ARC-83-12

WISE RIVER DISTRICT

MOUNTAIN LAKE SURVEY, 1982

Prepared for

U.S. Dept. of Agriculture
Beaverhead National Forest
Dillon, Montana 59725

by

Steve L. McMullin, Fisheries Biologist
Montana Dept. of Fish, Wildlife and Parks
Dillon, MT 59725

January, 1983

INTRODUCTION

The Wise River district contains 67 mountain lakes, 26 percent of the total for the Beaverhead National Forest. At least 42 of the lakes support fish populations. Angling in mountain lakes is an important part of the recreational opportunities available in the Wise River district.

Montana Department of Fish, Wildlife and Parks (MDFWP) records indicate some lakes in the district were planted with trout as early as 1933. Rainbow, cutthroat and brook trout as well as grayling have been introduced at various times. All species have established naturally reproducing populations in some lakes, while other lakes require periodic stocking due to a lack of spawning habitat.

Since 1976, MDFWP has used McBride strain Yellowstone cutthroat trout to stock mountain lakes east of the Continental Divide. McBride strain cutthroat originate from McBride Lake in Yellowstone National Park, and are well adapted to an alpine lake environment. They grow rapidly and spawn successfully in alpine lakes where sufficient spawning habitat (usually a permanent inlet stream) exists. Studies of alpine lakes in the Beartooth Plateau suggest McBride strain cutthroat efficiently utilize the food base of alpine lakes, which usually consists of zooplankton and chironomidae.

Fish populations in a number of lakes in the Wise River district were sampled by MDFWP personnel in 1967. A few lakes were sampled in 1972. None of the lakes in the district have been sampled since management emphasis was shifted to McBride strain Yellowstone cutthroat trout in 1976.

A survey of 13 alpine lakes in the Wise River district was done in summer, 1982. The cooperative project involved the Beaverhead National Forest and MDFWP. The project was designed to evaluate the success of plants of McBride strain cutthroat trout in several lakes in 1976 and 1979 and develop management recommendations for the lakes sampled. It is especially important to develop management strategies for these lakes now, since a portion of the East Pioneer Mountains has been recommended for inclusion in the wilderness system.

STUDY AREA

The Wise River district is located in southwest Montana, encompassing most of the East and West Pioneer Mountains. The entire 462,260 acres is drained by the Big Hole River. Most of the lakes sampled in 1982 were located in the Wise River drainage, the largest tributary of the Big Hole (Figure 1). Land uses within the district include timber harvest, grazing, mineral exploration, mining and several diverse forms of recreation.

Naturally reproducing and artificially supplemented populations of fish include the following species: cutthroat trout, rainbow trout, rainbow x cutthroat hybrids, brook trout, arctic grayling and mountain suckers.

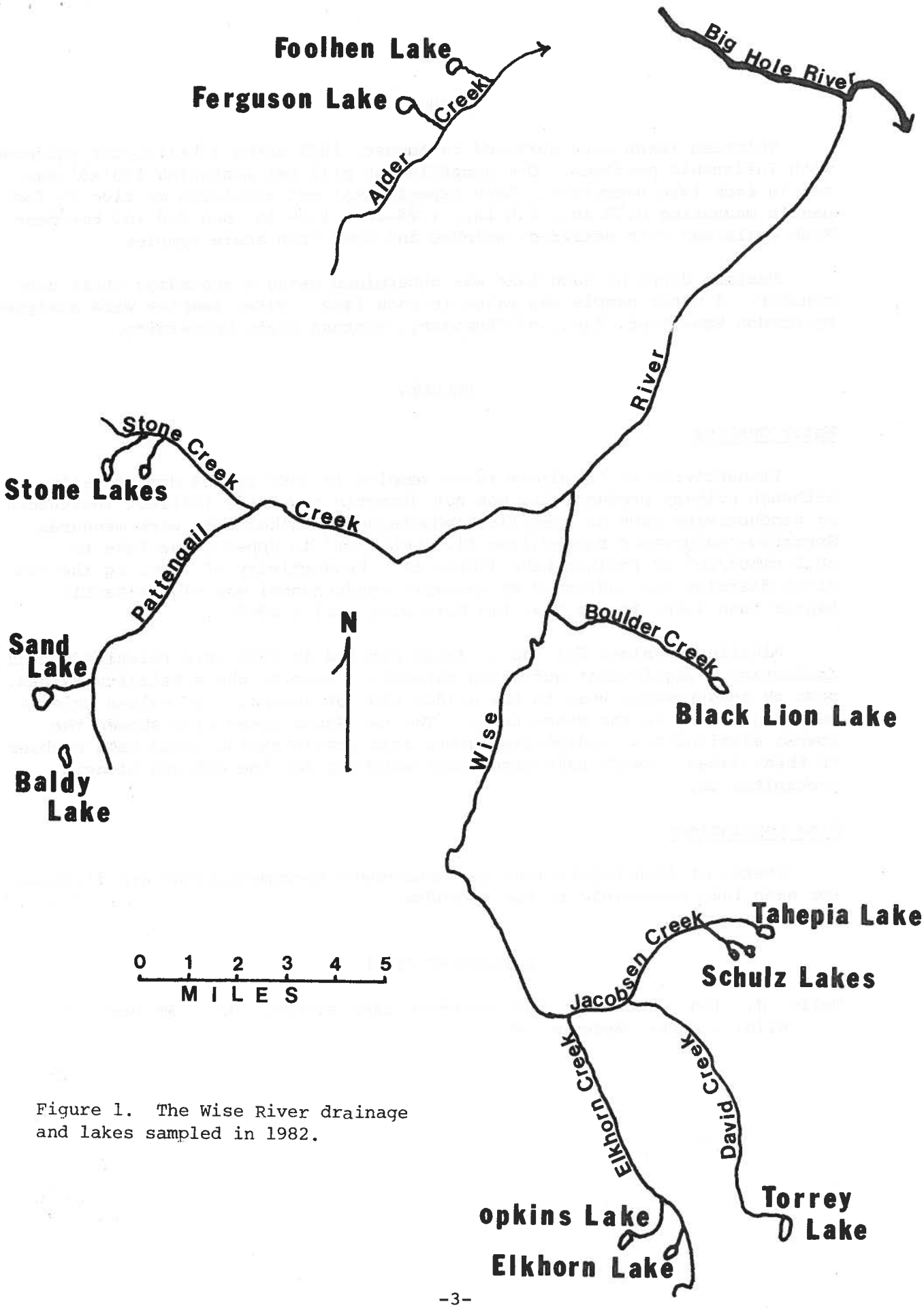


Figure 1. The Wise River drainage and lakes sampled in 1982.

METHODS

Thirteen lakes were surveyed in August, 1982 using a helicopter equipped with inflatable pontoons. One monofilament gill net measuring 125'x5' was set in each lake overnight. Each experimental net consisted of five 25 foot panels measuring 0.75 in., 1.0 in., 1.25 in., 1.50 in. and 2.0 in. bar mesh. Fish collected were measured, weighed and aged from scale samples.

Maximum depth of each lake was determined using a recording chart echo sounder. A water sample was taken in each lake. Water samples were analyzed by Gordon Pagenkopf, Dept. of Chemistry, Montana State University.

RESULTS

Water Quality

Productivity of 13 alpine lakes sampled in 1982 varied dramatically. Although primary productivity was not directly measured, indirect indicators of productivity such as specific conductance and alkalinity were measured. Specific conductance ranged from 11.3 $\mu mhos/cm^2$ in Upper Stone Lake to 88.2 $\mu mhos/cm^2$ in Foolhen Lake (Table 1). Productivity of lakes in the Wise River district (as indicated by specific conductance) was significantly higher than lakes in the West Big Hole area (Wells 1982).

Alkalinity values for the 13 lakes sampled in 1982 were relatively high, indicating a significant buffering capacity. Despite the alkalinity values, most pH measurements were to the acidic side of neutral. pH values below 6 were registered in the Stone Lakes. The two Stone Lakes also showed the lowest alkalinities, indicating future acid precipitation could be a problem in these lakes. Baldy Lake also bears watching for the effects of acid precipitation.

Fish Populations

Status of fish populations and management recommendations are discussed for each lake separately in the appendix.

LITERATURE CITED

Wells, J. 1982. West Big Hole mountain lake survey, 1981. MT Dept. Fish, Wildl., Parks, Bozeman, MT

Table 1. Selected water quality parameters for Pioneer Mountain lakes sampled in 1982.

