## CALIFORNIA DEPARTMENT OF FISH AND GAME

## **STREAM SURVEY**

NAMEMILL CREEK	
STREAM SECTIONENTIREFROMHEADWATERS	ToMouthLength13 mi
TRIBUTARY TONavarro River	Twp14NR15WSec3
OTHER NAMESNash Mill Creek	
SOURCES OF DATApersonal survey by foot	

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 Barriers Diversions Temperatures Food Aquatic Plants Winter Conditions Pollution Springs FISHES PRESENT AND SUCCESS OTHER VERTEBRATES FISHING INTENSITY OTHER RECREATIONAL USE ACCESSIBILITY OWNERSHIP POSTED OR OPEN IMPROVEMENTS PAST STOCKING GENERAL ESTIMATE RECOMMENDED MANAGEMENT SKETCH MAP REFERENCES AND MAPS

EXTENT OF OBSERVATION - Nash Mill Creek and its tributaries were walked out by foot from the headwaters to the mouth by Seasonal Aid Bob Keller and Fish and Game Assistant James Crowdus on September 24, 1962. LOCATION - Mill Creek is located approximately 4.3 miles west of the town of Philo on State Route 128. RELATION TO OTHER WATERS - This is a medium-sized stream of the Navarro drainage providing good spawning and nursery area and a large winter flow. GENERAL DESCRIPTION - Watershed - Mill Creek and its tributaries have a watershed of approximately 20 square miles. Immediate Drainage Basin - Consist of a coastal transition zone with rolling hills and v-shaped canyons. The soil is mostly shale and bedrock and rubble. The domestic cultivation of the area is occasional apple orchard. Vegetation consist of red-wood and fern association in the upper extreme head-waters of both Mill Creek and its tributary, Hungry Hollow Creek. This vegetation progresses into bay, oak, alder, grass association in the mid and lower areas. Access through the stream at low water is considered easy for the entire stream.

Altitude - Mill Creek ranges from 250' above sea level at the mouth to approximately 750' in the extreme headwaters. Gradient - Considered steep in the upper area. It is estimated that 5% is 6' plus per 50' of stream. The mid and lower area considered to be moderate with a 6' rise per 200' of stream. The gradient is considered consistent in all areas below the series of falls on the Mill Creek. Depth - From 0 to 15 feet. The average depth is 6" on this date. Estimated winter flows have a range of from 0 to 25' averaging 4' deep. Width - Ranges from 0-30 with an average of 3' on this date. The winter marks indicate a range from 0-30' averaging 12'. Flow - Summer minimum 0-1/2 cfs, Most flow was observed in the upper area above the mill pond. The average present flow was less than 1/4 cfs. Estimated maximum winter flows at 10 cfs during extreme high water. Velocity - Cascading to sluggish at this date, averaging rapid throughout 20% of the stream. There are several falls in the headwaters. Bottom - Coarse rubble is predominant by 75% in the upper 1/2 of the stream and the tributary. Coarse gravel to fine gravel predominant by 75% in the lower half of the stream. The entire area is interspersed with 25% sand and 25% bedrock. Spawning Area - The lower half of the tributaries and the main creek are considered best areas for spawning, Estimated 60% of this area is suitable. This area is loose gravel and rubble slightly silted in. The upper 1/2estimated at least 10% suitable for spawning. Overall estimate of this stream for spawning is fair to good especially in the lower and mid sections.

<u>Pools</u> - Ratio is 50% pools 50% riffles. The lower half of Mill Creek has pools caused by rock and large boulders. The average pool size is 3' long x 2' wide x 1' deep. All pools are round or crescent shape. The pools in the upper half of Mill Creek are smaller and are caused by log jams,

<u>Shelter</u> - Considered fair to poor; there is no shelter for more than one fish over 2" long in one pool or for more than any fish 2" long. Shelter is caused by undercut rock, banks or log jams. Estimate shelter to be 30% of the stream. <u>Barriers</u> - There are two complete barriers at this time on Mill Creek and one on Hungry Hollow Creek, The first major barrier on Mill Creek consist of an earth dam to impound water for a mill pond. This dam is located approximately 3 miles from the mouth of Mill Creek on the Nash Mill Road. The size of this dam is 18' high x 20' long. The barriers at the headwaters of Hungry Hollow Creek and Mill Creek consist of an 18' falls and a series of 6' falls respectively. Local residents report that the mill pond dam washes away at high water every winter. There is no

facility for a fish ladder at this dam and the outlet flow is about 2' from the top of the dam. At the end of the potential fishery value on Hungry Hollow Creek there are two falls about a quarter a mile apart. These falls also have a major falls consisting of at least three 6' stair step rock configuration with a total height of at least 18 feet.

<u>Diversions</u> -There are three diversions observed in the area below the mill pond to the mouth. These diversions consisted of three siphons with a 2" diameter suction hose powered by a 1/2 h.p.gas and/or electric motor. It is believed these diversions are for domestic use.

<u>Temperatures</u> - The water temperatures for the two days of this survey ranged from  $52^{\circ}$  F. to  $60^{\circ}$  F. The air temperatures for the same period of time ranged from  $55^{\circ}$  F. to  $70^{\circ}$  F. at 1000 to 1500 hours.

