

THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF FISH AND GAME

STREAM SURVEY

Date: August 17, 1977

NAME: GRAY CREEK COUNTY: Sonoma

STREAM SECTION: Entire FROM: Mouth TO: Headwaters LENGTH: 4.8 mi.

TRIBUTARY TO: East Austin Creek TWP: 9N R: 11W SEC: 34

OTHER NAMES: Little Austin Creek RIVER SYSTEM: Russian

SOURCES OF DATA: Personal observations and those of 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 - On August 16, 1977, Dennis Fong and William Rowser walked from the mouth of Gray Creek to its headwaters.

RELATION TO OTHER WATERS - Gray Creek provides spawning and nursery area for steelhead within the Austin Creek drainage.

GENERAL DESCRIPTION -

Watershed - Gray Creek flows through a steep-sided V-shaped canyon vegetated mainly by bay trees.

Immediate Drainage Basin - Gray Creek drains an area of approximately 5.1 square miles. It generally flows fast through a lense-shaped channel. Streamside vegetation was abundant and consisted of horsetails, azaleas, ferns, bays, alders, redwoods, oaks, buckeyes, tan oaks, toyons, wild grapes, and California nutmegs.

Altitude - Mouth - 340 feet M.S.L.; Headwaters - 1400 feet M.S.L.

Gradient - The overall gradient is 4 ft./100 ft.

Width & Depth - Pools averaged 6 feet wide and 2 feet deep. Riffles averaged 6 inches wide and 1/2 inch deep.

Flow - Surface flow was intermittent throughout the entire stream. Using the float method, the flow at the mouth was determined to be 0.1 cfs. All tributaries were dry except for Lawhead Canyon Creek which had less than 0.05 cfs.

Velocity - The velocity was sluggish in most sections and rapid where the stream cascaded over rocks.

Bottom - In the lower 2 miles, the stream bottom was 10% boulders, 60% rubble, 10% gravel 10% silt, and 10% detritus. The

middle 2 miles was 40% boulders, 30% rubble, 20% gravel, and 10% detritus. The upper mile of bottom was composed almost entirely of silt.

Spawning Areas - There were few spawning areas in the lower section because gravel was scarce. There was a moderate amount of spawning areas in the middle section but, here, the gravel tended to contain excessive amounts of silt. Availability of spawning areas in the upper section was poor since the bottom was mainly silt.

Pools - Pools on Gray Creek resulted from the digging action of the current. They averaged 6 feet wide, 2 feet deep and 15 feet long. The ratio of pool to riffle was about 75/25.

Shelter - Shelter was adequate and consisted mainly of rocks and boulders with occasional undercut banks.

Barriers - All observed barriers were passable by steelhead since a resident reported seeing several adult steelhead upstream from them this last spring. At the mouth of Gray Creek, was a 6 foot high log jam with a 1.5 foot high opening in the bottom. Five hundred feet upstream from unnamed tributary S-2 was a 4 foot high falls. Fifteen hundred feet upstream from unnamed tributary S-3 was a 3 foot high log jam. A canyon area above the confluence of Lawhead Canyon Creek approximately 200 yards in length contained several 5 to 6 foot high falls and a log jam 6 feet in height. All upper fish

limits resulted from steep gradients and boulders in the streambed. (see sketch map).
Diversions - A screened 1 inch hose entered a pool in Gray Creek 1000 feet upstream from the mouth of Lawhead Canyon Creek (see sketch map). The pump was not in operation at the time of the survey.

Temperatures - At the mouth of Gray Creek at 1230 hours; air temperature 75°F., water temperature 60°F. Gray Creek at the mouth of tributary N-1 at 1330 hours; air temperature 82°F., water temperature 66°F. Gray Creek at mouth of tributary N-2 at 1440 hours; air temperature 81 F., water temperature 66 F. Gray Creek at mouth of tributary N-3 at 1600 hours; air temperature 86 F., water temperature 62°F. Gray Creek at mouth of Lawhead Canyon Creek at 1730 hours; air temperature 78°F., water temperature 60°F.

Aquatic Plants - Filamentous algae was common near the mouth. Slimy algae was common in a few shallow pools in sunny locations.

Pollution - None observed.

Springs - Three active springs were observed.

FISHES PRESENT AND SUCCESS - In the lower two miles; Sacramento squawfish - average 10 per 100 feet, 4 inches long, California roach - average 50 per 100 feet, 3 inches long, Western suckers - 5 per 100 feet, 4 inches long. Juvenile steelhead were observed from the mouth of Gray Creek to ½ mile upstream from the mouth of Lawhead Canyon Creek at an average of 5 fish per 100 feet. The steelhead ranged in size from 3 inches to 8 inches and averaged about 6 inches long.

OTHER VERTEBRATES - Also observed were California newts, a king snake, frogs, a great blue heron, water snakes, an owl, chickens, domestic dogs, and a feral pig.

FISHING INTENSITY - None observed, probably light.

OTHER RECREATIONAL USE - None observed.

ACCESSIBILITY - Gray Creek is closely paralleled by a dirt road, the downstream end of which can be reached from Armstrong Woods State Park (after passing through two gates with park locks). The upstream end of the dirt road can be reached from Mill Creek Road, west of Healdsburg.

OWNERSHIP - Gray Creek is in private ownership and is posted.

IMPROVEMENTS - Removal of the log jams listed in the text (and shown on the sketch map) would facilitate steelhead passage.

PAST STOCKING - None known.

GENERAL ESTIMATE - The potential of Gray Creek as a steelhead and silver salmon spawning and nursery area has been reduced by the subnormal rainfalls of the last 2 winters. Also gravel of the size needed for these fish to spawn was scarce in the lower section, silted in the middle section and absent in the upper section.

RECOMMENDED MANAGEMENT - Gray Creek should be managed as steelhead spawning and nursery habitat.

SKETCH MAP - Attached.

REFERENCES AND MAPS - U.S.G.S. Cazadero, California 1943; and Guerneville, California 1955; 7.5 minute series.

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Region 3

AWB/cls

GRAY CREEK

T:9N R:11W SEC:34

LEGEND

- PAVED ROAD ==
- UNPAVED ROAD - - -
- UPPER FISH LIMIT >
- LOG JAM X
- DIVERSION →
- FALLS ▲
- GATE ●
- BUILDING ■

