

THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF FISH AND GAME

STREAM SURVEY

Date: _____

NAME: FORSYTHE CREEK COUNTY: Mendocino Total

STREAM SECTION: FROM: Confluence with Russian River TO: Headwaters (2 mi. above Ridgewood Ranch) LENGTH: Watershed
30 miles

TRIBUTARY TO: Russian River TWP: 15N R: 12W SEC: 8

OTHER NAMES: Not known RIVER SYSTEM: Russian River

SOURCES OF DATA: Personal observations, local resident

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
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Temperatures
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FISHES PRESENT AND SUCCESS
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SKETCH MAP
REFERENCES AND MAPS

EXTENT OF OBSERVATION - This stream was walked out on foot on the 20, 21, 22 and 23rd of July, 1963, by G. K. Brackett, from the confluence with Russian River to headwaters, including all major tributaries noted; Seward, Eldridge, Mill and Walten Creek.

LOCATION - Forsythe Creek is approximately 12 miles north of Ukiah. Highway 101 follows most of the main stream channel, approximately 7 miles.

RELATION TO OTHER WATERS - Forsythe Creek is an important spawning and nursery stream for anadromous salmonids. It is valued as an important contribution to the steelhead fishery (Russian River). It also has significant summer flows which it maintains under normal years. It also provides water for recreation and agricultural purposes.

GENERAL DESCRIPTION -

Watershed - Predominantly rangeland with oak, bay and maple. Streamside conditions provide vegetative cover over stream channel. Second growth redwood predominate in upper headwater drainage.

Vegetation - Rangeland conditions; grass predominating, brush, live oak, oak, maple, bay, redwood, douglas fir.

Soil - color grey, relatively deep residual soil profiles. Leaching common, Weathering common resulting in light grey to white soil surfaces. No humus layer present, or very small.

Immediate Drainage Basin - Drainage basin - 57 square miles Basin - V-shaped in headwaters U-shaped in valley

The headwater basin is undergoing downcutting which has resulted in a steep V-shaped canyon. Slope creep is evident, slope erosion minimal, both resulting in natural stream barriers. A relatively wide valley in the lower 5 miles of stream channel has developed with a broad flood plain and channel. This is predominantly an area of deposition. This area is utilized for agricultural purposes, orchards. Streamside vegetation is found throughout most stream sections in the form of trees (oak, maple, bay, alder, redwood, madrone and fir), shrubs. (salmon berry, willow) and grasses (horsetail, swords, junkis), Most sections of stream are shaded. Some open stretches are found in the valley and throughout the rangeland. About 75% of streamside is vegetated.

Altitude - 700' to 800' from confluence with Russian River to Mill Creek Road crossing (approximately 3-1/2 to 4-1/2 miles of stream channel) and 800' to 2100' from Mill Creek Road crossing to headwaters (approximately 9 miles).

Gradient - Overall - approximately 130'/mile. Valley gradient (3-1/2 to 4-1/2 miles) - approximately 25'/mile headwater gradient (9 miles) approximately 145'/mile. Gradient is considered steep to moderate in headwaters and slight in valley.

Width - Riffles average 4 ft. range - 1 to 25 ft. Pools average 8 ft, range 3 to 40 ft.

Depth - Riffles average 3 inches, range 2 to 8 inches. Pools average 8 inches - range 6" to 6 ft.

Flow - Measured with current meter - 3.16 cfs (50' below Highway 101 bridge) 3.36 cfs (500' below Mill Creek confluence). Estimated minimum flows 1.5 cfs. Stream reported to dry up during very dry seasons. Winter flows moderate to high in nature. Highwater marks vary from 4' in valley to 6' in headwater areas.

Velocity - Rapid in headwaters, sluggish in valley.

Bottom - Averages: Headwaters (9 miles) bedrock 10% - boulders 15% - rubble 15% - gravel 15% - sand 20% - mud 10% - silt 10% - organic debris 5%. Valley; (3-1/2 to 4-1/2 miles) bedrock 2% - boulders 2% - rubble 10% - gravel 30% - sand 25% - mud 10% - silt 10% - organic debris 5%.

Spawning Areas - Steelhead appear to have access to 7-1/2 miles of Forsythe Creek, of which 30% can be utilized for spawning, 3-1/2 miles of Seward Creek of which 20% can be utilized for spawning, 2 miles of Eldridge Creek of which 20% can be utilized for spawning, 5 miles of Mill Creek of which 30% can be utilized for spawning. Mill Creek is considered by most local residents to be of greatest importance to the Forsythe steelhead fishery. It provides ideal spawning and nursery area for steelhead propagation.

Pools - Long, wide pools are found in 75% of the stream area in the valley, however, in the stream sections above 50% of the area is in the form of pools which also have good dimensions.

