

THE RESOURCES AGENCY OF CALIFORNIA
Department of Fish and Game

STREAM SURVEY

Date: May 25 and 31, 1977

NAME: Unnamed Stream (Tributary to Sonoma Creek) COUNTY: Sonoma

STREAM SECTION: Entire FROM: _____ TO: _____ LENGTH: 3.4 miles

TRIBUTARY TO: Sonoma Creek TWP: 7 N R: 6 W SEC: 30 (projected)

OTHER NAMES: None known RIVER SYSTEM: Sonoma Creek

SOURCES OF DATA: Personal observation and 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 foot and by car by Seasonal Aids, Jane Webb and Valli Boccone, on May 25 and 31, 1977.

RELATION TO OTHER WATERS: The stream is a small ephemeral tributary to an unnamed tributary to Sonoma Creek. It is 3.4 miles long with 0.3 mile of tributaries.

GENERAL DESCRIPTION:
Watershed: The watershed, from the headwaters to approximately one mile downstream, is steep and mountainous. The soil is rocky. The predominant vegetation consists of Douglas fir, black oak, coast live oak, madrone, big leaf maple, buckeye and bay trees. Shrubs such as poison oak, Cytissus and Baccharis are small and sparse. The canopy of the trees provides 70 - 90% cover. The lower section of the stream flows south into the Sonoma Valley where the shrubs become more dense. Baccharis, Cytissus, poison oak, wild rose and blackberry bushes are abundant. Trees become sparse, often separate by long stretches of open grassland. The trees are mostly valley oak with a few Oregon ash and willows. The soil in the valley is an adobe matrix with river gravel and rubble. Prune and walnut orchards, cattle pasture and private homes are found along the stream in the valley.

Immediate Drainage: The stream drains approximately 1.8 square miles. North of Highway 12, the streambed channel is V-shaped with banks 5 to 12 feet high. Near the headwaters the stream is U-shaped with 1-foot banks. South of Highway 12 the channel becomes U-shaped with banks 4 to 5 feet high.

Altitude: The mouth is approximately 440 feet MSL. The headwaters are approximately 2100 feet MSL.

Gradient: The gradient from the headwaters to approximately 1 1/2 miles downstream is steep, 17.0 feet per 100 feet. Downstream from that point to the mouth, the gradient is slight, 3.6 feet per 100 feet.

Width: The stream width averages 3 1/2 feet throughout the steep section, widening to 10 feet south of Highway 12.

Depth: In the sections of streambed that have water, the depth ranged from 1/2 inch to 2 feet.

Flow: Streamflow was interrupted. Where there was water, the streamflow was measured and found to be less than 0.1 cfs. This stream is ephemeral and run-off ceases by June in most years according to landowners Willard L. Johnson, Jr., and Elwin G. Storey. Station 1, above concrete holding pools, flow 0.03 cfs at 1230 hours; Station 2, just above Andrade house, flow 0.02 cfs at 1300 hours; Station 3, mouth of stream-dry 1600 hours; Station 4, confluence of unnamed tributary and Sonoma Creek, flow 0.0 cfs at 1430 hours. The streambed was dry from Los Guilucos School to just above Sonoma Creek.

Velocity: Sluggish; less than 0.5 cfs.

Bottom: North of Highway 12 the bottom is composed of clay hardpan with fine gravel (0.12 to 0.5-inch diameter) littered with fine rubble (rocks, 3 to 6-inch diameter). There is a thick layer of leaf litter or detritus over all. South of Highway 12, to the mouth, the bottom consists of: 50% fine gravel (1/4 to 1-inch diameter); 30% coarse gravel (1 to 3 inches in diameter); 20% fine rubble (3 to 6 inches in diameter). The unnamed tributary into which this stream flows, is mostly mud with some coarse gravel and fine rubble.

Spawning Areas: The one-mile stretch of stream, between Highway 12 and the mouth, is good spawning habitat. The gravel is loose and is 50% fine gravel. Mr. Elwin G. Story has observed steelhead spawning near his house, at 7700 Sonoma Highway, during the 30 years he has lived there. He has not seen any sign of steelhead in the last five years, however.

