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

**FISHERIES DIVISION**
**JOB PERFORMANCE REPORT**

**STATE:** MONTANA **PROJECT TITLE:** STATEWIDE FISHERIES INVESTIGATIONS

**PROJECT NO.:** F-46-R-6 **STUDY TITLE:** SURVEY AND INVENTORY OF COLDWATER STREAMS

**JOB NO.:** I-a **JOB TITLE:** NORTHWEST MONTANA COLDWATER STREAM INVESTIGATIONS

**PROJECT PERIOD:** JULY 1, 1992 THROUGH JUNE 30, 1993

## BACKGROUND

The coldwater fisheries resource of northwest Montana includes about 3,500 miles of streams ranging in size from average flows of less than 1 cfs up to 18,000 cfs. Stream dwelling Salmonidae include brook (Salvelinus fontinalis), brown (Salmo trutta), bull (Salvelinus confluentus), cutthroat (Oncorhynchus clarki) and rainbow trout (O. mykiss), and mountain whitefish (Prosopium williamsni). Other species found in streams includes suckers (Catostomus spp.), northern squawfish (Ptychocheilus oregonensis), peamouth (Mylocheilus caurinus), redside shiners (Richardsonius balteatus), and sculpins (Cottus spp.). This survey and inventory project is an ongoing effort to update management programs to maintain or improve the coldwater streams fisheries to support increasing angler utilization of stream habitats.

## OBJECTIVES AND DEGREE OF ATTAINMENT

1. To determine and maintain, within legal limits, the flows necessary to maintain or enhance existing fish populations. This objective accomplished utilizing state funding.

2. To maintain streambanks and channels in present or improved condition. This objective met utilizing state funding. During calendar year 1992 project personnel reviewed a total of 363 construction projects affecting streams. Two project personnel continued to be team members on "Best Management Practices" (BMP's) timber harvest audits.

3. To maintain water quality at or above present levels as measured by the state Water Quality Bureau and the U.S. Geological Service. Objective accomplished using state funding.

4. To maintain aquatic habitat and associated fish populations at or above present levels. Western Montana has been in a moderate to severe drought that started in 1985 but appears to have moderated in second quarter of 1993. Below average streamflow for the last several years has undoubtedly caused a downward adjustment in strength of many fish populations. In fiscal year 1993 fish population estimates were made in Bull River and several of its tributaries, Swan River, South Fork and Middle Fork Flathead rivers and Kootenai River. Bull trout spawning redd counts were made in 9 North Fork Flathead River tributaries, 14 Middle Fork Flathead River tributaries, 10 Swan River tributaries and 1 tributary of Cabinet Gorge Reservoir. Brown trout redd counts were made in four lower Clark Fork Drainage streams. Higher than normal streamflows related to heavy, prolonged rains precluded making redd surveys of cutthroat trout spawning

areas in North Fork and South Fork Flathead River tributaries. Rainbow trout redd surveys were completed in tributaries of Ashley and Bitterroot lakes and Lake Mary Ronan.

5. To maintain fish populations and harvest at acceptable levels to provide 163,300 angler days of use by 1992 and a catch rate of 0.5 fish/hour or greater. This objective was mostly met. Prolonged low water conditions and associated higher-than-normal water temperatures have had an adverse effect on fishing success.

6. To maintain a population of 1,300 rainbow trout per mile with 5 percent being larger than 14 inches in the Kootenai River. Operation of Libby dam regulating discharge in Kootenai River affects both fish populations and fishing success. An estimate was made of rainbow trout inhabiting Kootenai River from the Libby Dam afterbay downstream three miles.

7. To maintain or expand populations of species of special concern (westslope cutthroat trout, bull trout and inland (redband rainbow trout). Objective was met and special segment report has been submitted. The Department, Washington Water Power Company and Kootenai National Forest cooperated in a long-term genetic sampling of fish populations in the lower Clark Fork River Drainage.

8. Secure public access on currently used sites on private ground. Provide floating access four to six hours apart on major streams. Work was continued on obtaining access on private properties on major streams.

## RECOMMENDATIONS

Bull trout (Salvelinus confluentus) has been proposed for listing as a threatened or endangered species under the federal Endangered Species Act. Work recommended for fiscal year 1994 will emphasize bull trout and these recommendations are listed by drainage below:

1. Region One - Bull trout presence-absence surveys should be conducted on streams with no previous sampling history. Those streams found to contain or known to contain bull trout should be quantified as to relative importance to bull trout conservation. Individual populations should be classified as adfluvial, fluvial or resident or combinations thereof. Spawning run strength using spawning redd surveys should be done on adfluvial and fluvial populations counting as many streams as possible.

2. Clark Fork River Drainage - In addition to work on bull trout, surveys of lower Clark Fork River tributaries of Noxon Rapids and Cabinet Gorge reservoirs should continue. This work is a cooperative effort between the Department, Washington Water Power Company and Kootenai National Forest.

3. Kootenai River Drainage - Populations of rainbow trout should be determined in two sections of Kootenai River. One section should be immediately below Libby Dam and the other near the town of Libby, 17 miles downstream from the dam. Estimation of numbers and size of rainbow trout from Kootenai River spawning in two or three known spawning tributaries should be determined either by trapping or making redd counts. Streams known to be used by rainbow trout for spawning include Dunn Creek, Fisher River, Libby Creek, Pipe Creek, Bobtail Creek, O'Brien Creek, Callahan Creek and Yaak River.

4. Swan River Drainage - Fish populations inhabiting Swan River both above and below Swan Lake should be sampled to determine differences between the two areas separated by a large lake.

5. Flathead River Drainage - Cutthroat trout populations in a section of the North Fork Flathead River near Polebridge, Montana and a section of the South Fork Flathead River near Spotted Bear, Montana should be estimated. These data will be primary estimators of effects of special fish regulations and effects of lower water (drought-related) in unregulated systems.

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