runs through Petaluma Valley. The overall vegetation of the drainage is grass. The vegetative cover in the headwater is oak and bay trees. The soil is primarily clay.

Immediate Drainage Basin - Lichau Creek drains approximately 11 square miles of terrain. The major portion of the stream courses through an open valley and displays a bowl shaped channel. The riparian vegetation along the stream is abundant and consists primarily of willows, blackberry vines and bay trees.

Altitude - 40 feet to 400 feet.

Gradient - Less than 1 foot per 100 feet of stream in the valley, and 5 feet per 100 feet of stream in the headwater area.

Width - Average 1 foot, range 1 inch to 4 feet. The stream appears

to be wider in the pengrove area than in either the headwater or near the confluence of Willow Brook Creek.

Depth - Average 9 inches, range 1/2 inch to 5 feet. The stream was generally deeper near the town of Pengrove.

Flow - Intermittent pools were observed near Pengrove whereas a flow of 0.05 cfs was recorded in the headwaters (float method).

Velocity - Sluggish where flow was evident.

Bottom - The bottom was composed of 25% rubble, 50% gravel, 10% sand, 5% mud, 5% silt, and 5% boulders. Riffles generally contained more gravel and rubble, whereas pools contained more sand and silt.

Spawning Areas - 15% of the stream bed appeared suitable for steelhead spawning purposes. Spawning area was limited primarily because of sand and silt.

Pools - The average pool was 7 feet long 5 feet wide and 1 foot deep. Pools appeared deeper near the Pengrove area. Pool frequency in the headwater area was about 75% pools and 25% riffles. Pools were intermittent in the lower section of the stream.

Shelter - Shelter consisted primarily of deep pools, undercut banks, and overhanging terrestrial plants.

Barriers - None observed. However some dams were observed in tributary streams.

Diversions - None observed.

Temperatures - Air temperature 88°F, water 68°F at 1700 in the headwaters. The temperature in the lower part of the stream at 1100 was; air - 86°F, water 67°F.

Aquatic Plants - Algae was common. Duckweed was abundant. Cattails were present in small quantities near Pengrove.

Winter Conditions - Debris and high water marks along the stream indicate that flows about 4 feet high can be expected.

Pollution - None other than possible dairy pollution from near by ranches.

Springs - None observed.

Food - Dragonflies, and a large number of dipterous insects. Caddisflies were observed in numbers of about 3 per rock.

Fishes present and success - Juvenile steelhead were observed in only two small pools in the headwater area. Juvenile steelhead ranged in size from 2 to 7 inches. A total of about 10 were seen. In the lower section of stream stickleback were observed in numbers of about 100 per 100 feet of stream. Stickleback were generally of a length of ¼ inch to 2 inches. Suckers were also observed in the lower section of the stream, numbering about 20 per 100 feet of stream. The suckers ranged in size from 2 to 5 inches.

Other vertebrates - Frogs, snakes, deer, birds and cattle.

Fishing intensity - Unknown.

Other recreational uses - None observed.

Accessibility - Lichau Creek is accessible by a number of roads, such as, Old Redwood Highway, Adobe Road, Davis Lane, Railroad Avenue, Petaluma Hill Road, Roberts Road and Lichau Road. The headwater and lower stream areas are accessible only on foot.

Ownership - Private property

Posted or open - All areas were posted against trespass.

Improvements - None observed.

Past stocking - Unknown.

General estimate - Lichau Creek in its present condition is of minor importance as a steelhead spawning and nursery area. Limiting factors appear to be lack of summer flow and the presence of large amounts of sand and silt.

Recommended management - This stream should be managed as a steelhead stream. Although the creek is in poor condition the potential is present. Water developments that have potential for increasing the summer flow in the stream should be encouraged.

Sketch map - See attached

References and maps - U.S. Geological survey map - Santa Rosa Quad - 1954 - 15 minute series.

LICHUUM CREEK