Pools: Pool development is poor; one pool per 1/4 mile. Size averages 3 x 6 feet with a depth of two feet in areas with water. Long stretches of dry ground serve to isolate pools during the summer.

Shelter: There is little shelter in the pools. The roots from oaks and a few undercut banks provide a small amount of shelter in pools.

Barriers: Above BM 857 (see sketch map) the gradient is quite steep. Roughs with 10 to 20 foot falls are not uncommon and probably limit upstream passage of fish. At Station 1 (see sketch map) there are two small (5 to 6 feet) concrete dams that collect water from the stream above. This water is piped down to three storage tanks (see accompanying slide 35 mm). Below the collecting ponds, the flow is subsurface for approximately 20 yards. The road over the creek, at this point, has no culvert. A small amount of seepage is visible just below the road, which is about 20' higher than the streambed. A 4-foot diameter culvert beneath the dirt road, just before it intersects Pythian Road, may provide a velocity barrier to fish during heavy winter flows. This appears to have happened in the winter of 1964/65 when water was backed up behind it (Willard L. Johnson, Jr.). There are eight culverts between Los Guilicos School and Sonoma Creek. Four of them (see a, b, c and d on sketch map) have concrete floors which may be barriers to upstream movement by fish when flows are low in late spring, or late fall. There are two (4 x 4-inch) wire mesh fences across the stream (see photo #7) between Highway 12 and the mouth. These have been installed recently and may be washed out during normal winter flows. A sandbag dam, 1 1/2 feet high and 3 feet across, blocks the unnamed tributary to Sonoma Creek. It, too, may not survive a normal winter. Two concrete and aggregate posts (1 x 1 x 6 feet) have been placed across the unnamed tributary to Sonoma Creek approximately 50 feet below the sandbag dam (see sketch map). The concrete posts would not be a barrier if the stream was more than one foot deep. Two board fences (see polaroid photos 1 and 3) have been built on either side of a cattle pasture west of Lawndale Road. They have a clearance of approximately 1 foot above the streambed at present, but may be a barrier to steelhead coming up from Sonoma Creek in the future, especially if the water level is high.

Diversions: Water from the stream and its small tributaries is diverted into a reservoir on the Willard L. Johnson property (see R-1 on the sketch map) during years of normal runoff. The maximum surface area is 4 acre-feet. At present, the water level is 25 feet below the top of the earth dam and is only 2 feet deep. A smaller reservoir (R-2 on sketch map) holds about 1 acre-foot and is spring-fed. A pipe connected to a pump diverts water from a pool (Station 2 on sketch map) west of BM 857. The pool was 10 x 2 feet and approximately 1 foot deep and appears to be spring-fed. Elvin G. Story, who resides at 7700 Sonoma Highway, says that the above diversions of water from the stream have cut off the flow completely at times during the last five years. In late spring, when streamflow ceases, adult steelhead who had not yet returned to Sonoma Creek are stranded. Mr. Story has rescued these fish by transporting them to Sonoma Creek. He and his neighbors hold the Johnson family responsible and have complained (not known to what agency) in the past.

Temperatures: Station 1, above concrete holding pools, air temperature 55 F, water temperature 49 F at 1230 hours; and Station 2, pool near BM 857, air 65 F, water 51 F at 1300 hours.

Food: Grasshoppers were abundant, as were crickets and small flying insects, where water was located; especially near the reservoirs.

Aquatic Plants: Mats of filamentous green algae were present in ponds and reservoirs, as well as in slow-moving, shallow water in the stream itself. Duckweed was abundant in the pool below the reservoir (R-1 on sketch map). There was little aquatic vegetation in the steep sections of stream (above Andrade house on sketch map). Wild celery, sedges, rushes and annual grasses were found in the unnamed tributary near Sonoma Creek.

Winter Conditions: During normal winter run-off, the culvert beneath the dirt road (4 feet in diameter) above Andrade's house is about half full, according to Willard L. Johnson, Jr. In the severe winter of 1964-65, the water backed up behind the culvert.

Pollution: Solid waste from septic tanks of residences along the stream may contribute to pollution. Cattle wastes may go into the stream during the winter wet season. A pile of ashes, 10 x 15 feet, was found in the dry streambed approximately 500 feet below Highway 12.