Lake	Specific Conductance ($\mu mhos/cm^2$)	Total Alkalinity (mg/l)	pH	Major Ions						
				Mg	Ca	Na (mg/l)	K	NO_3	Cl	SO_4
Baldy 02-7225	13.4	73.0	6.04	.15	.70	.35	.10	1.12	.89	2.16
Black Lion 02-7350	29.4	238.0	6.45	.75	2.90	.30	.20	.43	.29	1.25
Elkhorn 02-7760	14.0	98.2	6.14	.14	.85	.38	.10	.23	.54	1.27
Ferguson 02-7800	65.4	497.0	6.90	1.76	6.80	1.50	.32	.49	1.54	8.88
Foolhen 02-7875	88.2	675.0	7.28	2.16	10.70	3.80	.43	6.05	<.01	0.86
Hopkins 02-8175	17.5	137.0	6.10	.12	1.00	.49	.13	<.05	1.08	1.21
Sand 02-8950	14.8	90.0	6.22	.19	.82	.63	.10	<.05	.18	1.19
Schulz (Lower) 02-9000	23.2	196.0	6.75	.42	2.00	.37	.18	.59	.66	1.16
Schulz (Upper) 02-9001	40.1	423.0	7.13	.82	4.10	.65	.20	<.05	.02	.58
Stone (Lower) 02-9200	12.7	70.4	5.69	.16	.27	.40	.15	<.05	.01	.13
Stone (Upper) 02-9201	11.3	62.6	5.90	.22	.37	.51	.16	.54	1.28	2.04
Tahepia 02-9250	20.3	155.0	6.47	.28	1.50	.47	.17	.49	1.04	1.71
Torrey 02-9350	19.3	146.0	6.41	.34	1.90	.20	.10	.67	.50	1.69

BALDY LAKE

Planting History

Year	Species	Number	Size
1933	Ct	32,000	fry
1941	Rb	11,880	fry
1944	Rb	5,150	fry

Description and Fish Population

Baldy Lake is a large (33 acres), deep (85 ft.) lake located near the head of the Pattengail Creek drainage. It is one of the least productive lakes sampled in 1982 (HCO_3 alkalinity = 73 mg/l). The inlet is precipitous with spawning gravel extremely limited. The outlet is a seep.

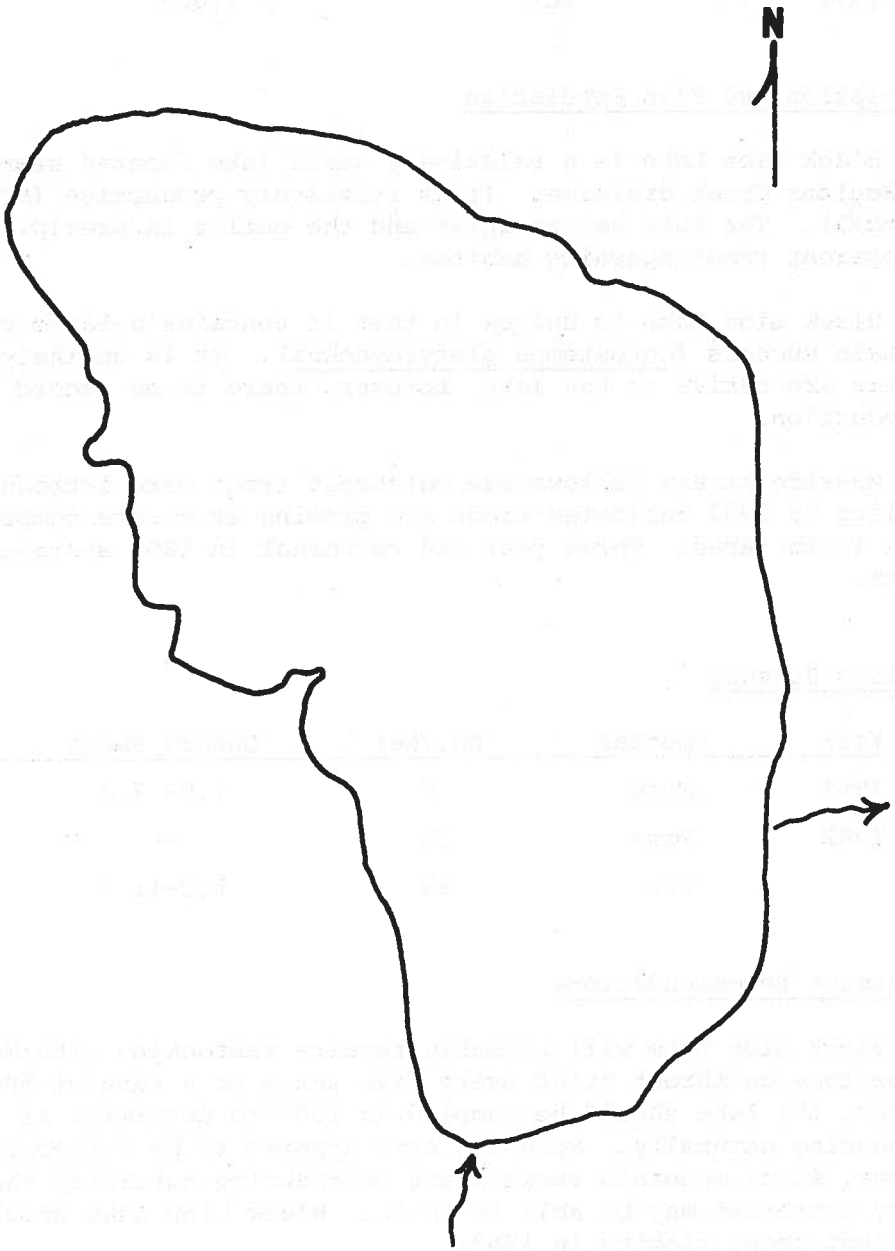
Sampling in 1967 and 1982 indicates a naturally reproducing population of rainbow trout exists in Baldy Lake. Apparently the limited amount of spawning area has prevented the trout population from reaching excessive densities.

Sampling History

Year	Species	No./Net	Length Range	Condition
1967	Rb	8	11.2-15.8	38.4
1982	Rb	17	6.4-15.0	44.3

Management Recommendations

Baldy Lake should be managed as a wild rainbow trout fishery. The trout population and water quality should be monitored periodically.



BALDY LAKE

Location:	T3S R14W S1
Elevation:	8555'
Area:	33 acres
Max. Depth:	85'
Drainage:	Pattengail Creek

Rainbow Trout

BLACK LION LAKE

Planting History

Year	Species	Number	Size
1979	Yct	1,000	2"

Description and Fish Population

Black Lion Lake is a relatively small lake located near the head of the Boulder Creek drainage. It is relatively productive (HCO_3 alkalinity = 238 mg/l). The lake has no inlet and the outlet is precipitous. There is no apparent trout spawning habitat.

Black Lion Lake is unique in that it contains a large population of mountain suckers (Catostomus platyrhynchus). It is unlikely that mountain suckers are native to the lake, however, there is no record of their introduction.

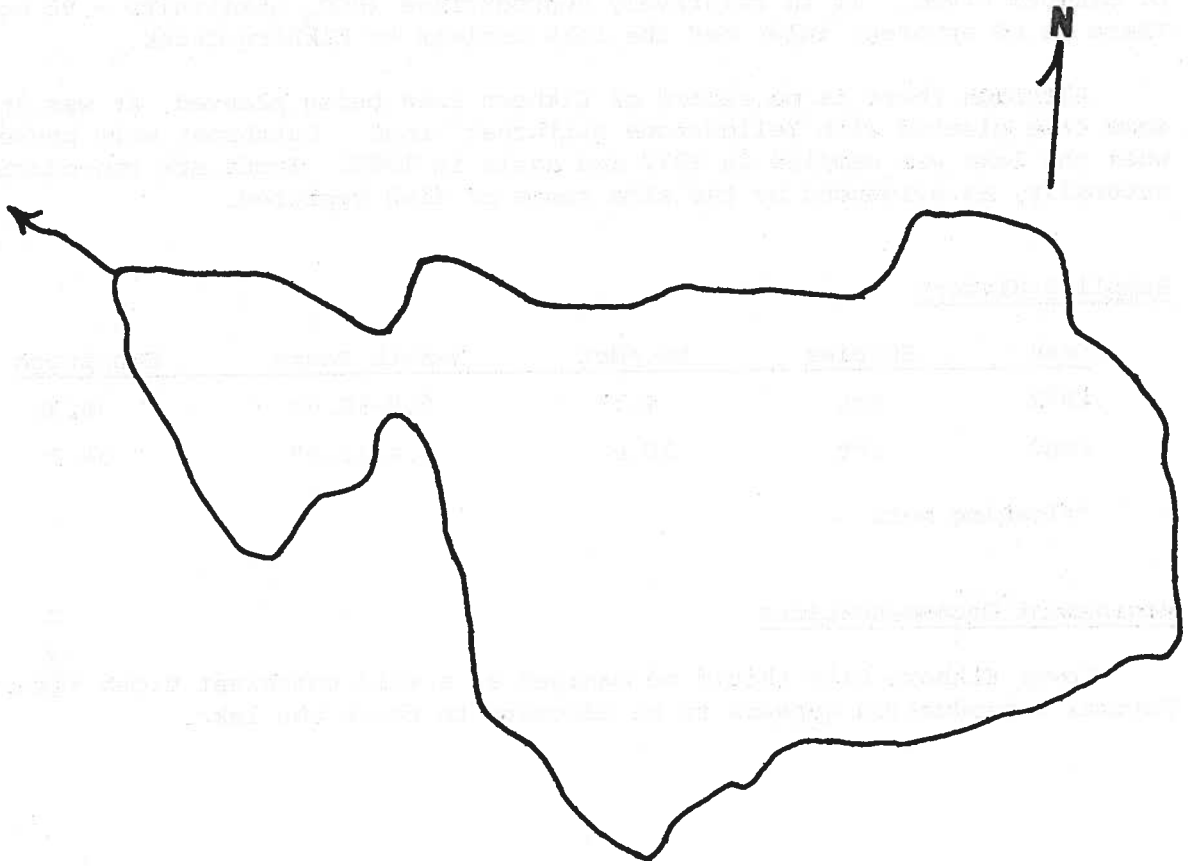
McBride strain Yellowstone cutthroat trout were introduced in 1979. Sampling in 1982 indicates trout are growing at a rate comparable to other lakes in the area. Three year old cutthroat in 1982 averaged 10.7 in. total length.

