

new watershed code

lk seg 1

460-2429-515-000-...

LAKE SURVEY DATA

Accepted for the Inventory Operations
Unit - J. A. B. Alkum

NAME: Toboggan Lake

WATERSHED CODE: 46-2400-

SURVEYED BY: D. Coombes/D. Jesson

MAP REF. CODE NO: 93 L/14

DATE SURVEYED: September 15, 1982

MANAGEMENT UNIT: 6-8

DATA ON FILE FOR THIS SURVEY:

Physical Data	X	Netting Results	X
Contour Map	X	Fish Samples	-
Terrain Features	X	Stomach Analysis	X
Chemical	X	Scale Reading	-
Flora	X	Resort & Campsite	X
Invertebrates	-	Habitation	X
Temperature Series	X	Access	X
Obstructions & Pollutions	X	Oxygen	X
Stocking	-	Photography	X
Miscellaneous	X	Rehabilitation	-
Location map/photo	X	Bench Mark	X

LOCATION: 10 km by air NNW of Smithers, B. C.

Latitude, Longitude $54^{\circ}47'20''$: $127^{\circ}15'00''$ U.T.M. 9.6125.60815

Drainage, System Toboggan C. → Bulkley R. → Skeena R. →

Chatham Sound, Hecate Strait.

ELEVATION 482 ± 4 m

PHYSICAL DATA:

Surface Area 148,700 sq. m. Volume 160,000 cu. m.

Area above 6 m contour All sq. m. Shoreline Perimeter 2,700 m.

Maximum Depth 1.9 m. Mean Depth 1.1 m.

Filterable Residue (T.D.S.) 30 mg/L Secchi Reading 1.0 m.

Bench mark: Located 2 m above the present water level in a 29.5 cm. aspen poplar tree, near the house on the north shore of the lake.

TERRAIN FEATURES:

Immediate Shoreline: The entire lake has a sedge shoreline, which forms a broad area on the east and northwest end (50-100m) but is from 5 - 20 m wide elsewhere. Much of the backshore is agricultural land, or logged over. The northwest has a patch of aspen, and the south shore is mixed lodgepole pine and aspen, with some spruce and cottonwood.

Surrounding Country: Toboggan Creek flows parallel to the Bulkley River on a till plain with low rolling drumlinoid ridges. It is largely agricultural, and has been logged off. Treed areas are forested in aspen, cottonwood, lodgepole pine and spruce. Hudson's Bay Mt. overlooks the area.

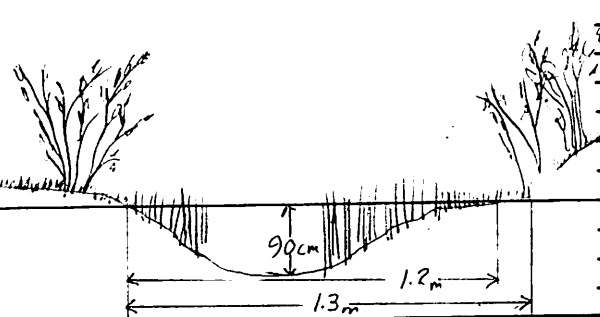
LAKE Toboggan

TERRAIN FEATURES: (continued)

