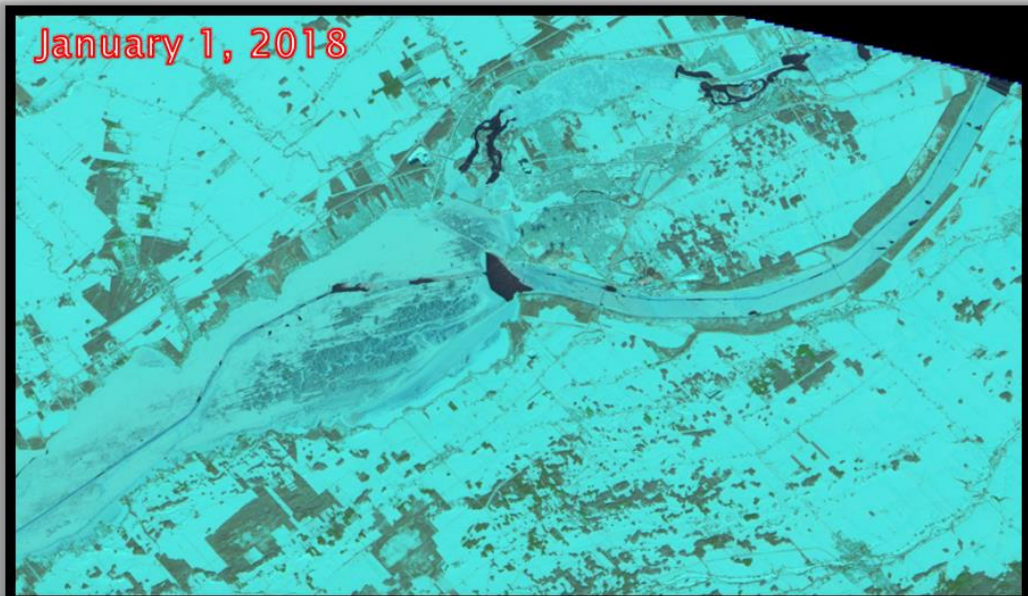


One Hundred and Twenty-Ninth Progress Report  
to the  
International Joint Commission  
by the  
International Lake Ontario-St. Lawrence River Board  
Covering the Period  
1 September 2017 through 28 February 2018



1 March 2018

**Cover Photo:** Comparison of Beauharnois Canal Ice Conditions in January 2017 and 2018

## Executive Summary

### HYDROLOGICAL CONDITIONS, OUTFLOWS AND LEVELS

Following an extremely wet spring and summer, Lake Ontario's water level began September 2017 well above average at an elevation of 75.23 m (246.82 ft) and remained above average throughout the reporting period. After Lake Ontario levels exceeded Criterion H14 high thresholds at the end of April 2017 and following subsequent major deviations and above-Plan flows from 24 May through August 2017, Lake Ontario's water level fell below the Criterion H14 high threshold level on 1 September 2017 and the International Lake Ontario-St. Lawrence River Board (Board) returned to Plan 2014 specified outflows on 2 September 2017 with concurrence from the International Joint Commission (IJC). At the same time, the Board, in consultation with the IJC, eliminated the total accumulated deviations that had been previously incurred, which totaled 15.4 cm (6.1 in) of water removed from Lake Ontario relative to Plan 2014, and therefore no offsetting deviations (i.e., to restore that water to what it would have been if plan flow had been followed) were necessary during the reporting period.

Despite a relatively dry month within the Lake Ontario basin itself, high Lake Erie inflows continued and September's net total supplies to Lake Ontario remained above average. Combined with continuing well-above average Lake Ontario levels, Plan 2014 outflows from the Moses-Saunders dam continued to be set according to the L-limit, which is the maximum flow that can be released from Lake Ontario while maintaining adequate levels and safe conditions for navigation in the upper St. Lawrence River. Outflows from Lake Ontario were well above average for the month, and the third highest outflow recorded in September since 1900 (higher outflows occurred in 1986 and 1973).

In October, the net total supply to Lake Ontario was well above average with high precipitation in both the Lake Ontario and Lake Erie basins. Most of the precipitation fell during two notable precipitation events: the first occurred 8-10 October when 60 to 100 mm (2.3 to 3.9 in) of rain fell across a large swath of the surfaces of both Lake Erie and Lake Ontario, and the second occurred 29-31 October over the eastern part of the Lake Ontario basin, including over 130 mm (5 in) of rain recorded in Watertown NY. Outflows remained well above average throughout the month and despite a brief flow reduction 6-8 October to assist boat haul-out efforts on Lake St. Lawrence.

November again yielded high net total supplies (third highest since 1900) with well-above-average inflows from Lake Erie continuing. Outflows from Lake Ontario were again well above average, and the highest in November since the record high set in November 1986.

Precipitation in the Lake Ontario basin was below average in December but the net total supplies remained above average. Outflows from Lake Ontario remained well above average and followed the L-limit for the majority of the month. From 5-15 December, the Board in coordination with representatives from the St. Lawrence Seaway, increased outflows to slightly higher values than the L-limit to test outflows above the established criteria. This test was authorized by the IJC in accordance with Condition J of the 8 December 2016 Supplementary Order of Approval. At the end of the month, a period of extreme cold required outflows to be reduced in accordance with the Plan 2014 I-limit, as ice formation had commenced on the Beauharnois Canal.

January brought near-average precipitation to the Lake Ontario basin. As in the previous months, inflows from Lake Erie remained well above average contributing to well-above-average net total supplies. Ice formation continued to progress rapidly in the Beauharnois Canal and the International Section of the St.

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Lawrence River during extreme cold at the start of the month, requiring outflows to continue to follow the I-limit for the first few weeks of January. Thereafter, ice conditions stabilized and outflows were increased until 26 January when Lake St. Louis had risen rapidly due to a combination of the increased Lake Ontario outflows and ice conditions in the Montreal area. At that time, outflows were reduced in accordance with the F-limit. As ice conditions downstream improved, Lake Ontario outflows were increased.

In February, a relatively dry start to the month was followed by widespread rain accompanied by very mild temperatures during the second half of the month, causing significant snowmelt and streamflow runoff. With net basin supply and inflows from Lake Erie both well above average, the net total supply provisionally set a record high for the month of February. Throughout February, outflows were set according to Plan 2014's I- and F-limits, which prescribe the maximum outflows that can be released from Lake Ontario, while also maintaining stable ice conditions and critical water levels on Lake St. Lawrence, which was extremely low, and Lake St. Louis, which was extremely high during this time. Despite following these maximum limits and the multiple operational adjustments that were required, the February monthly-mean outflow was the highest since records began in 1900, 300 m<sup>3</sup>/s more than the previous record set in February 1997.

By the end of February, the level of Lake Ontario was 74.96 m (245.93 ft), which is 27 cm (10.6 in) less than the level at the start of the reporting period. On average, Lake Ontario declines 14 cm (5.5 in) from the beginning of September to end of February.

## **BOARD ACTIVITIES**

The Board, IJC advisors, and associates met in-person twice and via teleconference as needed to conduct business, assess conditions, and affirm its outflow strategy. The regulation representatives provided the Board with weekly information on conditions in the system, monthly reviews of hydrologic conditions and forecasts. The Canadian regulation representative office continued to provide weekly briefings of water levels and weather predictions in the system. The Operations Advisory Group (OAG) continued its weekly teleconference to apprise the regulation representatives of operational requirements and constraints. The St. Lawrence River - Great Lakes Adaptive Management (GLAM) Committee continued to work closely with the Board, presenting to common stakeholders and at Board meetings.

## **COMMUNICATION ACTIVITIES**

The joint Board-IJC Communications Committee, through emails and regular monthly telephone conference calls, prepared media releases and top line messages to communicate critical information to the public and stakeholders. Board members, secretaries, and regulation representatives continued to conduct media interviews and provide timely responses to inquiries from the public, local government officials, and stakeholders.

At the request of government officials, Board members and associates attended in-person hearings and public meetings. The NY State Senate Standing Committee on Environmental Conservation and Senate Standing Committee on Agriculture hosted hearings in October and November respectively held in Mexico and Ontario, New York. Along with other state and local agency representatives and members of the public, Board members and regulation representatives submitted verbal and written testimony explaining that the record high water levels in the spring of 2017 were driven by unprecedented rainfall throughout the system, despite the belief that Plan 2014 was the cause. In Canada, Board members and associates attended meetings in: Quebec City, Quebec; and Cornwall, Belleville, Brighton, Picton, Quinte West,

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Bowmanville, Oakville, Hamilton, Brampton, Toronto, and St. Catharines, Ontario to communicate similar messages.

The Board continues to improve public communication with the use of its website, Facebook and Flickr sites. Additionally, the Board is currently working with the IJC on a website modernization project. The Board website is expected to be migrated to the modernized platform by the end of the year. Details on communications activities are in Appendix A and the members of the joint Board-IJC Communications Committee are listed in Appendix B.

Appendix C provides the background information and is available on the Publications page of the Board's website, allowing this report to focus on the issues and conditions of the reporting period.

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## **1. Hydrological Conditions**

### **1.1 Lake Ontario Basin - Net Basin Supply**

Monthly net basin supplies (NBS) to Lake Ontario (see appendix C for definition) for September 2017 through February 2018 and the average for the six-month period are provided in Table 1. Net basin supplies were near average in September and December, and above average during the other four months of the reporting period. Over the six-month period, NBS were well above average and the ninth highest for the September through February period since reliable record keeping began in 1900.

### **1.2 Precipitation**

Monthly precipitation amounts for the Lake Ontario and Great Lakes basins, and the average for the total six-month period are provided in Table 2. Precipitation over the Lake Ontario basin was above average in October, and below or very near average during the remaining months of the reporting period.

While monthly totals were not especially significant, most of the precipitation occurred during a number of notable, heavy precipitation events over the six-month reporting period, which led to increased runoff to Lake Ontario. The first event occurred 8-10 October when 60 to 100 mm (2.3 to 3.9 in) of rain fell across a large swath and directly onto the surfaces of both Lake Erie and Lake Ontario. On 29-31 October, a large rainfall event centered over the eastern part of the Lake Ontario basin resulted in over 130 mm (5 in) of rain recorded in Watertown NY during this three-day period. Unseasonably mild temperatures accompanied the precipitation events of 12 -13 January and 19 – 21 February, resulting in rainfall and snowmelt, which also significantly increased runoff to Lake Ontario.

The average precipitation for the six-month reporting period was 72 mm (2.83 in), which was just slightly below average. Monthly average precipitation over the entire Great Lakes basin for the six-month period was 63 mm (2.48 in), which was also just below average, having been exceeded 60% of the time.

