

3806

MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS

FISHERIES DIVISION

JOB PROGRESS REPORT

State: Montana Project Number: F-46-R-5
Job Number: VI-B

Project Title: Statewide Fisheries Investigations
Study Title: Statewide Surveys and Inventory
Job Title: Statistical Services
Period Covered: July 1, 1991 through June 30, 1992

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 11,488 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. Work was done on verifying and creating new equations and formulaes for automating the estimation procedure.

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 61,639 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 1990, through November 1991, is in progress at the time this report is written.

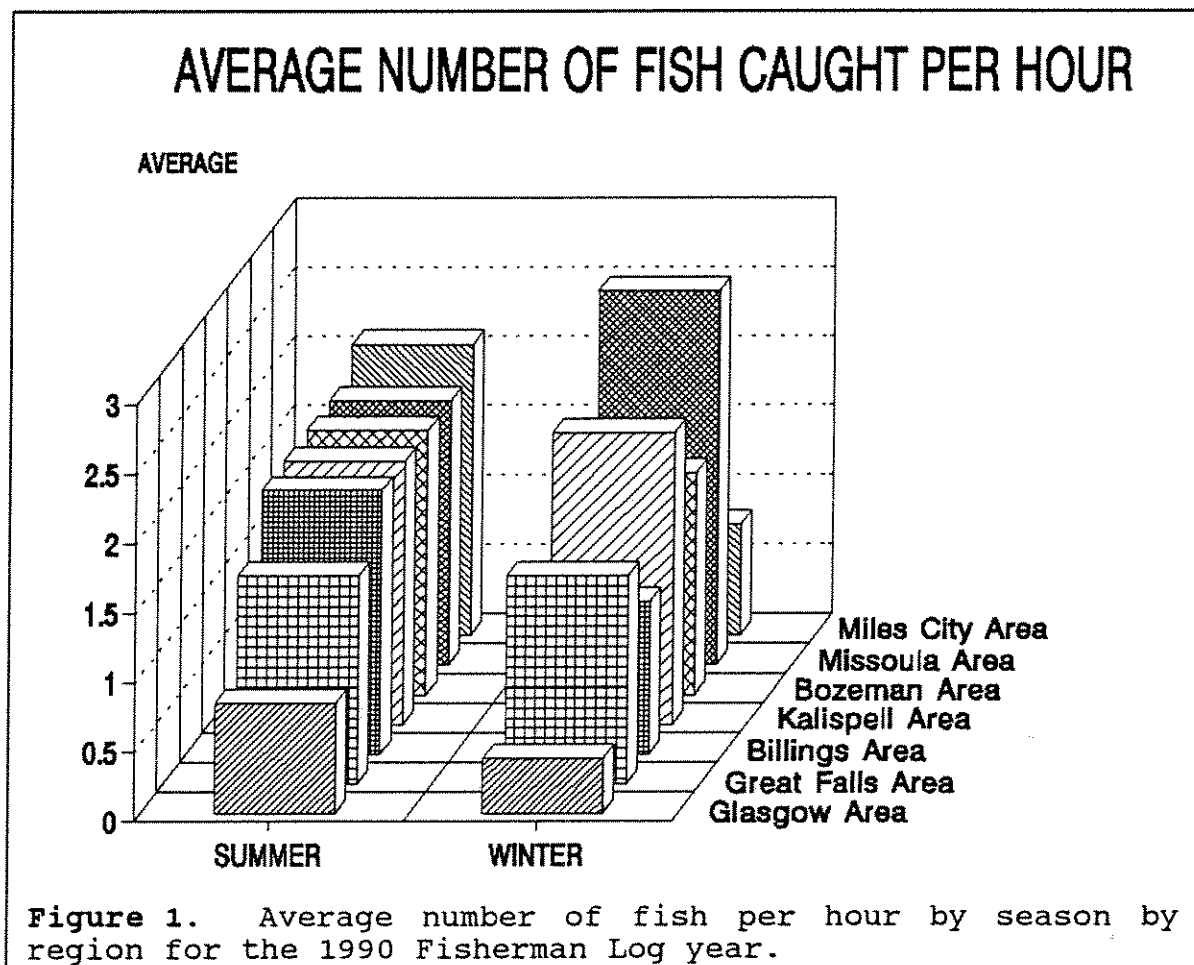
Data analysis for the period December 1989, through November 1990, showed 611 log holders catching 1.8 fish per hour for the summer months (May-November) and 1.6 fish per hour for the winter months. The annual catch rate was 1.7 fish/hour. New logs were issued to 306 anglers for a total of 1,701 active logholders.

