CALIFORNIA DEPARTMENT OF FISH AND GAME

# STREAM SURVEY

**FILE FORM No**.....

**NAME**.....South Fork Big River.....**COUNTY**.....Mendocino.....

**STREAM SECTION**.....Head-waters.....**FROM**.....Orr Springs.....**TO**.....Hansens School.....**LENGTH**.....7.5.....

**TRIBUTARY TO**.....Big River.....**Twp**.....16N.....**R**.....14W.....**Sec**.....19.....

**OTHER NAMES**.....None Known.....**RIVER SYSTEM**.....Big River.....

**SOURCES OF DATA**.....Personal Observation.....



EXTENT OF OBSERVATION: Stream section was surveyed, on foot, on August 25 1966. The survey required one day. Surveyor: Brien Edie.

LOCATION AND RELATION TO OTHER WATERS; South Fork is a major tributary in the Big River Drainage. It contributes greatly to the summer and winter flow of Big River, and is important as a spawning and nursery area.

GENERAL DESCRIPTION:

Watershed and Immediate Drainage Basin: This section of South Fork drains approximately 6 square miles. The vegetation along the stream consists mainly of these species: alders, tan oak. redwood, coast live oak, huckleberry, maple, poison oak, sword ferns, madrone and douglas fir. Description of Each Section - Section 1: (From Hansens School to Point 2 miles above school) - Vegetation - Alders, oaks, few redwoods, madrone; by stream small herbaceous plants and grasses. This section of the stream runs near a steepsided hill to its south while the north side faces a wide valley. The stream bed is bowl shaped and the channel does not meander a great deal. Section 2: (From end Section to Dark Bulch) - Stream flows through a narrow valley. The bed is bowl shaped - vegetation is the same as in Section 1 but Redwoods more common. Section 3 - (Dark Gulch to State Park) - narrow canyon-bed shallow bowl-vegetation scarce. Section 4: (State Park to Orr's Spring) narrow canyon; bed lense shaped; vegetation redwood, fir, alder, etc.

Altitude: Orr's Spring - 980' - Hansen School - 480'

Gradient: 66 ft/mi.

Width: Range 2'-20', average 10'

Depth: Range 1"-3.5', average 4"

Flow: At mouth of Daugherty Creek (Hansens School) 1.7 estimated.

Velocity: Sec. 1-moderate to rapid; Sec. 2-moderate; Sec. 3-sluggish;Sec.4-sluggish.

Bottom: Section 1: Stream alternated between areas of good gravel and sand to areas of good gravel and sand to areas of almost solid bedrock. Pool: sand and silt 70 per cent; bedrock 20 per cent; gravel 10 per cent. Riffle: rubble and boulders 30 per cent; gravel 60 percent; sand 5 per cent; other 5 percent. Section 2: Pool Sand 40 per cent; gravel 40 per cent; silt 10 per cent; bedrock 5 per cent; other 5 per cent. Riffle: 45 per cent fine gravel; 40 per cent course gravel; 10 per cent bedrock, rubble and boulders; 5 per cent sand and silt. Section 3: pool and ruffle - rubble 50 per cent, gravel 30 per cent, silt and sand 20 per cent. Section 4: Pool and riffle - bedrock, 35 per cent; gravel, 35 per cent, rubble-boulders, 15 per cent; silt and sand, 15 per cent.

Spawning Areas: Section 1-Good spawning gravels present in stream bed. Area also very valuable as a nursery area. Section 2 - Spawning gravels abundant, again valuable as nursery area. section 3-Poor spawning area heavy silt, great deal of rubble. Some spawning bed. Good nursery value. Section 4 - Poor spawning area; great deal of bedrock and silt, Little value as a nursery area.