Sampling History

Year	Species	No./Net	Length Range	Condition
1967	Mtsu	5	7.0- 7.3	--
1982	Mtsu	26	--	--
	Yct	30	9.2-11.9	34.5

Management Recommendations

Black Lion Lake will probably require restocking with McBride strain Yellowstone cutthroat trout every five years at a rate of 50-100 per acre. However, the lake should be sampled in 1985 to determine if trout are reproducing naturally. Spawning area appears to be extremely limited, however, since mountain suckers are reproducing naturally there is a possibility cutthroat may be able to do so. Black Lion Lake should provide excellent trout fishing in 1983.



BLACK LION LAKE

Location: T2S R11W S31
Elevation: 8780'
Area: 12 acres
Max. Depth: 29'
Drainage: Boulder Creek

Cutthroat trout
Mountain sucker

ELKHORN LAKE (Lower)

Planting History

None

Description and Fish Population

Lower Elkhorn Lake is located under Saddleback Mountain on the headwaters of Elkhorn Creek. It is relatively unproductive (HCO_3 alkalinity = 98 mg/l). There is no apparent inlet but the lake outlets to Elkhorn Creek.

Although there is no record of Elkhorn Lake being planted, it was at some time planted with Yellowstone cutthroat trout. Cutthroat were present when the lake was sampled in 1972 and again in 1982. Trout are reproducing naturally, as evidenced by the size range of fish captured.

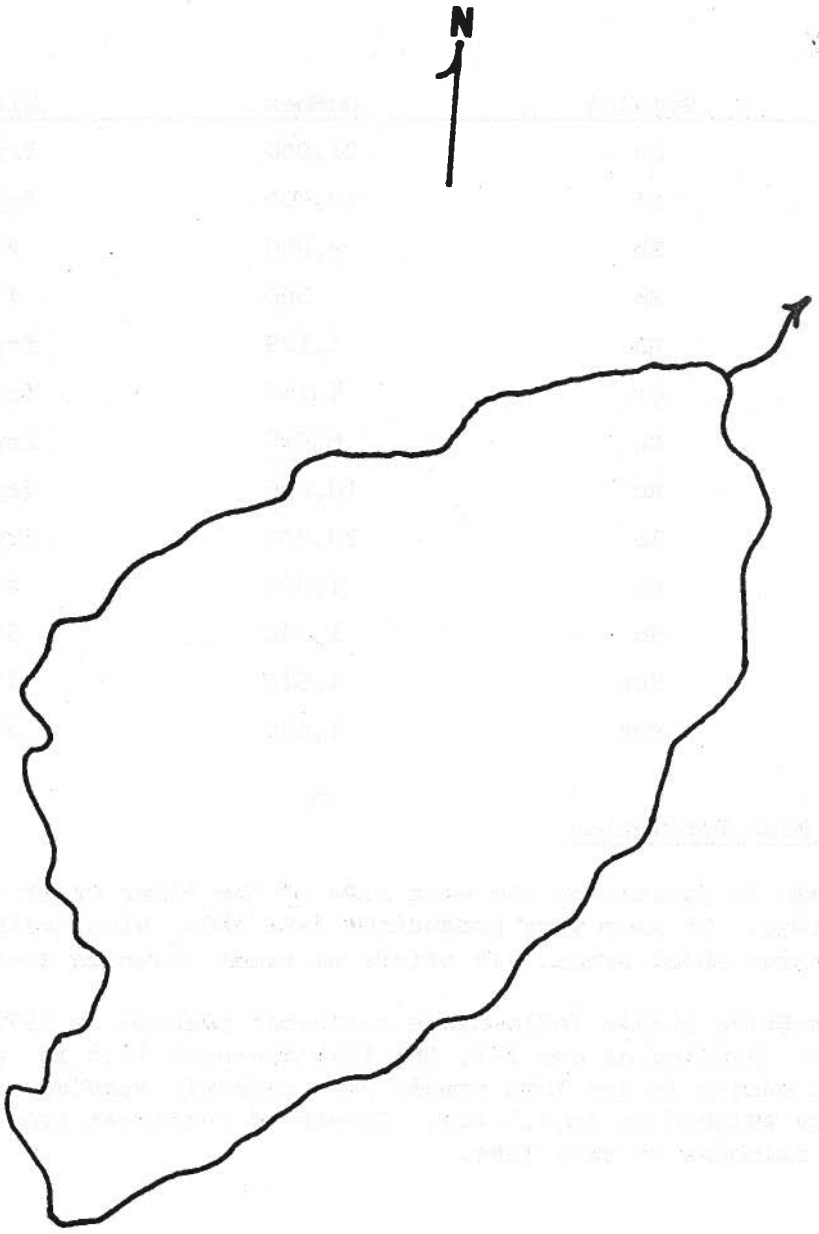
Sampling History

Year	Species	No./Net	Length Range	Condition
1972	Yct	4.5*	6.8-10.4"	34.3
1982	Yct	20.0	6.4-12.9"	38.2

*floating nets

Management Recommendations

Lower Elkhorn Lake should be managed as a wild cutthroat trout fishery. Natural reproduction appears to be adequate to stock the lake.



ELKHORN LAKE

Location: T4S R11W S30
Elevation: 8680'
Area: 12 acres
Max. Depth: 25'
Drainage: Elkhorn Creek

Cutthroat trout

FERGUSON LAKE

Planting History

Year	Species	Number	Size
1938	Ct	21,000	fry
1940	Ct	10,000	fry
1942	Rb	6,000	2"
1948	Rb	500	4"
1949	Rb	5,120	fry
1953	Ct	4,160	fry
1958	Rb	6,615	fry
1959	Rb	10,000	fry
1960	Rb	10,000	fry
1968	Rb	1,000	4"
1971	Rb	1,030	5"
1976	Yct	1,513	2"
1979	Yct	1,000	2"

Description and Fish Population

Ferguson Lake is located on the west side of the Alder Creek drainage, under Foolhen Ridge. It is a very productive lake (HCO_3 alkalinity = 497 mg/l) with extensive shoal areas. It offers no trout spawning areas.

Growth of McBride strain Yellowstone cutthroat planted in 1979 has been exceptional. Sampled at age III, the fish averaged 17.5 in. and 2.46 lbs. Older fish caught in the 1982 sample were probably survivors of the 1976 plant. They weighed up to 4.5 lbs. Growth of cutthroat trout far exceeds that of rainbows in this lake.