Springs: Springs provide water throughout the year, above Station 2. The small reservoir near the headwaters, is spring-fed as is the pool at Station 2.

FISHES PRESENT AND SUCCESS: No fish were found in the survey. However, Mrs. Michael Andrade reported that four 6-inch trout were observed in the summer of 1976, in a small pool below her house. Mr. Johnson, Jr., reported stranded adult steelhead had died along the banks in the same area in 1975. Mr. Story reported adult steelhead and juveniles (2 to 6 inches) in the stream behind his house (7700 Sonoma Highway) up until 1972. He had fished the area with good success many years ago.

OTHER VERTEBRATES: Frogs were seen near Sonoma Creek and bullfrogs were heard in the reservoirs. Cattle, dogs and horses are kept by residents. Raccoons and skunks were reported by Mrs. Andrade. Mr. Johnson killed a rattlesnake on Pythian Road while we were there. He also reported a great blue heron on the upper reservoir (R-2).

FISHING INTENSITY: Light fishing intensity reported for years before 1972. No fishing at present.

OTHER RECREATIONAL USES: The local residents use the area to hike and ride horses.

ACCESSIBILITY: The stream parallels Pythian Road. Above Pythian is a dirt road maintain by Willard L. Johnson. Where this road forks are two locked gates. The stream is accessible from Highway 12 and by several private roads and driveways along Highway 12. The unnamed tributary can be reached by Lawndale Road.

OWNERSHIP: North of Highway 12, the land adjacent to the stream belongs to Los Guilucos School (Sonoma County). Mr. and Mrs. Michael [Andrade] own the 8 acres between the school and BM 857. Willard L. Johnson owns the rest of the property north to the headwaters of the creek. South of Highway 12, ownership is divided among several residents.

POSTED OR OPEN: The stream as well as the unnamed tributary into which it flows, is posted along its entire length with "No Trespassing" signs.

IMPROVEMENTS: The 1/2 mile of stream south of Highway 12 has been "improved" by the people who live along its banks. Rip-rapping and revetments, as well as a 10 x 15 feet concrete floor, are among the various streambed modifications in this area.

PAST STOCKING: It is not known if the stream has ever been stocked. The four 6-inch trout observed by Mrs. Andrade's family in 1976 may have been put there. The reservoirs R-1 and R-3 (sketch map) have been stocked with largemouth bass, bluegill and Gambusia according to Mr. Johnson, Jr., and Mrs. Andrade.


GENERAL ESTIMATE: The one-mile stretch of stream between Highway 12 and the mouth, has been used in the past by steelhead. It provides good spawning habitat. The diversion of water into reservoirs north of Highway 12 presents severe problems in late spring when the flow has been stopped completely stranding adult steelhead.

RECOMMENDED MANAGEMENT: The section of stream south of Highway 12 has fisheries value and should be managed for steelhead. Removal of fences, if they are found to be barriers to the migration of steelhead to the spawning areas, is suggested. An agreement with Mr. Johnson to maintain normal flows in the late spring should be reached if steelhead are to return to this stream.

