### Reconnaissance Lake Inventory of Unnamed Lake alias M25\*

Waterbody Identifier 00338BABL Map # 93M.028 UTM 09.611720.6122970

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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 480-598800-47500 Waterbody Identifier 00338BABL

Waterbody Identifier 00338BABL

UTM at Lake Outlet 09.611720.6122970

Number of Tributaries on TRIM or FCM 1

Number of Tributaries observed in field 1
Magnitude 7

Elevation 906

NTS Map 93M/01

TRIM Map 93M.028

Biogeoclimatic Zone SBS

Air Photos 30BCC96106

#### Lake Sampling Summary

Fish Species Present Rainbow Trout

Lake Survey Type Secondary (1997 RIC Standards)

Water Surface Area 25 ha
Max. Depth 17 m
Secchi Depth 3 m
Shoreline Perimeter 3.0 km
Lake Length 1.1 km

Number of Islands

#### **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 M25\* 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. M25\* 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

M25\* is located approximately 70 kilometres northeast of Smithers Airport and approximately 20 kilometres north of Smithers Landing, B.C. The latitude of the lake is 55° 13' 36.2" and the longitude is 126° 27' 26". The location of the lake is given in Figure 1.

#### 1.2.1 Access

The field crew reached this lake by helicopter, however the lake is accessible by road and the helicopter landed on the side of the road. There are no landing sites for a helicopter on the edge of the lake. M25\* is accessible by a branch off the Morrison Main Forest Service Road (FSR) which passes the lake on the east side. The distance from the road to the lake is approximately 150 m through the riparian zone on the eastern side.

#### 2.0 Resource Information

A thorough data search of Ministry of Environment lake files yielded no preexisting information about M25\*. This lake was pristine however logging settings were located to the north and east of the lake. No preexisting campsites were observed.

#### 2.1 Points of Interest

This lake has high potential for recreational activities including hiking and camping. Natural campsites are possible in the surrounding forest or on the island located in the northeastern portion of the lake. This lake may receive fishing pressure because of its proximity to a FSR.

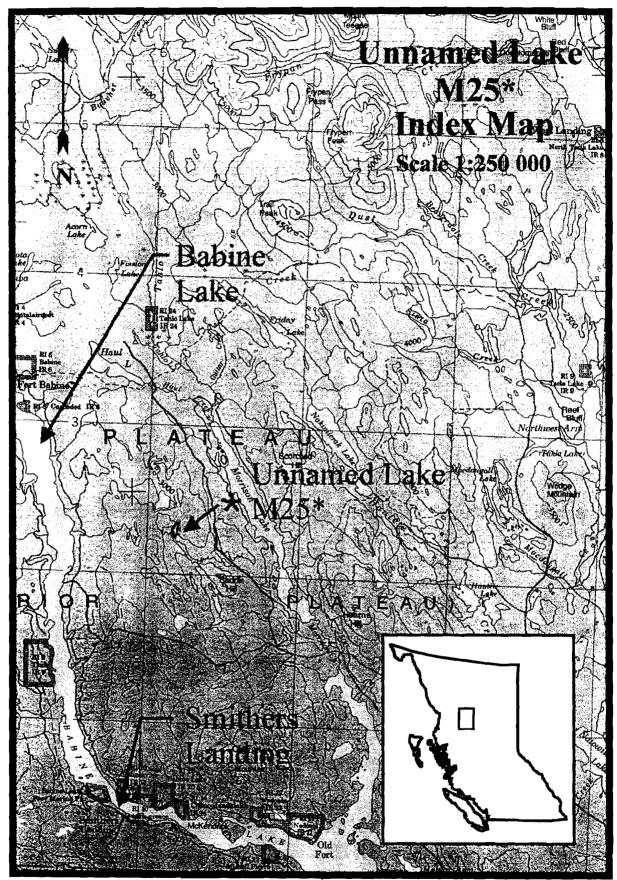


Figure 1. Map showing the location of Unnamed Lake (M25\*), Waterbody Identifier 00338BABL.

