

**Reconnaissance Lake Inventory
of
Unnamed Lake
alias M22***

Waterbody Identifier 00217BABL
Map # 93M.028
UTM 09.655825.6130225

Prepared for:
Ministry of Environment, Lands and Parks
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March 31, 1998

Disclaimer

The Province has not accepted the contents of this product for the purposes of the Forest Practices Code, and reserves the right to dispute the validity of summarized results. The province does not necessarily agree with the classification assigned to any individual stream reach, for use in logging plans, silviculture prescriptions or any other application.

Data Summary

Project Reference Information

MoELP Project Number	CSK3029
FDIS Project Number	06-LBIR-0010-0003-1998
Forest Region	Prince Rupert
Forest District	Morice
MoELP Region	Skeena
Wildlife Management Unit	6-8
FRBC Region	Skeena-Bulkley

Watershed Information

Higher Level Watershed Code	480-
Waterbody Identifier	LP00001
UTM at Lake Outlet	09.655825.6130225
Number of Tributaries on TRIM or FCM	4
Number of Tributaries observed in field	3
Magnitude	11
Elevation	825
NTS Map	93M/07
TRIM Map	93M.028
Biogeoclimatic Zone	SBS
Air Photos	30BCC96114 No. 023

Lake Sampling Summary

Fish Species Present	Longnose Sucker
Lake Survey Type	Secondary (1997 RIC Standards)
Water Surface Area	72 ha
Max. Depth	6.5 m
Secchi Depth	1.5 m
Shoreline Perimeter	4.0 km
Lake Length	1.4 km
Number of Islands	None

Contractor Information

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Acknowledgments

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We would like to thank Paul Giroux, Steve Gray, Sig Hatlevik, Steve Woodliffe and Doug Webb for their help with this inventory.

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- Photo CD's
- Photographs and Negatives
- Photocopies of Original Field Data

1.0 Introduction

1.1 Project scope/Objectives

The primary purpose of the reconnaissance inventory of M22* was to gather information on the presence or absence of fish in the lake, and to gather preliminary data on biophysical attributes of the lake. M22* was a secondary lake included in a secondary level reconnaissance inventory of 34 lakes located in the northern portions of the Kalum, Kispiox, Bulkley and Morice Forest Districts.

1.2 Location

Unnamed Lake M22* is located approximately 75 kilometres northeast of Smithers Airport and approximately five kilometres southeast of Fort Babine, B. C. The latitude of M22* is 55° 17' 37.5" and the longitude is 126° 32' 45". The location of the lake is given in Figure 1.

1.2.1 Access

The field crew reached this lake by helicopter. The flight to the lake from Smithers, B. C. takes about 30 minutes. M22* was not accessible by road.

2.0 Resource Information

A thorough data search of Ministry of Environment lake files yielded no pre-existing information about M22*. This lake was pristine. None of the surrounding area of the lake had been logged and no preexisting campsites were observed.

2.1 Points of Interest

This lake has potential for recreational activities including hiking and camping. Potential campsites are located in the forested edge of the lake as the creek mouths were wetlands. The surrounding area of the lake was a mixed coniferous and deciduous stand making it interesting for hiking.

