MONTANA FISH AND GAME DEPARTMENT
FISHERIES DIVISION

JOB COMPLETION REPORT
RESEARCH PROJECT SEGMENT

State of Montana

Name Helicopter Mountain Lake Survey

Project No. F-32-R-7

Title Mountain Lake Survey - Upper and Lower Clark Fork Drainages

Job No. I-b

Period Covered: July 1, 1970 - June 30, 1971

ABSTRACT

A pontoon equipped helicopter and two men were employed to survey 59 remote mountain lakes in the upper and lower Clark Fork River Drainages in Western Montana. Experimental gill nets were used to measure fish populations. Eighteen of the 59 lakes surveyed contained fish. Physical features, fish population data and management recommendations are included in the report.

OBJECTIVES

The objective of the job is to conduct fisheries surveys on mountain lakes which are inaccessible by road and which lie outside wilderness or primitive area boundaries.

TECHNIQUES

A helicopter equipped with floats was used to transport fisheries survey equipment to the lakes. Survey data from each lake were entered on standard Montana Fish and Game Department lake survey forms. Sketch maps were constructed for each lake. Maps included information on shoal area, aquatic weed beds, tributary streams and approximate locations of experimental gill net sets. Lake depth information was obtained through the use of a Lowrance Fish Lo-K-tor and plotted on the sketch map. Standard 125-foot long experimental (graduated mesh) monofilament gill nets were set overnight in assessing fish populations. Net set information and catch were recorded on gill net catch forms. Data from the survey were used to determine management recommendations for the individual lakes.

Surveys were made on 32 lakes in the lower Clark Fork River drainage along the Montana-Idaho divide (Superior-St. Regis vicinity) and on 27 lakes in the upper Clark Fork River drainage in Rattlesnake, Gold and Grant Creek, sub-drainages near Missoula. Gill nets were set in all lakes except those considered (through aerial observation) to be unsuitable for management.

Information collected included gill net catch data, lake depths and temperature profile data. Other observations (size, cover, spawning potential, etc.) were made to complete information on lake survey forms.

FINDINGS

Of the 32 lakes surveyed in the lower Clark Fork drainage, 15 contained fish, 13 contained no fish, and 4 were determined by aerial inspection to be too shallow for management. In the upper Clark Fork drainage three of the 27 lakes surveyed contained fish, 8 contained no fish, and 16 were determined by aerial inspection to be unsuitable for management. A total of 12 half-days were required to survey the 59 lakes, since flying could be done only in early morning or late evening.

Upper Clark Fork Drainage

Pertinent data for lakes surveyed in the upper Clark Fork drainage are given in Table 1.

Lakes in the upper Clark Fork drainage which were observed only from the air and determined to be too shallow and unsuitable for management are given in Table 2.

All of the unnamed lakes which have been surveyed will be called "Rattlesnake Lakes," "Farmers Lakes," or "Grant Creek" Lakes and assigned numbers (i.e., Rattlesnake Lake #1). Hopefully these lakes will some day be properly named.

Surveys of all of the major lakes in the Rattlesnake, Gold and Grant Creek drainages have been completed as of the 1970 survey. Two exceptions (Farmers Lake #1 and Farmers Lake #3) were not gill-netted because of time limitations. Farmers #1 looks good for management and, from observations, does not presently contain fish. Farmers #3 appeared marginal for fish. No fish were observed at this lake either.

A summary of the present status of all major lakes in the Gold, Grant, and Rattlesnake Creek drainages is given in Table 3. A key map to the identity and location of the unnamed (numbered) lakes is shown in Figure 1.

Lower Clark Fork Drainage

Survey data obtained from lakes in the lower Clark Fork River drainage in 1970 are given in Table 4.