Sampling History

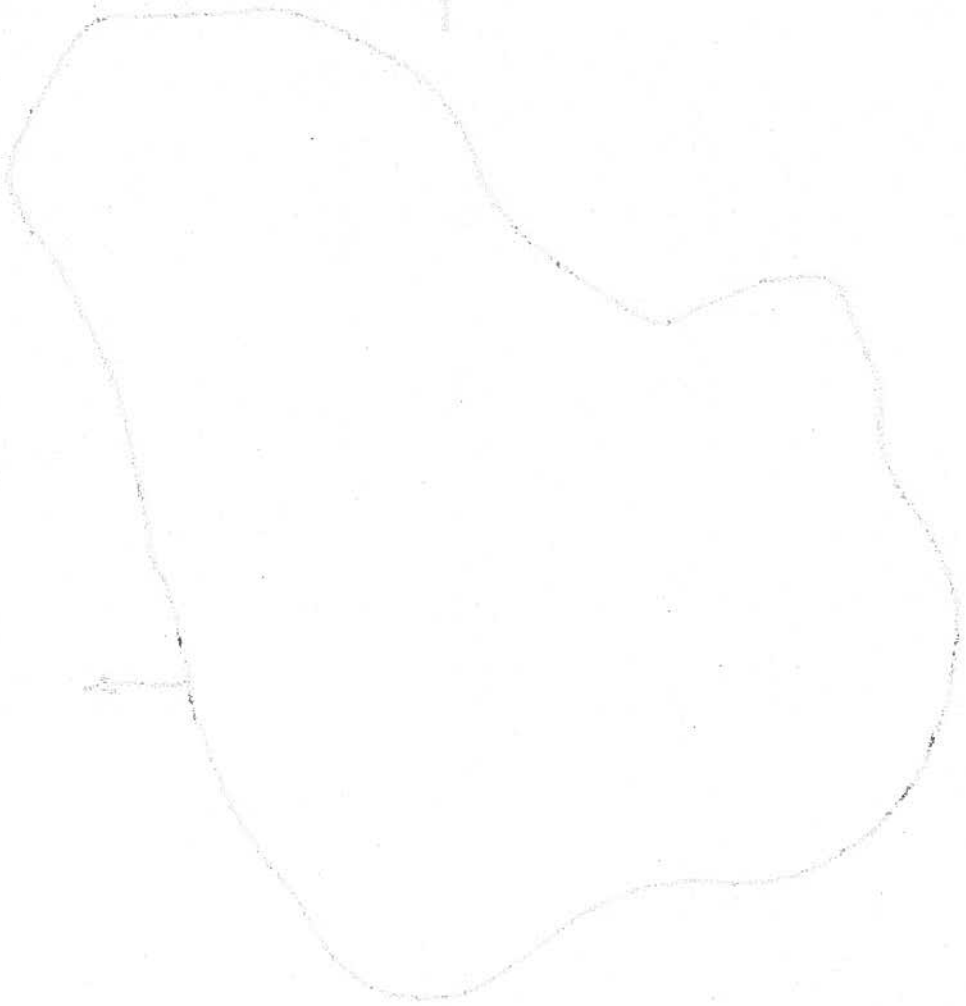
Year	Species	No./Net	Size Range	Condition
1967	Rb	19	10.7-15.6	33.1
1982	Yct	7	16.6-21.2	49.1

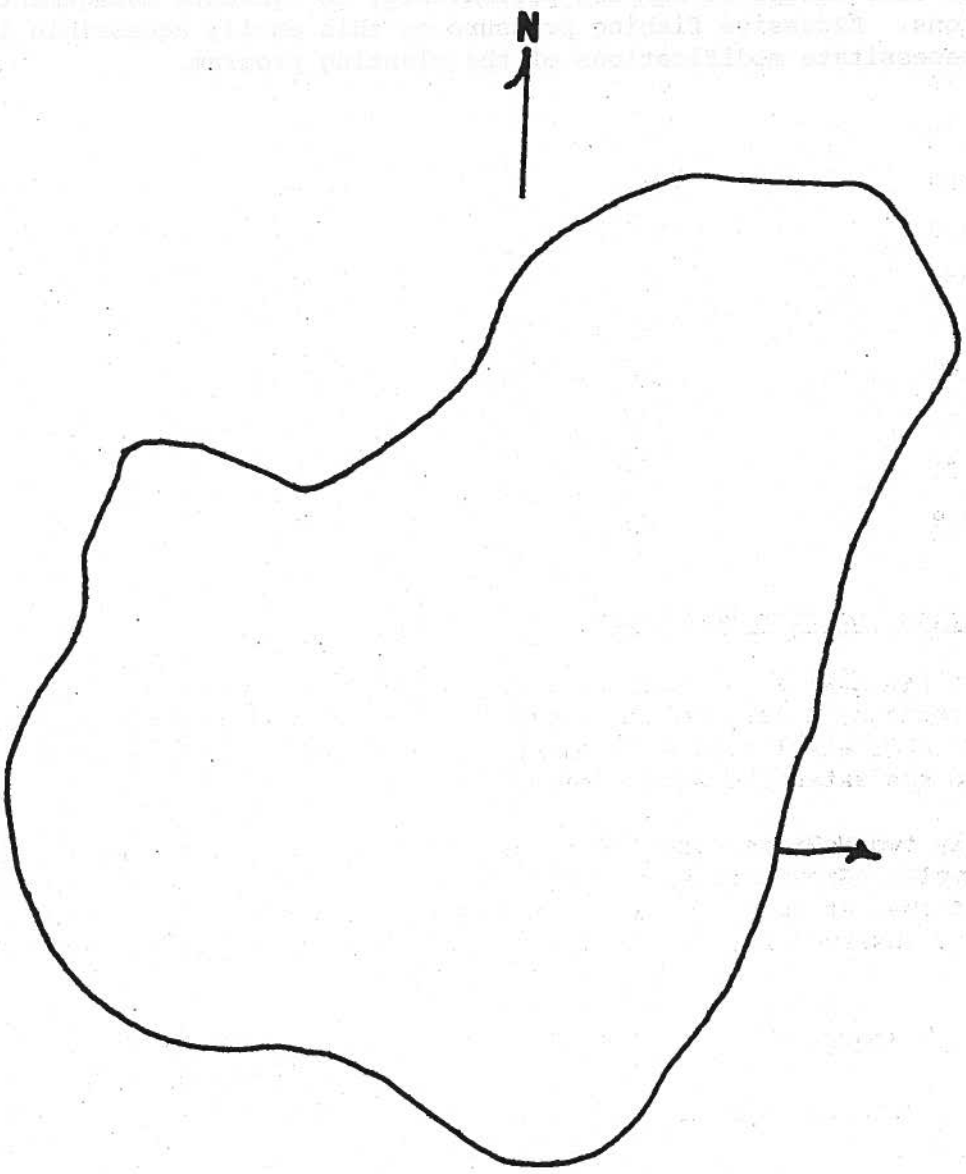
Management Recommendations

Ferguson Lake should be managed as a trophy cutthroat trout fishery. Due to its exceptional productivity, the lake can produce cutthroat trout

in the five pound class. Since there is no natural reproduction, the lake should be restocked every five years with McBride strain Yellowstone cutthroat at a rate of 50-100 per acre.

The lake should be sampled periodically to evaluate management recommendations. Excessive fishing pressure on this easily accessible lake could necessitate modifications of the planting program.





FERGUSON LAKE

Location: T1N R12W S31
Elevation: 7528'
Area: 17 acres
Max. Depth: 48'
Drainage: Alder Creek

Cutthroat trout

FOOLHEN LAKE

Planting History

Year	Species	Number	Size
1938	Ct	21,000	fry
1948	Rb	190	4"
1949	Rb	5,120	fry
1953	Ct	4,160	fry
1958	Rb	3,321	fry
1959	Rb	3,000	fry
1960	Rb	1,740	fry
1968	Rb	1,000	4"
1971	Rb	1,030	5"
1976	Yct	1,018	2"
1979	Yct	1,000	2"

Description and Fish Population

Foolhen Lake is a small lake located in the western portion of Alder Creek drainage, under Foolhen Ridge. It is the most productive lake sampled in 1982 (HCO_3 alkalinity = 675 mg/l). Although its maximum depth is 38 ft., the lake has extensive shoal areas.

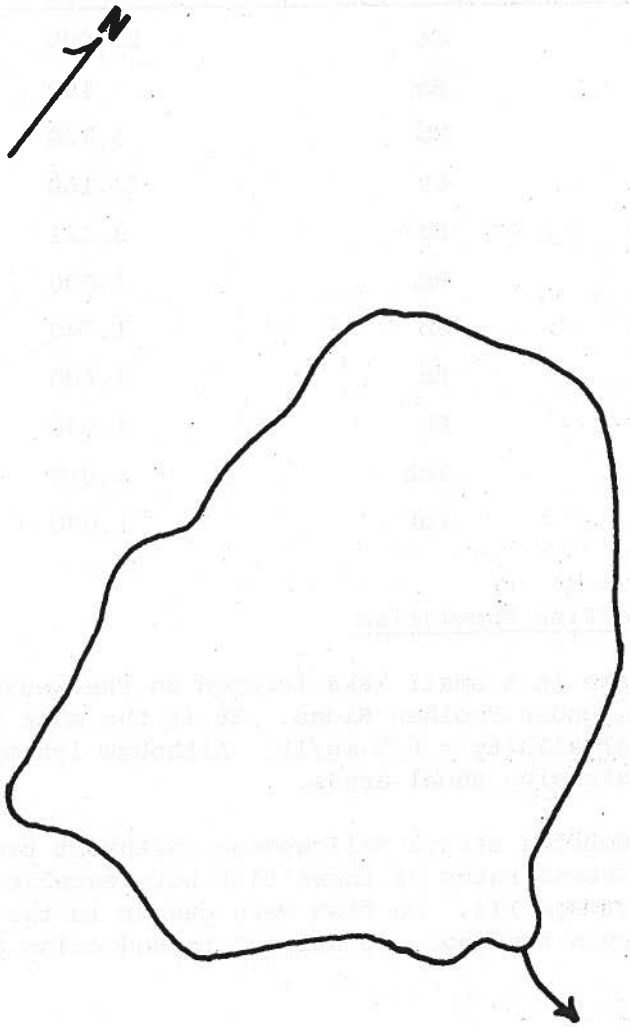
Only two McBride strain Yellowstone cutthroat trout were caught in the 1982 sample. Growth rates of these fish were excellent, averaging 15.8 in. and 1.64 lbs, at age III. No fish were caught in the 1967 sample although fish were observed feeding. No natural reproduction occurs in Foolhen Lake.

