

ONE HUNDRED AND SIXTEENTH PROGRESS REPORT
to the
INTERNATIONAL JOINT COMMISSION
by the
INTERNATIONAL ST. LAWRENCE RIVER BOARD OF CONTROL
Covering the Period
MARCH 24, 2011 THROUGH SEPTEMBER 13, 2011



SEPTEMBER 13, 2011

COVER PHOTO: Edgemere Drive, Greece, NY on June 27, 2011: How a 75.28 m water level 30 cm (1 ft) below the top of the wall looked. A month earlier at the 75.38 m maximum water level, high waves were hitting the house. (P. M. Yu)

EXECUTIVE SUMMARY

REGULATION STRATEGY AND RESULTS

The water supplies to Lake Ontario during the reporting period were well above average in March, April and May, below average in July and above average in June and August. The supplies received were within the range of those used in the design of the regulation plan, Plan 1958-D. Lake Ontario levels began the reporting period slightly above average, rose rapidly above average in late April, peaking at 75.38 m (247.31 ft) from June 1 to June 6, after the International St. Lawrence River Board of Control (the Board) had reduced outflows earlier in May during wet conditions in the Ottawa valley and downstream. High Lake Ontario outflows in June kept water levels below the monthly average water level of 75.37 m of criterion (h). With the dry weather of June and July, water levels dropped at a faster rate than average. Water levels on Lake Ontario and in the St. Lawrence River were maintained within the criteria specified in the 1956 Amended Orders of Approval.

Lake Ontario began the reporting period 1 cm (0.4 in) above average and with 0.03 cm (0.01 in) of water removed from Lake Ontario relative to a strict adherence to Plan 1958-D.

The Board's general regulation strategy throughout the reporting period was to release outflows in accordance with the regulation plan, while providing for deviations to meet critical needs. The freshet from the Ottawa River and wet conditions downstream resulted in the Board directing releases from Lake Ontario lower than those specified by the regulation plan starting in late April to keep levels on Lake St. Louis within 1 cm (0.4 in) of the flood alert level. At most, on 21 May, these decreased releases caused the level of Lake Ontario, to be 3.7 cm (1.5 in) higher than the level that would have occurred had Plan 1958-D flows been consistently released. At the beginning of June with the threat of downstream flooding diminished, the Board decided to release the equivalent of the maximum outflow limit of the regulation plan to alleviate high water concerns on Lake Ontario. Subsequent dry conditions and powerhouse maintenance requirements meant further adjustments to the outflows. By late July, the Board was again releasing outflows as specified by the Plan, until it later authorized slightly lower releases to relieve low water conditions on Lake St. Lawrence. Thus water was stored on the lake relative to that which would have occurred with consistent Plan 1958-D flows through August.

At the end of the reporting period, the level on Lake Ontario was 4.0 cm (1.6 in) above average. The level was 2.7 cm (1 in) above that specified by Plan 1958-D.

BOARD ACTIVITIES

The Board met in person twice during the reporting period to conduct business, assess conditions, and affirm its outflow strategy. The Regulation Representatives continued to provide the Board with weekly information on conditions in the system, monthly assessments of hydrologic conditions and forecasts, and risk assessments. The Board reviewed the information each month to revise or affirm the regulation strategy through emails and with teleconferences. The Operations Advisory Group continued its weekly teleconference to apprise the Regulation Representatives of operational requirements and constraints.

COMMUNICATION ACTIVITIES

Communications activities during the reporting period were conducted within the constraints of limited existing resources. A media briefing by teleconference on 20 June 2011 communicated the Board's response to high water conditions. A multi-city public meeting/teleconference will be held on 20 September 2011 in Oswego, NY and Cornwall, ON. The Board will post its presentation materials beforehand on its

web site for public access. The joint Board-Commission Communications Committee continues to provide advice and assistance on a variety of issues. Environment Canada and the US Army Corps of Engineers have supplied part-time communications staff to assist the Board. The Board's website is now hosted by the IJC. Background work is being done to enhance the Board web site. Board Members and staff responded to a number of public inquiries and requests for information, primarily related to high spring conditions and the rapid decline of Lake St. Lawrence this summer. The Board is considering several initiatives to improve its communications effectiveness.

An appendix provides the background material that was previously repeated in the semi-annual reports of the International St. Lawrence River Board of Control (the Board) to the International Joint Commission (the Commission). Providing the material in this manner allows the report to be focussed on the issues and conditions of the reporting period, allowing the interested reader to refer to this appendix for the background information.

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HYDROLOGICAL CONDITIONS

1.1 Lake Ontario Basin - Net Basin Supply

The local net basin supplies (NBS) to Lake Ontario were well above average in March, April, and May, above average in August, average in June, and below average in July. The six-month average NBS would be expected to be exceeded 3% of the time. Monthly NBS values for the reporting period are provided in Table 1. Figure 1 shows the long-term average monthly NBS for the period 1900 to 2010 and the supplies for this reporting period. Also shown, for comparison purposes, are the monthly NBS for 2009 and 2010. The horizontal bars above and below the curves on the graph are the long-term monthly net basin supplies maxima and minima.

1.2 Precipitation

Monthly precipitation amounts for the Lake Ontario basin are provided in Table 2. Precipitation was well above average in March, April, May, and August; and below average in June and July. The monthly mean value in April was a new provisional maximum rainfall for that month. The total amount of precipitation in the six-month reporting period was 584 mm (23.0 in.), which was 127 % of average and has been exceeded 4 % of the time. Total precipitation for the entire Great Lakes basin for the six-month period was 518 mm (20.4 in.), which was 118 % of average and has been exceeded 3 % of the time.

1.3 Supply from Lake Erie

The inflows to Lake Ontario from Lake Erie during the reporting period are provided in Table 1. With Lake Erie's level at and above average much of the reporting period, its flow to Lake Ontario was also generally above average, particularly in May and June. The six-month average outflow would be expected to be exceeded 34 % of the time.

