

Executive Summary

Otipemisiwak Lake 2004

A stocking assessment was conducted on Otipemisiwak Lake during the fall of 2004. This was the first assessment since the inception of stocking. A floating gillnet 90 m in length (standard mesh) was set on September 28, 2004. The total sampling effort was 25.3 hours resulting in a gillnet catch per unit effort (CPUE) of 1.38 rainbow trout per hour. The objective of this assessment was to document the status of the fishery. The original management goal for Otipemisiwak Lake was to provide for a low-use fishery. The rainbow trout sampled during the 2004 assessment were mainly composed of fish less than 300 mm that were between one and four years of age. The fish captured were showing slow growth rates. There does not appear to be any problems associated with the productivity of the lake. To improve the quality of the fishery, starting in 2005, the stocking rate will be reduced to 1000 from 3000 rainbow trout annually. To further enhance this fishery the stock will change from Pennask AF3N (sterile) to Blackwater AF3N. The next stock assessment is scheduled for 2009 to allow for stocking changes to take effect.

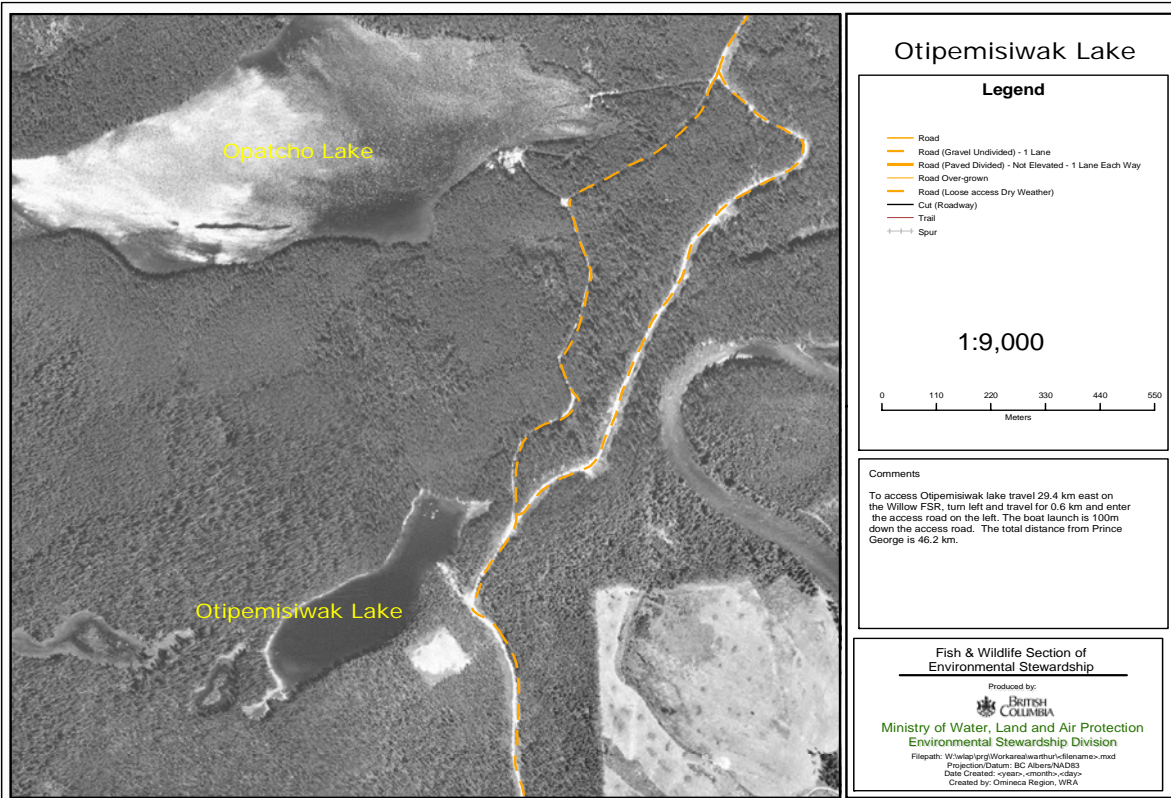


Figure 1. Orthophoto showing location of Otipemisiwak Lake in relation to Opatcho Lake.

