

## MONTANA DEPARTMENT OF FISH AND GAME

## FISHERIES DIVISION

## JOB PERFORMANCE REPORT

STATE: MontanaPROJECT NO: F-7-R-25TITLE: Northwest Montana Fisheries StudyJOB NO: I-aTITLE: Inventory of Waters of Project AreaPERIOD COVERED: April 1, 1975 through March 31, 1976REPORT PERIOD: February 1, 1975 through June 30, 1976

## OBJECTIVES

Objectives of this job are: 1. Determine fishing pressure and harvest estimates of the North Fork, Middle Fork and main stem of the Flathead River. 2. To determine opening day fishing pressure and harvest trends of kokanee, rainbow trout and cutthroat trout for Lake Mary Ronan. 3. To obtain fish population trend information of lakes and streams to evaluate changes in habitat and biological communities that may occur. 4. To enumerate fish populations of large lakes using acoustical gear operation and data analysis techniques. 5. To obtain survey information from several small valley lakes and streams in Region One. 6. To obtain initial survey information from high mountain lakes within the boundaries of the Cabinet, Mission and Bob Marshall Wilderness Areas. 7. To make reconnaissance surveys of streams and watersheds to offer recommendations on roads near streams or stream crossings, especially those involved with timber sales and road construction activity. 8. To obtain measurements on selected streams to determine the relationship between flow, depth and wetted perimeter on habitat of aquatic life to be used in filing for reservation of flow under Montana's 1973 Water Use Act.

## ACCOMPLISHMENTS

1. Fishing pressure and harvest estimates were obtained from the Middle Fork, North Fork and the main stem of the Flathead River above Flathead Lake. Estimates were derived by expansion of creel census contact data with state-wide mail survey fishing pressure estimates. In 1975, an estimated 59,165 anglers fishing a total of 130,976 hours with a total catch of 245,032 fish. The summer fishery, (May through Sept.) primarily Dolly Varden and cutthroat trout, comprised 59 percent of the total fishing pressure (34,465 anglers) and 28 percent of the total catch (67,832 fish). The catch per angler hour during the summer fishery was 0.43 fish per hour.

The winter fishery (Oct. through April) consists primarily of kokanee migrating up from Flathead Lake during the fall spawning migration. This fishery comprised 42 percent of the total fishing pressure (24,700 anglers) and 72 percent of the total catch (177,200 fish). The catch per angler hour during the winter fishery was 2.00 fish.

The greatest fishing pressure was expended in the main stem of the Flathead River. This segment of the river was fished by 46,193 anglers comprising 78 percent of the total fishing pressure and 89 percent of the total catch (217,610 fish). The North Fork of the Flathead River was fished by 8,933 anglers comprising 15 percent of the total fishing pressure and 8 percent of the total catch (20,766 fish). The Middle Fork of the Flathead River was fished by 4,039 anglers comprising 7 percent of the total fishing pressure and 3 percent of the total catch (6,656 fish).

A complete analysis of the data will be presented in F-7-R-26 report when final computer analysis of the data is completed.

2. Opening day creel census information is collected annually to determine trends in fishing success, fishing pressure and relative size of kokanee and cutthroat trout. The fisheries of Lake Mary Ronan is dependent on annual maintenance stocking of these cold water species and the natural reproduction of largemouth bass. The data derived from the census is used in part to direct future management direction, particularly for cold water fishes.

The species composition of the catch from the opening day of 1976 was 72 percent kokanee, 21 percent westslope cutthroat, 5 percent largemouth bass and 2 percent rainbow trout. A total of 69 anglers contacted caught 139 fish at a rate of 2.04 fish per angler or 0.46 fish per hour. Kokanee averaged 11.0 inches, 93 percent of them were mature fish at age 3+. Cutthroat trout averaged 9.8 inches and the catch was primarily a result of fish planted the previous year at four to five inches in length.

The average size of mature kokanee has steadily decreased from 13.4 inches in 1974 to 11.0 inches in 1976. The downward trend in size is probably related to the increase survival of the last three spawning year classes of kokanee. A decrease in annual stocking number from 600,000 in 1974 to 400,000 in 1976 kokanee fry has been initiated to decrease the intra-specific competition and improve the growth of the individual kokanee.

3. Gill netting data were collected from Little Bitterroot Lake and Lake Mary Ronan to determine trends in kokanee populations. Several sections of the North Fork of the Flathead River were electrofished to determine the movements of migratory cutthroat trout.

4. Preliminary sounding transects were run with a Ross Echo Sounder in Ashley Lake in an effort to determine spatial distribution of fish during daylight hours and after dark.

5. Fish population survey information was collected from Shannan and Cad Lakes. The lakes were found to have an over abundance of non-game fish, were rehabilitated and stocked with trout species. Fish population surveys were conducted for 15 North Fork tributary streams by electrofishing.

6. There were no high mountain lake surveys made during the report period.

7. Reconnaissance surveys of streams subjected to hydraulic construction involving stream channel or streambank encroachment were reviewed in the field and written recommendations to reduce the impact of fish habitat were prepared for 72 streams during the report period. In addition, 10 stream alteration projects relating to the private sector of the stream preservation act were acted upon. Approximately one-half of all hydraulic projects were charged to F-7-R-25, Job.1.

8. No data were obtained for stream flow reservations during the report period.

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Waters referred to:

North Fork Flathead River	- 08-5100
Middle Fork Flathead River	- 08-4740
Flathead River, Sec. 2	- 07-1560
Lake Mary Ronan	- 07-7700
Shannon Lake	- 11-9540
Cad Lake	- 11-8050