

Muskoka Watershed Advisory Group  
via E-mail [mardiwitzel@gmail.com](mailto:mardiwitzel@gmail.com)

February 11, 2020

Dear Chair Witzel:

Re: Follow up to Listening Sessions

Thank you for the opportunity to provide additional input to the work of the Muskoka Watershed Advisory Group (MWAG). The Muskoka Lakes Association (MLA) represents over 2000 families and for over 125 years we have promoted the responsible use, enjoyment and conservation of the unique Muskoka environment.

The \$5 million financial commitment made by the government is a good start to addressing the issues that you are disclosing in the watershed. We challenge the Advisory Group to make recommendations that will make Muskoka *the most resilient watershed in Ontario* and the Government to ensure sufficient investment in each to result in prompt action.

We offer the following comments for your consideration as you form your recommendations.

### **1. Watershed Focus**

The watershed is the logical unit by which to monitor, protect and manage the environment. To protect the lakes, one cannot take the watershed out of the water – the characteristics of the land and what happens on the land is of great influence on the quality and quantity of water and habitats.

***Recommendation:*** We support the watershed focus of the province and MWAG.

### **2. Watershed Based Planning**

For decades, watershed-based planning, also called integrated watershed management (IWM) has been used to characterize the environmental conditions in a watershed, predict future conditions under various scenarios, and develop plans for protection, management and restoration, as appropriate. It shares the work with all those who have the ability to assess and manage the responses, whether through official plans, development agreements, monitoring, or infrastructure improvements, for example.

The Muskoka Watershed Council (MWC) has developed an excellent paper that outlines the importance of IWM so we will not repeat it here. One distinction that we want to make is that the province has incorporated IWM into the planning process as a tool for assessing the impacts of land use change from development, which it is. But the tool has many more applications including to assess protection, restoration and resource based 'development' conditions.

This watershed planning tool has been used for Source Water Protection, the Oak Ridges Moraine Protection Plan, and the Lake Simcoe and Lake Erie nutrient reduction plans, to name a few.

From a watershed plan may emerge plans for specific sub watershed where more in-depth knowledge is required, justifications for infrastructure improvements (e.g. phase 1 of an Environmental Assessment) or a forest management plan, for example. Each watershed plan is tailored to the unique environments, circumstances and challenges and involving those who need to be at the table. Watershed scale planning allows us to see issues and solutions beyond municipal boundaries and the capacity of one organization to effect.

***Recommendation:*** *That an Integrated Watershed Plan be undertaken for the Muskoka Watershed to characterize the environment, establish monitoring parameters and locations, assess a variety of issues and risks today and into the future, and to develop management actions and responsibilities for implementation.*

### **3. Planning for Climate change**

Any watershed plan needs to assess the existing and future impacts from climate change on the environment and ensure that our management plans and standards are proactively allowing us to mitigate and adapt to this new regime. Nowhere has this been more evident than in the spring flooding and severe summer storms experienced more frequently in the past decade.

The Muskoka River Water Management Plan (MRWMP) guides the management of water levels in the lakes. The base model for the Muskoka River plan was set up to simulate the period 1970-2000 and much of the data used in the model was current as of late 1990s, over 20 years ago. Much has changed since then. Climate conditions have changed according to many sources, including the Ministry of Natural Resources (*Climate change projections for Ontario: An updated synthesis for policymakers and planners, 2015*). Their results show significant changes are expected in future years (2011-2040, 2041-2070 and 2071- 2100) when compared with the baseline period 1971-2000 (coincidentally the same baseline period in the MRWMP). They predict that air temperatures will be 2-7 degrees warmer in summer. Winter temperatures are projected to increase, on average by 2.5 to 2.8° in the 2020s. We are here now. Another new report focused on the impact of climate change in the Muskoka region is well documented in the Planning for Climate Change in Muskoka report, published by the Muskoka Watershed Council, 2016 ([www.muskokawatershed.org](http://www.muskokawatershed.org)). This sets the stage for increased lake-effect snow and/or winter rain in the Muskoka river basin, conditions that are impacting our water levels and spring floods. Conditions that will result in more drought and a greater risk of forest fire.

Despite repeated requests from the MLA, one of the stakeholders of the MRWMP, MNRF has steadfastly refused to initiate an update to the plan. It is clear now that the Muskoka River Water Management Plan needs to be revised to reflect our new climate reality and to transparently incorporate the Bala Falls Hydroelectric Plant. While we acknowledge that the MRWMP is not a flood control plan, a water level management plan within the context of the watershed can mitigate these effects to some extent.

Having said all this, the MRWMP only looks after water levels to support recreational boating, fisheries and hydro power generation. There are many other aspects of a watershed that contribute to the control of water levels in the lakes. Therefore, an update to the MRWMP is overdue but it should be conducted within the Watershed Plan process for maximum effect.

**Recommendation:** *Update the Muskoka River Water Management Plan as an element of the Muskoka Watershed Plan, with current data and climate scenarios built in.*

#### **4. Science, Data and Tools to Manage**

The Muskoka environment is changing. Whether it be from climate change, land development, improvements in sewage treatment, invasive species and diseases affecting trees and wildlife, or runoff from roads, the environmental responses are now more complicated and interrelated. Monitoring data and the application of scientific research has shone a light on many issues over the years including acid rain, nutrient enrichment of lakes, and storm water management. Now, more than ever, we need science and tools to assess issues today and into the future. We need to be able to predict with accuracy and know when we are approaching thresholds.

