

# Footprints

WATER QUALITY REPORT- Jayne MacDonald (jmacdonald43@cogeco.ca)

With respect to greenhouse gas emissions we're all well aware of the need to reduce our "carbon footprint". Those of us fortunate enough to enjoy life around the lake have another issue and hence we also need to reduce our "**phosphorus footprint**".

Phosphorus is a nutrient essential for plant growth. It is found in lawn fertilizers, manure, as well as human and other animal waste. So while phosphorus is naturally occurring and not harmful to people, too much of it in a lake causes algal blooms and excessive aquatic plant growth thus in general deteriorates water quality.

**Phosphorus enters freshwater systems in four main ways:**

- (i) atmospheric inputs, including rain and dust;*
- (ii) point (discrete) sources, including sewage treatment plants, septic systems and industrial effluents;*
- (iii) non-point (diffuse) sources, including stormwater, agricultural, and land clearing runoff; and*
- (iv) non-point sources from within the water system, including washout from riverbanks and re-suspension from sediments (internal loading).*

**The rate at which phosphorus loads enter freshwater systems varies with land use, geology, morphology of the drainage basin, soil productivity, human activities, and pollution.<sup>1</sup>**

Like with carbon emissions we often question:

**"How can what I do actually make a significant difference?"**

Albeit some of these phosphorus sources are beyond our control.

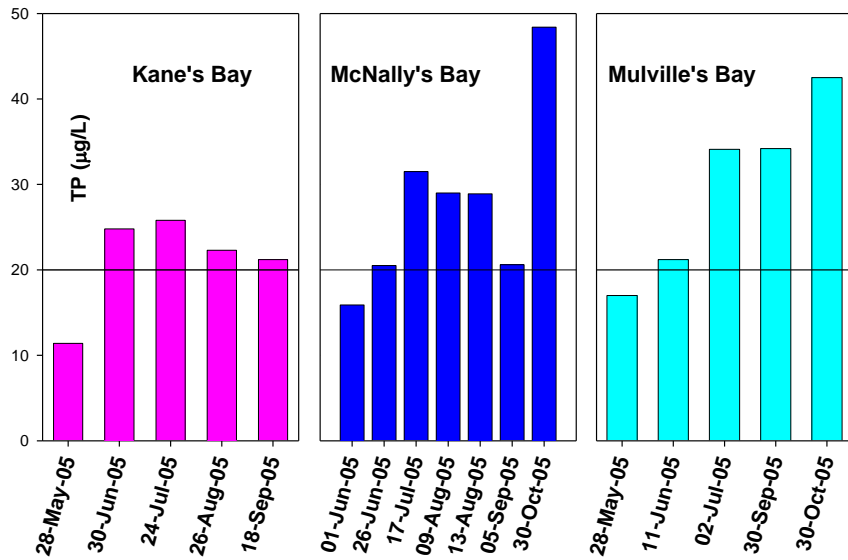
The sewage treatment plant issues from the Westport Village system was, in the early days of the lake association, a huge concern. The village has addressed these issues satisfactorily.

In 1983 the Ministry of the Environment estimated that 33% of the phosphorus entering the lake was from land runoff and 18% from septic tank systems.

Our "phosphorus footprint" is significant. Although these values may have changed some over the years, we estimate that we can control about **50%** of the phosphorus inputted into the lake by practicing good stewardship.

**It all seems so simple.**

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2005 Upper Rideau Lake - Phosphorus Levels (TP)  
Lake Partner Program

In 2005 we reported these *Total Phosphorus* results from around the lake. A quick look at the numbers shows that 14 of the 17 values are over the 20 microgram per liter number that indicates high nutrient levels. The seasonal average being 26.6 µg/L. The Watershed Watch report for 2005 indicated similar values with 73% of the readings greater than 20 µg/L.

**The good news is than things are looking a bit brighter.**  
In 2008 only nine of the 17 values exceeded the standard.