### **1.3 Supply from Lake Erie**

Reflecting higher water levels in the upper lakes, the inflows to Lake Ontario from Lake Erie during the reporting period remained well above average from September through February, as shown in Table 1. The six-month average Lake Erie outflow during the reporting period has been previously exceeded only 6% of the time, and was the tenth highest for the September through February period since reliable record keeping began in 1900.

### **1.4 Lake Ontario – Net Total Supply**

The monthly net total supplies (NTS) to Lake Ontario (see appendix C for definition) are provided in Table 1 and shown graphically in Figure 1. Figure 1 shows the long-term average monthly NTS for the period 1900 to 2016 and the supplies so far for 2018. Also shown, for comparison purposes, are the monthly NTS for 2016 and 2017. The horizontal bars above and below the curves on the graph are the long-term monthly NTS maxima and minima. The monthly net total supplies were above average throughout the reporting period, including a record high in February 2018, and third highest on record in November 2017. Overall, the six-month average net total supply was 123% of average during this reporting period and the eighth highest for the September through February period since reliable record keeping began in 1900.

## 1.5 Ottawa River Basin

Figure 2 shows the Ottawa River flows. Outflows from Ottawa River basin began September above average, but fell below average in early October. Flows remained below average until late October when flows rapidly rose to near-record highs through early November after heavy precipitation events in the basin. Outflows declined to average values by the end of November and remained near average throughout December. In January, flows started near average but rose quickly after more heavy precipitation combined with snowmelt occurred 11-12 January. Flows declined in February but remained above average and rose again in the latter half of the month due to additional precipitation combined with snowmelt during 19-21 February.

## 2. Regulation of Flows & Levels

### 2.1 Regulation Overview

In order to be responsive to conditions and the needs of all interests in the Lake Ontario – St. Lawrence River system, the Board assessed conditions regularly throughout the year and developed outflow strategies with the aid of weekly reports from the regulation representatives. Figure 3 shows actual daily outflows from Lake Ontario from January 2016 through February 2018, and Figure 4 shows the actual Lake Ontario outflows for the reporting period in comparison to the long-term average, preproject and plan-specified outflows. Tables 3a and 3b show the operational adjustments, major and minor deviations that occurred from 1 September 2017 to 2 March 2018. Operational adjustments are required to account for inaccurate forecasts of within-week conditions in order to maintain the intent of the plan and are not required to be paid back by subsequent offsetting outflows.

Lake Ontario's water level fell below the Criterion H14 high threshold level on 1 September 2017, after having first exceeded this threshold at the end of April 2017. The Board, after assessing current and forecast hydrologic conditions, water levels and outflows, and with concurrence of the IJC, agreed to return to Plan 2014 specified outflows on 2 September 2017, thus ending major deviations from Plan 2014 (in accordance with criterion H14) and above-Plan flows, which had been released from 24 May through 1 September 2017.

Lake Ontario outflows then generally followed those specified by Plan 2014 for the remainder of the reporting period. Nonetheless, with the upper Great Lakes and Lake Ontario water levels remaining well above average and also above 74.8 m (which is the level Plan 2014 strives to reach by January 1 whenever Lake Ontario level is above this level at the beginning of September), Plan 2014 generally continued to maximize outflows to the extent possible and in consideration of conditions in the St. Lawrence River, and as a result prescribed well-above-average outflows throughout most of the reporting period.

Throughout September, outflows from the Moses-Saunders dam continued to be set according to the Plan 2014 L-limit, which is the maximum flow that can be released from Lake Ontario while maintaining adequate levels and safe conditions for navigation in the upper St. Lawrence River. This continued into October, with the exception of a brief reduction in outflow (minor deviation) 6-8 October to temporarily raise low levels and assist boat haul-outs in Lake St. Lawrence.

For the week of 28 October to 3 November, the outflow was set to the Plan 2014 adjusted (rule curve) flow, as the maximum L-limit was slightly higher and therefore did not apply. However, extremely heavy rains and record net basin supplies that week caused the level of Lake Ontario to rise, and Plan 2014 flows were again set to the L-limit value starting the week after and continue into December.

At the beginning of December, outflows were set in accordance with the L-limit rules of Plan 2014, but from 5 December through 15 December, the Board agreed to release flows slightly higher than the L-limit values during a test in accordance with Condition J of the 8 December 2016 Supplementary Order of Approval. During that period, the IJC granted approval to the Board to make temporary, minor modifications to the regulated outflows to test potential changes to the L-limit values. Outflows higher than the L-limit were released throughout this period, with the exception of seven hours on 12 December, when the Lake Ontario outflow was reduced temporarily in accordance with the L-limit to maintain levels on Lake St. Lawrence at the Seaway minimum of 72.6 m. Lake St. Lawrence remained near this critical low level throughout the duration of the testing period. The Plan 2014 maximum L-limit rule was followed again from 16 December through 24 December, and on the morning of 22 December, flow was adjusted downwards to again maintain critical levels on Lake St. Lawrence.

Ice formation began in critical areas of the St. Lawrence River during a period of extremely cold weather near the end of December. Starting on 25 December, Lake Ontario outflows were reduced in accordance with Plan 2014's I-limit rules, as ice formation had commenced on the Beauharnois Canal. By 12 January, a stable ice cover was completed, and outflows were increased rapidly according to the Plan 2014 J-limit, which prescribes the maximum change in outflow from one week to the next.

Throughout February, outflows were set according to Plan 2014's I- and F-limits, which prescribe the maximum outflows that can be released from Lake Ontario, while also maintaining stable ice conditions and critical water levels on Lake St. Lawrence and Lake St. Louis. For approximately the first half of February, the high outflows combined with ice conditions in the Montreal area resulted in levels at Lake St. Louis approaching 22.10 m, and outflows were adjusted to maintain this critical level according to the Plan 2014 F-limit. In addition, throughout February, the combined effects of high flows and ice conditions caused a rapid decline in levels on Lake St. Lawrence, requiring outflows to be adjusted according to the Plan 2014 I-limit and to maintain levels near 71.8 m, which is the minimum level that applies during the winter to protect water intakes on Lake St. Lawrence.

Despite flows being set according to these Plan 2014 maximum flow limits and the multiple operational adjustments that were required to do so, the February monthly-mean outflow was the highest since records began in 1900, 300 m<sup>3</sup>/s more than the previous record set in February 1997.

## **2.2 Deviations from Regulation Plan 2014**

Figure 4 shows daily outflows compared to Plan-specified outflows from Lake Ontario and Table 3a summarizes the Board's deviations during the reporting period.

At the same time that it returned to Plan 2014 flows starting 2 September, the Board, in consultation with the IJC, eliminated the total accumulated deviations that had been previously incurred, which totaled 15.4 cm (6.1 in) of water removed from Lake Ontario relative to Plan 2014, and therefore no offsetting deviations (i.e., to restore that water to what it would have been if plan flow had been followed) were necessary during the reporting period.

Thereafter, the Board deviated from outflows prescribed by Plan 2014 three times during the reporting period. The first minor deviation occurred on 6-8 October and was a 1080 m<sup>3</sup>/s (38,134 ft<sup>3</sup>/s) reduction in outflow to temporarily raise low levels and assist with boat haulouts on Lake St. Lawrence. The Board then increased outflows above Plan 2014 prescribed flows until 27 October to remove the excess water (relative to Plan 2014) and offset the effects of the temporary flow reduction on Lake Ontario, which had totalled 0.9

cm (0.35 in). The Board deviated again from 5-15 December increasing flows slightly above the L-limit (with the exception of a temporary interruption and return to the L-limit value on 12 December in order to offset a wind induced set-down on Lake St. Lawrence), during a test in accordance with Condition J of the Orders of Approval. For these periods, the IJC granted approval to the Board to make temporary, minor modifications to outflows to test potential changes to the L-limit values. Lastly, the Board deviated on 22 and 29 December due to low lake levels at Lake St. Lawrence.

### **2.3 Iroquois Dam Operations**

The gates at Iroquois Dam were partially closed from 15 January to 1 March to facilitate stable ice formation upstream of the structure. Thereafter, all of the gates were raised to their typical “Summer Set” position with the two navigation gates raised well above the water line.

### **2.4 Long Sault Dam Operations**

The power entities opened gates partially at Long Sault Dam occasionally during September through December 2017 to spill the amount of total Lake Ontario outflow that exceeded the capacity of the Moses-Saunders Dam, which varied according to maintenance requirements.

### **2.5 Raisin River Diversion**

The Raisin River Diversion was not opened during the reporting period September 2017 through February 2018.

### **2.6 Results of Regulation**

#### Lake Ontario

The effects of hydrologic factors and outflow regulation on the water levels of Lake Ontario are shown in Figure 5. For comparison purposes, the daily levels of 2016, 2017 and 2018 through 28 February are shown. During this reporting period, Lake Ontario’s water level started well above average and remained above average throughout the reporting period due to significantly above average outflows from Lake Erie, combined with sporadic rainfall events in the upper and lower Great Lakes. Above-average outflows in September resulted in a record high 29 cm (11.4 in) drop in Lake Ontario’s water level for the month, while October saw an average decline of 12 cm (4.7 in). In November, lake levels rose 2 cm (0.8 in) despite above-average monthly-mean outflows. December saw an 8 cm (3.2 in) decline. Levels began their seasonal rise at the start of 2018, increasing 16 cm (6.3 in) in January and 4 cm (1.6 in) in February despite continued above-average monthly-mean outflows in both months.

As a means of determining the effect of regulation activities on levels and outflows, the Board provides the IJC with a comparison of Lake Ontario’s actual monthly levels and outflows to those that would have occurred under preproject conditions (i.e. the levels and outflows that would have occurred had regulation not been undertaken). A summary of this comparison for the reporting period is given in Table 4. This summary shows that Lake Ontario ranged from about 58 cm (22.8 in) to 74 cm (29.1 in) lower than it would have been without regulation. A comparison of the daily levels to long-term average, and weekly computed Plan 2014 levels is also shown in Figure 6.

#### Lake St. Lawrence

The water levels of Lake St. Lawrence at Long Sault Dam (Figure 7) were generally below average from September until the end of December except during minor deviations when outflows were reduced to raise levels temporarily and assist boat haul-outs in early October and also following a rainfall event accompanied by strong west winds at the end of October.

During ice formation, Lake St. Lawrence rose above average due to reduced outflows from the Moses-Saunders dam, but then fell below average owing to the effect of the ice cover. Levels remained below average as outflows were increased as ice conditions stabilized, and fell well below average in February as outflows reached record highs and the effects of ice conditions peaked. Outflows were adjusted according to the Plan 2014 I-limit to maintain levels near 71.8 m, which is the minimum level that applies during the winter to protect water intakes on Lake St. Lawrence, but fell as low as 71.53 m (234.68 ft) on 12 February, the lowest levels recorded on Lake St. Lawrence since 1997. On 28 February 2018, the water level was 72.52 m (237.93 ft), 1 cm (0.4 in) below the long-term average.

