WATER TESTING ON BAY LAKE

We currently take samples from 11 sites around Bay Lake and submit them for testing for Recreational E-coli. We do this 4 times a year. May 24 week, July 1st week August 1st week and Labour Day week. This year that test will cost $11.00 per sample

Once a year, normally at the time of the August 1st sampling , we take a second bottle of water from 3 specific sites and submit it for testing for the following : Faecal Strep (cost of test $27.25) , TKN (cost of test $26.25) , Nitrate & Nitrite (cost of each test $16.00) and lastly Microcystin (cost of test $58.76) The three special sites are off the inlet, off the outlet and off the boat launch ramp.

These substances were suggested to us by several other lake associations and were confirmed by our lab as being important.

WHY DO THESE TESTS?

Faecal Strep is important if there are a large number of ducks or geese on the lake. This can lead to high E-coli readings

TKN or total Nitrogen is the sum of **Nitrogen, ammonia and ammonium**. **Nitrogen** can be harmful for pregnant women and small children. High levels could indicate sewage discharge or manure reaching the lake.

Nitrates and Nitrites there is a complicated relationship between the two groups in how they react in the body. There is a rare disease in children that can be caused by **Nitrites** directly or **Nitrates** that become **Nitrites** by reacting to bacteria in the intestines. Presence of these substances is usually due to contamination by decaying plant or animal matter, domestic fertilizer, domestic sewage or geological formations containing soluble nitrogen compounds. There is a weak correlation between **Nitrates** and gastric cancer.

Microcystin is blue green algae or pond scum. This is actually primitive microscopic plants that live in fresh water. Most forms of this are harmless, but, some forms like the one last year in Clear Lake, can produce toxins that can be harmful to humans and animals. No filtration or water treatment other than distillation can remove these toxins. They are produced by the plant when it dies so killing it is counter-productive.

We are part of the Lake Partner program for which Judy and John take tests. Their samples are checked for **Phosphorous. High Phosphorous** can indicate soap in the water meaning residents are running soapy dish water or shower water directly into the lake**. Phosphorous** is plant food which can support **Microcystins.**

We did check our own samples for **Phosphorous** one year but the readings were basically identical to that of the results of the samples for the Lake Partners Program so we discontinued that testing.

They also do Secchi disc sampling which measures the clarity of the water by measuring the depth that the disc can be seen.

Testing has to be done on a Tuesday as samples are picked up by the lab's courier at the Information Centre Wednesday mornings.

We normally have the test results by e-mail within 48 hours