

Executive Summary

LaSalle Lake (West) 2002

A stocking assessment was conducted on LaSalle Lake (West) on June 11, 2002. The original management goal for LaSalle Lake (West) in 1987 was to manage for a moderate-use eastern brook trout fishery as it was one of the few lakes in the McBride area with the potential to support game fish. In 1998 an assessment of the lake outlet by the Ministry of Environment determined that LaSalle Lake (West) was not suitable as an eastern brook trout fishery due to the potential for escapes into the Fraser River. At that time, the Ministry of Environment replaced the brook trout stocking program with a rainbow trout stocking program to reduce the risks to Fraser stocks. This report summarizes the first assessment of LaSalle Lake (West) since rainbow trout were first stocked in 1999. Historical catch rates, size data, and stocking information for eastern brook trout are not included in this report as they will not be used in the future for management of this fishery.

LaSalle Lake (West) is 12.0 ha and is situated 48 km west of McBride. It has been noted that the lake receives moderate angling pressure and is easily accessible from Highway 16 West. A floating gillnet 90 m in length (experimental mesh) was deployed on June 11, 2002. The total sampling effort was 17.17 hours resulting in a gillnet catch per unit effort (CPUE) of 0.64 fish per hour. The rainbow trout had an average length of 273 mm with a maximum length of 452 mm. Due to the low gillnet CPUE the stocking rate was increased in the spring of 2005 to 2500 yearlings in odd-years. As well, Blackwater strain rainbow trout were utilised to replace the naturalized rainbow trout strain used in previous stocking events because of the presence of lake chubb. The presence of small rainbow trout (~100mm) captured during the survey indicates that natural recruitment may be occurring. For this reason it is recommended that marked fish be used in 2007 for stocking to allow for a determination on the relative amount of natural recruitment occurring. LaSalle Lake (West) should be re-assessed in 2008 to assess the effects of the stocking changes implemented in 2005 and to determine the level of natural recruitment.



Figure 1. Aerial photo of La Salle Lake (West). The Fraser River is situated immediately northeast of the lake (top of the picture).

**OMINECA REGION
LAKE STOCK ASSESSMENT REPORT**

LAKE NAME: LaSalle Lake West **BC WBID:** 00972MORK

LAKE LOCATION: *Nearest center:* 41 km NW of McBride *Drainage:* FRASER
UTM: 10.653643.5932978

LAKE ATTRIBUTES: *Surface Area:* 12 Ha *Elevation:* 878 m
Littoral Area: 11.3 Ha *T.D.S.:* 109 ppm
Max Depth: 7.6 m *Mean depth:* 2.8 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 Westcott 1987; Van Schubert 1992;
Year(s) Surveyed: 1987; 1992; 1998 Zimmerman 1998

STOCKING DATA:

Current Stocking Rate 125 Fish/Ha *Odd years*
Stock Type **BADGER TUNKWA**
Species RB mixed
Previous Stocking Rate 125

SURVEY METHODS:

Method	Date (yy.mm.dd)	Survey Agency	Crew
Fish	GN 2002-06-11	MOE	T. Zimmerman, Ray Pillipow
Chem.	DO, pH, 1987-06-02	MOE	D. J.. Grant
Physical	Bathymetric 1987-06-03	MOE	D. J.. Grant
Temp.	Profile 1987-06-04	MOE	D. J.. Grant

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

SURVEY RESULTS:

Catch

	RB	EB	RSC	LKC	LSU	CSU	NSC	CAS	BT	LT
2002	11	0	0	19	0	0	0	0	0	0
1900	0	0	0	0	0	0	0	0	0	0
1900	0	0	0	0	0	0	0	0	0	0
1900	0	0	0	0	0	0	0	0	0	0

Survey Year	2002
Effort Hours	17.17
RB CPUE:	0.64
EB CPUE:	0.00
# of Sets:	1

RB/Net Hour

EB/Net Hour

Next Assessment 2008

Omineca Region Stocked Lake Assessment Report

SURVEY CONCLUSIONS:

Objective	Objectives Achieved		Reason
	Yes	No	
1. Family	<input type="checkbox"/>	<input type="checkbox"/>	
2. Average	<input checked="" type="checkbox"/>	<input type="checkbox"/>	54.5 % of rainbow trout captured are between 250-400 mm in length.
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 2007 to determine the effect of using BW strain rainbow trout that were stocked in 2005. The stocking interval also needs to be examined as it was increased to 2500 yearlings every odd-year .

Management: Recommend marking fish in 2007 to assess the level of natural recruitment.