LAKE DRAINAGE

POINT SAMPLE

Point No. 1 of 2

BANK				BED MATERIAL			
C	L	R	C	BED MATERIAL			
S	F	F	S	Ice Scouring	Y ? (N)	C	Texture (%)
F	Genetic Mat.	F		Imbric	(Nil) L M H		Org. 10
Texture %				Compac	(Nil) L M H		Clay 0
F	0	0	F	Lag	(Nil) L M H		Silt 80
100	0	0		D ₉₀ (cm)	N/A		Sand 10
90	0	0		HYDRAULICS		Meth	S. Gr. 0
10	0	0		Valley W (m)	N/A		L. Gr. 0
0	0	0		Chan W (m)	1.3 M		Cob. 0
0	0	0		Wet W (m)	1.2 M		Boul. 0
0	0	0		Slope (%)			Bedr. 0
0	0	0		Max Depth (cm)	90 M		
0	0	0		Avg. Depth (cm)	80 M		
0	0	0		Wet X-sec area			
0	0	0		Velocity (m/sec)			
0	0	0		Flow (m ³ /sec)			
0	0	0		Bank Height (m)	0.03 M		
0	0	0		Fld. Signs (HL/Type)	05/T		
0	0	0		Bank Ice Scour	Y ? (N)		
0	0	0		Stage	Dry (L) M H Fld		
0	0	0		Flow Char.	(P) S R B T		
0	0	0		Valley/Chan	0-2 2-5 5-10 (10) N/A		
0	0	0		Side Chan	(Nil) L M H		
0	0	0		Channel	(Nil) L M H		
0	0	0		Stable %	N/A		
0	0	0		Floodplain	(Nil) L M H		
CHANNEL COVER				FISH SPECIES PRESENT:			
Distr.	Sp	VEG.	Sp	L STREAM CROSS-SECTION R			
0	0	Conif.	0	(looking downstream)			
0	0	Decid.	0				
0	0	Under	0				
0	0	Ground	0				
BIOTA							
Aquatic Veg.	5	H					
Invertebrates		M					
Algae		M					

COMMENTS

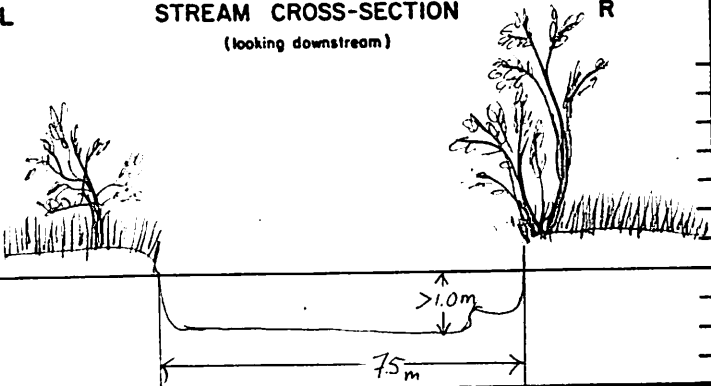
- C_x Stream has been channelized
- C₁ Not measureable
- S₁ Narrow strip along bank of alder, willow
- S₂ Aspen
- S₃ Juvenile willow
- S₄ Grasses, sedges
- S₅ Sparganium, several grasses, speedwell, bugle weed
- C₂ Very flat, probably about 0.1%
- C_x Rearing low - maybe for coarse fish
Spawning poor -no gravels available for salmonids.

TERRAIN FEATURES: (continued)

LAKE DRAINAGE

POINT SAMPLE

Point No 2 of 2

BANK				BED MATERIAL			
C	L	S	R	C	L	S	R
S	S	Form	S	S	Ice Scouring	Y ? (N)	C
F	F	Genetic Mat.	F	F	Imbric	(Nil) L M H	Texture (%)
Texture %				Texture (%)			
F	0	Org.	0	F	Compac	(Nil) L M H	Org.
F	0	Clay	0	F	Lag	(Nil) L M H	Clay
F	0	.004 Silt	0	F	D ₉₀ (cm)	N/A	Silt
F	0	.062 Sand	0	F			Sand
F	0	10	0	F	HYDRAULICS		
F	0	10	0	F	Valley W (m)	N/A	
F	0	10	0	F	Chan W (m)	7.5 M	
F	0	10	0	F	Wet W (m)	7.5 M	
F	0	10	0	F	Slope (%)	0.5 CL	
F	0	10	0	F	Max Depth (cm)		
F	0	10	0	F	Avg. Depth (cm)		
F	0	10	0	F	Wet X-sec area		
F	0	10	0	F	Velocity (m/sec)	0.6 F	
F	0	10	0	F	Flow (m ³ /sec)		
F	0	10	0	F	Bank Height (m)	0.1 M	
F	0	10	0	F	Fld. Signs (Ht./Type)	1.0/T	
F	0	10	0	F	Bank Ice Scour	Y ? (N)	
F	0	10	0	F	Stage	Dry L (M) H Fld	
F	0	10	0	F	Flow Char.	P S (R) B T	
F	0	10	0	F	Valley-Chan	0-2 2-5 5-10 10+ (N/A)	
F	0	10	0	F	Side Chan	(Nil) L M H	
F	0	10	0	F	Channel	(Nil) L M H	
F	0	10	0	F	Stable %		
F	0	10	0	F	Floodplain	(Nil) L M H	
CHANNEL COVER				FISH SPECIES PRESENT: Cutthroat Fry			
Distr. Sp VEG. Sp Distr.				L STREAM CROSS-SECTION R			
0 Conf.				(looking downstream)			
7 1 Decid.							
4 2 Under							
9 3 Ground							
BIOTA							
Aquatic Veg.							
Invertebrates							
Algae							

