

## Executive Summary

## Verdant Lake : 2004

A stocking assessment was conducted on Verdant Lake during the fall of 2004. Both a standard sinking and a floating gillnet 90 m in length were set on October 1, 2004. The total sampling effort was 60.83 hours resulting in a gillnet catch per unit effort (CPUE) of 0.00 fish per hour for eastern brook trout. The objectives of this assessment were to document the status of the fishery and attempt to determine the level of natural recruitment of brook trout stocked prior to 1999. The management objectives for Verdant Lake are to maintain a low-use fishery for brook trout up to 1.0 kg and to promote a winter fishery. Based on anecdotal evidence from anglers during the summer of 2004, Verdant Lake apparently summer-killed in July 2004. Additional anecdotal information from anglers suggests that eastern brook trout were attaining above average sizes, with some fish exceeding 50 cm. There have also been complaints that anglers have been keeping more than the daily quota of one trout/char over 50 cm in length. Verdant Lake has been previously stocked in odd-years with 5000 fingerlings.

Verdant Lake is a popular winter fishery, and has the potential to provide an above average angling experience. To reduce impacts to this fishery from periodic fish kill events and to maintain fishery quality the stocking rate has now been changed to 2500 fingerlings on an annual basis. The next stock assessment for Verdant Lake is scheduled for 2009.

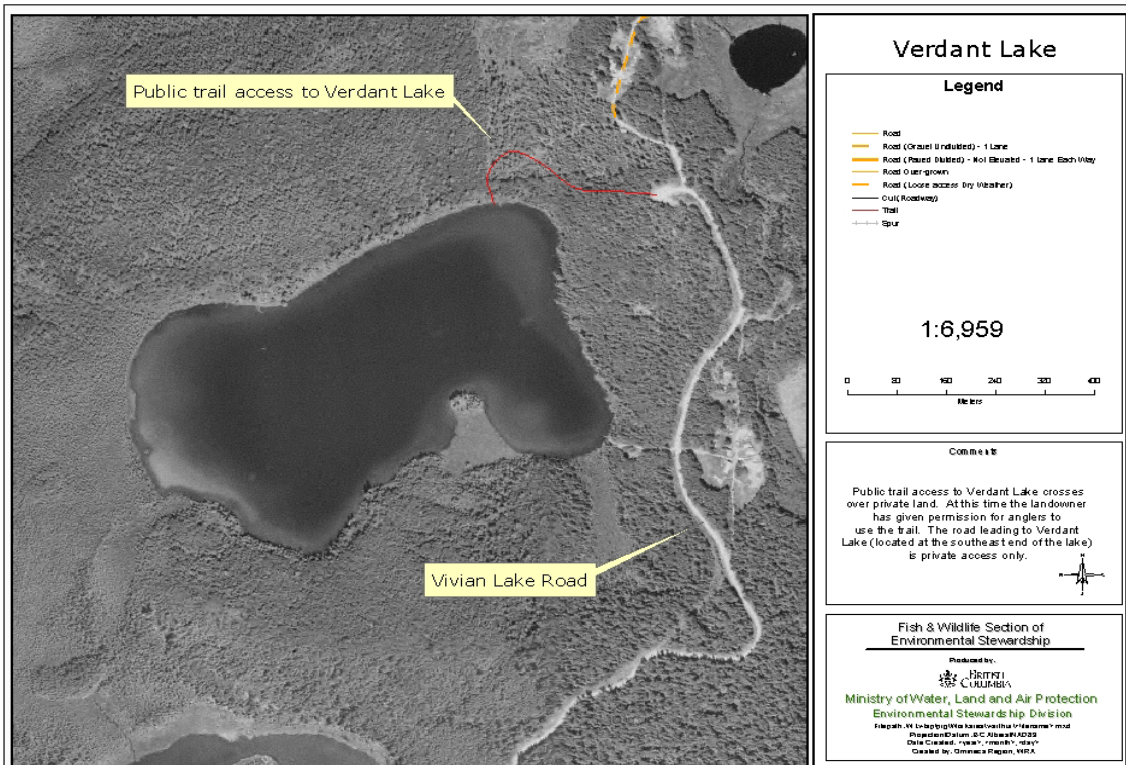


Figure 1. Orthophoto of Verdant Lake.