#### 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 M25\* 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

M25\* is easily accessible by a Forest Service Road and may receive some fishing pressure. The lake has recreation potential for hiking, canoeing and camping. Natural campsites are located in the dry, pine-covered areas around the lake. The lake has a surface area of 25 ha and an elevation of 906 metres.

#### 4.2 Immediate Shoreline

M25\* had a shoreline lined with sedges (Carex spp.) There was an absence of rocks and the substrate consisted of organic fines. The outlet had many fallen logs near its mouth and the inlet on the northwestern side of the lake was a wetland. Emergent and submergent aquatic vegetation was sparse and observed only near the inlet and outlet streams.

Terrestrial plants and lichens observed on the lake shore included; Devil's club (oplopanax horridus), Pine (Pinus spp.), Spruce (Picea spp.), Fir (Abies spp.), Alder (Alnus spp.), Bunchberry (Cornus canadensis), and Coastal reindeer (Cladina portentosa).

#### 4.3 Surrounding Country

M25\* is surrounded by rolling hills between Babine and Morrison Lakes and is located within the SBS Biogeoclimatic zone. The majority of the surrounding country was covered by a mature coniferous forest. Logging cutblocks were located on the east and northern sides of the lake. The closest mountains are Old Fort Mountain approximately 16 kilometres to the south and Netalzul Mountain approximately 31 km to the northwest.

#### 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 M25\* 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 M25\* showing limnological station, fish sampling sites, inlet and outlet streams and photograph locations and directions is given in Figure 3.

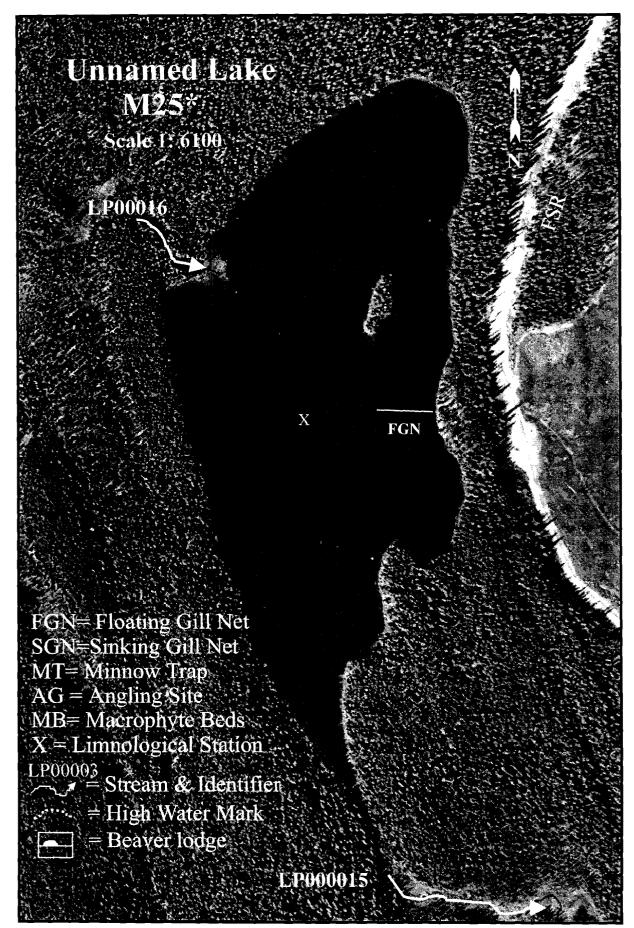


Figure 2. Enlargement of Unnamed Lake (M25\*) (Waterbody Identifier 00338BABL) from aerial photograph 30BCC96106 No. 148.