1.4 Lake Ontario – Net Total Supply

The monthly net total supplies to the Lake are provided in Table 1 and shown graphically in Figure 2. The six-month net total supplies for the past ten years are provided in Table 3 for comparison purposes. The monthly net total supplies were well above average in March, April, and May, above average in June and August, while below average in July. Overall, the total supply was 112 % of average during this reporting period and has been exceeded 14 % of the time.

1.5 Ottawa River Basin

Figure 3 shows the Ottawa River flows, which were generally near average until early August, when they fell below average. The freshet occurred with multiple peaks as it typically does during March, April and May with average flows for the remainder of the reporting period. The highest freshet peak was slightly above average in early May, which led the Board to release less water from Lake Ontario from 23 April until 19 May 2011 to maintain the level of Lake St. Louis below the flood alert level.

2 REGULATION OF FLOWS & LEVELS

2.1 Board's Regulation Strategies and Resulting Actions

In order to be responsive to conditions and the needs of interests, the Board assessed conditions twice in meetings and with regular monthly reports from the Regulation Representatives that reviewed conditions in the Great Lakes-St. Lawrence River system, and developed outflow strategies. The strategies for the reporting period, and their rationale, are available on the Board's Website:

http://ijc.org/conseil_board/islrbc/en/main_accueil.htm. Figure 4 shows the Lake Ontario outflows for 2011 to the end of the reporting period in comparison to the long-term average outflows, calculated pre-project and plan specified outflows. In summary, the Board strategy during the reporting period was to release outflows in accordance with the regulation plan, while providing for deviations at first to avert flooding downstream, later avert high water levels on Lake Ontario, then to respond to maintenance requirements of the power plants, and finally to meet the needs of recreational boaters on Lake St. Lawrence.

2.2 Deviations from Regulation Plan 1958-D

Table 4 summarizes the Board's discretionary deviations during the reporting period. On March 24, there were 0.03 cm (0.01 in.) of water removed from Lake Ontario with respect to the level prescribed by the Plan, but this water was restored by 8 April. Plan-prescribed flows were released until 23 April when outflows were lowered as Lake St Louis was approaching flood alert levels. Plan flows were released from 26 to 30 April but then were reduced again to prevent downstream flooding until 9 May. Outflows were below Plan flows until 1 June 2011, since power plant capacity was reduced due to scheduled maintenance thereafter and/or to prevent downstream flooding. These flow decreases resulted in an accumulated deviation from Plan 1958-D of at most -1180 m³/s-weeks or 3.7 cm (1.5 in) of water stored on Lake Ontario relative to the plan as of 21 May 2011. These deviations were offset by flows above those prescribed by the regulation plan between 1 June and 8 July. Deviations again occurred from 10 to 25 July to accommodate hydropower maintenance and later from 10 August to 2 September to facilitate removal of recreational boats. At the end of the reporting period there were -880 m³/s-weeks or 2.7 cm (1.0 in) of water stored on Lake Ontario relative to the plan. At the Board's September 13 meeting, it decided to maintain releases according to the Regulation Plan, while allowing for variations to meet critical needs. The stored water may be released in early winter to smooth the transition to lower flows necessary for the formation of a stable ice cover.

2.3 Iroquois Dam Operations

The gates at Iroquois Dam dipped from 5 to 12 May to suppress high Lake St. Lawrence levels. Several gates remained dipped thereafter until 9 June to retain debris.

2.4 Results of Regulation

2.4.1 Upstream

Lake Ontario

The effects of Regulation Plan 1958-D and the Board's outflow strategies on the levels of Lake Ontario are shown in Figure 5. For comparison purposes, the daily levels of 2009, 2010 and 2011 to the end of the reporting period are shown. During the reporting period, levels started above average, rose sharply to the peak level of 75.38 m (247.31 ft) before falling at a fast rate for the remainder of the reporting period. At the end of the reporting period, the level was at 74.78 m (245.3 ft), about 4 cm (1.6 in) above the long-term average.

As a means of determining the impact of regulation activities on levels and outflows, the Board provides the Commission with a comparison of Lake Ontario's actual monthly levels and outflows to those that would

have been obtained under pre-project conditions (that is, 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 5. This shows that Lake Ontario ranged from about 24 to 37 cm (0.8 to 1.2 ft.) lower during the reporting period than it would have been without regulation. A comparison of the daily levels to long-term average, and weekly computed Plan 1958-D levels and preproject conditions is also shown in Figure 6.

Lake St. Lawrence

The water levels of Lake St. Lawrence started the reporting period near average, but rose to well above by late May, when they started to decline rapidly. At the beginning of August levels were the lowest they had been since 1998 at that time of the year. To assist recreational boaters the Board approved releasing less water than the plan flow to raise water levels somewhat. The outflows were maintained at 100 m³/s below Plan-prescribed values from 10 August to 2 September to help provide some relief during this period of low levels.

2.4.2 Downstream

Lake St. Francis

Daily water levels at Summerstown on Lake St. Francis were below average at the beginning of the reporting period and rose to above average by mid-April. Levels fluctuated for the rest of the month and then generally remained above average. Levels were above the Seaway Low Alert level throughout the reporting period, except on 18 April when the level dipped 1 cm (0.3 in) below for one day. From May to August, water levels fluctuated above average.

Lake St. Louis

As mentioned earlier, outflows of the Ottawa River peaked three times, once each in March, April and May. After the April peak the daily water levels on Lake St. Louis remained above average (based on the period 1960 through 2010) until mid August. Levels peaked 1 cm (0.3 in) or 2 cm (0.6 in) above the flood alert level of 22.10 m (72.5 ft) on two different days in May as shown on Figure 7. Had the Lake Ontario outflow not been reduced, it is estimated that levels may have reached as high as 22.34 m (73.3 ft) during May.

Port of Montreal

The daily levels at the Port generally were below average until mid-April, when they rose to well above average, peaking at 8.36 m (27.4 ft) on 7 May 2011. Water levels declined at a rate faster than the average and reached below average levels by mid-July. Through August water levels generally remained below average but above chart datum. Figure 8 indicates the daily water levels in the Port.

