

## YQNA: Detailed Information on Lake Ontario Water Levels

Lake Ontario drains into the St Lawrence River, which contains a hydro-electric dam near Cornwall called the Moses-Saunders Dam. The river supports commercial and pleasure shipping and has water intakes for various towns along its banks. It is fed below the dam by the Ottawa River that discharges near Montreal.

In 1956 when the International Joint Commission (IJC) approved the building of the Moses-Saunders Dam and the St Lawrence Seaway, it also created what is now known as the Lake Ontario-St Lawrence River Board to regulate the water flows through the dam. The first set of rules was known as Plan 1958D.

Water levels in the lakes are expressed in terms of elevation above mean sea level. For example, the average for Lake Superior is 601.7 feet, while for Lake Ontario it is 245.2 feet. Lake Ontario's historic range of levels was 6.6 feet. The goal of Plan 1958D was to keep the range within 4 feet, with a high of 247.3 feet, "for the benefit of property owners on the shores of Lake Ontario in the United States and Canada so as to reduce extremes." This goal led to guidelines for the release of water through the dam, and the management for 55 years was generally successful.

In response to lobbying from various interests, in 1999 the IJC commissioned a study to assess the need to change the plan. The outcome was Plan 2014, implemented in 2017, which allows for wider fluctuations in the levels in Lake Ontario. To safeguard shoreline owners and other interests there are triggers that permit unusual rates of flow through the dam. For June 1, that trigger is 248.13 feet (75.63 m); for late November, 245.8 feet (74.92 m). On November 22, 2019 the level was recorded at 75.01 m. The IJC has just authorized a higher flow rate from now until June 2020, but experts say it is not enough to adequately reduce the level in the lake prior to next spring's runoff. To do so would impact shipping, and the marine operators do not want to cut short the season that lasts into December.

In 2017 the maximum level was 75.88 m (248.95 feet) while this year it was a record 75.92 m (249.09 feet). Forecasts vary, but based on the last 5 years we could see 76 m (249.28 feet) next spring. This is four feet above the average level. To avoid a 2020 spring flood even greater than in 2019, the lake level needs to drop as soon as possible to 74.5 m. This can only happen using extraordinary measures such as shortening the shipping season. The IJC needs to get ahead of next year's forecast.