COMMENTS

- S₁ Willow, alder
- S₂ Juvenile willow
- S₃ Grasses
- S₄ Sedges, grasses
- C₁ None seen, but probably present (Reported present by locals).
- C₂ Unable to measure
- C₃ Unable to measure
- C₄ May come from railway track
- C_x Numerous frogs
- C_x Point is representative of 90% of reach

GENERAL INFORMATION

LAKE Toboggan

ACCESS: 1. Directions Drive 11.3 km northwest on Highway 16 from Smithers (starting at the corner of Main Street and Highway 16) and turn left down the driveway of a house standing by Toboggan Lake. Then turn right, before trespassing on the house's yard, through a wire gate, and left to a boat launch point.

2. Road Type and Conditions Highway 16 is paved, and in good condition.

3. Restrictions, Prohibitions The lake is on private property owned by Mr. Storey (2 km S-E, just off Highway 16) and has private property access.

RESORT & CAMPSITES:

None

OTHER HABITATION:

Two houses overlook the west end of the north shore, there is a house near the water, on the middle section of the south shore, and there are two houses across the highway but close to the lake.

OBSTRUCTIONS AND POLLUTIONS: The houses, farmyards, highway and railway must add some pollution to the lake. Aquatic plants are very thick in the lake, and impede boats.

SOUNDING DEVICE:

oar

MAP OUTLINE:

B.C. 81043:055 (July 11, 1981)

AQUATIC PLANTS: From "Aquatic Plants in the Lakes of British Columbia" (P. Warrington, Water Management Branch) and personal observation.

<u>Nitella</u> sp.	<u>Potentilla</u> <u>palustris</u>
<u>Hippuris</u> <u>vulgaris</u>	
<u>Utricularia</u> <u>vulgaris</u>	
<u>Ranunculus</u> <u>aquatilis</u>	
<u>Potamogeton</u> <u>epihydrus</u>	
<u>Sparganium</u> <u>emersum</u>	
<u>Lobelia</u> <u>dortmanna</u>	

MISCELLANEOUS COMMENTS:

Wildlife: This lake is probably heavily used by waterfowl, but the nearby highway and our boat kept a lot of birds away. Mallards and Canada geese were seen flying by.

General: Too weedy, cold, turbid, and shallow to be an important recreational lake for water sports. As the lake is private (the lake itself is Crown-granted, an unusual occurrence) permission must be asked to fish, boat, etc.

LAKE Toboggan Lake STATION No. 1 EQUIS No. 1132033
DATE September 15, 1982 WATERSHED CODE No. 46-2400
TIME 1350 hrs

AIR TEMPERATURE 16.5 °C WIND VELOCITY 15-25 km/hr
CLOUD COVER 4 /10 O.C. WIND DIRECTION west
SURFACE CONDITION light ripples
SECCHI DISC 1.0 m
WATER COLOUR milky-green

pH	SURFACE	<u>6.0-6.5</u>	pH
			Hast
	<u> </u> m	<u> </u>	Stick
	<u> </u> m	<u> </u>	
H ₂ S	SURFACE	<u>Not</u>	
		<u>tested.</u>	
	<u> </u> m		

