

CALIFORNIA DEPARTMENT OF FISH AND GAME

**STREAM SURVEY**

File Form no.....

NAME.....South Branch North Fork Navarro River.....COUNTY.....Mendocino....

STREAM SECTION...Entire.... FROM....mouth ....TO .....Headwaters.....LENGTH...1.7 mi.

TRIBUTARY TO..... Navarro River.....Twp....15N....R....15W...Sec.....7.....

The headwaters section from Rose Creek upstream

OTHER NAMES.....is also called Hardscratch.....RIVER SYSTEM..Navarro.....

SOURCES OF DATA.....personal observation and Masonite Corp. ....Ukiah Calif. Foresters.....

<b>EXTENT OF OBSERVATION</b>
Include Name of Surveyor, Date, Etc.
<b>LOCATION</b>
<b>RELATION TO OTHER WATERS</b>
<b>GENERAL DESCRIPTION</b>
Watershed
Immediate Drainage Basin
Altitude (Range)
Gradient
Width
Depth
Flow (Range)
Velocity
Bottom
Spawning Areas
Pools
Shelter
Barriers
Diversions
Temperatures
Food
Aquatic Plants
Winter Conditions
Pollution
Springs
<b>FISHES PRESENT AND SUCCESS</b>
<b>OTHER VERTEBRATES</b>
<b>FISHING INTENSITY</b>
<b>OTHER RECREATIONAL USE</b>
<b>ACCESSIBILITY</b>
<b>OWNERSHIP</b>
<b>POSTED OR OPEN</b>
<b>IMPROVEMENTS</b>
<b>PAST STOCKING</b>
<b>GENERAL ESTIMATE</b>
<b>RECOMMENDED MANAGEMENT</b>
<b>SKETCH MAP</b>
<b>REFERENCES AND MAPS</b>

EXTENT OF OBSERVATION - On July 18, 26, 27, 28, 1962 John Rowell, Dick Burge, and Burtz walked out the major portions of the stream. Short sections were checked from the truck. The surveyed section extended from the mouth to the headwaters, a length of 17 miles.

LOCATION - This stream rises about 14 miles west of Ukiah and north of Booneville.

RELATION TO OTHER WATERS - This is a main tributary to the North Fk. Navarro River providing excellent steelhead and/or rainbow spawning and nursery grounds.

**GENERAL DESCRIPTION**

Watershed & Immediate Drainage Basin - This stream is within the coastal redwood belt. It flows through a v-shaped canyon throughout most of the length. Soil predominantly gray powder with gravel mixture. Only one small area is under cultivation. Redwood, fir and bark oak, madrone and willows were abundant. Shade from these trees is very good. This stream drains an area of 45 sq. miles.

Altitude - This stream rises at 2,800 ft. above sea level dropping to 160 ft. at mouth.

Gradient - Steep in the headwaters, dropping at the rate of 100 ft. per mile. The mid and lower sections are slight dropping at the rate of 100 ft. per 5 miles.

Width - Range of 4 ft. to 18 ft. with 4 ft. being common in the headwaters and 6 ft. in the mid section. In the lower third, 18 ft. was the average width.

Depth - Range of 3 inches to 8 inches, 3 in. in the headwaters, 4 in. in midsection and 6 in, to 8 in, in the lower third.

Flow - 1/2 cfs in the headwaters, 2 cfs from Rose Creek to Bridge Creek; 3 cfs from Bridge Creek to mouth. The float method was used to estimate flows.

Winter flows not known.

Velocity - Cascading in headwaters, rapid in the mid section and slow in the lower section.

Bottom - 90 percent of the streambed was rubble-gravel mix; about 5 percent bedrock and 5 percent silt.

Spawning Areas - Excellent. About 90 percent of the stream had good loose spawning gravel.

Pools - Poor in headwaters with 20% pools to 80% riffles. Good in the midsection with 50% pools and 50% riffles; excellent in the lower third with 75% pools to 25% riffles. Pools were rectangular in shape formed by logs and undercut banks. Pools were 4 ft. wide, 6 ft. long and 6 inches deep in the upper areas. 14 ft. wide, 40 ft. long and 5 to 6 ft. deep in the lower section.

