

**MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS**

**FISHERIES DIVISION  
JOB PERFORMANCE REPORT**

STATE: MONTANA PROJECT TITLE: STATEWIDE FISHERIES INVESTIGATION  
PROJECT NO.: F-46-R-5 STUDY TITLE: SURVEY AND INVENTORY OF COLDWATER LAKES  
JOB NO.: II-a, Segment 1 JOB TITLE: NORTHWEST MONTANA COLDWATER LAKES INVESTIGATIONS  
PERIOD COVERED: JULY 1, 1991 THROUGH JUNE 30, 1992

**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**

1. To manage lake and reservoir water levels to minimize impacts on fish populations. Objective accomplished utilizing state funding.
2. To maintain water quality at present levels as measured by Water Quality Bureau. Objective accomplished utilizing state funding.
3. To maintain aquatic habitat at a level capable of sustaining existing populations. Objective accomplished using state funding.
4. To increase the opportunity to catch larger trout (14" at 0.5 fish/hour) in specified lakes. Objective accomplished.
5. Provide lake fisheries to sustain an increase of 32,600 angler days by 1992 through natural reproduction and hatchery plants. Provide kokanee fisheries for 12"-14" fish at a catch rate of 1 fish per hour. Objective partially accomplished. Sizes of mature kokanee (Oncorhynchus nerka) increased noticeably in most Region One kokanee lakes. Kokanee populations appeared to have collapsed in Lake Mary Ronan in fall 1991 - winter 1992. Only 37,000 eggs were collected by the spawning crew versus an average of 1.5 million. the winter fishery was very poor. But, sampling in spring 1992 caught above average number of kokanee per net and included fish from three age classes. Reasons for the poor spawning success and winter fishery are not known at this time.
6. To provide a variety of trout sizes and species for angling and prey on stunted salmon. Objective accomplished.
7. To manage regulations and stocking to protect or expand species of special concern. Objective accomplished with state funding. A supplemental report on restoration of westslope cutthroat trout (O. clarki lewisi) in selected waters in the South Fork Flathead River drainage has been submitted.

8. To develop management plans to adapt to the introduction of Mysis and other unwanted species. Objective partially accomplished.
9. Coordinate with other agencies to maintain fisheries and water quality at or above present levels. Objective was accomplished using state funding.
10. To encourage public participation in understanding the problems and strategies of resource management. Objective accomplished.
11. Attempt to acquire and provide facilities on all lakes and reservoirs capable of sustaining more than 300 man days of fishing per year on a priority basis at the rate of one lake per year. Objective was accomplished using state funding.

#### RECOMMENDATIONS

Recommendations for work items in fiscal year 1993 are listed below:

1. Status of rainbow trout (O. mykiss) and cutthroat trout populations should be determined 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 Hungry Horse Reservoir mitigation, chemically rehabilitate Smokey Lake near Stryker, Montana and Lion Lake near Hungry Horse, Montana to remove undesirable nongame fish and re-establish a sport fishery.
4. Monitor success of planting kamloops (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. Assist as needed the Flathead Lake Salmon Hatchery kokanee spawning efforts.
8. Finish genetic analysis of selected kokanee stocks used for planting in regional lakes. To date analysis has been made of kokanee from four lakes but has yet to be done on fish being reared in hatcheries (Creston National Hatchery and Flathead Lake Salmon Hatchery) originating from the states of Colorado and Wyoming. Kokanee of Colorado origin have been planted in Lake Mary Ronan since 1988.
9. 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 trout spawning in tributaries and abundance of yellow perch.

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Waters referred to:

Lake Mary Ronan 7-7700