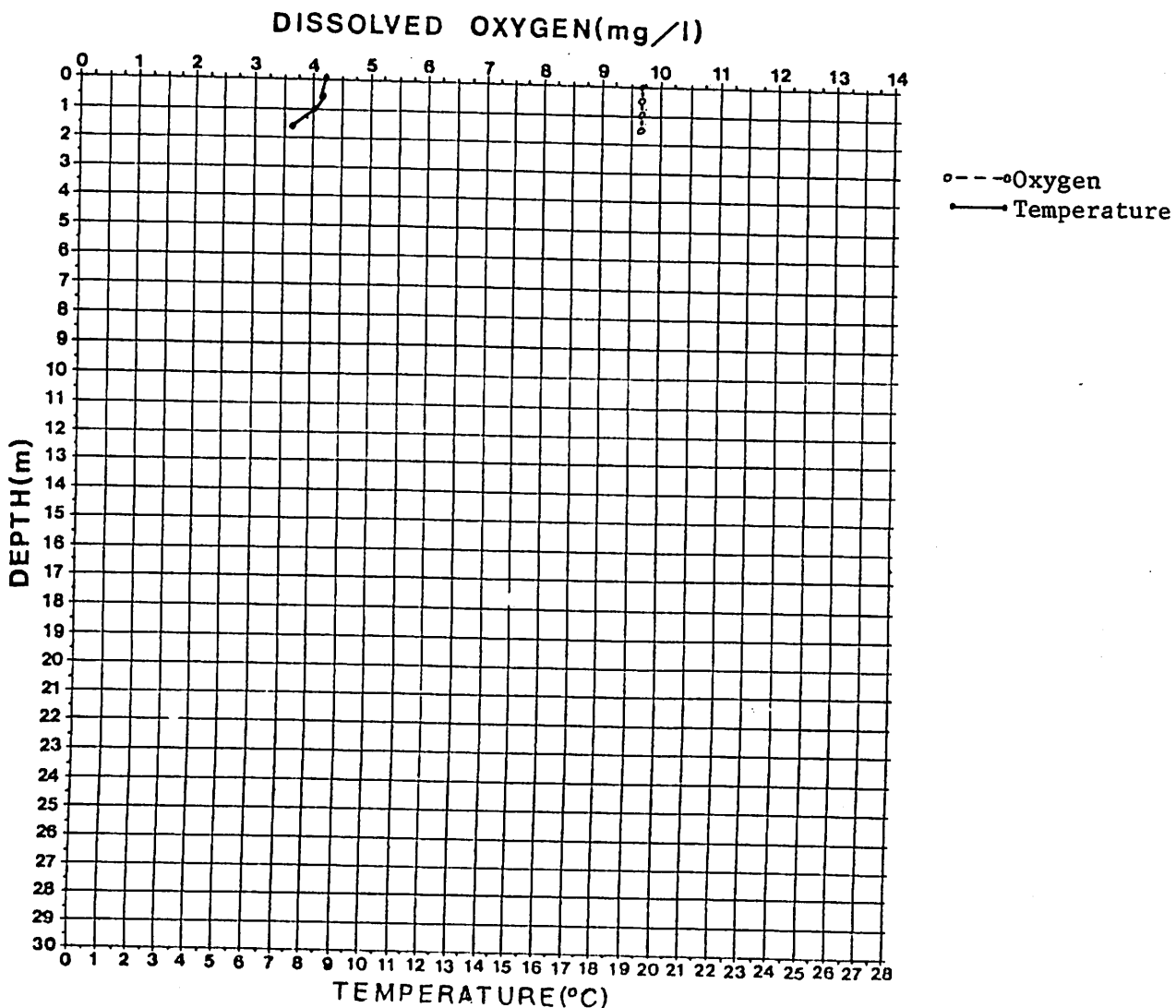
RESIDUE FILTERABLE 105 °C (T.D.S.) : SPECIFIC CONDUCTANCE :

SURFACE <u>30</u> mg / L	SURFACE <u>40</u> umhos / cm
_____ m _____ mg / L	_____ m _____ umhos / cm
_____ m _____ mg / L	_____ m _____ umhos / cm

METHOD / AGENCY USED : Environmental Laboratory

COMMENTS: pH 6.3 by Lab (sample too long in transit). Limited by phosphorus in nutrients.