Shelter - Good throughout the stream in the form of boulders, logs, undercut banks and overhanging terrestrial plants. Boulders in upper section and plants in the lower section with logs, undercut banks throughout.

Barriers - None observed.

Diversions - None observed. See log jam map for amount of debris and jams in stream.

Temperatures - Temperatures were taken between noon and midafternoon on the days the stream was surveyed. The weather was clear. Air temperature taken on the days of the survey were between 70°F., and 82°F.; water temperatures were between 65° F. and 68° F.

Food - Mayfly larvae, beetles and other unidentified insects were abundant throughout the entire stream.

Aquatic Plants - Some algae was noted.

Winter Conditions - The stream banks indicated winter flows reach a height of 3 ft. in the headwaters and 10 ft. near the mouth.

Pollution - None observed.

Springs - None observed.

FISHES PRESENT AND SUCCESS - Steelhead and/or rainbow trout in the size range of 3 inches to 8 inches were present at the rate of 25-30 per 100 ft. Their success and condition was good. The natural propagation was good. Roach were present at 2" to 4" in size. They were very abundant at the rate of 50 to 75 per 100 ft. Their success and condition was good. The natural propagation was good. Sticklebacks were present at the rate of 5-10 per 100 ft. They ranged in size 1" to 2". Their success and condition was fair. The natural propagation was fair. The sticklebacks were in spawning colors. One sculpin 8 in. long was observed about 1/3" of the stream length from the mouth. Roach were seen upstream as far as Indian Creek Road.

OTHER VERTEBRATES - Frogs, salamanders, raccoons, deer, snakes and cattle.

FISHING INTENSITY - Fishing is probably light near the mouth and none in the upper half of the stream.

OTHER RECREATIONAL USE - Boating and swimming near the mouth. Possibly some deer hunting upstream.

ACCESSIBILITY - A logging road parallels 75% of the stream. It is reached by a Masonite Corp. Ukiah, Calif. industrial road turning off at 20.9 onto Rose Creek road, to reach headwaters.

OWNERSHIP - Union Lumber Co., Ft. Bragg, Calif. and Masonite Corp., Ukiah, Calif.

POSTED OR OPEN - Posted by both Union Lumber Co. and Masonite Corp.

IMPROVEMENTS - The log jams scattered throughout the entire 17 miles of stream need to be removed.

PAST STOCKING - Unknown.

GENERAL ESTIMATE - The South Branch North Fork Navarro River is an excellent steelhead and/or rainbow trout spawning and nursery stream. It lies within the coastal redwood belt with steep v-shaped canyons. Spring flows during the summer months are good being between 2 and 3 cfs. The bottom throughout has a good mixture of loose rubble and gravel. Short sections of bedrock showed up at the lower areas forming large pools. Food was plentiful throughout the entire stream. The whole area showed signs of selective logging. Redwood and firs give good shade. Tan bark oak and madrone were also present. The stream had a large roach population with the largest being 5" in length. While this stream had a large number of log jams, the amount of debris between jams was very low. Silting was at a minimum. No silver salmon were found. The reason for this was not clear.

RECOMMENDED MANAGEMENT - This stream should be managed as a silver salmon steelhead and rainbow trout spawning and nursery grounds. The removal of log jams will make the upstream migration of silver salmon steelhead and rainbow trout much easier.

SKETCH MAP - Attached.

REFERENCES AND MAPS - Stream maps were used for reference.

1. U.S. Dept. of Interior Geological survey 7 1/2 minute series topographic map Booneville quadrangle advanced sheet 1962.
2. Masonite Corp., Ukiah, California property and topographic map based on War Dept, maps 1943.
3. U.S. Dept. of Interior Geological Survey 15-minute series topographic map Booneville quadrangle, 1959.

