

THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF FISH AND GAME

STREAM SURVEY

NAME: Adobe Creek COUNTY: Sonoma
 STREAM SECTION: entire FROM: mouth TO: headwaters LENGTH: 7 miles
 TRIBUTARY TO: Petaluma Creek TWP: 4N R: 7W SEC: 2
 OTHER NAMES: Casa Grande Creek RIVER SYSTEM: Petaluma Creek
 SOURCES OF DATA: Personal observation, and conversations with local residents

EXTENT OF OBSERVATION	<u>EXTENT OF OBSERVATION</u> - Surveyed on Thursday, July 11, 1968 by Bruce Thomson and Jim Michaels by car with frequent stops for closer observation on foot.
Include: Name of Surveyor, Date, Etc.	
LOCATION	<u>RELATION TO OTHER WATERS</u> - Contributes a large winter flow to Petaluma Creek, but during the summer, most of the flow is diverted to the City of Petaluma as water supply. The stream supplies habitat for a fair population of resident trout.
RELATION TO OTHER WATERS	
GENERAL DESCRIPTION	<u>Watershed and Immediate Drainage Basin</u> - Adobe Creek drains an area of about 10 average square miles to the northwest of the town of Petaluma. The terrain is rolling hills. Vegetative cover of 25% oak-bay forest and 75% open grassland. The open grassland is used extensively. It is used for grazing. Riparian cover was considered abundant, consisting of oaks and bay trees.
Watershed	
Immediate Drainage Basin	
Altitude (Range)	<u>Altitude</u> - At mouth 0, at headwaters about 1500 feet.
Gradient	<u>Gradient</u> - Moderate at about 250 feet of rise per mile.
Width	<u>Width</u> - Average of 2 feet, ranges from 6 inches to 12 feet.
Depth	<u>Depth</u> - Average depth 3 inches, ranges from 1 inch to 3 feet.
Flow (Range)	<u>Flow</u> - Approximately 0.08 cfs below the lower diversion, and 1.0 above. (float method).
Velocity	<u>Velocity</u> - Rapid in 75% of the stream. Sluggish in the remaining portion of the stream.
Bottom	<u>Bottom</u> - Generally 20% boulders, 40% rubble, 30% gravel, 5% sand and 5% silt. In riffles the streambed composition was 30% boulders, 50% rubble, and 20% gravel. In pools the streambed was 30% rubble, 40% gravel, sand 20% and silt 10%.
Spawning Areas	<u>Spawning Areas</u> - Appears good for resident trout. Spawning area averaged about 40% of the stream.
Pools	<u>Pools</u> - Good pools development, about two 10 ft. x 20 ft. x 1 ft. pools per hundred feet.
Shelter	<u>Shelter</u> - 75% of the pools had undercut banks, while virtually all of the pools had 3 or 4 large rocks or logs under which fish could hide.
Barriers	<u>Barriers</u> - A ten foot high diversion dam was observed 2 miles upstream from the old Adobe road. A similar structure was observed one mile upstream from this. Two farm ponds, each earth dams 20 ft. high were observed. Each farm pond was located on a tributary to the main stem, upstream from the highest diversion dam. See the attached sketch map.
Diversions	<u>Diversions</u> - Four diversions were observed, each was considered a barrier. These diversions were located between the lower two dams. Almost all of the stream's water during the summer is diverted to Petaluma for water supply. The upper two reservoirs appeared to be pumping stations for irrigation.
Temperatures	<u>Temperatures</u> - Air temperature - 69°F at 1130. Water temperature ranged from 72°F below the first diversion dam to 58°F. in the headwaters.
Food	<u>Food</u> - Approximately 2 caddis flees were observed per square foot of stream above the diversion Stone fly larvae were also present in numbers of 1 per square foot of bottom. Helgramites were also present.
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	

Aquatic Plants - Algae was found in some pools.

Winter Conditions - The high water mark was located about 3 to 5 feet above the present stream level.

Pollution - None observed.

Springs - One spring was noted 150 yds. downstream from the second diversion dam. It contributed approximately 0.2 cfs at the time of the survey.

FISHES PRESENT AND SUCCESS - Rainbow trout. Numbers were about 150 per 100 feet of stream. The fish ranged in size from 1" to 6" and averaged about 3 1/2 inches long. No other species were observed.

OTHER VERTEBRATES - Observed about 50 frogs and 150 tadpoles per 100 feet of stream. Cattle are also present.

FISHING INTENSITY - Unknown.

OTHER RECREATIONAL USES - None.

ACCESSIBILITY - Crossed by Lakeville hwy, Adobe Road, Casa Grande Ave., and paralleled Manor Lane for about one mile.

OWNERSHIP - Private.

POSTED OR OPEN - Posted the entire length.

IMPROVEMENTS - Fish ways should be constructed over the barriers.

PAST STOCKING - Not known.

GENERAL ESTIMATE - Adobe Creek has potential as a steelhead spawning and nursery stream. However, use of the stream for spawning and rearing purposes is minimized by several impassable barriers, and diversions of summer flow. Resident trout reside in the flowing portion of the stream.

RECOMMENDED MANAGEMENT - Construct fish ladders over the diversion dams, plant steelhead for four years to reestablish a run, and then manage the stream as a spawning and nursery area for steelhead.

REFERENCES - U.S.G.S. Petaluma Creek Quadrangle 7 1/2 minute series, and the California State Automobile Association map.

