

THE RESOURCES AGENCY OF CALIFORNIA  
Department Of Fish And Game

**STREAM SURVEY**

File form No \_\_\_\_\_ Date: \_\_\_\_\_

NAME: Willow Brook COUNTY: Sonoma

STREAM SECTION: FROM: mouth of stream TO: headwaters and LENGTH: 8 miles  
tributaries

TRIBUTARY TO: Petaluma Creek TWP: 5N R: 7W SEC: 18

OTHER NAMES: Hoggins Creek RIVER SYSTEM: Petaluma Creek hence San Francisco Bay

SOURCES OF DATA: Data obtained from personal observation and information from local residents

<b>EXTENT OF OBSERVATION</b> Include: Name of Surveyor, Date, Etc.
<b>LOCATION</b>
<b>RELATION TO OTHER WATERS</b>
<b>GENERAL DESCRIPTION</b>
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 July 17, 1968 by Bruce Thomson and Jim Michaels on foot. A car was used to spot check the tributaries.

RELATION TO OTHER WATERS - Willow Brook Creek contributes more than 507, of the total winter flow to Petaluma Creek above the city of Petaluma. The stream is of no importance as a nursery area because of lack of summer flow.

Watershed - Willow Brook Creek drains about 10 square miles of rolling hills to the north of the town of Petaluma. The vegetative cover is primarily grassland except for the headwaters where oak and bay trees form dense cover.

Immediate Drainage Basin - Willow Brook Creek is located in a broad V-shaped valley and discharges towards the west. The channel is generally incised with a wide bottom indicating a high and fast winter flow. Streamside vegetation is scarce, and where present, is composed of willows and blackberry.

Altitude - 40 to 700 feet.

Gradient - Slight, approximately 75 feet per mile.

Width - Range 0-10 feet, average 1 foot.

Depth - Range 0-3 1/2 feet, average 1/2 foot.

Flow - Intermittent pools only. High-water mark indicates a winter maximum of 1-15 feet wide and 2-4 feet deep.

Velocity - Standing in pools, no flow between pools.

Bottom - 10% rubble, 40% gravel, 20% sand, 30% adobe mud.

Spawning Areas - 5% of the streambed contains loose gravel suitable for steelhead and silver salmon spawning.

Pools - Poor pool development, one 8 ft, by 20 ft. by 1 foot deep pool per 150 feet of stream. The pools are located near limestone outcroppings where water appears unable to sink into the ground.

Shelter - 50% of pools have undercut banks and 25% have heavy green algae under which fish can hide.

Barriers - Three dams, one 4 feet high by 10 feet wide 1/2 mile west of Adobe Road, another 4 feet high by 15 feet wide 100 yds. upstream from last unnamed tributary, and a third dam was located southeast of Davis Lane roadhead. The first two dams are passable during high water but the last one is a complete barrier.

Diversions - Irrigation pumps were observed at all three barriers.

Temperatures - Air temperatures at 1320, 93°F. Water temperature was 82°F.

Food - Three caddis flies per square foot of stream in pools. Observed many adult dragon fly, and damsel fly were present but no larvae were observed.

Aquatic Plants - Green Algae was found in all pools, duckweed was found in 75% and cattails were found in 50% of the pools.

Winter Conditions - Local residents indicate the stream is swift and at times, carries a large volume of water during the winter period.

Pollution - None observed.

Springs - Seepage appears along the stream at most limestone outcroppings.

FISHES PRESENT AND SUCCESS - Sticklebacks were observed in all of the pools. About 200 fish in an average pool. Tule perch were observed in about 20% of the pools with less than 30 fish in an average 8' by 20' by 1' pool. The fish appeared to be thin and in poor condition. It is believed the pools are drying up.

OTHER VERTEBRATES - Frogs and tadpoles are found in abundant numbers in pools along the entire stream.

FISHING INTENSITY - None observed.

OTHER RECREATIONAL USES - None.

ACCESSIBILITY - The stream is crossed by several roads and is never more than a mile from any one road.

OWNERSHIP - Private.

POSTED OR OPEN - All land was posted.

IMPROVEMENTS - None observed.

PAST STOCKING - Unknown.

GENERAL ESTIMATE - This stream has no fishery value as a nursery area because of its lack of summer flow.

RECOMMENDED MANAGEMENT - Consideration should be given for water projects that would increase summer flows in the stream.

REFERENCES AND MAPS - Cotati Quad map. USGS 7 1/2 minute series.