Sampling history

Year	Species	No./Net	Length Range	Condition
1967	--	0	--	--
1982	Yct	2	15.3-16.2	42.0

Management Recommendations

Foolhen Lake should be restocked with McBride strain Yellowstone cutthroat trout every five years at a rate of 50-100 per acre. The lake should be sampled periodically. It has the potential to provide trophy trout fishing.



FOOLHEN LAKE

Location: T1N R12W S29
Elevation: 7162'
Area: 8 acres
Max. Depth: 38'
Drainage: Alder Creek

Cutthroat trout

HOPKINS LAKE

Planting History

Year	Species	Number	Size
1971	Yct	1,125	4"
1976	Yct	1,018	2"
1979	Yct	1,000	2"

Description and Fish Population

Hopkins Lake is located between Comet and Saddleback Mountains in the upper reaches of the Elkhorn Creek drainage. It is moderately productive (HCO_3 alkalinity = 137 mg/l). There is no apparent inlet. The outlet may provide a small amount of spawning habitat before falling precipitously to the valley bottom.

McBride strain Yellowstone cutthroat trout weighing up to 2.5 lbs. were sampled in 1982. Hopkins Lake appears to support a healthy population of cutthroat and some natural reproduction may occur. The lake is probably visited only rarely, as access is difficult.

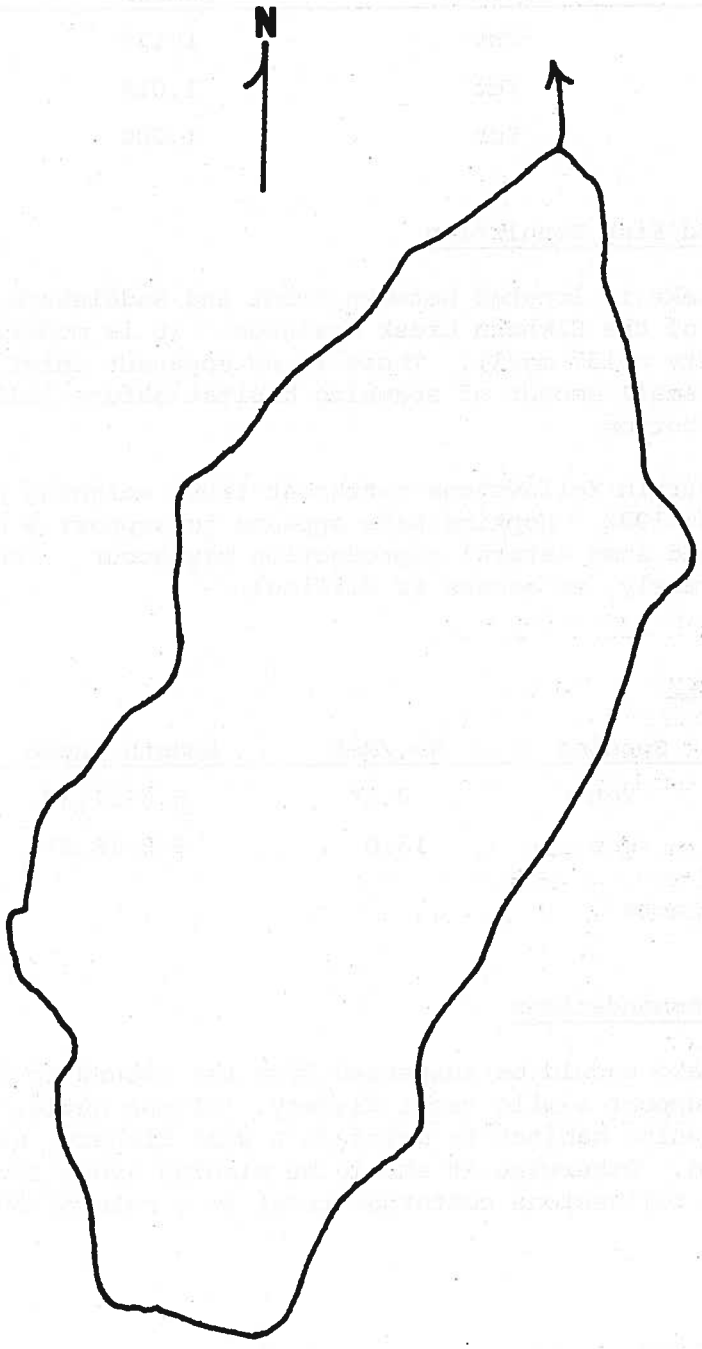
Sampling History

Year	Species	No./Net	Length Range	Condition
1972	Yct	9.5*	8.6-11.1"	41.4
1982	Yct	13.0	8.8-18.2"	47.2

*Floating nets

Management Recommendations

Hopkins Lake should be inspected from the ground to determine its potential to support a wild trout fishery. If the outlet stream has sufficient spawning habitat to maintain a wild fishery, stocking should be discontinued. Otherwise it should be planted every five years with McBride strain Yellowstone cutthroat trout at a rate of 50-100 per acre.



HOPKINS LAKE

Location: T4S R12W S25
Elevation: 8884'
Area: 13 acres
Max. Depth: 45'
Drainage: Elkhorn Creek

Cutthroat trout

SAND LAKE

Planting History

Year	Species	Number	Size
1934	Rb	28,000	2"
	Rb	20,000	fry
1944	Rb	5,150	fry
1959	Rb	5,000	fry
1960	Rb	5,000	fry
1963	Rb	2,500	2"
1965	Rb	1,950	4"
1968	Rb	3,000	4"
1971	Rb	3,024	5"
1976	Yct	3,026	2"
1979	Yct	1,000	2"

Description and Fish Population

Sand Lake is a large lake located just north of Baldy Lake at the head of the Pattengail Creek drainage. It is relatively unproductive (HCO_3 alkalinity = 90 mg/l). Some spawning habitat is available in both the inlet and the outlet.

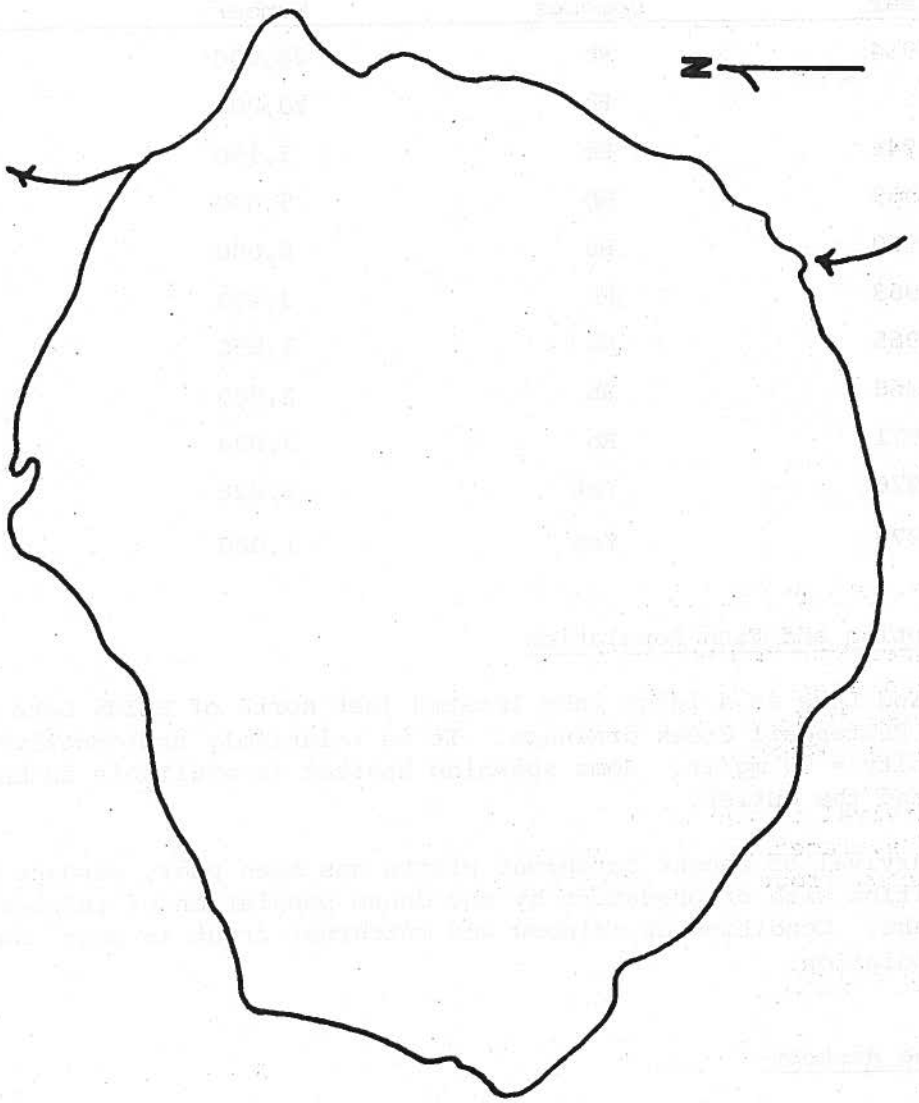
Survival of recent cutthroat plants has been poor, perhaps due to competition with or predation by the dense population of rainbow trout in Sand Lake. Condition of rainbow and cutthroat trout is poor, suggesting overpopulation.

