Project Note

To: Caryn Rea	Date: May 9, 2003
From: Jon Wolf	Project: 2003 Alpine Lake L9313 Monitoring
Subject: May 9, 2003 Monitoring Event	

On May 9, 2003, Mike Cox and Jim Meckel conducted the second of two in situ water quality monitoring events at Alpine lake L9313. The monitoring event was carried out with the assistance of Mr. Jack Tipleman of LCMF surveyors. Access to the lake was provided by LCMF tracked vehicle. Weather on the day of sampling was ideal. Temperatures were in the low 20s and wind was from the east at approximately 10 miles per hour.

Locations monitored during this event were within 5 feet of the locations monitored during the April 28, 2003 monitoring event (see April 28, 2003 report for sampling locations).

At each sampling location, a two-cycle power auger was used to drill a six-inch sampling hole through the ice. Total depth was measured using a weighted tag line. Freeboard, the distance from the top of ice to the water surface in the sample hole, was measured using a pocket rod. Ice thickness was determined using a pole with a wire hook on the end. The pole was lowered into the hole until the hook found the underside of the ice. The pole was then withdrawn and the pocket rod used to measure the resultant ice thickness as marked along the pole. All measurements were made to the nearest tenth-foot and were referenced to the water surface.

A Horiba U-10 in situ water quality meter was used to measure the following in situ water parameters:

- Temperature in degrees Celsius (^{o}C)
- pH in standard units
- Conductivity in millisiemens per centimeter (mS/cm)
- Dissolved oxygen in milligrams per liter (mg/L)
- Salinity in milligrams per liter (mg/L)

In situ samples were collected at 3-foot intervals between the bottom of the ice and the bottom of the lake.

Project Note

2003 Alpine Lake L9313 Monitoring Program

In-Situ Water Quality Parameters

May 9, 2003

Sample Location	Sample Time	Sample Location Coordinates (NAD27)	Total Depth (ft)	Ice Thickness (ft)	Free-board (ft)	In-Situ Sample Depth (ft)	Temp. (°C)	pH	Conduc-tivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)
L9313	13:07	N70°20'29.3" W150°56'20.2"	9.2	4.3	0.1	4.5	1.0	7.9	0.3	0.0	0.6
						7.5	2.0	7.3	0.3	0.0	0.1
L9313a	13:28	N70°20'22.5" W150°56'47.7"	6.7	4.4	0.1	5.0	2.0	7.3	0.3	0.0	2.6
L9313b	14:00	N70°20'32.3" W150°56'20.3"	9.4	4.9	0.4	5.0	3.0	7.3	0.4	0.0	1.1
						8.0	3.0	6.9	0.4	0.0	0.9
L9313c	14:10	N70°20'25.0" W150°56'36.7"	8.8	5.1	0.3	5.5	2.0	7.1	0.3	0.0	2.3
						8.5	2.0	6.8	0.4	0.0	2.2
L9313d	14:20	N70°20'31.5" W150°56'03.8"	8.4	4.3	0.3	5.0	2.0	6.8	0.3	0.0	1.5
						8.0	2.0	6.4	0.3	0.0	0.0
L9313e	14:35	N70°20'35.5" W150°55'59.0"	9.2	4.7	0.4	5.0	2.0	6.8	0.4	0.0	1.5
						8.0	2.0	6.2	0.4	0.0	0.0
L9313f	14:45	N70°20'39.2" W150°55'48.0"	9.0	4.7	0.3	5.0	2.0	6.5	0.4	0.0	1.8
						8.0	2.0	6.3	0.4	0.0	1.6
L9313g	14:50	N70°20'40.1" W150°55'40.6"	8.6	4.6	0.3	5.0	1.0	6.7	0.3	0.00	2.9
						8.0	2.0	6.5	0.4	0.00	2.3

Notes:

1 - Total depth is measured from the water surface to the lake bottom.

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

3 - Sample depth is measured from the water surface.