

THE RESOURCES AGENCY OF CALIFORNIA
Department of Fish and Game

STREAM SURVEY

FILE FORM No.....

Date September 17, 1969

NAME....ANDERSON CREEK.....COUNTY.....MENDOCINO.....
 STREAM SECTION...Entire...FROM....Headwaters...TO.... Confluence with Robinson Creek....LENGTH...8mi....
 TRIBUTARY TO.....SOUTH FORK NAVARRO RIVER.....TWP.....14N....R..14W...Sec...19.....
 OTHER NAMES.....NONE KNOWN.....RIVER SYSTEM.....
 SOURCES OF DATA.....Personal observation.....

EXTENT OF OBSERVATION

Include: Name of Surveyor

Etc. LOCATION

RELATION TO OTHER WATER

GENERAL DESCRIPTION

Watershed

Immediate Drainage Basin

Altitude (Range)

Gradient

Width

Depth

Flow (Range)

Velocity

Bottom

Spawning Areas

Pools

Shelter

Barriers

Diversions

Temperatures

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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: Anderson Creek was surveyed June 25, 1969. The entire survey was done on foot by Jim Michaels and Jim Thompson..... Time: approximately 10 hours.

LOCATION AND RELATION TO OTHER WATERS: Anderson Creek is an important tributary to So. Fork Navarro River both for its contribution of flow during the summer and for its steelhead spawning and nursery habitat.

GENERAL DESCRIPTION

WATERSHED: The headwaters of Anderson Creek are located in a narrow steep-sided canyon which gradually widens to form Anderson Valley.

VEGETATION: Vegetation is primarily of oaks, bays, maples, alders, grasslands.

IMMEDIATE DRAINAGE BASIN: Drainage for the section of stream surveyed is approximately 6 sq. mi. The Basin begins as a steep-sided V-shaped canyon which gradually opens into the long narrow Anderson Valley. Direction of flow is from the southeast to northwest. Type of channel varies from incised in the canyon area to lense-shaped in the valley. Streamside vegetation included bays, oaks, alders, maples, cattails, rushes, willows. Overall abundance was common.

ALTITUDE: Altitude ranged from about 2300 ft. above sea level at the headwaters to about 300 ft. above sea level at the confluence with Robinson Creek.

GRADIENT: Overall gradient was moderate and ranged from steep in the headwaters to sluggish in the valley section (250 ft. per mile).

WIDTH: Pools - 5 - 30 ft. average 8 ft.

Riffles - 2 - 15 ft. average 6 ft.

DEPTH: Range 1" to 8' average 1.5 ft.

Riffles - 2" - 1' average 8 inches.

Pools - 1' to 8' - average 3.5 ft.

FLOW: At confluence of Bald Mill Creek (upstream) approximately 0.2 c.f.s. At confluence of Soda Creek (downstream) approximately 5 c.f.s.

VELOCITY: Velocity of Anderson Creek was rapid.

BOTTOM: Over -all range - boulders to silt.

Pools - boulders and sand or silt.

Riffles - coarse rubble to fine gravel. Composition by percent - mud 2 - 3%, clay 2 - 3%, silt 5 - 10%, detritus 2 - 3%, hardpan less than 1%, sand 5%, coarse gravel 15%, fine gravel 5 - 10%, fine rubble 15%, coarse rubble 10%, boulders 20%.

SPAWNING AREAS: Spawning areas were primarily loose gravel; and were limited (see map).

POOLS: Most pools were found in conjunction with boulders and short drops or logs,

Size: Width - 5 - 30 ft., average 8 ft.

Depth - 1 - 8 ft., average 3½ft.

Length - 6 - 45 ft., average 12 ft

Pools were generally deep and short with good shelter provided by rocks. Pool to riffle ratio - 40% pools, 60% riffle (approximately).

SHELTER: Most shelter available was in the form of rocks. Vegetation cover was approximately 30 - 40%.