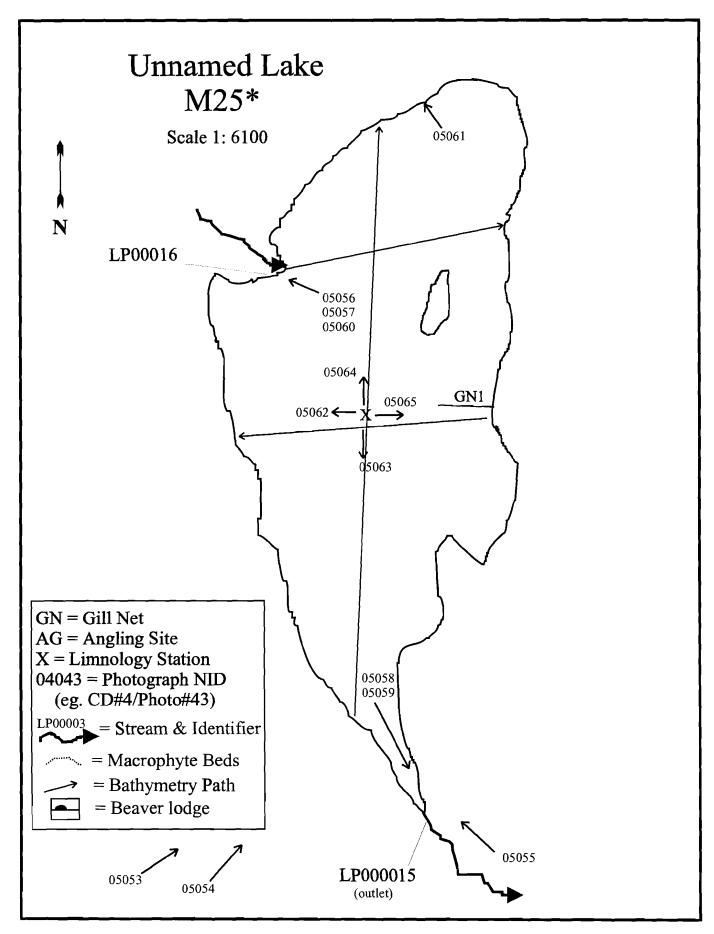


Figure 3. Outline map of Unnamed Lake (Waterbody Identifier 00338BABL) showing limnological station, fish sampling sites, inlet and outlet streams, and photograph locations and directions.

#### 4.4.3 Streams

#### Table 1. A list of streams associated with M25\*.

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 M25\*. Both of these streams were found in the field. LP numbers are interim location point numbers assigned to each stream pending replacement with unique watershed codes.

| Map<br>Number | Project<br>ID                      | Interim<br>Location<br>Point<br>Number | Found<br>in Field | UTM<br>Zone | Easting | Northing | High Level<br>Watershed<br>Code | Comments                     |
|---------------|------------------------------------|--|-------------------|-------------|---------|----------|---------------------------------|------------------------------|
| 93M.028       | 06-LBIR-<br>0010-<br>0003-<br>1998 | LP00015                                | Yes               | 9U          | 665080  | 6120960  | 480-598800-<br>47500            | Unnamed Lake M25*<br>Outlet; |
| 93M.028       | 06-LBIR-<br>0010-<br>0003-<br>1998 | LP00016                                | Yes               | 9U          | 661640  | 6123240  | 480-598800-<br>47500            | Unnamed Lake M25*<br>Inlet;  |

#### 4.3.4.1 Streams Surveyed

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

LP00015. The outlet stream was influenced by a beaver dam which reduced flow in the channel. The head of the creek was blocked to boat access by large woody debris. The observable portion of the channel had a width of 1 metre with adequate depth and cover to provide moderate quality rearing habitat.

The only inlet recorded on TRIM and Forest Cover Maps was found in the field.

#### 4.4.4 Limnological Sampling

Limnological sampling was conducted at 1320 hours on September 24, 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

M25\* was both thermally stratified as well as stratified with respect to dissolved oxygen concentration. The depth threshold for both the thermocline and the oxycline was approximately 4 metres. M25\* appeared to be eutrophic.

