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A Creel Census and Fisherman-Expenditure Study of The Causeway and Black Sandy Fishing Accesses Near Helena Montana

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Introduction

During the months of January and February, 1980, a ~~combination~~ fisherman ~~expenditure and~~ creel census investigation was conducted on the ice fishery in the area of the Lake Helena, Causeway and Hauser Lake and Black Sandy fishing accesses. Catch rates were found to be very high in these waters and estimates of use showed that these areas receive a lot of fishing pressure during the winter months. ~~Fisherman expenditures were estimated by adding transportation cost to bait costs. No attempt was made to estimate costs of equipment, refreshments or licenses. In spite of this, the average fisherman expenditure was surprisingly high and most fishermen indicated that they would be willing to travel farther and pay more if necessary to enjoy a similar experience.~~

Methods

The Causeway and Black Sandy fishing accesses are two very popular recreation areas located about 20 miles from Helena. The two access sites are located fairly close to each other (see map). This facilitated collection and interpretation of use data as counts could be made at both sites within a few minutes time and the data could be combined to treat the two access sites as one. Counts were made at two hour intervals, five times a day on two randomly selected weekdays and both weekend days of every week. The starting time of the first count of the day also varied randomly between 8, 9 and 10 o'clock to insure that early and late fishermen were not overlooked.

Creel census data collected from 626 fishermen was combined with use data to estimate catch rates and total harvest in 1/2 month intervals during the study. Some 439 of these fishermen were interviewed more extensively to obtain fisherman expenditure data. The value of the fishery to the fishermen using it was determined by adding average daily transportation and bait costs. This sum represents the average daily cost to an angler with no consideration of what might have been spent on equipment, refreshments or licenses. In an attempt to quantify how much more the average fishermen would be willing to pay to use this fishery a hypothetical question was presented to the groups interviewed. They were asked how much farther they would be willing to drive to enjoy a similar experience were this site no longer available to fishing access. Fishermen were also asked how many fisheries they frequented that they preferred to the Causeway-Black Sandy area.

RESULTS AND DISCUSSION

Creel Census and Count Data

Fishing success was quite high in the Causeway-Black Sandy area when compared with other reservoirs in the Rocky Mountain region. The overall catch rate for the two month study period was .83 fish per hour. A listing of catch rates for 13 different reservoirs in the Rocky Mountain region found in a 1950 Creel Census and Expenditure Study on the Madison River showed only two reservoirs with higher catch rates (measured in fish per hour) than this. When viewed in terms of pounds of fish per hour this fishery was far more productive than any other reservoir listed.

The catch rate remained fairly constant through the month of January. During the first half of the month the rate was .85 fish per hour and during the second half it was .86 fish per hour. During the first half of February the catch rate dropped off to .76 fish per hour and then rebounded to .83 fish per hour for the second half of the month. It is interesting to note that the drop off in catch rate was coincidental with a change in daily water fluctuations that were occurring through the Causeway Bridge. Art DesRosier who is foreman in charge of operation and maintenance at Canyon Ferry Dam said that on January 25th they began operating the turbines at less than full capacity during the nighttime hours to match peak power demands and conserve water. This apparently resulted in slight increases in the daily fluctuation of water elevations of the tailwater pool. While the tailwater pool normally fluctuated one or two tenths of a foot during the day, in the month of February it began to fluctuate as much as four or five tenths of a foot. This resulted in much larger flow fluctuations beneath the Causeway Bridge and the ice began to soften and disappear in this area early in February in spite of average daily temperatures that remained well below freezing.

Estimates of use measured in total hours of pressure were also quite high. The average number of fishermen per count was 37.9 while on some occasions the number of fishermen on the ice was over 150. The estimate of total hours of fishing pressure for the two month period was 27,331. This resulted in a harvest of 22,685 fish. The fish were Rainbow Trout averaging 12.9 inches in length and 1.01 pounds in weight.

Probably should leave this out for the time being

Fisherman Expenditures

As was mentioned earlier the only fisherman expenditures that could readily be attributed to this fishery were travel and bait costs. The average distance traveled to fish this area was 85.2 miles per party. The average party consisted of 1.92 fishermen. At 30¢ per mile (AAA estimate for February 1980) the average fisherman must spend $13.31 per trip. An additional expenditure for bait came to $1.21 which brings the cost of an average trip to $14.52, not including what might have been spent on equipment, licenses and refreshments. A Creel Census and Expenditure Study conducted on the Gallatin River in 1950 stated that 47% of the total cost to fishermen could be attributed to equipment expenditures with another 9% of the cost attributable to annual expenditures. While it seems unlikely (considering the extremely inflationary trend in transportation costs) that equipment and annual expenses amounted to over half of the cost of an average fishing trip in this study, it is obvious that estimates of cost per trip would be somewhat higher if equipment and annual expenses could be included.

The combined cost of travel and bait was however a considerable expense by itself. If the cost of an average trip is divided by the average number of hours anglers spent fishing (3.87) the cost per hour figures to be $3.75. With an overall catch rate of .83 fish per hour the average cost to the fisherman per fish is $4.52. At this rate fishermen in these two access areas spent $102,500 to harvest 22,685 fish during the two month interval.

Fishermen were also approached with a hypothetical question asking how much farther they might be willing to drive to enjoy a similar fishing experience if this fishery were no longer accessable. Many individuals appeared obviously distressed at the mere suggestion that they might have to travel farther to reach a suitable recreation area. A common outraged reply was, "We won't travel any farther...you tell them that." For this reason this estimate of how much farther fishermen would be willing to drive is probably somewhat lower than it should be. The average angler said he would be willing to drive 22.7 miles farther for a similar fishing experience. When added to the cost of an average trip this additional travel expense would bring the cost to $21.33 per trip. This means that the average fisherman would be willing to pay $5.51 per hour to fish in this area and the average cost per fish would come to $6.64.

One question that was asked of the fishermen in an attempt to estimate the value of the fishery in terms other than dollars and cents was, how many ice fisheries do you frequent that you prefer to the Causeway-Black Sandy area? Three quarters of those interviewed said they knew of no other ice fisheries that they preferred to this one.

1- use more up to date references if possible

2- leave off fishermen expenses for time being

3.- add map of area

4- add tables of data

Literature Cited

Fisherman Expenditure Study 1949, 1950, West Gallatin River Montana, United States Department of Interior Fish and Wildlife Service.

Creel Census and Expenditure Study 1950-52, Madison River Montana, Special Scientific Report-Fisheries No. 126, United States Dept. of Interior Fish and Wildlife Service.

CAUSEWAY AND BLACK SANDY FISHING ACCESSES