Omineca Region Stocked Lake Assessment Report

**OMINECA REGION
LAKE STOCK ASSESSMENT REPORT**

LAKE NAME: Otipemisewak **BC WBID:** 00372WILL

LAKE LOCATION: *Nearest center:* 46.2 km SE from P.G. *Drainage:* FRASER
UTM: 10.547124.5954767

LAKE ATTRIBUTES: *Surface Area:* 5.98 Ha *Elevation:* 808 m
Littoral Area: 5.53 Ha *T.D.S.:* na ppm
Max Depth: 9 m *Mean depth:* 2.1 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 Barry and Schubert 1992
 Year(s) Surveyed: 1992

STOCKING DATA:

Current Stocking Rate 502 Fish/Ha Annually
Stock Type **PENNASK AF3N**
Species RB mixed
Previous Stocking Rate 502

SURVEY METHODS:

Method	Date (yy.mm.dd)	Survey Agency	Crew
Fish	sgn 2004-09-27	BCCF	Chad Robertson ,Kevin Mernickle
Chem.	DO, pH, 1992-07-07	MOE	Sean Barry & John Williamson
Physical	bathymetric 1992-07-07	MOE	Sean Barry & John Williamson
Temp.	profile 1992-07-07	MOE	Sean Barry & John Williamson

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
2004	35	0	8	10	10	0	0	0	0	0
1992	0	0	0	0	90	0	0	0	0	0

Survey Year	2004	1992
Effort Hours	25.28	22
RB CUE:	1.38	0.00
EB CUE:	0.00	0.00
# of Sets:	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"/>	
2. Average	<input type="checkbox"/>	<input checked="" type="checkbox"/>	rb are mainly < 30cm, gillnet CPUE is 1.38
3. Above Average	<input type="checkbox"/>	<input type="checkbox"/>	
4. Trophy	<input type="checkbox"/>	<input type="checkbox"/>	

RECOMMENDATIONS:

Assessment: Next assessment in 2009, to allow for stocking changes to be in effect for four years before reassessment.

Management: The original management goal in 1992 was to manage as a low-use fishery. The population of rainbow trout is composed of fish mainly < 30 cm. A reduction in stocking density should allow for increased growth as there are no apparent problems with the productivity of the lake (specific conductance = 72µS/cm).

Comments: The survey in 1993 also captured 71 LSU and 25 chub (species unknown) in 2 minnow traps. The rainbow trout captured in the 2004 survey were showing signs of slow growth and had a low mean condition factor (0.92). Reducing the density of the stocking rate may allow for improved growth and condition. Recommend that stocking is reduced to 1000 fish annually and changing the stock from Pennask AF3N to Blackwater AF.

Uncertainties:

Recent Brood Request Comments:

2005 Assessed '04. Was Pennask AF3N Change stock to BW-AF. Slow growth. Reduce stocking rate to 1000 per year.

History of Angling Regulations

There are no special angling regulations.

Reported by: Adrian Clarke

Date: Feb-05

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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
2004	1	10	155	131	231	28.0	38	20	112	26.3	0.95	0.82	1.22	0.1	0.01
2004	2	14	206	166	251	23.8	84	40	138	31.7	0.93	0.74	1.18	0.1	0.02
2004	3	10	260	214	283	24.2	159	90	240	47.8	0.89	0.75	1.17	0.1	0.02
2004	4	1	364				500				1.04				