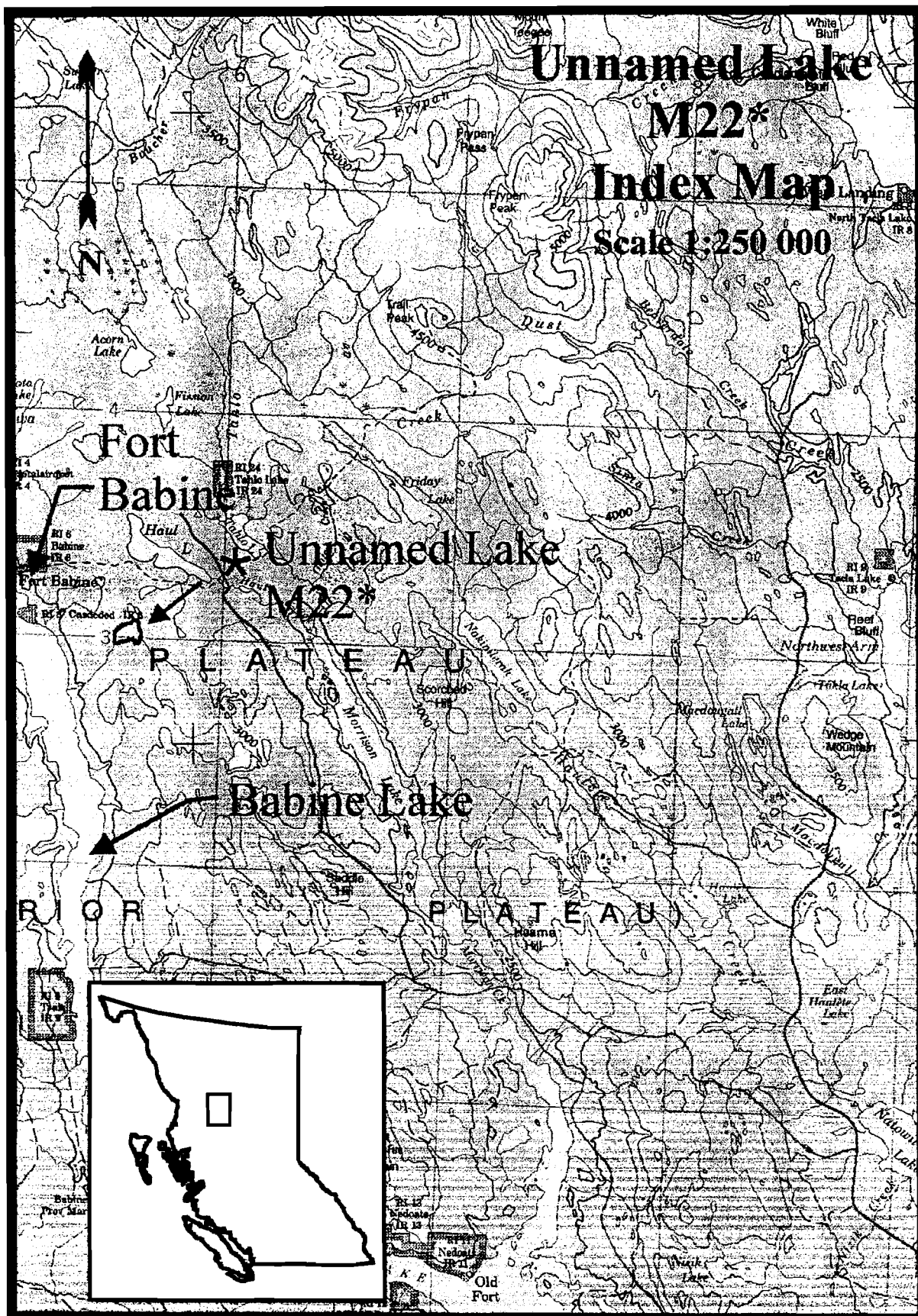


Figure 1. Map showing the location of Unnamed Lake (M22*), Waterbody Identifier 00217BABL.

3.0 Methods

Methods used in the inventory of this lake were those described primarily in the Resource Inventory Committee of British Columbia (RIC) document entitled Reconnaissance 1:20 000 Fish and Fish Habitat Inventory Standards and Procedures, May 1997 for secondary lakes. In addition, the standards prescribed in the following documents were used:

- Fisheries Information Summary System: Data Compilation and Mapping Procedures. Federal/Provincial Fish Habitat Inventory and Information Program. February 1995.
- Lake and Stream Inventory: Standards and Procedures, RIC Draft, May 1995; to be replaced in March 1997 by: Reconnaissance (1:20 000) Fish and Fish Habitat Inventory: Standards and Procedures.
- Users Guide to the British Columbia Watershed/Waterbody Identifier System, Version 2.1, RIC Draft January 1997;
- Fish Collection Methods and Standards, RIC Draft January 1997;
- Field Key to Fresh Water Fishes of British Columbia, RIC Draft 1993;
- Bathymetric Standards for Lake Inventories, A: Fish and Fish Habitat, RIC Draft, January 1997;
- Aerial Photography and Videography Standards for Fish Habitat Channel Assessment, RIC 2nd Draft, March 1996;
- A Guide to Photodocumentation for Aquatic Inventory, RIC Draft, March 1996;
- Standards for Aquatic Mapping, RIC Draft, January 1997;
- Ambient Fresh Water and Effluent Sampling Manual, RIC Draft, July 1994;
- Identification Keys to the Aquatic Plants of British Columbia, RIC Draft 1994;
- BC Standards, Specifications and Guidelines for Resource Surveys Using Global Positioning Systems (GPS) Technology, RIC Draft, 1995.

Prior to landing on the edge of the lake, aerial photographs of the lake and its associated streams were taken from the helicopter. Upon landing on the edge of the lake, angling was attempted. If no fish were caught by angling, a multimesh, 92 m long floating gill net was set. The deepest part of the lake was then found using a Lowrance echosounder by measuring the depth along one e-line and then measuring the depth along one transect at right angles to the e-line and at the deepest point on the e-line. At the deepest point we measured the dissolved oxygen concentration and temperature at 1 metre intervals to either the bottom of the lake or 30 metres, whichever came first. The pH and conductivity of the surface water and a sample from 1 metre above the bottom were measured. The secchi depth was then determined at this location and photographs of the surrounding shoreline were taken. At this point, the floating gill net was checked for fish. If it was empty, a similar sinking gill net and five minnow traps were set. The shoreline was surveyed, locations of inlet and outlet streams were recorded and assessed visually for significant habitat from the boat, substrate was assessed, aquatic vegetation was mapped and the high water mark was estimated. The nets and minnow traps were then frequently checked and if nothing was caught, they were left to fish overnight. In the morning, nets and traps were hauled regardless of fish capture.

Equipment used in the M22* inventory included the following:

- Lowrance X-16 echosounder was used to find the depth of the deepest spot in the lake to determine the limnological sampling site
- Eight foot Zodiac inflatable boat powered by a 2 hp Honda 4 cycle outboard motor was used for studying inlet and outlet streams, shoreline vegetation and substrate composition, and for setting minnow traps
- YSI Model 57 portable Oxygen Meter was used for dissolved oxygen and temperature measurements
- Oakton pH/mV/C meter was used for pH measurements
- LaMotte Conductivity Meter was used for conductivity measurements
- Eagle Explorer 12 Channel GPS Receiver or Garmin 12XL GPS handheld units were used for UTM measurements on the lake
- Pentax 35 mm single lens reflex (SLR) camera with a standard 35 mm focal length lens was used for all photography
- Microsoft Word 6.0 was used for production of the report, and Microsoft Excel 5.0 was used for data storage, calculations, and graphing
- CorelDRAW Graphics 6.0 was used for composition of lake outline, fishing, and index maps
- Ministry of Environment digital entry tools entitled Field Data Information System (FDIS) and Fish Collection Form (Fishcoll) were used for recording data

4.0 Results and Discussion

4.1 General Description

M22* is located on an interior plateau of generally low relief. The elevation of the lake was 825 metres and it had a surface area of 72 ha. The surrounding country had recreational potential for hiking and camping.

4.2 Immediate Shoreline

M22* had a shoreline composed of 100% wetland. The wetlands were more extensive around the creek mouths, however the entire perimeter of the lake had a few metres of wetland prior to the edge of the forested riparian zone. Substrate consisted of organic fines.

Emergent aquatic vegetation covered approximately 15% of the surface area of the lake, and included yellow pondlily (*Nuphar spp.*), *Potamogeton spp.*, and marsh cinquefoil (*Potentilla palustris*). Submergent aquatic vegetation was sparse, however the water colour was brown and the secchi depth was one and a half metres making it difficult to see into the water.