DISSOLVED OXYGEN AND TEMPERATURE PROFILE



NET SET RECORD

LAKE Toboggan

NET #1 Type* Sinking monofilament Date September 15, 1982 Time 1020
 Date Lifted September 15/82 Time 1334
 Net Dimensions: Length 92.4 m. Depth 2.4 m.
 Mesh Size(s) In Order of Set
 Shallow End Mesh Size 64 mm., Depth 1.2 m., Substrate weed & mud
 Deep End Mesh Size 25 mm., Depth 1.5 m., Substrate weed & mud

NET #2 Type* Sinking monofilament Date September 15, 1982 Time 1025
 Date Lifted September 15/82 Time 1500
 Net Dimensions: Length 92 m. Depth 2.4 m.
 Mesh Size(s) In Order of Set
 Shallow End Mesh Size mm., Depth 1.5 m., Substrate weeds & mud
 Deep End Mesh Size mm., Depth 1.5 m., Substrate weeds & mud

NET #3 Type* Sinking monofilament Date September 15, 1982 Time 1032
 Date Lifted September 15/82 Time 1540
 Net Dimensions: Length 92 m. Depth 2.4 m.
 Mesh Size(s) In Order of Set
 Shallow End Mesh Size 64 mm., Depth 1.5 m., Substrate weeds & mud
 Deep End Mesh Size 25 mm., Depth 1.5 m., Substrate weeds & mud

NET #4 Type* Date Time
 Date Lifted Time
 Net Dimensions: Length m. Depth m.
 Mesh Size(s) In Order of Set
 Shallow End Mesh Size mm., Depth m., Substrate
 Deep End Mesh Size mm., Depth m., Substrate

* Sinking or Floating, Twisted or Monofilament, or Beach Seine.

LAKE: TobogganFISH CATCH AND SAMPLE RECORD

SPECIES	NET NUMBER				ANGLED	OTHER	TOTAL	# SAMPLE	# PRESERVED	SIZE RANGE (cm)
	1	2	3	4						
Cutthroat	9	14	10	-	-	-	33	32?	0	19.8-34.7
Mountain whitefish	18	28	6	-	-	-	52	45	0	17.7-31.8
Dolly Varden	2	1	0	-	-	-	3	3	0	23.5 - 63.0
Coho	6	6	2	-	-	-	14	7	0	45.0 - 60.0
Sucker (longnose)	0	1	0	-	-	-	1	-	0	37.5

MINNOW TRAPS:BAIT: Roe

HOURS	DEPTH (m)	SUBSTRATE	SPECIMENS
14	1.0	mud & weeds	nothing
14	1.0	mud & weeds	nothing
14	1.2	mud & weeds	nothing

FISHERIES COMMENTS:

- The longnose sucker weighed 650 gm.
- With the weeds, cool water, food and cover available, this lake is probably an important rearing area for salmonids.
- Fishing access is poor, due to the number of weeds.
- Permission must be asked of Mr. Story to use the lake, as the lake itself is Crown-granted.
- Half the coho were released without measuring them. Scales were taken from dead fish and weights and lengths taken from landed fish which were released.
- Sculpins and cyprinids seen.

FISH DATA SUMMARY

FIELD DESCRIPTION CODES:

SEX	GONADAL MATURITY	FISH SAMPLE TYPE
M-Male	IMM-Immature	EG-Egg
F-Female	MG-Maturing	FR-Fin Ray
?-Not Obvious	MT-Mature	HD-Head
	GV-Gravid	ML-Mill
	SP-Spent	OT-Otolith
	?-Not Obvious	SC-Scale
		ST-Stomach
		TG-Fish Tag
		WF-Whole Fish

