

Independent review of the 2019 flood events in Ontario

Read [Special Advisor Doug McNeil's report on the 2019 flood events, including recommendations for improving flood resilience and enhancing public safety.](#)

Executive summary

Ontario has a long history of taking actions to keep people and property safe from the impacts of flooding through land use planning policies and mitigative activities. The development of the modern floodplain policy in Ontario, the watershed approach, the conservation authority model, and the flood standards have been extremely effective at reducing flood risks, especially in new greenfield development areas.

However, during the spring of 2019, heavy rains paired with melting snow and a sudden temperature increase led to devastating flooding across many areas throughout northern and southern Ontario. Emergency declarations were made by 23 municipalities and one First Nation, with significant flooding impacting households, commercial properties, roads and other key infrastructure, such as bridges. Emergencies were first declared starting in early April and lasted through July in many cases. Even through the fall and heading into winter, the Great Lakes continue to experience high-water levels that have been underway since early 2017, and many people and properties continue to be at risk.

In response to these flood events, the provincial government announced that it would undertake consultation on the province's current flood mitigation and land use planning policies. Their first step was to host three regional listening sessions held by provincial leaders with municipal, Indigenous and industry leaders in Muskoka, Pembroke and Ottawa in May 2019. These sessions allowed the Province to hear directly from areas most devastated by the spring floods. Acknowledging that these sessions did not cover all areas that experienced flooding, nor provided the public with an opportunity to engage on the topic, the Province invited comments regarding flooding and suggestions to make Ontario more resilient to flooding through an online survey from May 16 to June 28, 2019.

Following this initial engagement in the spring, I was appointed by the Minister of Natural Resources and Forestry, the Honourable John Yakabuski, on July 18, 2019, to review the province's current flood management framework. In addition to considering policies and activities which influenced spring flooding, I was also asked to consider both Great Lakes and urban flooding.

As Special Advisor on Flooding, I was appointed by the government to provide expert advice to the Minister, and to make Recommendations to the government on opportunities to improve the existing flood policy framework.

Despite having worked in Manitoba on flooding issues throughout my career, I was unfamiliar with the complex policy framework for flood management in Ontario. Understanding the various roles of agencies involved, including the federal government, municipalities, conservation authorities and individual provincial ministries, along with the policies and technical guidance was of utmost importance to the review process. The Ministry provided a number of documents to enable an understanding of the current policy framework for flood management in Ontario and a listing of the documents is included in Appendix A.

While information provided by the Ministry was helpful in providing context for my evaluation, further engagement was warranted to ensure a full review.

I first met with Minister Yakabuski to ensure a clear understanding of my mandate and the importance of this review to the people of Ontario. He underscored the devastating impacts being felt across the province from flooding and the need for the Province to help citizens and ensure their safety in the future.

Working with the Ministry, a nine-day community tour over two weeks in early September 2019 was developed to highlight the variance in issues, geographies and responsibilities. Tour stops included a mix of provincial department meetings; agency meetings; municipal and conservation authority roundtables; and guided tours of locally impacted areas. The first set of community tours took place in the Ottawa, Pembroke and North Bay areas. During the second week of my community tours, I visited Toronto, Muskoka, Cambridge and London.

I have segmented my report into six chapters:

1. Introduction
2. The Review Process
3. Background and the 2019 Flooding in Ontario
4. Region Specific Situations
5. Ontario's Approach to Managing Flood Risk
6. Challenges and Opportunities to Managing Flood Risk

In Chapter 3, I wanted to set the stage and explain all of the reasons behind the 2019 flooding, such as the above average snowfall in winter 2018/19, above average snow water equivalent, low temperatures going well into the spring, and significant rainfall during snow melt.

I prepared Chapter 4 to try to provide the reader with explanations as to what happened during the flooding in each of the watersheds that I visited or heard about. Too often I heard people say they didn't understand how systems worked, or if they did, they felt that operations could have been done differently for a better result. I asked for and am grateful for the significant amount of detailed information from the various conservation authorities, municipalities, agencies and provincial departments. A lot of this information is included in this report, but was first reviewed and edited by me.

In Chapter 5, I talk about the core components of emergency management—prevention, mitigation, preparedness, response and recovery. I also identify the Acts, regulations, policies and technical guidelines regarding floods. Lastly, I write about the roles and responsibilities of provincial ministries, municipalities, conservation authorities, the federal government, and other agencies involved in flood management.

It is not hard to see that flooding, whether it is as a result of spring freshet, urban flooding or high Great Lakes water levels, is having a growing effect on Ontarians, and has reminded us that there is always room to improve. In Chapter 6, I write about the challenges and opportunities to managing flood risk, and include my numerous Recommendations to the Ontario Government and Recommendations to the other parties discussed in Chapter 5.

Based on an analysis of the information available for all of the systems that experienced flooding in 2019, nothing points to human error or the negligent operation of water control structures as the cause of the flooding. The sheer amount of water (snow and rainfall) on the landscape directly contributed to the flooding. Measures taken by water managers everywhere were effective in reducing the magnitude of flooding and associated damages throughout the drainage basins.

My work was supported by, and I am very much indebted to, the Ministry of Natural Resources and Forestry, which provided background materials, logistic support for meetings and tours, and facilitated the transfer of information and correspondence from the public and stakeholders related to my review.

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