3 BOARD ACTIVITIES

3.1 Board Meetings & Conference Calls

The Board continued to oversee the operations of 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 regulation data; monthly reviews of the hydrological conditions; risk analyses using water level outlooks; 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) held weekly teleconferences to review conditions and advise the Regulation Representatives on weekly operational requirements and constraints. The Committee on River Gauging continued to monitor the Power Entities' program for operation and maintenance of the gauging system required for Board operations, and to report annually.

The Board continued to assess conditions in the basin and adjust or affirm its regulation strategy accordingly. Conditions were such that the Board required two conference calls (on 11 May and 1 June) as well as email exchanges to discuss appropriate strategies. During the reporting period, the Board held meetings on 12 April in Washington, DC and on 13 September in Quebec, Quebec. Table 6 provides a list of Board Members in attendance at the teleconference calls and meetings.

3.2 Meetings with the Public and Input from the Public

The Board will conduct its next public teleconference the evening of 20 September. Meeting sites will be provided in Cornwall, Ontario and Oswego, NY, to allow the public to interact with the Board in person.

The Board continued its efforts to improve its dialogue with the public through its Communications Committee and Media Releases in addition to the individual Board Members' efforts to attend other meetings.

During the reporting period, the Communication 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. Board members and staff responded to a number of inquiries and requests for interviews from the media and the general public concerning water level conditions and the effectiveness of the Board's strategies.

4 COMMUNICATIONS COMMITTEE REPORT

The Board continued to work with the International Joint Commission through the Communications Committee, to seek opportunities to improve communications with the public. The Canadian Section of the Board was provided communications assistance from Environment Canada. The Corps of Engineers hired a part-time communications specialist in July to assist the Board.

Communication activities during the reporting period included:

- Preparation of news releases: The Board issues media releases after each Board regulation decision, to provide the public with recent information on water level conditions and regulation strategies;
- A special media teleconference 20 June 2011 to explain the high water levels on Lake Ontario at the end of May and beginning of June which was well attended by over a dozen English and French speaking journalists from both sides of the border;
- Operation of the Board's 1-800 numbers: The Board continued to post weekly updates of levels and flows (In the U.S., the number is 1-800-883-6390, and in Canada the numbers are 1-800-215-8794 (English) and 1-800-215-9173 (French));
- Operation of the Board's Web Page on the internet http://www.ijc.org/conseil_board/islrbc/en/main_accueil.htm . The Page includes:
 - Weekly updates on water levels and outflows;
 - General information about the Board, its activities and its structure;
 - Announcements about the Board's outflow strategies and "related media" releases.
 - Posting of the Board's meeting minutes, teleconference summaries, and data updates.
 - The Board's next annual meeting with the public and public teleconferences.

The Board's Regulation Representatives sent weekly updates on Lake Ontario regulation and water level and outflow conditions, to over 300 e-mail subscribers. Stakeholders are encouraged to subscribe to this free service.

5 RIVER GAUGING COMMITTEE REPORT

The Board's St. Lawrence Committee on River Gauging monitors the Power Entities' program of maintaining gauges required for the Board's monitoring of water levels and flows. The Committee is responsible for annual inspections of the water level gauging network and provides the Board with a report on inspection results and the computed outflows. The 74th (2010) report is under way. The Board approved the committee's Cornwall Canal Closure Structure Report and its recommendations. Results of a recent precision survey will be implemented this October.

5.1 Raisin River

The Raisin River Diversion was used from 21 June onward to augment flows in the headwaters of the South Branch of the Raisin River. The diverted outflows were up to about 0.2 m³/s (7.1 cfs). The diversion remained open at the end of the reporting period.

5.2 Water Level Gauges

The Board's Committee on River Gauging ensures the accuracy of flow and water level measurements. This includes annual inspections of computational methods at each of the eight outflow structures and the 15 water level gauges used by the Board to monitor river conditions. Auditing of the Power Entities' data processing is also conducted under the direction of the Committee. The Inspection Team prepares an annual report to the Gauging Committee. Operation and maintenance of the water level gauges are performed by the Power Entities. The Gauging Committee will perform an annual inspection of the water level gauging network from 11 to 21 October 2011.

5.3 Turbine Upgrades

Moses Unit #24 was removed from service for upgrade to an Alstom turbine on 29 September 2010 and returned to service on 21 June 2011. Moses Unit #19 was removed from service on 25 July 2011 with the completion of its upgrade scheduled for 28 March 2012. Two units at the Moses plant remain to be upgraded, including Unit #19.

6 ICE SLUICE GATES

The IJC requested the Board review a proposal from the New York Power Authority and Ontario Power Generation to remove from service the six ice gates at the Moses-Saunders Powerhouse. After a technical review by its Regulation Representatives of the detailed analysis submitted with the proposal, the Board recommended that the proposal be approved. Experience over the past 50 years has shown that the use of Iroquois Dam, placement of ice booms, and other measures, are sufficient to handle ice formation issues. The Board concurred in the continued use of the eel ladders at Gates 1 and 5.

7 ST. LAWRENCE SEAWAY REPORT

The Seaway navigation season for the Montreal-Lake Ontario Section officially opened 22 March 2011 with the first vessel, the m/v Avonborg, transiting the St. Lambert Locks.

8 HYDROPOWER PEAKING AND PONDING

By letter dated 13 October 1983, the Commission authorized Ontario Power Generation and the New York Power Authority to continue to carry out peaking and ponding operations at the St. Lawrence Project. The conditions governing peaking and ponding operations are specified in Addendum No. 3 to the Operational

Guides for Regulation Plan 1958-D. On September 9, 2008, the IJC renewed the approval for a 3-year period, or until a new approval is issued, whichever comes first. In September 2011, the IJC granted an extension until 30 November 2011. The Board recommends that the Commission approve a 5-year extension.

Peaking operations were conducted throughout the reporting period. No ponding operations were conducted.

