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VALUE OF STREAM IMPROVEMENT WORK ON THE UPPER TRUCKEE RIVER, EL DORADO COUNTY

The following information may be of some value to the Wildlife Conservation Board or their advisors in connection with the erosion control on the Upper Truckee River. Insofar as I know no one from Fish and Game has examined the entire stream since the 1955 floods. Before this time, however, the gravel beds of the lower six miles of stream were, for the most part, covered with silt and decomposed granite.

My observations on the stream above the P.I.E. Shop are that the 1955 floods did a great deal of damage, and I expect that the entire stream from Meyers down will soon become covered with silt and decomposed granite if erosion is not controlled. I measured the stream on our low aerial photographs, and if my calculations are correct the total river miles from the Highway 50 crossing at Meyers to Lake Tahoe are 9.6. The distance by river from Meyers to the P.I.E. Shop is 2.8 miles. The distance from the P.I.E. Shop to the lowest Highway 50 crossing is 4.9 miles and from the lowest Highway 50 crossing to the Lake is 1.9 miles.

I do not know if the section below the lowest Highway 50 crossing can ever be made into a good spawning area because much of it has a very flat gradient. However, above this point to the Highway crossing at Meyers there is 7.7 miles of potentially excellent spawning stream.

I doubt that the value of this stream can be accurately measured. However, in the spring of 1955 I counted 50 pair of spawning rainbow trout on the one-half mile of river flowing over Mr. Broder's property. All of them were large trout, between two and three pounds, and if each female layed 2,000 eggs, half of which hatched into fingerlings and migrated into the lake, the annual contribution of trout from this one-half mile would be 50,000 fish. It's entirely possible that the stream could raise a million rainbow trout fingerlings each year. It is also used by brown trout, kokanee salmon, and brook trout, and I assume that at least an equal quantity of these might be produced.

It costs the Department of Fish and Game 1.1¢ to plant a fingerling trout. If the Upper Truckee River could raise two million fingerling trout each year you might say that its value as a spawning stream was \$22,000 a year. The real question, however, is how much good will trout produced in the stream improve the fishing in Lake Tahoe. I know of no good way to answer this question. I doubt that planting two million trout a year into Lake Tahoe would produce fishing of equal quality as that produced by natural

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reproduction possible in the Upper Truckee River. I feel that the planting of large numbers of fingerling trout in Lake Tahoe is a good thing, but that it is still only a substitute for natural reproduction. Our efforts to improve the spawning streams of Lake Tahoe have been mostly based on the idea that the lake is short of spawning area for fish that require streams to spawn in. I have never talked to anyone familiar with the situation who does not believe this to be so.

The fast growth obtained on trout planted by the Nevada Fish and Game Commission in Tahoe in recent years surprised almost everyone. Ordinarily, we would not expect such growth in a lake like Tahoe. I believe that there is a real possibility that the fish population is not as high as the carrying capacity of the lake. This situation could be caused by the lack of spawning area.

All of this, of course, is conjecture, but in view of the lack of research it may be of benefit when considering the improvement of spawning streams.

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