The Miles City Region had the highest number of fish caught per hour for the summer months, while the Missoula 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 the summer season while Missoula region was tops for the winter season. (figure 2).

In the summer, Rainbow trout comprised the largest percent of the catch (29.5%) while Kokanee accounted for the least (5.9%). In the winter, Yellow perch accounted for the majority of the catch at 30.1%, while whitefish was the smallest at 9.4%. (figure 3).

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



AVERAGE NUMBER OF FISH CAUGHT PER DAY

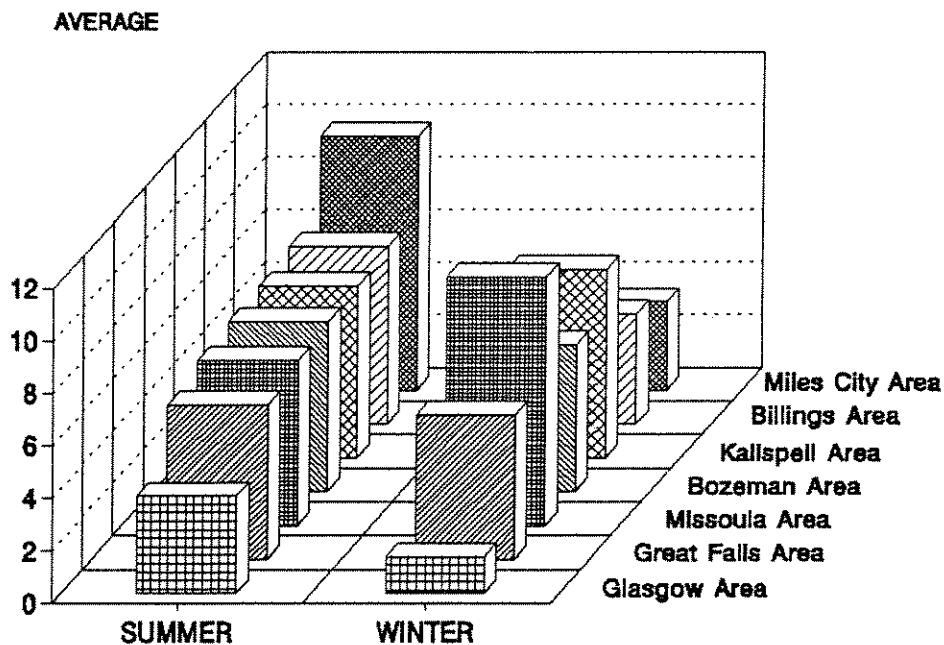


Figure 2. Average number of fish caught per day by season by region for the 1990 Fisherman Log year.

STATEWIDE TOP GAME AND SPORT FISH DECEMBER 1989 THRU NOVEMBER 1990

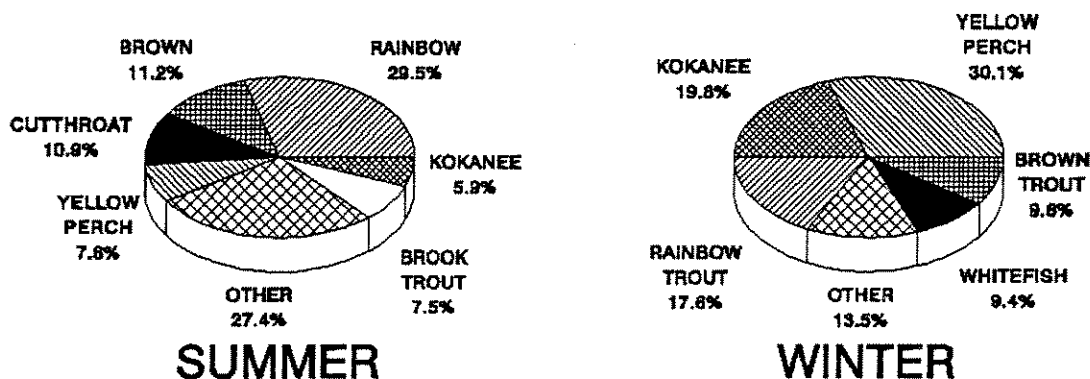


Figure 3. Percent of game and sport fish caught by season for the 1990 Fisherman Log year.