9 BOARD and COMMITTEE MEMBERSHIP CHANGES

The Regional Director General of the Quebec Region of Environment Canada, Mr. Philippe Morel, was appointed as Canadian co-chair of the Board 18 July 2011, replacing the Regional Director General of the Ontario Region of Environment Canada, Mr. James Vollmershausen. There continues to be a vacancy on the Canadian Section of the Board.

Mr. Brent Morton replaced Mr. Jerry Lapierre as the Ontario Power Generation alternate on the Operations Advisory Group on 11 May 2011.

Mr. Rob Carson resigned as the Canadian Chair of the Gauging Committee at the end of the reporting period.

Respectfully submitted,

MEMBERS FOR THE UNITED STATES

MEMBERS FOR CANADA

COL J. DROLET, ALT. CHAIR

P. MOREL, CHAIR

J. BERNIER

A. CARPENTIER

T. BROWN

J. FRAIN

T. HULLAR

P. YEOMANS

F. SCIREMAMMANO

Table 1 Monthly Mean Supplies to Lake Ontario

2011	Inflow from Lake Erie				Local Net Basin Supplies			Total Supplies			
	m ³ /s	tcfs	Exceed. Prob. ⁽¹⁾	% of LTA ⁽¹⁾	m ³ /s	tcfs	Exceed. Prob. ⁽¹⁾	m ³ /s	tcfs	Exceed. Prob. ⁽¹⁾	% of LTA ⁽¹⁾
Mar	5860	207	41	102	3530	125	4	9390	332	10	120
Apr	6140	217	41	102	3510	124	13	9650	341	20	112
May	6670	236	30	106	3490	123	2	10160	359	3	128
Jun	6790	240	22	108	1130	40	48	7920	280	29	107
Jul	6430	227	35	104	290	10	80	6720	237	55	98
Aug	6310	223	36	104	320	11	30	6630	234	32	106

⁽¹⁾ Based on period of record 1900-2010

Table 2 Provisional Precipitation Over the Great Lakes and Lake Ontario Basins

2011	Great Lakes Basin			Lake Ontario Basin		
	mm (inches) ⁽¹⁾	% of LTA ⁽²⁾	Exceed. Prob. ⁽³⁾	mm (inches) ⁽¹⁾	% of LTA ⁽²⁾	Exceed. Prob. ⁽³⁾
Mar	59 (2.32)	107	38	89 (3.50)	131	17
Apr	127 (4.99)	195	<1	137 (5.41)	185	<1
May	93 (3.66)	122	21	117 (4.62)	148	12
Jun	86 (3.39)	105	42	64 (2.51)	80	68
Jul	74 (2.91)	92	64	63 (2.47)	78	75
Aug	79 (3.10)	99	50	114 (4.47)	144	7

⁽¹⁾ Provisional

⁽²⁾ Based on period of record 1900-2010

⁽³⁾ Based on period of record 1900-2008

Table 3 Average and Recorded Six-Month Total Supplies (Mar-Aug)

	Long-Term Average ⁽¹⁾		Recorded			Recorded Below (-) or Above Average (+)		
	(m3/s)	(tcfs)	(m3/s)	(tcfs)	Exceed. Prob. ⁽¹⁾	(m3/s)	(tcfs)	Percent
Mar-Aug 02	7480	264	7640	270	42	160	6	2
Mar-Aug 03	7480	264	7300	258	58	-180	-6	-2
Mar-Aug 04	7480	264	7810	276	35	330	12	4
Mar-Aug 05	7480	264	7360	260	55	-120	-4	-2
Mar-Aug 06	7480	264	7020	248	70	-460	-16	-6
Mar-Aug 07	7480	264	7140	252	65	-340	-12	-5
Mar-Aug 08	7480	264	7960	281	29	480	17	6
Mar-Aug 09	7480	264	8050	284	25	570	20	8
Mar-Aug 10	7480	264	7090	250	67	-390	-14	-5
Mar-Aug 11	7480	264	8410	297	14	930	33	12

⁽¹⁾ Based on period of record 1900-2010

Table 4 Summary of Outflow Deviations from Regulation Plan 1958-D Flow

Date 2011	Deviation (cms)	Dev. (cms-wks)	Acc. Dev. rounded (cms-wks)	Cum. Effect on Lake Ont. rounded (cm)	Reason for Deviation
Mar 24			10	-0.03	
Mar 24-25	20 for 48 hrs	6	20	-0.1	Unintentional - minor operational deviation
Mar 26-Apr 1	10 for 168 hrs	10	30	-0.1	Unintentional - minor operational deviation
Apr 2-8	-30 for 168 hrs	-30	0	0.0	To restore water
Apr 23-26	-200 for 86 hrs	-102	-100	0.3	Pt. Claire approaching Flood Stage
Apr 30-May 4	-230 for 110 hrs	-151			Pt. Claire approaching Flood Stage
May 4-5	-430 for 23 hrs	-59			Pt. Claire approaching Flood Stage
May 5-6	-730 for 35 hrs	-152	-460	1.4	Pt. Claire approaching Flood Stage
May 7	-920 for 24 hrs	-131			Pt. Claire approaching Flood Stage
May 8	-920 for 14 hrs	-77			Lake St. Peter Flooding
May 8-9	-575 for 24 hrs	-82			Lake St. Peter Flooding
May 9-10	-295 for 22 hrs	-39			Hydropower Bank Outage (OPG)/NYPA capacity
May 10-11	-160 for 27 hrs	-26			Hydropower Bank Outage (OPG)/NYPA capacity
May 11-13	-60 for 57 hrs	-20	-830	2.6	Hydropower Bank Outage (OPG)/NYPA/HQ capacity
May 14-16	-140 for 62 hrs	-52			Hydropower Bank Outage (OPG)/NYPA/HQ capacity
May 16	-340 for 9 hrs	-18			capacity
May 16-18	-840 for 37 hrs	-185			Pt. Claire approaching Flood Stage
May 18	-640 for 3 hrs	-11			Pt. Claire approaching Flood Stage
May 18-19	-390 for 20 hrs	-46			Pt. Claire levels declining
May 19-20	-140 for 31 hrs	-26			Pt. Claire levels declining
May 20	-40 for 6 hrs	-1	-1170	3.6	Hydropower Bank Outage (OPG)/NYPA/HQ capacity
					Hydropower Bank Outage (OPG)/NYPA capacity
May 21	-180 for 12 hrs	-13	-1180	3.7	Hydropower Bank Outage (OPG)/NYPA capacity
Jun 1-2	260 for 12 hrs	19			Reduce Stored Water
Jun 2-3	520 for 42 hrs	130	-1030	3.2	Reduce Stored Water
Jun 4	-130 for 16 hrs	-12			Hydropower Bank Outage (NYPA)
Jun 4-10	390 for 152 hrs	353	-690	2.1	Reduce Stored Water
Jun 11-17	410 for 168 hrs	410	-280	0.9	Reduce Stored Water
Jun 25-Jul 1	30 for 168 hrs	30	-250	0.8	Reduce Stored Water
Jul 2-8	250 for 168 hrs	250	0	0.0	Reduce Stored Water
Jul 10-15	-400 for 138 hrs	-329	-330	1.0	Hydropower Bank Outage (OPG)
Jul 16-22	-240 for 168 hrs	-240	-570	1.8	Hydropower Bank Outage (OPG)
Jul 25	-100 for 24 hrs	-14	-580	1.8	Hydropower Bank Outage (OPG)
Aug 10-12	-100 for 72 hrs	-43	-620	1.9	Raise Lake St. Lawrence
Aug 13-19	-100 for 168 hrs	-100	-720	2.2	Raise Lake St. Lawrence
Aug 20-26	-100 for 168 hrs	-100	-820	2.5	Raise Lake St. Lawrence
Aug 27 – Sep 2	-60 for 168 hrs	-60	-880	2.7	Raise Lake St. Lawrence