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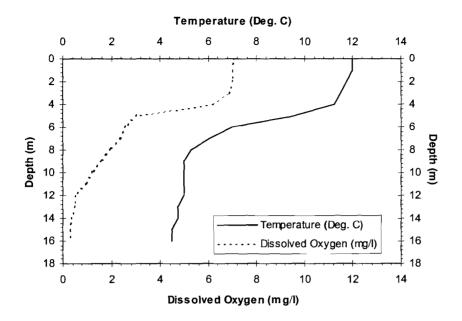


Figure 4. Temperature and dissolved oxygen profiles for M25\* on September 24, 1997.

#### 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<br># | Frame | CD/Photo<br>Number | Direction | NID<br>Map | NID  | UTM<br>Zone | Easting | Northing | 72 Comment                       |
|-----------|-------|--------------------|-----------|------------|------|-------------|---------|----------|----------------------------------|
| 41        | 1     | 5/053              | N         | 93M.028    | 5053 | 9U          | 661650  | 6122350  | overview from the air            |
| 41        | 10    | 5/062              | X         | 93M.028    | 5062 | 9U          | 661672  | 6122831  | looking W from limnology station |
| 41        | 11    | 5/063              | X         | 93M.028    | 5063 | 9U          | 661672  | 6122831  | looking S from limnology station |
| 41        | 12    | 5/064              | X         | 93M.028    | 5064 | 9U          | 661672  | 6122831  | looking N from limnology station |
| 41        | 13    | 5/065              | X         | 93M.028    | 5065 | 9U          | 661672  | 6122831  | looking E from limnology station |
| 41        | 14    | 5/066              | X         | 93M.028    | 5066 | 9U          | 662050  | 6123000  | fish                             |
| 41        | 2     | 5/054              | N         | 93M.028    | 5054 | 9U          | 661650  | 6122350  | overview from the air            |
| 41        | 3     | 5/055              | N         | 93M.028    | 5055 | 9U          | 661900  | 6122350  | LP00014 from the air             |
| 41        | 4     | 5/056              | N         | 93M.028    | 5056 | 9U          | 661640  | 6123240  | LP00016 from the air             |
| 41        | 5     | 5/057              | N         | 93M.028    | 5057 | 9U          | 661640  | 6123240  | LP00016 from the air             |
| 41        | 6     | 5/058              | S         | 93M.028    | 5058 | 9U          | 661900  | 6122350  | LP00014 from the air             |
| 41        | 7     | 5/059              | S         | 93M.028    | 5059 | 9UU         | 661900  | 6122350  | LP00014 mouth                    |
| 41        | 8     | 5/060              | N         | 93M.028    | 5060 | 9U          | 661640  | 6123240  | LP00016 mouth                    |
| 41        | 9     | 5/061              | N         | 93M.028    | 5061 | 9U          | 661850  | 6123500  | typical riparian zone            |

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 M25\* and its associated streams on September 24, 1997.

| 14g. 44<br>20 449 |                   | Fis               | hing Effort S | Summary |          |              |         |
|-------------------|-------------------|-------------------|---------------|---------|----------|--------------|---------|
| Site No.          | Method            | Depth at sampling | Set<br>Date   | Time    | Date     | Pull<br>Time | Species |
| 1                 | Floating Gill Net | 2 m               | Sept. 24      | 1220    | Sept. 24 | 1225         | RB      |

RB=Rainbow Trout

#### 4.5 Summary of Fish Captured

Table 4. Summary of data from fish sampled in M25\*, September 25, 1997.

| Lake Name |    | Number of fish | Mean<br>length<br>(mm) | Range of<br>Lengths (mm) |
|-----------|----|----------------|------------------------|--------------------------|
| M25*      | RB | 2              | 233                    | 230-235                  |

RB=Rainbow Trout

#### 4.6 Fisheries Observations

#### 4.6.1 Fish

Two rainbow trout (*Oncorhynchus mykiss*) were captured at this lake in a floating gill net which was set for about 5 minutes. Angling efforts were unsuccessful.

#### 4.6.2 Habitat

The habitat for fish in this lake appeared to be rich, however the beaver dam at the outlet of the lake may be a barrier to spawning migration of fish resident in this lake. Fallen logs near the outlet may provide cover for fish.

