

MONTANA FISH, WILDLIFE & PARKS**FISHERIES DIVISION
JOB PROGRESS REPORT**

STATE: MONTANA PROJECT TITLE: STATEWIDE FISHERIES INVESTIGATIONS
PROJECT NO.: E-78-R-2 STUDY TITLE: SURVEY AND INVENTORY OF
COLDWATER LAKES
JOB NO.: II-a JOB TITLE: NORTHWEST MONTANA COLDWATER
LAKES INVESTIGATIONS
PROJECT PERIOD: JULY 1, 1995 THROUGH JUNE 30, 1996

ABSTRACT

Fish populations were surveyed in valley floor and mountain lakes of the Clark Fork, Flathead, Kootenai, and Swan drainages. Fish stocking was completed as proposed on the regional stocking plan. The Thompson Chain-of-Lakes draft management plan was completed and will be submitted for FWP Commission adoption during fiscal year 1997. Fieldwork and data collection was completed for a full-year creel census on Swan Lake. Regional fisheries biologist Joe Huston retired from the lower Clark Fork position in October of 1995. This vacancy was filled in September of 1996 by Pat Saffel.

BACKGROUND

The coldwater lake fisheries resource in northwest Montana is comprised of 412 coldwater lakes, ranging from low elevation valley floor lakes to high elevation mountain lakes. The survey and inventory of this fishery resource is an ongoing effort to update the management programs to maintain or improve coldwater lakes fisheries.

OBJECTIVES AND DEGREE OF ATTAINMENT**Activity 1 - Survey and Inventory**

Objective: To survey and monitor the characteristics and trends of fish populations, angler harvest and preferences, and to assess habitat conditions in selected waters.

This objective was attained. Numerous lakes in the Region One area were surveyed during the report period. Objectives of these surveys ranged from repeat genetic surveys, pressure and harvest estimation, evaluation of salmonid populations to generalized population evaluations. A one-year creel census was completed for Swan Lake and will be presented in a later report.

Activity 2 - Fish Population Management

Objective: To implement fish stocking programs and/or fish eradication actions to maintain fish populations at levels consistent with habitat conditions and other limiting factors.

Objective was attained. Fish stocking programs for the region were updated. Survey data collected under Activity 1 from two lakes, Kilbrennen Lake near Troy, Montana and Blue Lake near Stryker, Montana, indicates that chemical rehabilitation would be desirable. Consideration is being given to make Kilbrennen Lake a brood lake for native inland rainbow trout.

Activity 3 - Technical Guidance

Objective: To review projects by government agencies and private parties which have the potential to affect fisheries resources, provide technical advice or decisions to mitigate effects on these resources, and provide landowners and other private parties with technical advice and information to sustain and enhance fisheries resources.

This objective was attained. Fisheries personnel commented on projects that had potential to affect lakeshores. Of special interest were private parties developing shoreline property leased from Washington Water Power Company on Noxon Rapids and Cabinet Gorge reservoirs.

Activity 4 - Aquatic Education

Objective: To enhance the public's understanding, awareness and support of the state's fishery and aquatic resources and to assist young people to develop angling skills and to appreciate the aquatic environment.

Objective was attained. Project personnel attended area sportsman clubs and presented programs as requested. Fishing and fishing ethics classes were given in the Kalispell, Libby, and Noxon, Montana locales.

PROCEDURES

General lake surveys were done using standard experimental floating and sinking gill nets set overnight. Experimental gill nets are constructed of nylon, measure 6' x 125' and consist of five 25 foot connected panels measuring 3/4 inch - 2 inch bar mesh. Fish caught were identified to species, length and weights recorded and scale samples taken from gamefish for age-growth determination. Kokanee were obtained from standard gill nets samples or collected by seining or electrofishing during spawntaking operations. Mature male and female kokanee were measured separately for total length and otoliths collected for aging. Basic creel census techniques were utilized on the Swan Lake creel designed by Neuhold and Lu (1957) with modifications by McFarland (personal communication).

RESULTS AND DISCUSSION

Activity 1 - Survey and Inventory

Fish population data were collected from numerous regional valley floor and high mountain lakes between June, 1995 and July, 1996. Data will be analyzed and summarized in future reports.

A one-year creel census was completed for Swan Lake and will be presented in a later report. A draft management plan for the Thompson Chain-of-Lakes was completed and will be submitted to the FWP Commission for adoption in fiscal year 1997.

Activity 2 - Fish Population Management

Regional fish stocking programs were updated and stocking was completed during the period (Helena Fish Planting Report, 1994-1995).

Activity 3 - Technical Guidance

Lakeshore protection applications, some requiring Department recommendations for mitigation, were processed through regional county agencies. Comments were submitted on Corps of Engineer's 404 permits for regional lakes. During the period, Plum Creek Timber Company announced the future sale of their lands with water-related development potential. Waters with their highest priority at this time include: Ashley Lake, Lake Mary Ronan, Little Bitterroot Lake, Island Lake, and Thompson Chain-of-Lakes. Sale of these lands will convert ownership to a private status likely denying future public access. The Department began immediate negotiations with Plum Creek in an attempt to maintain or develop key access points where feasible. This effort is ongoing.

Activity 4 - Aquatic Education

Regional fisheries personnel regularly attended area sportsman club meetings. Angler education clinics and Department classes were held to promote the sport of fishing. Youth fishing days were also held at area lakes to develop hands-on experience for young anglers.

RECOMMENDATIONS

Recommendations for work items in fiscal year 1997 are listed below:

1. Status of rainbow trout and cutthroat trout populations should continue to be monitored in Lake Koocanusa and compared to fish numbers in the 1978-1981 era which was immediately before kokanee became established.

2. Continue surveying small lakes within the region as the need or opportunity arises.
3. In cooperation with the U.S. Forest Service and/or Bonneville Power Administration funded hydropower mitigation, chemically rehabilitate Blue Lake near Stryker, Montana and Kilbrennan Lake near Troy, Montana to remove undesirable nongame fish and re-establish a sport fisheries.
4. Continue to monitor success of planting kamloops or Girrard (Duncan strain) rainbow trout in a wide variety of lake habitats ranging from lakes of several thousand acres surface area down to less than 100 surface acres.
5. Continue regulating water levels in Ashley Lake to provide good flows for the outlet stream without deleterious effects upon the lake fishery.
6. Continue monitoring of kokanee populations in region lakes every one to four years on a scheduled basis to detect population changes. Much of this data can be obtained during kokanee spawning efforts.
7. Develop plans to establish a broodstock of genetically pure inland rainbow that may be maintained in a hatchery or in a brood lake.
8. Monitoring of the Lake Mary Ronan fishery will be emphasized as it supports a major sport fishery and kokanee egg collection. This lake was illegally planted with yellow perch (*Perca flavescens*) in spring 1992. Data to be collected includes kokanee year class strengths, angler catch data, kokanee egg collecting, numbers of rainbow and cutthroat spawning in tributaries, and abundance of yellow perch.
9. Evaluate the relative success of "swamp out" planting in lakes containing hybridized populations of cutthroat and rainbow trout.

LITERATURE CITED

Neuhold, J.M. and K.H. Lu. 1957. Creel census method publication no. 8 of the Utah Dept. of Fish and Game. Salt Lake City, Utah, USA.

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