Unnamed Lake
(480-697200-25400-53700-01)
01648BABL

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:	**480-697200-25400-53700-01**
Waterbody Identifier:	**01648BABL**
Survey Date:	**September 30, 1997**
Project Code:	**lVBVS622**
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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APPENDICES

1.0 LAKE INVENTORY DATA

1.1 WATERBODY

Type:	Small lake (<400 ha)
Lake Name:	Unnamed Lake
Watershed Code:	480-697200-25400-53700-01
Waterbody Identifier:	01648BABL
Map Reference:	093L.078 (1993)
Air photo Reference:	30BCC 93055 No. 98, 30BCC 93054 No.170
Surface Area: 124 ha	Source: MELP
Elevation: 978 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. Road conditions were good.

Directions: From Houston, travel northeast on Highway 16 and turn left onto North Road; turn right onto Chapman Forest Service Road (FSR) and follow main road past the East Betty FSR. A large clearcut is evident on the right side of the road between the road and the lake. The lake is sizeable and not easily missed.

1.3 TERRAIN

The lake appears to be a glacial lake (GL), with a north aspect. It is situated on a valley floor (VF), with no signs of hillside coupling (DC). Land in the immediate vicinity of the lake is comprised of areas currently not used (65%) and forestry (35%). Forestry land use was estimated based on an existing clear cut situated at the south end of the lake. Forest Development Plan Maps do not show future logging plans within 1000 m of the lake.

1.4 SHORELINE

The shoreline is comprised of 90% marsh and 10% sand/gravel. Small amounts of gravel were observed along sections of the lake. Shoreline vegetative cover is abundant and consists primarily of grass and low-lying shrubs. 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. Abundant aquatic vegetation prevented completion of the E-line in the northwest part of the lake. spot sounding indicated the lake depth was relatively uniform throughout. Based on the E-line survey, the littoral area (% lake < 6 m) was estimated to be 100%. The maximum high water mark was observed at 0.1 m.

1.6 INLETS/OUTLETS

Nine ephemeral inlets and one outlet have been identified for this lake. Eight inlets were previously mapped on the 1:20,000 TRIM map. The ninth inlet is a new tributary identified during the field survey. One inlet had an existing watershed code; interim locational points (ILP) were used to identify the remaining inlets. Mouths of inlets along the southwest portion of the lake were difficult to access due to dense aquatic vegetation. Most of these inlets were surveyed on foot from the Chapman FSR, making channel identification difficult. Channels were not discernible for two of the previously mapped inlets and have been recorded as nvc on the lake outline map.

Inlet (ephemeral)
W/s code: 480-697200-25400-53700

This is the main inlet for this lake. The stream enters a large wetland near its mouth. The channel is wide and deep close to the lake with fine substrate providing good overwintering habitat. Good spawning habitat was observed farther up the inlet (where it crosses East Betty FSR), where good substrate and significant flow are present.

Inlet (ephemeral)
ILP # 89

This inlet is identified as ephemeral on the 1:20,000 TRIM map. Flow was observed during the field survey. Channel width was approximately 0.4 m at the lake. The substrate was primarily cobble.

Inlet (ephemeral)

ILP # 90

Water was flowing at the time of the field survey. The channel width was approximately 0.2 m, close to the lake. The substrate consisted primarily of sand and silt. There were pool/riffle characteristics identified along the channel, however, no spawning habitat was observed.

Inlet (ephemeral)
ILP #88

This inlet appears to meander through a small marsh area. Water was present intermittently, however no flow was observed. The substrate consists of mostly sand and silt.

Inlet (ephemeral – new tributary)
ILP # 102

This inlet was not previously mapped and was considered a new tributary. Water is present intermittently and no flow was observed along the channel, which was approximately 0.3 m in width where it crosses Chapman FSR. The substrate consists of cobble and gravel

Inlet (ephemeral)
ILP # 92

There were a number of indistinct ephemeral channels located close to the mouth of this inlet. Fisheries values in this stream are likely very low.

Inlet (ephemeral - nvc)
ILP # 94

Although previously mapped on the 1:20,000 TRIM map no channel was discernible during a foot survey of the area. Further investigations may be required to confirm channel presence.

Inlet (ephemeral)
ILP # 93

This inlet had intermittent presence of water. The substrate consists mostly of sand and silt. Although fish cover could be provided by the large/small woody debris present within the channel, this inlet offers poor fish habitat.

Inlet (ephemeral - nvc)
ILP # 91

Although previously mapped on the 1:20,000 TRIM, no visible channel was discernible during a foot survey of the area. Further investigations may be required to confirm its presence/absence.

Outlet
W/s code: 480-697200-25400-53700--01

This outlet drops through a series of log jams in an open wetland before flowing through mature coniferous forest at the north end of the lake. Considerable flow was observed at the time of the survey and good spawning habitat may exist in downstream reaches.