BARRIERS: All barriers are plotted on the attached map. A total of 5 natural barriers and 3 artificial barriers were present on the main stream. A separate report on the tributaries will be filed. Three earthen dams for summer diversion were present. Four barriers (boulder and gravel) of various heights were observed and 1 potential log barrier. The 4' barrier located $\frac{1}{2}$ mile downstream from confluence of Jimmy Creek may limit some upstream migration. The log jam plotted $\frac{3}{4}$ mile upstream from confluence of Jimmy Creek is a potential barrier. The 10 ft. and 6 ft. falls appearing downstream from confluence of Bald Mill Creek appear to be complete barriers to upstream fish passage. In a pool below the 20 ft. falls on Bald Mill Creek a number of 8 to 12 inch Rainbow Trout were observed. Downstream from this pool no fish were observed until we reached the 10 ft. and 6 ft. barriers. Fish were seen, the rest of the way downstream except where flow was subsurface.

DIVERSIONS: Six diversions were observed. All were of the pumping station type. All appeared to be for irrigational or domestic purposes. Sizes land location of diversions are plotted on the attached map. All appeared to be for summer use.

WINTER CONDITIONS: Through canyon areas, water level has been as much as 7 ft. above present level. In the valley water level appeared to have been about 4 - 5 ft. above the present level.

TEMPERATURES: Station 1 (at headwaters of Anderson Creek) a.t. 63°F. w.t. 56°F. Time - 1040 hr Station 2 - (on Bald Mill Creek $\frac{1}{3}$ mile upstream from confluence with Anderson Creek) a.t. 63°F. w.t. 55°F. Time - 1100 hours. Station 3 - (at confluence (u/s) of Bald Mill Creek) a.t. 54°F. w.t. 63°F. Time - 1130 hours.

AQUATIC PLANTS: Abundant algae growth along most sections of the stream. Some horsetails, rushes and cattails were also observed.

FOOD: Food included an abundance of caddisfly larvae, especially upstream from confluence of Jimmy Creek. Mayfly larvae were also observed. Average number of organisms per rock was 5-7.

POLLUTION: One garbage dump was noted 100 yards from confluence of Soda Creek. No other pollution was noted.

SPRINGS: Seepage was noted at various points upstream from confluence of Soda Creek. One spring with an appreciable flow was observed about $\frac{2}{3}$ mile upstream from confluence with Jimmy Creek. Est. 2.5 c.f.s.

FISHES PRESENT AND SUCCESS: Species present included sticklebacks, roach, steelhead and/or rainbow trout, suckers, and squawfish. Trout populations averaged about 100 - 125 per 100 ft. of stream. No fish were observed between the 20 ft. falls on Bald Mill Creek and the 6 ft. falls on Anderson Creek $\frac{1}{4}$ mile downstream from confluence of Bald Mill Creek except in the pool formed by the falls on Bald Mill Creek (which contained 10 - 15 trout 6 - 10 inches long). Populations of trout from the 6 ft. falls downstream on Anderson Creek increase from 50 - 60 trout per 100 ft. to about 200 trout per 100 ft. around confluence of Jimmy Creek. From that point downstream to Robinson Creek trout populations decreased to about 20 trout per 100 ft. Sticklebacks were present in small numbers through out the stream downstream from the 6 ft. falls and averaged 20 per 100 ft. of stream. Roach were observed in steadily increasing numbers from the 6 ft. falls previously noted to Robinson Creek. Maximum density was 200 roach per 100 ft. of stream. Minimum density 5 per 100 ft. of stream. Average density was 75 per 100 ft. Squawfish were noted in small numbers downstream from confluence of Jimmy Creek. Maximum density 30 - 40 per hundred feet of stream. Overall average about 5/100 ft. of stream. Suckers were also observed, but like the squawfish they were limited to downstream section and averaged less than 5 per 100 feet of stream, Size: Trout - range $1\frac{1}{2}$ " - 13" - average $2\frac{1}{2}$ ". Roach - range $1\frac{1}{2}$ " - $2\frac{1}{2}$ " - average 2". Squawfish - range 3" - 11" - average 4". Sticklebacks - range 1" - $1\frac{1}{2}$ " - average $1\frac{1}{4}$ ". Suckers - range 2" - 7" - average 3",

OTHER VERTEBRATES: Usual assortment of amphibians. Several raccoons were observed hunting along the stream bank. Also observed were deer and domestic sheep.