LAKE/STREAM

Toboggan

DATE

September 15, 1982

METHOD OF CAPTURE

Experimental Monofilament Gillnet

SPECIES	FORK LENGTH (cm)	WEIGHT (gm)	SEX	GONADAL MATURITY	SAMPLE TYPE	AGE (yrs)	STOMACH CONTENTS					COMMENTS
							BOTTOM ORGANISMS	PLANKTON	INSECTS	FISH	OTHER	
Mountain whitefish	17.7	60	?	?	-							
Mountain whitefish	19.0	65	?	?	-							
Mountain whitefish	19.3	80	?	?	-							
Mountain whitefish	19.8	65	M	IMM	SC							
Mountain whitefish	19.8	70	?	?	-							
Mountain whitefish	19.8	85	?	?	-							
Mountain whitefish	20.2	95	?	?	-							
Mountain whitefish	20.2	105	?	?	-							
Mountain whitefish	20.4	150	M	MT	SC			zooplankton				
Mountain whitefish	20.7	105	?	?	-							
Mountain whitefish	20.8	115	?	?	-							
Mountain whitefish	21.0	125	?	?	-							
Mountain whitefish	21.3	125	M	MT	SC				terrestrial insects		leeches	
Mountain whitefish	21.4	105	?	?	-							
Mountain whitefish	21.5	110	?	?	-							
Mountain whitefish	21.8	150	F	MT	SC				terrestrial insects		leeches	
Mountain whitefish	22.0	120	F	MT	SC							
Mountain whitefish	22.8	135	F	MT	SC		gastropods		insect larvae		leeches, gravel	
Mountain whitefish	23.0	150	?	?	-							
Mountain whitefish	23.7	190	F	MT	SC				terrestrial insects		leeches	
Mountain whitefish	23.8	160	F	MT	SC		copepods?					
Mountain whitefish	24.1	160	M	MT	SC		gastropods		terrestrial insects			
Mountain whitefish	24.1	180	M	IMM	SC						leeches	
Mountain whitefish	24.3	185	M	MT	SC				terrestrial insects			
Mountain whitefish	24.3	185	M	MT	SC			zooplankton				
Mountain whitefish	24.7	205	M	MT	SC				lg. terrestrial insects			
Mountain whitefish	24.8	220	F	MT	SC				terrestrial insects			

FISH DATA SUMMARY

FIELD DESCRIPTION CODES:

SEX	GONADAL MATURITY	FISH SAMPLE TYPE
M-Male	IMM-Immature	EG-Egg
F-Female	MG-Maturing	FR-Fin Ray
?-Not Obvious	MT-Mature	HD-Head
	GV-Gravid	ML-Mill
	SP-Spent	OT-Otolith
	?-Not Obvious	SC-Scale
		ST-Stomach
		TG-Fish Tag
		WF-Whole Fish

LAKE/STREAM

Toboggan

DATE

September 15, 1982

METHOD OF CAPTURE

Experimental Monofilament Gillnet

SPECIES	FORK LENGTH (cm)	WEIGHT (gm)	SEX	GONADAL MATURITY	SAMPLE TYPE	AGE (yrs)	STOMACH CONTENTS					COMMENTS
							BOTTOM ORGANISMS	PLANKTON	INSECTS	FISH	OTHER	
Mountain whitefish	25.1	235	F	MT	SC				fly larvae		leeches	
Mountain whitefish	25.2	200	F	MT	SC				terrestrial insects			
Mountain whitefish	25.2	220	F	MT	SC		sm.gastropods		terrestrial insects		leeches	
Mountain whitefish	25.2	240	M	MT	SC				insects			
Mountain whitefish	25.9	230	?	?	-				insects			
Mountain whitefish	26.0	200	F	MT	SC							
Mountain whitefish	26.0	215	M	MT	SC				terrestrial insects			
Mountain whitefish	26.8	225	F	GV	SC							
Mountain whitefish	27.2	270	F	GV	SC							
Mountain whitefish	27.8	260	F	MT	SC			zooplankton	terrestrial insects			
Mountain whitefish	27.8	300	F	GV	SC				terrestrial insects			
Mountain whitefish	28.3	260	F	MT	SC			zooplankton				
Mountain whitefish	28.6	325	F	GV	SC							
Mountain whitefish	29.8	325	M	MT	SC							
Mountain whitefish	30.1	225	M	MT	SC				caddis cases			
Mountain whitefish	30.1	225	M	MT	SC				caddis cases, terrestrial insects			
Mountain whitefish	30.9	325	F	GV	SC				caddis cases, terrestrial insects			
Mountain whitefish	31.0	375	F	MT	SC				terrestrial insects			
Mountain whitefish	31.8	450	F	MT	SC				brown insects			

