

MONTANA FISH, WILDLIFE & PARKS

FISHERIES DIVISION JOB PROGRESS REPORT

STATE:	<u>MONTANA</u>	PROJECT TITLE:	<u>STATEWIDE FISHERIES INVESTIGATIONS</u>
PROJECT NO.:	<u>F-46-R-7</u>	STUDY TITLE:	<u>SURVEY AND INVENTORY OF COLDWATER STREAMS</u>
JOB NO.:	<u>I-a</u>	JOB TITLE:	<u>NORTHWEST MONTANA COLDWATER STREAM INVESTIGATIONS</u>

PROJECT PERIOD: JULY 1, 1993 THROUGH JUNE 30, 1994

BACKGROUND

The coldwater stream fishery resources of northwest Montana include about 3,500 miles of streams ranging in size from less than 1 cfs up to 18,000 cfs average flow. Native species found in streams include westslope cutthroat trout (*Oncorhynchus clarki lewisi*), bull trout (*Salvelinus confluentus*), redband rainbow trout (*O. mykiss spp*), mountain whitefish (*Prosopium williamsoni*), two species of suckers (*Catostomus spp*), northern squawfish (*Ptychocheilus oregonensis*), dace (*Rhinichthys cataractae*), peamouth (*Mylocheilus caurinus*) and several species of sculpins (*Cottus spp*). Non-native fish species found include brook trout (*Salvelinus fontinalis*), brown trout (*Salmo trutta*), coastal rainbow trout (*O. mykiss*), Yellowstone cutthroat trout (*O. clarki bouvieri*), yellow perch (*Perca flavescens*), redbelt shiner (*Richardsonius balteatus*), northern pike (*Esox lucius*) and pumpkinseed (*Lepomis gibbosus*). This survey and inventory project is an ongoing effort to update management programs to maintain and improve coldwater streams to support increasing demand upon the resource.

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 1993, project personnel reviewed a total of 365 construction projects affecting streams. Projects reviewed by county included Flathead with 189 (American Telephone and Telegraph submitted 95 for a new buried telephone line), Missoula County 3, Lake County 30, Lincoln County 69 and Sanders County 74 projects. Two project personnel continued to be team members of "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 since 1985, somewhat modified by record summer and fall rainfall in 1993, followed by near record low snowpack in winter 1993-94. Spring runoff in 1994 was near all-time record lows and predictions for summer 1994 were for continued dry weather patterns. Below average streamflow for the last several years has undoubtedly caused a downward trend in resident fish populations in many of the region's streams.

In fiscal year 1994, fish population estimates were made in seven tributaries of Noxon Rapids and Cabinet Gorge reservoirs, two sections of Kootenai River and Middle Fork Flathead River and one each in South Fork Flathead River and Swan River. Rainbow and/or cutthroat trout redd counts were made in three Hungry Horse Reservoir tributaries, two Ashley Lake tributaries, two Lake Mary Ronan tributaries and one tributary of Bitterroot Lake. Brown trout redd counts were made in three tributaries of Cabinet Gorge Reservoir and five tributaries of Noxon Rapids Reservoir.

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 and in the Flower-Pipe Creek section located downstream of the Montana Highway 37 Bridge at Libby. A slot fishing regulations was adopted in March, 1994 to maintain or increase the number and average size of rainbow trout in the Kootenai River.
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 a special segment report on redband rainbow and westslope cutthroat trout has been submitted.

A presence-absence survey of almost all tributaries to the Clark Fork River west of Paradise, Montana was completed. Only one unexpected population of bull trout was found and that is a resident population in the upper end of Prospect Creek above the Twenty-four Mile tributary. The Thompson River fluvial bull trout are thought to do most of their spawning in Fishtrap Creek between Beatrice Creek and West Fork Fishtrap Creek based on redd surveys.

Bull trout redd counts were made in six Middle Fork Flathead River tributaries, four North Fork Flathead River tributaries and four tributaries of Swan River above Swan Lake. Number of redds found in the Flathead River tributaries was generally down compared to previous years, while number of redds in Swan River tributaries increased from previous years.

Thirty-six tributaries in the South Fork Flathead River Drainage above Hungry Horse Dam were examined for bull trout redds for the first time. Nine of these streams were tributary to Hungry Horse Reservoir or the South Fork Flathead River outside of the Bob Marshall Wilderness, while twenty-seven were located within the wilderness. Most streams outside of the wilderness were known to have adfluvial spawning runs from Hungry Horse Reservoir based on previous years' work while very little information was available about spawning runs into streams within the wilderness. Bull trout redds were found in 6 of the 9 streams located outside the wilderness, while 8 of the 27 within the wilderness contained bull trout redds.

A petition was filed with the U.S. Fish and Wildlife Service asking that redband rainbow trout in the Kootenai River Drainage in Montana and Idaho be added to the federal endangered species list. Montana Fish, Wildlife & Parks (FWP) signed a contract with the U.S. Fish and Wildlife Service to continue genetic surveys of trout populations in the Kootenai River Drainage to delineate occurrence of native salmonids including the redband rainbow trout, the westslope cutthroat trout and bull trout. Fish collections and genetic analysis will be done in fiscal year 1995.

RECOMMENDATIONS

Bull trout, redband rainbow trout and white sturgeon in Montana have been proposed for listing under the Endangered Species Act. The redband and sturgeon occur only in the Kootenai River Drainage, while bull trout occur in many streams and lakes throughout northwestern Montana. Work recommended for fiscal year 1995 will emphasize these species and recommendations are listed below:

1. Redband Rainbow Trout - A cooperative agreement between FWP and the U.S. Fish and Wildlife Service states that salmonids from 12 streams and Yaak River will be collected for genetic analysis and that presence-absence data will be recorded for bull trout. Fish from additional streams may be collected if a target of 1,100-1,200 fish for genetic analysis is not reached from streams to be sampled by a combination of U.S. Forest Service and FWP personnel. Monies to pay FWP personnel travel costs and to hire a geneticist at University of Montana Wild Trout and Salmon Genetics Laboratory for two months to analyze fish has been contracted with the U.S. Fish and Wildlife Service. Other costs of collection and analysis will be borne by FWP and Kootenai National Forest.

2. Sturgeon - One of the major efforts to recover sturgeon populations in the Kootenai River is to change discharge patterns at Libby Dam. The goal is to return dam discharge to a more natural hydrograph (ie. high spring discharges and lower fall and winter discharges, which is a reverse of past and present dam operation patterns. The effects upon river fish populations of a more natural hydrograph is unknown at this time but must be researched by continuation of fish population work in two or three areas sampled periodically since 1972. The target of this sampling is not sturgeon but other species including rainbow trout, mountain whitefish and suckers.
3. Bull Trout - Counting of redds should be continued in known bull trout spawning streams in the South Fork, North Fork and Middle Fork Flathead River System, in Swan River above Swan Lake, in Noxon Rapids and Cabinet Gorge reservoir tributaries, in Fishtrap Creek tributary to Thompson River and in Kootenai River and Lake Koocanusa tributaries.
4. Other Species - Redd counts should be continued in selected tributaries of Lake Mary Ronan, Bitterroot Lake, Ashley Lake and Hungry Horse Reservoir. Fish population estimation work and survey fish sampling should continue on a region-wide basis as the need or opportunity arises and samples for genetic analysis should be collected from suspected westslope cutthroat populations.

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