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MONTANA FISH AND GAME DEPARTMENT
FISHERIES DIVISION
HELENA, MONTANA

JOB COMPLETION REPORT
RESEARCH PROJECT SEGMENT

State of Montana

Project No. F-32-R-1 Name Helicopter Mountain Lake Survey

Job No. II Title Survey to Determine Rainbow Trout Distribution in South Fork of the Flathead River Drainage

Period July 1, 1964 to June 30, 1965

Abstract:

The mountain lake survey in the Upper South Fork of the Flathead River was hampered due to poor flying conditions. Flying in this area along the Continental Divide was restricted to a few days. Information was collected on Woodward Lake (70 surface acres - maximum depth 110 feet). The age distribution of rainbow trout taken in experiment gill nets indicated successful spawning. No known fish plants have been made in this lake since the introduction of rainbow trout in 1932.

The use of a portable battery powered depth recorded improved the soundings compared to the conventional hand-line method.

Recommendations:

It is recommended that this survey work in the Upper South Fork of the Flathead River drainage be continued. Priority should be given to this project in the assignment of the helicopter. Satisfactory flying conditions are generally restricted to a three week period in July. Consideration should also be given to coordinating the helicopter survey part with a ground based party in the vicinity of the lakes.

Objectives:

The South Fork of the Flathead River above Hungry Horse Dam is the stronghold of Montana's native cutthroat trout. To protect this valuable fisheries resource, no introductions of fish, hatchery or wild, have been sanctioned in recent years. Earlier, however, plants of rainbow trout were made. Progeny of these plants are a threat to the native cutthroat trout. Much of this drainage is in the Bob Marshall Wilderness Area.

The objective of this job is to survey high lakes in the South Fork Drainage where it is suspected there are rainbow trout. This survey will be the basis for determining if it would be feasible and desirable to eradicate the remnant rainbow populations to protect the native cutthroat.

Techniques Used:

Standard lake survey methods were used. A helicopter was used for transportation. A portable battery-powered depth recorder, substituted for the conventional hand line, improved the sounding record. With the transducer unit attached to one of the helicopter floats, sounding courses were run by taxiing the helicopter between the desired points.

Findings:

The mountain lake survey in the Upper South Fork of the Flathead River was hampered due to poor flying conditions. Flying in this area along the Continental Divide was restricted to a few days. Lake survey information was collected on one body of water, Woodward Lake. This lake has 70 surface acres and a maximum depth of 110 feet. An estimated 20 percent of the lake is over 100 feet deep.

Two 125-foot experimental gill nets, each set for 60 hours, caught a total of 28 rainbow ranging from 7.1 to 20.4 inches (total length). The largest fish weighed 2.45 pounds. Ages as determined from scale impressions, ranged from age group II+ to VI+.

The first and only known introduction of rainbow trout into this lake was in 1932 by a local outfitter. The only spawning area observed was in the outlet stream and was only 100 - 150 yards long. The stream then drops off a sharp fault, through a number of cascades, and over an impassable falls. The spawning area appears to be adequate to maintain a fishable trout population in the lake.

Specific survey information is recorded on the standard lake survey form filed in the District Fish and Game Headquarters, Kalispell, Montana.

Prepared by D. A. Hanzel Approved by George D Holton

Date May 19, 1965