

THE RESOURCES AGENCY OF CALIFORNIA
Department of Fish and Game

STREAM SURVEY

File form No. _____

Date: September 12, 1974

NAME: NATHANSON CREEK COUNTY: Sonoma

STREAM SECTION: Entire FROM: Mouth TO: Headwater LENGTH: 7.5 miles

TRIBUTARY TO: Schell Creek thence Steamboat Slough TWP: [5N] R: [5W] SEC: [19]
within the Sonoma Creek-Napa River Marsh

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 by Barbara Lincoln on September 12, 1974. A car was used on adjacent roads to cover the area surveyed. Frequent stops were made for closer observation of the stream on foot.

LOCATION - Nathanson Creek heads on the slopes of Hogback Mountain in the rugged terrain along the Sonoma, Napa County border. The stream courses in a southwesterly direction, entering and traversing Sonoma Valley and the town of Sonoma before converging with Schell Creek to the south of Vineburg.

RELATION TO OTHER WATERS - Nathanson Creek is one of the longer tributaries the east side of the Sonoma Creek drainage.

GENERAL DESCRIPTION AND IMMEDIATE DRAINAGE BASIN: - Nathanson Creek drains about 7 square miles of terrain. The upper portion of the watercourse drains through a narrow V-shaped canyon before opening up into the broad Sonoma Valley area. The channel was generally incised in the headwater opening into a broad U-shape in the valley portion. Vegetation in the drainage was predominantly oak and bay with some Cottonwood as well as redwood present. Willow and blackberry were also present along the stream course in some areas. Altitude - 60 feet near the confluence with Schell Creek and 1200 feet in the headwater.

Gradient - 6 feet/100 feet in the headwater and 1 foot/100 feet in the lower portion.

Width - Average 8 feet, range-2 feet to 20 feet.

Depth - Average 10 inches, range- 1 to 30 inches.

Flow - The flow was generally intermittent. A maximum flow of 0.5 c.f.s. was present in the headwater area.

Velocity - 0 - .5 feet/second and considered sluggish.

Bottom - Upper section-organic debris 10%, sand 20%, rubble 30%, boulders 40%. Lower section-organic debris 10%, silt 15%, sand 30%, rubble 45%.

Spawning Areas - Poor in the headwater, less than 5 percent. In the lower area, through the town of Sonoma, spawning area increased to about 50%. However, the accumulation of silts and fines had an adverse effect upon the availability of the gravel for spawning use.

Pools - Ninety-five percent of the wetted area was contained in isolated pools. Pool frequency was 1 pool for about every 75 feet of stream. Most pools were associated with boulders. Average pool dimensions were 2 feet long by 3 feet wide and 10 inches deep.

Shelter - Most shelter was composed of undercut boulders and overhanging vegetation and was considered poor to fair.

Barriers - Three barriers described as follows were observed:

1. A concrete dam located about 1 mile above the Lovall Valley Road crossing was considered a barrier, but only at low flows. The dam was about 4 feet in height.
2. A natural falls of about 60 feet in height was observed about 1 1/2 miles above barrier #1.
3. A 13 acre-foot dam was located on the Etherton Ranch about 1 1/2 miles above barrier #2. This dam was considered a partial barrier to fish.

Diversions - None observed.

Temperatures - Air: Minimum-66°F at 1000 hours and maximum-87°F at 1530 hours.
Water: Minimum-60°F at 1000 hours and maximum-72°F at 1530 hours.

Food - Caddis fly larvae were observed in areas where water was present.

Winter Conditions - Local residents indicate that during the winter stream conditions can become quite high. Normal winter flows, however, are usually 3 to 4 feet high.

Pollution - Some domestic garbage was observed in the streambed within the town of Sonoma.

Springs - Pools in the area near the 60-foot falls were maintained by adjacent springs.

Aquatic Plants - Lemna (duckweed) and some filamentous green algae was present throughout most of the stream.

FISHES PRESENT AND SUCCESS - Juvenile steelhead trout, rainbow trout and western roach were observed. The juvenile steelhead were present in numbers of about 20 fish per pool in the area below the falls (Barrier #2) and ranged in size from 2 to 7 inches. Rainbow trout are present above the falls. Brown trout were said by local residents to have been stocked above the falls. However, none were observed. Roach occupy pools within the Sonoma City area in large numbers, ranging in size from 1 to 3 inches.

OTHER VERTEBRATES - Frogs and tadpoles.

FISHING INTENSITY - No fishing was observed. Local residents indicated that the stream is fished moderately during the spring period.

ACCESSIBILITY - Above the town of Sonoma, Gericke Road parallels the stream for a distance of about 3 miles. In the town of Sonoma and in the drainage below, numerous roads cross the stream.

OWNERSHIP - Private.

IMPROVEMENTS - None observed.

PAST STOCKING - Local residents indicated that brown trout were planted in the stream above the falls many years ago.

GENERAL ESTIMATE - Nathanson Creek was considered to be in fair condition. Steelhead continue to use the stream although the size of the run is believed small. Conditions limiting habitat for steelhead are low summer streamflow and the presence of large quantities of streambed fines.

RECOMMENDED MANAGEMENT - Nathanson Creek should be managed as a spawning and rearing area for steelhead. The area above the falls should be managed as a resident trout area. Further surveys should be conducted to confirm the presence of brown trout in the headwater area. In addition, it is important that the habitat be protected against further deterioration from projects causing erosion, siltation and/or water diversion. Projects having the capacity to enhance summer flow conditions should be encouraged.

SKETCH MAP - See attachment.

REFERENCES AND MAPS - Local residents provided valuable information. U.S. Geological Survey maps-Sonoma Quadrangle, 7.5 minute series 1951.

Barbara Lincoln
Seasonal Aid
Region 3

Nathanson Creek
Sonoma County
Twp. 5N, R 5W, Sec 19