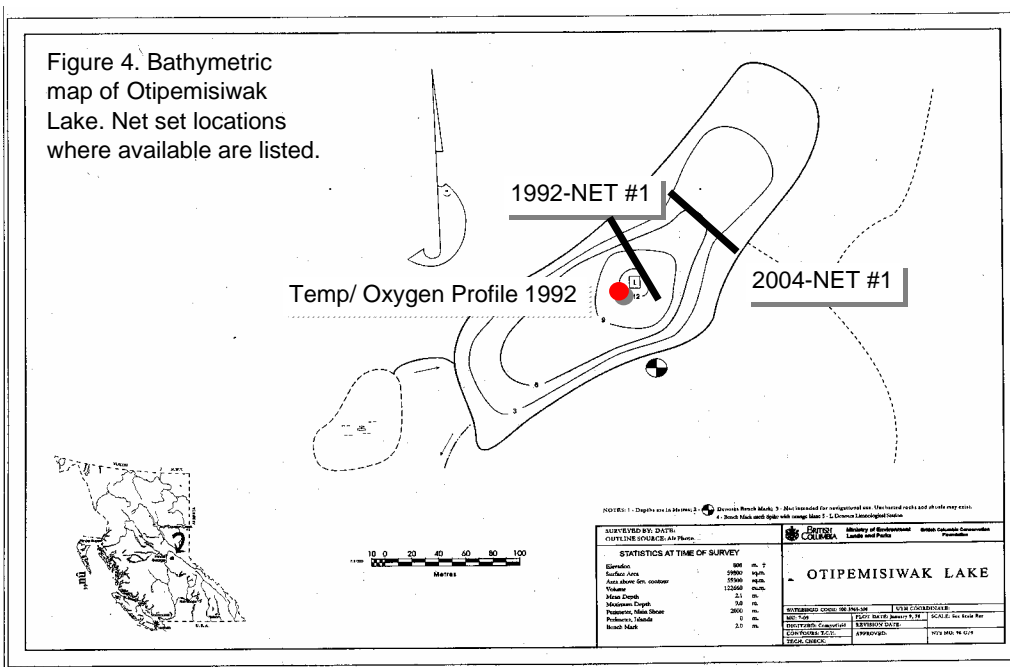
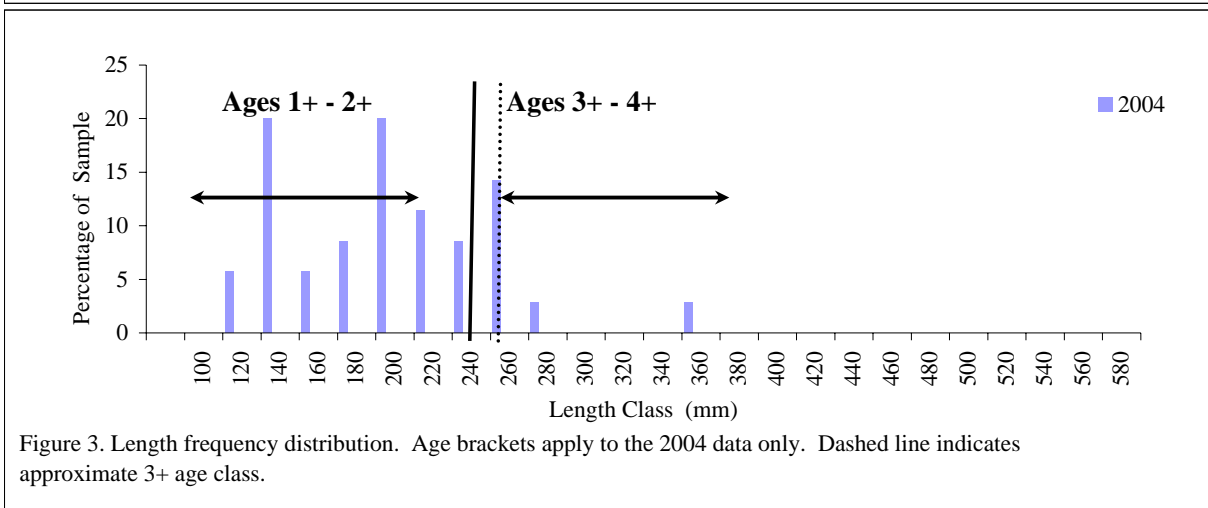
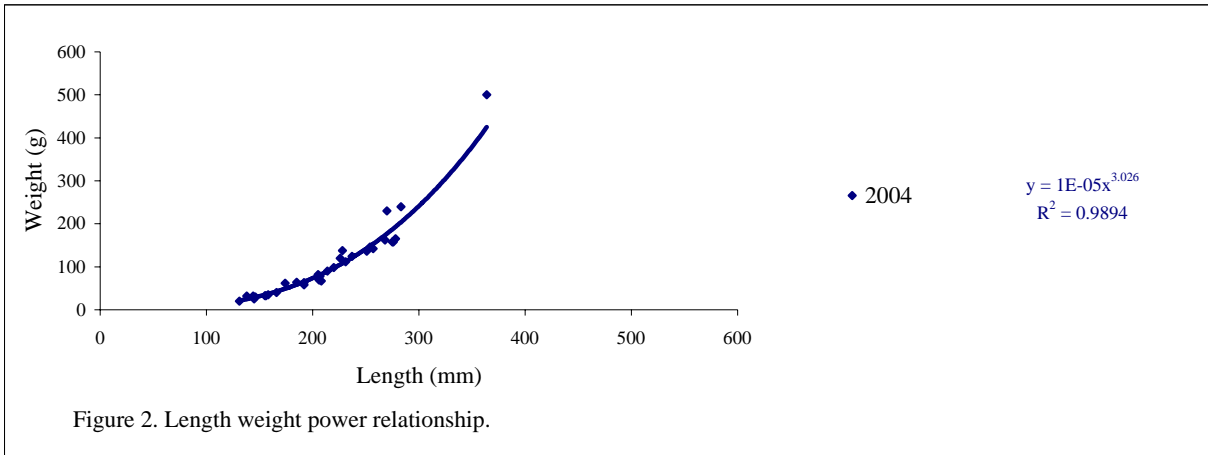
Table 2. Catch summary for all sample years.

