

**Unnamed Lake  
(460-750400-02)  
00845BULK**

**SECONDARY LAKE INVENTORY  
1997 STUDIES**

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

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**APRIL 1998**

## COVER PAGE

**Lake Name:** Unnamed Lake

**Alias:** -

**Watershed Code:** 460-750400-02

**Waterbody Identifier:** 00845BULK

**Survey Date:** September 28, 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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## APPENDICES

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- 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

## 1.0 LAKE INVENTORY DATA

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### 1.1 WATERBODY

Type:	Small lake (< 400 ha)
Lake Name:	Unnamed Lake
Watershed Code:	460-750400-02
Waterbody Identifier:	00845BULK
Map Reference:	093L.068 (1993)
Air photo Reference:	30BCC 93056 No.77
Surface Area: 67 ha	Source: MELP
Elevation: 1066 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 helicopter from Houston, British Columbia. Flying time was approximately 20 minutes north of Houston.

### 1.3 TERRAIN

The lake appears to be a glacial lake (GL), with a north aspect. It is situated on a plateau (PN), and exhibits no signs of hillside coupling (DC). Land in the immediate vicinity of the lake is not currently not used. Forest Development Plan Maps do not indicate logging plans within 1000 m of the lake.

### 1.4 SHORELINE

The shoreline is comprised of 80% marsh and 20% rocky substrate. Potential spawning habitat was observed along the shore. Shoreline vegetative cover is sparse 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 11.5 m. Based on the E-line survey, the estimated littoral area (% lake < 6 m) is 70%. The maximum high water mark was observed at 0.3 m.

## 1.6 INLETS/OUTLETS

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

Inlet (permanent)

*W/s code: 460-750400*

This channel is the main inflow for this lake. Fish habitat close to the lake consists primarily of rearing and overwintering areas. From the air, upper reaches appeared to possess potential spawning habitat and good cover.

Inlet (ephemeral)

*W/s code: 460-750400-70700*

Flow was evident during the ground survey. The channel had an approximate width of 0.3 m close to the lake. The substrate consists of a combination of fines, gravel and cobble and provides good potential spawning habitat. Good stream cover was also noted at this inlet, provided by large/small woody debris, and over-hanging vegetation.

Inlet (ephemeral)

*W/s Code: 460-750400-71300*

This inlet is identified as permanent tributary on the 1:20,000 TRIM map. No flow was evident during the ground survey. The channel was approximately 0.4 m wide and appears to drain a marsh. The substrate consists of sand and silt. Suitable fish habitat was not identified close to the lake. Potential seasonal spawning and rearing habitat may exist further upstream.

Inlet (ephemeral)

ILP # 81

Water is present intermittently along this channel, which drains a marsh. The channel was approximately 0.3 m at the lake. The substrate consists of sand and silt. Suitable fish habitat was not identified close to the lake.

Inlet (ephemeral)  
ILP # 83

Flow was evident at the time of observation. Channel width was approximately 0.4 m close to the lake. The substrate consists primarily of gravel and offers good potential spawning habitat. Good stream cover is present as undercut banks and small woody debris.

Outlet  
W/s code: 460-750400-02

The outlet is a distinct channel, with a strong flow at the time of the survey. The substrate consists primarily of gravel and offers good potential spawning habitat. Stream cover was provided by numerous pools and large woody debris, and offers good rearing habitat.

## 1.7 AQUATIC FLORA

Small areas of the lake contain emergent vegetation (<10%) and submergent vegetation (<10%). Submergent species included *Hippuris spp.* and *Elodea spp.*, and emergent vegetation included *Nuphar lutea* (yellow pond-lily) and *Caryx spp.* Floating algae were not observed.

## 1.8 WILDLIFE

No wildlife activity was observed.

## 1.9 LIMNOLOGICAL SAMPLING

The limnological sampling site was located at the deepest recorded point (11.5 m). Dissolved oxygen (mg/l) and temperature (C) were measured with a YSI meter (model 85). A thermocline was weakly evident at approximately 8.0 m below the surface. Oxygen values were low (less than 2 mg/l), but are believed to reflect malfunction of the oxygen probe (for profile results, refer to Appendix D). The Secchi depth was 2.6 m; water colour was brown. pH was measured using a hand held Hanna pH meter. Surface and bottom pH values were 8.6 and 8.8, respectively. H<sub>2</sub>S was not detected.

## **1.10 SURVEY COMMENTS**

### **1.10.1 Problems**

One of the YSI probes was found to be malfunctioning subsequent to the field survey; oxygen values appear to be underestimated.

### **1.10.2 Fish Comments**

One floating gillnet was set twice, perpendicular to the shore, for approximately 5 hours and 17 hours, respectively. No fish were caught in the first haul, and the net was re-set in a different location, and left overnight. Twenty largescale suckers (*Catostomus macrocheilus*), 5 longnose suckers (*Catostomus catostomus*) and 5 reidside shiners (*Richardsonius balteatus*) were captured during the overnight set.

### **1.10.3 Habitat Comments**

Rearing habitat was observed at one of the inlets. Good inlet spawning habitat was observed at a number of tributaries. Excellent potential spawning and rearing habitat were noted at the outlet, which contains pools and large woody debris. There is an abundance of shoreline grasses, which line the perimeter of the lake and 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

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Fish sampling results show that largescale suckers, longnose suckers and reidsided shiners are present in this lake. Overall, this lake appears to have good spawning and rearing habitat within the inlet tributaries as well as the outlet. Although no salmonids were captured, observed habitat conditions are suitable to sustain salmonid populations. No recreational features were observed; nor were there any logging plans identified in close proximity to the lake.

### 3.0 REFERENCES

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Scott, W.B., and E.J. Crossman. 1973. Freshwater Fishes of Canada.  
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**Plates**

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**Plate 1 View looking southeast down inlet stream ILP 81.**



**Plate 2 View looking north towards lake outlet (460-750400).**



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## **Appendices**

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**Appendix A**

**Bathymetry (E-line Trace)**

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**Appendix B**

**Lake Outline Map**

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**Appendix C**

**Air Photo Plate**

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**Appendix D**

**Lake Survey Form**

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**Appendix E**

**Fish Collection Form**

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**Appendix F**

**Photograph Contact Sheets**

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**Photographic index for southern lakes secondary lake survey 1997.**

Lake	Watershed Code	Roll	Pic#	CD	Image	Neg	Dir.	Comment
M44	460-750400-02	27	34	0830	34	9346	N	Aerial photos
M44	460-750400-02	27	35	0830	35	9346	NE	Aerial photos
M44	460-750400-02	27	36	0830	36	9346	NW	Aerial photos
M44	460-750400-02	28	34	0832	130	9348	Up	Inlet ILP 81
M44	460-750400-02	28	35	0832	131	9348	Dn	Inlet ILP 81
M44	460-750400-02	28	36	0832	132	9348	Dn	Outlet 460-750000-40000
M44	460-750400-02	28	37	0832	133	9348	Dn	Outlet 460-750000-40000
M44	460-750400-02	29	12	0822	62	9342	N/A	Largescale sucker
M44	460-750400-02	29	13	0822	63	9342	N/A	Longnose sucker
M44	460-750400-02	29	14	0822	64	9342	N/A	Redside shiner



