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Upper Fish Creek, Fish Creek and Fish Lake Tributary 1 - Winter Fish Sampling Summary 2012

Date: February 24 – 26, 2012

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Air temp: -5 to -14 °C

The objective of this assessment was to determine overwintering usage of Fish Creek Reach 8 and Fish Lake Tributary 1. A total of 9 sites were assessed and those suitable were sampled using baited minnow traps set overnight. Access to each of the sites was via helicopter with the sampling being completed from February 24th to 26th, 2012. The following section summarizes the methods, sites and sampling results.

Sampling Methods

Baited minnow traps were set overnight in areas where flowing water was accessible and where sufficient water was present upon drilling through the ice. UTM coordinates were recorded at each site as well as water quality parameters (where traps were able to be deployed) to assess suitability of the existing overwintering conditions. A summary of sites is provided in Table 1.

Table 1: Fish Lake Tributaries Winter 2012 Fish Sampling Results

Date	Reach/ Tributary	Waypoint	UTM (10U)	Water Depth (cm)	Trap set (Y/N)	Fish captured (Y/N)	Comment
24- Feb	Fish Lake Tributary 1	064	459126 5699289	15-30 cm	Y	Y	Open flowing water observed and two minnow traps set. One 44 mm RB captured with overnight set. Water quality parameters recorded February 26.
24- Feb	Reach 8	065	458606 5697910	15-30 cm	N	N	Water found but too shallow for minnow trap. Very tannic with pungent hydrogen sulfide odor indicating anoxic conditions.
24- Feb	Reach 8	066	458609 5697902	15- 20cm	Y	N	Water just deep enough to set minnow

							trap. Very tannic with pungent hydrogen sulfide odor indicating anoxic conditions. Adjacent to waypoint 072. Water quality parameters recorded February 26. NFC with overnight set.
25-Feb	Reach 8	070	458583 5697594	~5-10cm	N	N	Water clearer but not deep enough to set minnow trap.
25-Feb	Reach 8	072	458606 5697910	15-30 cm	N	N	Water found but too shallow for minnow trap. Very tannic with pungent hydrogen sulfide odor indicating anoxic conditions.
25-Feb	Reach 8	073	458609 5697902	15-20cm	Y	N	Water just deep enough to set minnow trap. Very tannic with pungent hydrogen sulfide odor indicating anoxic conditions. Adjacent to waypoint 072. Water quality parameters recorded February 26. NFC with overnight set.
25-Feb	Reach 8	074	458583 5697594	~5-10cm	N	N	Water clearer but not deep enough to set minnow trap.
25-Feb	Reach 8	083	458590 5697623	15-30 cm	Y	N	Water just deep enough to set minnow trap. Water quality parameters recorded February 26. NFC with overnight set.
25-Feb	Reach 6	077	456621 5700651	15-30 cm	Y	N	Open flowing water observed and two minnow traps set. Water quality parameters recorded February 26. NFC with overnight set.

Water quality data collected at the sample sites are summarized in Table 2.

Table 2: Water Quality Data – Middle and Upper Fish Creek and Fish Lake Tributary 1, Winter 2012

Date	Reach/ Tributary	Waypoint	Temp °C	Conductivity (µS)	TDS	DO %	DO mg/L	PH	ORP
26-	Fish Lake	070	-0.3	94	0.117	84.4	12.33	7.76	92.6

Feb	Trib 1								
26-Feb	Reach 8	073	-0.1	43	0.151	46.1	6.89	7.21	140.5
26-Feb	Reach 8	083	-0.04	127	0.158	41.6	6.07	7.1	79.9
26-Feb	Main outlet	077	0.63	87	0.106	57	9.06	7.1	135.0

Results

Five sites were found with open water and/or enough water beneath the ice to deploy minnow traps. Three trap sites in Upper Fish Creek (Reach 8), one trap site in Middle Fish Creek (Reach 6) and one trap site in Fish Lake Tributary 1. The three Upper Fish Creek sites that provided enough water depth under the ice to deploy minnow traps had one minnow trap set at each site. Fish Lake Tributary 1 and Fish Creek both had two minnow traps deployed within open flowing water.

No fish were captured in any of the Upper or Middle Fish Creek sites. One Rainbow Trout (44 mm fork length) was captured in Fish Lake Tributary 1. Fish Lake Tributary 1 was also found to have the highest Dissolved Oxygen (DO) of any of the sites sampled.

Results suggest limited overwintering potential exists in Fish Creek Reach 8 due to insufficient water and low DO. Fish Creek Tributary 1 provides more favourable overwintering habitat with higher DO.



Photograph 1: View of 44mm RB captured in Fish Lake Tributary 1 – February 26, 2012.