Sample Year	Sample Size	Length (mm)				Weight (g)				Condition (k)				
		Mean	Min	Max	StdDev	Mean	Min	Max	StdDev	Mean	Min	Max	StdDev	Var
2004	35	211	131	364	53.8	104	20	500	90.1	0.93	0.74	1.22	0.13	0.02
1992	0	0	0	0	53.8	0	0	0	0.0	0.00	0.00	0.00	0.00	0.00
1900	0	0	0	0	0.0	0	0	0	0.0	0.00	0.00	0.00	0.00	0.00
1900	0	0	0	0	0.0	0	0	0	0.0	0.00	0.00	0.00	0.00	0.00

Table 3. Proportion of Catch (by survey year)

<i>Survey Year</i>	2004
Less than 250 mm	71.4 %
Between 250-350 mm	25.7 %
Between 250-400 mm	28.6 %
Greater than 400 mm	0.0 %
Greater than 500 mm	0.0 %

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Table 4. Stocking History for Otipemisewak Lake to 2004.

Release Date	Species Name	Fish Count	Stock	Mark	Average Size (gm)	Life Cycle Stage
5-Jun-04	RB	3000	PENNASK AF3N		13	YEARLING
3-Jun-03	RB	3000	PENNASK AF3N		15.15	YEARLING
15-Jun-02	RB	3000	PENNASK AF3N		15.55	YEARLING
12-Jun-01	RB	3000	PENNASK AF3N		14.17	YEARLING
4-Jun-01	RB	2500	PENNASK BV AF		12.72	YEARLING
6-Jun-00	RB	3000	PENNASK AF3N		19.22	YEARLING
2-Jun-00	RB	2500	PENNASK PENN AF		3.74	YEARLING
4-Jun-99	RB	1500	PENNASK BEAV AF		15.15	YEARLING
4-Jun-99	RB	3000	PENNASK BEAV AF		15.15	YEARLING
28-May-98	RB	500	PENNASK BEAV AF3N		15.4	YEARLING

Table 5. Dissolved Oxygen/ Temperature Profile

07-Jul-92		
Depth (m)	DO	Temp. °C
0	8.2	22.5
1	8.2	22.5
2	8.2	22.5
3	8.3	22.5
4	8.4	22.1
5	11.4	18.5
6	10.9	14.7
7	10.6	12.2
8	4.9	9.9
9	1.2	9
10	1.2	8.2
11	1.2	7.8
12	bottom	
13		
14		

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Table 6. Stock assessment data for 2004 (see lakes files for additional survey data).

