

2007 Water Quality Report

Water quality monitoring on Go Home Lake for the past eight summers (2000-2007) has consisted primarily of biweekly bacteriological testing at 6 selected sites from mid June until mid September. This testing is made possible with financial assistance from the Township of Georgian Bay, the District of Muskoka, and the GBA Foundation. The monitoring program measures Total Coliforms (TC), Escherichia coli (E. coli) and water clarity (Secchi depth) at each of the 6 sites 7 or 8 times over the summer.

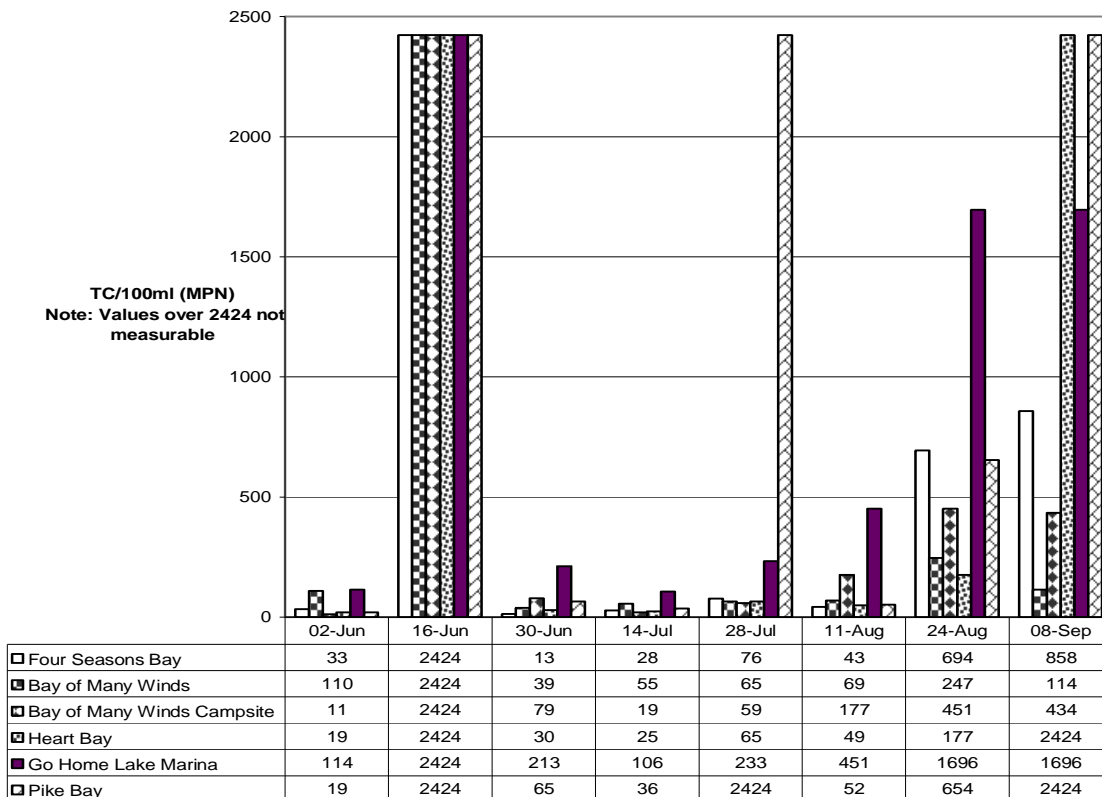
Once again this year, with the kind assistance of Paul Wiancko of Six Mile Lake, depth profiles to analyze water temperature, dissolved oxygen, conductivity (a measure of water source and circulation patterns), clarity and total phosphorus were conducted at 7 locations (southern Control Dam outlet, Blue Lagoon, Four Seasons Bay, Bay of Many Winds, Crystal Bay, Manning Bay and the inflow at Swallow Bay) in early September.

Total Coliforms

Total Coliform readings during the summer of 2007 were generally consistent with prior year averages. A notable exception occurred on June 16th in the form of very high readings at all sites, which were almost certainly due to heavy pollen. Excluding this anomaly, only five samples exceeded the Ontario recreational waters guideline of 1000 TC/100ml.

The majority of organisms measured by the TC test occur naturally in the environment, and enter the lake through soil runoff and decaying organic matter. There is little evidence that human activity contributes significantly to TC readings.