Omineca Region Stocked Lake Assessment Report

**OMINECA REGION  
LAKE STOCK ASSESSMENT REPORT**

**LAKE NAME:** Verdant Lake **BC WBID:** 01406STUR

**LAKE LOCATION:** *Nearest center:* NNW 27 km from Prince *Drainage:* FRASER  
*UTM:* 10.486480.5987738

**LAKE ATTRIBUTES:** *Surface Area:* 27.5 Ha *Elevation:* 780 m  
*Littoral Area:* 26.3 Ha *T.D.S.:* 120 ppm  
*Max Depth:* 7.6 m *Mean depth:* 3.3 m

**MANAGEMENT OBJECTIVE:**

- Objective 1 Family Fishery (High CPUE <30 cm)
- Objective 2 Average Quality (30-40 cm)
- Objective 3 Above Average (40-50 cm)
- Objective 4 Trophy (20% > 50 cm for RB, 20% > 40 cm for EB)

**MANAGEMENT/SURVEY HISTORY:**

Previous gill net assessment(s): no  yes  MOE 1968; Little 1982; MOE 1988  
Year(s) Surveyed: 1968; 1982; 1988; 2004

**STOCKING DATA:**

*Current Stocking Rate* 182 Fish/Ha *Odd years*  
*Stock Type* **AYLMER AF3N**  
*Species* EB, lake chub  
*Previous Stocking Rate* 182

**SURVEY METHODS:**

Method	Date (yy.mm.dd)	Survey Agency	Crew
Fish	SGN 2004-09-30	BCCF	Chad Robertson, Kevin Mernickle
Chem.	na		
Physical	bathymetric 1968-10-01	MOE	M. Weston
Temp.	na		

**Netting Specs:** *Net type:* Standard Experimental *Net length:* 90m (3x30m)  
*Setting:* Sinking and Floating *Panel Mesh:* standard

**SURVEY RESULTS:**

**Catch**

	RB	EB	RSC	LKC	LSU	CSU	NSC	CAS	BT	LT
<b>2004</b>	0	0	0	6	0	0	0	0	0	0
<b>1988</b>	0	30	0	0	0	0	0	0	0	0
<b>1982</b>	0	11	0	0	0	0	0	0	0	0
<b>1968</b>	0	50	0	0	0	0	0	0	0	0

Survey Year	2004	1988	1982	1968	
Effort Hours	39.92	23.27	12.5	24.6	
RB CUE:	0.00	0.00	0.00	0.00	RB/Net Hour
EB CUE:	0.00	1.29	0.88	2.03	EB/Net Hour
# of Sets:	2	1	1	1	

**Next Assessment 2009**

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### ***SURVEY CONCLUSIONS:***

Objective	Objectives Achieved		Reason
	Yes	No	
1. Family	<input type="checkbox"/>	<input type="checkbox"/>	Verdant Lake summer killed during the summer of 2004; however anecdotal information provided by anglers suggests that fish were average to above average in size prior to this event.
2. Average	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3. Above Average	<input type="checkbox"/>	<input type="checkbox"/>	
4. Trophy	<input type="checkbox"/>	<input type="checkbox"/>	

### ***RECOMMENDATIONS:***

***Assessment:*** The next assessment is scheduled for 2009.

***Management:*** Verdant Lake has been stocked in odd-years with 5000 fingerlings. Starting in 2005 this will be changed to 2500 fingerlings on an annual basis.

***Comments:*** Verdant Lake summer killed in July 2004 after a period of hot weather followed by thunderstorms with high winds.

### ***Uncertainties:***

### ***Recent Brood Request Comments:***

2005 Summerkill in 2004. Assessed '04- NFC. Was odd year stocking 5000. Anglers Indicate fish up to 50 cm or more. Problems with compliance with size limits also reported. Change to Annual 2500.

### ***History of Angling Regulations***

There are no special angling regulations for Verdant Lake.

***Reported by:*** Adrian Clarke

***Date:*** Feb-05

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**Table 1. Eastern brook trout physical attributes for sample years:**

Sample Year	Sample		Length (mm)				Weight (g)				Condition (k)				
	Age	Size	Mean	Min	Max	StdDev	Mean	Min	Max	StdDev	Mean	Min	Max	StdDev	Var
1982	3	4	297	280	318	15.9	330	300	410	53.5	1.26	1.13	1.41	0.1	0.01
1982	4	5	308	258	342	34.5	356	190	480	120.5	1.18	1.11	1.23	0.0	0.00