#### Lake St. Francis

Daily water levels at Summerstown on Lake St. Francis generally fluctuated around average throughout the reporting period. Daily mean levels were at or above the Seaway Low Alert level throughout the navigation season.

#### Lake St. Louis

The daily water levels on Lake St. Louis at Pointe Claire (Figure 8) remained generally above average throughout the reporting period. Due to near record high outflows from the Ottawa River at the end of October into the beginning of November, Lake St. Louis rose sharply but stabilized at above-average values after Ottawa River flows subsided.

Lake St. Louis fell to about average during ice formation operations in the St. Lawrence River, but increased again at the end of January due to a combination of high outflows from the Moses-Saunders dam and the apparent development of “anchor” ice in the Lachine Rapids, which acts as a natural weir in the St. Lawrence River just downstream of Lake St. Louis. Outflows were adjusted according to the Plan 2014 F-limit during the first part of February and levels at Lake St. Louis were maintained around 22.10 m (72.51 ft), which is highly unusual and a record-high for this time of year.

#### Port of Montreal

The daily levels at the Port of Montreal (Figure 9) began September above average and fell close to average by the end of the month. Water levels remained near average until the third week in October when they quickly rose, and reached a daily level of 7.67 m (25.16 ft) on 7 November 2017, which was 135 cm (53.1 in) above average and 40 cm (15.7 in) above the record-high for that time of year (set in 1972). In December, levels at the Port fell below average, but rose above average again by mid-January. Water levels were above chart datum at all times.

### **3 Board Activities**

The Board continued to direct the outflow from the hydropower project in the international reach of the St. Lawrence River. The Board, primarily through the offices of the regulation representatives, monitored conditions throughout the Lake Ontario-St. Lawrence River system. The regulation representatives provided the Board with weekly water level, forecast and hydrologic conditions updates, weekly regulation data, monthly reviews of the hydrological conditions, and advised the Board on regulation strategy options and their potential impacts on water levels and interests throughout the system. The Board's Operations Advisory Group (OAG) continued to hold weekly teleconferences to review conditions and advise the regulation representatives on weekly operational requirements and constraints. The Board continued to work with the IJC, through the Communications Committee, to seek opportunities to improve communications, outreach,

and engagement with its stakeholders and the public. The Committee on River Gauging continued to monitor the power entities' program for operation and maintenance of the gauging system required for Board operations, hold teleconferences as necessary, and report annually.

### **3.1 Board Meetings & Conference Calls**

The Board met in person twice and via teleconference as needed, along with IJC advisors, associated subcommittees, and advisory groups to conduct business, assess conditions, and affirm its outflow strategy, during the reporting period. The Board held face-to-face meetings on 20 September in Queenston, Ontario and on 24 October 2017 in Ottawa, Ontario. Table 5 provides a list of Board Members in attendance at the in-person meetings.

### **3.2 Board and Committee Membership Changes**

Mr. Rob Caldwell replaced Ms. Gail Faveri as Canadian Secretary effective 22 January 2018 following Ms. Faveri's retirement. Mr. Jacob Bruxer replaced Mr. Caldwell as Canadian Regulation Representative, and Ms. Jamie Dickhout replaced Mr. Bruxer as Alternate Canadian Regulation Representative at that time. Ms. Shirley Wagner replaced Mr. Tim Ahlfeld as New York Power Authority's OAG representative effective 23 February following Mr. Ahlfeld's retirement. Ms. Dickhout replaced Mr. Wayne Whittaker as lead Canadian Inspector on the Gauging Committee following Mr. Whittaker's retirement on 20 October 2017.

### **3.3 Communications, Outreach and Engagement**

During the reporting period, the Communications Committee, individual Board members, the secretaries and the regulation representatives were actively engaged in outreach, information exchange and liaison with stakeholders throughout the Lake Ontario-St. Lawrence River system and participated in various stakeholder and public meetings. More details of these outreach efforts are listed in Appendix A and a full Communications Committee membership list is available in Appendix B.

Board members and staff responded to a number of telephone and email inquiries from local government officials, interested stakeholders and members of the general public concerning water level conditions and Board strategies and conducted numerous interviews with the media. Board staff continued to send weekly updates on current conditions to over 400 email subscribers. Weekly and monthly updates on the Board's Facebook pages continue to be posted in both French and English and Board staff frequently respond to public comments and questions. The [French](#) and [English](#) pages currently have over 280 and 2,800 "likes" respectively. The Board's Facebook presence is currently reaching an average of over 3,500 people per week.

At the request of government officials, Board members and associates attended in-person hearings and public meetings. The NY State Senate Standing Committee on Environmental Conservation and Senate Standing Committee on Agriculture hosted hearings in October and November respectively held in Mexico and Ontario, New York. The hearing, among other things, was intended to explore what New York residents, local officials, and business should expect in future years with regard to water levels and along the shoreline of Lake Ontario, the effects Plan 2014 has on water levels, and the flexibility of Plan 2014 and the IJC's ability to respond proactively to future flood events. Along with various other state, local and federal agency representatives and members of the public invited by the Senate Committee, Board members and regulation representatives submitted verbal and written testimony explaining that the record high water levels in the spring of 2017 were driven by unprecedented rainfall throughout the system, despite the belief that Plan 2014 was the cause. In Canada, Board members and associates attended

meetings in Quebec City, Quebec, and Cornwall, Belleville, Brighton, Picton, Quinte West, Bowmanville, Oakville, Hamilton, Brampton, Toronto, and St. Catharines, Ontario to communicate similar messages.

The Canadian regulation representative office adapted the daily briefings of water levels and weather predictions that were developed during the spring of 2017 and continued to provide these updates at least weekly. The briefings are distributed by email to Board members and associates, and interested stakeholders including federal, provincial and state government agencies, several Conservation Authorities, Port Authorities, and municipalities.

The Board continued to operate and maintain its website ([http://www.ijc.org/en\\_/islrbc](http://www.ijc.org/en_/islrbc)) and is currently working with the IJC Website Modernization Working Group to migrate the Board website to a modernized platform. The website currently includes:

- Photo banners indicating interests in the Lake Ontario – St. Lawrence River system;
- Weekly tabular and graphical updates on water levels, outflow changes, and water supply information;
- General information about the Board, its activities and its structure;
- Current and archived media releases;
- An outdated list of Frequently Asked Questions and responses;
- Semi-annual progress reports, meeting minutes, and other background publications;
- Animated “Learning Modules”, a Video Gallery of past public teleconferences, and a Photo Gallery displaying content from the Board’s Flickr page

### **3.4 Gauging Committee**

The St. Lawrence Committee on River Gauging (Gauging Committee) is granted authority by the Board to ensure the accuracy of flow estimates and water level measurements in the international section of the St. Lawrence River.

The Gauging Committee inspects the computational methods employed at each of the eight outflow structures and monitors the operation and maintenance of the water level gauges owned and operated by the power entities, Ontario Power Generation (OPG) and New York Power Authority (NYPA).

The committee conducts an annual field inspection of 16 of the water level gauges used by the Board to monitor river conditions and performs monthly audits of the water level and outflow data collected and archived by the power entities. The findings and results of these activities are documented in an annual report to the Board.

The 79<sup>th</sup> (2015) Gauging Report was reviewed and approved by the Board at its 29 March 2018 meeting. The 80<sup>th</sup> report is awaiting approval, and the 81<sup>st</sup> (2017) report is currently being prepared. It will include the findings and results of the annual inspection that was completed on 11-15 September 2017.

### **4. Adaptive Management Committee**

The St. Lawrence River - Great Lakes Adaptive Management (GLAM) Committee of technical experts, established by the IJC to consider adaptive management methods as part of an on-going evaluation of regulation plans, continued to work with the Board to implement the science-based recommendations of past studies and develop new ones. The Board seeks to evaluate regulation plan performance over time with regard to a broad range of environmental and economic indicators. The committee has been very

active and are preparing a report of the impacts of 2017 high water levels. A detailed report of GLAM activities, once approved and translated, may be found on the GLAM Committee's website.

#### **7. St. Lawrence Seaway Report**

After transit of the last commercial downbound vessel through St. Lambert Lock in the Montreal Lake-Ontario (MLO) Section of the Seaway, the St. Lawrence Seaway Management Corporation and the Saint Lawrence Seaway Development Corporation declared the 2017 navigation season closed effective at 18:15 hrs on 11 January 11 2018. The Seaway originally announced a closure date of 31 December 2017; however, due to a freighter lodged in ice at the Snell lock, the closing was delayed until 11 January 2018.

#### **8. Hydropower Peaking And Ponding**

By letter dated 13 October 1983, the IJC authorized OPG and NYPA to continue to carry out peaking and ponding operations at the St. Lawrence Project. The conditions governing peaking and ponding operations are currently specified in Addendum No. 3 to the Operational Guides for Regulation Plan 1958-D. On 28 November 2011, the IJC renewed the approval for a 5-year period, dated 1 December 2011 to 30 November 2016. The IJC wrote the Board requesting information regarding information of adverse impacts as a result of peaking and ponding operations. The Board responded, indicating they have not received any notification of adverse impacts resulting from peaking and ponding. After communicating with the Board, the IJC wrote to the Power Entities requesting an analysis on potential impacts for flow variations greater than 570 m<sup>3</sup>/s during non-navigation season. The peaking and ponding extension was approved; however, flow variations greater than 570 m<sup>3</sup>/s during non-navigation season will not be considered until the analysis is complete. The Power Entities are preparing this analysis.

No ponding operations were conducted from 1 September 2017 to 28 February 2018. Peaking operations were conducted on select days from 25 December to 31 January, while flows were reduced for ice management, but were otherwise suspended during high-flow periods.

