MONTANA STATE DEPARTMENT OF FISH AND GAME
FEDERAL AID IN FISH RESTORATION SECTION

HELENA, MONTANA

Job Completion Report
Development Project

State of Montana

Name Central Montana Fishery Study

Project No. F-24-D-11

Title Statewide Lake and Stream Rehabilitation
Ackley Lake and Judith River

Period Covered: September 15, 1958 to April 30, 1959

ABSTRACT:

Ackley Lake in Judith Basin County was treated with 825 gallons of rotenone emulsives on October 14, 1958 to remove rough fish, principally common suckers (Catostomus sp.)

Following treatment of the lake the Judith River upstream from the Ackley Lake supply canal was treated with the commercial toxicant, Fish Tox.

Gill nets set in lake for a prolonged period following toxicant application failed to catch any fish.

Efforts will be made to establish a fishable population by plantings of rainbow trout fingerlings.

OBJECTIVES:

To remove or decimate as completely as possible the existing fish population from Ackley Lake and a portion of the Judith River along with the Ackley Lake supply canal above the lake. To establish a rainbow trout fishery after chemical treatment is a further objective of this project.

TECHNIQUES USED:

On October 14, 1958, Ackley Lake was treated with 620 gallons of Pro-Noxfish and 205 gallons of Chem Fish Special for a total of 825 gallons of Rotenone emulsives.

The material was pumped with a hand pump from the supply barrels to supply tanks mounted in a seventeen foot boat.

Application was accomplished by pumping water from the stern of the boat with a motor diven unit and adding toxicant into the suction side of the pump.

From October 28 to November 14, 1958 the commercial product, Fish Tox, was used in rehabilitation of the inlet canal and the Judith River upstream from Ackley Lake. Cold weather and ice formation stopped the work in mid November. The work was resumed in March, 1959 and has been continued to the present date.

Beaver dams aided in the application of the toxicant in the river since low flows hampered the movement of the material downstream. Beaver impoundments were treated with the toxicant and then the dam opened with explosives which resulted in a surge of toxic water downstream flowing into backwaters and isolated small pockets of water along the stream channel.

FINDINGS:

Ackley Lake was drawn down to 2,475 acre feet for the purpose of rehabilitation. It was originally proposed to draw it down to 1,685 acre feet but physical limitations of the outlet works prevented this.

Suckers (Catostomus sp.) were the predominant species killed in both the lake and treated portion of the stream. Rainbow trout (Salmo gairdnerii) and Kokanee (Oncorhynchus nerka) were observed in small numbers in the lake while Rainbow, Eastern Brook Trout (Salvelinus fontinalis) and Brown Trout (Salmo trutta fario) were found in the stream along with several species of minnows common to the area.

Several gill net sets made over prolonged periods since toxicant application have caught no fish.

Efforts will be made to establish a fishable population by plantings of rainbow trout fingerlings.

RECOMMENDATIONS:

It is recommended that further treatment of the river downstream from the Ackley Lake diversion be accomplished.

DATA AND REPORTS:

The original data and reports are in the fisheries office of the Fish and Game District Headquarters in Great Falls.

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Date July 28, 1959