Table 5 - Lake Ontario Recorded and Pre-Project Levels and Outflows

2011	Lake Ontario Monthly Mean Water Levels (IGLD 1985) - meters (feet)			Lake Ontario Monthly Mean Outflow m ³ /s (tcfs)		
	Recorded	Pre-project	Diff.	Recorded	Pre-project	Diff.
Mar	74.61 (244.78)	74.87 (245.63)	-0.26 (-0.85)	6850 (242)	6710 (237)	140 (5)
Apr	74.85 (245.57)	75.12 (246.45)	-0.27 (-0.88)	7330 (259)	7370 (260)	-40 (-1)
May	75.23 (246.81)	75.47 (247.60)	-0.24 (-0.79)	7790 (275)	8050 (284)	-260 (-9)
Jun	75.33 (247.14)	75.59 (248.00)	-0.26 (-0.86)	8750 (309)	8320 (294)	430 (15)
Jul	75.14 (246.52)	75.46 (247.57)	-0.32 (-1.05)	8400 (297)	8060 (285)	340 (12)
Aug	74.94 (245.86)	75.31 (247.08)	-0.37 (-1.22)	7970 (281)	7740 (273)	230 (8)

Table 6**Attendance at Meetings and Teleconferences (24 March 2011 – 13 September 2011)**

Board Member	Country	12 April	11 May⁵	1 June⁵	13 Sept
MG J. W. Peabody ¹	U.S.				
Mr. J. Vollmershausen ²	Can.	X			
Mr. P. Morel ³	Can.				X
Mr. J. Bernier	U.S.	X	X	X	X
Mr. T. Brown	U.S.	X	X	X	X
Mr. A. Carpentier	Can.	X	X	X	X
COL J. Drolet ⁴	U.S.	X	X	X	X
Ms. J. Frain	Can.	X		X	X
Dr. T. Hullar	U.S.	X		X	X
Dr. F. Sciremammano, Jr.	U.S.	X	X	X	X
Mr. P. Yeomans	Can.	X	X	X	X

Notes: 1. U.S. Co-Chair
2. Canadian Co-Chair until 17 July 2011
3. Canadian Co-Chair after 18 July 2011
4. Alt. U.S. Co-Chair
5. teleconference

Location of Meeting:

