Mr. Doug McNeil, Special Advisor on Flooding
c/o Mike Passey, Senior Policy Advisor, Ministry of Natural Resources and Forestry (MNRF)
(mike.passey@ontario.ca) and
Julia Holder, Policy Advisor, MNRF (julia.holder@ontario.ca)

August 9, 2019

Dear Mr. McNeil,

Thank you for meeting with Conservation Ontario's Chair Wayne Emmerson and I to discuss the critical flood management role of conservation authorities (CAs) in Ontario. This additional information is being provided in follow-up to our meeting on August 1, 2019, and has been pulled together by our staff Jo-Anne Rzadki (Business Development and Partnerships). It is being provided to supplement, clarify and respond to some questions you had during the discussion with regard to our briefing materials and in particular with regard to flood mapping and modelling.

Background Report - Metadata Inventory of Conservation Authority Flood Mapping

As discussed, in 2014-2015 Conservation Ontario with Ganaraska Region and Otonabee Conservation Authorities were supported by the MNRF to undertake a *Metadata Inventory of Existing Conservation Authority Flood Mapping.* The attached report provides a summary of the findings and recommendations from the survey conducted in 2014-2015. This report provides a snapshot in time. We are seeking the necessary resources to make the metadata inventory available on-line to enable easy updates by CAs so that the current status of mapping can be easily tracked.

Since the inception of the National Disaster Mitigation Program in 2015 a number of conservation authorities and their municipal partners have been successful in securing funding to update mapping. After 4 Intakes we know that CAs have been able to do 57 flood mapping projects. Recently the Federal Government posted results of the 5th Application Intake in Ontario (link: 2019 NDMP projects in Ontario at a glance) and these brief project descriptions provide a synopsis of the range of priority needs.

Additionally, some CAs provided presentations on the status of their floodplain mapping for a 2019 Flood Modelling and Mapping Knowledge Transfer Workshop. Other presentations may be of interest as well and they are all posted on Conservation Ontario's website (link: 2019 Workshop).

Flood Forecast and Warning - Modelling

During the meeting it was asked if all CAs conduct modelling to determine what flood warning messages to provide. Follow-up indicates that CAs use a range of models and statistics to identify inundation and

who would be at risk. The attached 2015 Paper submitted to the Canadian Dam Association on the *Delivery of Ontario's Flood Forecast and Warning Program* provides a good, although dated, overview of the Flood Warning program and section 2.6 addresses your question in more detail. Please let us know if there is additional interest in the various modelling techniques.

Climate Change and Floodplain Mapping

The 2018 Floodplain Mapping Tech Transfer Workshop focused on climate change. The participant survey included a specific set of questions used to determine if the workshop was effective in improving climate change related considerations. The Survey Report is attached. Comments included strong support for provincial guidance, direction and standards regarding how to incorporate climate change considerations.

Some additional points on the Importance of Base information in Developing Flood Mapping

Floodplain management in Ontario has a strong history and a solid foundation on which to build future improvement including:

- The Province's investment (cost share) in monitoring, particularly stream gauging, is key in support of many CA services including the flood forecast and warning program, dam safety program and water management in general.
- Being able to leverage LiDAR and bathymetric LiDAR has changed the way CAs are able to depict areas at risk of flooding. The bathymetric LiDAR being collected along the Great Lakes shoreline under the Canada-Ontario Agreement and the OMAFRA LiDAR project for soil inventory mapping have proven beneficial for many agencies including CAs. Continued investments in these would contribute considerably to advancing floodplain mapping in Ontario.

Finally, it is anticipated that we will be following up with some additional policy recommendations before the end of August. Thank you once again for the opportunity to meet with you and please do not hesitate to contact Jo-Anne Rzadki (Business Development and Partnerships) ext. 224, jrzadki@conservationontario.ca if you have any questions regarding the information provided.

Sincerely,

Bonnie Fox
Manager, Policy and Planning

Enclosed in email: 3 Attachments