

**Unnamed Lake
(480-697200-25400-40300-01)
01466BABL**

**SECONDARY LAKE INVENTORY
1997 STUDIES**

**Ministry of Environment, Lands and Parks
Project No. IVBVS622 (FRBC)**

Prepared for:

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COVER PAGE

Lake Name: Unnamed Lake

Alias: -

Watershed Code: 480-697200-25400-40300-01

Waterbody Identifier: 01466BABL

Survey Date: September 29-30, 1997

Project Code: IVBVS622

Survey Objectives: to conduct secondary lake inventories in the southern portions of the Morice and Lakes Forest Districts (Prince Rupert Forest Region)

Survey Type: Secondary Lakes Inventory

Survey Agency: CO60

Proponent: MELP

Inventory Program: FRBC

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- Appendix B Lake Outline Map
- Appendix C Air Photo Plate
- Appendix D Lake Survey Form
- Appendix E Fish Collection Form
- Appendix F Photograph Contact Sheets

1.0 LAKE INVENTORY DATA

1.1 WATERBODY

Type:	Small lake (<400 ha)
Lake Name:	Unnamed Lake
Watershed Code:	480-697200-25400-40300-01
Waterbody Identifier:	01466BABL
Map Reference:	093L.078 (1993)
Air photo Reference:	30BCC93054 No.118
Surface Area: 61 ha	Source: MELP
Elevation: 976 m	Source: TRIM
Biogeoclimatic Zone:	Sub-Boreal Spruce (SBS)

The lake is shown in Plates 1 and 2.

1.2 ACCESS

The lake was accessed by road from Houston.

Directions: From Houston, travel NE on Hwy 16; turn left onto North Road Forest Service Road (FSR); turn right onto Chapman FSR; turn right onto East Betty FSR and follow to the washed out bridge (approximately 10 km). The lake is on the right hand side.

1.3 TERRAIN

The lake appears to be a glacial lake (GL), with a west aspect. It is situated on a large plateau (PN), and exhibits no signs of hillside coupling (DC). Land in the immediate vicinity of the lake is currently in a natural state with no evidence of recent use.

1.4 SHORELINE

The shoreline is marsh with a grass perimeter. An extensive marsh area exists at the west end of the lake by the outlet. Shoreline vegetative cover is abundant. No recreational features (i.e. resorts, campsites, boat launches) were observed.

1.5 BATHYMETRY

An E-line survey was completed along the long axis of the lake using a Lowrance X-16 unit (equipped with continuous paper trace sounder rolls). The maximum recorded depth was 3.2 m. Based on the E-line survey, the lake littoral area (% lake <6 m) was estimated to be 100%. The maximum high water mark was observed at 0.3 m.

1.6 INLETS/OUTLETS

One permanent inlet, and one ephemeral inlet and one outlet have been identified for this lake. Both inlet tributaries were previously mapped on the 1:20,000 TRIM map. Neither tributary had an existing watershed code; interim locational points (ILP) were used to identify these streams.

Inlet (permanent)

w/s code: 480-697200-25400-40300

This is the main inlet for the lake. The lower portion of this inlet is a navigable channel flowing through a large wetland area for approximately 1.5 km. Good rearing areas exist but discharge is minimal and substrate is too small to provide useable spawning habitat. A large beaver dam is situated approximately 1 km upstream and possibly obstructs fish passage to upper reaches.

Inlet (ephemeral)

ILP #85

This tributary was approximately 0.4 m in width close to the lake, with a gravel and cobble substrate. There was good stream cover and flow. This inlet provides good potential spawning habitat.

Outlet

w/s code: 480-6972-002-540-040-300

The outlet is a distinct channel approximately 1.5 m wide close to the lake, yet narrows somewhat as the channel passes through an extensive marsh area. Flow was evident and substrate consists of fine gravel. The outlet offers good spawning habitat. Beaver dams were present at the outlet but did appear to be potential permanent barriers to fish movement.

1.7 AQUATIC FLORA

Large areas of the lake contained emergent vegetation (60%) and submergent vegetation (60%) at the time of the survey. Submergent species included *Potamogeton amphibium*, and emergent vegetation included *Nuphar lutea* (yellow pond-lily) and *Potamogeton natans* (floating-leaved pondweed). Floating algae were not observed.

1.8 WILDLIFE

During the survey, beaver activity (i.e. dams) was observed at both the main inlet and the outlet.

1.9 LIMNOLOGICAL SAMPLING

The limnological sampling site was located at the deepest recorded point (3.2 m). Dissolved oxygen (mg/l) and temperature (C) were measured with a YSI meter (model 85). Oxygen values low (< 1 mg/l), but one of the YSI probes was malfunctioning and results likely underestimate correct values (for profile results, refer to Appendix D). The Secchi depth was 1.9 m; water colour was brown. pH was measured using a hand held Hanna pH meter. Surface and bottom pH values were 8.7 and 8.8, respectively. H₂S was not detected.

1.10 SURVEY COMMENTS

1.10.1 Problems

One of the YSI probes was found to be malfunctioning after completion of the survey. As a result, oxygen values were likely underestimated.

