

## MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS

## FISHERIES DIVISION

## JOB PROGRESS REPORT

State: MontanaProject Number: F-46-R-6Job Number: VI-BProject Title: Statewide Fisheries InvestigationsStudy Title: Statewide Surveys and InventoryJob Title: Statistical ServicesPeriod Covered: July 1, 1992 through June 30, 1993

## JOB OBJECTIVES

Maintain a computerized catalog of stream and lakes. Continue cooperative effort with federal agencies to computerize lake and stream survey information. Coordinate and develop programs to enable the electronic processing of data too voluminous or complex to compile by hand. Statistically analyze methods and data when requested. Coordinate the use of consulting statisticians and contract programmers when requested or needed. Gather trend information on catch rates by species through the use of volunteer fisherman log holders. Maintain a computerized list of fish plants and request for plants.

## ACCOMPLISHMENTS

All objectives were fulfilled.

The lake and stream name file and cataloging system was maintained. New water names were entered as inventories were completed by field personnel and corrections of existing entries were made as needed. A total of 11,487 waters are now catalogued.

Stream and Lake Database development was continued with the assistance of NRIS and BPA.

The mark-recapture computer system is being rewritten in "C" programming language to alleviate the memory problems. A beta release is now available and the final product will be available early fall 1993.

Statistical analysis of various data and methods were made periodically throughout the project period.

Fish planting records were recorded and added to the fish planting database. Data for 61,900 plants have now been entered. The 5 year planting request was updated and the annual plant requests produced.

The fisherman log program was continued as planned. Compilation of the data for the period December 1991, through November 1992, is in progress at the time this report is written.

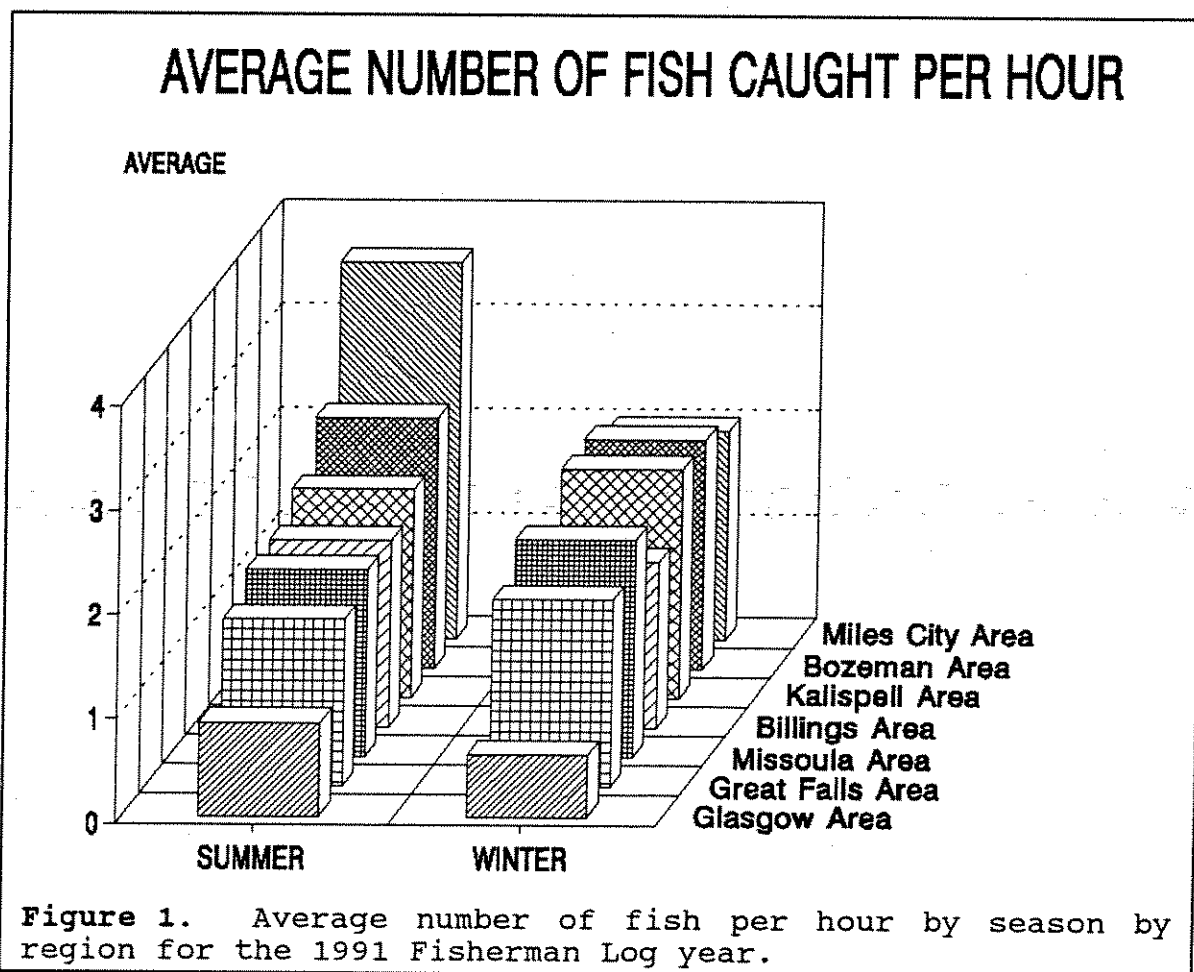
Data analysis for the period December 1990, through November 1991, showed 490 log holders out of 991 log holders returning their books for coding and analysis. These log holders caught 2.0 fish per hour for the summer months (May-November) and 2.0 fish per hour for the winter months. The annual catch rate was 2.0 fish/hour. New logs were issued to 120 anglers.