**Respectfully submitted,**

**MEMBERS FOR CANADA**

**MEMBERS FOR THE UNITED STATES**

\_\_\_\_\_  
**G. BECHARD, CHAIR**

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**S. DURRETT, Alt. CHAIR**

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**J. AUBRY-MORIN**

\_\_\_\_\_  
**T. BROWN**

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**P. CLAVET**

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**R. CAMPANY**

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**J. FRAIN**

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**A. DAVID**

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**M. HUDON**

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**F. SCIREMAMMANO**

**Table 1**  
**Provisional Monthly Mean Supplies to Lake Ontario**

Month	Inflow from Lake Erie				Local Net Basin Supplies			Total Supplies			
	m <sup>3</sup> /s	tcfs	Exceed. Prob. <sup>(1)</sup>	% of LTA <sup>(1)</sup>	m <sup>3</sup> /s	tcfs	Exceed. Prob. <sup>(1)</sup>	m <sup>3</sup> /s	tcfs	Exceed. Prob. <sup>(1)</sup>	% of LTA <sup>(1)</sup>
Sep 17	6700	237	12	113	20	1	56	6720	237	17	111
Oct 17	6770	239	7	115	960	34	7	7730	273	4	127
Nov 17	7000	247	3	119	1480	52	8	8480	299	3	131
Dec 17	7000	247	5	119	500	18	67	7500	265	23	112
Jan 18	6520	230	12	114	1830	65	10	8350	295	8	125
Feb 18	6740	238	5	121	2120	75	4	8860	313	1	133
6-month Average	6790	240	6	117	1150	41	8	7940	280	4	123

<sup>(1)</sup> Based on period of record 1900-2016

**Table 2**  
**Provisional Precipitation over Great Lakes and Lake Ontario Basins**

Month	Great Lakes Basin			Lake Ontario Basin		
	mm (inches)	% of LTA <sup>(1)</sup>	Exceed. Prob. <sup>(1)</sup>	mm (inches)	% of LTA <sup>(1)</sup>	Exceed. Prob. <sup>(1)</sup>
Sep 17	62 (2.44)	71	87	48 (1.89)	58	89
Oct 17	108 (4.25)	146	9	137 (5.39)	169	6
Nov 17	68 (2.68)	97	52	76 (2.99)	95	53
Dec 17	43 (1.69)	70	88	47 (1.85)	62	91
Jan 18	41 (1.61)	73	82	63 (2.48)	91	60
Feb 18	54 (2.13)	120	26	62 (2.44)	103	44
6-month Average	63 (2.48)	95	60	72 (2.83)	96	59

<sup>(1)</sup> Based on period of record 1900-2016

**Table 3a**  
**SUMMARY OF WEEKLY FLOWS, OPERATIONAL ADJUSTMENTS AND DEVIATIONS FROM REGULATION PLAN 2014 FLOW**

Week Ending 2017	Adj. RC Flow		Plan Flow		App. Rule/ Limit	Actual Flow		Op. Adjustments &/or Plan Limitations		Deviations						Type	Details
										Weekly		Accumulated		Cumulative effect on L. Ontario			
	m <sup>3</sup> /s	tcfs	m <sup>3</sup> /s	tcfs		m <sup>3</sup> /s	tcfs	m <sup>3</sup> /s	tcfs	m <sup>3</sup> /s	tcfs	m <sup>3</sup> /s-wks	tcfs-wks	cm	in.		
01-Sep	9480	335	9480	335	RC	9620	340			140	4.9	4960	175.2	-15.4	-6.1	Major (H14)	Deviations continue; flows set to max L-limit
08-Sep	9480	335	9220	326	L+	9220	326	-260	-9			0	0	0	0		<b>Eliminated accumulated major deviations as of 02-Sep (IJC approved)</b>
15-Sep	9700	343	8960	316	L+	8960	316	-740	-26								Plan (maximum L-limit)
22-Sep	9410	332	8750	309	L+	8750	309	-660	-23								Plan (maximum L-limit)
29-Sep	9240	326	8690	307	L+	8690	307	-550	-19								Plan (maximum L-limit)
06-Oct	9060	320	8630	305	L+	8550	302	-510	-18	-80	-2.8	-80	-2.8	0.2	0.1	Minor (Op)	Minor deviation for boat haul-out on Lake St. Lawrence
13-Oct	8670	306	8550	302	L+	8460	299	-210	-7	-90	-3.2	-170	-6.0	0.5	0.2	Minor (Op)	Minor deviation for boat haul-out on Lake St. Lawrence
20-Oct	8860	313	8560	302	L+	8700	307	-160	-6	140	4.9	-30	-1.1	0.1	0.04	Minor (Op)	Minor deviation to remove water stored previously on Lake Ontario for boat haul-out
27-Oct	8600	304	8500	300	L+	8530	301	-70	-2	30	1.1	0	0	0	0	Minor (Op)	Minor deviation to remove water stored previously on Lake Ontario for boat haul-out
03-Nov	8360	295	8360	295	R+	8360	295										Plan (Adjusted Rule Curve)
10-Nov	8720	308	8490	300	L+	8490	300	-230	-8								Plan (maximum L-limit)
17-Nov	9280	328	8540	302	L+	8540	302	-740	-26								Plan (maximum L-limit)
24-Nov	9320	329	8530	301	L+	8530	301	-790	-28								Plan (maximum L-limit)
01-Dec	9300	328	8510	301	L+	8510	301	-790	-28								Plan (maximum L-limit)
08-Dec	9300	328	8490	300	L+	8610	304	-690	-24	120	4.2	120	4.2	-0.4	-0.2	Minor (Op)	Plan (max. L-limit); minor deviation for Condition J test (+200 cms above Plan flow)

Week Ending 2017	Adj. RC Flow		Plan Flow		App. Rule/Limit	Actual Flow		Op. Adjustments &/or Plan Limitations		Deviations						Type	Details
										Weekly		Accumulated		Cumulative effect on L. Ontario			
	m <sup>3</sup> /s	tcfs	m <sup>3</sup> /s	tcfs		m <sup>3</sup> /s	tcfs			m <sup>3</sup> /s	tcfs	m <sup>3</sup> /s-wks	tcfs-wks	cm	in.		
15-Dec	8610	304	8450	298	LN	8600	304	-10	-0.4	150	5.3	270	9.5	-0.8	-0.3	Minor (Op)	Minor deviations for Condition J test (+160 cms above Plan flow) and low Lake St. Lawrence level
22-Dec	8700	307	8450	298	LN	8400	297	-300	-11	-50	-1.8	220	7.8	-0.7	-0.3	Minor (Op)	Minor deviation for low Lake St. Lawrence level
29-Dec	8540	302	7350	260	I	7230	255	-1310	-46	-120	-4.2	100	3.5	-0.3	-0.1	Minor (Op)	Minor deviation for low Lake St. Lawrence level and operational adjustments (OAs) for ice management at Beauharnois Canal

Note: The Op. Adjustments &/or Plan Limitations column values shown in this table are computed as the Actual Flow minus Adjusted Rule Curve Flow

Note: The "+" in the App. Rule/Limit column denotes the Plan 2014 "September Rule" was applied. Whenever the Lake Ontario level is above 74.8 m at the beginning of September, the September Rule strives to lower Lake Ontario to 74.8 m by 1 January. The rule curve flow is linearly increased by the amount needed to eliminate the storage on the lake above 74.8 m over the remaining time, before 1 January. The adjusted flow is constrained by the L-limit.

**Table 3a (Continued)**  
**SUMMARY OF WEEKLY FLOWS, OPERATIONAL ADJUSTMENTS AND DEVIATIONS FROM REGULATION PLAN 2014 FLOW**

Week Ending 2018	Adj. RC Flow		Plan Flow		App. Rule/ Limit	Actual Flow		Op. Adjustments &/or Plan Limitations		Deviations						Type	Details
										Weekly		Accumulated		Cumulative effect on L. Ontario			
	m <sup>3</sup> /s	tcfs	m <sup>3</sup> /s	tcfs		m <sup>3</sup> /s	tcfs	m <sup>3</sup> /s	tcfs	m <sup>3</sup> /s -wks	tcfs-wks	cm	in.				
05-Jan	8560	302	6190	219	I	6190	219	-2370	-84			100	3.5	-0.3	-0.1		OAs for ice mgmt. at Beauharnois Canal
12-Jan	8570	303	6490	229	I	6490	229	-2080	-73			100	3.5	-0.3	-0.1		OAs for ice management/stability
19-Jan	8520	301	7190	254	J+	7190	254	-1330	-47			100	3.5	-0.3	-0.1		Plan (maximum J-limit)
26-Jan	8790	310	7820	276	F	7820	276	-970	-34			100	3.5	-0.3	-0.1		Within-the-week flow adjustments to achieve weekly mean Plan (J-limit) flow, and OAs to max. F-limit flow (Maintain L. St. Louis at 22.10 m while L. Ont. <75.30 m)
02-Feb	8900	314	8060	285	F	8060	285	-840	-30			100	3.5	-0.3	-0.1		OAs for max. F-limit (maintain L. St. Louis at 22.10 m while L. Ont. <75.30 m)
09-Feb	8940	316	8690	307	F	8690	307	-250	-9			100	3.5	-0.3	-0.1		OAs for max. F-limit (maintain L. St. Louis at 22.10 m while L. Ont. <75.30 m), and max. I-limit (maintain L. St. Lawrence at 71.80 m)
16-Feb	8870	313	8610	304	I	8610	304	-260	-9			100	3.5	-0.3	-0.1		OAs for max. F-limit (maintain L. St. Louis at 22.10 m while L. Ont. <75.30 m), and max. I-limit (maintain L. St. Lawrence at 71.80 m)
23-Feb	8800	311	8550	302	I	8550	302	-250	-9			100	3.5	-0.3	-0.1		OAs for max. F-limit flow (maintain L. St. Louis at 22.10 m while L. Ont. <75.30 m)
02-Mar	8980	317	8810	311	I	8810	311	-170	-6			100	3.5	-0.3	-0.1		OAs for max. F-limit flow (maintain L. St. Louis at 22.10 m while L. Ont. <75.30 m), and max. I-limit (maintain L. St. Lawrence at 71.80 m, and ice management/stability at Beauharnois Canal)

Note: The Op. Adjustments &/or Plan Limitations column values shown in this table are computed as the Actual Flow minus Adjusted Rule Curve Flow

