IGF# 87137

MONTANA DEPARTMENT OF FISH AND GAME
ECOLOGICAL SERVICES DIVISION

JOB PERFORMANCE REPORT
RESEARCH PROJECT SEGMENT

State Montana Title Lower Missouri River Basin

Project Number FW-2-R-6 Investigations

Job Number 1-b Title Planning Inventory, Fisheries

Period Covered July 1, 1976 to June 30, 1977

ABSTRACT

Work begun on the Poplar River included population estimates for young-of-the-year game fish, tagging of game fish spawners, sampling of larval game fish, collection of streambottom macroinvertebrate samples and stream channel measurements. Very little data analysis has been done to date.

BACKGROUND

The Poplar River drains southern Saskatchewan and enters the U.S. north of Scobey, Montana. The river flows into the Missouri River near Poplar, Montana. The Saskatchewan Power Corporation has built a dam on the East Fork Poplar River and is presently constructing a coal-fired electrical generating complex near the dam. International negotiations have not yet finalized a water apportionment agreement between Canada and the U.S. for the Poplar River, but it is clear that the East Fork will be significantly dewatered and probably chemically degraded. Power development may also require water from the other forks, depending on the eventual degree of electrical power generating capacity developed in Canada.

PROCEDURES

Young-of-the-year game fish were sampled with seines. Spawners were captured by electrofishing and marked with Floy anchor tags. Drifting larval fish were captured with 1000 micron mesh nets set in riffles. Stream channel widths and depths were measured at transects spaced 100 feet apart on the East Fork Poplar River. Streambottom macroinvertebrates were sampled with a Water's Round sampler.

FINDINGS

Very little laboratory work and data analysis have been done to date as activities have been mostly in the field. Complete data will be given in a later report.

Young-of-the-year walleye were sampled at locations in the East and Middle Forks in September 1976. Sufficient numbers were captured in one section of the East Fork to make a population estimate. The estimate calculated was 314 young-of-the-year per stream mile.

Adult fish were sampled in April 1977 to tag spawners and find spawning areas. 829 game fish were captured at various locations in the river. The majority of these fish were walleye. Spawners were captured in most sections sampled, suggesting that most of the U.S. portion of the drainage is utilized for spawning.

Drifting larval fish were sampled at ten stations in late April, May and early June, 1977. Large numbers of larval fish were captured, but these have not yet been identified and counted.

A series of streambottom invertebrate samples were collected in late March, 1977. These have yet to be sorted. Stream channel widths and depths were measured in June, 1977 in the East Fork Poplar River. It is expected that depth in pools will decrease due to decreased peak flows.

RECOMMENDATIONS

The work previously described should continue. Additional work should include population estimates for adult game fish. Data are to be analyzed and a progress report will be submitted by September 30, 1978.

Waters referred to: Poplar River 6-16-2820-2

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