

MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS

FISHERIES DIVISION

JOB PROGRESS REPORT

State: Montana                      Project Number: F-46-R-4  
Job Number: VI-B

Project Title: Statewide Fisheries Investigations  
Study Title: Statewide Surveys and Inventory  
Job Title: Statistical Services  
Period Covered: July 1, 1990 through June 30, 1991

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 11,469 waters are now catalogued.

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

The mark-recapture computer system had memory problems. The program was modified and recompiled to reduce the amount of random access memory required to run. Work is continuing on adding enhancements and variances.

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 60,803 plants have now been entered. Federal plants made in Montana were updated for 1988 - 1990 and added to the system. The 5 year planting request was updated.

The fisherman log program was continued as planned.

Compilation of the data for the period December 1989, through November 1990, is in progress at the time this report is written.

Data analysis for the period December 1988, through November 1989, showed 405 log holders catching 1.8 fish per hour for the summer months (May-November) and 2.1 fish per hour for the winter months. The annual catch rate was 1.9 fish/hour. New logs were issued to 230 anglers for a total of 1,395 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 (24.5%) while cutthroat trout accounted for the least (7.4%). In the winter, Yellow perch accounted for the majority of the catch at 38.4%, while Brown trout was the smallest at 6.1%. (figure 3).

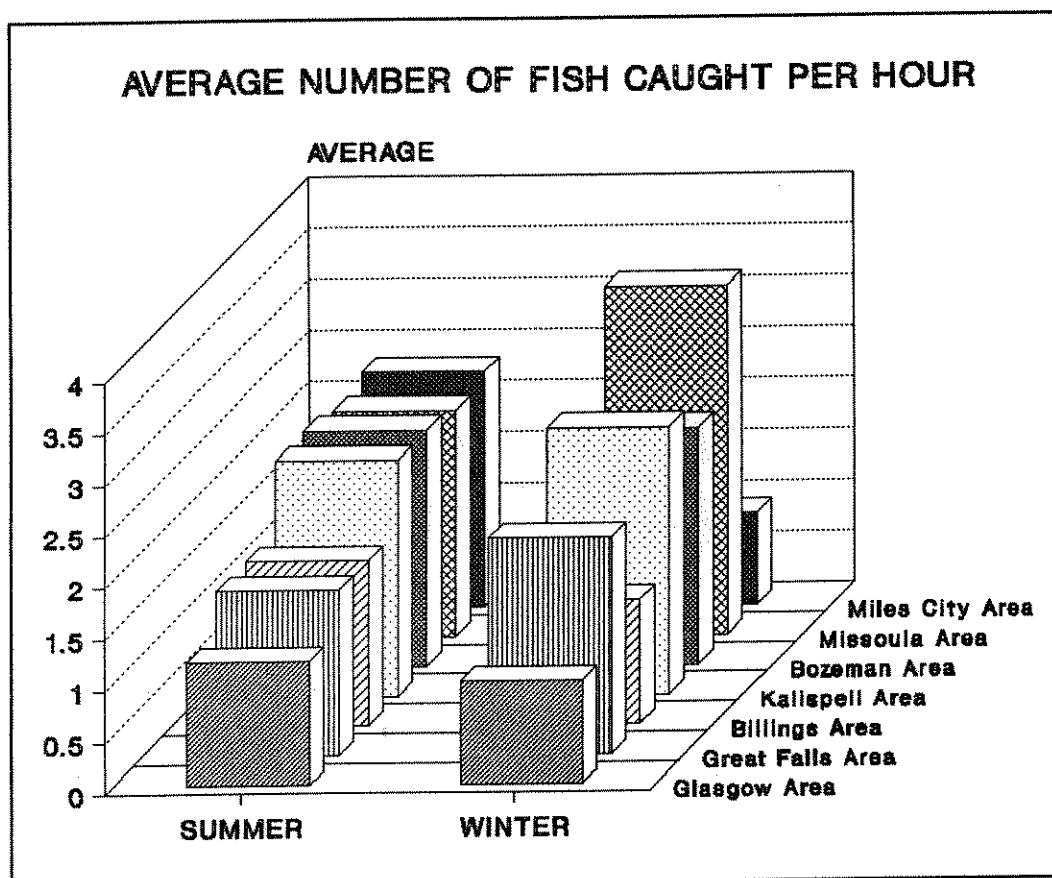


Figure 1. Average number of fish/hour for the 1988 - 89 Fisherman Log year.