FISH DATA SUMMARY

FIELD DESCRIPTION CODES

SEX	GONADAL MATURITY	FISH SAMPLE TYPE
M-Male	IMM-Immature	EG-Egg
F-Female	MG-Maturing	FR-Fin Ray
?-Not Obvious	MT-Mature	HD-Head
	GV-Gravid	ML-Mill
	SP-Spent	OT-Otolith
	?-Not Obvious	SC-Scale
		ST-Stomach
		TG-Fish Tag
		WF-Whole Fish

LAKE/STREAM

Toboggan

DATE

September 15, 1982

METHOD OF CAPTURE

Experimental Monofilament Gillnet

SPECIES	FORK LENGTH (cm)	WEIGHT (gm)	SEX	GONADAL MATURITY	SAMPLE TYPE	AGE (yrs)	STOMACH CONTENTS					COMMENTS
							BOTTOM ORGANISMS	PLANKTON	INSECTS	FISH	OTHER	
Cutthroat trout	19.8	75	M	MT	SC		gastropods		terrestrial insects			empty
Cutthroat trout	21.8	110	?	V.IMM.	SC							
Cutthroat trout	22.6	95	?	V.IMM.	SC							
Cutthroat trout	23.0	115	M	MG	SC				terrestrial insects			
Cutthroat trout	23.5	125	M	IMM	SC		amphipods, gastropods		terrestrial insects	fish		
Cutthroat trout	23.9	130	F	MG	SC				beetles & dragonfly nymphs			
Cutthroat trout	24.2	150	?	IMM	SC				terrestrial insects			
Cutthroat trout	24.5	160	?	IMM	SC				dragonfly nymph			
Cutthroat trout	24.5	175	F	MG	SC		gastropods, copepods		insects	fish		
Cutthroat trout	24.8	155	?	IMM	SC		gastropods					
Cutthroat trout	25.4	180	F	IMM	SC				insects	sm. fish		
Cutthroat trout	25.6	160	F	MG	SC				terrestrial insects			
Cutthroat trout	25.9	185	M	IMM	SC		gastropods		terrestrial insects			
Cutthroat trout	26.2	175	F	IMM	SC				flies			
Cutthroat trout	26.2	195	M?	IMM	SC		gastropods		terrestrial insects			stomach empty
Cutthroat trout	26.5	210	F	MT	SC				beetles		frog	
Cutthroat trout	26.8	185	F	IMM	SC							
Cutthroat trout	27.2	205	M	MG	SC				terrestrial insects	fish		
Cutthroat trout	27.2	220	M	?	SC				terrestrial insects			
Cutthroat trout	27.2	230	M	IMM	SC				stonefly			

FISH DATA SUMMARY

FIELD DESCRIPTION CODES:

SEX	GONADAL MATURITY	FISH SAMPLE TYPE
M-Male	IMM-Immature	EG-Egg
F-Female	MG-Maturing	FR-Fin Ray
?-Not Obvious	MT-Mature	HD-Head
	GV-Gravid	ML-Mill
	SP-Spent	OT-Otolith
	?-Not Obvious	SC-Scale
		ST-Stomach
		TG-Fish Tag
		WF-Whole Fish

LAKE/STREAM

Toboggan

DATE

September 15, 1982

METHOD OF CAPTURE

Experimental monofilament gillnet

SPECIES	FORK LENGTH (cm)	WEIGHT (gm)	SEX	GONADAL MATURITY	SAMPLE TYPE	AGE (yrs)	STOMACH CONTENTS					COMMENTS
							BOTTOM ORGANISMS	PLANKTON	INSECTS	FISH	OTHER	
Coho salmon	45.0	1175	M	MT	SC							empty
Coho salmon	46.0	1300	M	MT	SC							empty
Coho salmon	47.5	1400	M	MT	SC							empty
Coho salmon	49.5	1400	?	MT	-							empty
Coho salmon	51.5	1650	M	MT	SC							empty
Coho salmon	55.5	2000	?	MT	-							empty
Coho salmon	60.0	3750	?	MT	-							
Dolly Varden	23.5	150	F	GV	OT		gastropods					
Dolly Varden	25.5	215	M	MT	OT		gastropods					
Dolly Varden	63.0	325	F	SP	OT					cutthroat trout 6 whitefish		This fish had a very large liver.

