Project Trip Report

Project Name: Alpine Lake Monitoring	**Date of Trip:** May 13, 2009
Project Code: 117010	**Submitted By:** Elijah Keib

Weather: 12˚ F, 5-10 mph wind

Elijah Keib arrived at Alpine on Wednesday, May 7, 2009 at 3:00 PM for Alpine Spring Break Up 2009. On May 13, Mr. Keib attended LCMF's daily health and safety meeting. At 8:30 AM equipment was assembled, calibrated and prepared for transport. Steven Clark of Baker accompanied Mr. Keib to Lakes L9312 and L9313 departing Alpine at approximately 9:00 AM. Ice thickness, total depth, freeboard, temperature, salinity, conductivity, dissolved oxygen (DO), and water velocities were collected at predetermined locations. Specific conductance was calculated from observed temperatures and conductivity. Results are tabulated and graphed in the attached sheets.

In-situ water quality parameters were recorded using a YSI-30 meter (conductivity, salinity, and temperature). Dissolved oxygen was measured using a Hach HQ40 LDO meter. All measurements were made from below the ice surface to the lake bottom at a maximum of two-foot intervals. The DO meter was calibrated prior to the trip by TTT Environmental. The YSI-30 was calibrated on May 13 by Baker prior to sampling. This was the final scheduled sampling event.

Lake L9312

The maximum specific conductance calculated was approximately 184 µS/cm. Specific conductance values were relatively consistent at each sampling location. The average specific conductance ranged from approximately 165 µS/cm at 5 feet of depth to 184 µS/cm at 11 feet of depth. Dissolved oxygen saturation remained consistent with respect to depth, having values as high as 62.4%, and averaging 49.4%.

Lake L9313

The maximum specific conductance calculated was approximately 644 µS/cm. Specific conductance values were relatively consistent at each sampling location. The average specific conductance ranged from approximately 434 µS/cm at 5 feet of depth to 644 µS/cm at 9 feet of depth. Dissolved oxygen saturation remained consistent with respect to depth, having values as high as 48.0%, and averaging 23.9%.

Alpine Lake Monitoring Program
Water Quality

Sample Date: May 13, 2009

Upstream Location Time	Water Depth (ft)	Ice Thickness (ft)	Free Board (ft)	Sample Depth (ft)	Temp (^{0}C)	Conductivity (µS/cm)	Specific Conductance (µS/cm)	DO (mg/L)	DO (Percent Saturation)	Salinity (ppt)
Lake L9313 N70°20'28.1" W150°56'31.5" 9:20 a.m.	9.6	4.7	0.3	1	-	-	-	-	-	-
				2	-	-	-	-	-	-
				3.0	-	-	-	-	-	-
				4	-	-	-	-	-	-
				5	0.3	224	434	7.0	48.0	0.2
				6	-	-	-	-	-	-
				7	2.2	336	607	1.6	11.6	0.3
				8	-	-	-	-	-	-
				9	3.3	370	644	1.7	12.1	0.3
				10	-	-	-	-	-	-
				11	-	-	-	-	-	-
				12	-	-	-	-	-	-
Lake L9312 N70°19'52.2" W150°56'59.9" 9:50 a.m.	11.6	4.8	0.3	1	-	-	-	-	-	-
				2	-	-	-	-	-	-
				3	-	-	-	-	-	-
				4	-	-	-	-	-	-
				5	0.3	85	165	9.0	62.0	0.1
				6	-	-	-	-	-	-
				7	2.2	96	173	8.6	62.6	0.1
				8	-	-	-	-	-	-
				9	3.4	105	183	6.2	46.2	0.1
				10	-	-	-	-	-	-
				11	3.2	105	184	3.7	26.8	0.1
				12	-	-	-	-	-	-

Notes:

(1) All sample location coordinates referenced to NAD83 datum.

(2) Freeboard is the distance from the top of ice to the water surface.

(3) Sample depth is measured from the water surface.

(4) Salinity, conductivity, and temperature were measured using a YSI-30 meter.

(5) Specific conductance (referenced to 25^{0}C) was obtained using a conversion coefficient of 0.0196 based on empirical data.

(6) Dissolved oxygen was measured using a Hach HQ-40d LDO.

(7) Time shown indicates the end of the measurement.