THE RESOURCES AGENCY OF CALIFORNIA
CALIFORNIA DEPARTMENT OF FISH AND GAME

STREAM SURVEY

FILE FORM NO:…… DATE:……
NAME……Soda Creek…..…….... **COUNTY**..……..…Mendocino…….
STREAM SECTION……..entire…….. **FROM**…....headwater…… **TO**..mouth... **LENGTH**….8 mi……..
TRIBUTARY TO.....Anderson Creek…….. **TWP**…13N… **R**…14W… **SEC.**…12.....
OTHER NAMES...……..unknown...…… **RIVER SYSTEM**……Navarro River……
SOURCES OF DATA…Personal observations of Jim Thompson and Jim Michaels and local residents…….....

EXTENT OF OBSERVATION - Soda Creek was surveyed by Jim Thompson and Jim Michaels on June 25, 1969. The entire stream was surveyed on foot.

LOCATION – Soda Creek enters Anderson Creek approx. ¼mile from the town of Boonville.

RELATION TO OTHER WATERS - Soda Creek is an important drainage and tributary to Anderson Creek, discharging both summer and winter flows. It was contributing approx. 2 CFS of water to Anderson Creek at the time of the survey . Good nursery areas, but limited steelhead spawning areas were observed.

GENERAL DESCRIPTION

Watershed and Immediate Drainage Basin - The topography was mountainous, with a vegetative cover composed of oaks, bay, maple, horse chestnut, redwoods, and various grasses. The basin is a steep-sided "V"-shaped canyon, with the streambed characterized by an incised channel. Stream-side vegetation was primarily composed of willow and alders, which sheltered approx. 60% of the stream.

Altitude - The altitude ranged from approx. 400 ft. above sea level at the mouth, to approx, 2240 ft. above sea level in the headwaters.

Gradient - The gradient of Soda Creek is moderate in Anderson and Bell Valleys, but in the canyon area between these two valleys it is very steep. The stream has an average drop of approx. 2 ft. per 100 ft. with segments in the canyon area that drop approx. 100-150 ft. per 100 ft. of stream.

Width - The stream averaged 4 ft. in width and ranged from 4 to 20 ft.

Depth - The stream averaged 6 inches in depth and ranged from 1 inch to 7 ft.

Flow - The flow in an unnamed tributary to Soda Creek located approx. 5 miles upstream from the confluence with Anderson Creek, was visually estimated at 1 cfs. Soda Creek immediately upstream from the confluence with the unnamed tributary was visually estimated at 0.6 cfs. Soda Creek immediately upstream from confluence with Anderson Creek was visually estimated at 2 cfs.

Velocity - The velocity was rapid on the entire stream.