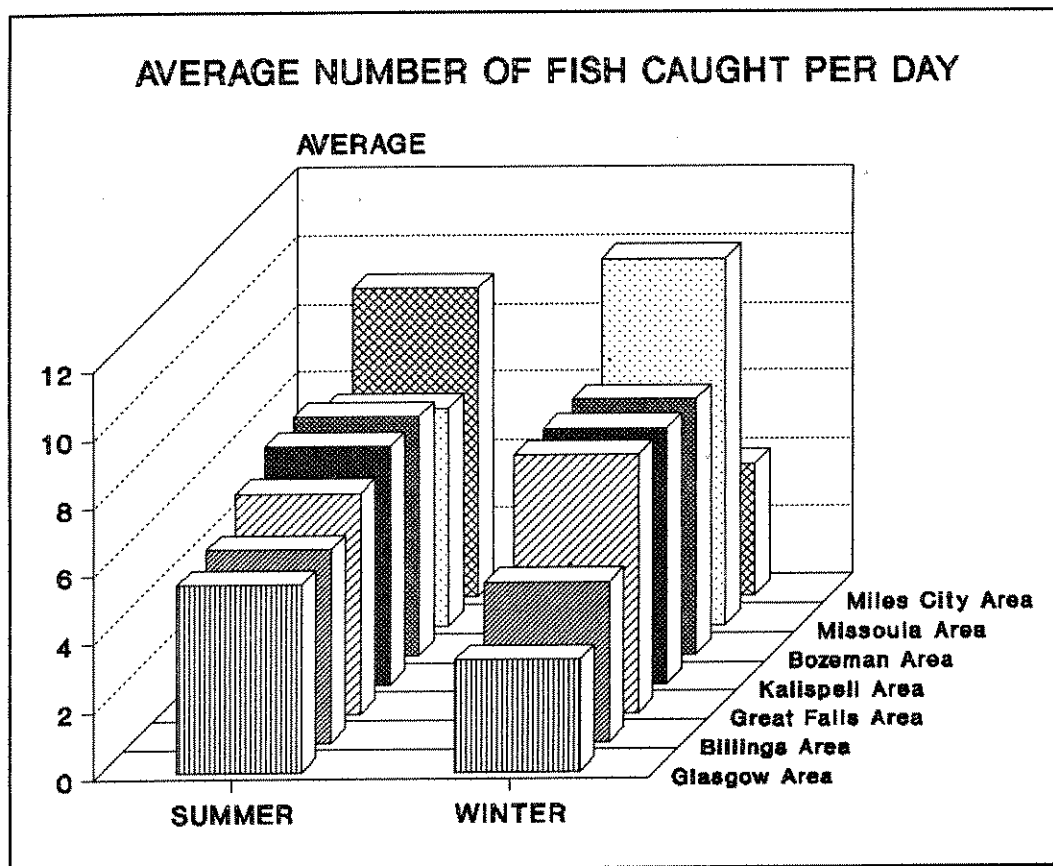


Figure 2. Average number of fish caught per day for the 1988 - 89 Fisherman Log year.

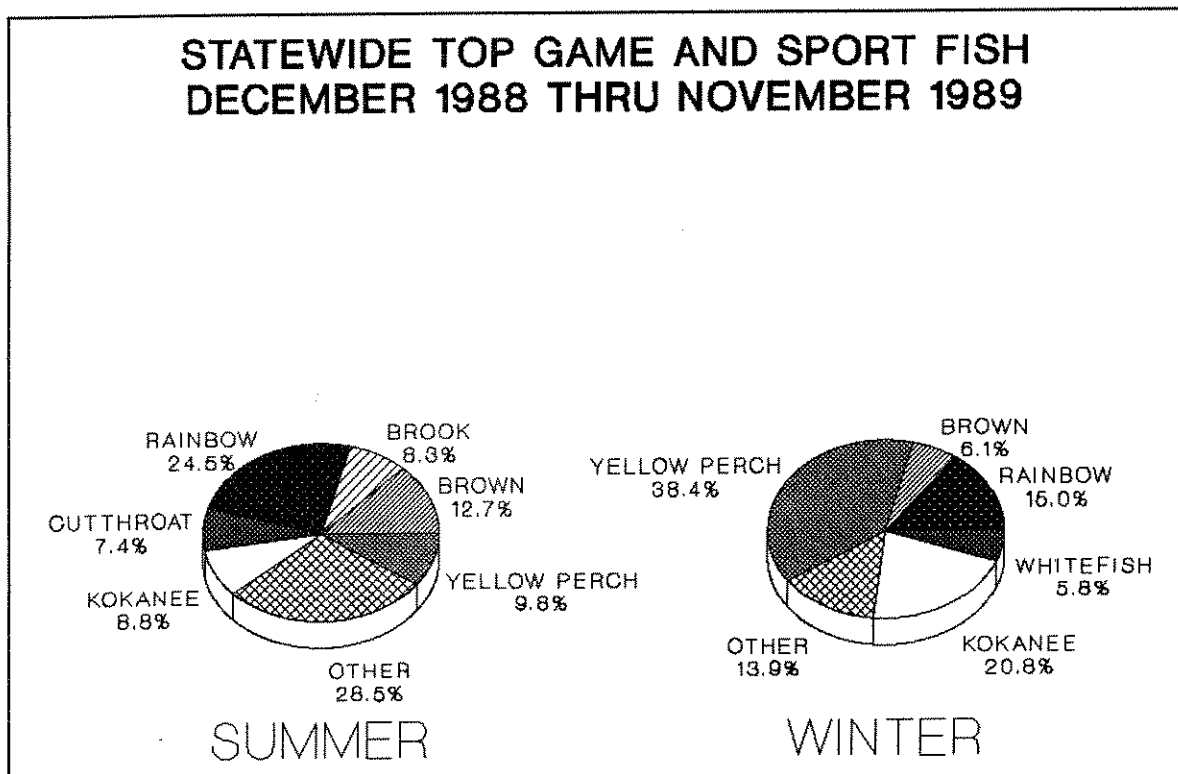


Figure 3. Percent catch of game and sport fish for the 1988 -89 Fisherman Log year.

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

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