**Table 3b**  
**SUMMARY OF FLOW CHANGES**

Week Ending 2017	Flow Changes							Details	
	Day	Hr	(m <sup>3</sup> /s)		(tchs)		Reason		App. Rule/ Limit
			From	To	From	To			
01-Sep	26-Aug	0001	9870	9620	348.6	339.7	Dev	Major (H14)	Flow set to max L-limit to further lower L. Ont. and maintain safe conditions in upper St. Lawrence
08-Sep	02-Sep	0001	9620	9220	339.7	325.6	Plan	L+	Plan (maximum L-limit)
15-Sep	09-Sep	0001	9220	8960	325.6	316.4	Plan	L+	Plan (maximum L-limit)
22-Sep	16-Sep	0001	8960	8750	316.4	309.0	Plan	L+	Plan (maximum L-limit)
29-Sep	23-Sep	0001	8750	8690	309.0	306.9	Plan	L+	Plan (maximum L-limit)
06-Oct	30-Sep	0001	8690	8630	306.9	304.8	Plan	L+	Plan (maximum L-limit)
	06-Oct	1201	8630	7550	304.8	266.6	Dev	Minor(Op)	Boat haul-out on Lake St. Lawrence
13-Oct	08-Oct	1201	7550	8120	266.6	286.8	Dev	Minor (Op)	Boat haul-out on Lake St. Lawrence
	08-Oct	1301	8120	8700	286.8	307.2	Dev	Minor (Op)	Boat haul-out on Lake St. Lawrence
20-Oct							Dev	Minor (Op)	Remove water stored previously on Lake Ontario due to Lake St. Lawrence boat haul-out
27-Oct	21-Oct	0001	8700	8530	307.2	301.2	Dev	Minor (Op)	Remove water stored previously on Lake Ontario due to Lake St. Lawrence boat haul-out
03-Nov	28-Oct	0001	8530	8360	301.2	295.2	Plan	R+	Plan (Adjusted Rule Curve)
10-Nov	04-Nov	0001	8360	8490	295.2	299.8	Plan	L+	Plan (maximum L-limit)
17-Nov	11-Nov	0001	8490	8540	299.8	301.6	Plan	L+	Plan (maximum L-limit)
24-Nov	18-Nov	0001	8540	8530	301.6	301.2	Plan	L+	Plan (maximum L-limit)
01-Dec	25-Nov	0001	8530	8510	301.2	300.5	Plan	L+	Plan (maximum L-limit)
08-Dec	02-Dec	0001	8510	8490	300.5	299.8	Plan	L+	Plan (maximum L-limit)
	05-Dec	0001	8490	8690	299.8	306.9	Dev	Minor (Op)	Condition J test (+200 m <sup>3</sup> /s above Plan flow of 8490 m <sup>3</sup> /s)
15-Dec	09-Dec	0001	8690	8610	306.9	304.1	Dev	Minor (Op)	Condition J test (+160 m <sup>3</sup> /s above Plan flow of 8450 m <sup>3</sup> /s)
	12-Dec	1301	8610	8450	304.1	298.4	Dev	Minor (Op)	Low Lake St. Lawrence Level
	12-Dec	2001	8450	8610	298.4	304.1	Dev	Minor (Op)	Condition J test (+160 m <sup>3</sup> /s above Plan flow of 8450 m <sup>3</sup> /s)
22-Dec	16-Dec	0001	8610	8440	304.1	298.1	Dev	Minor (Op)	Max L-limit computed using actual end of week level of 74.79 m (L-limit 8440 m <sup>3</sup> /s), rather than computed EOW level of 74.80 m (Plan L-limit 8450 m <sup>3</sup> /s)
	22-Dec	1001	8440	8000	298.1	282.5	Dev	Minor (Op)	Low Lake St. Lawrence Level
29-Dec							Dev	Minor (Op)	Low Lake St. Lawrence Level
	25-Dec	0001	8000	7600	282.5	268.4	OpA	I	Ice management at Beauharnois Canal
	26-Dec	1601	7600	6700	268.4	236.6	OpA	I	Ice management at Beauharnois Canal
	27-Dec	1801	6700	6900	236.6	243.7	OpA	I	Ice management at Beauharnois Canal
	28-Dec	1601	6900	6400	243.7	226.0	OpA	I	Ice management at Beauharnois Canal
	29-Dec	1201	6400	6230	226.0	220.0	OpA	I	Ice management at Beauharnois Canal
	29-Dec	1801	6230	5900	220.0	208.4	OpA	I	Ice management at Beauharnois Canal

**Table 3b (Continued)**  
**SUMMARY OF FLOW CHANGES**

Week Ending 2017-2018	Flow Changes								Details
	Day	Hr	(m <sup>3</sup> /s)		(tcfs)		Reason	App. Rule/ Limit	
			From	To	From	To			
05-Jan	30-Dec	1201	5900	6230	208.4	220.0	OpA	I	Ice management at Beauharnois Canal
	30-Dec	1801	6230	6100	220.0	215.4	OpA	I	Ice management at Beauharnois Canal
	31-Dec	1001	6100	6230	215.4	220.0	OpA	I	Ice management at Beauharnois Canal
12-Jan	10-Jan	0001	6230	6430	220.0	227.1	OpA	I	Ice management/stability
	10-Jan	1201	6430	6830	227.1	241.2	OpA	I	Ice management/stability
	12-Jan	0001	6830	7100	241.2	250.7	OpA	I	Ice management/stability
19-Jan	13-Jan	0001	7100	7190	250.7	253.9	Plan	J+	Plan (maximum J-limit)
26-Jan	20-Jan	0001	7190	7420	253.9	262.0	Plan	J+	Within-the-week flow adjustment to achieve weekly mean Plan flow (maximum J-limit)
	21-Jan	0001	7420	7650	262.0	270.2	Plan	J+	Within-the-week flow adjustment to achieve weekly mean Plan flow (maximum J-limit)
	22-Jan	0001	7650	7890	270.2	278.6	Plan	J+	Within-the-week flow adjustment to achieve weekly mean Plan flow (maximum J-limit)
	25-Jan	0001	7890	8130	278.6	287.1	Plan	J+	Within-the-week flow adjustment to achieve weekly mean Plan flow (maximum J-limit)
	26-Jan	0001	8130	8360	287.1	295.2	Plan	J+	Within-the-week flow adjustment to achieve weekly mean Plan flow (maximum J-limit)
	26-Jan	0901	8360	7800	295.2	275.5	OpA	F	Maintain L. St. Louis at 22.10 m; L. Ont. < 75.30 m
	26-Jan	1901	7800	7550	275.5	266.6	OpA	F	Maintain L. St. Louis at 22.10 m; L. Ont. < 75.30 m
02-Feb	28-Jan	1201	7550	8200	266.6	289.6	OpA	F	Maintain L. St. Louis at 22.10 m; L. Ont. < 75.30 m
	29-Jan	1401	8200	8600	289.6	303.7	OpA	F	Maintain L. St. Louis at 22.10 m; L. Ont. < 75.30 m
	30-Jan	1001	8600	8000	303.7	282.5	OpA	F	Maintain L. St. Louis at 22.10 m; L. Ont. < 75.30 m
	30-Jan	1801	8000	7600	282.5	268.4	OpA	F	Maintain L. St. Louis at 22.10 m; L. Ont. < 75.30 m
	31-Jan	1001	7600	8000	268.4	282.5	OpA	F	Maintain L. St. Louis at 22.10 m; L. Ont. < 75.30 m
	31-Jan	1801	8000	8200	282.5	289.6	OpA	F	Maintain L. St. Louis at 22.10 m; L. Ont. < 75.30 m
09-Feb	02-Feb	1201	8200	8600	289.6	303.7	OpA	F	Maintain L. St. Louis at 22.10 m; L. Ont. < 75.30 m
	05-Feb	1201	8600	8850	303.7	312.5	OpA	F	Maintain L. St. Louis at 22.10 m; L. Ont. < 75.30 m
	07-Feb	2001	8850	8600	312.5	303.7	OpA	F/I	Max F-limit (maintain L. St. Louis at 22.10 m; L. Ont. < 75.30 m), and max I-limit (maintain L. St. Lawrence at 71.80 m)
16-Feb	10-Feb	0001	8600	8700	303.7	307.2	OpA	F/I	Max F-limit (maintain L. St. Louis at 22.10 m; L. Ont. < 75.30 m), and max I-limit (maintain L. St. Lawrence at 71.80 m)
	11-Feb	0001	8700	8810	307.2	311.1	OpA	F/I	Max F-limit (maintain L. St. Louis at 22.10 m; L. Ont. < 75.30 m), and max I-limit (maintain L. St. Lawrence at 71.80 m)
	12-Feb	1001	8810	8600	311.1	303.7	OpA	I	Maintain L. St. Lawrence at 71.80 m
	12-Feb	2001	8600	8300	303.7	293.1	OpA	I	Maintain L. St. Lawrence at 71.80 m
	14-Feb	1201	8300	8500	293.1	300.2	OpA	I	Maintain L. St. Lawrence at 71.80 m
	15-Feb	0001	8500	8700	300.2	307.2	OpA	I	Maintain L. St. Lawrence at 71.80 m
	16-Feb	2001	8700	8600	307.2	303.7	OpA	I	Maintain L. St. Lawrence at 71.80 m

**Table 3b (Continued)**  
**SUMMARY OF FLOW CHANGES**

Week Ending 2018	Flow Changes								Details
	Day	Hr	(m <sup>3</sup> /s)		(tcfs)		Reason	App. Rule/Limit	
			From	To	From	To			
23-Feb	22-Feb	2001	8600	8400	303.7	296.6	OpA	F	Maintain L. St. Louis at 22.10 m; L. Ont. < 75.30 m
	23-Feb	1301	8400	8100	296.6	286.0	OpA	F	Maintain L. St. Louis at 22.10 m; L. Ont. < 75.30 m
2-Mar	24-Feb	1201	8100	8600	286.0	303.7	OpA	F	Maintain L. St. Louis at 22.10 m; L. Ont. < 75.30 m
	25-Feb	2001	8600	8750	303.7	309.0	OpA	F/I	Max F-limit (maintain L. St. Louis at 22.10 m; L. Ont. < 75.30 m), and max I-limit (maintain L. St. Lawrence at 71.80 m)
	26-Feb	1401	8750	8900	309.0	314.3	OpA	F/I	Max F-limit (maintain L. St. Louis at 22.10 m; L. Ont. < 75.30 m), and max I-limit (maintain L. St. Lawrence at 71.80 m)
	28-Feb	1201	8900	9000	314.3	317.8	OpA	I	Ice management/stability at Beauharnois Canal

**Table 4**  
**Lake Ontario Recorded and Preproject Levels and Outflows**

Month	Lake Ontario Monthly Mean Water Levels (IGLD 1985) - meters (feet)			Lake Ontario Monthly Mean Outflow m <sup>3</sup> /s (tcf)		
	Recorded	Pre-project	Diff.	Recorded	Pre-project	Diff.
Sep 17	75.08 (246.32)	75.66 (248.23)	-0.58 (-1.91)	8920 (315)	8460 (299)	460 (16)
Oct 17	74.86 (245.60)	75.50 (247.70)	-0.64 (-2.10)	8530 (301)	8120 (287)	410 (14)
Nov 17	74.87 (245.63)	75.56 (247.90)	-0.69 (-2.27)	8500 (300)	8240 (291)	260 (9)
Dec 17	74.77 (245.31)	75.51 (247.73)	-0.74 (-2.42)	8080 (285)	8110 (286)	-30 (-1)
Jan 18	74.83 (245.50)	75.48 (247.63)	-0.65 (-2.13)	7150 (252)	7820 (276)	-670 (-24)
Feb 18	74.90 (245.73)	75.56 (247.90)	-0.66 (-2.17)	8610 (304)	7800 (275)	810 (29)

**Table 5**  
**Attendance at Meetings**

Board Member	Country	20 Sept	24 Oct
BG M. Toy <sup>1</sup>	US	-	-
Dr. G. Bechard <sup>2</sup>	Can	X	X
Mr. S. Durrett <sup>3</sup>	US	X	X
Dr. F. Sciremammano, Jr.	US	X	X
Mr. T. Brown	US	X	X
Mr. T. David	US	X	X
Mr. R. Company	US	X	X
Mr. J. Aubry-Morin	Can.	X	X
Ms. P. Clavet	Can.	X	X
Ms. J. Frain	Can.	X	X
Mr. M. Hudon	Can.	X	X