12 April 2011: Washington, DC, USA

13 September 2011: Quebec, QC, Canada

Figure 1: Monthly Net Basin Supplies to Lake Ontario

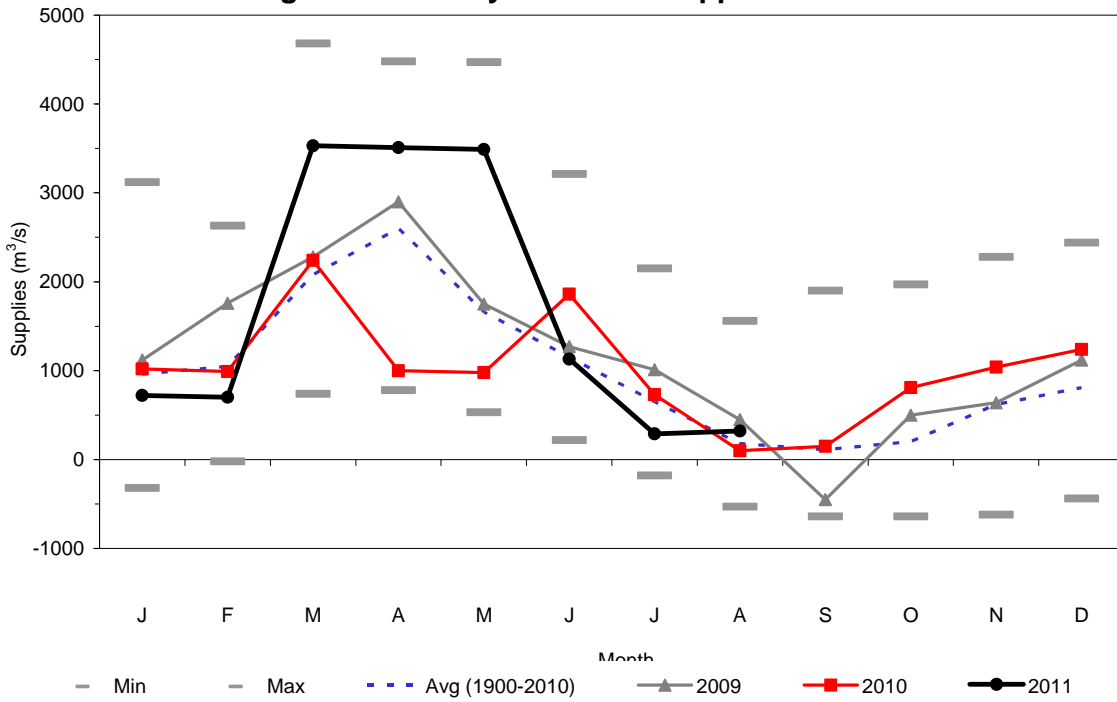


Figure 2: Monthly Net Total Supplies to Lake Ontario

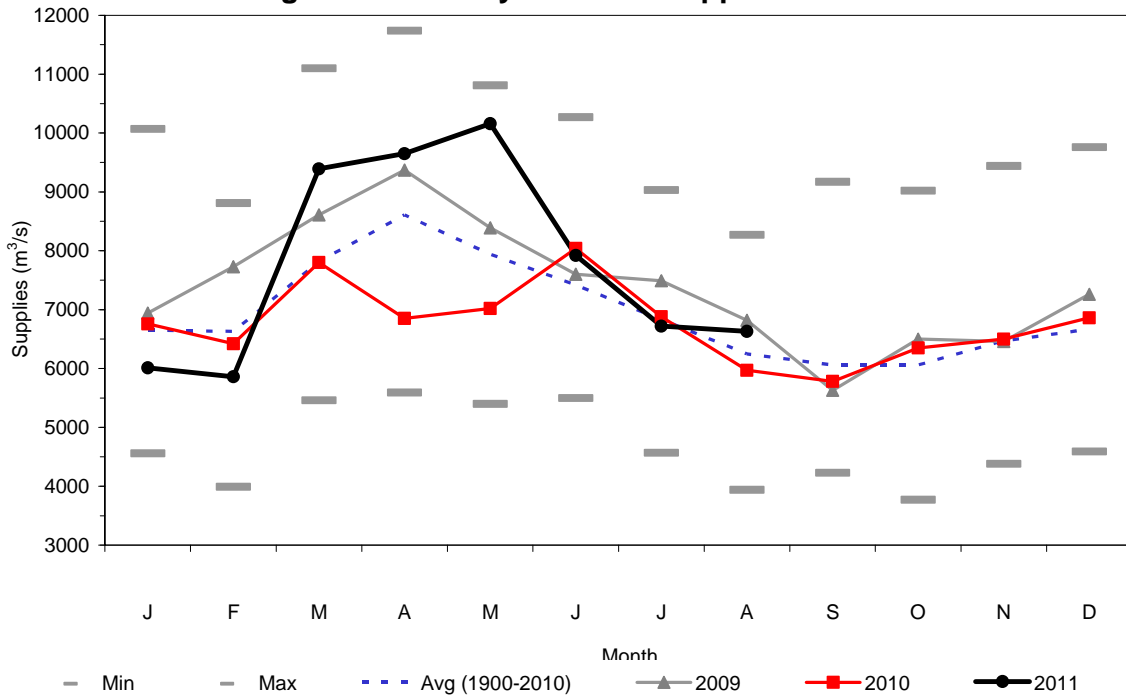


Figure 3: Daily Ottawa River Flow @ Carillon

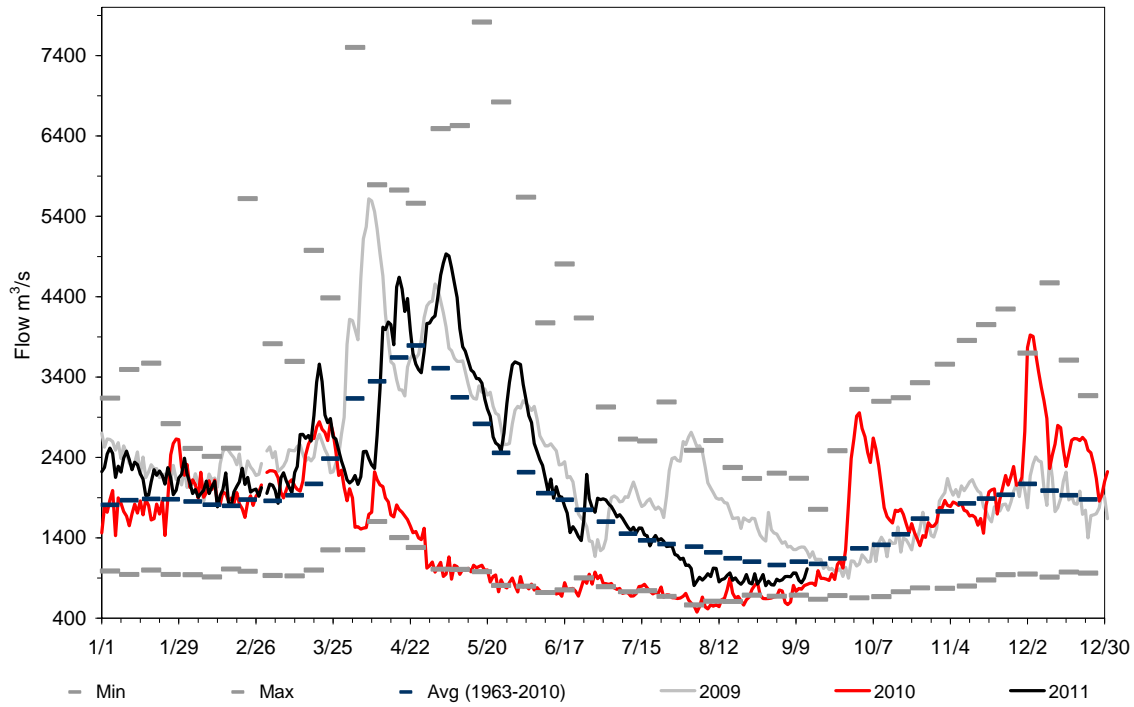


Figure 4: 2011 Lake Ontario Daily Outflows (m³/s)

