

The flood of 2019

The drastically high water this summer came close on the heels of the 2017 high water and many of us felt overwhelmed. We were unable to reach our docks and cottages, worried about swamped boathouses and (in the case of some marinas) a shaky financial future. With water still high, we are all dreading yet another year of record-breaking snow and rain in 2020.

Because that's what it was: record-breaking precipitation over the huge 770,000 km² (300,000 mi²) Great Lakes watershed, flowing from those lakes down into our River. The (uncontrolled) flows from Lake Erie into Lake Ontario exceeded records by spring 2019. Meanwhile, above-average precipitation was falling on Lake Ontario's 19,000 km² (7,300 mi²) as well as on its drainage basin of 64,000 km² (25,000 mi²). The result was the record lake and River water levels of 2019.

Enter Plan 2014

Unfortunately 2017, a year of record-breaking precipitation, just happened to be the same year that the International Joint Commission (IJC) introduced its now famous Plan 2014.

To backtrack: Plan 2014 was the result of 16 years of study, analysis, consulting and negotiating with a wide range of often sharply competing interests. The IJC said Plan 2014 was "a new regulation plan for determining the flows through the Moses-Saunders Dam ...to replace an outdated system of regulating flows developed in the 1950s" (the old Plan 1958DD).

This old plan 1958DD had primarily accommodated municipal water use, shipping navigation and hydro-electric generation, as well as the needs of Montréal where the Ottawa River flows unchecked into the St. Lawrence. But it was drawing criticism from other interests, including waterfront owners on the south side of Lake Ontario, marina owners, recreational boaters along the River, and environmental organizations concerned about habitat and wetland loss.

Plan 2014 was designed to extend the recreational boating season to respond to complaints that end-of-summer water was consistently too shallow, and to "foster the conditions needed to restore 26,000 hectares (64,000 acres) of coastal wetlands and improve habitat for fish and wildlife." (See more about Wetlands on page 2.)

Flooding: Coincidence or direct result?

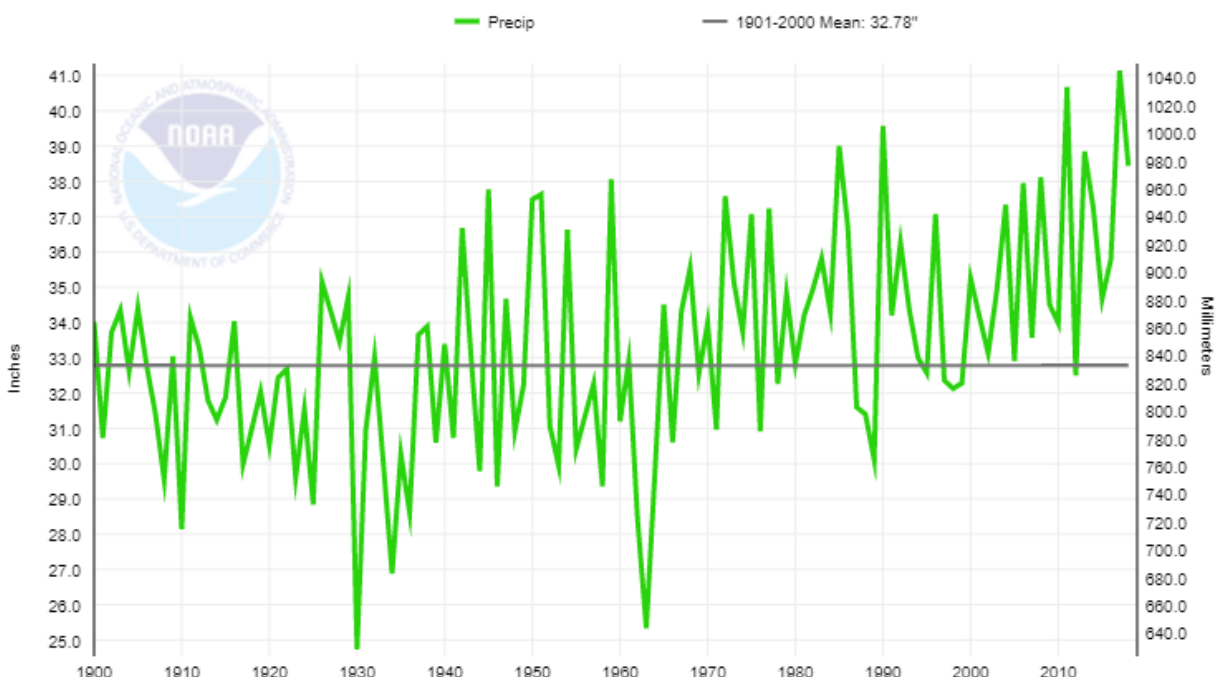
In the spring of 2017, with many docks under water, rather than pointing to the record-breaking rainfall (see graph below), waterfront property owners' natural reaction was to blame Plan 2014, which had coincidentally just come into effect.

The IJC defended Plan 2014, pointing to "record-breaking precipitation", insisting that "**Lake Ontario and St. Lawrence River levels under Plan 2014 were not higher than they would have been had the Lake Ontario-St. Lawrence River Board been operating under Plan 1958DD** and previous operating and deviation authorities". (The IJC's Great Lakes St. Lawrence River Adaptive Management (GLAM) Committee "Report for 2017")

Unfortunately for Plan 2014's reputation, in 2019 precipitation records were broken once again, with resulting floods. And once again, Plan 2014 was blamed. The IJC continued to defend it. "When you look at the amount of water coming into the system from the other lakes as well as precipitation, clearly **that's not from the plan. That's from the weather,**" said IJC U.S. Chair Jane Corwin (June 28, 2019).