1.10.2 Fish Comments

Seven adult cutthroat trout (*Oncorhynchus clarki*) and 25 adult redbreast shiners (*Richardsonius balteatus*) were captured during gillnetting. One floating gillnet was set in the centre of the lake for approximately 1.25 hours.

1.10.3 Habitat Comments

Good spawning habitat was observed at one of the inlets and the outlet. The entire shoreline was marsh with no indication of rock or gravel substrate. The extensive presence of shoreline grasses and macrophyte vegetation offers good fish cover.

1.10.4 Rehabilitation/Enhancement Comments

No rehabilitation/enhancement efforts are recommended.

1.10.5 Follow-up Sampling

No follow-up sampling is recommended.

1.10.6 Other Concerns/Interest Points

None.

2.0 PROJECT- SPECIFIC RESULTS DISCUSSION

Fish sampling results show that cutthroat trout and redbside shiner are present in this lake. Potential spawning habitat was observed in one of the tributaries as well as the outlet. No lake spawning habitat was identified. No recreational activity was observed at the lake.

3.0 REFERENCES

- Anonymous. 1994. Ambient Fresh Water and Effluent Sampling Manual. Resources Inventory Committee Manual, Province of British Columbia. Draft, July 1994.
- Anonymous. 1995. FISS: Data Compilation and Mapping Procedures. Federal/Provincial Fish Habitat Inventory and Information Program. February, 1995.
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- Anonymous. 1996. A Guide to Photodocumentation. BC Ministry of Environment, Lands and Parks, Fisheries Branch. (Resources Inventory Committee Manual)
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- Anonymous. 1997. Standards for Fish and Fish Habitat Mapping. BC Ministry of Environment, Lands and Parks, Fisheries Section, Resources Inventory Branch. May, 1997. (Resources Inventory Committee Manual)
- Anonymous. 1997. Users Guide to the British Columbia Watershed/Waterbody Identifier System. Resources Inventory Committee Manual, Province of British Columbia. Draft, January 1997.
- BC Ministry of Environment, Lands, and Parks. Fisheries Branch, Inventory Unit. Stream Information Summary System (SISS) and Fisheries Inventory Summary System (FISS) - Data Files and Maps.
- McPhail, J.D., and R. Carveth. 1994. Field Key to the Freshwater Fishes of British Columbia. BC Ministry of Environment, Lands and Parks. Fisheries Branch. (Resources Inventory Committee Manual)
- Scott, W.B., and E.J. Crossman. 1973. Freshwater Fishes of Canada. Fisheries Research Board of Canada, Ottawa. 966 p.

Plates

Plate 1 View from northeast end of lake looking south.



Plate 2 View from northeast end of lake looking west.



Appendices

Appendix A

Bathymetry (E-line Trace)

Appendix B

Lake Outline Map

Appendix C

Air Photo Plate

Appendix D

Lake Survey Form

Appendix E

Fish Collection Form

Appendix F

Photograph Contact Sheets

Photographic index for southern lakes secondary lake survey 1997.

Lake	Watershed Code	Roll	Pic#	CD	Image	Neg	Dir.	Comment
M46	480-697200-25400-40300-01	29	10	0822	60	9342	N/A	Cutthroat trout
M46	480-697200-25400-40300-01	29	11	0822	61	9342	N/A	Redside shiner
M46	480-697200-25400-40300-01	29	35	0822	85	9342	Up	Outlet 480-697200-25400-40300
M46	480-697200-25400-40300-01	29	36	0822	86	9342	Dn	Outlet 480-697200-25400-40300
M46	480-697200-25400-40300-01	29	37	0822	87	9342	Up	Outlet 480-697200-25400-40300
M46	480-697200-25400-40300-01	30	1	0831	10	9349	Up	Inlet ILP 85
M46	480-697200-25400-40300-01	30	2	0831	11	9349	Up	Inlet ILP 85
M46	480-697200-25400-40300-01	30	3	0831	12	9349	Dn	Inlet ILP 85
M46	480-697200-25400-40300-01	30	4	0831	13	9349	Dn	Inlet ILP 85
M46	480-697200-25400-40300-01	30	5	0831	14	9349	Up	Inlet 480-697200-25400-40300
M46	480-697200-25400-40300-01	30	6	0831	15	9349	Dn	Inlet 480-697200-25400-40300
M46	480-697200-25400-40300-01	30	7	0831	16	9349	Up	Inlet 480-697200-25400-40300
M46	480-697200-25400-40300-01	30	8	0831	17	9349	SE	Panoramic view of lake
M46	480-697200-25400-40300-01	30	9	0831	18	9349	S	Panoramic view of lake
M46	480-697200-25400-40300-01	30	10	0831	19	9349	SW	Panoramic view of lake
M46	480-697200-25400-40300-01	30	11	0831	20	9349	SW	Panoramic view of lake
M46	480-697200-25400-40300-01	30	12	0831	21	9349	W	Panoramic view of lake
M46	480-697200-25400-40300-01	30	13	0831	22	9349	NW	Panoramic view of lake
M46	480-697200-25400-40300-01	30	14	0831	23	9349	N	Panoramic view of lake