Comments: Gill-net CPUE appears low. Angling for 3 hours only produced 1 fish.

Uncertainties: The small size of the fish present in the sample may suggest natural recruitment is occurring.

Recent Brood Request Comments:

2005 Assessed in 98 & 02. RB doing well, but low CPUE. Evidence of natural recruitment. Increase to odd year stocking of 2,500 starting 05. Reassess in '08. Changed stock to BW- Lake chubb present

2004 Assessed in 98 & 02. RB doing well, but low CPUE. Evidence of natural recruitment. Increase to odd year stocking of 2,500 starting 05. Reassess in '08.

History of Angling Regulations

There have been no special angling regulations applied to LaSalle Lake West.

Reported by: Adrian Clarke
Date: Jun-05

Table 1. Rainbow 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
2002	1	2	122	111	133	15.6	22	16.9	26.9	7.1	1.19	1.14	1.24	0.1	0.01
2002	2	5	258	104	326	90.3	243	16.5	386	167.2	1.37	1.23	1.47	0.1	0.01
2002	3	2	306	289	322	23.3	317	317	317		1.31	1.31	1.31		
2002	4	1	452												

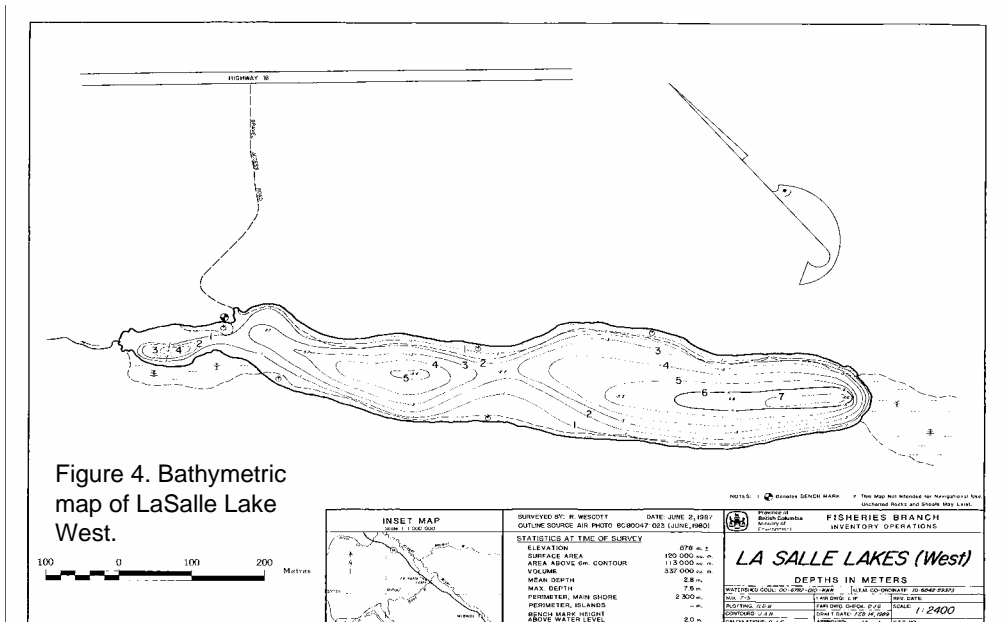
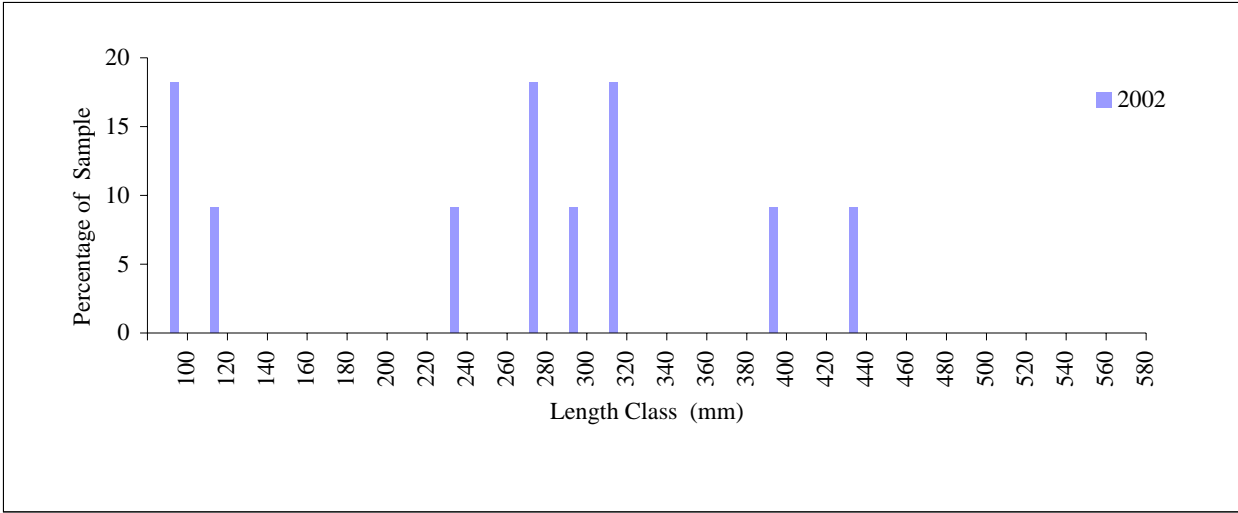
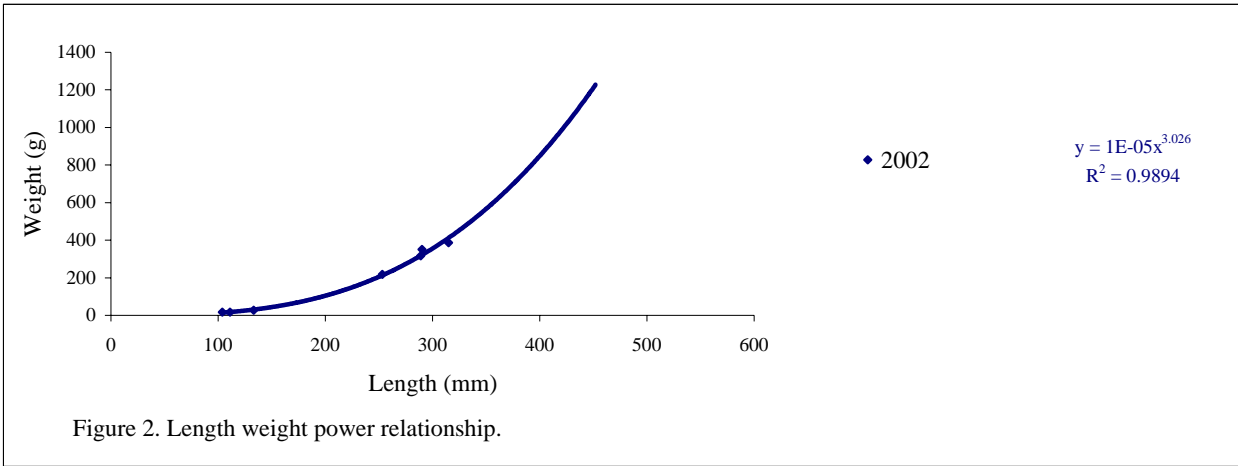
Table 2. Catch summary for all sample years.