Terrestrial plants and lichens observed on the lake shore included; Pine (*Pinus spp.*), Spruce (*Picea spp.*), Willows (*Salix spp.*), Cottonwood (*Populus balsamifera*), Bunchberry (*Cornus*

canadensis), Freckle pelt lichen (*Peltigera britannica*), Narrow-leaved cotton-grass (*Eriophorum angustifolium*), Scouring rush (*Equisetum spp.*) and Common reed (*Phragmites australis*).

4.3 Surrounding Country

M22* is surrounded by rolling hills of the Nechako Plateau and is within the SBS Biogeoclimatic zone. The majority of these hills are covered by a mixed coniferous and deciduous forest. No forest development had occurred in the area. The closest visible mountain was Netalzul Mountain located approximately 28 kilometres west of the lake.

4.4 Summary of Data Collection

The data collected was recorded in digital files written by the Ministry of Environment in Microsoft Access 2.0 under the name Field Data Information System (FDIS). The specific file name is fdisdat.mdb and contains all of the habitat information. In a similar digital entry tool called Fish Collection Form (Fishcoll), all information relating to fish and fish sampling effort was recorded in a file named fishcoll.mdb. The information in these files is contained in an appendix in hardcopy form and is also provided on a 3 1/2 inch diskette at the back of this document.

4.4.1 Annotated Air Photo

An annotated air photo of M22* showing limnological station, fish sampling sites and inlet and outlet streams is given in Figure 2.

4.4.2 Lake Outline Map

An outline map of M22* showing limnological station, fish sampling sites, inlet and outlet streams and photograph locations and directions is given in Figure 3.

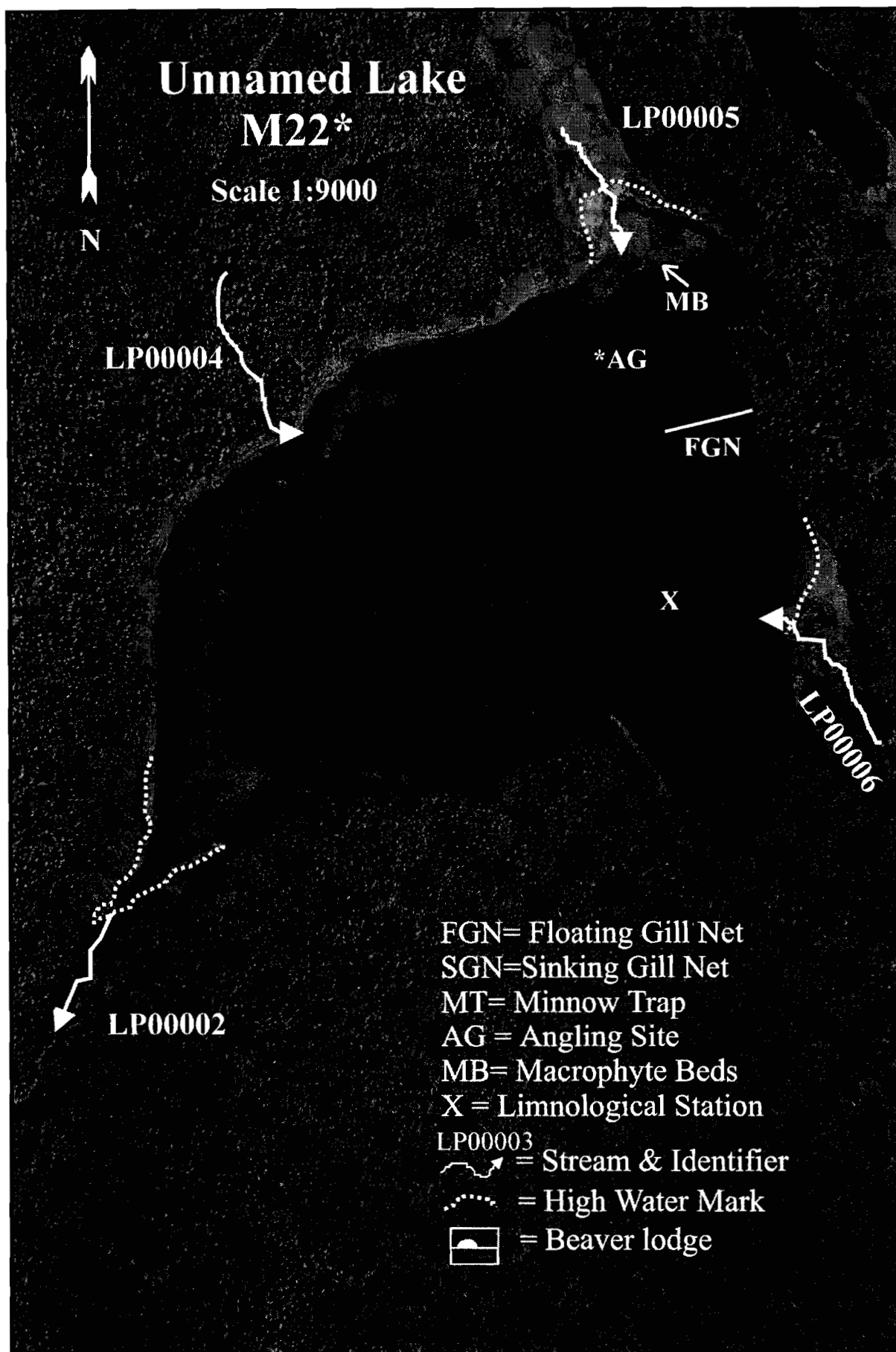


Figure 2. Enlargement of Unnamed Lake (M22*)(Waterbody Identifier 00217BABL) from 30BCC96114 NO. 023.