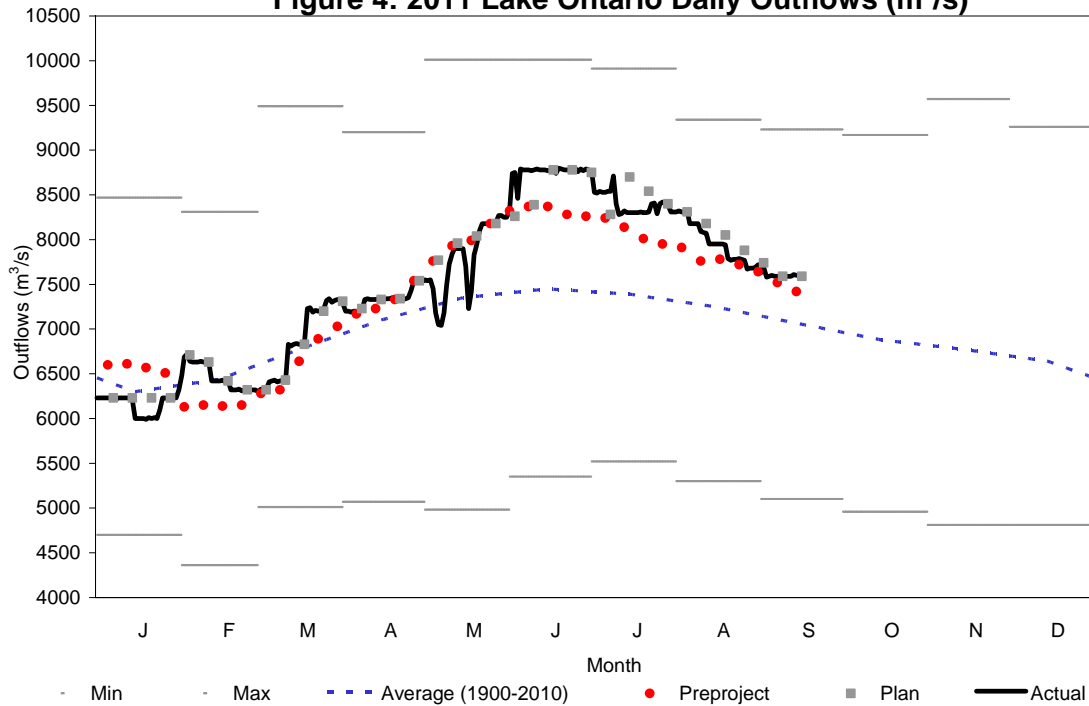


Figure 5: Daily Lake Ontario Levels in comparison with previous years

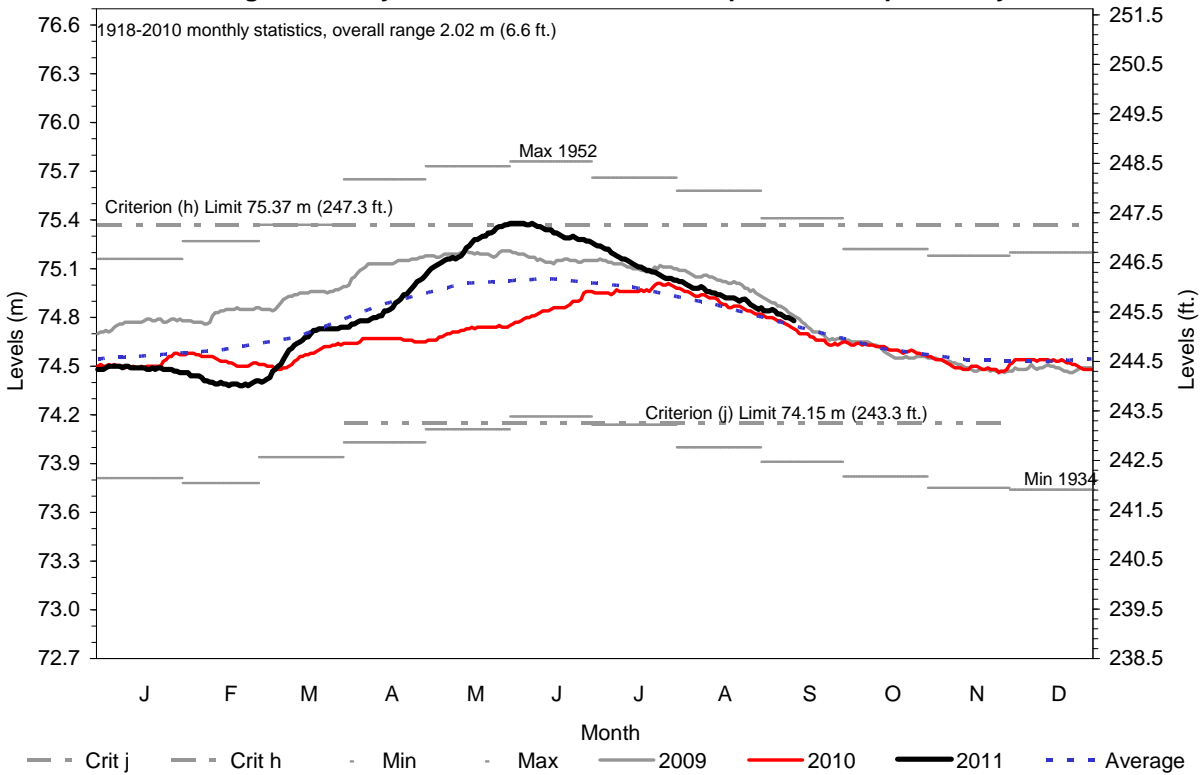


Figure 6: 2011 Actual/Preproject/Plan Levels