Surveyors Rowell, Surge and Burtz  
R. Moore/cd 8-28-62

# SOUTH BRANCH OF NORTH FORK NARARRO

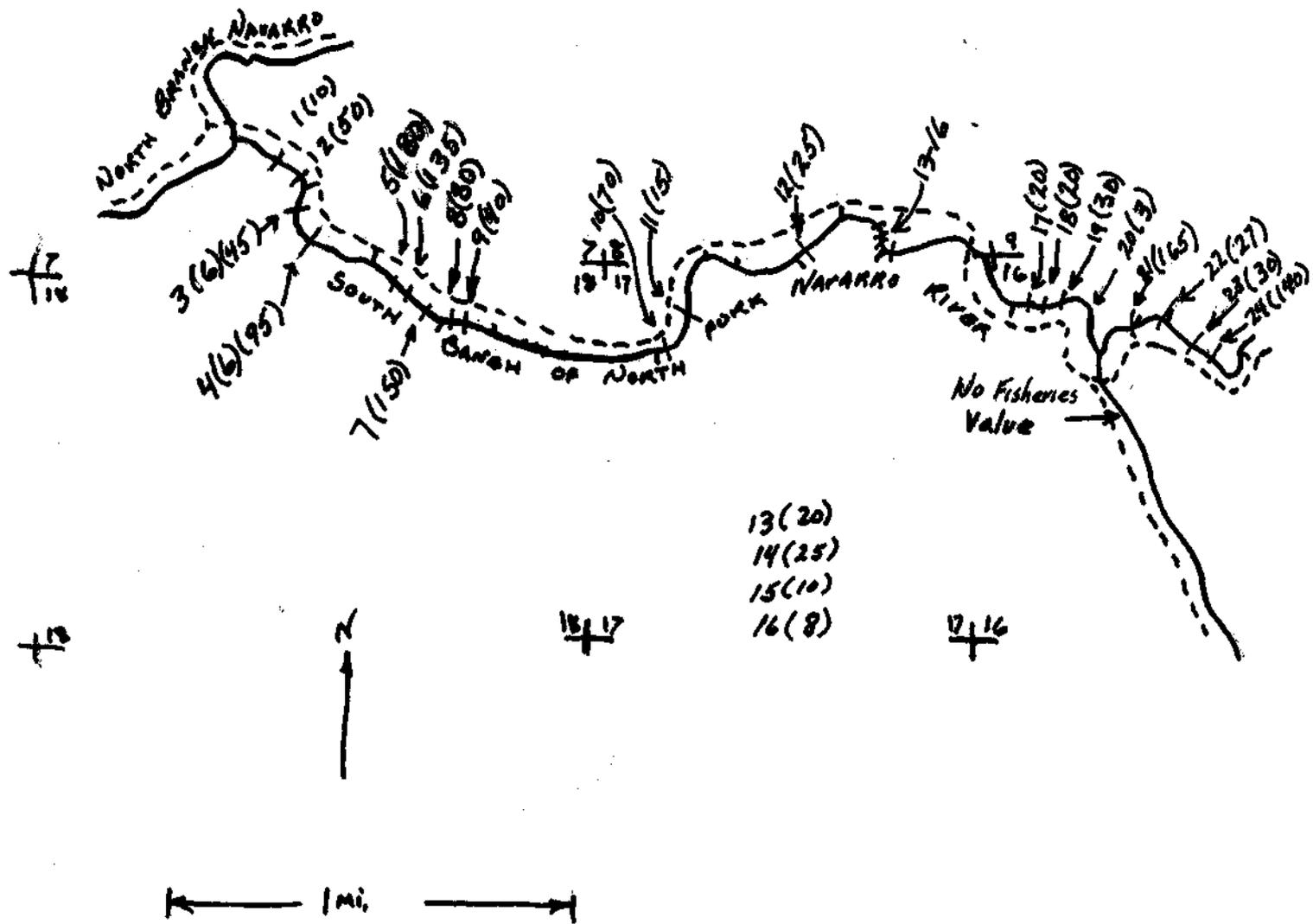
T. 15 N. R. 15 W. S. 7

PAGE ONE OF FIVE

## Spawning and Nursery Area in miles

1. Now satisfactory for SH & SS .1
2. To be improved 16.7
3. Available after improvement 16.8

Surveyor Rowell, Bunker BURTZ



Add 5% for Debris  
Between Numbered Log Jams

SOUTH BRANCH OF NORTH FORK NAVARRO RIVER

T. 15N. R. 15W. SEC. 7

PAGE TWO OF FIVE

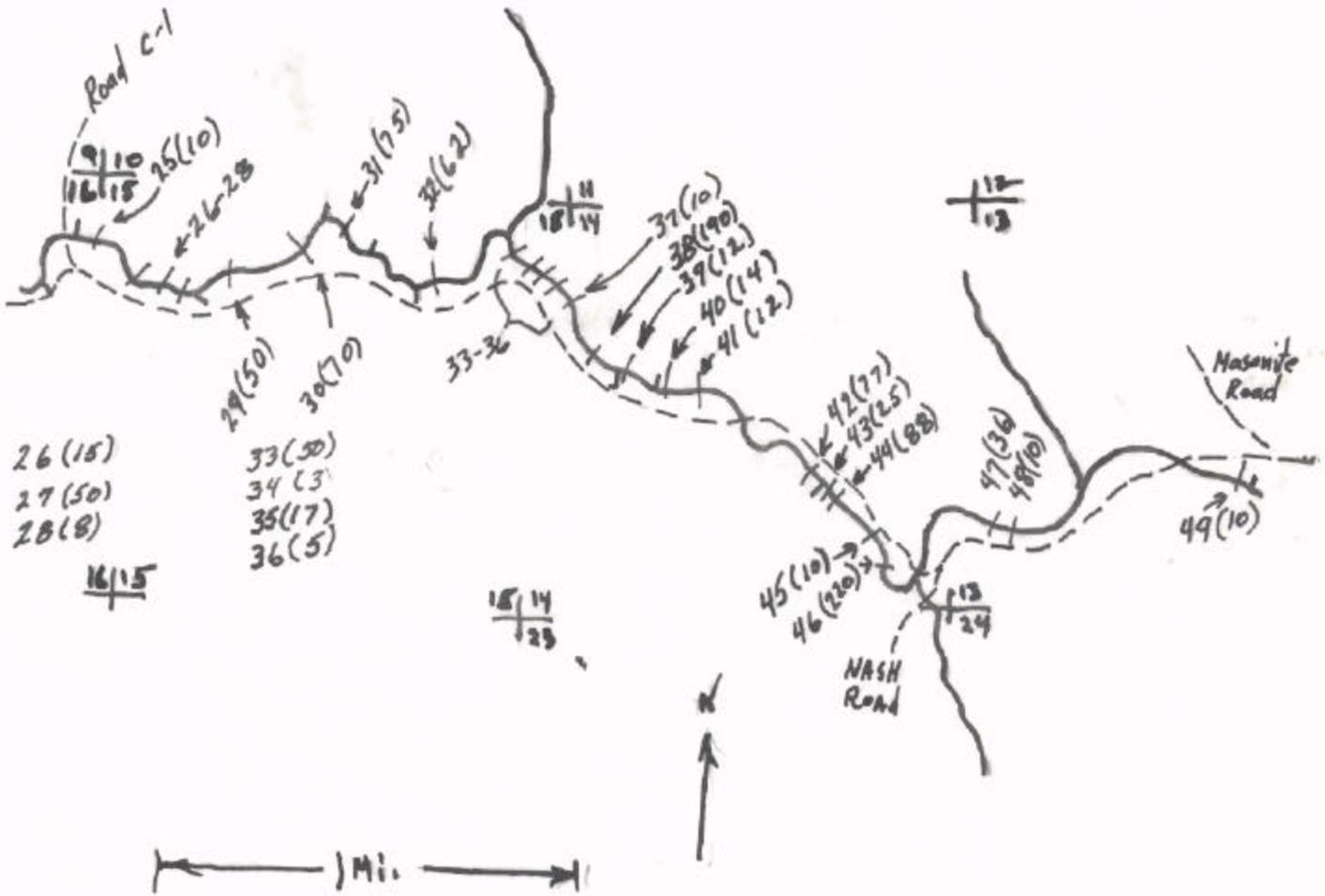
Spawning and Nursery Area in miles

1. Now satisfactory for SH & SS 77

2. To be improved 7

3. Available after improvement 16

Surveyor R. L. Moore



South Branch of North Fork Navarro River

T15N R15W Sec 7

PAGE Three of five