Sampling History

Year	Species	No./Net	Length Range	Condition
1967	Rb	19.0	7.4-13.8"	35.9
1982	Rb	22.0	5.7-14.1"	37.6
	Yct	2.0	11.4-14.5"	31.8

Management Recommendations

Sand Lake should be managed as a wild rainbow trout fishery. Anglers should be encouraged to visit the lake and keep their limit of fish. Stocking of cutthroat trout should be discontinued.



SAND LAKE

Location: T2S R14W S36
Elevation: 8277'
Area: 42 acres
Max. Depth: 58'
Drainage: Pattengail Creek

Rainbow trout
Cutthroat trout

SCHULZ LAKE (Upper)

Planting History

Year	Species	Number	Size
1941	Rb	40,320*	fry
1943	Rb	2,700*	3"
1948	Rb	10,000*	fry
1953	Ct	4,160*	fry
1958	Ct	3,150*	fry
1959	Ct	4,000*	fry
1963	Ct	1,500*	2"
1979	Yct	1,000	2"

*Records indicate plant made in Schulz Lakes but do not specify which lake.

Description and Fish Population

Upper Schulz Lake is a small, shallow lake located in the Jacobsen Creek drainage, just east of Lower Schulz Lake. It is quite productive (HCO_3 alkalinity = 423 mg/l). Spawning potential of inlet and outlet streams is unknown.

Survival of the 1979 cutthroat plant has been good. Age III cutthroat in 1982 averaged 10.8 in. total length. Condition factors of cutthroat and rainbow trout show no indication of overpopulation.

Sampling History

Year	Species	No./Net	Length Range	Condition
1982	Yct	18.0	7.8-13.5"	37.3
	Rb	3.0	6.1-16.5"	46.5

Management Recommendations

Upper Schulz Lake should be sampled periodically to determine if McBride strain Yellowstone cutthroat trout are able to reproduce in the lake. Stocking should be discontinued until it is determined that supplements are needed. The lake should provide good fishing in 1983.

SCHULZ LAKE (Lower)

Planting History

Year	Species	Number	Size
1941	Rb	40,320*	fry
1943	Rb	2,700*	3"
1948	Rb	10,000*	fry
1953	Ct	4,160*	fry
1958	Ct	3,150*	fry
1959	Ct	4,000*	fry
1963	Ct	1,500*	2"
1979	Yct	1,000	2"

*Records indicate plant made in Schulz Lakes but do not specify which lake.

Description and Fish Population

Lower Schulz Lake is a small, shallow lake located in the upper Jacobsen Creek drainage, just west of Upper Schulz Lake. It is relatively productive (HCO_3 alkalinity = 196 mg/l). Spawning habitat is available in both the inlet and the outlet.

Survival of the 1979 cutthroat plant has been excellent in spite of the presence of rainbow trout in the lake. Age III cutthroat in 1982 averaged 10.1 in. total length. Rainbow trout have been naturally reproducing in the lake, however, the limited amount of spawning habitat has apparently prevented them from overpopulating. Condition of rainbow trout is poor.

Sampling History

Year	Species	No./Net	Length Range	Condition
1982	Yct	29.0	7.9-11.5"	37.4
	Rb	7.0	5.9-15.9"	35.0

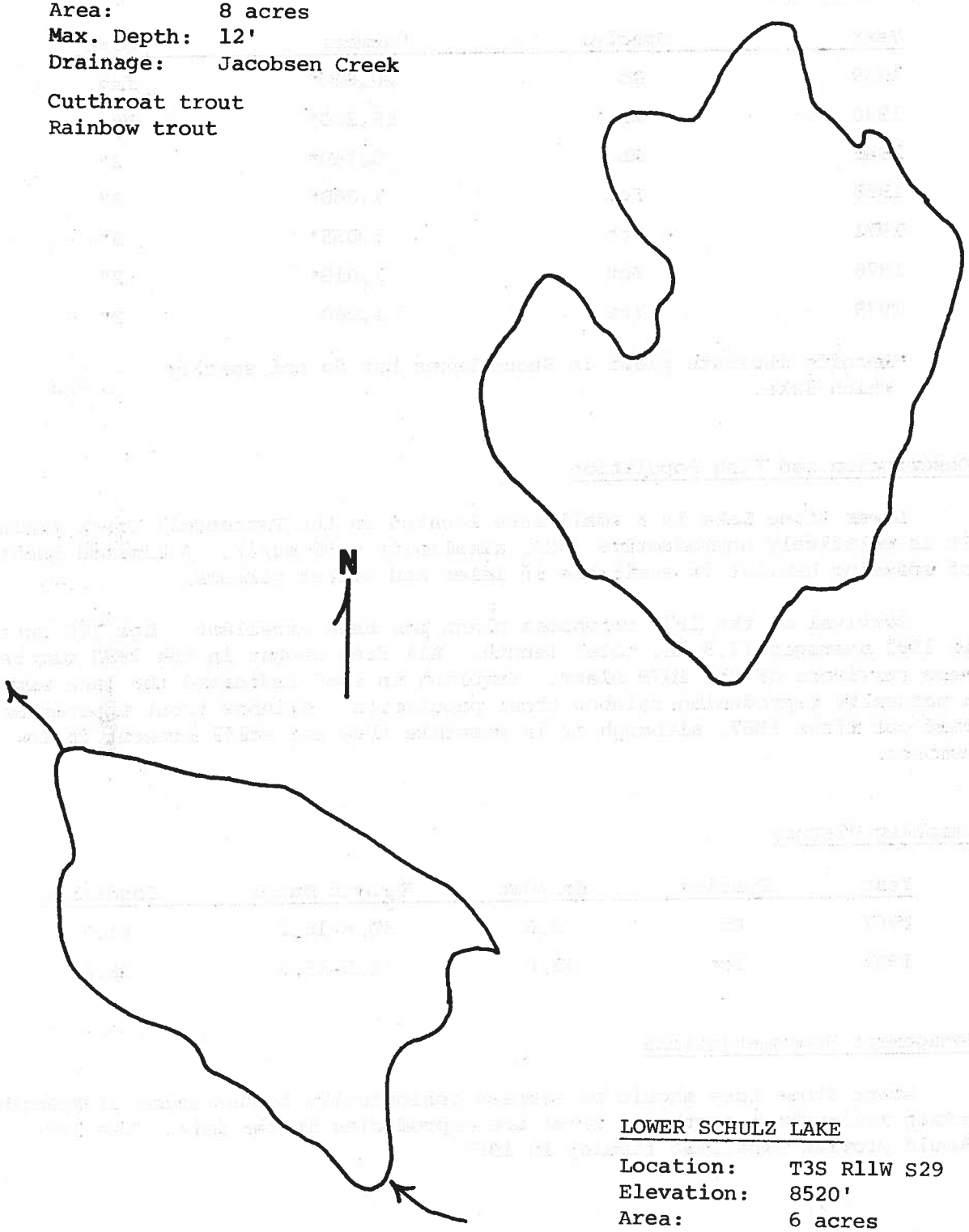
Management Recommendations

Lower Schulz Lake should be sampled periodically to determine if McBride strain Yellowstone cutthroat trout are able to reproduce in the lake. Stocking should be discontinued until it is determined that supplements are needed. The lake should provide excellent fishing in 1983.

UPPER SCHULZ LAKE

Location: T3S R11W S29
Elevation: 8680'
Area: 8 acres
Max. Depth: 12'
Drainage: Jacobsen Creek

Cutthroat trout
Rainbow trout



LOWER SCHULZ LAKE

Location: T3S R11W S29
Elevation: 8520'
Area: 6 acres
Max. Depth: 8'
Drainage: Jacobsen Creek

Cutthroat trout
Rainbow trout

STONE LAKE (Lower)

Planting History

Year	Species	Number	Size
1939	Rb	20,000*	fry
1940	Rb	19,200*	fry
1946	Rb	5,760*	2"
1968	Yct	1,060*	3"
1971	Yct	1,035*	3"
1976	Yct	1,018*	2"
1979	Yct	1,000	2"

*Records indicate plant in Stone Lakes but do not specify which lake.

Description and Fish Population

Lower Stone Lake is a small lake located in the Pattengail Creek drainage. It is relatively unproductive (HCO_3 alkalinity = 70 mg/l). A limited quantity of spawning habitat is available in inlet and outlet streams.