Go Home Lake Total Coliforms 2007

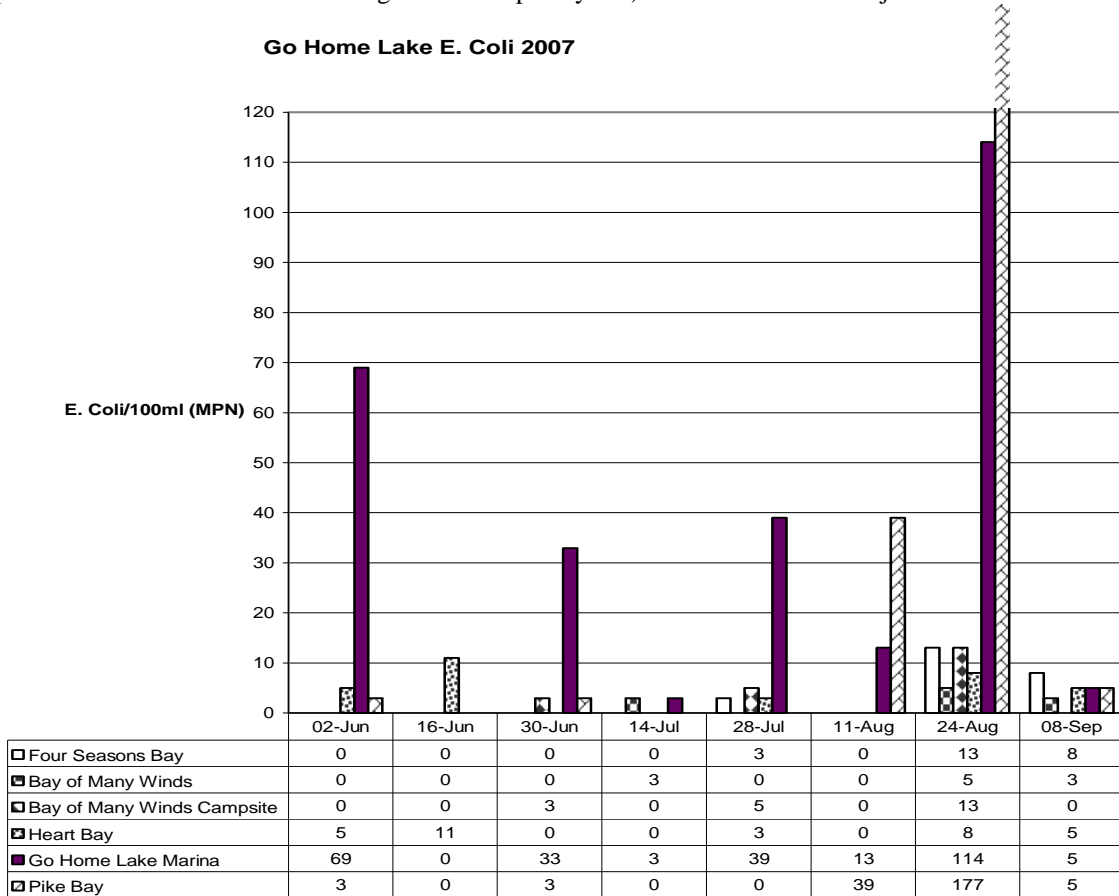


E. Coli

E. Coli, an organism which is abundant in human and animal excreta, is now favoured as an indicator of fecal contamination. Studies have shown that illness rates among recreational water users increase with fecal-associated bacteria levels in the water. Health Canada has established a guideline of 0 E. Coli/100ml for drinking water, while

Ontario uses 100 E. Coli/100ml as the recreational water guideline. Because children typically ingest quantities of lake water while swimming or playing, the GBA has proposed an objective of 10 E. Coli/100ml for our recreational waters.

E. Coli readings during the summer of 2007 were broadly consistent with prior year averages, except for results at Go Home Lake Marina which showed marked deterioration. In addition the August 24th readings were unusually high, with two results exceeding the provincial guideline. This was the first time levels exceeding 100 E. Coli/100ml have been recorded on Go Home Lake, however readings had returned to normal by September 8th. Ten results spanning five sites (compared to seven in 2006 and an average of four in prior years) exceeded the GBA objective.



Summary

In summary, water quality conditions were generally quite acceptable in Go Home Lake during the summer of 2007, however the significant upward trend in average seasonal E. Coli levels first observed in 2005 continued and remains cause for concern, particularly at the Go Home Lake Marina site.

Results from the September 8th depth profile analysis were almost identical to prior years for all measured parameters. This is due to consistent source water and a steady flow from Swallow Bay to the Control Dam. Go Home Lake is able to flush nutrient inputs from cottages each year. The lake has only a few deep holes so most of these nutrients have nowhere to build up in the sediments and are thus flushed out.

Conductivity and mixing throughout the lake was very good with identical values at the inlet (Swallow Bay) and outfall (Control Dam) of 58.1 $\mu\text{S}/\text{cm}$, almost the same as in 2006.

Water clarity was slightly lower this year throughout the lake with visibility depths of 3.9 meters in Bay of Many Winds to 5.7 meters in Swallow Bay and 5.2 meters at the Control Dam. Last year values ranged from 6.4 to 4.2 meters.

We hope to continue the water quality monitoring program in future years to enable us to track the effectiveness of our efforts to preserve this important natural resource. For further information on the program, contact Simon Edwards at 705 756 3445, 416 492 7696, or simon@tipperlinne.com