Ailport Lake
(460-829700-20600-30400-01)
01123BULK

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:	**Ailport Lake**
Alias:	**-**
Watershed Code:	**460-829700-20600-30400-01**
Waterbody Identifier:	**01123BULK**
Survey Date:	**September 27, 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:	Ailport Lake
Watershed Code:	460-829700-20600-30400-01
Waterbody Identifier:	01123BULK
Map Reference:	093L.060 (1994)
Air photo Reference:	30BCC 94065 No.89
Surface Area: 22 ha	Source: MELP
Elevation: 1277 m	Source: TRIM
Biogeoclimatic Zone:	Englemann Spruce-sub-alpine Fir (ESSF)

The lake is shown in Plates 1 and 2.

1.2 ACCESS

The lake was accessed by helicopter from Houston, British Columbia. Flying time was approximately 20 minutes northeast of Houston.

1.3 TERRAIN

The lake appears to be a glacial lake (GL), with a southwest aspect. It is situated on a large plateau (PN), and does not exhibit signs of hillside coupling (DC). Land in the immediate vicinity of the lake is currently unused (100%). Forest Development Plan Maps do not indicate future logging plans within 1000 m of the lake.

1.4 SHORELINE

The shoreline comprised of 100% marsh with a grass perimeter. Shoreline vegetative cover is sparse and consists primarily of grass. A large trapper cabin was observed on the south shore, located near one of the inlets. No other 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 12.2 m. Based on the E-line survey, the estimated littoral area (% lake < 6 m) is 60%. The maximum high water mark was observed at 0.3 m.

1.6 INLETS/OUTLETS

Two permanent inlets, one ephemeral inlet and one outlet have been identified for this lake. All inlet tributaries were previously mapped on the 1:20,000 TRIM map. One inlet had an existing watershed code; interim locational points (ILP) were used to idenify the remaining two tributaries.

Inlet (permanent)
w/s code: 460-829700-20600-30400-8550

This channel flows through a marsh area near the lake. Channel width is approximately 0.35 m. The substrate consists of sand and silt. Rearing habitat was observed close to the lake and spawning habitat may be provided farther upstream. A beaver dam located close to the mouth of the inlet but did not appear to present a significant barrier to fish.

Inlet (permanent)
ILP #47

This inlet also flows through a long marsh area towards the lake. The channel width at the lake is approximately 0.5 m. The substrate consists of sand and silt. Rearing habitat was observed close to the lake and spawning habitat may be provided farther upstream.

Inlet (ephemeral)
ILP #46

This inlet appears to be an ephemeral channel, which winds through a small marsh area towards the lake. Although low flow was observed at the time of the survey, it was believed to be surface run-off. The channel width at the lake is approximately 0.2 m. The substrate consists of sand and silt. Rearing habitat was observed close to the lake and spawning habitat may be provided farther upstream.

Outlet
w/s code: 460-829700-20600-30400

The outlet is a distinct channel approximately 0.4 m wide close to the lake and flows downstream through grassy banks. Significant flow was evident at the time of the survey. The substrate consists primarily of sand/silt with some gravel/cobble, providing moderate spawning and rearing habitat downstream of the lake.

1.7 AQUATIC FLORA

The lake contained small areas of emergent vegetation (<10%) and submergent vegetation (<10%) at the time of the survey. Submerged species included *Hippuris spp*. and *Potamogeton perfoliatus*, and emergent vegetation included *Nuphar lutea* (yellow pond-lily) and *Caryx spp.* Floating algae were not observed.

1.8 WILDLIFE

During the survey, beaver activity (i.e. dam) was observed, particularly at the east end of the lake.

1.9 LIMNOLOGICAL SAMPLING

The limnological sampling site was located at the deepest recorded point (12.2 m). Dissolved oxygen (mg/l) and temperature (C) were measured with a YSI meter (model 85). A thermocline was evident at approximately 7.0 m below the surface. Oxygen values were low (2-5 mg/l) above the thermocline (for profile results, refer to Appendix D). Oxygen values are believed to be underestimated; the YSI probe was found to be malfunctioning upon completion of the field program. The Secchi depth was 2.75 m; water colour was brown. pH was measured using a hand held Hanna pH meter. Surface and bottom pH were 8.4 and 8.2, respectively. H_2S was not detected.

1.10 SURVEY COMMENTS

1.10.1 Problems

The YSI oxygen probe was found to be malfunctioning during a laboratory test at the end of survey, and oxygen results may be underestimated.

1.10.2 Fish Comments

Six adult cutthroat trout (*Oncorhynchus clarki)* were captured during gillnetting. Fish sizes ranged between 18.3 and 25.8 cm in length.. One floating gillnet was set perpendicular to the shore for approximately 3 hours.

1.10.3 Habitat Comments

Rearing habitat was observed at all of the inlets, close to the lake. Potential spawning habitat may also be available farther upstream along the inlets. Both spawning and rearing habitat were observed at the outlet. Moderate amounts of shoreline grasses may provide 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 are present in this lake. Both spawning and rearing habitat were observed at the lake. Temperature measurements indicated a thermocline at approximately 7.0 m below the surface.

A trapper cabin was observed on the south shore of the lake. All terrain vehicle trails around the cabin indicate that this area is used regularly for recreational purposes. No other recreational features were observed; nor were there any logging plans identified in close proximity to the lake.

3.0 REFERENCES

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Plates

Plate 1 Aerial view of lake looking northeast.

Plate 2 View looking west down inlet stream ILP 47 towards lake.

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
L33	460-829700-20600-30400-01	26	2	0830	39	9345	Dn	Inlet ILP 46
L33	460-829700-20600-30400-01	26	3	0830	40	9345	Dn	Inlet ILP 46
L33	460-829700-20600-30400-01	26	4	0830	41	9345	Up	Inlet ILP 46
L33	460-829700-20600-30400-01	26	5	0830	42	9345	Dn	Outlet 460-829700-20600-30400
L33	460-829700-20600-30400-01	26	6	0830	43	9345	Up	Outlet 460-829700-20600-30400
L33	460-829700-20600-30400-01	26	7	0830	44	9345	Up	Outlet 460-829700-20600-30400
L33	460-829700-20600-30400-01	26	8	0830	45	9345	XS	Outlet 460-829700-20600-30400
L33	460-829700-20600-30400-01	26	9	0830	46	9345	Up	Inlet ILP 47
L33	460-829700-20600-30400-01	26	10	0830	47	9345	Dn	Inlet ILP 47
L33	460-829700-20600-30400-01	26	11	0830	48	9345	N/A	CT
L33	460-829700-20600-30400-01	26	12	0830	49	9345	Up	Inlet 460-829700-20600-30400-8550
L33	460-829700-20600-30400-01	26	13	0830	50	9345	Dn	Inlet 460-829700-20600-30400-8550
L33	460-829700-20600-30400-01	27	1	0830	1	9346	Up	Inlet 460-829700-20600-30400-8550
L33	460-829700-20600-30400-01	27	30	0830	30	9346	SE	Aerial photos
L33	460-829700-20600-30400-01	27	31	0830	31	9346	SE	Aerial photos
L33	460-829700-20600-30400-01	27	32	0830	32	9346	SE	Aerial photos
L33	460-829700-20600-30400-01	27	33	0830	33	9346	SE	Aerial photos


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