The Miles City Region had the highest number of fish caught per hour for the summer months, while the Bozeman region had the highest number of fish caught per hour for the winter season (figure 1).

The Miles City region had the highest average number of fish caught per day for both the summer and winter seasons. (figure 2).

In the summer, Rainbow trout comprised the largest percent of the catch (25.5%), while in the winter, Kokanee accounted for the majority of the catch at 24.1% (figure 3).

Assistance and trouble shooting of both hardware and software were provided when requested.



# AVERAGE NUMBER OF FISH CAUGHT PER DAY 1991 Log Year

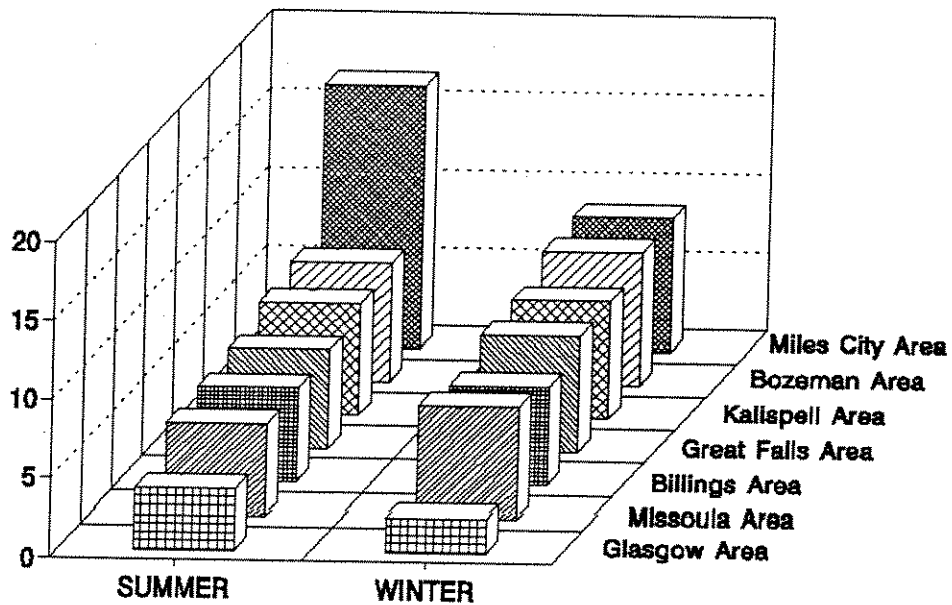


Figure 2. Average number of fish caught per day by season by region for the 1991 Fisherman Log year.

# STATEWIDE TOP GAME AND SPORT FISH DECEMBER 1990 THRU NOVEMBER 1991

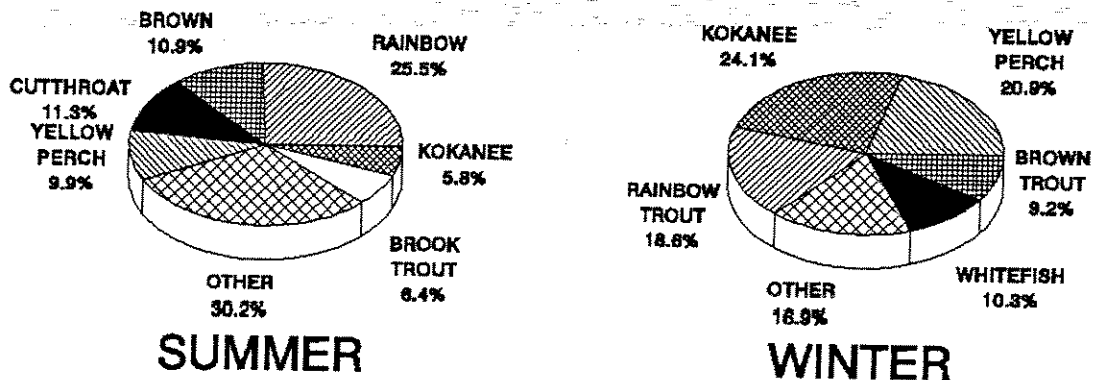


Figure 3. Percent of game and sport fish caught by season for the 1991 Fisherman Log year.

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