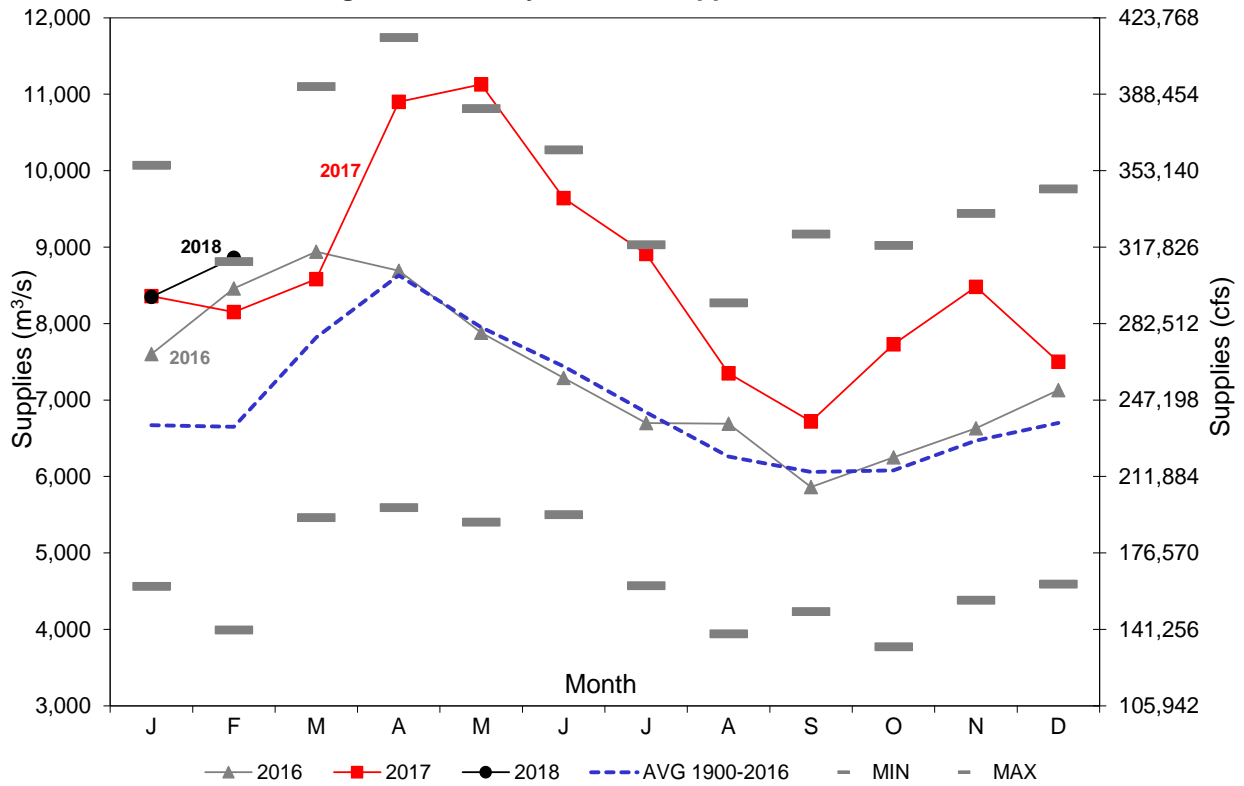
- Notes:
1. US Co-Chair
  2. Canadian Co-Chair
  3. US Alternate chair

**Location of Meeting:**

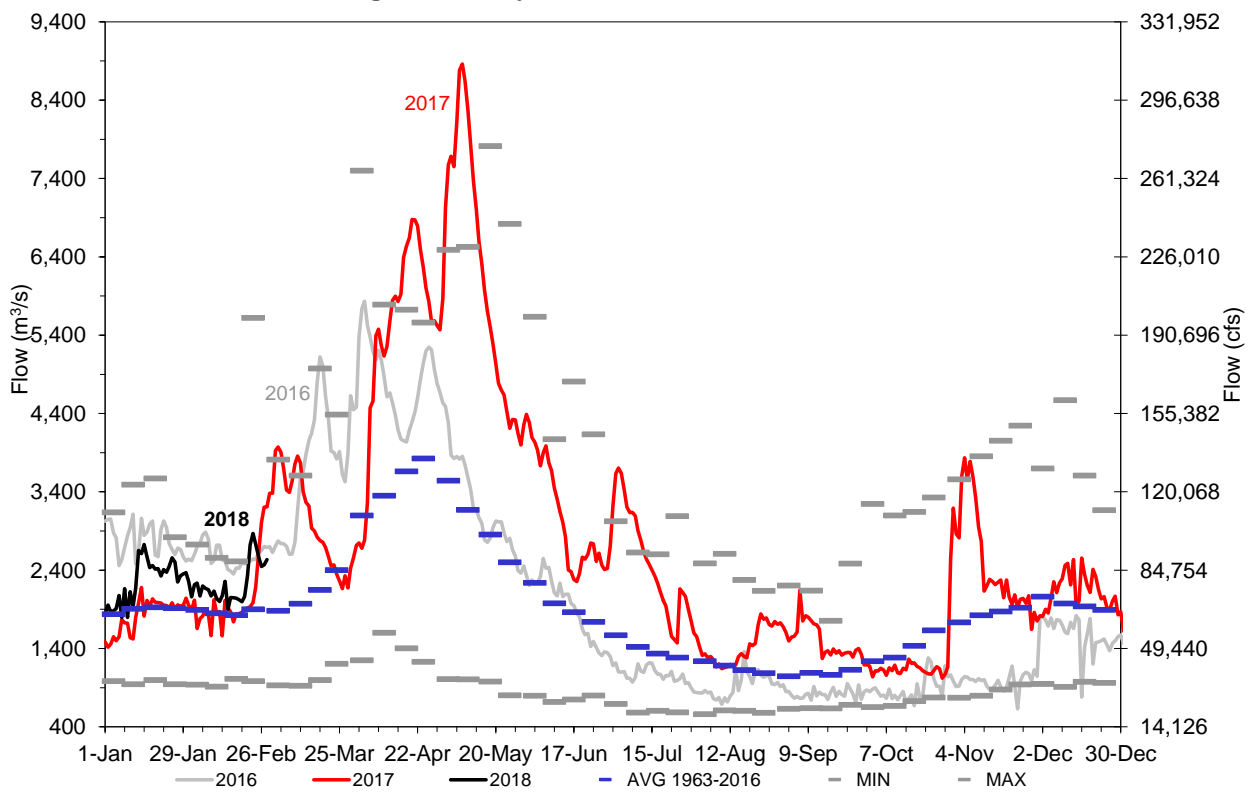
20 September 2017: Queenston, ON

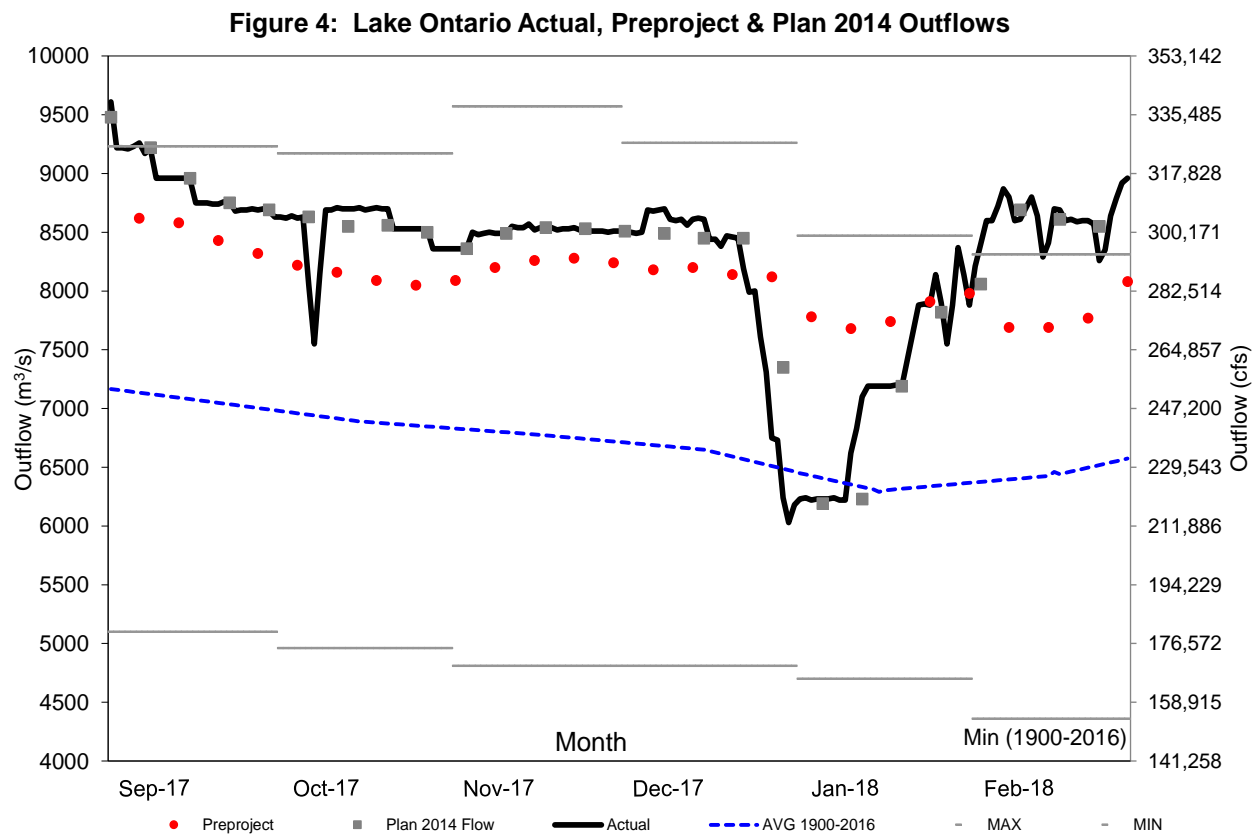
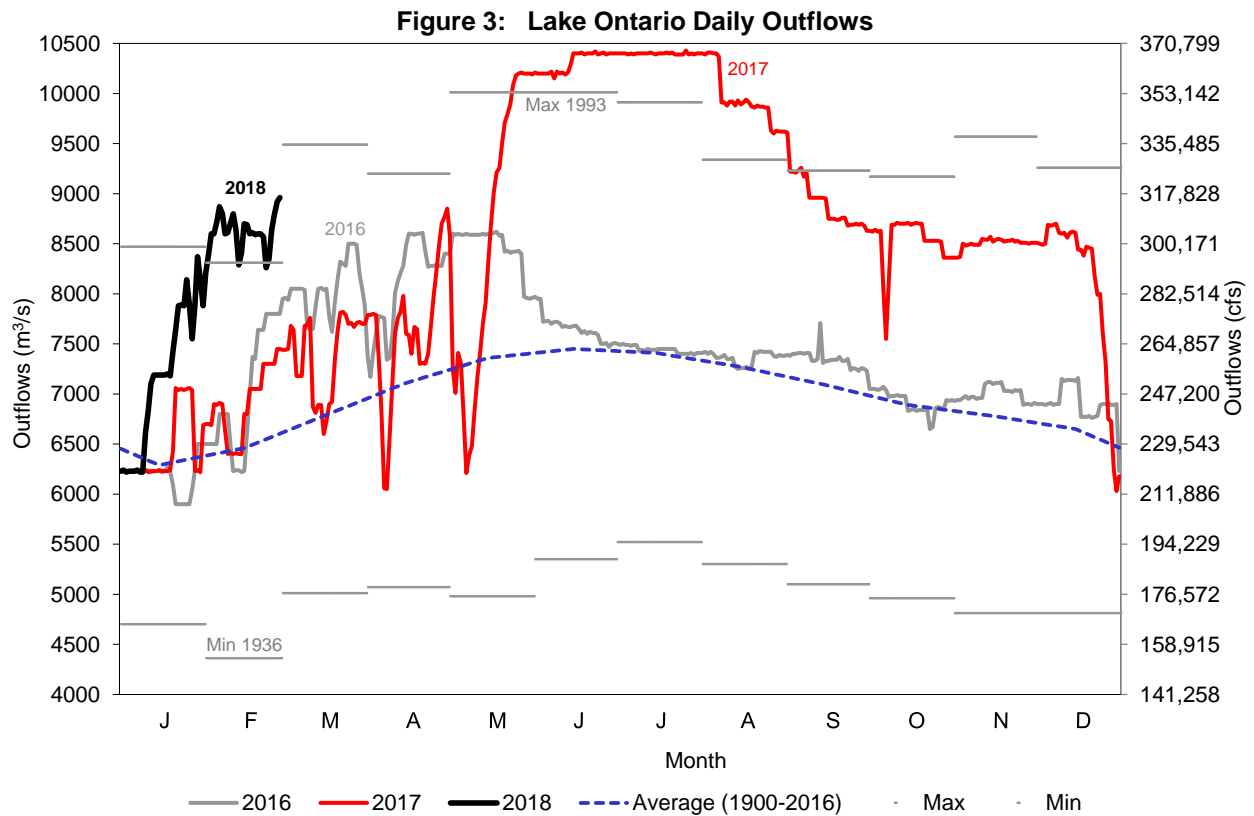
24 October 2017: Ottawa, ON

