

MONTANA STATE DEPARTMENT OF FISH AND GAME
FEDERAL AID IN FISH RESTORATION SECTION
HELENA, MONTANA

JOB COMPLETION REPORT
INVESTIGATIONS PROJECTS

State of Montana

Project No. F-4-R-3 Work Plan No. I & II Job No. IA & IIA

Title of Job: Census of Fisherman's Creels and Analysis of Creel Census Data

Abstract:

Creel Census was taken by deputy game wardens of persons contacted while wardens were engaged in their regular law enforcement duties. Guides and outfitters contributed considerable data on some waters. Pocket-sized booklets, Fishermen's Logs, were distributed to 400 sportsmen. Two hundred and thirty-two fishermen logs were returned, representing 3,628 fishing trips and 12,305 hours during the regular season. These anglers took 18,737 fish for an average catch of 1.5 fish per man-hour and 5.2 per man-day. During the winter period 219 fishing trips and 810 hours produced 1,723 fish for an average catch of 2.1 fish per man-hour and 7.9 per man-day.

Reports from wardens, guides and outfitters were totaled together. In this group 6,971 anglers contacted during the regular season fished 27,535 hours to catch 26,239 fish for an average catch of 1.0 fish per man-hour and 3.8 per man-day. For the winter period from this group 1,703 anglers fished 5,943 hours to catch 5,870 fish for an average catch of 1.0 fish per man-hour and 3.4 fish per man-day.

An estimate of total catch for the year in the state gave a figure of 11,182,214 fish. Of this number 76.9% were trout, salmon or grayling; 10.2% whitefish; 5.2% food fish; and 7.7% coarse fish.

Objectives:

1. To accumulate as large a volume of information from the entire state concerning fish catches and fishing success as is possible from all available sources.
2. To effect as rapid and economical an analysis of the creel census as possible, that its timely distribution to project leaders and fishery managers throughout the state may be realized.

Techniques Used:

Creel census was taken by deputy game wardens of persons contacted on streams and lakes while the wardens were engaged in their regular duties of enforcement. Guides and outfitters contributed considerable data for certain waters. Pocket-sized booklets, Fishermen's Logs, were distributed to cooperative sportsmen. Just prior to the end of the fishing season, it was requested by news release that logs be returned. At the end of the fishing season, a letter was sent to each log holder, not heard from, asking him to return the log to the Fish and Game Department. Records were transcribed from the logs returned, and the logs were sent back to their owners.

All census data were coded and sent to the I.B.M. offices in Helena where the analysis was done. The following information was tabulated by I.B.M. for each lake and stream from which census data was received:

- a. Number of fishermen
- b. Hours fished
- c. Catch per hour
- d. Number of each species of fish
- e. Average length of each species of fish
- f. Percentage species composition

When this information was received in the Helena office, it was immediately distributed to the respective project leaders for inclusion in their stream survey files. One complete copy was retained in the Helena office.

In addition, this year an estimate of the total catch for the state was made through the use of a postcard survey made by P.R. personnel of the number of license holders in the state who go fishing and through the use of fisherman log data of the average number of days each fisherman fishes and the average number of hours spent fishing on each trip. The Creel Census I.B.M. Report gave the catch per hour, the average size and the percentage species composition.

Findings:

The census this year was again divided into two periods. One period from the end of the 1952 regular fishing season to the beginning of the 1953 fishing season, and the other the period during the regular fishing season.

Two hundred and thirty-two Fishermen's Logs were returned to the project leader, representing 3,628 fishing trips and 12,305 hours during the regular season. These anglers took 18,737 fish for an average catch of 1.5 fish per man-hour and 5.2 per man-day. During the winter period, 219 fishing trips and 810 hours produced 1,723 fish for an average catch of 2.1 fish per man-hour and 7.9 per man-day.

Reports from deputy game wardens, biologists, guides and outfitters were treated together. In this group, 6,971 anglers contacted during the regular season fished 27,535 hours to catch 26,239 fish for an average catch of 1.0 fish per man-hour and 3.8 per man-day. For the winter period from this group 1,703 anglers fished 5,943 hours to catch 5,870 fish for an average catch of 1.0 fish per man-hour and 3.4 fish per man-day.

During the year, catch records were received from 484 trout streams, 13 non-trout streams, 191 trout lakes, 8 non-trout lakes, 10 trout ponds and 11 non-trout ponds.

From the data received in the creel census and from a postcard survey made by the Federal Aid in Wildlife Restoration Division, an estimate of total fish caught in the state by anglers was 11,182,214 fish. Of this number trout, salmon and grayling made up 76.9% or 8,599,123; whitefish 10.2% or 1,140,586; food fish (bass, sunfish, perch, catfish, crappie, sturgeon, ling, pike) 5.2% or 581,475; and coarse fish (suckers, carp, goldeye, squawfish, chubs) 7.7% or 861,030. This is admittedly a very rough estimate of the fish catch but does give some idea of the angler catch in one year in the State of Montana. It is recognized that the figure for coarse fish is low due to many people returning these fish to the water and not counting them in their creel.

Analysis and Recommendations:

Statewide Creel Census provides information concerning a large number of lakes and streams. This information is supplied to other project leaders and fish managers for their use in supplementing information they are gathering for use in working out management plans. There was a 38% increase this year in the wardens' contribution to the census, but it is felt that their contribution could be much larger. Fishermen logs increased 87.8% in creel census returns, due mainly to advertising in news releases and fishing regulations of log availability.

Sincere appreciation is expressed to those deputy game wardens and district supervisors who have contributed materially to this project. It is recommended that greater effort be expended to educate the others to the value of their recording creel census. District meetings and personal contacts by district project leaders will aid much in providing opportunities to gain support for this program.

Consideration should be given this year to developing a system along lines used in other states for estimating the annual yield of fishes from Montana waters.

Summary:

The statewide creel census was obtained from 232 cooperative anglers by their entries in the Fishermen's Logs and from deputy game wardens, guides and outfitters. Through the Fishermen's Logs source, 3,847 fishing trips were reported with a catch of 18,737 fish. Guides, outfitters and deputy game wardens reported 8,674 anglers who caught 26,239 fish. Creel census was again divided into winter and summer fishing. Data analysis was made by I.B.M., and the resulting I.B.M. tabulations were sent to the respective Federal Aid project leaders for inclusion in their stream and lake survey files.

Data and Reports:

The original field records are filed in Helena. Tabulations of I.B.M. analysis are filed in the Helena office and, for each district, in the district project leader's headquarters.

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Approved by _____

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