



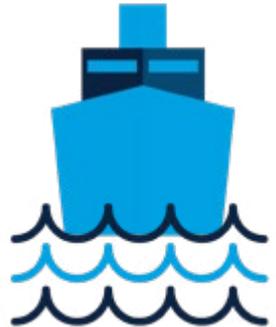
CHAMBER OF MARINE COMMERCE
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High Water and Shipping: Myths vs Facts

Water levels on the Great Lakes and St. Lawrence Seaway are reaching new heights after several years of fluctuating weather patterns and high precipitation in the region. There have been numerous rumors and misinformation shared about water levels. Here are some myths the maritime industry would like to debunk about water levels and shipping.

MYTH: Shipping advocated for Plan 2014 and that this plan was designed to benefit the shipping industry.

FACT: Plan 2014 was supported by environmental groups and one of its main purposes was to improve ecosystem health and diversity on Lake Ontario and the upper St. Lawrence River. Allowing for more natural variations of water levels, the plan was billed as fostering the conditions needed to restore 26,000 hectares (64,000 acres) of coastal wetlands and improve habitat for fish and wildlife. During consultations, marine shipping was focused on maintaining a minimum amount of water to support navigation as water levels were very low at the time.



MYTH: "Opening up the floodgates" at Moses-Saunders dam can solve Lake Ontario flooding.



FACT: Science shows that outflow at Moses-Saunders dam has very little impact on Lake Ontario levels. The dam can only lower the Lake by a few centimeters before it risks interrupting upstream municipal water supplies on Lake St. Lawrence and/or flooding downstream communities. For every centimeter that Lake Ontario decreases, water levels in St. Lawrence River downstream communities increase by 12 cm. Other factors that have to be considered are engineering capacity of the dam, power generation, ice formation (during the winter), shoreline damage and recreational and commercial navigation interests. During the first quarter of 2020, the River Board adjusted the outflow levels more than 80 times to deal with these factors, while shipping was closed for the season.

MYTH: Lake Ontario flooding would be less if the St. Lawrence Seaway didn't exist.

FACT: Construction of the St. Lawrence Seaway included excavation of bedrock and other modifications that increased the channel capacity of the St. Lawrence River. It has been calculated that Lake Ontario would have peaked at 20 cm higher in 2017, and 35 cm higher in 2019 if the channel conditions had been the same as they were before the Seaway was constructed. Source: [International Joint Commission](#)



MYTH: High water levels benefit the shipping industry economically.

FACT: The realities of climate change and the resulting swings in lows and highs from weather have demonstrated that too much water is just as damaging to shipping as too little water – flooding port infrastructure and curtailing the ability to carry cargo. Raising outflow levels at Moses-Saunders dam above the L-limit (2014 plan limit for shipping) causes high velocity currents. To navigate safely, shipping must follow speed restrictions, no passing zones and use tug assistance in certain high-risk areas along with other mitigation measures. Once the outflow reaches a certain level, the currents become so unmanageable that navigation is no longer safe with any mitigation measures.

MYTH: Marine shipping is not shouldering any of the cost of high water.

FACT: In 2019, 26 mitigation measures put in place to ensure safe navigation at record outflow levels from Moses-Saunders dam for five months led to millions of dollars of extra operating expenses for the Seaway and ship operators. Delays and lost cargo business also cost \$2 million in lost economic activity per day for the wider Canadian and U.S. economies. Cargo volumes on the St. Lawrence Seaway decreased by 7 per cent in 2019 due in part to challenging navigation conditions. These mitigation measures will be in place this season as well, as warranted.



MYTH: Delaying the St. Lawrence Seaway shipping season to April 1 to accommodate unsafe water outflow from Moses-Saunders dam had no real economic impact.

FACT: Due to very little ice, the St. Lawrence Seaway acknowledges that the MLO section could have opened on March 20. During that 12 days, more than 100 ship transits were ready to go, supporting more than \$80 million in economic activity. Marine shipping was also asked to help clear a severe backlog of Canadian grain exports and fuel shipments due to recent blockades at railways and coastal ports. In contrast to this economic loss, outflow levels from March 20 to March 31 allowed the River Board to remove just 3.46 cm from Lake Ontario. Source: [International Joint Commission](#)

MYTH: Delaying St. Lawrence Seaway shipping further to April 15 would have prevented Lake Ontario flooding.

FACT: Water levels on Lake Ontario are mostly determined by supply from Lake Erie, which is also extremely high. No regulation plan can prevent extremely high water supply that would cause flooding. The IJC has publicly stated there would have been no benefit to suspending navigation further to April 15 and they do not have more opportunity to reduce water further. In contrast, economic analysis demonstrates delaying the shipping opening another two weeks would have accelerated economic activity losses to \$445 million and adversely affected over 5,000 jobs.



MYTH: Companies that use Seaway shipping can just find alternative transportation during proposed shutdowns to increase outflows from the Moses-Saunders dam.



FACT: Canadian and U.S. industries specifically located their mines, plants and grain terminals on this waterway and have organized their entire supply chains around using marine shipping to transport huge volumes of materials and products. For many industries, there is no alternative rail transportation infrastructure network at their facility or for their supply route. These businesses will be scrambling to deal with lost business or trying to find thousands of trucks to fill the gap at extra cost, as each ship can carry as much as 963 trucks.

MYTH: Going back to the strategy deployed in 1993 and stopping shipping for intermittent periods to increase outflow levels at the dam would provide more flooding relief for shoreline residents.

FACT: The IJC has said that stop-and-go scenarios are unfeasible because of how costly it would be from an economic perspective, and technically, it would not actually move more water. The strategy in 2019 of increasing outflow to levels that were still safe for navigation (with mitigation measures) allowed more water to be removed from Lake Ontario, a greater rate of lowering and more rapid relief to Lake Ontario shoreline interests, and with fewer impacts on the economy.

Source: [International Joint Commission - Question 13](#)

We need better solutions for high-water. Learn more at marinedelivers.com