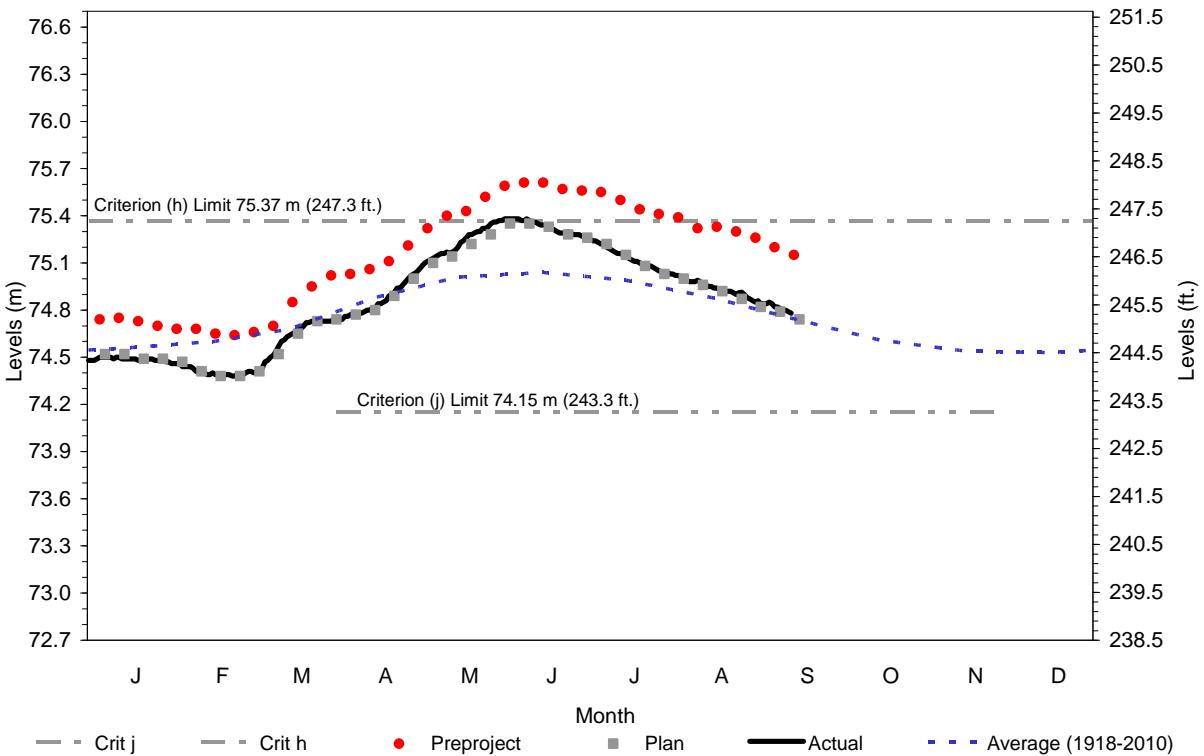


Figure 7: Daily Water Levels on Lake St. Louis Levels

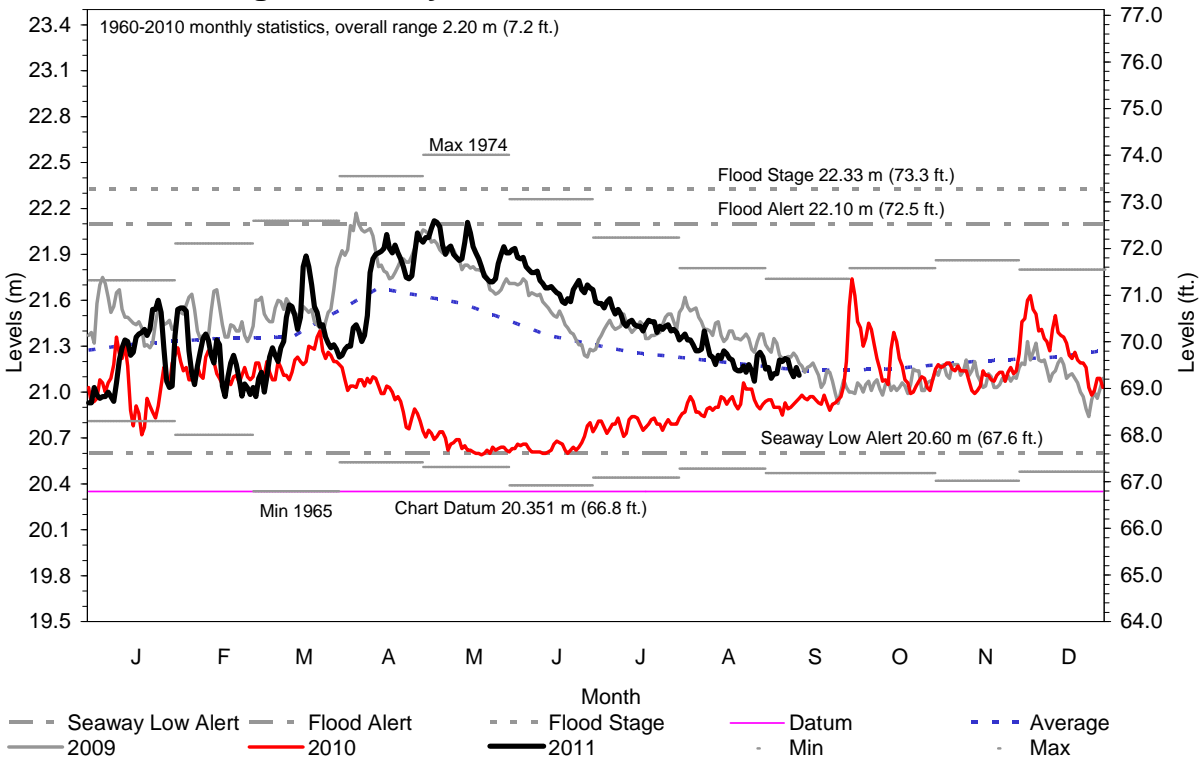


Figure 8: Water Level in the Port of Montreal @ Jetty #1