FISHING INTENSITY: Evidence of fishing was almost nonexistent. One discarded hook pack was found about 1 mile upstream from confluence of Soda Creek. Information from local residents indicate some fishing pressure in the fall.

OTHER RECREATIONAL USE: Some empty cartridges found along stream indicated hunting pressure. A couple of inner tubes and a very small plastic boat pointed to some use for swimming downstream from confluence of Soda Creek.

ACCESSIBILITY: Anderson Creek is almost completely inaccessible from headwaters to 1 mile upstream from confluence of Soda Creek. Highway 253 parallels it for about a mile beginning at a point $\frac{1}{4}$ mile upstream from Soda Creek confluence. One jeep trail parallels Anderson Creek for about a mile, then turns up Jimmy Creek. Another jeep trail from Highway 128 past Fruit Lake to a ridge 300 ft. above the streambed approximately at the confluence of Bald Mill Creek. Downstream from Soda Creek two dirt roads cross Anderson Creek. Highway 128 crosses the stream about 100 yds. upstream from confluence of Robinson Creek.

OWNERSHIP: Most of stream section surveyed was in private ownership.

POSTED OR OPEN: All land bordering stream was posted, but some owners indicated that permission to enter would, at times, be given to individuals who inquired.

IMPROVEMENTS: Stream appears to be in good condition. The one log jam noted on main stream plus a couple of others on tributaries could be removed. Removal of rough fish in downstream section might be desired.

PAST STOCKING: None known.

GENERAL ESTIMATE: Anderson Creek provides major spawning habitat for steelhead runs from the Navarro River. Good nursery habitat is available and no pollution was noted upstream from confluence of Soda Creek.

RECOMMENDED MANAGEMENT: Anderson Creek should be managed for native rainbows and for steelhead spawning and nursery habitat. Some control of non-game fishes may be desired in downstream sections.

SKETCH MAP: Map included as a $1\frac{1}{2}$ x enlargement directly from U.S.G.S. 15 minute series of Boonville and Ornbaun quadrants.

REFERENCE: U.S.G.S. Maps. $7\frac{1}{2}$ " and 15" series. Boonville and Ornbaun quadrants.

Submitted by: Jim Thompson

Notes on Tributaries to Anderson Creek - Jim Michaels

- I Unnamed Tributary to Anderson Creek, located approximately 300 yards upstream from the confluence of Anderson Creek with Bald Mill Creek. The stream has no fish value due to it's steep gradient. It contributed approximately 0.2 c.f.s., (water temperature 55°F. air temperature 65°F.) at time of survey.

- II Bald Mill Creek, located approximately 5½ miles upstream from Highways 253 bridge. Fish have access to approximately 200 yards of stream, at which point a 25 ft. bedrock fall is located. No fish were observed above this fall. Approximately 100 yards upstream from the confluence with Anderson Creek, 10 Rainbow - steelhead trout, ranging 5 - 10 inches, were observed. Bottom was composed of 75% rubble, 15% bedrock, 10% gravel. No steelhead spawning habitat was observed. Streamside vegetation was less than 1%. Flow estimated at 1 c.f.s. Basin was V-shaped, with a mountainous topography covered with grass. Water temperature - 63°F. and air temperature 72°F.

- III Second Unnamed Tributary to Anderson Creek, located approximately 2 1/2 miles upstream from Highway 253 bridge. Flow was approximately 0.5 c.f.s. 1/4 mile upstream from the confluence with Anderson Creek is a 20 ft. high log jam - a barrier to migration. The flow was subsurface for about 400 feet immediately upstream from the log jam. No fish were observed upstream from the log jam. Removal of this barrier would increase the fish population by making more of the stream accessible to steelhead. Air temperature was 70°F.; water temperature was 73°F. Bottom - 20% boulders, 50% rubble, 30% gravel. Trout ranged 3/4" - 2 1/2" in length, and occupied the stream in numbers of approximately 50 - 70 trout per 100 feet of stream.