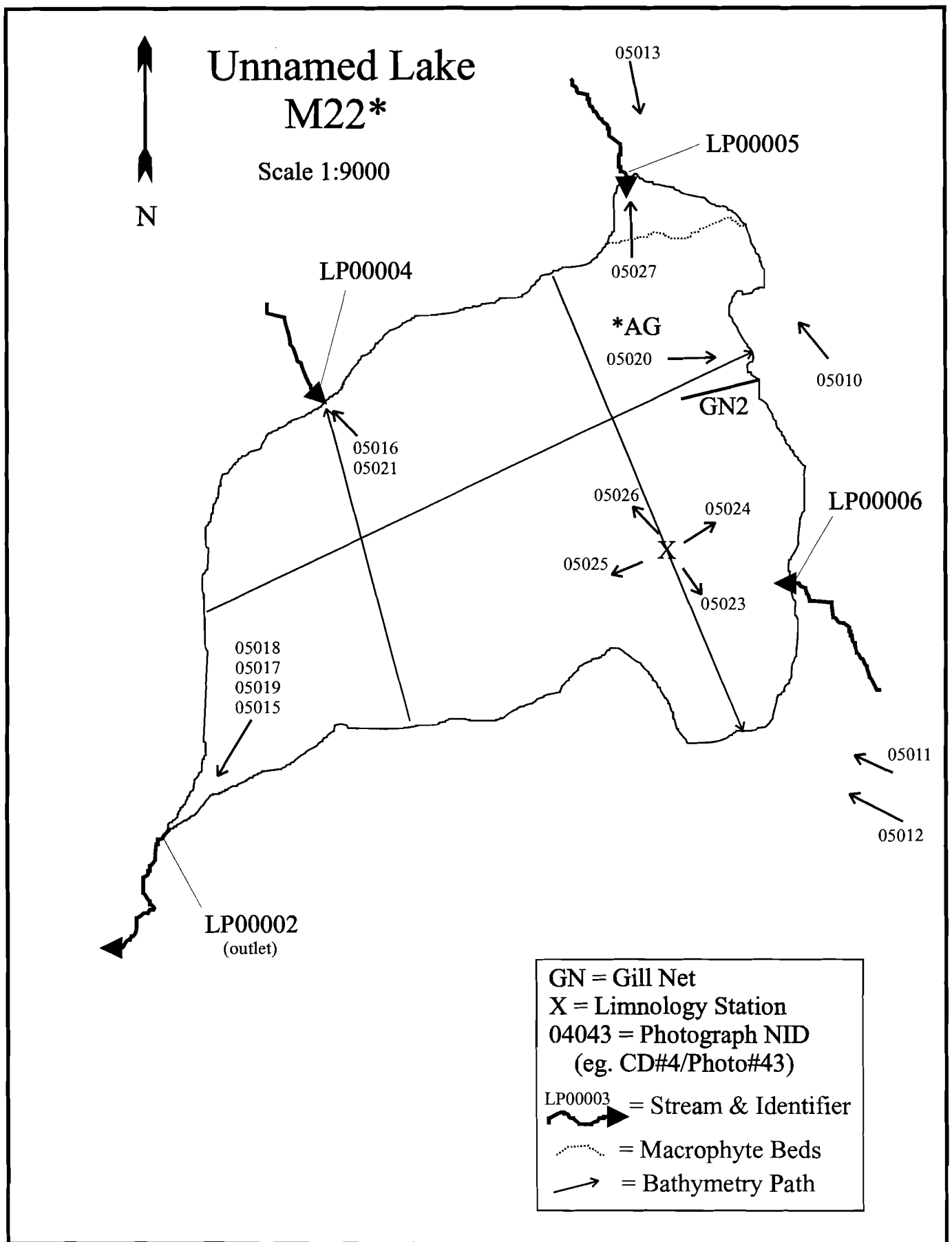


Figure 3. Outline map of Unnamed Lake (Waterbody Identifier 00217BABL) showing limnological station, fish sampling sites, inlet and outlet streams, and photograph locations and directions.

4.4.3 Streams

Table 1. A list of streams associated with M22*.

Table 1 lists all of the streams that were shown on the 1:20 000 TRIM and Forest Cover Maps as flowing into or out of M22*. One of these streams was not found in the field. LP numbers are interim location point numbers assigned to each stream pending replacement with unique watershed codes.

Map Number	Project ID	Interim Location Point Number	Found in Field	UTM Zone	Easting	Northing	High Level Watershed Code	Comments
93M.028	06-LBIR-0010-0003-1998	LP00002	Yes	9U	653140	6127600	480-445700	Unnamed Lake M22* Outlet;
93M.028	06-LBIR-0010-0003-1998	LP00003	No	9U	655280	6130220	480-445700	Unnamed Lake M22* Inlet;
93M.028	06-LBIR-0010-0003-1998	LP00004	Yes	9U	655580	6130440	480-445700	Unnamed Lake M22* Inlet;
93M.028	06-LBIR-0010-0003-1998	LP00005	Yes	9U	656000	6130700	480-445700	Unnamed Lake M22* Inlet;
93M.028	06-LBIR-0010-0003-1998	LP00006	Yes	9U	656260	6130040	480-445700	Unnamed Lake M22* Inlet;

4.3.4.1 Streams Surveyed

Detailed comments on the individual streams observed can be found on the Lake Survey Form.

LP00002. The outlet stream had a beaver dam across it that established the lake level. Beyond the dam, the channel varied from one to five metres wide and had a high degree of cover provided by the presence of cutbank and sedge.

Three of the four inlets recorded on TRIM and Forest Cover Maps were found in the field.

4.4.4 Limnological Sampling

Limnological sampling was conducted at 1700 hours on September 23, 1997. This site is marked LS on the accompanying annotated air photo map and lake outline map. Field data was recorded on the Lake Survey Form, a copy of which can be found in the appendix.

4.4.4.1 Stratification

M22* was not distinctly thermally stratified. Temperature decreased gradually with depth. Dissolved oxygen was also not stratified with the concentration decreasing with increasing depth. M22* appeared to be mesotrophic.