#### 4.6.2.1 Fisheries Sensitive Zones

The inlet creek mouth was surrounded by a wetland that could be considered a Fisheries Sensitive Zone.

#### 4.6.2.2 Restoration and Rehabilitation Opportunities

The forest service road that passed along the eastern side of the lake was approximately 150 metres from the edge of the lake. A cutblock was located on the eastern side of the road and bordered the edge of the road. The coniferous trees forming the 150 metre riparian zone on the eastern edge of the lake should be monitored as they may be subject to blow-down.

#### 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

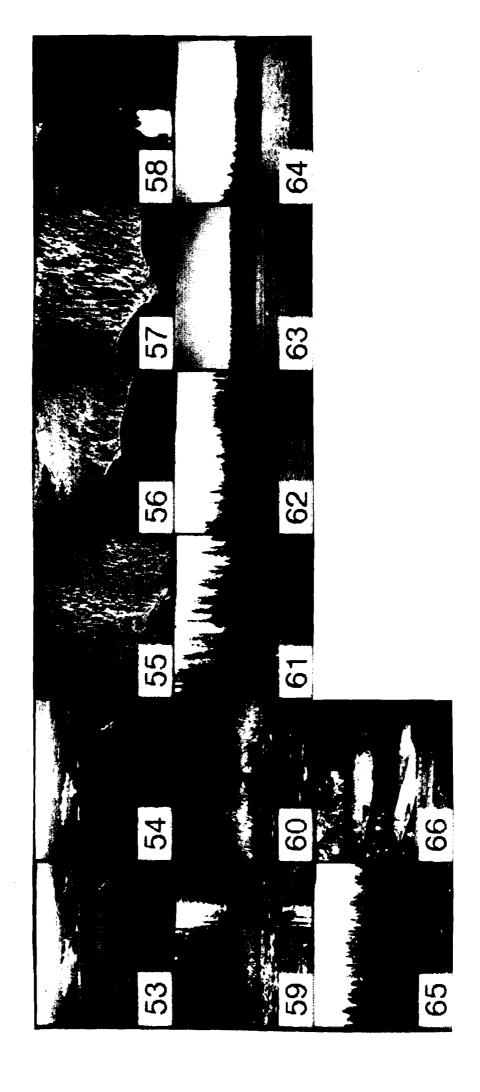
The following field guides were used for this project.

- 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<br>Number | Direction | NID<br>Map | NID  | UTM<br>Zone | Easting | Northing | Comment                          |
|--------------------|-----------|------------|------|-------------|---------|----------|----------------------------------|
| 5/053              | N         | 93M.028    | 5053 | 9U          | 661650  | 6122350  | overview from the air            |
| 5/062              | X         | 93M.028    | 5062 | 9U          | 661672  | 6122831  | looking W from limnology station |
| 5/063              | x         | 93M.028    | 5063 | 9U          | 661672  | 6122831  | looking S from limnology station |
| 5/064              | Х         | 93M.028    | 5064 | 9U          | 661672  | 6122831  | looking N from limnology station |
| 5/065              | X         | 93M.028    | 5065 | 9U          | 661672  | 6122831  | looking E from limnology station |
| 5/066              | X         | 93M.028    | 5066 | 9U          | 662050  | 6123000  | fish                             |
| 5/054              | N         | 93M.028    | 5054 | 9U          | 661650  | 6122350  | overview from the air            |
| 5/055              | N         | 93M.028    | 5055 | 9U          | 661900  | 6122350  | LP00014 from the air             |
| 5/056              | N         | 93M.028    | 5056 | 9U          | 661640  | 6123240  | LP00016 from the air             |
| 5/057              | N         | 93M.028    | 5057 | 9U          | 661640  | 6123240  | LP00016 from the air             |
| 5/058              | S         | 93M.028    | 5058 | 9U          | 661900  | 6122350  | LP00014 from the air             |
| 5/059              | S         | 93M.028    | 5059 | 9UU         | 661900  | 6122350  | LP00014 mouth                    |
| 5/060              | N         | 93M.028    | 5060 | 9U          | 661640  | 6123240  | LP00016 mouth                    |
| 5/061              | N         | 93M.028    | 5061 | 9U          | 661850  | 6123500  | typical riparian zone            |