0040101 PH

K REL UNIT

0071701 RES:FILT.105C

30. MG/L

0110101 SPECIFIC CONDUCT

40. UMH0/CM

1000001 SPECIAL ANALYS.

MG/L K

1083704 NITROGEN:AMMONIA

0.010 MG/L

1093703 NITROGEN:NO2 NO3

L 0.02* MG/L

1120003 NITROGEN:ORGANIC

0.13 MG/L

1133601 NITROGEN:KJELDAH

0.14 MG/L

1140001 NITROGEN:TOTAL

0.14* MG/L

1183703 PHOSPHORUS:ORT

L 0.003 MG/L

1193703 PHOSPHORUS :TOT

L 0.003 MG/L

1193603 PHOSPHORUS :TOT

0.011 MG/L

2530310 CADMIUM

0.0006 MG/L

2560310 COPPER

0.005 MG/L

2580310 LEAD

0.001 MG/L

2630310 NICKEL

L 0.01 MG/L

2510214 ARSENIC

L 0.25 MG/L

2530214 CADMIUM

L 0.01 MG/L

2540214 CALCIUM

4.34 MG/L

2550214 CHROMIUM

L 0.01 MG/L

2560214 COPPER

L 0.01 MG/L

2570214 IRON

0.83 MG/L

2580214 LEAD

L 0.1 MG/L

2590214 MAGNESIUM

0.4 MG/L

FOLLOWING ARE PACKAGE TESTS:

SAMPLE NO. 212940W CONTINUED ON NEXT PAGE.

WATER QUALITY REPORT FOR SAMPLE 212940W

2600214 MANGANESE 0.04 2620214 MOLYBDENUM 1 0.01

2630214 NICKEL 1 0.05 2660214 ZINC 1 0.01

2670214 ALUMINUM 0.23 2680214 COBALT 1 0.1

2720214 VANADIUM 1 0.01

THE APPROXIMATE COST OF THE ABOVE TESTS IS \$ 157.00

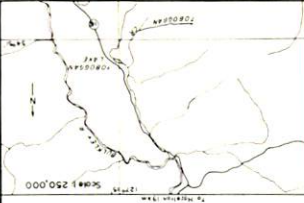
REMARKS:

Special Analysis: Cost of titration curve attached \$25.00
pH 6.3 relative units
Sample too long in transit

TOTAL ALKALINITY (CaCO₃) = 8.2 mg/l

[Signature]
FOR ENVIRONMENTAL LABORATORY

Reduced to
33%
of Original



INSET MAP

SURVEYED BY D. COOMBS
DATE: SEPT 15, 82
OUTLINE SOURCE: BC AIR PHOTO B1043.055

NOTE: 5 DENOTES BENCH MARK

- STATISTICS AT TIME OF SURVEY
- 1 ELEVATION 482 m. Approx.
 - 2 SURFACE AREA 148,700 sq. m.
 - 3 VOLUME 160,000 cu. m.
 - 4 EST. ANNUAL FLUCTUATION 1.1 m.
 - 5 MEAN DEPTH 1.9 m.
 - 6 MAX DEPTH 2.700 m.
 - 7 PERIMETER 1.9 m.
 - 8 AREA ABOVE 6 m. CONTOUR 148,700 sq. m.
 - 9 HEIGHT OF BENCH MARK ABOVE WATER LEVEL 2 m.

AQUATIC STUDIES BRANCH MINISTRY OF ENVIRONMENT		WATERSHED CODE NO. 46-2400	
INVENTORY OPERATIONS UNIT		U.T.M. CO-ORDINATE 9 6125 60815	
TOBOGGAN LAKE		DEPTHS IN METERS	
DATE: AUG 29, 1983		DRAWN: R.S.D.	
CHECK: J.A. BALKWILL		SCALE: 1:3500	
PLOTTER: D.M.V.C.		APPROVED: [Signature]	
FAIR DMS. W.D.S.		NTS. NO. 93 L/14	