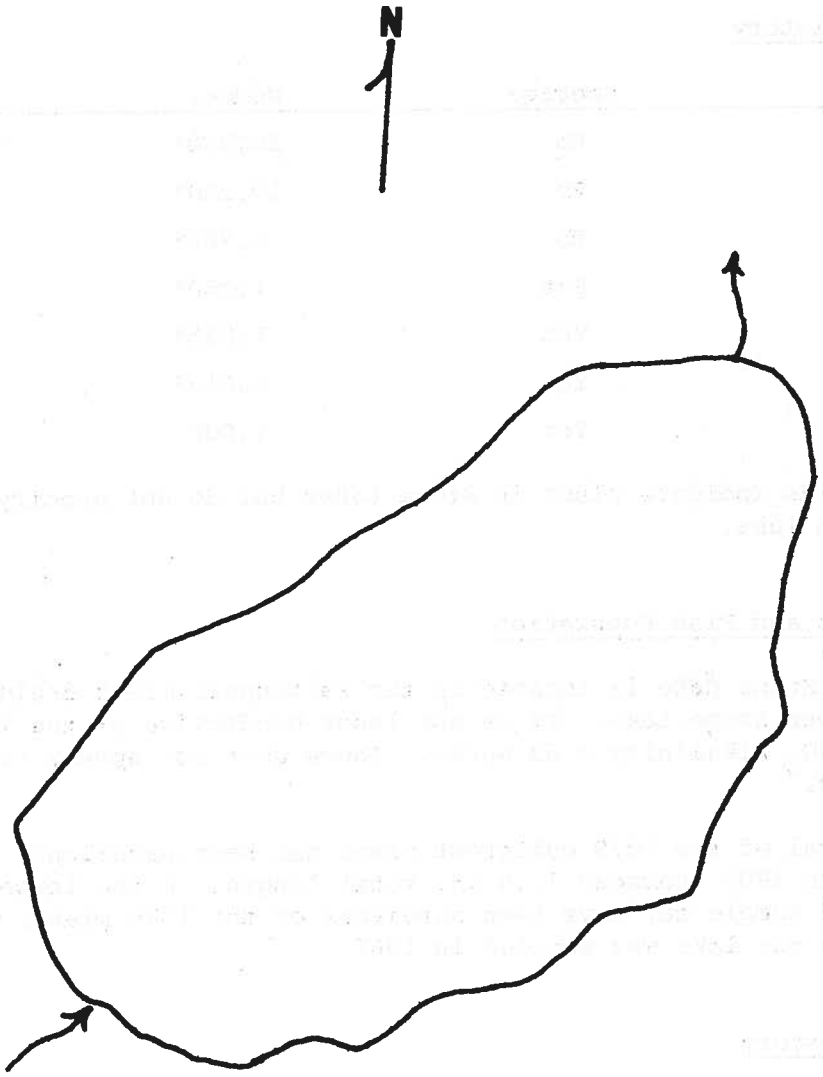
Survival of the 1979 cutthroat plant has been excellent. Age III cutthroat in 1982 averaged 12.5 in. total length. All fish caught in the 1982 sample were survivors of the 1979 plant. Sampling in 1967 indicated the lake supported a naturally reproducing rainbow trout population. Rainbow trout apparently died out after 1967, although it is possible they are still present in low numbers.

Sampling History

Year	Species	No./Net	Length Range	Condition
1967	Rb	8.0	10.6-16.2	41.7
1982	Yct	32.0	11.5-13.4	36.1

Management Recommendations

Lower Stone Lake should be sampled periodically to determine if McBride strain Yellowstone cutthroat trout are reproducing in the lake. The lake should provide excellent fishing in 1983.



STONE LAKE (Lower)

Location: T2S R13W S5
Elevation: 8000'
Area: 11 acres
Max. Depth: 47'
Drainage: Pattengail Creek

Cutthroat trout

STONE LAKE (Upper)

Planting History

Year	Species	Number	Size
1939	Rb	20,000*	fry
1940	Rb	19,200*	fry
1946	Rb	5,760*	2"
1968	Yct	1,060*	3"
1971	Yct	1,035*	3"
1976	Yct	1,018*	2"
1979	Yct	1,000	2"

*Records indicate plant in Stone Lakes but do not specify which lake.

Description and Fish Population

Upper Stone Lake is located in the Pattengail Creek drainage, one mile west of Lower Stone Lake. It is the least productive of the lakes sampled in 1982 (HCO_3 alkalinity = 63 mg/l). There does not appear to be any spawning habitat.

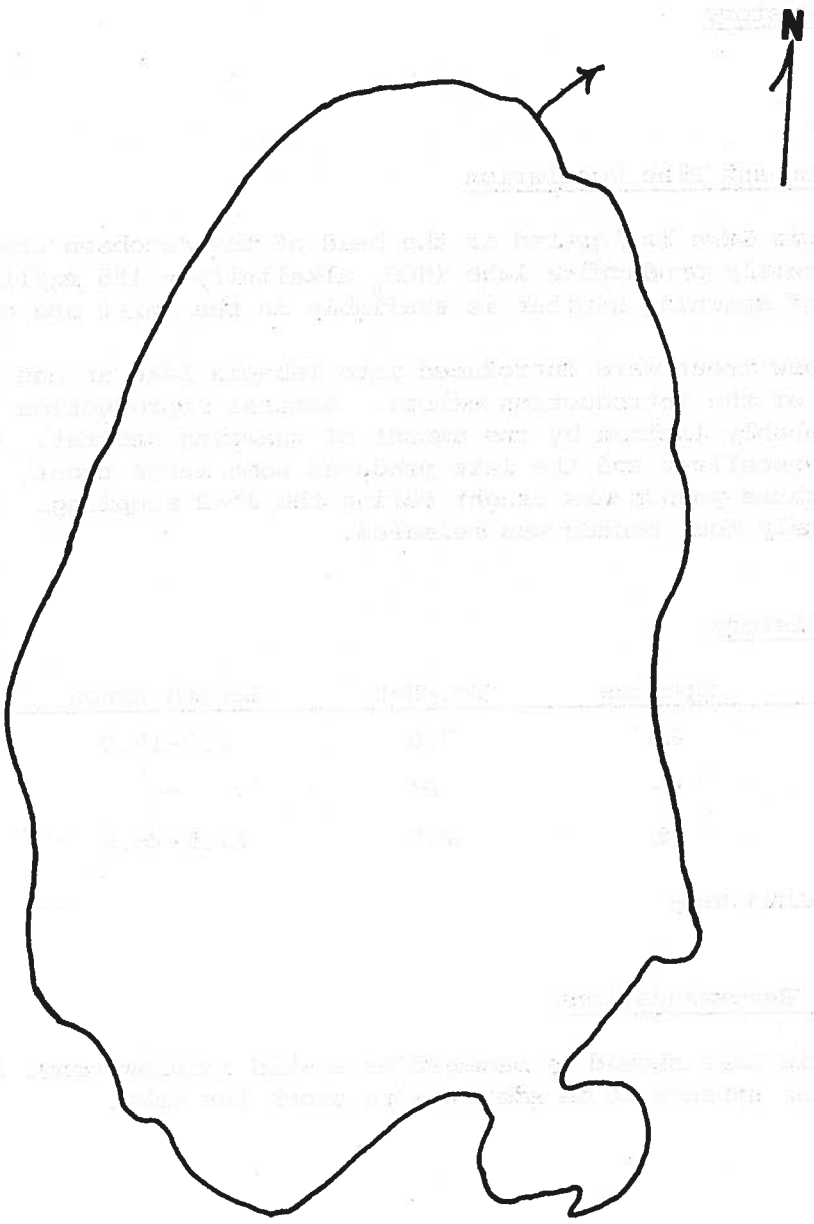
Survival of the 1979 cutthroat plant has been excellent. Age III cutthroat in 1982 averaged 12.4 in. total length. A few larger fish caught in the 1982 sample may have been survivors of the 1976 plant. No fish were caught when the lake was sampled in 1967.

Sampling History

Year	Species	No./Net	Length Range	Condition
1967	--	0	--	--
1982	Yct	26.0	11.2-16.7	35.4

Management Recommendations

Upper Stone Lake should be planted every five years with McBride strain Yellowstone cutthroat trout at a rate of 50-100 per acre. It should be sampled periodically to determine if cutthroat trout are reproducing. The lake should provide excellent fishing in 1983.



UPPER STONE LAKE

Location: T2S R13W S6
Elevation: 8480'
Area: 17 acres
Max. Depth: 29'
Drainage: Pattengail Creek

Cutthroat trout

TAHEPIA LAKE

Planting History

None

Description and Fish Population

Tahepia Lake is located at the head of the Jacobsen Creek drainage. It is a moderately productive lake (HCO_3 alkalinity = 155 mg/l). A limited quantity of spawning habitat is available in the inlet and outlet streams.

