

MONTANA FISH AND GAME DEPARTMENT
FISHERIES DIVISION
HELENA, MONTANA

JOB COMPLETION REPORT
INVESTIGATIONS PROJECTS

STATE OF Montana

PROJECT NO. F-28-R-2

NAME Sun River Fisheries Study

JOB NO. I

TITLE Inventory of Waters of the Sun River
Drainage Upstream from Diversion Dam

PERIOD COVERED May 1, 1961 to June 30, 1962

ABSTRACT:

Seven streams were included in survey work accomplished during the summer of 1961. Stream flows, bottom samples and water quality data were collected. This information was added to that collected in 1960 from streams in the same general area. Cutthroat trout planted in 1960 in Rock Creek were not found during 1961. A second experimental plant of cutthroat trout was made in the South Fork of the Sun River upstream from the mouth of Hoadley Creek.

OBJECTIVES:

To determine the physical, chemical and biological characteristics of the waters of the Sun River drainage and obtain estimates of existing or potential fisherman use. This information will be used in forming a fish management plan for this area.

TECHNIQUES USED:

Seven streams of the Sun River drainage were surveyed during the summer of 1961. More work on this project was planned but due to personnel transfers it could not be accomplished. Fish populations were sampled by fishing with hook and line and by use of dynamite. Water samples were collected and analyzed at the State Board of Health Laboratory. Two square-foot bottom samples were collected at each station. Stream flow data were taken with the floating chip method. Field data and other information collected on this project have been transferred to permanent file cards.

FINDINGS:

The data obtained from these surveys is presented in Tables 1 and 2. Total dissolved solids was checked on seven streams in addition to those reported in Completion Report F-28-R-1.

An effort was made to find some of the 20,000 cutthroat trout which were planted in Rock Creek on September 9, 1960. None of these fish could be found.

Another plant of 20,748 cutthroat trout was made on August 29, 1961 in the South Fork of the Sun River above the mouth of Hoadley Creek where a natural barrier occurs. Prior to this plant there were no trout in this area.

Table 1. Data collected in survey of the Sun River Drainage, Teton and Lewis and Clark Counties, Montana, 1961.

Stream	Location	Date	Time	Temperature		Vol.	Total dissolved solids PPM
				Air	Water	Cu. Ft./Sec.	
So. Fork Sun Riv.	Mouth Hoadley	7/6/61	1100	70°F.	48°F.		105
Open Creek	4 mi. from mouth	7/11/61	1445	66	50	15	90
Wrong Creek	2 mi. above Rge. S.	7/10/61	1420	69	42	10	125
Lick Creek	Below forks	7/12/61	1140	60	46	24	110
Route Creek	Trail Crossing	7/13/61	0950	55	43		160
Rock Creek	At Ranger Sta.	7/9/61	1350	64	48		40
Rock Cr. Spring	At Ranger Sta.	7/9/61	1400	64	48		20

Table 2. Summary of bottom fauna sampling in the Sun River Drainage, 1961.

Stream	No. Stations	Average No. insects Per Sq. Ft.	Percent Composition				
			Eph.*	Ple.*	Tri.*	Col.*	Dip.*
Open Creek	2	98	63	23	7		7
Wrong Creek	2	40	72	23	5		
Lick Creek	2	45	67	20	13		

* Eph. - Ephemeroptera

Ple.- Plecoptera

Tri. - Tricoptera

Col. - Coleoptera

Dip. - Diptera

RECOMMENDATIONS:

Some data has been collected from most of the more important trout streams in the Upper Sun River drainage. Several high mountain lakes in the area should be surveyed and it is recommended that this be done. A follow-up survey should be made in the South Fork of the Sun River in order to evaluate the success of the cutthroat trout plants made in 1961.

DATA AND REPORTS:

The original data and reports are in the Fisheries Office of the Montana Fish and Game Department Headquarters at Great Falls, Montana.

Prepared by: Nels A. Thoreson

Approved by: George D. Holton

Date: December 30, 1962