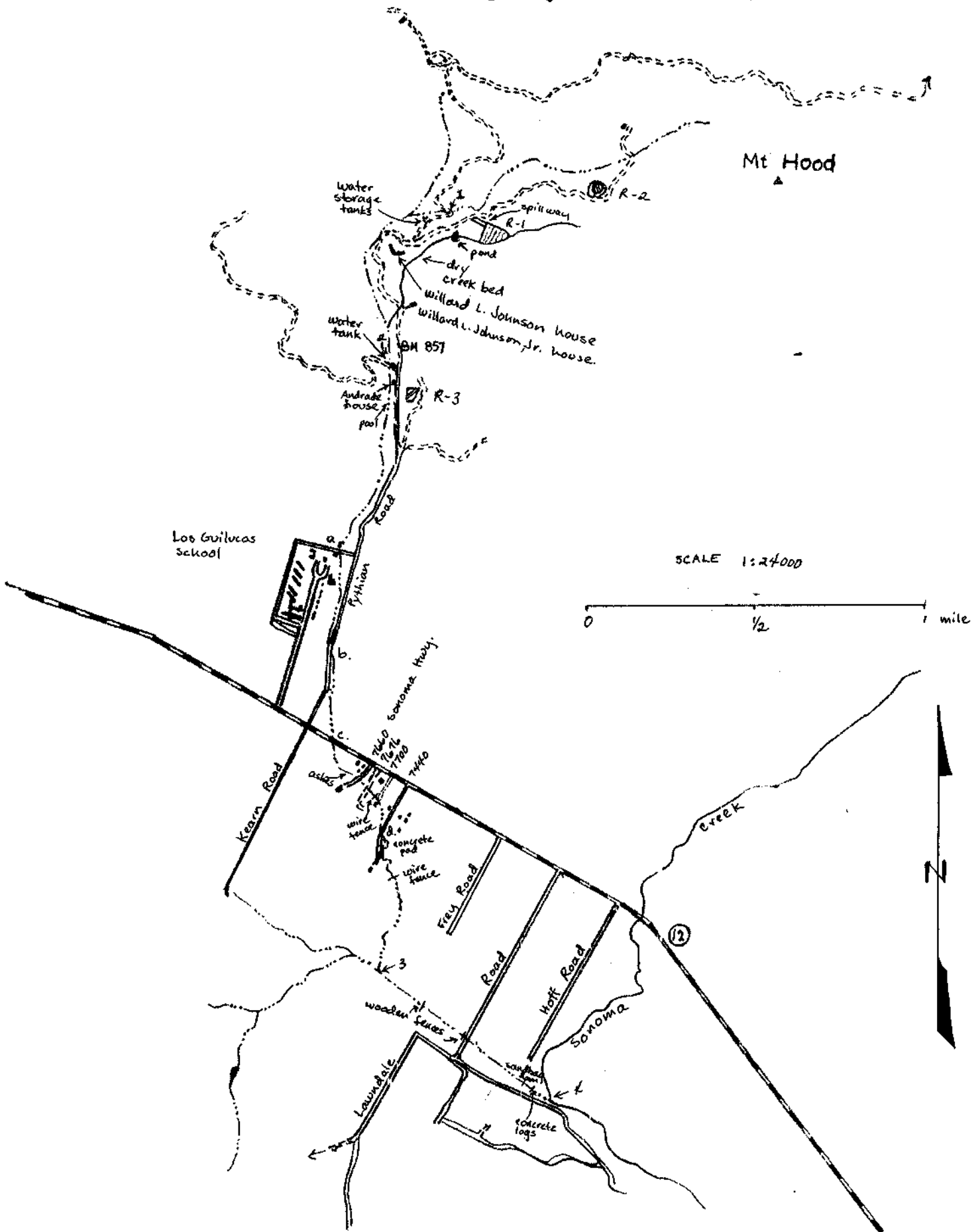
SKETCH MAP: Attached.

PHOTOGRAPHS: Attached.

REFERENCES AND MAPS: U.S.G.S. 7.5' series map for the Kenwood quadrangle, California.


 Jane Webb
 Seasonal Aid
 Region 3

Unnamed stream along Pythian Road, Kenwood.





1.



2.



3.



4.

1. Culvert under Laundale Road. Dimensions: 6' x 10'. Gravel dumped in foreground.
2. Sandbag dam on unnamed tributary to Sonoma Creek. Dimensions 1.5 x 3 feet. Plastic lining on upstream side.
3. Wooden fence on western end of Laundale Road culvert. Dimensions: 5' x 10 feet. One foot of clearance between fence and streambed.
4. Culvert below highway 12. Dimensions: 3 x 10 feet for each opening. Exposed aggregate floor.



5



6



7



8

- 5. Culvert under driveway at 7660 Sonoma Highway. Dimensions: 3 X 8 feet north
No floor. 3 X 10 feet south
- 6. culvert under dirt road at 7676 Sonoma Highway. Dimensions: 6 X 10 feet.
No floor.
- 7. Wire mesh (4 X 4 inches) fence ^{across} ~~in~~ stream behind 7700 Sonoma Highway.
- 8. Culvert under dirt road at 7700 Sonoma Highway. Dimensions: 3 X 6 feet.
No floor.