# Appendix 2. Field Data Information System (FDIS)

#### **FDIS Lake Form** Reach # ILP Map # ILP# 1 16-Jul-98 Watershed Code: WATERBODY **Waterbody Type** Project ID 06-LBIR-0010-1001-1998 Secondary Sample Type Secondary Fish Form? Local Name M 25 (Unnamed Lake) Lake Name **Watershed Code** Air Photo Ref. 30BCC96106 147 Reach # Ref. Comment Waterbody ID 00338BABL ILP Map # ILP# Magnitude 7 NID# UTM 9 611720 6122970 NID Map # Method Source Year TRIM Map # 93M.028 **Surface Area** 25 0 O 1993 906 MAP Elevation MAP **Biogeoclimatic Zone** SBS TERRAIN CHARACTERISTICS SHORELINE CHARACTERISTICS Setting VF Shoreline Type Ν Aspect iii **Hillslope Coupling** PC **Basin Genesis** GL Percentage 10 90 Cover ABUN Resorts Camps Boatlaunch LAND USE FR NO AG FB MI PR UD OT Percentage 0 60 40 Rec. Features 0 0 **INLETS / OUTLETS** Spawning hab. present? # Inlets (Perm.) Inlets (Other) **Outlets:** O 1/O Watershed Code ILP Map# ILP# Comments 0 93M.028 15 1 93M.028 16 SURVEY INFORMATION ACCESS AIR FW H ROAD X V2 V4 Auto within Date 1997-09-24 1997-09-24 to OFF ROAD FT ATV V4 Agency C074 Crew MB/DW Distance

| Туре     | Dom. Species    | <br> | <br> |
|----------|-----------------|------|------|
| EMERGENT | yellow pondlily |      |      |
| EMERGENT | sedge           |      |      |
| EMERGENT | cinquefoil      |      |      |

%

TRAIL?

Comments

logging road)

Closest Community Smithers Landing

Now there is a trail! (gear was packed through riparian zone from

AQUATIC FLORA

SUBMERGENT VEG.

Sparse X OR

EMERGENT VEG.

Floating Algae?

**Voucher Specimen** 

Sparse X OR

Distance

**FDIS Lake Form** 

Reach #

ILP Map #

ILP#

16-Jul-98

Watershed Code:

**EMERGENT** 

mare's tail

SUBMERGENT

milfoil

SUBMERGENT

P. richardsonii

LAKE BATHYMETRY

Type of Survey

EL

Littoral Area

20 %

Method

Max. Depth

17

Benchmark Height

Max Water Level

O 0.2

**Benchmark Type/Location** 

Comments

|             | PHOTO DOCUMENTATION |     |          |      |     |              |              |        |                             |  |  |  |
|-------------|---------------------|-----|----------|------|-----|--------------|--------------|--------|-----------------------------|--|--|--|
| Photo (R/F) | Foc Lg              | Dir | NID Map# | NID# | UTM | (zone/eastin | ıg/northing) | Method | Comments                    |  |  |  |
| 41 / 1      | ST                  | N   | 93M.028  | 5053 | 9   | 661650       | 6122350      | MAP    | overview from the air       |  |  |  |
| 41 / 10     | ST                  | X   | 93M.028  | 5062 | 9   | 661672       | 6122831      | GP3    | looking W from limnology s  |  |  |  |
| 41 / 11     | ST                  | Х   | 93M.028  | 5063 | 9   | 661672       | 6122831      | GP3    | looking S from limnology st |  |  |  |
| 41 / 12     | ST                  | Х   | 93M.028  | 5064 | 9   | 661672       | 6122831      | GP3    | looking N from limnology st |  |  |  |
| 41 / 13     | ST                  | Х   | 93M.028  | 5065 | 9   | 661672       | 6122831      | GP3    | looking E from limnology st |  |  |  |
| 41 / 14     | ST                  | Х   | 93M.028  | 5066 | 9   | 662050       | 6123000      | MAP    | fish                        |  |  |  |
| 41 / 2      | ST                  | N   | 93M.028  | 5054 | 9   | 661650       | 6122350      | MAP    | overview from the air       |  |  |  |
| 41 / 3      | ST                  | N   | 93M.028  | 5055 | 9   | 661900       | 6122350      | MAP    | LP00014 from the air        |  |  |  |
| 41 / 4      | ST                  | N   | 93M.028  | 5056 | 9   | 661640       | 6123240      | MAP    | LP00016 from the air        |  |  |  |
| 41 / 5      | ST                  | N   | 93M.028  | 5057 | 9   | 661640       | 6123240      | MAP    | LP00016 from the air        |  |  |  |
| 41 / 6      | ST                  | S   | 93M.028  | 5058 | 9   | 661900       | 6122350      | MAP    | LP00014 from the air        |  |  |  |
| 41 / 7      | ST                  | S   | 93M.028  | 5059 | 9   | 661900       | 6122350      | MAP    | LP00014 mouth               |  |  |  |
| 41 / 8      | ST                  | N   | 93M.028  | 5060 | 9   | 661640       | 6123240      | MAP    | LP00016 mouth               |  |  |  |
| 41 / 9      | ST                  | N   | 93M.028  | 5061 | 9   | 661850       | 6123500      | MAP    | typical riparian zone       |  |  |  |

| AQUAT | C WII DI IFF | OBSERVA | TIONS |
|-------|--------------|---------|-------|

Group Observations

loon

BIR duck (think

duck (think it was a mallard)

MAM BIR moose excrement

LIMNOLOGICAL STATION WATER QUALITY

Station No.

1

Date 1997-09-24

Time: 13:20

Location UTM

9 6

661672

6122831

EMS#

### **FDIS Lake Form**

Reach # 1

ILP Map#

ILP#

16**-**Jul-98

Watershed Code:

480-598800-47500-00000-0000-000-000-000-000-000-000

**METHOD USED** 

WATER SAMPLE

Secchi Depth **Water Color** 

**BROW** 

VΕ

pH (surf/bottom)

10.8 8.7

Ice Depth

| Depth | DO (d) | T(C) | DO (a) | T (C) | Cond. |         |  |
|-------|--------|------|--------|-------|-------|---------|--|
| 0.1   | 7.3    | 12   | 6.8    | 12    | 32    | ******* |  |
| 1     | 7.3    | 12   | 6.7    | 12    |       |         |  |
| 2     | 7.3    | 12   | 6.7    | 11.5  |       |         |  |
| 3     | 7.2    | 11.5 | 6.5    | 11.5  |       |         |  |
| 4     | 6.5    | 11.5 | 5.9    | 11    |       |         |  |
| 5     | 3      | 10   | 3      | 9     |       |         |  |
| 6     | 2.8    | 7.5  | 2.3    | 6.5   |       |         |  |
| 7     | 2.6    | 6    | 2.1    | 6     |       |         |  |
| 8     | 2.2    | 5.5  | 1.6    | 5     |       |         |  |
| 9     | 2      | 5    | 1.1    | 5     |       |         |  |
| 10    | 1.5    | 5    | 0.9    | 5     | 0     |         |  |
| 11    | 1.3    | 5    | 0.6    | 5     |       |         |  |
| 12    | 0.7    | 5    | 0.3    | 5     |       |         |  |
| 13    | 0.7    | 4.5  | 0.3    | 5     |       |         |  |
| 14    | 0.4    | 4.5  | 0.3    | 5     |       |         |  |
| 15    | 0.3    | 4.5  | 0.3    | 4.5   |       |         |  |
| 16    | 0.3    | 4.5  | 0.3    | 4.5   | 39    |         |  |

| EQUIPMENT USED |    |            |    |              |    |             |    |  |  |  |
|----------------|----|------------|----|--------------|----|-------------|----|--|--|--|
| рН             | P2 | Water Temp | T2 | Conductivity | S4 | Dis. Oxygen | D2 |  |  |  |