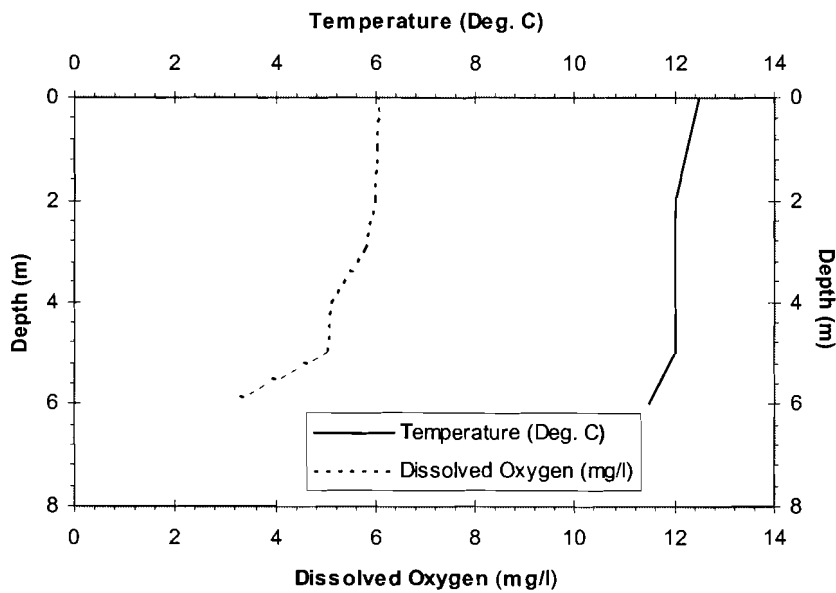


Figure 4. Temperature and dissolved oxygen profiles for M22* on Sept 23, 1997.

4.4.5 Photographs

Photographs taken at this lake are recorded on Compact Disk #2124(CD #5), one of a duplicate set of six CD's produced during the overall project assessing 34 lakes.

Table 2. Index to photographs.

Roll #	Frame	CD/Photo Number	Direction	NID Map	NID	UTM Zone	Easting	Northing	Comment
86	1	5/010	N	93M.028	5010	9	656000	6130700	LP00005 from the air
86	10	5/019	X	93M.028	5019	9	655400	6129800	vegetation near outlet
86	11	5/020	X	93M.028	5020	9	656200	6130300	typical riparian zone
86	12	5/021	N	93M.028	5021	9	655580	6130440	LP00004 mouth
86	13	5/022	S	93M.028	5022	9	656260	6130040	LP00006
86	14	5/023	S	93M.028	5023	9	656029	6130193	looking south from limnology station
86	15	5/024	E	93M.028	5024	9	656029	6130193	looking east from limnology station
86	16	5/025	W	93M.028	5025	9	656029	6130193	looking west from limnology station
86	17	5/026	N	93M.028	5026	9	656029	6130193	looking north from limnology station
86	19	5/027	X	93M.028	5028	9	655900	6130750	longnose sucker
86	2	5/011	W	93M.028	5011	9	656700	6129450	overview of lake
86	3	5/012	W	93M.028	5012	9	656700	6129450	overview of lake
86	4	5/013	S	93M.028	5013	9	656000	6130700	LP00005 from the air
86	5	5/014	S	93M.028	5014	9	656260	6130040	LP00006 from the air
86	6	5/015	S	93M.028	5015	9	655200	6129600	LP00001 from the air
86	7	5/016	N	93M.028	5016	9	655580	6130440	LP00004
86	8	5/017	N	93M.028	5017	9	655200	6129600	LP00001 mouth
86	9	5/018	N	93M.028	5018	9	655200	6129600	LP00001 mouth

N.B. The NID is the Numerical Identifier of a feature, in this case, a photograph. The first digit of the NID represents the CD number and the last three digits represent the photo number.

X = Direction not relevant N, E, S, W = Compass Directions

All photographs taken with a standard 35 mm focal length lens.

4.4.6 Sampling Summary

Table 3. Fish sampling effort summary for M22* and its associated streams on September 23, 1997.

Fishing Effort Summary							
Site No.	Method	Depth at sampling	Set		Pull		Species
			Date	Time	Date	Time	
1	Angling	Surface	Sept. 23	1400	Sept. 23	1415	
2	Floating Gill Net	2 m	Sept. 23	1430	Sept. 23	1645	LSU

LSU=Longnose Sucker

4.5 Summary of Fish Captured

Table 4. Summary of data from fish sampled in M22*, September 23, 1997.

Lake Name	Spp.	Number of fish	Mean length (mm)	Range of Lengths (mm)
M22*	LSU	2	150	115-185

LSU=Longnose Sucker

4.6 Fisheries Observations

4.6.1 Fish

Two longnose suckers (*Catostomus catostomus*) were caught at M22* in the floating gill net which was set for two hours and fifteen minutes. Angling efforts were unsuccessful.

4.6.2 Habitat

A beaver dam at the outlet maintained the lake level. Creek mouths were wetland areas with an abundance of emergent aquatic vegetation which could provide cover for fish. No spawning habitat was observed in any of the streams associated with the lake.

4.6.2.1 Fisheries Sensitive Zones

Inlet streams (LP00005 and LP00006) were surrounded by wetlands that could be considered Fisheries Sensitive Zones.

4.6.2.2 Restoration and Rehabilitation Opportunities

There were no opportunities for restoration or rehabilitation. M22* was pristine.

4.7 Logistics

There were no significant problems in the field work component of this inventory.

Data entry in this report was done using a program called Field Data Information System (FDIS) produced by Ministry of Environment, Lands and Parks of British Columbia. There were multiple releases of this data entry tool throughout production of this report and this caused a loss of significant time. In addition, the Lake Survey Form component of this program was not released until the project was nearly finished causing undue delays.

References

Section A. Standards Documents

The following documents were used as guidelines in conducting this project.