TABLE 1. Survey data collected on mountain lakes in the Upper Clark Fork River drainage in 1970

Lake (Code number)	Location T	R	S	Elevation (feet MSL)	Surface acres	Max. depth(ft)	Gill net hours	Number of fish caught	Species[1]	Size range (inches)	Ave. size (inches)
Boulder (04-6180)	15N	18W	11	6300	108.6	85	11.5	16	YCt	7.1-14.8	9.5
Bull (04-6225)	15N	18W	26	5900	9.2	40	10.5	none			
Farmers #1(06-7800)	14N	18W	3	6200	5.8	29	none (time limitation prevented setting net. No fish observed).				
Farmers #3(06-7800)	14N	18W	9(NW¼)	6500	8.7	20	none (time limitation prevented setting net. No fish observed).				
Fly (04-6596)	15N	18W	1	6200	11.0	34	11	none			
Glacier (06-7999)	15N	19W	24	6750	17.3	75	10	none			
Gold Creek (04-6598)	15N	18W	2,3	6650	12.1	60	34.5(2 sets)	none			
Grant Creek #1 (06-8146)	15N	19W	27(NE¼)	6700	6.8	17	24	none			
Little (06-8417)	15N	18W	19(NW¼)	6250	16.2	63	35.5	26	YCt	6.1-11.3	7.8
Rattlesnake #1(06-8980)	15N	18W	35(NE¼)	5550	2.9	4	10	none			
Rattlesnake #15(06-8980)	15N	18W	7(NE¼)	7000	5.8	14	23	none			
Rattlesnake #17(06-8980)	15N	18W	6(SE¼)	7000	6.4	26	24	none			
Rattlesnake #22(06-8980)	16N	18W	31(SE¼)	7600	11.0	85	24	none			
Sanders (06-9139)	15N	19W	13	6700	42.8	190	34	none			
Worden (06-9480)	15N	18W	30(SW¼)	6500	10.4	19	9.5	16	WSCt[2]	5.0-6.4	6.0

[1] Abbreviations: YCt = Yellowstone cutthroat trout, WSCt = Westslope cutthroat trout

[2] Planted on 10-6-69 from WSCt stock at Jocko River Trout Hatchery

TABLE 2. Mountain lakes observed from helicopter and considered marginal or unsuitable for fish management in upper Clark Fork drainage

Lake	Location T	R	S	Surface acres
Grant Creek #2	15N	19W	36	1.0
Grant Creek #3	15N	19W	24 ($SE\frac{1}{4}$)	1.0
Farmers #4	14N	18W	5 ($SE\frac{1}{4}$)	4.3
Rattlesnake #8	15N	18W	30 ($NE\frac{1}{4}$)	0.2
Rattlesnake #12	15N	19W	24 ($NE\frac{1}{4}$)	0.5
Rattlesnake #13	15N	19W	13 ($SE\frac{1}{4}$)	0.3
Rattlesnake #14	15N	19W	12 ($SE\frac{1}{4}$)	3.9
Rattlesnake #16	15N	18W	7 (Center of $N\frac{1}{4}$)	3.5
Rattlesnake #18	15N	18W	6 ($SE\frac{1}{4}$)	1.4
Rattlesnake #19	15N	18W	6 ($SE\frac{1}{4}$)	0.4
Rattlesnake #20	15N	18W	6 ($SW\frac{1}{4}$ of $SW\frac{1}{4}$)	2.2
Rattlesnake #21	15N	18W	5 ($NW\frac{1}{4}$)	4.0
Rattlesnake #23	16N	18W	32 ($NW\frac{1}{4}$)	1.4

TABLE 3. Present status of mountain lakes in Gold, Grant, and Rattlesnake Creek drainages, Missoula County, Montana

