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MONTANA DEPARTMENT OF FISH AND GAME  
FISHERIES DIVISION

JOB PERFORMANCE REPORT

STATE: Montana

TITLE: Northwest Montana Fisheries Study

PROJECT NO. F-7-R-27

TITLE: Inventory of Waters of Project Area

JOB NO. I-a

PERIOD COVERED: September 1, 1977 through September, 1978

REPORT PERIOD: February, 1977 through September 1, 1978

OBJECTIVES

Objectives of the job are (1) determine the success and harvest trends of kokanee and cutthroat trout at Lake Mary Ronan on the opening day of fishing season and randomly throughout the year, (2) to obtain fish population trend information of lakes and streams, to inventory habitat and biological communities and evaluate changes that may occur, (3) to obtain survey information from several small valley lakes and streams in Region One and apply management measures as needed, (4) make reconnaissance surveys of streams and water sheds to offer recommendations on road construction near streams or stream crossings involved with the State Highway, or State and Federal Forest Service timber sale road construction, and (5) obtain flow measurements on selected streams in the project area and make observations on the relationship between flow and habitat requirements for maintaining aquatic life.

ACCOMPLISHMENTS

Opening day creel census information is collected annually from Lake Mary Ronan to determine trends in fishing success, fishing pressure and size of both kokanee and cutthroat trout. The cold water fishery of Lake Mary Ronan is dependent on the annual maintenance stocking of these species. A limited amount of rainbow trout reproduction occurs in the inlet tributary streams.

The catch success for trout and kokanee averaged 7.5 fish per angler with a catch rate of 1.4 fish per hour in 1978. The success ratio is similar to that obtained on the opening day of 1977. The species composition of the catch was 98 percent kokanee, 1 percent cutthroat and 1 percent rainbow trout and largemouth bass. Kokanee averaged 11.5 inches with 90 percent of the catch comprising fish at age 3+. Cutthroat trout averaged 12.6 inches and ranged from 11.7 to 13.3 inches. All of the anglers contacted were successful in catching one or more fish. Fifty-three percent of the anglers

took limit catches (10 fish) of kokanee on opening day. Random creel checks were made on two days during the summer angling season and four days during the winter angling season. Anglers averaged about one fish per hour during the summer months as compared to an average catch rate of 1.5 fish per hour during the winter months.

Annual spring and fall gill netting data were collected at Lake Mary Ronan to determine trends in kokanee and cutthroat trout populations. The spring catch of kokanee 10.6 in 1978 declined from 23 per net night collected in 1977. Approximately 66 percent of the kokanee comprised fish of age class 3+.

The average size of mature spawning kokanee dropped from 15.8 inches in 1974 to 12.3 inches in 1977. In 1976 annual kokanee plant was reduced from 600,000 to 400,000 in an effort to reduce competition and increase the growth rate of fish. Future year classes of mature fish should reflect an increase in size of fish as a result of the reduced annual fish plant.

Gill net sampling was conducted for several lakes in Region One to collect data for management needs of individual lakes. Lakes sampled include: Upper and Lower Stillwater, Whitefish, Bitterroot, Lion, Lynch, Murphy, Dickey, Sylvia, Bull, Upper Sunday, Grouse, Halfmoon, Lake Five, Hole-in-the-Wall, Patty, and Church Slough. Streams sampled with electrofishing gear included: Trail Creek (Kootenai drainage) and Spring Creek near Kalispell.

McWhorters pond was chemically treated with rotenone in September 1978 to eliminate undesirable warm water species. The lake will be restocked with westslope cutthroat trout in the spring of 1978.

Several North Fork Flathead River tributaries were "walked out" to observe and record location of Dolly Varden redd construction. Data were collected on depth, velocity, size of redds, composition of gravel size, temperature and distance to cover.

Kokanee samples were collected using gill nets from several waters in Region One to monitor sex and age composition of spawning year classes. These waters included: Swan, Lake Mary Ronan, Middle Thompson, Crystal, Whitefish, Bitterroot, McGregor, Ashley, Tally, Blaine, Bull, and Spoon Lakes. Sample collections were also taken from the Whitefish and Flathead Rivers.

During the project report period a total of 63 hydraulic projects affecting stream habitat were received at the Region One headquarters in Kalispell. These included 23 projects submitted by the U.S. Forest Service and 40 projects submitted by the State and County Highway Departments and the State Division of Forestry. These projects resulted in field reviews followed up by specific written recommendations.

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Date: December 29, 1978