- Anon. (1997) Bathymetric Standards for Lake Inventories. British Columbia Ministry of Environment, Lands and Parks, 42 pp.
- Anon. (1995) Fisheries Information Summary System: Data Compilation and Mapping Procedures. British Columbia Ministry of Environment, Lands and Parks, and Department of Fisheries and Oceans, 105 pp.
- Anon. (1996) A Guide to Photodocumentation, Resources Inventory Committee Manual, Province of British Columbia.
- Anon. (1996) Field Key to the Freshwater Fishes of British Columbia, Resources Inventory Committee Manual, Province of British Columbia.
- Anon. (1997) User's Guide to British Columbia's Watershed/Waterbody Identifier System, version 2.1, Resources Inventory Committee, Province of British Columbia.
- Anon. (1997) Field Data Information System Users Manual. British Columbia Environment, Lands and Parks.
- Anon. (1997) Reconnaissance (1:20 000) Fish and Fish Habitat Inventory: Standards and Procedures.
- Anon. (1997) Fish Collection Methods and Standards. Ministry of Environment, Lands and Parks' Fish Inventory Unit in consultation with Gordon Haas of UBC Fish Museum.
- Anon. (1997) Standards for Fish and Fish Habitat Mapping. Fisheries Section, Resources Inventory Branch, Resources Inventory Committee

Section B. List of Contacts

The following individuals were contacted during the course of this study.

- Deleeuw, D. (1997) Senior Habitat Biologist. Ministry of Environment, Terrace, British Columbia. Personal Communication.
- Facchin, Angelo. (1997-1998) Ministry of Environment, Lands and Parks, Victoria, British Columbia. Field Data Information System. Personal Communication.

Giroux, Paul. Fisheries Inventory Specialist. Ministry of Environment. Smithers, British Columbia. Personal Communication.

Hatlevik, Sig. Senior Fisheries Technician. Ministry of Environment. Smithers, British Columbia. Personal Communication.

Hazelwood, G. (1997) Biologist. Terrace, British Columbia. Personal Communication.

Miers, Lynn. (1997-1998) Ministry of Environment, Lands and Parks, Victoria, British Columbia. Field Data Information System. Personal Communication.

Neis, P. (1997). Ministry of Environment, Lands and Parks, Smithers, British Columbia. Personal Communication.

Senka, J. (1997) Environmental Protection. Waste Management Branch, Ministry of Environment, Lands and Parks, Smithers, British Columbia. Personal Communication.

Stewart, R. (1997) Forest Ecosystem Specialist. Ministry of Environment, Kispiox Forest District, Hazelton, British Columbia. Personal communication.

Section C. Field Guides

The following field guides were used for this project.

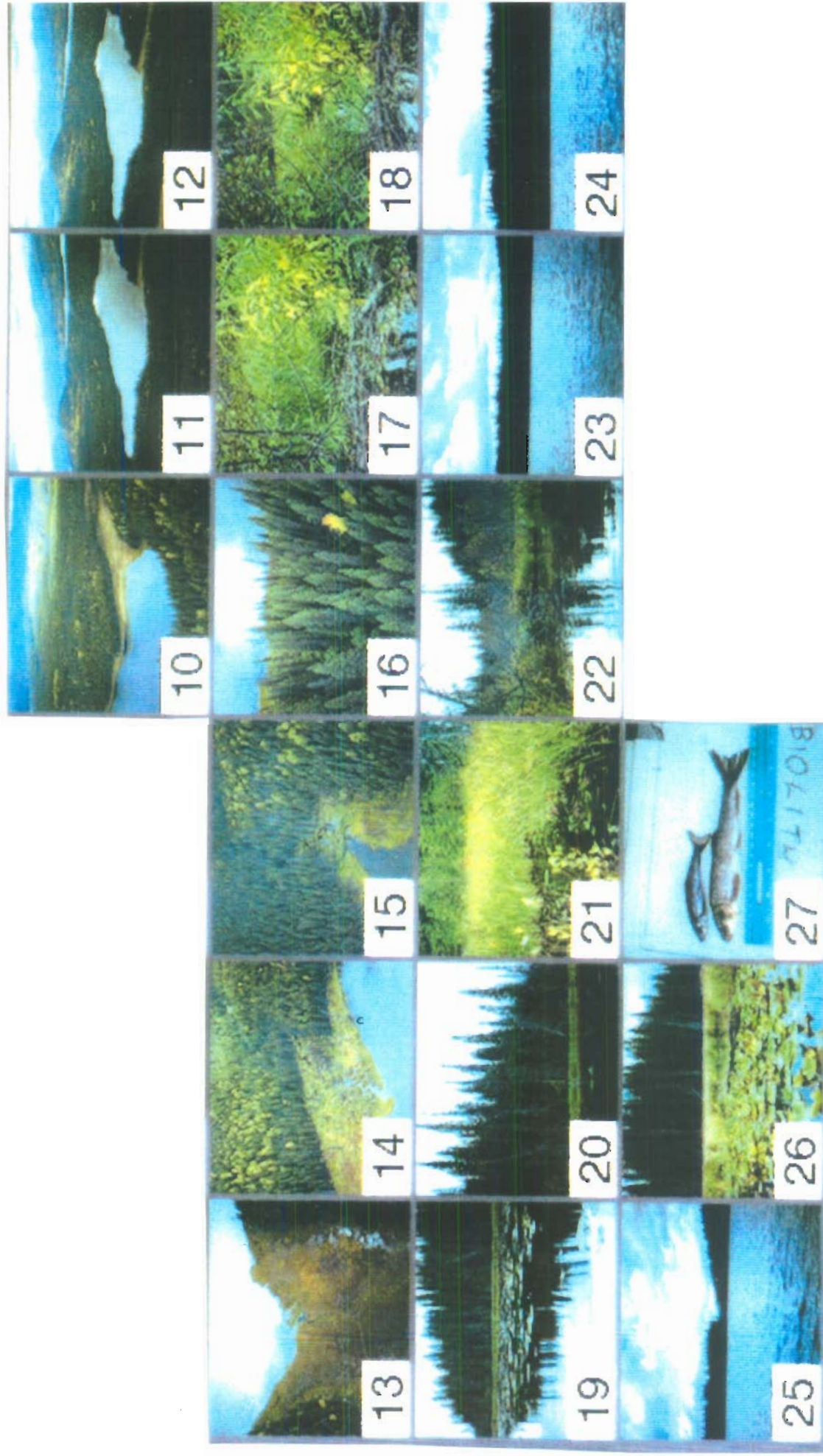
Scott, W. B. and Crossman, E. J. (1973) Freshwater Fishes of Canada. Fisheries Research Board of Canada, Ottawa. Published by Crown.

