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We have tested the samples of water submitted by you August 16, 23, September 01, 09 and 16, 2011 and report as follows:

Method of Testing:

Five samples were collected at seven sites over 30 days in accordance with Provincial Health Guidelines for evaluation of Total, Thermotolerant Coliforms and E.coli bacteria. Analyses was performed in accordance with methods outlined in the "Standard Methods of Examination of Water and Wastewater", 17th edition, 1989 published by the American Public Health Association, Specifically, Section 9222D. All tests were done by Membrane Filtration

Results of Testing:

	8/16/2010		8/23/2010		9/01/2010		9/09/2010		9/16/2010	
	Total cfu/100 ml	Fecal cfu/100 ml	Total cfu/100 ml	Fecal cfu/100 ml	Total cfu/100 ml	Fecal cfu/100 ml	Total cfu/100 ml	Fecal cfu/100 ml	Total cfu/100 ml	Fecal cfu/100 ml
1. Slocan	3	0	0	0	6	0	6	2	4	0
2. Silverton Hotel	1	0	4	3*	6	0	2	0	12	0
3. Silverton Creek	3	0	12	0	8	0	7	3	11	0
4. New Denver Hospital	1	0	12	2*	6	0	7	0	13	0
5. Carpenter Creek	137	0	0	0	7	0	6	0	6	0
6. Wilson Creek	7	0	3	1*	1	0	9	1*	19	0
7. Hills	22	0	30	0	10	0	64	1*	11	1*
8. QA/QC (in house)	0	0	0	0	0	0	0	0	0	0

cfu = colony forming units, Gt = Greater than
*All Thermotolerant Coliform colonies were tested for E.coli and found to be negative

Analyst:
Jennifer Yeow, Microbiologist, Passmore Laboratory Ltd.

Passmore Laboratory Ltd. complies with methods and certification through UBC's Canadian Microbiological Proficiency Testing Progeram

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Background:

Coliforms refer to a group of bacteria that have been tested for over 90 years as indicators of human infection. They are defined as rod-shaped non-spore forming organisms. Coliforms are abundant in the feces of warm-blooded animals, but can also be found in the aquatic environment, in soil and on vegetation. Their presence is used to indicate other pathogenic organisms of fecal origin that may be present. These include other bacteria, viruses, protozoa (Giardia, Cryptosporidium) and multicellular parasites. The three tests done are described:

1. Total Coliforms – Bacteria that ferment lactose at 35ºC. This group includes bacteria from warm-blooded animal source as well as plant source. E.g. from algae, decaying plants

2. Thermotolerant or Fecal Coliforms – Bacteria that have the capacity to grow at elevated temperature e.g. recently shed from the intestine of warm blooded animals

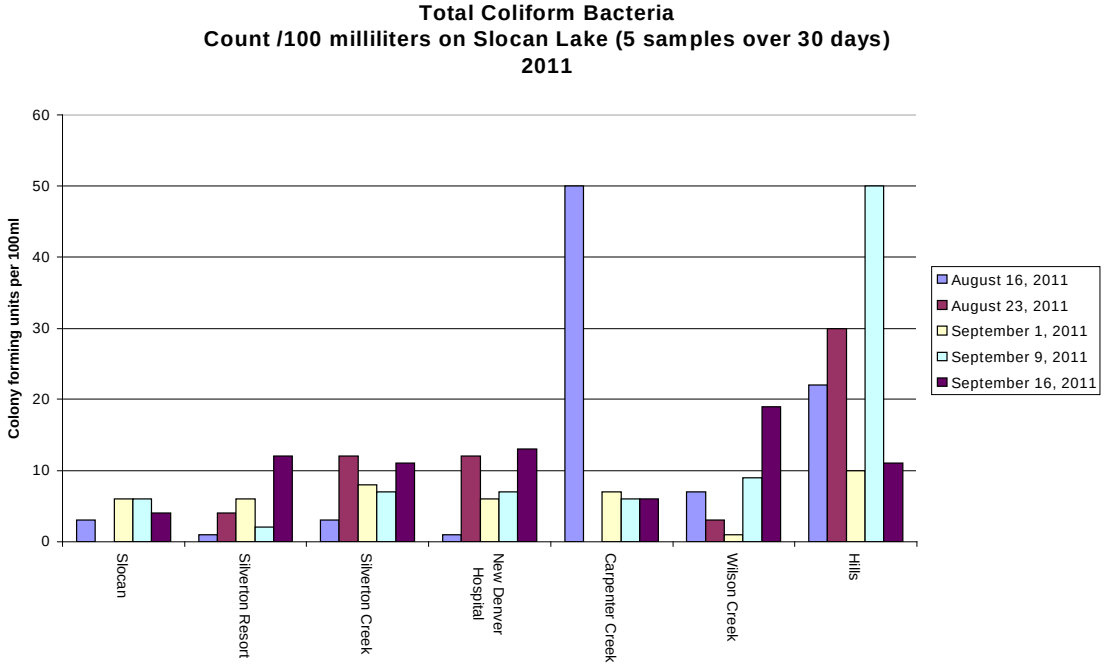
3. E.coli – Bacteria that are a subgroup of the Total and Thermotolerant groups that are known to inhabit humans, warm blooded animals and some serotypes are pathogenic to humans.