# SOUTH BRANCH OF NORTH FORK NAVARRO RIVER

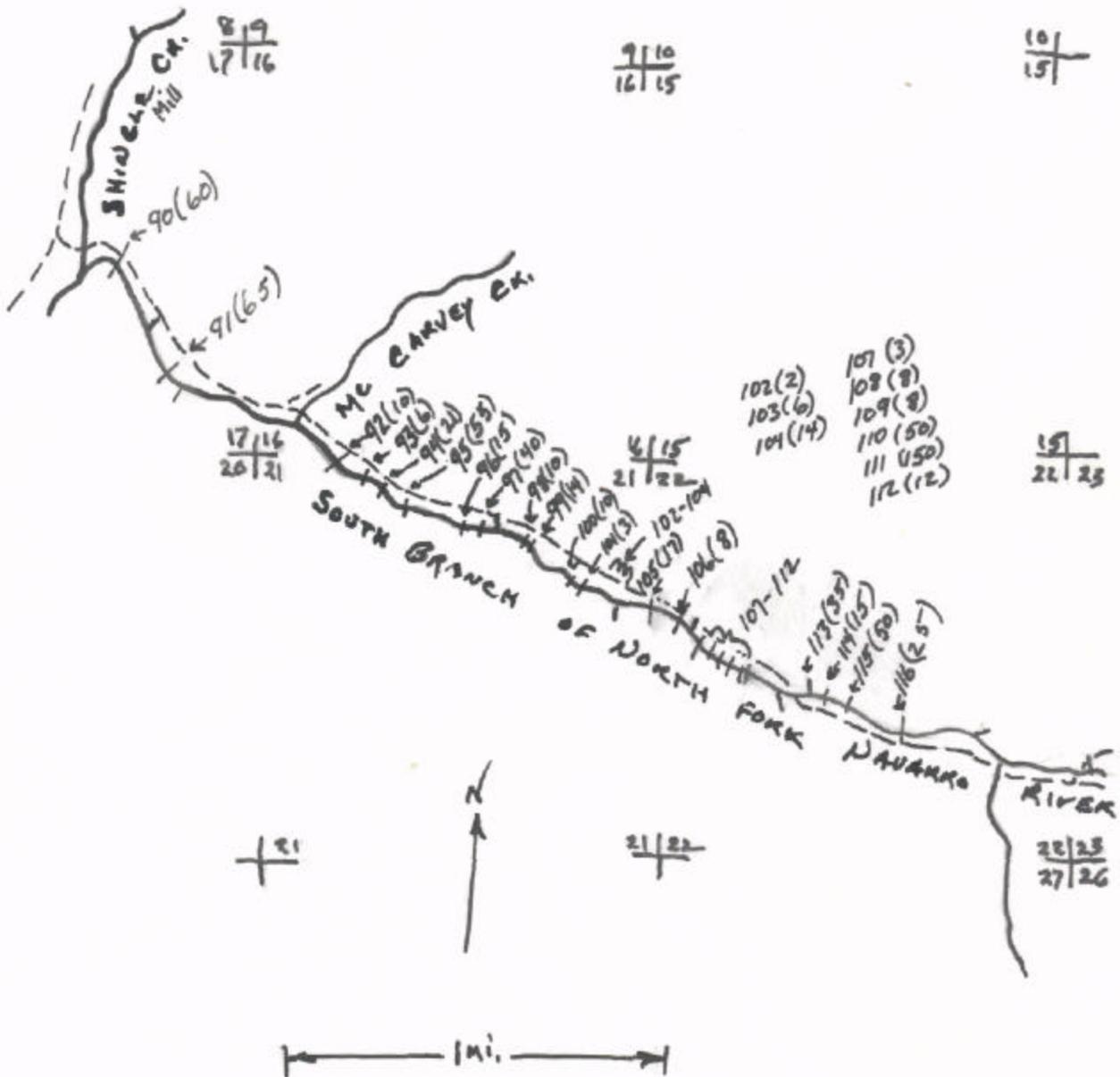
T. 15N, R. 15W SEC. 7

PAGE FOUR OF FIVE

Spawning and Nursery Area In miles

1. Now satisfactory for SH & SS. \_\_\_\_\_
2. To be improved \_\_\_\_\_
3. Available after improvement \_\_\_\_\_

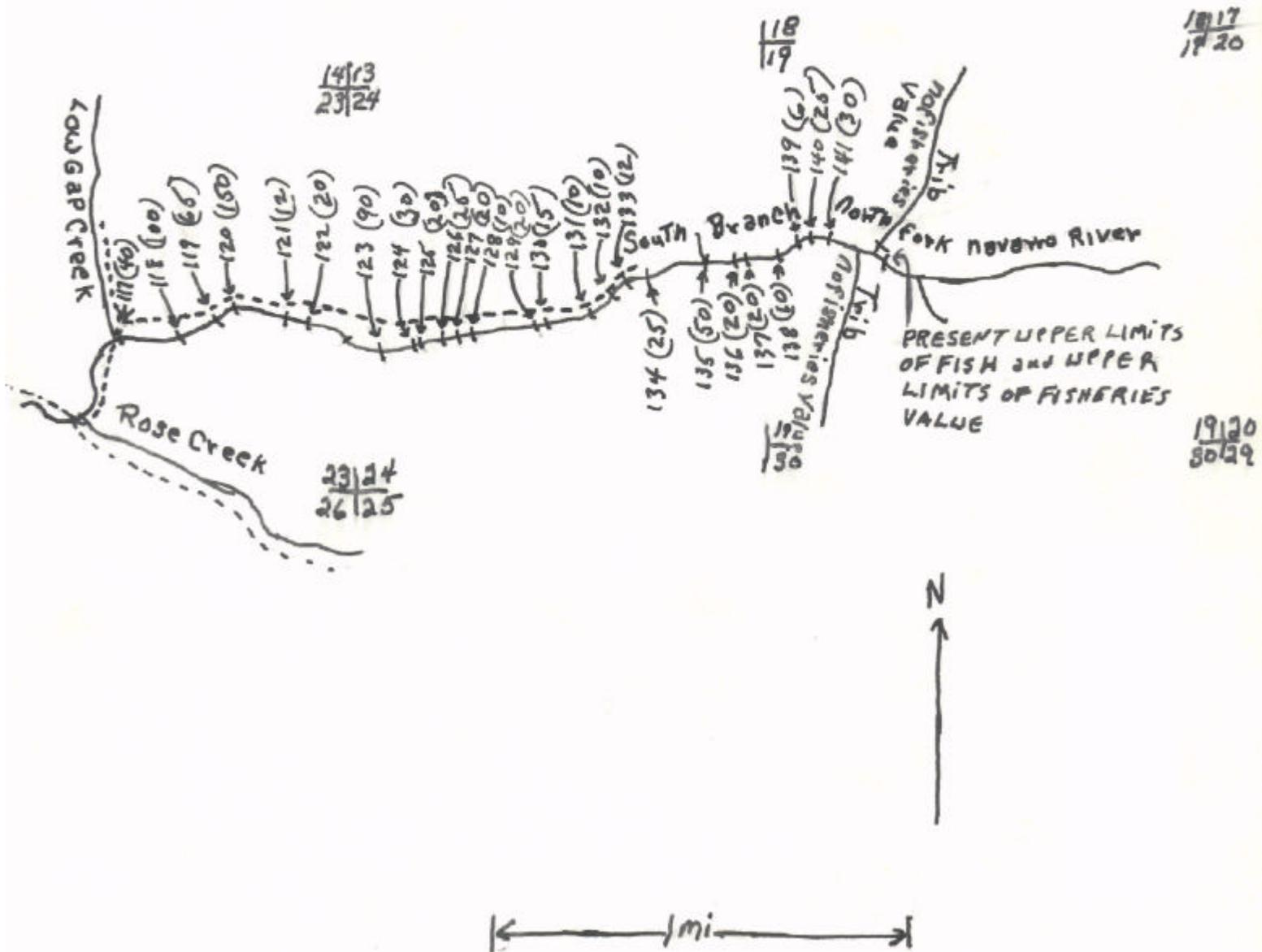
Surveyor \_\_\_\_\_



South Branch of North fork Navarro River (HARVSCRAH)

T15N R15W sec. 7

PAGE five of five



NAME OF STREAM

Navarro River

REMARKS—GENERAL ESTIMATE—RECOMMENDED MANAGEMENT

S. B. N. NAVARRO is an excellent SH and RT spawning + nursery stream. It lies within the coastal forest belt with steep V shape canyons. Stream flows during the summer months are good, being between 2+3 cfs. The bottom throughout has a good mixture of loose rubble + gravel. Short sections of bed with