MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS
FISHERIES DIVISION

JOB PROGRESS REPORT

STATE: MONTANA PROJECT TITLE: _____

PROJECT NO.: F-38-R-5 STUDY TITLE: _____

JOB NUMBER: 1

JOB TITLE: WATER RESERVATIONS - MISSOURI RIVER BASIN

PROJECT PERIOD: JULY 1, 1989 THROUGH JUNE 30, 1990

JOB OBJECTIVES AND DEGREE OF ATTAINMENT

1. To compile existing biological and stream profile data to identify data needs.

   Compilation of existing biological information and stream profile data for the Missouri River and its tributaries downstream from Fort Peck Reservoir and for the Little Missouri River and its tributaries. Information was collected for seventeen streams. Biological data was collected for each of the streams. Several low gradient, warmwater streams did not lend themselves to the use of stream profile data. Other methods will be used to determine instream flows on these streams. Stream profile information was collected for eight streams.

2. To determine distribution, species composition and relative abundance of fish populations where needed.

   This information was available for several streams. Intensive field studies were conducted on the Little Missouri River and its tributaries to obtain this information. This information still needs to be collected from four warmwater tributaries to the Missouri River.

3. To collect stream profile data on streams where fish population assessments are completed.

   Stream profile data was obtained on eight streams at a number of locations (see #1 above).

4. To summarize existing recreational data as may be available in the Missouri basin below Fort Peck Dam and in the Little Missouri basin and perform an economic analysis of recreational use.

A thorough review of available sources indicates a dearth of knowledge regarding recreational use in this area. Two studies were identified. The first of these was completed by the University of Montana and provides general information regarding visitor use and dollars expended. The second study was conducted by this Department. This study is designed to provide bioeconomic data on warmwater fishing in eastern Montana. This report is not yet completed. Additional work in this area must be conducted next year.

5. To summarize the impacts of the reservation on other existing and potential water users in the lower Missouri basin.

   This objective was not addressed this year.

6. To help coordinate work in the Little Missouri Basin so that data acceptable for inclusion in an instream flow reservation application is collected, analyzed and compiled in a suitable and timely manner.

   Through coordination with the Fisheries Cooperative Unit at Montana State University, two graduate students were retained to conduct necessary fish and stream profile data. The students have utilized electrofishing, seines and hoop nets to make fish population collections. Stream profile measurements have been made at several stations.

   This effort will continue into FY 1991.

7. To respond to requests for additional information or clarification of information contained in the reservation application for streams above Fort Peck Dam which was submitted on July 1, 1989.

   No requests for additional information have been received.

8. To participate in other instream flow and/or water-related activities in the Missouri basin as may be required.

   Participated on the drought management committee for the state water plan.

   Coordinated Department efforts with regard to the listing of the pallid sturgeon as an Endangered Species.

   Coordinated Department efforts with regard to the petition to list the paddlefish.

9. To assemble instream flow write-ups on individual stream reaches for the reservation application.

Stream write-ups were completed in draft form for approximately one-half of the 17 stream reaches being studied in the basins.

10. To determine water availability in the Missouri Basin below Fort Peck Dam and in the Little Missouri Basin.

    A cost share agreement was completed with the U.S. Geological Survey to conduct water availability analyses on 17 streams in the two basins. Work will be completed by January 1, 1991.

11. To implement a pilot water leasing program in the Missouri Basin and/or other river basins as appropriate.

    The pilot program was begun following signing of the water leasing bill by the Governor in May 1990. Activities in FY 90 included developing criteria to use in selecting streams for leasing; developing a list of candidate streams; meeting with landowners to determine interest in leasing; selecting two streams for leasing; meeting with other water users on those streams to provide them information on the program; seeking and obtaining approval to study the two streams from the Board of Natural Resources and Conservation (as required by law); and arranging for studies to determine hydrologic effects of leasing water and also to determine the market value of leasing agricultural water for instream use.

    The two selected streams are:

    (1) Swamp Creek, a tributary to the Big Hole River near Wisdom, Montana, where a 3.38 cfs water right would be leased to provide additional flows for the dwindling fluvial Arctic grayling population in the Big Hole basin, and

    (2) Big Creek, a tributary to the Yellowstone River near Emigrant, Montana, where "salvaged" water would be leased to benefit the Yellowstone cutthroat trout which spawn in the stream. The salvaged water would become available from conversion of six inefficient irrigation ditches to a gravity pipeline and sprinkler system.

SUMMARY

All of the objectives, except #4 and #5 were completed as scheduled in FY 90. Objectives #4 and #5 will be continued in FY 91. During this report period, the first phase of the Lower Missouri River Basin and Little Missouri River Basin reservation request was completed. This project will be completed in FY 91 when an application for reservation of waters in these basins will be submitted to the Montana Department of Natural Resources and Conservation.