Provincial Government Guidelines for "raw"or untreated ***drinking water*** state that no Thermotolerant (Fecal Coliforms) and no E.coli. should be present. Guidelines for water used for ***primany contact recreation*** use state the Thermotolerant Colifrom level should not exceed a geometric mean of 200/100ml in 5 samples taken in a 30 day period. Also, the E.coli level should not exceed a geometric mean of 77/100ml in 5 samples over a 30 day period.

Findings:

Total Coliforms

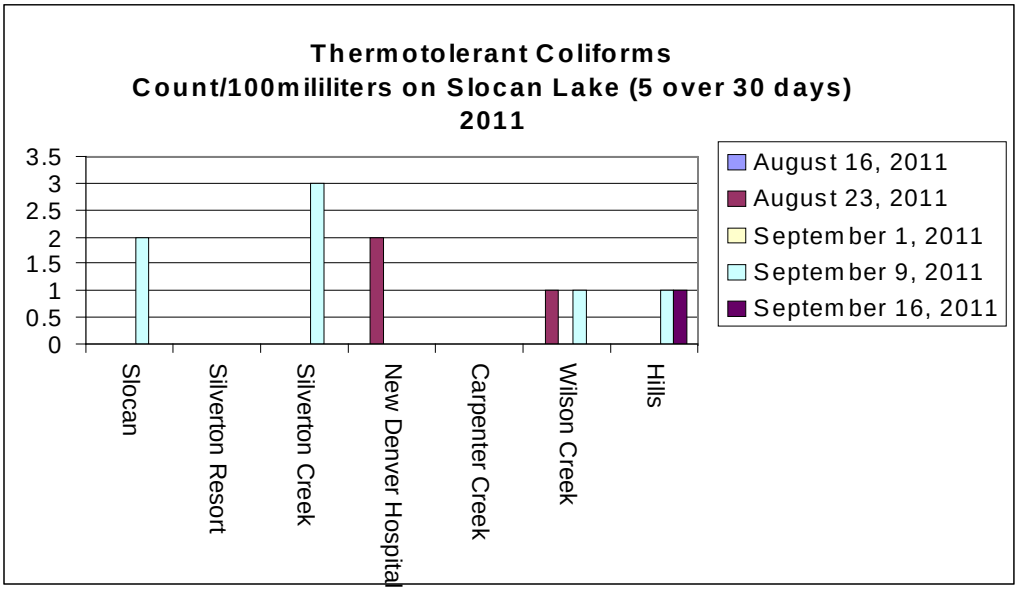
The test results for 2010 showed high counts in regions where the water was likely to experience human and/or tributary creek nutrient input (Bonanza Creek in Hills and Slocan City). In addition, there was one very high count at Slocan (greater than 300cfu). In 2011 we did not see high Total Coliform counts at the Slocan site. However, counts at the Hills site remained relatively high. High counts (137cfu) were observed off Carpenter Creek on August 16th and at Hills (64cfu) on Sept 9th. Counts at the other sites averaged 10 cfu/100ml and were slightly higher than seen in 2010 when the average was 4cfu/100ml.



Findings:

Thermotolerant Coliform Bacteria

In 2010, samples collected at Slocan and Hills on September 22nd showed low (1-2cfu/ml) counts for Thermotolerant Bacteria. Both samples were tested for E.coli and found to be positive. In 2011, eight samples were found to contain Thermotolerant coliforms (averaging 2 cfu/100ml) taken from all sites and none of the samples were positive for E.coli. See chart below:



As we have seen in 2011, there are organisms other than E.coli isolated in the test for Thermotolerant bacteria that may not be from human/warm blooded animal source. However, they may still have a correlation with disease and so, are recommended as indicators of water quality.

Respectfully Submitted,

Jennifer Yeow, Microbiologist
Passmore Laboratory Ltd.