

THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF FISH AND GAME

STREAM SURVEY

Date: August 10, 1977

NAME: Big Oat Creek COUNTY: Sonoma

STREAM SECTION: entire FROM: Headwaters TO: Mouth LENGTH: 1.9 miles

TRIBUTARY TO: Ward Creek thence Big Austin Creek TWP: 8N R: 12W SEC: 13

OTHER NAMES: none known RIVER SYSTEM: Russian

SOURCES OF DATA: Personal observation

- 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
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- FISHES PRESENT AND SUCCESS
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- FISHING INTENSITY
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- RECOMMENDED MANAGEMENT
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EXTENT OF OBSERVATION - On August 9, 1977, Dennis Fong and William Rowser walked from the headwaters of Big Oat Creek to its confluence with Ward Creek.

RELATION TO OTHER WATERS - Big Oat contributes minor summer flows to Ward Creek. It supplies little steelhead spawning and nursery habitat.

GENERAL DESCRIPTION - Big Oat Creek flows through a steep-sided canyon. The dominant trees are redwoods and bays. Interspersed among these were live oaks, firs, maples, pines, toyons, buckeyes, and madrones. Some open sections adjacent to the mid-section of the streambed were dominated by annual grasses.

Watershed & Immediate Drainage Basin - Big Oat Creek drains 0.9 square miles. It flows southward through a narrow V-shaped canyon near the mouth and headwaters, and through a broad U-shaped canyon in the mid-section. Redwoods and bays were abundant beside the stream near the mouth and in the headwaters. Vegetation was common to scarce in the middle section.

Altitude - 530' MSL at the mouth and 1200' MSL at the headwaters.

Gradient - Upper 1/2 mile: 11.6 ft/100 ft; middle 0.75 mile: 5 ft/100 ft.; lower 0.75 mile: 6.3 ft/100 ft. All unnamed tribs had

steep gradients.

Width - The average pool was 2 feet wide. The average riffle was one foot wide.

Depth - The average pool was 7 inches deep. The average riffle was one inch deep.

Flow - There was no surface flow in the upper and middle sections. In the lower 1/2 mile the flow was between 0.05 and 0.1 cfs. All tributaries were dry.

Velocity - The velocity was sluggish.

Bottom - The bottom of the upper section was 10% boulder, 30% bedrock, 30% rubble, 15% gravel, and 15% silt and detritus. In the middle section, it was 30% boulders, 20% rubble, 20% gravel, 15% sand and 15% silt. In the lower section, it was 15% bedrock, 50% boulder, 20% rubble and 15% gravel.

Spawning Areas - There were only a few areas in the downstream 1/2 mile where there was enough suitable gravel for steelhead spawning. There was almost no suitable spawning gravel above the lower 1/2 mile.

Pools - Pools resulted from the digging action of the current. They averaged 4 feet long, two feet wide and 7 inches deep. The ratio of pool to riffle was about 50/50.

Shelter - Fish shelter in the pools was provided by boulders and rocks.

Barriers - Partial barriers were formed by log and boulder jams. A log jam 100 feet below the mouth of tributary E-3 was 4 feet high. A log jam 100 yards below tributary E-2 was 7 feet high. A log jam 200 yards below tributary E-2 was 10 feet high. A log jam 100 yards below E-1 was 6 feet high. Two hundred yards below tributary W-1, was a rock and log jumble that caused a 20 foot drop in about 40 linear feet. Anadromous fish use Big Oat Creek up to this point.

Diversions - One quarter mile up from the mouth of Big Oat Creek a 3-inch screened pipe was taking water by gravity flow. This pipe fed into a ½ inch hose.

Temperatures - Pool in tributary W-2, 1600 hours, Air temperature 83° F, water temperature 60°F. A pool in Big Oat Creek near the mouth of tributary E-5 at 1645, water temperature 74°F, air temperature 77°F. Near tributary E-2, at 1700 hours, air temperature 75°F, water temperature 64°F. Five hundred yards below tributary W-1 at 1745 hours, air temperature 70°F. water temperature 50°F. At the mouth of Big Oat Creek at 1830 hours, air temperature 70°F, water temperature 66°F.

Food - Waterstriders, whirly-gig beetles, backswimmers, caddis fly larvae were all observed in various pools. Dragonflies and other aerial insects were also observed.

Aquatic Plants - Watercress was growing in a shallow pool.

Winter Conditions - Big Oat Creek receives fairly heavy run-off from its watershed. Average annual rainfall is approximately 50". Water level appeared to average 3' to 5' above the streambed in the downstream section.

Pollution - None observed.

Springs - Resident at the mouth of tributary E-1 was piping water from springs into tanks.

FISHES PRESENT AND SUCCESS - Juvenile steelhead less than 4 inches long were observed in the lower ¼ mile of the stream. There were about 5 fish per 100 feet of stream. Steelhead utilize the lower ½ mile of Big Oat Creek for spawning and nursery habitat.

OTHER VERTEBRATES - Frogs, California newts, water snakes, Pacific giant salamanders and deer were observed in and around Big Oat Creek.

FISHING INTENSITY - Probably none.

OTHER RECREATIONAL USES - None observed.

ACCESSIBILITY - The mouth is accessible by parking at the top of a dirt road that leaves Fort Ross Road 2 miles west of Cazadero Highway and walking down the dirt road to Ward Creek.

OWNERSHIP / POSTED OR OPEN - The land is in private ownership and is posted.

PAST STOCKING - None.

GENERAL ESTIMATE - The importance of this stream as a nursery habitat for steelhead is very limited since only the lower ½ mile and any summer flows and, according to a local resident, this is the case every year.

RECOMMENDED MANAGEMENT - Removal of log jams is not recommended because the area that might be opened to fish is heavily silted and goes dry in the summer. Management as anadromous fisheries habitat should continue.

SKETCH MAP - attached

REFERENCES AND MAPS - - Field note from 8/9/65. U.S.G.S. Fort Ross, California, 1943, 7½ minute Quad and U.S.G.S. Cazadero, California, 1943, 7½ minute Quad.

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Region 3

BIG OAT CREEK

Twp 12N, R 18W, S13



- LEGEND**
- PAVED ROAD =====
 - UNPAVED ROAD -----
 - UPPER FISH LIMIT } (dashed line)
 - UNNAMED TRIBUTARY N-1 (dashed line)
 - FALLS ▲
 - LOG JAM X
 - BUILDING ■
 - LOCKED GATE ●
 - DIVERSION →
 - SECTION NUMBER 4