Pools: Section 1: Pools excellent frequency. No specific shape. Very large. Angling area 100-150 square feet. Caused by bedrock, boulders, undercut banks. digging action. Section 2: Pools excellent frequency-still fairly large-100 sq. feet. Causes same as in one. Section 3: pools good frequency. Smaller now, caused by boulders undercut banks. Section 4: Pools poor frequency-very small 10-15 feet. Causes-digging action and boulders.
Shelter: Shelter is good in the stream along its entirety with the exception of Section 4 where pools are very small. Shelter of all kinds, mainly boulders and undercut banks, also logs and streamside vegetation.
Barriers: No log jams were observed that might be considered barriers. Two places on the stream (both in Section 4) had the stream falling rapidly between huge boulders. High winter waters would probably eliminate these areas as barriers.
Diversions: None.
Temperatures: At Orrs Spring - Air-$70^0$ - H2O-$74^0$ - 1700 hours.
Food: Sections 2 and 1 - food abundant-caddis fly abundant. Little silt in stream-bed. Section 3 food less abundant-heavy silt in stream. Section 4 food not abundant-also heavy silt.
Aquatic Plants: Algae is very abundant in the stream. Iran Bacteria also present but scarce. Mosses scarce; liverworts present; horsetails scarce. Small ferns common grasses and rushes common.
Winter Conditions: Very high flow, velocity rapid.
Pollution: mainly silt due to road building; some sheep raised in area. Silt particularly bad in Section 3.
Springs: None observed.
FISHES PRESENT AND SUCCESS: Both silver salmon and steelhead present in abundance, also stickle back and minnows.
Section 1; Salmon and steelhead very numerous almost equal proportions slightly more steelhead. Salmon 250/100 feet; steelhead 300/100 feet. Section 2: Salmon steelhead and minnows more steelhead. Salmon 100/100 feet, steelhead 350/100 ft. Section 3: Few salmon many steelhead 275/100 feet. Section 4: Few fish of either type. Steelhead appear to be extremely successful in this stream despite the heavy silt in some areas. Minnows-observed about 50 in entire stream.
OTHER VERTEBRATES: Frogs and newts very numerous.
FISHING INTENSITY: Light fishing during summer. Closed during winter fishery.
OTHER RECREATIONAL USE: Hunting in area. Stream used for summer vacation area swimming, picnicing, etc.
ACCESSIBILITY: Good access to the stream. Orr Spring-Ukiah Road from Ukiah. Road follows south fork all the way to Hansens School.
OWNERSHIP: Land along stream has many small land owners. Actual property lines unable to obtain.
POSTED OR OPEN: All land is posted.
IMPROVEMENTS: No improvements are necessary.
PAST STOCKING: Not known.
GENERAL ESTIMATE AND RECOMMENDED MANAGEMENT: Stream has excellent value as a spawning and rearing area. Fish seem very successful, steelhead in particular. Conditions in the stream are at a maximum No management is necessary for this stream.
SKETCH MAP: Attached.
REFERENCES: USGS map 15' series Boonville Quadrangle 1959.

SOUTH FORK BIG RIVER
Mendocino County

Field Note

From Orrs Springs downstream 1 mile:

The stream in this section courses through good conifer-tan oak cover furnishing good stream shade. Average width is 5 ft. (3-8 ft.), average 4 in. (3-6 in.). Pools are small and scattered. Bottom is composed mainly of bedrock with scattered gravel areas. Spawning areas are considered to be fair to poor. Steelhead-rainbows averaging 3 in. in length are present but not abundant in this section. Flow was estimated at 1 c.f.s. Frogs and salamanders abundant.

1.0 Mile Downstream to B. E. Johnson Camp No. 1:

Stream courses through a moderately open valley in the section which has been logged off in the past rather expensively. Conifer-tan oak stream shade is fair. Average width 5 ft. (2-6 ft.) average depth 3 in. (2-6 in.). Bottom is predominantly gravel, rubble and some sand. Spawning areas are considered to be very good in this section. Salmonids averaging 3 inches in length are present in this section but not abundant. Flow was a measured 1.0 c.f.s. at a point approximately 1/4 mile above Johnson's Camp. The stream between the Johnson Camp and Leonard Ranch is much the same as noted above.

Leonard Ranch to Hansen School:

Stream in This section courses through a wide valley characterized by grass - conifer cover. Tan oak-conifer streamshade is good. Spawning gravels in this section are very good. Average stream width 5 ft. (5-10 ft.), average depth 5 in. (3-6 In.). Pool development is fair, scattered, fairly large but shallow. Flow at the Hansen School on this day was an estimated 2 c.f.s.