Lake name	Location T R S	Date of survey	Fish present?	Species 1/	Size - from net catch (inches) Range	Average
Big	15N 18W 19	1963	Yes	Rb	3.3-13.0	10.0
Boulder	15N 18W 11	1970	Yes	YCt	7.1-14.8	9.5
Bull	15N 18W 26	1970	No	Suitable for fish		
Carter	15N 18W 30	1963	Yes	Rb	3.5-12.7	9.4
Farmers #1	14N 18W 3	1970	No	Suitable		
Farmers #2	14N 18W 3	1963	No	Too shallow		
Farmers #3	14N 18W 9	1970	No	Marginal		
Farmers #4	14N 18W 5	1970	No	Marginal		
Farmers #5	14N 18W 5	1963	Yes	Rb	11.4-15.6	13.6
Farmers #6	14,15N 18W 5,32	1963	Yes	WSCt	2"-stocked in 1969	
Fly	15N 18W 1	1970	No	Suitable		
Glacier	15N 19W 24	1970	No	Suitable		
Gold Creek	15N 18W 2,3	1970	No	Suitable for fish		
Grant Cr. #1	15N 19W 27	1970	No	May be suitable for fish		
Grant Cr. #2	15N 19W 36	1970	No	Marginal		
Grant Cr. #3	15N 19W 24	1970	No	Marginal		
Little	15N 18W 19	1970	Yes	YCt	6.1-11.3	7.8
Lower Twin	15N 18W 31	1963	No	Suitable		
McKinley	15N 18W 31	1963	Yes	Rb	8.1-11.8	10.5
Rattlesnake #1	15N 18W 35	1970	No	Marginal		
Rattlesnake #2	15N 18W 30	1963	No	Too small and shallow		

TABLE 3. (cont'd)

Lake name	Location T	R	S	Date of survey	Fish present?	Species 1/	Size - from net catch (inches) Range	Average
Rattlesnake #3	15N	18W	32	1963	Yes	WSCt	1" - stocked in 1968 2" - stocked in 1969	
Rattlesnake #4	14N	18W	5	1963	No	Too small and shallow		
Rattlesnake #5	15N	18W	31	1963	No	Too small and shallow		
Rattlesnake #6	15N	18W	30	1963	No	Too small and shallow		
Rattlesnake #7	15N	18W	30	1963	No	Too small and shallow		
Rattlesnake #8	15N	18W	30	1970	No	Too shallow		
Rattlesnake #9	15N	18W	19	1963	No	Too small and shallow		
Rattlesnake #10	15N	18W	19	1963	No	Too small and shallow		
Rattlesnake #11	15N	18W	19	1963	No	Too small and shallow		
Rattlesnake #12	15N	19W	24	1970	No	Too shallow		
Rattlesnake #13	15N	19W	13	1970	No	Too small and shallow		
Rattlesnake #14	15N	19W	12	1970	No	Too shallow		
Rattlesnake #15	15N	18W	7	1970	No	Suitable for fish		
Rattlesnake #16	15N	18W	7	1970	No	Too shallow		
Rattlesnake #17	15N	18W	6	1970	No	Suitable		
Rattlesnake #18	15N	18W	6, 7	1970	No	Too small and shallow		
Rattlesnake #19	15N	18W	6	1970	No	Too shallow		
Rattlesnake #20	15N	18W	6	1970	No	Marginal		
Rattlesnake #21	15N	18W	5	1970	No	Too shallow		
Rattlesnake #22	16N	18W	31	1970	No	Suitable for fish		
Rattlesnake #23	16N	18W	32	1970	No	Too shallow		
Roosevelt	15N	18W	31	1963	No	Too small and shallow		
Sanders	15N	19W	13	1970	No	Suitable for fish		
Sheridan	15N	18W	19,20	1963	Yes	Rb	3.3-11.5	9.3
Upper Twin	15N	18W	31	1963	No	Too shallow		
Worden	15N	18W	30	1970	Yes	WSCt	2"-stocked in 1969	

1/ Rb = rainbow trout, YCt = Yellowstone cutthroat trout, WSCt = Westslope cutthroat trout