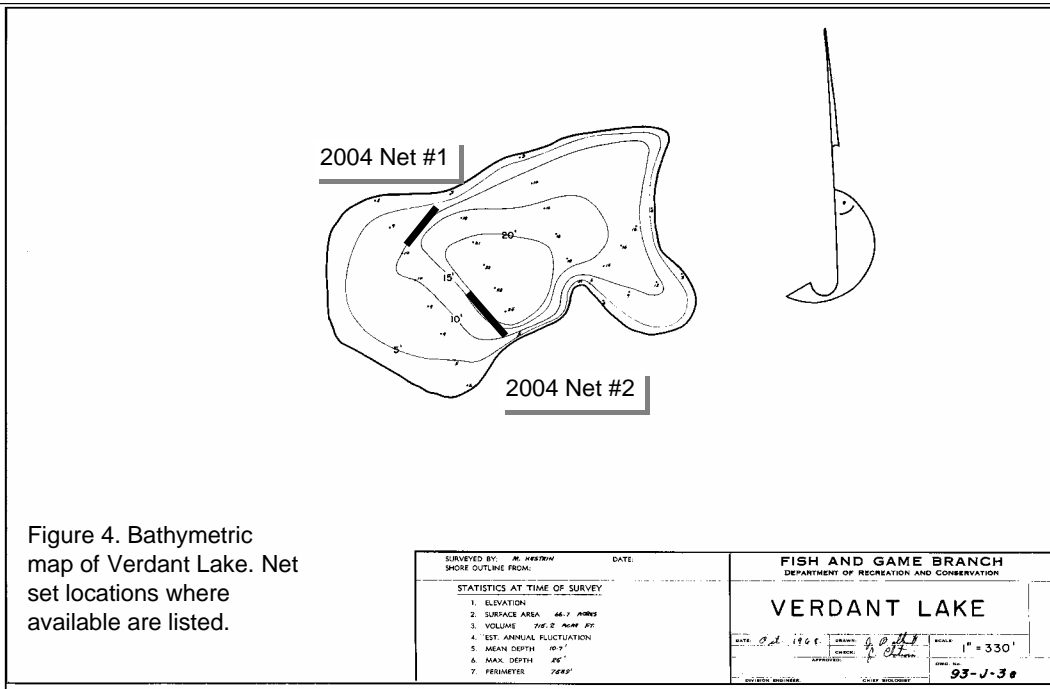
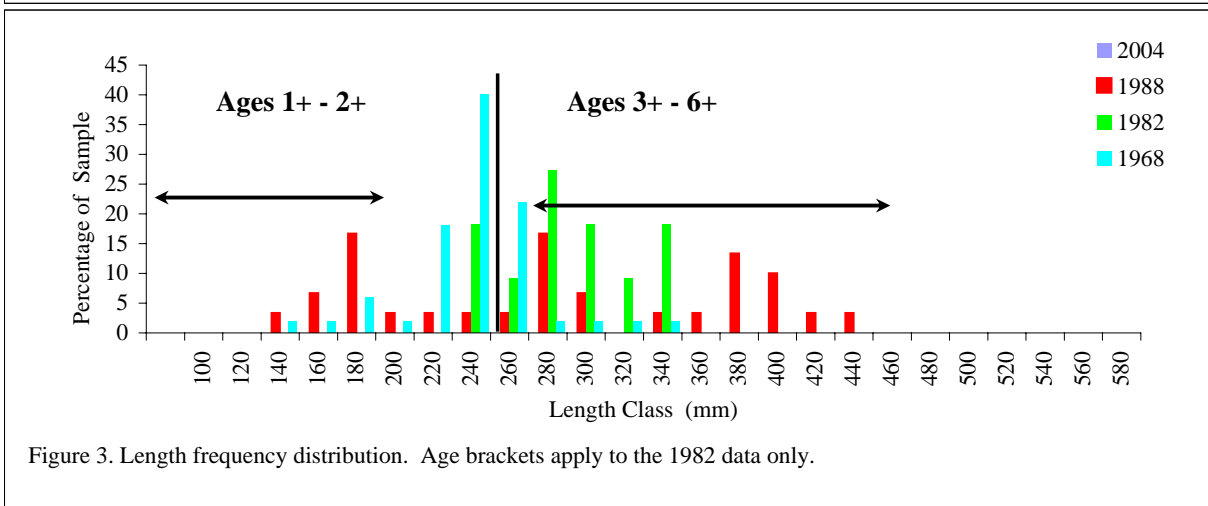
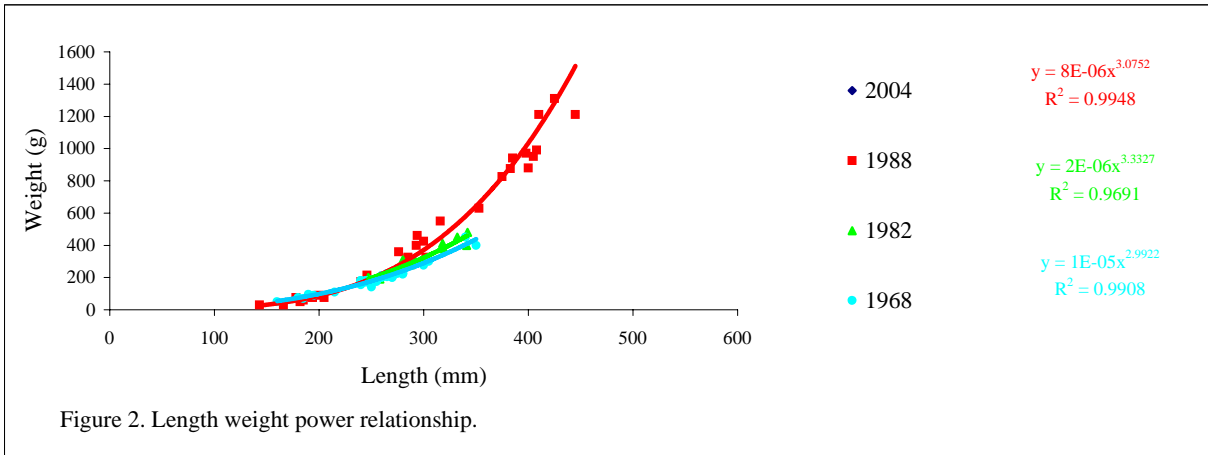
**Table 2. Catch summary for all sample years.**