Rainbow trout were introduced into Tahepia Lake at one time, however, no record of the introduction exists. Natural reproduction is occurring but is probably limited by the amount of spawning habitat. Growth rates of trout are excellent and the lake produces some large trout. One rainbow weighing three pounds was caught during the 1982 sampling. Another of approximately four pounds was released.

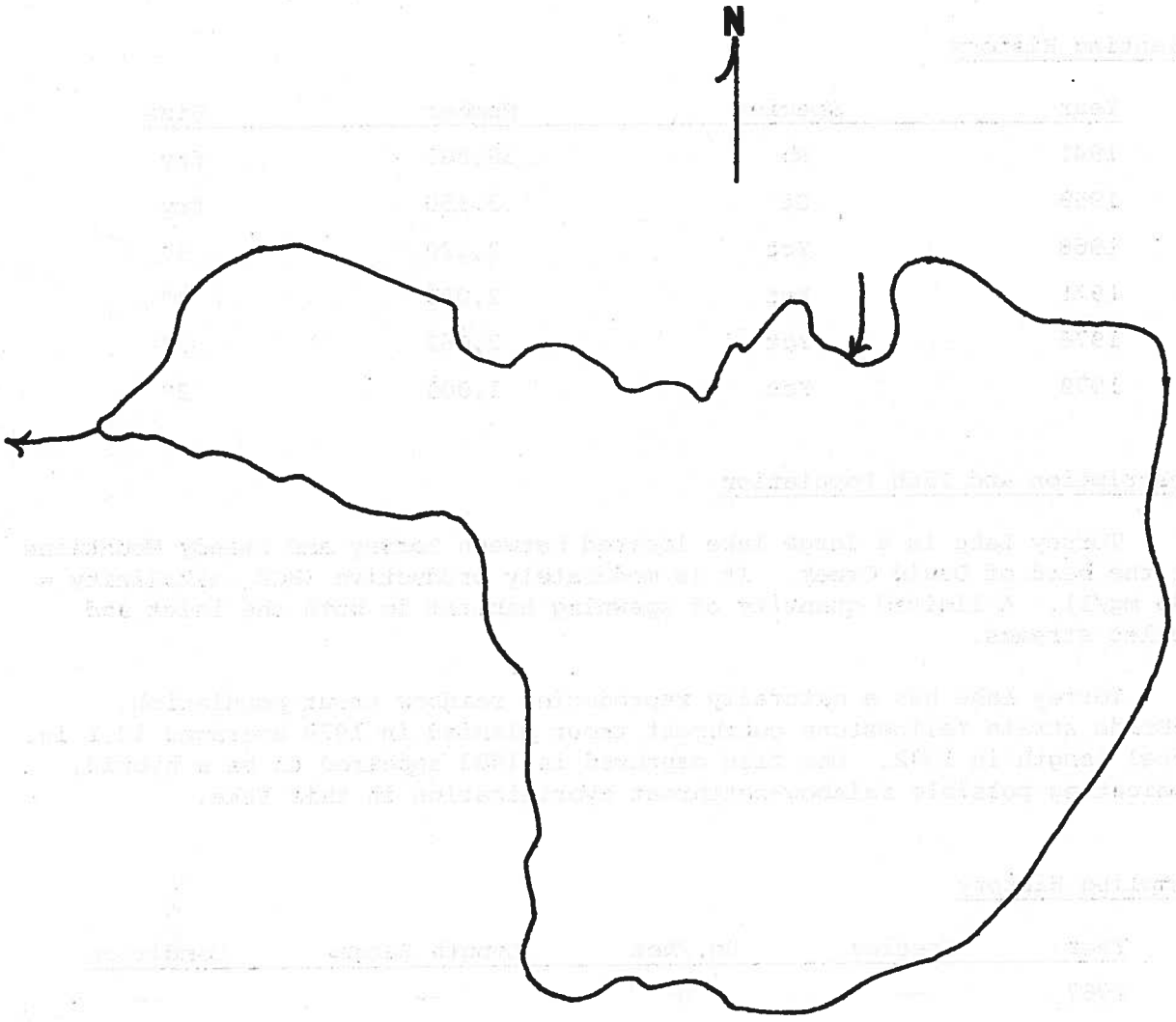
Sampling History

Year	Species	No./Net	Length Range	Condition
1967	Rb	7.0	8.9-15.0	36.5
1972	--	0*	--	--
1982	Rb	6.0	11.1-18.6	51.7

*floating nets

Management Recommendations

Tahepia Lake should be managed as a wild rainbow trout fishery. Natural reproduction appears to be adequate to stock the lake.



TAHEPIA LAKE

Location: T3S R11W S21
Elevation: 8920'
Area: 16 acres
Max. Depth: 20'
Drainage: Jacobsen Creek

Rainbow trout

TORREY LAKE

Planting History

Year	Species	Number	Size
1941	Rb	38,800	fry
1958	Ct	3,150	fry
1968	Yct	2,120	3"
1971	Yct	2,028	3"
1976	Yct	2,062	2"
1979	Yct	1,000	2"

Description and Fish Population

Torrey Lake is a large lake located between Torrey and Tweedy Mountains at the head of David Creek. It is moderately productive (HCO_3 alkalinity = 146 mg/l). A limited quantity of spawning habitat in both the inlet and outlet streams.

Torrey Lake has a naturally reproducing rainbow trout population. McBride strain Yellowstone cutthroat trout planted in 1979 averaged 12.1 in. total length in 1982. One fish captured in 1982 appeared to be a hybrid, indicating possible rainbow-cutthroat hybridization in this lake.

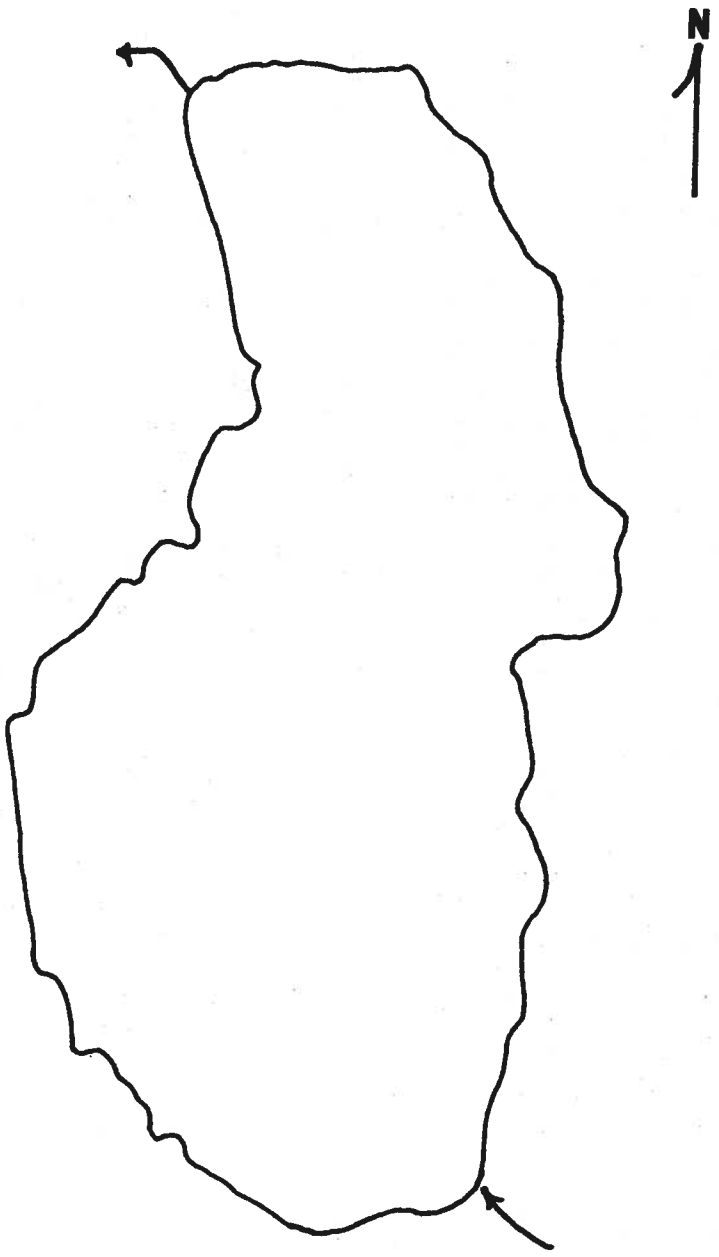
Sampling History

Year	Species	No./Net	Length Range	Condition
1967	--	0	--	--
1972	Yct	1.0*	8.5- 9.3	32.6
1982	Yct	10.0	9.6-14.3	39.2
	Rb	9.0	6.6-13.0	44.2
	Rb x Ct	1.0	11.2	40.6

*floating nets

Management Recommendations

Torrey Lake should be sampled periodically to determine if natural reproduction is sufficient to stock the lake. Management for a wild trout fishery would be preferable to regular planting.



TORREY LAKE

Location: T4S R11W S21
Elevation: 8964'
Area: 28 acres
Max. Depth: 35'
Drainage: David Creek

Cutthroat trout
Rainbow trout