MacKinnon, Pojar and Coupe. (1992). Plants of Northern British Columbia. B. C. Ministry of Forests and Lone Pine Publishing, Vancouver, British Columbia.

Appendix 1. Photo CD Index Enlargement

The following page is a contact sheet to be used as an index to photographs stored on CD #5. This CD is one of a set of duplicate copies of six CDs that were supplied with the 34 separate lake reports which formed this project.

CD/Photo Number	Direction	NID Map	NID	UTM Zone	Easting	Northing	Comment
5/010	N	93M.028	5010	9	656000	6130700	LP00005 from the air
5/019	X	93M.028	5019	9	655400	6129800	vegetation near outlet
5/020	X	93M.028	5020	9	656200	6130300	typical riparian zone
5/021	N	93M.028	5021	9	655580	6130440	LP00004 mouth
5/022	S	93M.028	5022	9	656260	6130040	LP00006
5/023	S	93M.028	5023	9	656029	6130193	looking south from limnology station
5/024	E	93M.028	5024	9	656029	6130193	looking east from limnology station
5/025	W	93M.028	5025	9	656029	6130193	looking west from limnology station
5/026	N	93M.028	5026	9	656029	6130193	looking north from limnology station
5/027	X	93M.028	5028	9	655900	6130750	longnose sucker
5/011	W	93M.028	5011	9	656700	6129450	overview of lake
5/012	W	93M.028	5012	9	656700	6129450	overview of lake
5/013	S	93M.028	5013	9	656000	6130700	LP00005 from the air
5/014	S	93M.028	5014	9	656260	6130040	LP00006 from the air
5/015	S	93M.028	5015	9	655200	6129600	LP00001 from the air
5/016	N	93M.028	5016	9	655580	6130440	LP00004
5/017	N	93M.028	5017	9	655200	6129600	LP00001 mouth
5/018	N	93M.028	5018	9	655200	6129600	LP00001 mouth



Appendix 2. Field Data Information System (FDIS)

FDIS Lake Form

16-Jul-98

Watershed Code:

480-445700-00000-00000-0000-0000-000-000-000-000-000

Reach #

ILP Map #

ILP #

1

WATERBODY

Waterbody Type Secondary Sample Type Secondary Project ID 06-LBIR-0010-0959-1998
 Lake Name Local Name M 22 (Unnamed Lake) Fish Form? ☒
 Watershed Code 480-445700-00000-00000-0000-0000-000-000-000-000-000
 Reach # 1 Air Photo Ref. 30BCC96114 023 Ref. Comment
 Waterbody ID 00217BABL ILP Map # ILP # Magnitude 11
 NID Map # NID # UTM 9 655825 6130225

TRIM Map #	Year
93M.028	1993

Source Method
 Surface Area 72 O O
 Elevation 825 MAP MAP
 Biogeoclimatic Zone SBS

TERRAIN CHARACTERISTICS

Setting VF Aspect W
 Hillslope Coupling DC Basin Genesis GL
 LAND USE NO AG FB FR MI PR UD OT
 Percentage 100

SHORELINE CHARACTERISTICS

Shoreline Type i ii iii iv v
 Percentage 100
 Cover ABUN Resorts Camps Boatlaunch
 Rec. Features 0 0 0

INLETS / OUTLETS

Inlets (Perm.) 2 Inlets (Other) 2 Outlets: 1 Spawning hab. present? ☐

I/O	Watershed Code	ILP Map #	ILP #	Comments
O		93M.028	2	
I		93M.028	3	
I		93M.028	4	
I		93M.028	5	
I		93M.028	6	

SURVEY INFORMATION

Date 1997-09-23 to 1997-09-24
 Agency C074 Crew MB/DW

AQUATIC FLORA

EMERGENT VEG. SUBMERGENT VEG.
 Sparse ☐ OR 20 % Sparse ☒ OR %
 Floating Algae? ☐
 Voucher Specimen

ACCESS

AIR ☐ FW ☒ H ROAD ☐ V2 ☐ V4 Auto within
 OFF ROAD ☐ FT ☐ ATV ☐ V4 Distance
 TRAIL? ☐ Distance
 Closest Community Fort Babine or Smithers
 Comments
 No comments

FDIS Lake Form

Reach # 1
ILP Map #
ILP #

16-Jul-98

Watershed Code: 480-445700-00000-00000-0000-000-000-000-000-000

Type	Dom. Species
EMERGENT	yellow pondlily
EMERGENT	grass leaved pot.
EMERGENT	floating leaved pot.
EMERGENT	marsh cinquefoil
SUBMERGENT	grass

LAKE BATHYMETRY

Type of Survey EL Littoral Area 90 % Method O Max. Depth 6.5
 Benchmark Height Max Water Level 0.2
 Benchmark Type/Location
 Comments

