Progress Report, January 1973

Beaverhead River - Clark Canyon Project - 2267

This report presents information gathered during 1972. Overall, the project has progressed quite well. Analysis of all available fishery data and a comprehensive summary is now being compiled. This summary is approximately 75 percent completed and should be ready for distribution by late March of this year.

The Beaverhead River-Clark Canyon Project was temporarily suspended on January 1 of this year. A final year of study will be reinitiated during a low water year. It is believed that a study of the river fishery resource during a low water year with the accompanying low river flows is necessary to fully evaluate the effects of Clark Canyon Dam.

Clark Canyon Reservoir

Gill netting was conducted on Clark Canyon Reservoir to supplement previous years netting data. Average size of white suckers netted has tended to stabilize at approximately 15 inches, while size of longnose suckers leveled off at 15.5-16.0 inches. Size of burbot has decreased since 1970. In 1970 burbot averaged slightly under 20 inches while in 1972 average size netted was 15.6 inches.

Growth of hatchery rainbow trout was monitored during the year. Rainbows are still growing at an excellent rate. Trout planted as 5-inch fish in April and May were 12.7 inches by November.

Horse Prairie Creek was electrofished in the spring to determine trout population numbers and use by spawning reservoir suckers. Trout population numbers had significantly decreased since 1970. Number of suckers using the stream was extremely high. In approximately 2,000 to 3,000 feet of Horse Prairie Creek, we marked 2,813 white suckers and 421 longnose suckers. These marked suckers represented only a small portion of the suckers observed in the sample section of the stream. During this marking operation, six suckers tagged with a purple flag tag were taken. In 1969, 2,200 reservoir suckers had been tagged with these purple flag tags. Later in 1972, some of the river marked suckers were recaptured in Clark Canyon Reservoir. These marked fish recoveries demonstrate that spawning suckers from Clark Canyon are utilizing Horse Prairie Creek.

Fishermen counts and creel checks were conducted from January to October. Fishing pressure was estimated at 67,631 hours for bank fishermen and 67,939 hours for boat fishermen. Fishermen success rate for rainbow trout ranged from 0.25 to 0.36 fish per hour. This success rate is down slightly from the 0.41 rate calculated for 1971.

Beaverhead River

Spring and fall trout population sampling was conducted on both the Hildreth and Pipeogran sections of the Beaverhead River. This data has not been fully analyzed at this time. The population sampling was conducted during September, one month earler than previous years. Very few female brown trout

run in September, thus the impact of our electrofishing operation on spawning brown trout was minimized.

In July and August the Wheat section of the Beaverhead River was electrofished for trout population data. This section of river is immediately upstream from Dillon. Blaine, a section near Beaverhead Rock, 48 miles downstream from the dam, was electrofished in September when river flows were approximately 450 cfs. A jet motor was used on the electrofishing boat. Trout populations were less in the lower Blaine section than upstream in the Dillon and Clark Canyon areas. A number, 12-15, large carp weighing between 6 and 18 pounds were observed in the lower Blaine section. Trout population estimates for the Wheat and Blaine sections are presently being worked up.

Fishermen harvest and pressure computations for the Beaverhead River have not been completed.

Fecundity of brown trout in the Beaverhead River is being studied by a Montana State University student who collected a number of female brown trout this past fall from the Hildreth section. Spawning rainbow will be taken this spring for fecundity studies. There are two other projects being carried out by Montana State University students, one on the effect of Clark Canyon Reservoir on the limnology of the Beaverhead River and the other on reservoir limnology.

Survival of trout fry and time of fry emergence were two factors that were not determined this past year. We observed brown trout spawning and marked a number of redds upstream from Dillon this past fall. However, because of high flows followed by extreme cold and icing, no redds could be observed downstream from Dillon. High water in the spring of 1972 prevented any work on fry emergence and survival the previous year.

Streamside fish habitat, primarily willow cover, is being measured on the Beaverhead River. This information is being taken from infrared photographs and will be presented as percent willow cover and if possible miles of willow banks or vegetative protected banks.

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