 $\underline{Food}$  - Considered adequate for large population of fish. Food is composed of caddis fly larvae and unidentified mollusk.

<u>Aquatic Plants</u> - Algae was relatively scarce and scattered existing only in an occasional pool. Stream associated grasses such as horsetail, mosses and ferns were scattered but considered common,

<u>Winter Conditions</u> - Believed moderate to severe. Estimate *a* rather rapid runoff. Local residents report winter flows are capable of moving large logs. Surveyor does not feel the flows are sufficient enough to deter salmon migration or activity.

<u>Pollution</u> - None observed although the mill pond dam, until the time sufficient flow are strong enough to wash away or break the dam, causes considerable siltation below the dam and local residents report salmon activity not good at this time.

Springs - None observed on this date.

FISHES PRESENT AND SUCCESS - Steelhead and/or rainbow trout. Their average size was 2 inches. Their range size was 1/2" to 8", The abundance of this fish was 50/100' of stream below the mill pond and 25/100' of stream in the area above the mill pond. Success is considered good. Condition is good, natural propagation good. There were no fish observed above the falls. Food and fish most common below the mill pond dam. Residents report good salmon activity during the winter flows.

OTHER VERTEBRATES - Racoon, deer, domestic sheep.

FISHING INTENSITY - None observed. Considerable poaching reported,

OTHER RECREATIONAL USES - None known due to the posting of the area.

ACCESSIBILITY - The headwaters and the lower 1/2 of the stream are easily accessible by the Mill Creek road or the Peachland Road for the headwaters. There are several scattered private jeep trails frequenting the stream for short

periods of time throughout the stream bed. Mill Creek road and Mill Creek are located 4.3 miles west of the town of Philo on Route 128, Peachland Road is located immediately west of Conn Creek on Route 128, Foot access in the summer is easy walking down the center of the stream. Walking time is approximately 12 hours. The Peachland bridge road has a locked gate approximately 2 miles from the headwaters of Mill Creek, This locked gate belongs to the Clow Ridge Hunting Club in Anderson Valley. Access to the jeep trails is rather difficult due to the numerous locked gates and numerous owners of these locked gates.

OWNERSHIP - Private and commercial. The commercial concern is Union Lumber Co. of Fort Bragg. The private interests are Alex R. Thomas of Ukiah and James Nash of Santa Rosa, Joseph E. Banco from Philo, Joseph Pinoli also of Philo and W. M. Reilly of Philo.

POSTED OR OPEN - This area is posted No Trespass, No Hunting by the aforementioned owners.

IMPROVEMENTS - No improvements to the stream itself were observed. The local terrain is currently being farmed as apple orchards or for raising of domestic sheep.

PAST STOCKING - None known or noted.

GENERAL ESTIMATE - Mill Creek wanders through heavily forested rolling hills with V-shaped canyons. The major tributary to Mill Creek are Hungry Hollow Creek and two northwest tributaries located below the mill pond. Both of these tributaries have names of uncertain reliability. Near the center area of Mill Creek there is an abandoned mill pond and occupied mill houses. Below this there are occasional farm dwelling. This is the area of the farm dwellings near the State Route 128 which crosses approximately one mile from the mouth. The terrain in the mid and lower section becomes a grass-oak association. Scattered redwood and frequent brush, scrub oak association line the entire stream and tributaries. The extreme headwaters are forested with redwood, fir and fern. The earth mill pond dam is a major upstream barrier to fish migration. This dam appears to cause a change in the characteristic of the stream and fishery habitat above its location. This earth dam reportedly washes out every winter at high water. Three small 2" pipe domestic water diversions exist below the mill pond, A series of falls in Mill Creek and two large falls in Hungry Hollow Creek at the upper potential fishery value exist at approximately 8 miles from the mouth. Spawning is best in the area below the mill pond, The bottom here is loose, coarse gravel covering 75% of the stream. Access is easy in the lower half of Mill Creek via the Nash Mill road. Headwater access easy by Peachland Road at Conn Creek, The width of the stream averages 12' at high water with a depth of 5 ' average in the winter. The stream runs intermittent during the summer months. Water in the summer time is most common above the mill pond. Food is considered adequate and fishes present were Steelhead and/or rainbow trout averaging 2" in length of good condition and 50/100' of stream. Few fish were observed above the mill pond. RECOMMENDED MANAGEMENT - Recommend the few scattered log jams and logging debris be removed throughout the Mill Creek, Recommend the mill pond be permanently removed and/or facility be installed for increased water flow through the dam to facilitate washing and transporting of silt below the dam. Install an access way for upstream fish migration. Management of this stream should be spawning and nursery Steelhead and/or rainbow trout. No measure should be initiated in this stream other than those mentioned. Mill Creek is of small moderately important

tributary to the Navarro drainage because of its water flows and spawning and nursery area. REFERENCES AND MAPS - The U.S. Army Corps of Engineers, Navarro Quadrangle, 1947, 15-minute series map was used. Accuracy considered good.

Jim Crowdus & Bob Keller/cd 1-14-63