PHOTO DOCUMENTATION

Photo (R/F)	Foc Lg	Dir	NID Map #	NID #	UTM (zone/easting/northing)	Method	Comments
86 / 1	ST	N	93M.028	5010	9 656000 6130700	MAP	LP00005 from the air
86 / 10	ST	X	93M.028	5019	9 655400 6129800	MAP	vegetation near outlet
86 / 11	ST	X	93M.028	5020	9 656200 6130300	MAP	typical riparian zone
86 / 12	ST	N	93M.028	5021	9 655580 6130440	MAP	LP00004 mouth
86 / 13	ST	S	93M.028	5022	9 656260 6130040	MAP	LP00006
86 / 14	ST	S	93M.028	5023	9 656029 6130193	GP3	looking south from limnology
86 / 15	ST	E	93M.028	5024	9 656029 6130193	GP3	looking east from limnology
86 / 16	ST	W	93M.028	5025	9 656029 6130193	GP3	looking west from limnology
86 / 17	ST	N	93M.028	5026	9 656029 6130193	GP3	looking north from limnology
86 / 18	ST	N	93M.028	5027	9 656000 6130700	MAP	LP00005
86 / 19	ST	X	93M.028	5028	9 655900 6130750	MAP	longnose sucker
86 / 2	ST	W	93M.028	5011	9 656700 6129450	MAP	overview of lake
86 / 3	ST	W	93M.028	5012	9 656700 6129450	MAP	overview of lake
86 / 4	ST	S	93M.028	5013	9 656000 6130700	MAP	LP00005 from the air
86 / 5	ST	S	93M.028	5014	9 656260 6130040	MAP	LP00006 from the air
86 / 6	ST	S	93M.028	5015	9 655200 6129600	MAP	LP00001 from the air
86 / 7	ST	N	93M.028	5016	9 655580 6130440	MAP	LP00004
86 / 8	ST	N	93M.028	5017	9 655200 6129600	MAP	LP00001 mouth
86 / 9	ST	N	93M.028	5018	9 655200 6129600	MAP	LP00001 mouth

AQUATIC WILDLIFE OBSERVATIONS

Group	Observations
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FDIS Lake FormReach # ILP Map # ILP #
1

16-Jul-98

Watershed Code: 480-445700-00000-00000-0000-000-000-000-000-000-000

BIR loon calling in the morning
BIR 2 ducks
BIR hawk hunting over NE swamp
MAM moose
MAM red squirrel
BIR kingfisher
BIR woodpecker
INV aphids

**LIMNOLOGICAL STATION
WATER QUALITY**

Station No. 1 Date 1997-09-23 Time: 17:00
Location UTM 9 656029 6130193 EMS #

METHOD USED**WATER SAMPLE**

Secchi Depth 1.5
Water Color BROW VE
pH (surf/bottom) 7.8 7.6
Ice Depth

DISSOLVED OXYGEN, TEMPERATURE PROFILE AND CONDUCTIVITY

Depth	DO (d)	T(C)	DO (a)	T (C)	Cond.
0.1	6.4	12.5	5.7	12.5	20
1	6.3	12.5	5.7	12	
2	6.3	12	5.6	12	
3	6.1	12	5.4	12	
4	5.3	12	4.8	12	
5	5.3	12	4.7	12	
6	3.2	11.5	3.2	11.5	20

H2S: **EQUIPMENT USED**

pH	P2	Water Temp	T2	Conductivity	S4	Dis. Oxygen	D2
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COMMENTS

Section	Comments
AQUATIC FLORA	submergent grass looks like eelgrass but is freshwater
WEATHER	cloudy with blue sky between
WATERBODY	the water has a yellowy colour and looks very black from the air-very difficult to see into
INLETS/OUTLETS	LP00002-outlet. A beaver dam is holding the level of the lake and there is not much flow at the outlet channel. Beyond the beaver dam the channel is 1-5m wide and 1m deep with 50% cover provided by cutbank and sedge.

FDIS Lake Form

Reach # ILP Map # ILP #

1

16-Jul-98

Watershed Code: 480-445700-00000-00000-0000-0000-000-000-000-000-000

INLETS/OUTLETS

LP00004-this inlet is not classifiable as a creek as it has no defined channel and is more aptly described as ground seepage.

INLETS/OUTLETS

LP00006-the inlet channel is a swamp complex with braided channels at the mouth. High degree of cover is present from willow and sedge providing good rearing habitat.

INLETS/OUTLETS

LP00005-this inlet is typical of swamp channels with abundant lily pads and sedge and no discernable flow. The channel is 4m wide and 1m deep, providing rearing habitat.

INLETS/OUTLETS

LP00003-this inlet appears intermittent from the air and was not located during the ground survey.

Appendix 3. Fish Data Collection Form

Fish Data Collection Form

A. Location Referencing

Gazetted Name UNNAMED LAKE Alias M22
Watrshed Cod 480-445700-00000-00000-0000-000-000-000-0 WBID # 00217BABL
Reach # 1 Interim Locational ID: Project ID 06-LBIR-0010-0959-1998
(BCGS/NTS) Map # 93M.028 Locational Point

B. Survey Information

Survey Dat 1997/09/23 to 1997/09/24 Agency C074
Crew MB /DW/ Fish Collection Permit 34770-20
General Comments

C. Station Identification and Conditions

Site	Method	#	UTM Coordinates	Temp	Con	Vis	Turb
1	AG	1					
2	GN	7					

D. Fish Summary

Site	Meth	#	H/P	Species	Stage	Age	Tot #	Min Lgth	Max Lgth	Fish Act
1	AG	1	10							
2	GN	7	1	LSU	J		2	115	185	R

E. Gear Specifications

Site	Meth	#	H/P	D In	T In	D Out	T Out	EF Sec	EF Lgth	EF Width	Encl	Nt Typ	Lgth	Dpth	Mesh	IN Sz	Set	Hab	Volt	Freq	Pul	Make	Model
1	AG	1	10	09/23	1400	09/23	1415																
2	GN	7	1	09/23	1430	09/23	1645					FL	100	2	ST		SU	L					

F. Individual Fish Data

Site	Meth	#	H/P	Species	Lgth	Wgt	Sex	Mat	Age Str	Age Smp #	Vouch #	Gen Str	Gen Smp #	Comments	Roll	Fr
1	AG	1	10													
2	GN	7	1	LSU	185	50	U	IM	SC	1					86	19
2	GN	7	1	LSU	115	10	F	MT	SC	2					86	19