| COMMENTS                     |   |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|--|--|--|--|--|--|--|--|--|--|
| Section                      | Comments  |  |  |  |  |  |  |  |  |  |  |
| WEATHER                      | sunny with clear skies (air temp 18C)   |  |  |  |  |  |  |  |  |  |  |
| RECREATION POTENTIAL         | very pretty lake with good fishing and canoeing and swimming  |  |  |  |  |  |  |  |  |  |  |
| OTHER                        | logging very close to lake -block is reforested with pines and has a fairly good riparian zone  |  |  |  |  |  |  |  |  |  |  |
| AQUATIC WILDLIFE OBSERVATION | no beaver lodges on this lake   |  |  |  |  |  |  |  |  |  |  |
| INLETS/OUTLETS               | LP00015-the outlet is 1m wide and .5m deep. The current is weak and the channel is affected by a beaver dam. Cutbank and sedge cover are present. At the head of the creek there are fallen logs which prevented boat access. |  |  |  |  |  |  |  |  |  |  |
| INLETS/OUTLETS               | LP00016-3m wide by 1m deep inlet channel. The stream is very swampy with a high degree of cover from sedge, alder, and buckbrush.   |  |  |  |  |  |  |  |  |  |  |

# Appendix 3. Fish Data Collection Form

# **Fish Data Collection Form**

Page

30

A. Location Referencing

Gazetted Name UNNAMED LAKE M25 Alias

480-598800-47500-00000-0000-0000-000-000-000-0 **WBID #** 00338BABL Watrshed Cod

Reach #1

Interim Locational ID:

Project ID 06-LBIR-0010-1001-1998

**Locational Point** (BCGS/NTS) Map # 93M.028

#### B. Survey Information

Survey Dat 1997/09/24

Crew MB /DW/

**General Comments** 

to 1997/09/24 Agency C074

Fish Collection Permit 34770-20

#### C. Station Identification and Conditions

#### D. Fish Summary

| Site | Method | # | UTM Coordinates | Temp | Con | Vis | Turb | Site | Meth | # | H/P | Species | Stage Age | Tot# | Min Lgth | Max Lgth | Fish Act |
|------|--------|---|-----------------|------|-----|-----|------|------|------|---|-----|---------|-----------|------|----------|----------|----------|
| 11   | GN     | 7 |                 |      |     |     |      | 1    | GN   | 7 | 11  | RB      | J         | 2    | 230      | 235      | R        |

#### E. Gear Specifications

| S | ite | Meth | # | H/P | D In  | T In | D Out | T Out | EF Sec | EF Lgth | EF Wdth | Encl | Nt Typ | Lgth | Dpth | Mesh | IN Sz S | et Hal | Volt | Freq | Pul | Make | Model |   |
|---|-----|------|---|-----|-------|------|-------|-------|--------|---------|---------|------|--------|------|------|------|---------|--------|------|------|-----|------|-------|---|
|   | 1   | GN   | 7 | 1   | 09/24 | 1220 | 09/24 | 1225  |        |         |         |      | FL     | 100  | 2    | ST   | S       | υL     |      |      |     |      |       | 1 |

#### F. Individual Fish Data

| Site | Meth | # | H/P | Species | Lgth | Wgt | Sex | Mat | Age Str | Age Smp # | Age | Vouch # | Gen Str | Gen Smp # | Comments       | Roll | Fr |  |
|------|------|---|-----|---------|------|-----|-----|-----|---------|-----------|-----|---------|---------|-----------|----------------|------|----|--|
| 1    | GN   | 7 | 1   | RB      | 235  | 140 | М   | MT  | SC      | 1         |     | _       | FR      | 1         | EATING INSECTS | 41   | 14 |  |
| 1    | GN   | 7 | 1   | RB      | 230  | 120 | М   | MT  | SC      | 2         |     |         | FR      | 1         | NO PARASITES   | 41   | 14 |  |