**Figure 1: Monthly Net Total Supplies to Lake Ontario**

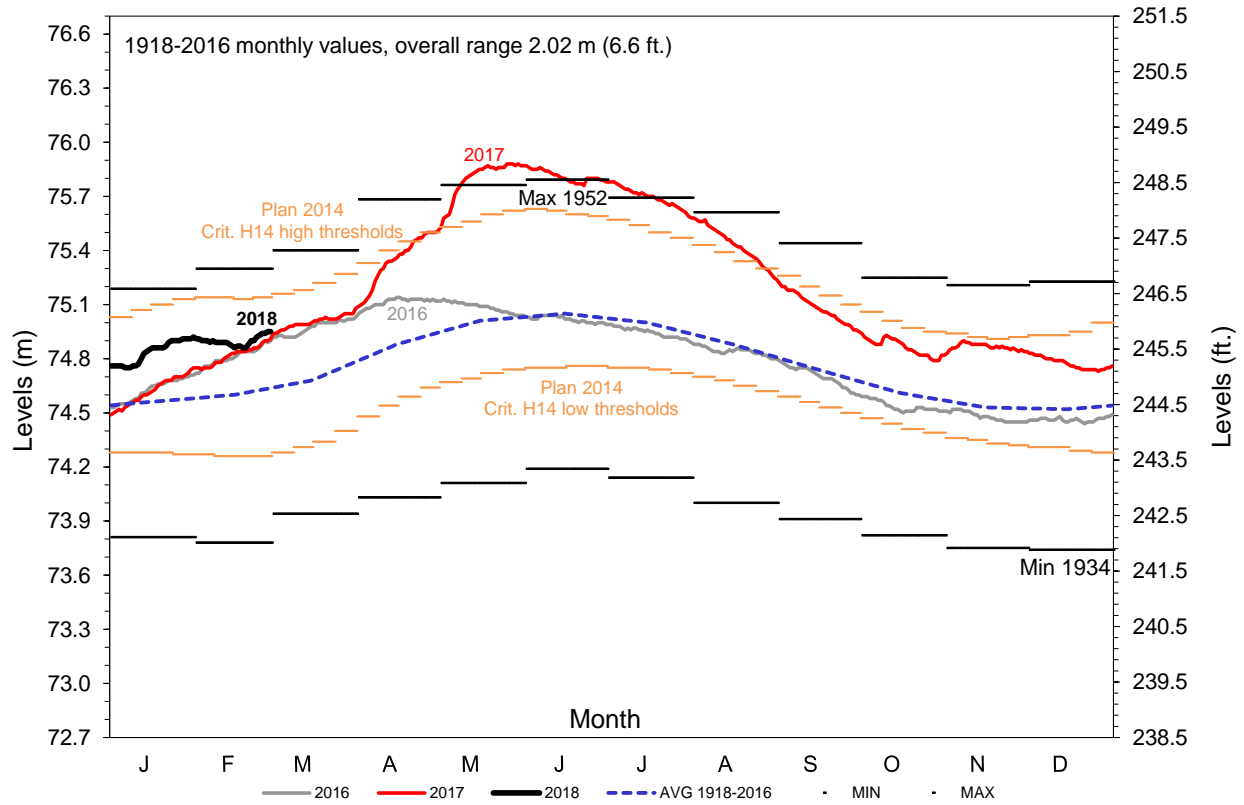


**Figure 2: Daily Ottawa River Flow @ Carillon**

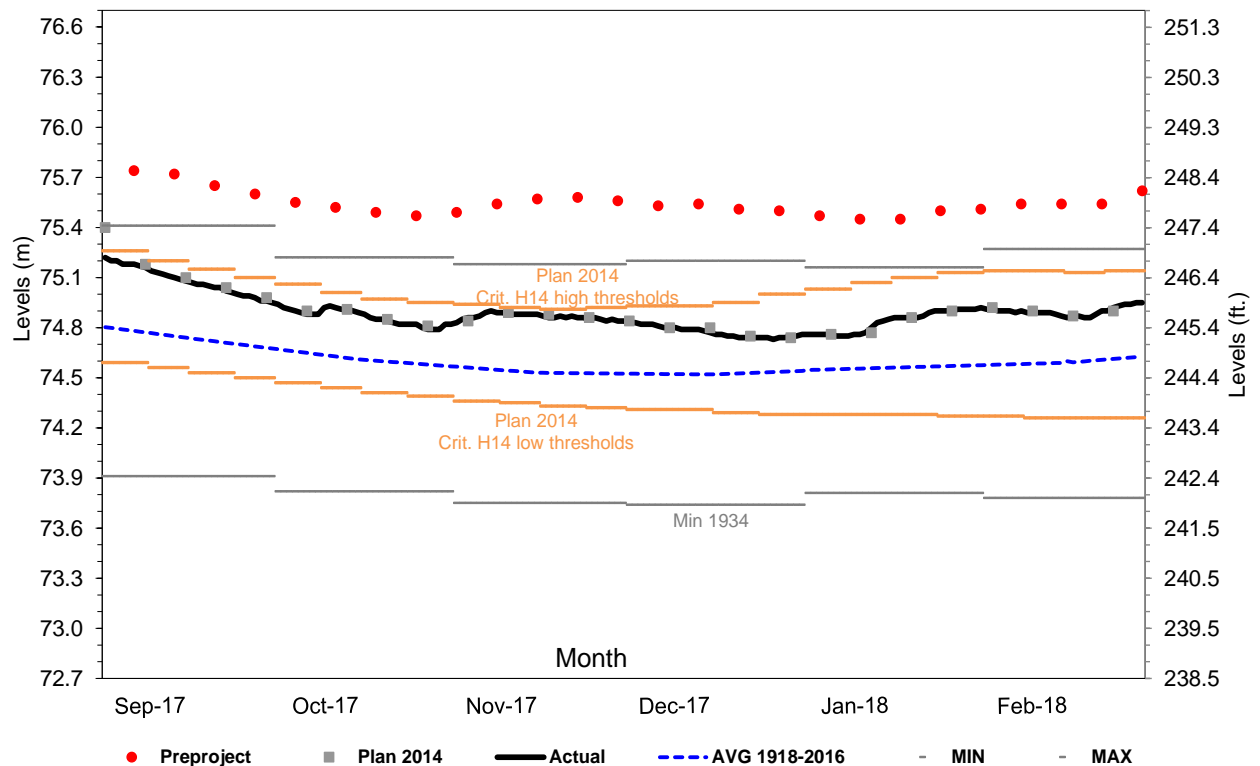




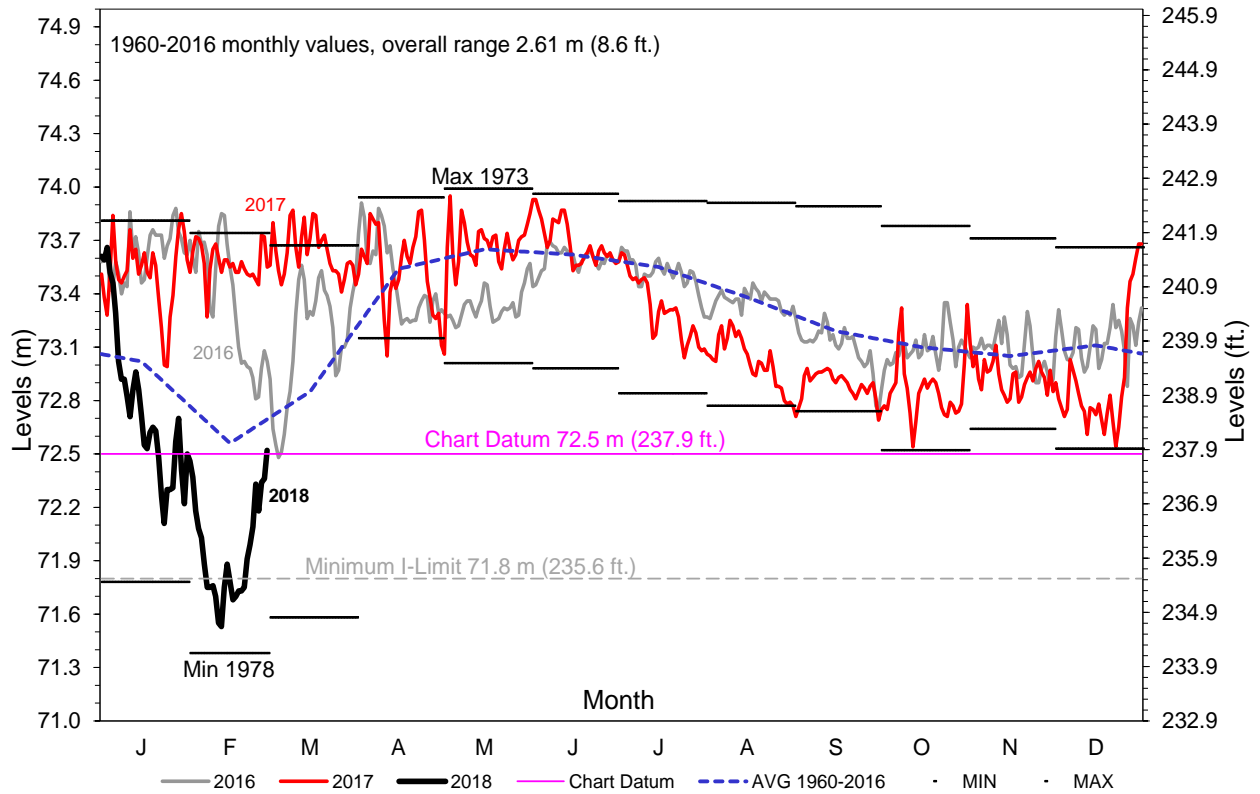
**Figure 5: Daily Lake Ontario Water Levels**