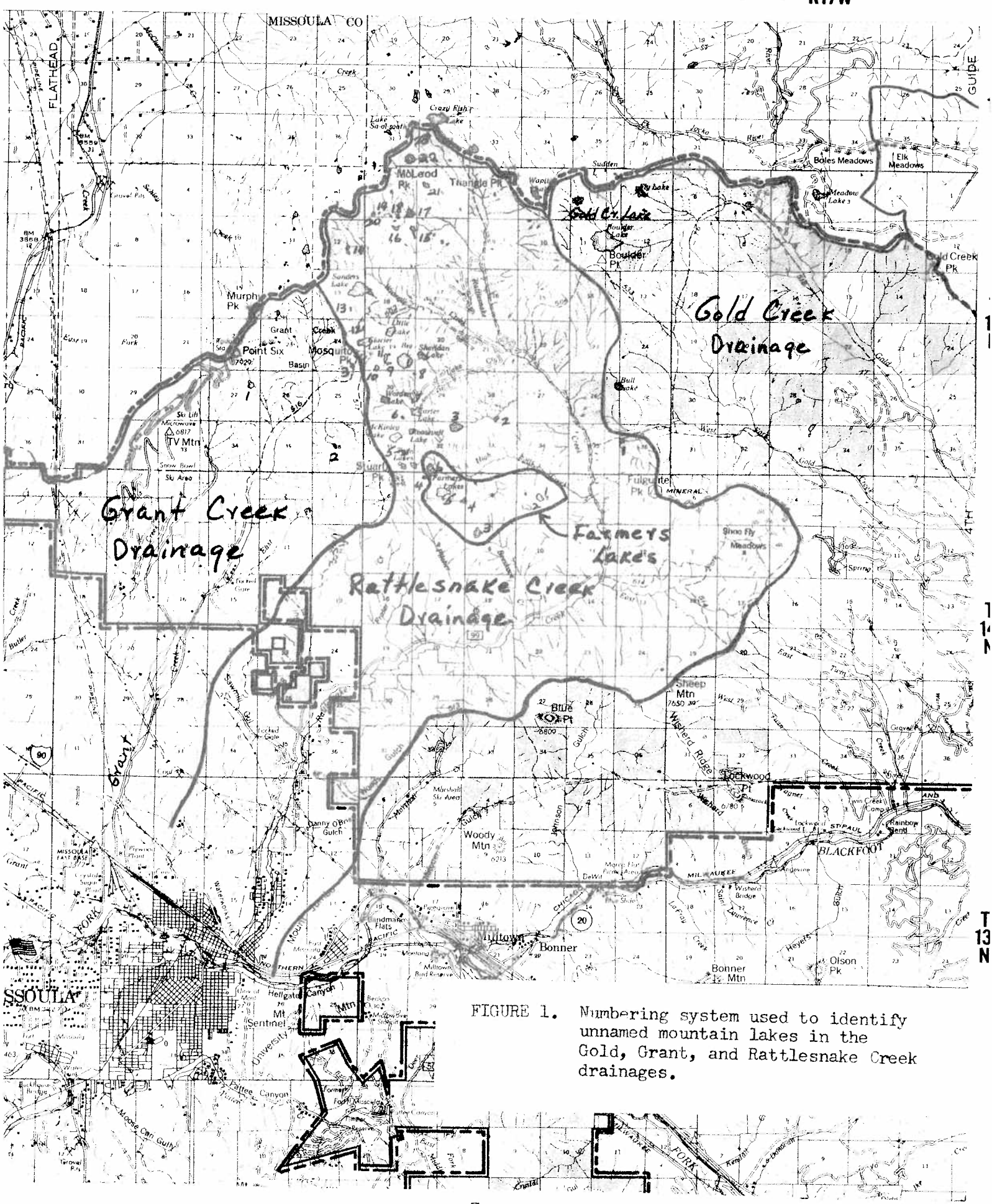

FIGURE 1. Numbering system used to identify unnamed mountain lakes in the Gold, Grant, and Rattlesnake Creek drainages.