##### Science

Muskoka is fortunate to have the Dorset Research Centre in its midst, with world class scientists. The Muskoka Watershed Council and Friends of the Muskoka Watershed also have expertise to be valued from those who have chosen to make Muskoka their home.

No longer can our current and future issues be left to an ad hoc approach to understanding and managing. Our scientists have flagged many disturbing trends, such as calcium reduction, increasing blue green algae and increasing chlorides in the lakes.

Unfortunately, successive governments, in an attempt to reduce costs, have been systematically reducing the capacity of our government scientists to research and develop solutions. Perhaps it is time to reinvigorate the Dorset Centre into a Recreational Lakes and Watersheds Centre of Excellence as well as the research conducted there to aid in understanding the science behind the watershed conditions.

**Recommendation:** *Expand investment in the Dorset Centre to create a Recreational Lakes and Watersheds Centre of Excellence to aid in understanding the science behind watershed conditions and their effects on our lakes.*

##### Monitoring

Integrated watershed monitoring programs are developed and implemented in many watersheds to ensure long term, consistent and complimentary data to inform analysis and management actions. In southern Ontario conservation authorities are often the organizations undertaking these programs with data made available to various stakeholders. The conservation authorities also undertake monitoring on behalf of other organizations, such as the provincial government for efficiency.

The MLA, lake partners and the District of Muskoka all monitor water quality in the Muskoka Lakes. Some important parameters may not be measured consistently by all. Forests, wildlife, and aquatic life all have variable levels of monitoring or inventory from a variety of organizations, again subject to funding which is dwindling despite an increasing need for quality data.

You cannot manage what you do not measure. Therefore, an integrated watershed monitoring program should be developed and implemented, incorporating long term data points.

Monitoring points may need to be increased to provide sufficient coverage and be able to see responses to changes in land use or action. Experience from the south tells us that rain gauges need to be real time and installed at many more locations in the watershed to capture the variability in intense storms. More climate and stream flow stations are required. The data needs to be quickly available to all that need it through centralized and accessible storage.

**Recommendation:** *An integrated watershed monitoring program should be developed and implemented, incorporating long term data points, and be readily available to users.*

### Tools

With data and future planning comes the need to have predictive models to run scenarios of change – either long or short term. We need models for flood forecasting and warning, models for forest change, for loading of nutrients under various management scenarios, etc. The models must calibrate to observed conditions which means monitoring data is required. Of greatest urgency is the requirement for hydrological models for flood forecasting and warning and the update to the MRWMP.

**Recommendation:** *Develop a hydrological model for the Muskoka River to aid in flood forecasting and warning and inform the update to the MRWMP.*

## **5. Effective Governance**

There is no comprehensive watershed governance for the Muskoka Lakes, be it for flooding, water quality, or forest management. The District of Muskoka provides some of the needed actions as well as the Ministry of Natural Resources and Forestry for flooding and forestry and Ministry of Environment Conservation and Parks for water quality and natural heritage. The MLA strongly believes that neither Ministry has the full set of resources or authorities to truly manage the watershed (evidenced by lack of floodplain mapping, limited water quality testing, lack of tools) and the District does not have the jurisdiction.

The conservation authority model has been in place in Ontario since 1946 to manage natural resources on a watershed basis. Sounds like exactly what we are missing here. Given the scope and impact of the water management issues in the Muskoka region the MLA believes that it is time to bring a conservation authority to Muskoka who have the mandate for water and natural resources management at the watershed scale. They are delegated the responsibility to implement the hazard management policies of the Provincial Policy Statement and through recent changes to the CA Act are mandated to undertake programs for source protection. We can no longer expect effective management, especially around flooding, without a purpose-built body who have the power to study, proactively manage and where necessary regulate the system.

The argument is made that it is expensive to form a conservation authority. The MLA would argue that it is becoming increasingly expensive not to have such an organization. This is an opportunity to invest in the environment by investing in governance.

**Recommendation:** *Form a conservation authority for Muskoka*

## 6. Effective implementation/action

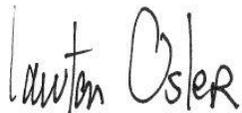
Currently a number of groups have arisen to fill a void in knowledge, action and governance. Most of these groups are fueled by volunteers, such as the Muskoka Watershed Council and the Muskoka Lakes Association. They have been very successful but imagine what more could be done with dedicated resources and co-ordination within a governance framework. Considerations for implementation are as important as developing a plan at the beginning. If we are not prepared to support implementation as outlined in the watershed plan then it is better not to offer false hope. Funds need to be available for investing in on the ground action, be it through outreach to residents or infrastructure.

**Recommendation:** *Ensure there are funds to invest in implementation.*

In conclusion, it will soon be 2 years from the provincial announcement for the Muskoka Watershed Initiative to them receiving your recommendations. It has been 7 years since the first of three flood events in the last decade. Climate change is upon us. There needs to be a sense of urgency to act – protect our water, our forests and our properties. Investment needs to be made in this watershed, for the environment and the economy of Muskoka depend on it.

Thank you for receiving these comments and we would be pleased to discuss any points further.

Yours truly,



Lawton Osler  
President

Cc. Deborah Martin-Downs, Vice President, MLA  
Katie Edwards, General Manager, MLA