JOB COMPLETION REPORT

INVESTIGATIONS PROJECTS

State of Montana

Project No. F-7-R-7 Name Northwest Montana Fishery Study

Job No. II Title Productive Capacity of Smith Lake Rearing Pond With More Than One Age Class of Fish

Period Covered: May 1, 1957 - April 30, 1958

Abstract: A total of 9,847 cutthroat trout was recovered from a plant of 25,200 fry, or a return of 39 percent. The trout averaged 5.3 inches total length with a range from 3.8 to 6.7 inches. The lake was replanted with 7,935 yearling recaptured fish (345 pounds) plus 15,000 cutthroat trout fry.

Objectives: The primary objective of this study is to determine a planting schedule for lakes that are devoid of trout either by natural or artificial disaster. It is known that plants of trout the first several years after rehabilitation provide good fishing and then begin to fall off in spite of a planting program. This study is aimed to find out the cause of this fall off in fishing and perhaps provide remedial measures. The objective of this study will be to determine the most suitable stocking rate per surface acre for succeeding plants following the initial plant to produce the best return.

Techniques Used: In April and May of 1957, part of the inlet stream was diverted past the lake and a ¼-inch screen was installed in the outlet of the lake. The screen was checked periodically until the lake was drained, starting on June 11. The pond was completely drained by June 25th. While the lake was draining the trout were captured, and each day 100 were weighed and measured and all fish hauled to the Creston Fisheries Station. The remaining pool in the lake basin was left until high temperatures killed the stranded fish in them so that they could be counted. On July 9, water was again diverted into the lake basin.

On July 23, 345 pounds of the trout captured were marked by removing the right pelvic fin and placed back into the lake. In addition, 15,000 cutthroat trout fry were scatter planted in the lake on August 2.

Findings: A total of 9,847 trout, weighing 425 pounds, were recovered from a plant of 25,200 fry. This is a return of 39 percent. The average length of the fish captured was 5.3 inches with a range from 3.8 to 6.7 inches.

Recommendations: It is recommended that the study be continued so that this problem of providing continued fishing success several years after a lake has been rehabilitated may be resolved. Probably a more realistic figure for the number of fry to be planted per surface acre should be made. The number now used is 1,000 per surface acre and is thought to be too high, therefore it is recommended that 150 trout fry be planted per surface acre.

Prepared by Frank A. Stefanich Approved by George D. Holton

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