TABLE 4. Survey data collected on mountain lakes in the lower Clark Fork River drainage in 1970

Lake (Code number)	Location T R S	Elevation (feet MSL)	Surface acres	Max. depth (ft)	Gill net hours	Number of fish caught	Species[1/]	Size range (inches)	Ave. size (inches)
Clear (05-8557)	17N 30W 3 18N 30W 34	5700	9.0	40	23.5	33	Eb	6.5-9.6	7.5
Cliff (05-8576)	16N 28W 18,19	5800	45	175	22	5	Ct	7.0-16.1	11.7
Copper (05-8607)	19N 32W 8	4900	3.8	7	24	19	Ct	6.8-11.4	8.8
Crater (05-8624)	14N 26W 33,34	5500	15.8	25	24.5	none			
Crystal (04-8656)	18N 30W 28	5400	14.8	120	24.5	27	Eb	4.6-8.7	7.2
Deep Creek (05-8688)	15N 27W 22	6000	4.8	15	22	1 none	Eb	21.3	21.3(4.54 lbs)
Gold (05-8864)	18N 30W 23	5850	1.6	11	24	10	Rb	7.1-13.9	11.5
Hazel (05-8912)	18N 30W 36	5300	8.0	24	23.5	none			
Heart (05-8927)	18N 30W 29,30 31,32	5500	6.5	60	23.5	10	Rb	5.8-15.2	11.3
Hidden (05-8960)	16N 28W 20	5900	0.9	15	24.5	none			
Hoodoo (05-8992)	14N 27W 15	5650	10.5	35	25	55	Eb	6.3-9.5	8.0
Hub (05-9024)	18N 30W 35	5600	5.2	18	22	1	WSCt	12.2	12.2
Mary (05-9184)	18N 30W 35	6250	3.4	6	22	none			
Mud (05-9285)	12N 26W 14,15	6100	5.0	5.5	20	none			
N.(upper) Cedar Log (05-8544)	12N 26W 14	5600	13.8	6	20	34	YCt	5.9-12.2	9.1
Rudie (05-9440)	18N 30W 28	±5600	7.2	12	24	51	Eb	6.4-8.8	7.3

TABLE 4. (Cont'd)

Lake(Code number)	Location T R S	Elevation (feet MSL)	Surface acres	Max. depth(ft)	Gill net hours	Number of fish caught	Species[1]	Size range (inches)	Ave.size (inches)
S.(lower)Cedar Log (04-8544)	12N 26W 24	5900	39.8	140	20	24	YCt	7.4-14.8	9.9
Square (05-9568)	17N 30W 1	5550	10.2	60	23.5	None			
Straight (05-9600)	13N 26W 30	6250	9.2	40	21	None			
St. Regis(Big) (05-9504)	19N 33W 12	5500	7.2	44	24	27	Eb	6.4-10.7	8.5
Surveyor (05-9616)	12N 25W 4,5	5850	18.0	50	20	16	Rb	6.1-14.3	11.4
Trail (05-9680)	14N 27W 5	5600	11.5	19	25	24	Eb	5.9-12.5	8.4
Upper Oregon (05-9344)	15N 28W 23	6450	11.2	40	22.5	31	Eb	6.2-10.3	8.6
Windfall (05-9820)	14N 26W 6	6500	4.0	17	23.5	None			
Wilson (05-9815)	16N 28W 11	5900	2.9	12	22	None			
Unnamed (head of Ward Cr.)(05-9752)	18N 30W 35(NE¼)	6200	±2	25	23	None			
Unnamed (near Oregon Peak) (05-9751)	15N 28W 11(SE¼)	Fish were observed surfacing on lake when passed over in helicopter.							
Unnamed (above Hazel Lake) (05-9750)	17N 30W 2	6200	±3	11	23	None			

[1] Eb = brook trout, Ct = cutthroat trout of undetermined origin, Rb = rainbow trout, WSCt = Westslope cutthroat trout and YCt = Yellowstone cutthroat trout

Lakes which were observed only from the air and considered unsuitable for management are shown in Table 5.

TABLE 5. Mountain lakes observed from helicopter and considered unsuitable for fish management in lower Clark Fork drainage

Lake	Location	Surface acres
St. Regis (Little)	19N 33W 12	±2 (estimated)
Unnamed (below Gold Peak)	18N 30W 26	±1 (estimated)
Unnamed (below Gold Peak)	18N 30W 25	±2 (estimated)
Unnamed (near St. Regis lakes)	19N 32W 6,7	5.5

A summary of the present status of all major mountain lakes in the lower Clark Fork River drainage in Mineral County is given in Table 6. Information was obtained from surveys conducted by Fish and Game Department personnel from 1958-1970 and from stocking records. Some of the barren lakes found in 1960 have recently been stocked and are shown as such in the table. Those found barren in 1970 and scheduled for stocking are also indicated.