Lake	Sample#	Site	Species Caught	Age	Length (mm)	Weight (grams)	Condition (k)	Scale Age	Structure	Sex	Maturity	Ageing Comments
Otipemisewak	1	1	rb	2	166	40	0.9	2++	ot	f	im	
Otipemisewak	2	1	rb	1	144	32	1.1	1++	ot	f	im	
Otipemisewak	3	1	rb	3	270	230	1.2	3++	ot	f	im	
Otipemisewak	4	1	rb	3	283	240	1.1	3++	ot	f	im	
Otipemisewak	5	1	rb	2	251	136	0.9	2+	ot	f	im	
Otipemisewak	6	1	rb	2	174	62	1.2	2+	ot	f	im	
Otipemisewak	7	1	rb	4	364	500	1.0	4+	ot	f	im	
Otipemisewak	8	1	rb	2	207	78	0.9	2+	ot	f	im	
Otipemisewak	9	1	rb	1	145	25	0.8	1+	ot	f	im	
Otipemisewak	10	1	rb	2	208	67	0.7	2+	ot	f	im	
Otipemisewak	11	1	rb	1	138	32	1.2	1+	ot	f	im	
Otipemisewak	12	1	rb	3	254	146	0.9	3+	ot	f	im	translucent & broken
Otipemisewak	13	1	rb	2	206	69	0.8	2+	ot	f	im	translucent
Otipemisewak	14	1	rb	3	268	162	0.8	3+	ot	f	im	translucent
Otipemisewak	15	1	rb	3	278	165	0.8	3+	ot	f	im	translucent
Otipemisewak	16	1	rb	3	257	142	0.8	3+	ot	f	im	
Otipemisewak	17	1	rb	2	228	138	1.2	2+	ot	f	im	translucent
Otipemisewak	18	1	rb	2	237	124	0.9	2+	ot	f	im	tip broken; translucent
Otipemisewak	19	1	rb	2	226	120	1.0	2+	ot	f	im	
Otipemisewak	20	1	rb	3	214	90	0.9	3+	ot	f	im	translucent
Otipemisewak	21	1	rb	3	276	158	0.8	3+	ot	f	im	
Otipemisewak	22	1	rb	3	275	158	0.8	3++	ot	f	im	
Otipemisewak	23	1	rb	1	231	112	0.9	1+	ot	f	im	large first year growth
Otipemisewak	24	1	rb	2	205	76	0.9	2+	ot	f	im	
Otipemisewak	25	1	rb	2	205	82	1.0	2+	ot	f	im	
Otipemisewak	26	1	rb	2	192	63	0.9	2+	ot	f	im	
Otipemisewak	27	1	rb	3	220	98	0.9	3+	ot	f	im	
Otipemisewak	28	1	rb	2	185	64	1.0	2+	ot	f	im	
Otipemisewak	29	1	rb	2	192	58	0.8	2+	ot	f	im	
Otipemisewak	30	1	rb	1	145	29	1.0	1++	ot	f	im	
Otipemisewak	31	1	rb	1	146	30	1.0	1+	ot	f	im	
Otipemisewak	32	1	rb	1	131	20	0.9	1+	ot	f	im	translucent
Otipemisewak	33	1	rb	1	158	35	0.9	1+	ot	f	im	
Otipemisewak	34	1	rb	1	156	33	0.9	1+	ot	f	im	
Otipemisewak	35	1	rb	1	155	33	0.9	1+	ot	f	im	