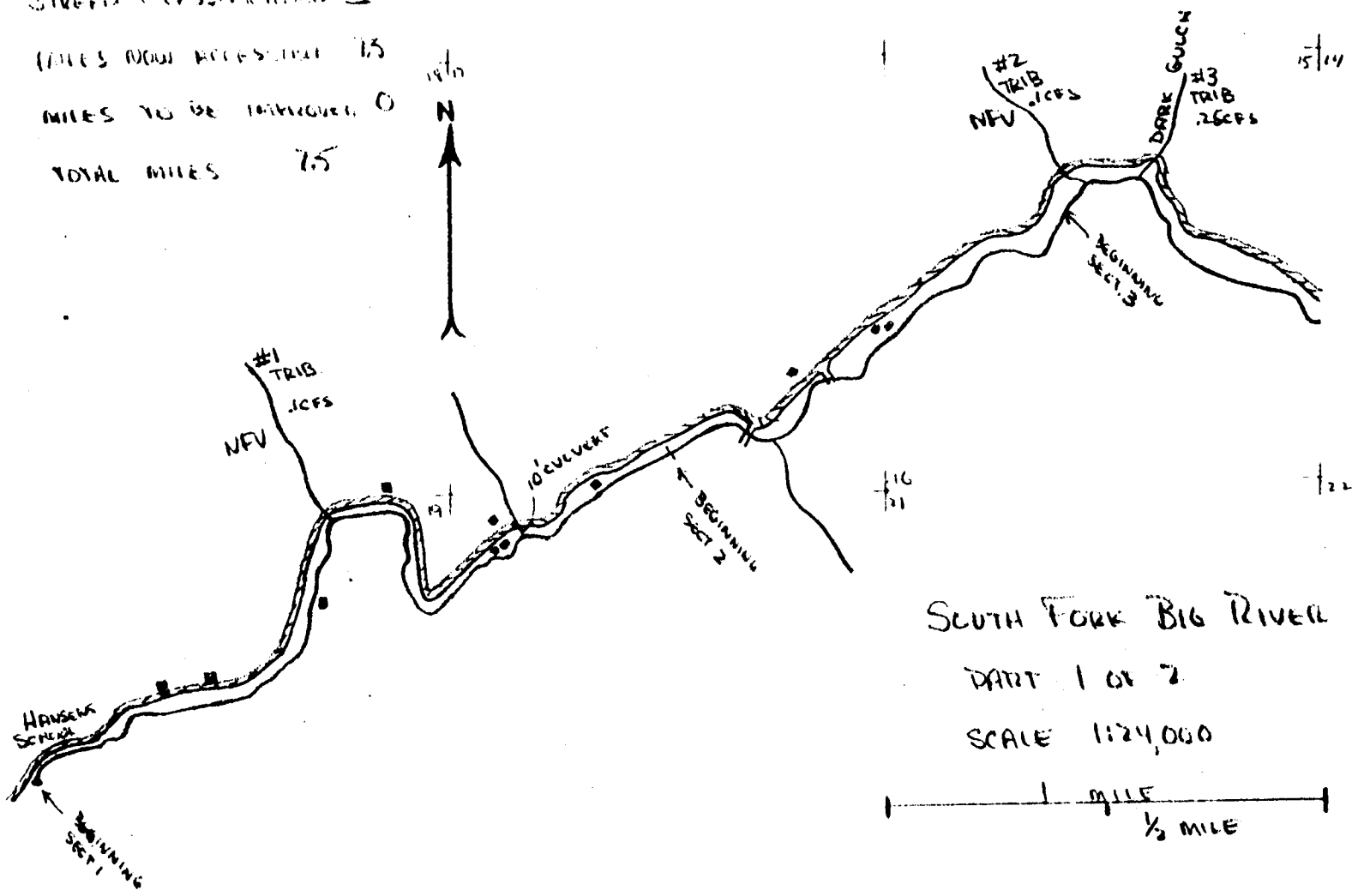
R. F. Elwell:cd

STREAM CLASSIFICATION V

MILES NOW ACCESSIBLE 1.5

MILES TO BE IMPROVED 0

TOTAL MILES 1.5