Hazel and Square Lakes were found to be barren in 1970. However, they had been stocked in 1953 with cutthroat trout. These lakes apparently are not self-sustaining, probably because they lack suitable spawning areas. Suitable barren lakes lacking reproduction areas must be stocked at regular intervals to maintain suitable populations.

The two fish hatcheries which were primarily responsible for stocking, the lakes listed in Table 6, are the Jocko River Trout Hatchery at Arlee, and the now-abandoned Hamilton Fish Hatchery. Some of the lakes are shown for proposed plants on the 5-year planting programs of the Hamilton Hatchery from 1942 to 1951. However, the records are unclear as to whether the lakes were actually stocked or not during these periods. Past stocking information was therefore obtained from the complete record of the Arlee station only, and this record is shown in Table 7.

TABLE 6. Present status of mountain lakes in the lower Clark Fork River drainage, Mineral County, Montana

Lake name	Location T R S	Date of survey	Fish present	Species[1/]	Size from net catch (inches) Range	Average
Clear	17,18N 30W 3,34	1970	Yes	Eb	6.5-9.6	7.5
Cliff	16N 28W 18,19	1970	Yes	Ct	7.0-16.1	11.7
Copper (Silvex)	19N 32W 8	1955	Yes	Ct	8.0-13.0	9.7
		1970	Yes	Ct	6.8-11.4	8.8
Crater	14N 26W 33,34	1970	No	Scheduled for WSCt stocking in 1971		
Crystal	18N 30W 28	1970	Yes	Eb	(one Eb 21.3" & 4.54#) 4.5-8.7	7.2
Dalton	14N 27W 25	1960	Yes		Stocked 1969 w/2" WSCt)	
Deep Creek	15N 27W 22	1970	No	Marginal		
Diamond	16N 28W 17,18	1961	Yes	Eb	6.5-10.7	7.6
		1968	Yes	Eb	7.1-11.1	8.8
				Rb	8.7-10.7	9.7
French	14N 26W 18	1960	Yes	Rb	7.2-14.9	10.0
Gold	18N 30W 23	1970	Yes	Rb	7.1-13.9	11.5
Hazel	18N 30W 36	1970	No	Schedule for 2" WSCt stocking in 1971		
Heart	18N 30W 29,30 31,32	1970	Yes	Rb	5.8-15.2	11.3
Heart	14N 27W 23,26	1960	Yes	Eb	7.1-12.4	10.0
					15.6-16.1(3)	15.9
Hidden	16N 28W 20	1970	No	Marginal		
Hoodoo	14N 27W 15	1970	Yes	Eb	6.3-9.5	8.0
Hub	18N 30W 35	1970	Yes	WSCt	12.2(1)	12.2
Left Bonanza	15N 28W 3	1960	Yes	Eb	7.0-9.2	7.9
Lenore	17N 29W 9	1970	Could not land helicopter. Reportedly contains fish.			

TABLE 6. (Cont'd)