In July, the GLAM Committee launched a questionnaire online, seeking input from "property and business owners who have been directly affected by the high water levels in 2019". This was to help the Committee assess "the performance of the regulation plans that are used to manage outflows from Lake Superior and Lake Ontario".

Area-Weighted Great Lakes Basin, Precipitation, January-December



Annual precipitation 1900 to present

Source: NOAA (U.S. National Oceanic and Atmospheric Administration)

During the summer, pressure was building to reduce the water level on Lake Ontario and the River, still a good 1.5 feet above normal levels for this time of year. The IJC pointed out (September 20, 2019) that “outflows remain at record-high rates for this time of year, eclipsing the outflows released at this same time in any other years dating back to 1900”. The IJC was concerned that faster outflows would produce dangerous currents for Seaway shipping.

TIARA’s action: TIARA joined an urgent request for “patterning”, halting shipping temporarily at set times to allow for even higher outflows. When that didn’t work, Save The River made a final request, (October 23, 2019) in which TIARA has also joined, calling for “**an early closure to shipping to allow for the release of maximum outflows prior to the formation of ice on the River**”. As we go to press, it is not known if this will happen.

Don’t scrap it, review it: The precipitation graph (overleaf) suggests that weather patterns are changing, and that significantly higher rainfall might be the new reality. The challenge is: how to manage it.

The International Lake Ontario– St. Lawrence River Board (letter to TIARA October 24, 2019) says the IJC is “seeking government funds in support of **an expedited review of Plan 2014**, which would be undertaken by the...GLAM Committee”. TIARA endorses such review, and a simulation comparing how the old and new plans would have performed in 2019.

In the long term however, what happens if the precipitation, which we cannot control, continues to break records? We may all have to work together to work out how to deal with it, and plan, design and build to accommodate it.

Wetlands



When Plan 2014 was launched, one of the announced aims was “managing water levels and flows that will **restore the health and diversity of coastal wetlands**”. It’s worth taking a look at this aim, which is not well understood.

“A wetland can be any landscape that holds, rather than sheds, water”, says Don Ross, a Parks Canada biologist for many years. “It could be a large expanse of cattails, or a combination of other valuable species such as sedges, aspens, pond weeds and waterlilies.” Don points out that **biodiversity in a marsh is desirable and makes it more productive**.

Productive? What is a marsh actually *doing*? “Wetlands function as natural sponges that trap and slowly release surface water, rain, snowmelt, groundwater and flood waters,” says the United States Environmental Protection Agency.

Wetlands also provide other valuable ecological services such as wildlife habitat. 95% of our animals (birds, mammals, insects, reptiles and amphibians) need a healthy wetland to survive.

Over the years, most of our original wetlands have been lost to various kinds of development. And we now know that wetlands need a certain water level fluctuation in order to survive. Plan 1958DD’s “compressed” range was too narrow, and Plan 2014 is intended to gradually restore our wetlands to health by increasing this range.

It is ironic that Plan 1958DD damaged the very wetlands that could have helped to provide a “natural flood barrier” in 2017 and 2019. So, instead of dismissing wetland restoration as part of the problem, think of it as part of the solution.

TIARA’s 2019 AGM—July 13: The speaker at our AGM was **Dr. Jeff Ridal**, Executive Director and Chief Research Scientist of **The River Institute in Cornwall**. Jeff gave us a fascinating overview of how the St. Lawrence fits into the whole Great Lakes system, the habitat it provides for many species, particularly fish, and the work of The River Institute in research, education and community outreach.

New Board Members: We are delighted to welcome two new members to our Board. **Elisabeth Sterken**, living in Rockport, is a nutritionist, active on global infant and young child nutrition policy. **Michael Bell** is a retired plastic surgeon specializing in micro-surgery who lives on Hill Island (inevitably to be confused with our Co-President Michael Bell of Wisconsin and Tar Island! See CD Launch.)

CD Launch: Mike Bell’s CD “Take Me Back To The River”, released at our AGM, has been selling like hotcakes all summer, raising funds for TIARA. Did you miss getting one? Still available—just \$10! Email us at tiaraweb.org. Great little gift for the holidays! Also available for digital purchase at <https://outhouseshouters.bandcamp.com>.

Please renew your membership!: A renewal slip in your envelope means that you still haven’t renewed your 2019/2020 membership. Still \$40 for individuals, \$50 for family. Please renew (or join) through our website www.tiaraweb.org or by cheque to TIARA, 481 Thousand Islands Parkway, Lansdowne ON K0E 1L0. We very much appreciate your support!

TIARA

THOUSAND ISLANDS AREA RESIDENTS’ ASSOCIATION
481 Thousand Islands Parkway, Lansdowne ON K0E 1L0
www.tiaraweb.org facebook.com/TIARACANADA

Directors:

Michael Bell and Martin Bordt, Co-Presidents

Charles Baker

Roswitha Baker

Laura Bell

Michael Bell

Blu Mackintosh, Secretary

Jennifer Macklem

Marion MacLeod, Treasurer

Christina McCarthy

Pierre Mercier

Margot Miller

Brian Reynolds

Elisabeth Sterken

Jonathan Thorburn

Harry McAdie, Director Emeritus