Sample Year	Sample Size	Length (mm)				Weight (g)				Condition (k)				
		Mean	Min	Max	StdDev	Mean	Min	Max	StdDev	Mean	Min	Max	StdDev	Var
2002	11	273	104	452	114.6	190	17	386	167.1	1.31	1.14	1.47	0.12	0.01

Table 3. Proportion of Catch (by survey year)

Survey Year	2002
Less than 250 mm	27.3 %
Between 250-350 mm	54.5 %
Between 250-400 mm	54.5 %
Greater than 400 mm	18.2 %
Greater than 500 mm	0.0 %

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Table 5. Stock Assessment Data for 2002 (see lake files for additional survey data).

Lake	Sample#	Site	Species Caught	Age	Length (mm)	Weight (grams)	Condition (k)	Scale Age	Structure	Sex	Maturity
LaSalle West	GN1	1	rb	2	104	17	1.5	2+	scale		im
LaSalle West	GN2	1	rb	2	315	386	1.2	2+	scale	F	mt
LaSalle West	GN3	1	rb	3	322			3+	scale	F	im
LaSalle West	GN4	1	rb	2	290	350	1.4	2+	scale	F	mt
LaSalle West	GN5	1	rb	2	253	218	1.4	2+	scale	F	mt
LaSalle West	GN6	1	rb		403			n/a		M	m
LaSalle West	GN7	1	rb	2	326			2+	scale		
LaSalle West	GN8	1	rb	3	289	317	1.3	3+	scale	F	mt
LaSalle West	GN9	1	rb	4	452			4+	scale	M	mt
LaSalle West	GN10	1	rb	1	133	27	1.1	1+	scale		
LaSalle West	GN11	1	rb	1	111	17	1.2	1+	scale		