shales upon the lower areas, forming large pools. Food was plentiful throughout the entire stream. The whole area showed signs of selective logging. Redwood + Fir gave good shade. Tan oak, oak, and Madrone were also present. The stream had a large roach population with the largest 5" in length, while the stream had a large number of log jams, the amount of debris between jams was very low, fishing was at a minimum. No 53 were found. The reason for this wasn't clear.

Recommended Management: This stream should be managed as a 53 p. SH and RT spawning + nursery grounds. Removal of log jams will make the upstream migration of 53 + SH much easier.

Improvements The log jams scattered through out the entire 17 miles of stream need to be removed.

ALTITUDE 2800 ft. - 160 ft.

Gradient - Steep in head waters, 1000 ft per mile  
Mid + Lower 100 ft per mile

NAME OF SURVEYOR

Rowell, Burget + Bertz

T. 15 N. - R. 15 W. Sec. 7  
NE 1/4 SW 1/4

Field Form

California Department of Fish and Game

## STREAM SURVEY

NAME OF STREAM <sup>South Branch</sup> North Fork Navarro River  
CO. Mendocino  
DATE July 16, 21<sup>st</sup> 1962 EXTENT OBSER. Rowell, Burget + Bertz  
walked out majority of stream - short sections checked from Truck  
From Mouth to Headwaters. LENGTH 17 miles

TRIB. TO Navarro River

RELATION TO OTHER WATERS Main Trib. <sup>North Fork</sup> providing excellent  
SH and RT spawning + nursery grounds.

WATERSHED AND IMMEDIATE DRAINAGE BASIN (Type; Terrain; Soil; Cultivation; Vegetation; Shade)

Within coastal Redwood belt. V shape canyons thru out most of length. Soil Predominantly Grey Boulder/Gravel mixture - only one small area under cultivation - Redwood, Fir

WIDTH (4' - 18') 4' common in headwaters - 6' in mid section + 12' in lower section  
DEPTH (3" to 8") 2" in headwaters - 4" in mid section + 6"-8" in lower section  
Tan bank oak, madrone + willows were abundant. Shade for these trees very good. Drains 45 percent

FLOW 5 cfs in headwaters, 2 cfs. for Base to Bridge or and 3 cfs for Bridge to mouth. The float method was used to estimate flows - winter flows not known.

VELOCITY Cascading in headwaters, Rapid in mid section + slow in lower section.

BOTTOM (Bedrock, Boulder, Rubble, Gravel, Sand, Mud, Silt, Organic Debris)

90% of the stream bed was Rubble/Gravel mix. about 5% Bedrock + 5% Silt.