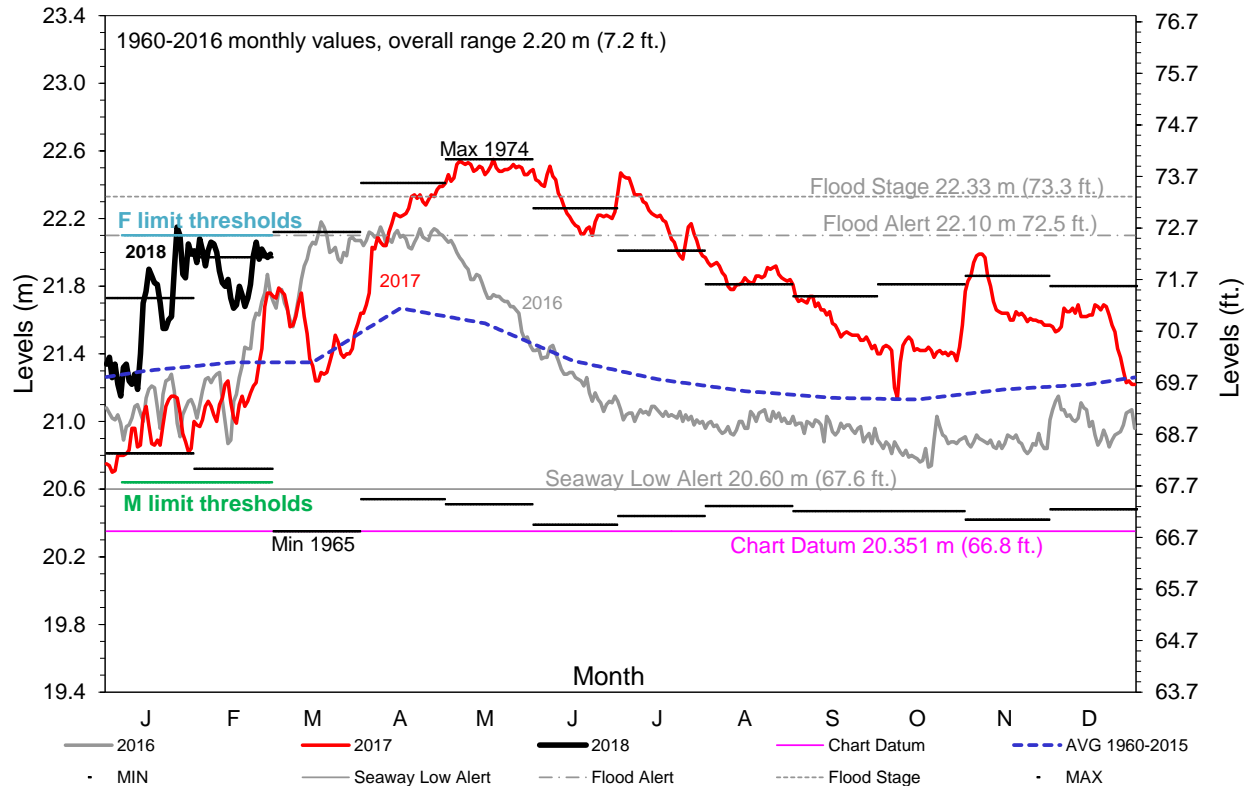
**Figure 6: Lake Ontario Actual, Preproject & Plan 2014 Levels**



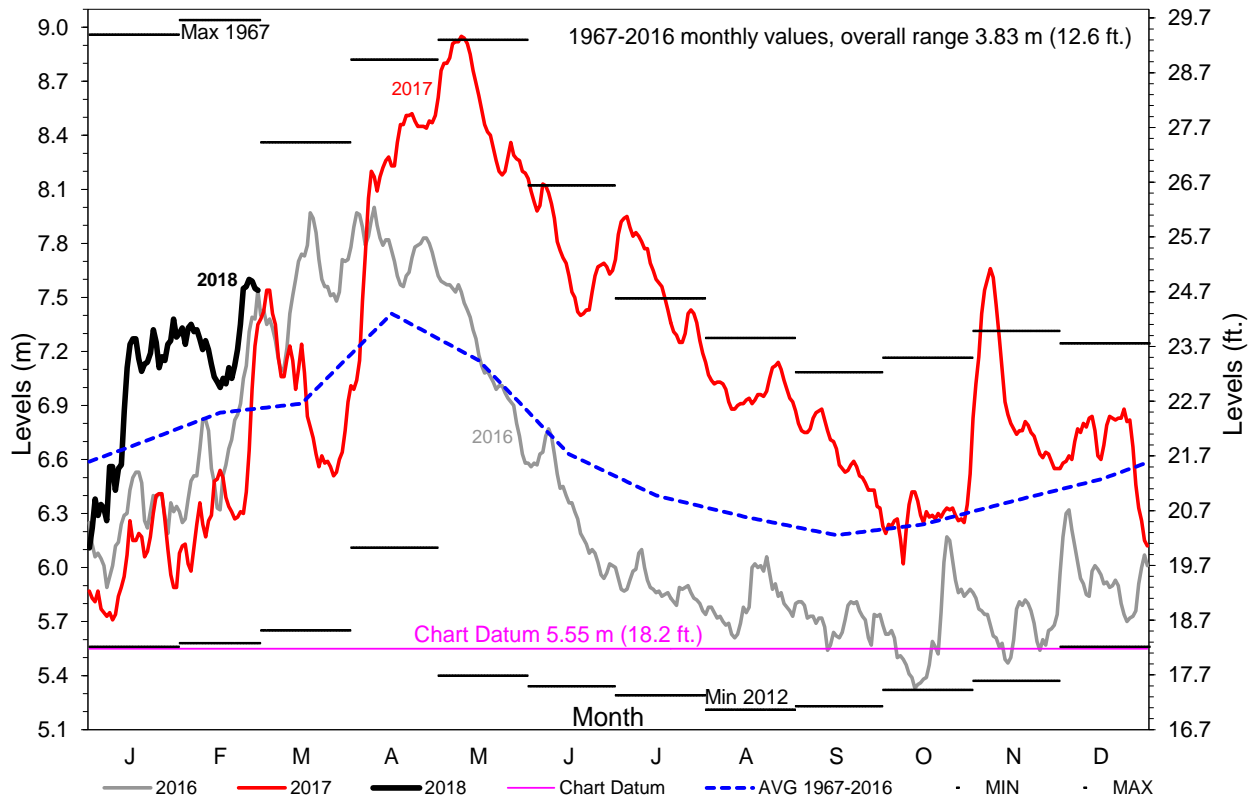
**Figure 7: Daily Lake St. Lawrence Levels @ Long Sault Dam**



**Figure 8: Daily Lake St. Louis Levels @ Pointe-Claire**



**Figure 9: Daily Port of Montreal Levels @ Jetty #1**



## Appendix A: Communication Committee Summary of Activities

Since 1 September 2017, the International Lake Ontario - St. Lawrence River Board of Control Communication Committee held five meetings, generally occurring at the beginning of the month via teleconference. The Committee continued to engage in initiatives and develop products to accomplish five strategic communication goals:

1. increase general public awareness of the IJC and the Board;
2. communicate accurately and in a timely fashion the actions of the Board and the reason for those actions;
3. explain how natural factors and regulation affect water levels and flows;
4. increase understanding of the necessity of and need to prepare for fluctuations in levels and flows; and
5. consistently seek out, consider and respond to the views and concerns of all stakeholders.

Consistent with the communication goals the Committee also developed short video segments as public education tools describing causes of fluctuating water levels in Lake St. Lawrence, ice formation considerations, and how safety concerns constraint high outflows.

In addition to the outreach through Facebook, Flickr and our website, Board members and staff held interviews, responded to media, and individual stakeholders in the entire system. As well they actively engaged stakeholders, presenting at the following venues where they also answered questions and concerns from those present:

21 September	Provincial Flood Forecasting Workshop	Brampton, ON
4 October	St. Lawrence River Institute of Environmental Sciences	Cornwall, ON
5 October	Table de concertation régionale de Québec	Quebec, QC
10 October	NY Senate Hearing	Mexico, NY
18 October	Belleville Emergency Management Team	Belleville, ON
7 November	St. Lawrence Seaway Management Corporation	St. Catherines, ON
9 November	NY Senate Hearing	Ontario, NY
22 November	Municipality of Quinte West	Trenton, ON
29 November	Committee of the Whole, Prince Edward County	Picton, ON
8 February	American Fisheries Society	Cooperstown, NY
20 February	Nature Québec	Quebec, QC
21 February	MP Erin O'Toole and Constituents	Bowmanville, ON
22 February	Table de concertation régionale de Québec	Quebec, QC

In addition to requests for information, from both Canadian and US agencies, such as NYSDEC and the Ontario Surface Water Centre, Board members and staff spoke to people on a number of informal occasions about the high water conditions and what could be done about them.

**Appendix B: Communication Committee List of Members**

Mr. R. Company  
Mr. T. David  
Mr. A. Heer  
Mr. K. Koralewski  
Mr. F. Bevacqua  
Mr. D. Hermann

Mr. M. Hudon  
Ms. G. Faveri  
Mr. R. Caldwell  
Mr. J. Bruxer  
Ms. S. Lobrichon  
Mr. D. Fay