Shelter - Good throughout. Consists of boulders, cutbanks, vegetation, sizable pools and debris.

Barriers - Forsythe Creek has a natural rock barrier located approximately 7-1/2 miles from Russian River confluence point. The slopes have pushed a great deal of boulders into the stream resulting in 4 to 8 foot falls. However, it is possible that during ideal water conditions fish may reach the upper reaches of stream area (approximately 3-1/2 miles) as is indicated by the fish observed. The remaining 4 miles of Mill Creek is unavailable to fish migration due to the same problem. This barrier is located 1/4 to 1/2 mile above Putnam's property line (cabin and bridge crossing). These series of falls are 3 to 10 feet in size. These barriers constitute more of a complete barrier but fish were also observed above this point.

Diversions - A dam is located on Walker Creek. No summer flow is released. No direct diversions were noted.

Temperatures - Water ranged 63 - 71°F average 67°F.
Air ranged 56 - 79°F average 74°F.

Aquatic Plants - *Spirogyra* was very common throughout most sections of stream. Areas exposed to sunlight had blooms. Mats of algae were found in the lower area. Bluegreen algae x was found abundant in shaded areas.

Food - Aquatic organisms were found abundant throughout most stream sections. The riffle areas had large quantities of mayfly, stonefly and diptera larvae, while the pools contained swimming type mayflies, caddis and crustaceans (*Daphnia*). Pollywogs were very numerous throughout and could be considered as a possible food source.

Winter Conditions - Increase dimensions of stream area (width and depth) considerably with a rise of a foot or more. More riffles, faster velocities and turbulence. Drainage of watershed is undoubtedly rapid resulting in great variations in water depth and turbidity. The lower valley stream section has a sluggish type of gradient and the flood plain is very wide. No doubt, channelization in this lower section is unstable. Large quantities of gravel, rubble and silt are found deposited in this flood plain. Its estimated that from high water mark scans under the 101 Forsythe Bridge that water reaches heights of 8 feet. No normal winter flows are known.

Pollution - Watershed erosion in some locations is very common to this stream system. Slope creep is active along some stretches of stream. Range management is under good control.

Springs - Are very common to this drainage system. Mineral springs are located on Mill Creek at Putnam's cabin while Soda Springs can be found above Ridgewood Ranch.

FISHES PRESENT AND SUCCESS - Rainbow trout and/or steelhead, catosomids, Cyprinids, sticklebacks and centrarchids (bluegill, largemouth and smallmouth black bass) were observed. Estimated average size of RT - SH, 3-1/2 inches, range from 1-1/2 to 24 inches. Frequent to most sections of stream surveyed were fish in the 6-8 inch size class. These may constitute what may be called resident fish. Above the barriers noted above where fish were still observed young-of-year RT-SH were more infrequent, estimated 50 to 75 fish per 100 feet of stream. However, below these natural barriers it was observed that young-of-year RT-SH were more frequent, estimated 150-200 fingerlings per 100 feet of stream. The maps attached show distributional patterns and location of barriers. Mill Creek appeared to have the greatest spawning success. Many young-of-the-year RT - SH were frequent to the areas accessible by adult steelhead. It appears that Mill Creek has great importance to the Forsythe Creek drainage as a spawning and nursery area. Counts of RT-SH averaged between 300 to 400 per 100 ft. of stream for this five miles of accessible area. Two adult steelhead were observed. One dead spent female 1/2 mile below the barrier on Mill Creek and one live one 1.5 mile below the barrier on Forsythe Creek. No salmon were observed, however, local people have said that they were prominent at one time to most accessible stream areas throughout the drainage system. The Wardens have placed increasing importance to this stream system as related to the silver salmon fishery. It appears that silver salmon utilize this drainage to a limited extent. The outstanding success of the RT - SH fishery this year might be related to ideal water conditions. Many local people have noted that the water conditions this year have been better than in the past, especially higher summer flows. The salmonids observed were in excellent condition.

A concentrated fishery exists in Leonard Lake on the Mill Creek drainage, and Walker Reservoir on the Walker Creek drainage. Bluegill, largemouth bass populations were noted, no estimates of success were made. The bluegill in Leonard Lake were presently going through spawning activities around the shoreline. Bass were said to be of good size. This lake is privately owned, as is Walker Lake, and is not under the management of the Department of Fish and Game, Leonard Lake has a steep shoreline and what appears to be a deep bottom, average 25 ft. Leonard Lake has no natural outlet (underground seepage) while Walker Reservoir has a long spillway. Walker Reservoir is dirt filled and sets approximately 35 feet above the lower creek bed. The Reservoir is beginning to fill in, has no shoreline vegetation, and is very muddy in color. The water in Leonard Lake is used for recreation while Walker is for recreation and agricultural.

