

## **Water Levels on Lake of Bays**

*by Deb Cumming, Chair, Environment Committee*  
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This year, many residents noticed that water levels were very low by the end of August and wondered whether this was a cause for concern. Water levels on Lake of Bays are determined as part of the overall Muskoka River Water Management Plan that was initiated in 2002 in response to the opening of Ontario's electricity market to competition in May 2001.

The guiding principle of the Muskoka River Management Plan is to ensure that the waterpower facilities are properly supplied, that the lower and upper lake limits are not breached and that the water in the system is constantly flowing.

Operational strategies for water level management vary from lake to lake but there are some general principles:

- Lake of Bays and other regulated lakes are drawn down during the fall and winter to provide storage capacity for spring run-off and rain.
- Stop logs are removed in the fall and early winter to ensure that the system can pass spring flows and that the stop logs are not frozen into place thereby impeding spring flow.
- Near the end of spring runoff, the logs are put back in place to capture a portion of the remaining flow and bring lake levels to their summer start level. This is particularly the case for Lake of Bays which is at the top of the system and thereby a source of water inventory.
- Lake levels are then (usually) slowly drawn down over the summer to meet hydroelectric needs and to ensure flow.

In theory, these high and low lake limits are set to support the eco-function of the lake and care is taken to ensure that these are not breached, although weather events can always have an impact.

The Muskoka River Water Management Plan has considered a diverse range of stakeholder issues, including: fish and wildlife, public safety, navigation needs, economic opportunities, flood control, property damage, and power generation, and has attempted to balance these needs when determining water levels. Although many Lake of Bays waterfront property owners are frustrated by the fluctuations in water levels over the course of the season and the impact on docks, shorelines and boating activities, the inconvenience of fluctuating water levels for docks and docking was ranked relatively low on the Muskoka River Water Management Plan's list of concerns, compared to the other concerns.

Given that the Muskoka River Water Management Plan builds on the agreements that preceded it, its objective is clear. It is an operational strategy for the hydro facilities and dams on the system. The Ministry of Natural Resources has recognized that there is a range of users on the system and the planning process must balance the needs and interests of the various water users and stakeholders and adjust flow and water levels accordingly. This is challenging because:

- There are 42 water control structures on the Muskoka River, 11 associated with hydroelectric power and 29 of which are dams owned and operated by the Ministry of Natural Resources.
- The Muskoka River system contains 78,000 hectares of lakes.
- The Muskoka River descends approximately 345 metres from its headwaters to its outlet over a distance of about 210 kilometres.
- There are hundreds of wetlands that are part of the Muskoka River system, including seven that have been identified for protection because they are provincially significant.