1.7 AQUATIC FLORA

At the time of the survey, large areas of the lake contained emergent vegetation (50%) and submergent vegetation (50%). Submergent species included *Polygonum amphibium,* while emergent vegetation included *Nuphar lutea* (yellow pond-lily) and *Glyceria spp.* Floating algae were not observed.

1.8 WILDLIFE

During the survey, loons, beaver activity (i.e. lodges) and signs of moose and bear were observed.

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 were low (< 1 mg/l); the oxygen probe was found to be malfunctioning after completion of the survey and may have underestimated correct concentrations. The Secchi depth was 1.8 m; water colour was brown. pH was measured using a hand held Hanna pH meter. Surface and bottom pH values were 8.8 and 8.4, respectively.

1.10 SURVEY COMMENTS

1.10.1 Problems

One of the YSI probes was found to be malfunctioning after completion of the survey and likely underestimated oxygen values for this lake.

1.10.2 Fish Comments

One floating gillnet was set perpendicular to shore for approximately 1.5 hours. Three cutthroat trout (*Oncorhynchus clarki*) and one longnose sucker (*Catostomus catostomus)* were captured. All fish appeared to be adults.

1.10.3 Habitat Comments

Potential spawning habitat exists in some inlets. Abundant aquatic vegetation in most of the lake provides good cover for rearing fish.

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 longnose sucker are present in this lake. Potential spawning habitat was observed in inlets. Temperature measurements did not indicate a thermocline. Oxygen concentrations were abnormally low for a productive lake and likely were underestimated due to malfunction of the YSI probe. Presence of fish indicates oxygen levels are suitable to sustain fish populations. No recreational features were observed at the lake. This lake does not appear to be in high use by anglers, likely due to dense aquatic vegetation and lack of good access.

3.0 REFERENCES

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Plates

Plate 1 View from near ILP 96 looking northwest.

Plate 2 View from Chapman Forest Service Road looking north.

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
M48	480-697200-25400-53700-01	29	1	0822	51	9342	Up	Inlet ILP 90
M48	480-697200-25400-53700-01	29	2	0822	52	9342	Dn	Inlet ILP 90
M48	480-697200-25400-53700-01	29	3	0822	53	9342	SD	Shoreline near ILP 91
M48	480-697200-25400-53700-01	29	4	0822	54	9342	Dn	Inlet ILP 93
M48	480-697200-25400-53700-01	29	5	0822	55	9342	Up	Inlet ILP 93
M48	480-697200-25400-53700-01	29	6	0822	56	9342	Up	Inlet 480-697200-25400-53700
M48	480-697200-25400-53700-01	29	7	0822	57	9342	Dn	Outlet
M48	480-697200-25400-53700-01	29	8	0822	58	9342	Dn	Outlet
M48	480-697200-25400-53700-01	29	15	0822	65	9342	N/A	CT
M48	480-697200-25400-53700-01	29	16	0822	66	9342	N/A	LSU
M48	480-697200-25400-53700-01	29	17	0822	67	9342	NW	Panoramic view
M48	480-697200-25400-53700-01	29	18	0822	68	9342	N	Panoramic view
M48	480-697200-25400-53700-01	29	19	0822	69	9342	NE	Panoramic view
M48	480-697200-25400-53700-01	29	20	0822	70	9342	E	Panoramic view
M48	480-697200-25400-53700-01	29	21	0822	71	9342	SE	Panoramic view
M48	480-697200-25400-53700-01	29	22	0822	72	9342	Dn	Inlet ILP 88
M48	480-697200-25400-53700-01	29	23	0822	73	9342	Dn	Inlet ILP 88
M48	480-697200-25400-53700-01	29	24	0822	74	9342	Up	Inlet ILP 88
M48	480-697200-25400-53700-01	29	25	0822	75	9342	Dn	Inlet ILP 89
M48	480-697200-25400-53700-01	29	26	0822	76	9342	Up	Inlet ILP 89
M48	480-697200-25400-53700-01	29	27	0822	77	9342	Dn	Inlet ILP 102
M48	480-697200-25400-53700-01	29	28	0822	78	9342	Up	Inlet ILP 102
M48	480-697200-25400-53700-01	29	29	0822	79	9342	Dn	Trib of ILP 92
M48	480-697200-25400-53700-01	29	30	0822	80	9342	Up	Trib of ILP 92
M48	480-697200-25400-53700-01	29	31	0822	81	9342	Dn	Trib of ILP 92
M48	480-697200-25400-53700-01	29	32	0822	82	9342	Dn	Trib of ILP 102
M48	480-697200-25400-53700-01	29	33	0822	83	9342	Dn	Trib of ILP 92
M48	480-697200-25400-53700-01	29	34	0822	84	9342	Dn	Trib of ILP 92


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