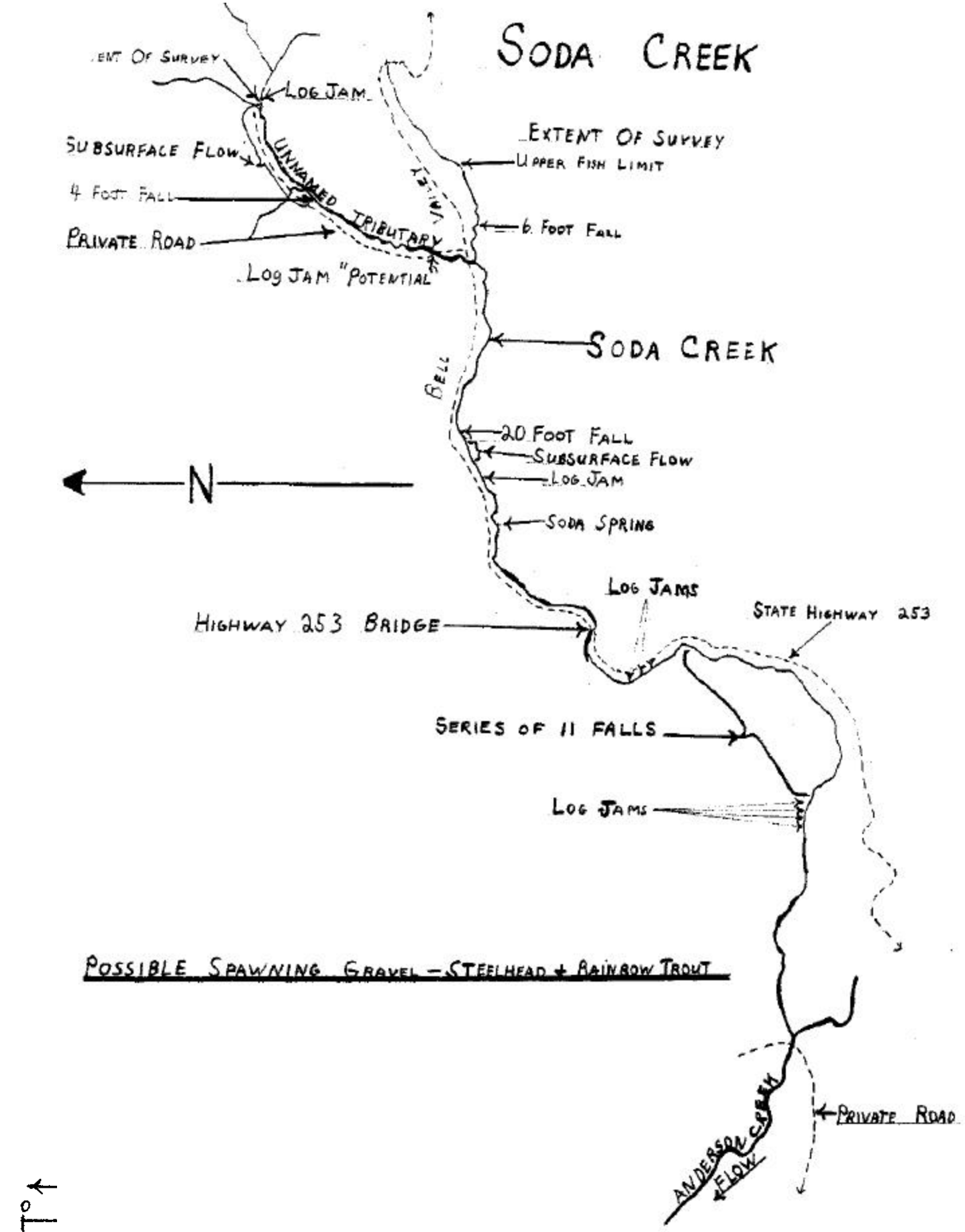
Bottom - The bottom was approx. 20% boulders, 40% rubble, 10% bedrock, 20% gravel, 10% silt.

Spawning Areas - Spawning areas for steelhead were very limited. Approx. 1 mile of stream appeared accessible to steelhead, but the spawning areas in this segment of stream were silted in and were in poor condition. Good steelhead spawning areas were located upstream from State Highway number 253, but this section of stream was unaccessible to steelhead.

Pools - Pools averaged 2 ft. in depth, 7 ft. wide and 12 ft. long. The pools were larger downstream than upstream from the series of falls.