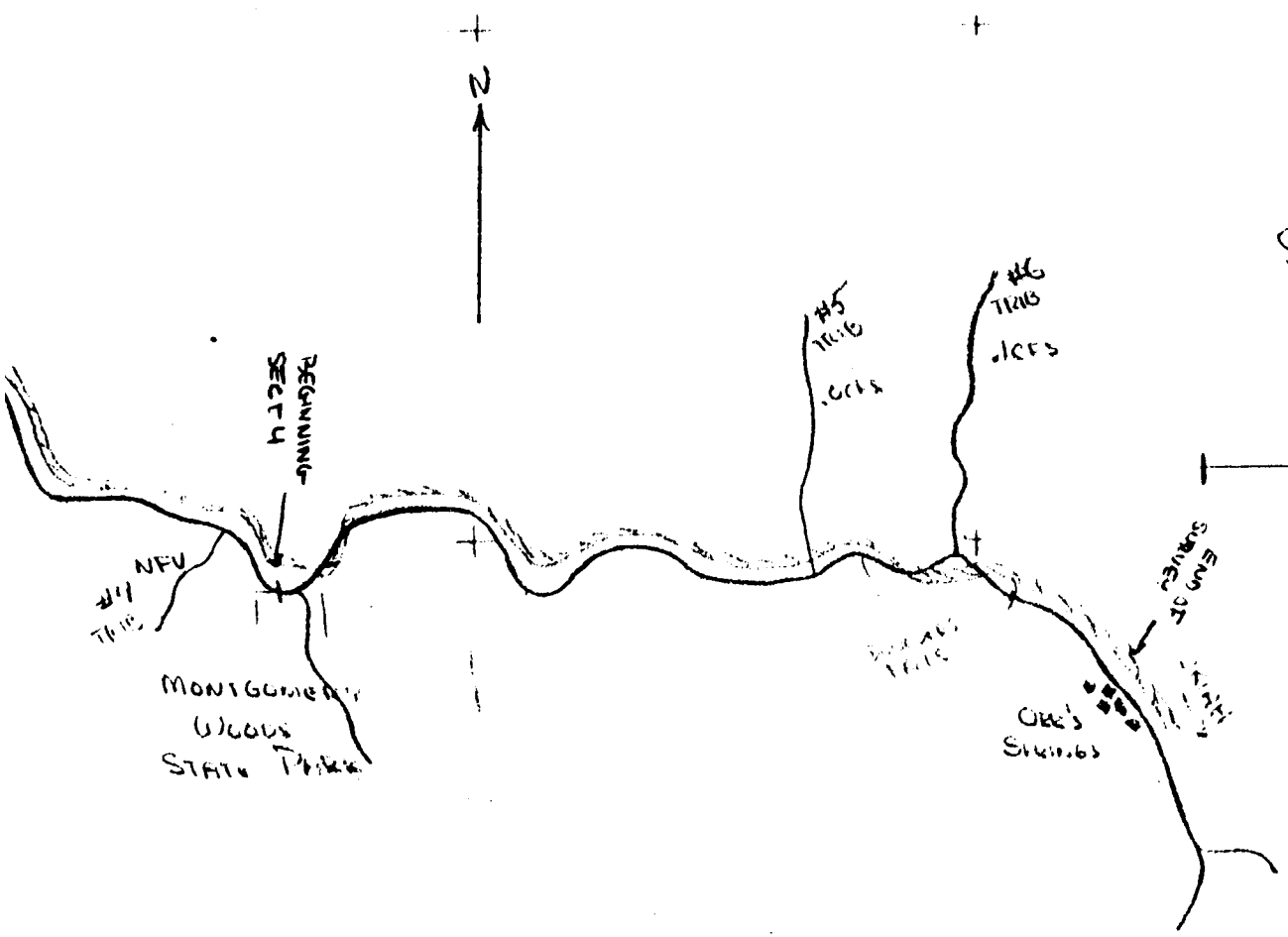

SOUTH FORK BIG RIVER

PART 1 OF 2

SCALE 1:24,000

1 MILE

½ MILE




SOUTH FORK BIG RIVER

MAP 2 OF 2

SCALE 1:24,000

1 MILE

1/2 MILE