SPAWNING AREAS excellent - about 90% of stream had good loose spawning gravel

POOLS Poor in head waters - good in mid section and excellent in lower section. Rectangular in shape formed by logs - undercut banks + digging action of current

SHELTER Was found thru out stream in the form of boulders, logs, undercut banks and over hanging terrestrial plants. Boulders in upper section + plants in lower section with logs + undercut banks thru out

South Branch of North Fork

NAME OF STREAM S. NAV. Willow River

BARRIERS AND DIVERSIONS No Diversions  
See log van map for amount of debris  
of James L. Stream

FOOD Mayfly larva, beetles & other unidentified  
insects were abundant thru out entire stream.

STATIONS	STATION DATA		
	No. A	No. B	No. C
Location of Station	Mouth of Rose Cr.	upper <sup>1/2</sup> mile of Rose Cr.	@ Road crossing 1/5 mi. fm Rose Cr.
Width	6 feet	4 feet	5-8'
Depth	4 inches	3 inches	4"
Bottom	Rubble & gravel	Boulders, Rubble & gravel	Boulders & rubble
Spawn. Area	Good	Fair	Good R. small
Flow	2 cfs <sup>flat</sup>	.5 cfs estimated	1.25 cfs
Velocity	T C R(S)	T C R S	T C R S
Stream Condition	Good	Fair	Good
Water Temp.	68°	66°	58°
Air Temp.	80°	77°	82° F
Time and Date	1600 July 16/67	July 16-1900	10:30 July 16/67
Weather	clear	clear	clear
Altitude	960 feet	1600	960

STATIONS	No. D	No. E	No. F
	Location of Station	Bridge crossing S Branch Rd	Where C-1 crosses Stream
Width	10'	18'	
Depth	6-8"	6-8"	
Bottom	Rubble, Boulders & gravel	Rubble-gravel	
Spawn. Area	good	good	
Flow	3 cfs flat	3.0 cfs flat	
Velocity	T C R S	T C R S	T C R S
Stream Condition	good	good	
Water Temp.	65°	65°	
Air Temp.	70°	70°	
Time and Date	12:04 July 27	11 AM July 27	
Weather	clear	clear	
Altitude	400'	4	

South Branch of North Fork

NAME OF STREAM Navarro River

FISH PRESENT: Species	5H and/or RT	Roach	Stickleback
Size	3" to 10"	2 to 4"	1" to 2"
Abundance	25 to 30/100ft.	50-75/100ft	5-10/100
Success	Good	Good	Fair
Condition	Good	Good	Good
Nat. Propagation	Good	Good	Fair

Other Remarks Sticklebacks were in spawning colours.  
Saw 1 sculpin 8" long.  
Roach were seen upstream as far as Indian Cr. Road.

FISHING INTENSITY: Light near the mouth & probably  
none in the upper half

ACCESSIBILITY AND REMARKS ON ROUTE (Road or Trail, Mileage and Time)  
A logging road parallels 76% of the stream.  
It is reached via Masonite Corp. (UKish, Calif.)  
Road turning off at mile 20.9 onto Rose Cr. Road  
To reach headwaters, To reach lower section turn off  
at mile 23.1 onto South Fork Road.

ADDITIONAL DATA (Aquatic Plants, Winter Conditions, Pollution, Springs, Other Vertebrates, Other Recreational Use, Ownership, Posted or Open, Past Stocking, Other Names, Names and Accuracy of Maps, Sketch Map, Photograph, Other References.)  
Aquatic Plants - some algae - Stream banks indicate  
winter flow reach a height of 3 ft in head waters & 10 ft  
near the mouth - No Pollution & several springs  
Frogs, Salamanders, Rabbits, Deer, snakes, sheep  
& cattle - Boating & swimming near mouth. Posted  
By <sup>the owners</sup> Union Lumber Co, Ft. Bragg & Masonite Corp. Which  
any past stocking unknown. Stream also called  
HARDSCRATCH upstream from mouth of Rose Cr.  
maps show location of headwater Trib. OK BUT  
are confused by the names. Sketch map prepared