Sample Year	Sample Size	Length (mm)				Weight (g)				Condition (k)				
		Mean	Min	Max	StdDev	Mean	Min	Max	StdDev	Mean	Min	Max	StdDev	Var
2004	0	0	0	0	0.0	0	0	0	0.0	0.00	0.00	0.00	0.00	0.00
1988	30	296	143	445	0.0	497	30	1310	414.1	1.36	0.66	1.81	0.30	0.09
1982	11	301	247	342	32.1	336	190	480	95.6	1.20	1.01	1.41	0.11	0.01
1968	50	252	160	350	33.7	190	50	450	67.9	1.14	0.90	1.39	0.10	0.01

**Table 3. Proportion of Catch (by survey year)**

Survey Year	2004	1988	1982	1968
Less than 240 mm		30 %	0 %	12 %
Between 240-360 mm		40 %	100 %	90 %
Between 240-400 mm		53 %	100 %	88 %
Greater than 400 mm		30 %	0 %	0 %
Greater than 500 mm		0 %	0 %	0 %

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**Table 4. Stocking History for Verdant Lake to 2004.**

Release Date	Species Name	Fish Count	Stock	Mark	Average Size (gm)	Life Cycle Stage
11-Jun-03	EB	5000	AYLMER AF3N		6.59	FINGERLING
28-May-01	EB	5000	AYLMER AF3N		6.6	FINGERLING
4-Jun-99	EB	5000	AYLMER AF3N		5.9	FINGERLING
16-Jun-97	EB	3000	AYLMER		3.01	FINGERLING
10-Jun-95	EB	5000	AYLMER		4.02	FINGERLING
12-Jun-93	EB	5473	AYLMER		4.2	FINGERLING
23-May-91	EB	5000	AYLMER		2.26	FINGERLING
10-Jun-90	EB	5000	AYLMER		4.2	FINGERLING
1-Jun-89	EB	5000	AYLMER		2.5	FRY
1-May-88	EB	5000	AYLMER		2.2	UNKNOWN
1-Jul-87	EB	5000	AYLMER		2.1	UNKNOWN
1-May-86	EB	5000	AYLMER		1.4	UNKNOWN
1-May-85	EB	5000	AYLMER		2.5	UNKNOWN
1-May-84	EB	5000	AYLMER		3.7	UNKNOWN
1-May-83	EB	5000	AYLMER		2.4	UNKNOWN
1-May-81	EB	10000	AYLMER		2.6	UNKNOWN
1-Jun-80	EB	20000	AYLMER		3.4	UNKNOWN
1-Jan-79	EB	30000	AYLMER		3.2	UNKNOWN
1-Jan-76	EB	10000	AYLMER		2.7	UNKNOWN
1-Jan-76	EB	20000	KTH		1.6	UNKNOWN
1-Jan-74	EB	9000	AYLMER		15	FINGERLING
1-Jan-69	EB	35000	ONTARIO		15	FINGERLING
1-Jan-67	EB	26500	ONTARIO		15	FINGERLING
1-Jan-66	EB	40375	OREGON		1.5	FRY
1-Jan-65	EB	24000	OREGON		5	FINGERLING
1-Jan-63	EB	40000	OREGON		2.5	FRY
1-Jan-62	EB	20000	OREGON		2.5	FRY
1-Jan-61	EB	12000			2.5	FRY