Shelter - Shelters created by undercut banks, logs, deep pools, and boulders were observed along the entire length of stream. The shelter was considered excellent for fish habitat.
Barriers - A series of falls ranging from 4 ft. to 15 ft. in height were observed in a one mile section of stream. These falls were located approx. 1 mile upstream from the confluence with-Anderson Creek. A total of 11 falls and log jams were observed in this area. One 20 ft. bedrock water-fall was observed approx. 1 mile upstream from Highway 253 bridge. Approx. 100 ft. downstream from this 20 ft. waterfall, the stream flow was subsurface for approx. 100 ft. One 6 ft. boulder waterfall was observed on Soda Creek approx. 1/8 mile upstream from the confluence with the unnamed tributary.
Diversions - No diversions were observed at the time of the survey.
Temperatures - The water temp, of the unnamed tributary immediately upstream from the confluence with Soda Creek was 58° F at 0900 hours. The water temp, of Soda Creek immediately upstream from the unnamed tributary was 60°F at 1000 hours. The water temp. of Soda Creek immediately upstream from the confluence with Anderson Creek was 76°F at 1600 hours.
Food: - Stone-fly and caddis-fly larvae were observed in numbers of approx. 10 caddisfly larvae per 6 inch rock, and approx, one stonefly per 6 inch rock.
Aquatic Plants - Sword grass, and filamentous algae were observed, but not in any great abundance.
Winter Conditions - High water marks indicated that water levels increased approx. 2 ft. in depth near the headwaters, and approx. 5 ft. in depth near the mouth of Soda Creek during past winter conditions.
Pollution - No evidence of pollution was observed at the time of the survey.
Springs - One spring was observed! approx. 3/4 mile upstream from Highway number 253. It was a natural Soda Spring contributing approx. 0.09 cfs.
FISHES PRESENT AND SUCCESS - Steelhead and/or rainbow trout ranged from 1 inch to 10 inches and averaged 4 inches total length. Trout inhabited the entire stream in numbers of approx. 100 per one hundred feet of stream. Fish numbers based on visual estimates. Two stickle-backs % inch long were observed approx. 200 yds. downstream from the 20 ft. bedrock fall. Roach inhabited the stream in numbers of approx. 25 per 100 ft. of stream. They were observed in the section of stream from the confluence with Anderson Creek to the 20 ft. bedrock fall. Rainbow trout observed upstream from the 20 ft. fall averaged approx. 90-100 per 100 ft. of stream. The number of rainbow trout in the unnamed tributary averaged approx. 25 per 100 ft. of stream. Steelhead/rainbow trout averaged 150-200 per 100 ft. of stream, in the segment upstream from the confluence of Anderson and Soda Creeks, to the falls area. There are approx. 3,960 to 10,560 trout in this segment of stream.
OTHER VERTEBRATES - Deer, frogs, turtles, and newts were observed.
FISHING INTENSITY - Discarded hook packs and bait containers indicated that the previous fishing intensity was light.
OTHER RECREATIONAL USES - None observed.
ACCESSIBILITY - Soda Creek was paralleled by State Highway 253 which provided easy access to the headwaters. A private road paralleled the unnamed tributary, and another private road provided access to the confluence of Anderson and Soda Creeks.
OWNERSHIP - All land bounding the stream appeared to be privately owned.
POSTED OR OPEN - All the land was posted against trespass.
IMPROVEMENTS - No needed improvements were noted at the time of the survey.
PAST STOCKING - According to local residents, the headwaters of Soda Creek were stocked with rainbow trout or juvenile steelhead by land owners 11 years ago.
GENERAL ESTIMATE - Soda Creek is a major tributary to Anderson Creek. The headwaters were apparently populated with rainbow trout, due to the impassible barriers. Only 1 mile of stream was accessible to steelhead and this segment exhibited good steelhead nursery areas, but limited steelhead spawning areas.
RECOMMENDED MANAGEMENT - Soda Creek should be managed as a resident trout stream. The mile of stream, upstream from the confluence of Anderson and Soda Creeks should be managed as a limited steelhead spawning and nursery stream.
SKETCH MAP - Attached
REFERENCES AND MAPS - U.S.G.S. Boonville 15'[1] series 1959 and Ornbaun 15' series 1960.

Jim Michaels


SODA CREEK
ENT OF SURVEY
LOG JAM
SUBSURFACE FLOW
UNNAMED TRIBUTARY
4 FOOT FALL
PRIVATE ROAD
LOG JAM "POTENTIAL"
BELL
EXTENT OF SURVEY
UPPER FISH LIMIT
6 FOOT FALL
SODA CREEK
20 FOOT FALL
SUBSURFACE FLOW
LOG JAM
SODA SPRING
N
LOG JAMS
HIGHWAY 253 BRIDGE
STATE HIGHWAY 253
SERIES OF 11 FALLS
LOG JAMS
POSSIBLE SPAWNING GRAVEL - STEELHEAD + RAINBOW TROUT
PRIVATE ROAD
ANDERSON CREEK
FLOW
0
SCALE
J. MICHAELS