Lake name	Location T	R	S	Date of survey	Fish present	Species[1]	Size from net catch (inches) Range	Average
Lost	16N	28W	34	1960	Yes	Eb	6.3-8.9	7.5
Lower Oregon	15N	28W	13	1960	Yes	Eb	5.9-9.0	7.5
Lower Siamese	13N	26W	29	1960	Yes	Rb	9.4-15.2	12.1
						Ct	7.4-13.6	10.3
Lower Trio	14N	27W	31	1960	Yes	Rb	9.5-18.4	12.9
						Ct	12.1-14.1	13.1
Mary	18N	30W	35	1970	No	Marginal		
Middle Oregon	15N	28W	13,14, 24	1960	Yes	Eb	7.2-10.6	8.8
Middle Trio	14N	26,27W	31,36	1960	No	Too shallow		
Missoula[2]	15N	28W	15	1960	Yes	Eb	7.2-10.1	8.6
				1965	Yes	Rb	6.1-12.8	10.6
				1968	Yes	Rb	8.9-14.1	10.5
Moore	16N	29W	3	1958	Yes	Eb	6.1-12.5	8.4
						Rb	12.6(1)	12.6
				1968	Yes	Eb	7.9-11.6	9.5
Mud	12N	26W	14,15	1970	No	Too shallow		
N.Cedar Log	12N	26W	14	1970	Yes	YCt	5.9-12.2	9.1
Pearl	14N	27W	25	1960	Yes	Stocked in 1969 with 2" WSCt		
Right Bonanza	15N	28W	3,4	1960	Yes	Eb	7.0-9.1	8.1
Rudie	18N	30W	28	1970	Yes	Eb	6.4-8.8	7.3
Silver	19N	31W	32	1955	Yes	Eb	6.5-10.2	8.5
				1961	Yes	Eb	5.4-9.1	8.0
				1968	Yes	Eb	8.0-10.1	9.0
						LL	10.0-19.2(2)	-

TABLE 6 (Cont'd)

Lake name	Location T	R	S	Date of survey	Fish present	Species[1]	Size from net catch(inches) Range	Average
Silvex (Sildex, Amazon-Dixie)	See Copper Lake							
S. Cedar Log	12N	26W	24	1970	Yes	YCt	7.4-14.8	9.9
Square	17N	30W	1	1970	No	Scheduled for WSCt stocking in 1971		
Straight	13N	26W	30	1970	No	Suitable for fish		
St. Regis(Big)	19N	33W	12	1970	Yes	Eb	6.4-10.7	8.5
St. Regis(Little)	19N	33W	12	1970	No	Too small and shallow		
Surveyor	12N	25W	4,5	1970	Yes	Rb	6.1-14.3	11.4
Trail	14N	27W	5	1970	Yes	Eb	5.9-12.5	8.4
Unnamed	18N	30W	35($NE\frac{1}{4}$)	1970	No	Suitable for fish		
Unnamed	15N	28W	11($SE\frac{1}{4}$)	1970	Yes	Unknown	Fish activity observed only from air	
Unnamed	18N	30W	26	1970	No	Too shallow		
Unnamed	19N	32W	6,7	1970	No	Too shallow		
Unnamed	18N	30W	25	1970	No	Too shallow - swamp		
Unnamed	17N	30W	2	1970	No	Too shallow		
Upper Oregon	15N	28W	23	1970	Yes	Eb	6.2-10.3	8.6
Upper Siamese	13N	26W	29	1960	Yes	Stocked in 1969 with 2" WSCt		
Upper Trio	14N	27W	36	1960	Yes	Eb	6.5-10.5	8.6
Wilson	16N	28W	11	1970	No	Marginal		
Windfall	14N	26W	6	1970	No	Marginal		

[1] Rb=rainbow, Eb=brook trout, Ct=cutthroat trout of undetermined origin, WSCt=Westslope cutthroat trout, YCt=Yellowstone cutthroat trout, LL=brown trout, FSu=longnose sucker

[2] Chemically treated in 1962 to remove Eb. Restocked with Rb.

TABLE 7. Stocking record (1947-1970) from Jocko River Trout Hatchery for mountain lakes in lower Clark Fork River drainage, Mineral County, Montana

