

## Our Lake

The theme of “Our Lake” articles last year was on water quality related issues. The same theme will continue this year with emphasis on increasing our knowledge about the subject. As we become aware of the effect that our activities have on our lake, we can make choices to lesson these effects.

The Normanoch Association commissioned an update study of our lake’s hydrology and nutrient loading. The full text of the report can be accessed on line at Normanoch.org under water quality. This study is an update to the initial study in 1989. On the hydrology of the lake, the lake receives water from 6 subwatershed areas covering an area of 3702 acres stretching back to Bear Swamp south of Lake Owassa and north east of Culver Lake to about Kymer’s Camp Ground area. The ratio of the watershed to lake area is 7.4:1. The watershed area is mostly forest, wetlands and residential. The residential area is relatively smaller than forest and wetlands but contains a high input of nutrients. The greatest amount of water make-up occurs in March and September. The total input of water to the lake is sufficient to fill the lake in 2.47 years. Because this a slow replacement rate, nutrients within the lake linger longer and increase the risk of algae blooms.

The report states that we have the following loading to the lake compared to 1989:

<b>2014 Data</b>	<b>1989 Data</b>
• TSS 148,000 kg/yr	TSS 512,983 kg/yr
• TN 6,150 kg/yr	TN 4,604 kg/yr
• TP 391 kg/yr	TP 327 kg/y

TSS is total suspended solids, TN is total nitrogen and TP is total phosphorus, 1Kg.=2.2 pounds

The report concedes that the different computer modeling program was improved over the 1989 version; hence, the 2014 TSS value is the more accurate value. The TN and the TP have both increased in the 25 years. Subwatersheds consisting of the west shore and the east shore and eastern part of the north shore have the highest per area nutrient loads to the lake. Watershed 4 has the highest ground water and surface water impact due to the steep gradients.

What does this all mean? If we hope to restore the lake, we need to focus on the major impacts to the lake – storm water, and septic’s. I will discuss some of the recommendations of this study that are designed to reduce these factors next week. The Water Quality Committee will be developing strategies that target our lake’s problems. Our first meeting will be on July 21<sup>st</sup> at 9AM at the Clubhouse.

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