JOB COMPLETION REPORT

INVESTIGATIONS PROJECTS

State of Montana

Project No. F-7-R-2 Work Plan No. II Job No. II-B

Title of Job: Inventory of the Project Area's Waters from the Standpoint of Fish Response to Enviroment.

Objectives:

There is little information of growth of fish in this area of the state and very little is known of the species composition. The purpose of this job is to gather data on the various kinds of fish in this area, together with their abundance and their growth.

Techniques Used:

Scale samples of game fish were taken at every opportunity while in the field. The samples were sent to the Montana Fish and Game Department Laboratory at Bozeman for age-growth determinations. Species composition of the lakes was taken by gill nets and that of the streams by the electric shock method.

Findings:

A brief description of the Kootenai River drainage is given in Job No. II-A. A game fish population was found in thirteen of the twenty-nine streams sampled in the Kootenai River drainage. No fish were found in the other sixteen streams. Cutthroat trout, dolly varden trout, eastern brook trout, mountain whitefish, rainbow trout, rainbow x cutthroat trout hybrids, and cottus were the species of fish found in the streams. The eastern brook trout were the most abundant species found in six of the nine streams containing them. Cutthroat trout were dominant in four of the streams sampled and were present in four other streams. Rainbow trout was the only species of fish found in one stream and some were captured in two other streams. Dolly varden trout were the chief species present in one stream and were found in one other stream. Rainbow x cutthroat hybrid trout were found in two streams but were not the dominant species. One stream was found to have an equal number of eastern brook trout and cutthroat trout.

All of the five lakes sampled were found to have a high population of suckers and two lakes also had a high population of squawfish. Sunfish were found in three lakes and large mouth bass were found in two. Eastern brook trout, rainbow trout, dolly varden trout and mountain whitefish constituted the game fish captured in three of the lakes, however, their numbers were few.

Five streams were sampled in the Flathead River drainage. In all cases the eastern brook trout were the dominant species while dolly varden trout and cutthroat trout were also present but in less numbers. A few suckers, cottus, mountain whitefish and redside shiners were found in some of the streams.

Six lakes were sampled in the Flathead River drainage. In four lakes an extremely high population of suckers or squawfish were found, while the numbers of trout

were few. A high sucker or squawfish population was always found in lakes which did not have an inlet or outlet stream.

Scale samples were taken from all trout species captured and the results of the age-growth studies have not yet been received from the department's laboratory.

Analysis and Recommendations:

In all of the streams sampled that contained eastern brook trout, they were in great abundance and of small size (mostly sub-legal). The extensive introduction of these trout in the small streams has been successful and they are propagating themselves. In many instances where they occur with the native cutthroat trout, it appears that the cutthroat trout population has suffered. The proper management procedure to utilize the eastern brook trout would be to remove the size and number limit but to retain the weight limit.

In the lakes sampled, the dominance of either squawfish or suckers presents a real problem, however, it must be born in mind that gill nets may be selective in catching fish. The practice of removing the entire population of fish by poisoning and subsequent planting of a desirable species would be the only answer to provide fishing in these lakes, however, the cost of poisoning would be prohibitive. Some success may be obtained by the annual planting of trout in lakes containing suckers. Plantings of trout are not recommended for the lakes containing a high population of squawfish.

This type of survey is giving the department some knowledge of the existing fisheries and it is recommended that this survey be continued.

Summary:

Eighteen streams were sampled by the electric shock method and the majority were found to contain a high but sub-legal sized eastern brook trout population. Suckers and squawfish appeared to be the dominant species in the eleven lakes that were sampled by gill nets.

Data and Reports:

The original data and reports are with the project leader at Kalispell, Montana.

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