Lake	Year	Species	Number	Size
Cliff	1962	Rb	1,408	3"
	1960	Rb	1,020	3"
	1949	Rb	5,184	2"
Crystal	Twice (1953	Rb	4,000	2"
	(1953	Rb	3,000	2"
	1949	Rb	10,000	2"
Dalton	1969	WSCt	2,100	2"
	1949	Rb	10,080	2½"
Diamond	1966	Rb	1,076	3"
	1965	Rb	1,000	3"
	1964	Rb	2,030	4"
	1962	Rb	1,276	4"
French	1953	Rb	5,000	2"
	1950	Rb	10,400	1½"
	Twice (1948	Rb	12,600	Fry
	(1948		12,600	
Hazel	1953	Ct	4,000	1"
Hub	1953	Ct	4,000	1"
Lenore	1953	Rb	5,000	2"
	1950	Rb	3,120	1½"
	1949	Rb	2,000	3"
Lost	1966	Rb	2,000	3"
	1965	Rb	2,000	4"
Missoula	1966	Rb	1,200	3"
	1965	Rb	1,200	4"
	1964	Rb	2,030	4"
Moore	1953	Rb	5,000	2"
	1950	Rb	6,082	1½"
	1949	Rb	3,040	3"
Pearl	1969	WSCt	4,900	2"
Silver	1964	Rb	1,080	Legal
	1963	LL	1,500	5"
	1962	Rb	656	Legal
	1949	Rb	8,000	2"
Square	1953	Ct	4,000	1"

TABLE 7. (Cont'd)

Lake	Year	Species	Number	Size
Surveyor	1950	Rb	10,220	1½"
	1949	Rb	10,000	2"
	1948	Rb	12,200	fry
Trail (Cr)	1964	Rb	2,030	4"
Trio	1953	Rb	4,000	2"
Upper Siamese	1969	WSCt	7,000	2"

RECOMMENDATIONS

Upper Clark Fork Drainage

Lake	Recommendation
Boulder	Has suitable population. No stocking necessary.
Bull	No stocking at present time.
Farmers #1	Should be gill netted to complete survey.
Farmer #3	Should be gill netted to complete survey.
Fly	No stocking at present time.
Glacier	Stock with 3,400 2" WSCt.
Gold Creek	No stocking at present time.
Grant Creek #1	Marginal lake - no stocking.
Little	Has adequate population. No stocking necessary.
Rattlesnake #1	Marginal lake, no stocking.
Rattlesnake #15	Marginal lake - no stocking.
Rattlesnake #17	Stock with 1,200 2" WSCt.
Rattlesnake #22	Stock with 2,200 2" WSCt.
Sanders	Stock with 8,600 2" WSCt.

Lake	Recommendation

Worden - Stocked in October 1969 with WSCt.

Lower Clark Fork Drainage

Lake	Recommendation

Clear - Abundant, self-sustaining Eb population. No stocking needed.

Cliff - Adequate Ct population. No stocking needed.

Copper - Suitable self-sustaining Ct population. No stocking needed.

Crater - Stock with 3200 2" WSCt.

Crystal - Abundant, self-sustaining Eb population. No stocking needed.

Deep Creek - Marginal lake. No stocking.

Gold - Adequate Rb population. No stocking needed.

Hazel - Stock with 1600 2" WSCt.

Heart - Adequate Rb population. No stocking needed.

Hidden - Marginal lake. No stocking at present time.

Hoodoo - Abundant, self-sustaining Eb population. No stocking needed.

Hub - Marginal lake and has a few Ct. No stocking at present.

Mary - Unsuitable lake. No stocking.

Mud - Unsuitable lake. No stocking.

N. Cedar Log - Adequate self-sustaining YCt population. No stocking.

Rudie - Abundant, self-sustaining Eb population. No stocking.

S. Cedar Log - Adequate self-sustaining YCt population. No stocking.

Square - Stock with 2,000 WSCt.

Straight - Stock with 1,800 WSCt.

St. Regis - Abundant self-sustaining Eb population. No stocking.

Lake	Recommendation
Surveyor	Adequate self-sustaining Rb population. No stocking.
Trail	Abundant, self-sustaining Eb population. No stocking.
Upper Oregon	Adequate self-sustaining Eb population. No stocking.
Windfall	Marginal lake. No stocking.
Wilson	Marginal lake. No stocking.
Unnamed (head of Ward Creek)	No stocking at present time.
Unnamed (near Oregon Peak)	Needs surveying, has fish.
Unnamed (above Hazel Lake)	Marginal lake. No stocking.

Prepared by Liter Spence

Date March 9, 1971

Waters referred to:

Lakes listed in Tables 1 and 4.