Smallmouth black bass, bluegill and some green sunfish were observed below the barriers on Forsythe Creek. Bluegill and green sunfish were found distributed all the way to the barrier on Forsythe Creek, estimated abundance 30 per 100 ft. of stream, and smallmouth black bass were found distributed from the mouth to 2 miles upstream and estimated numbers of 10 per 100 feet of stream in this 2 mile section.

FISHES PRESENT AND SUCCESS (continued)

Shiners were very abundant throughout most stream areas accessible (same as bluegill in distribution) estimated abundance 1750 per 100 ft. of streams.

Catatanids were said to be present but were not observed.

Roaches were very abundant in the same areas accessible to bluegill and shiners, estimated abundance 500 per 100 ft. of stream. Success seems to be excellent for shiners and reaches.

One dead spent adult lamprey was observed in Mill Creek, 2 miles above confluence. Lamprey spawning redds were observed in Mill Creek and Forsythe Creek. Success is unknown.

OTHER VERTEBRATES -

Adult and larval forms of the yellow legged, redlegged and bull frog were observed, also coons, salamanders (one giant Pacific salamander, 14 inches long, was observed on Mill Creek), turtles (very abundant on lower sections), snakes (rattlers very abundant in Mill Creek) kingfishes, great blue and green heron, deer (both Pacific Coast and some fallow) and cattle (white faced on Boxmans' ranch - 200 head - light grazing and holsteins, herefords, and white faced on the Ridgewood Ranch).

FISHING INTENSITY -

Medium, two limits of fish were checked from Mill Creek - size 5 to 8 inches). Early season fishing is said to be heavy but overall fishing use is limited. Catchable size rainbows seem to be common and abundant, estimated 10 per 100 feet of stream, in most stream sections and tributaries. However, land is posted, restricting public access to some degree.

OTHER RECREATIONAL USES -

Swimming, boating (Leonard and Walker Reservoir), camping (cabins on Mill Creek) picnicking and hunting.

ACCESSIBILITY -

From confluence with Russian River to 9.5 miles upstream, Forsythe Creek can be reached directly from Highway 101. Ridgewood Ranch roads give access in Walker and the headwaters of Forsythe. Mill Creek may be reached by taking the Leonard Lake road off Highway 101. Access is good except Seward and Eldridge. All roads are good for conventional vehicle travel.

OWNERSHIP -

Mostly Ridgewood Ranch. Headwater sections of Mill Creek in Putnam, Antone, Cowford Lumber and Dakin lands. Middle section of Forsythe around Mill Creek confluence in hands of Bauman. Lower drainage has wide distribution of land ownership (last four miles).

POSTED OR OPEN -

Mostly posted lands. None is accessible to the public.

IMPROVEMENTS -

The Dakin's land on headwaters of Mill Creek is presently being cleaned of logjams. It is the plan of these people to restore the whole Mill Creek drainage basin. Soil erosion on this section of recently logged stream basin has resulted in stream siltation and land erosion problems.

See attached map of barriers for location, extent and condition. The Best of the stream is being well managed and needs very little improvement.

PAST STOCKING -

No record known, however, some local people have said that some past stocking activity was done.

GENERAL ESTIMATE -

1. Water temperatures and stream flow are very important summer condition that can be related to the salmonid fishery success. At present, the only prominent limiting factor to fish production is water flow*
2. Spawning conditions seem to be ideal for steelhead. Approximately 18.5 miles of stream is available to the steelhead fishery, both for spawning and nursery purposes. About 22 percent of this can be utilized for spawning. Forsythe Creek has 7.5 miles of available stream of which an added 3.5 miles could be added, but is being utilized by a resident trout population that seems to be very productive. Two miles of Walkin's is not available for steelhead production, but is again being utilized by a resident trout population. Five miles of Mill Creek is being utilized by steelhead with excellent success. Five miles of headwater in Mill Creek is inaccessible to steelhead production, but is being utilized with poor success by resident trout.
3. Fish food is very abundant, but competition is heavy among competing species. The shiner and roach population might be considered a limiting factor to steelhead production.
4. Pools and shelter are more than adequate for salmonid habits.
5. Under the conditions previously described it could be said that salmonids are fully utilizing the stream areas available.
6. Timber and rangeland activities should be supervised more critically. Soil erosion could limit this stream's production considerably.

RECOMMENDED MANAGEMENT -

1. This stream should be managed as a steelhead - salmon spawning and nursery area.
2. Rough fish control would not be practical.
3. Stream flows should be maintained during May to October at a minimum level of 2 cfs and no lower than 1.5 cfs.

SKETCH MAP - See attached. [sic]

REFERENCES AND MAPS - U. S. Department of Interior, Geological Survey, 15 minute series. Willits, 1942; Pomo 1943; and Boonville, 1959.

GKB:vg

Attachments (2) [sic]