



**Oswego (SUNY at Oswego) and Call-in**  
**1-866-200-5980 (English)**  
**1-866-200-5973 (French)**  
**Call between 6:45-6:55pm**

March 13, 2009

*International St. Lawrence River Board of Control*



## **Regulation of Lake Ontario is possible due to:**

- Boundary Waters Treaty of 1909
  - Established the IJC
  - Set order of precedence of interests
- 1952 IJC Order of Approval
  - Approved construction of hydropower projects which allowed outflows to be controlled
- 1956 Supplementary Order
  - Defined criteria consistent with the Treaty
- Plan 1958-D
  - Established method to manage flow from Lake Ontario

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For those of you who may not have participated in one of these Board events previously, let me briefly review who it is that regulates the flows in the St. Lawrence River.

One hundred years ago, the U.S. and Canada created an independent organization to prevent and resolve issues over the waters shared by the two countries. The IJC can approve projects that impact levels in the boundary waters. In 1952, they approved the power project at Cornwall, Ontario and Massena, New York. They also created this Board to carry out the regulation and see that the conditions required for operating the project are met. We generally change the outflows once a week.

If you wish more details, please feel free to contact one of the Board secretaries.

## WATER LEVELS

	Actual*	Compared To	
	11 Mar 2009	March Average**	Last Year
Lake Superior	183.13 m (600.81 ft)	-12 cm (-5 in)	+15 cm (+6 in)
Lake Michigan-Huron	176.08 m (577.68 ft)	-22 cm (-9 in)	+30 cm (+12 in)
Lake Erie	174.30 m (571.84 ft)	+27 cm (+11 in)	+7 cm (+3 in)
Lake Ontario	74.92 m (245.80 ft)	+28 cm (+11 in)	+7 cm (+3 in)
Lake St. Lawrence	73.52 m (241.20 ft)	+85 cm (+33 in)	+106 cm (+42 in)
Lake St. Louis	21.59 m (70.83 ft)	+25 cm (+10 in)	+25 cm (+10 in)
Montreal Harbour	7.14 m (23.42 ft)	+24 cm (+9 in)	+16 cm (+6 in)

\*Preliminary.

\*\*Statistics: Great Lakes: 1918-2007; St. Lawrence River: 1960-2007; Montreal: 1967-2007.

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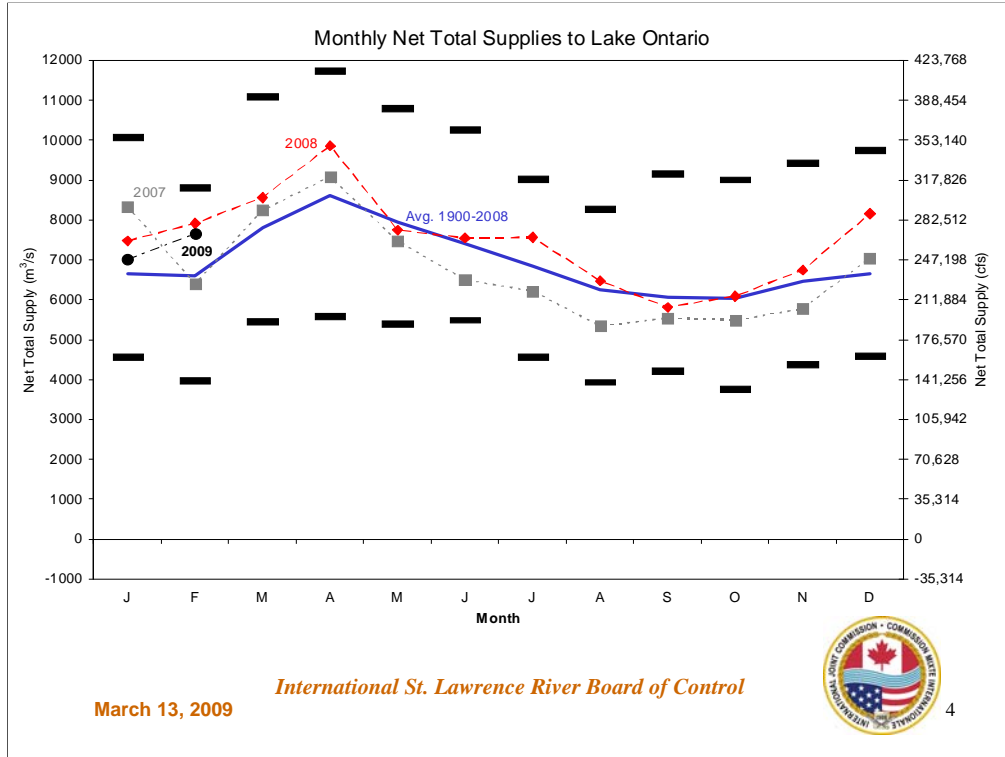


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Here is a recent snapshot of conditions on the Great Lakes and points along the St Lawrence River. We also show how these levels compare to the long term average and to last year at this time. You may note that Lakes Superior, Michigan and Huron are below their averages but have risen from last year. Lakes Erie and Ontario are both above average and close to levels for this time last year.

On the St. Lawrence River, levels are also above average for this time of year and higher than a year ago.

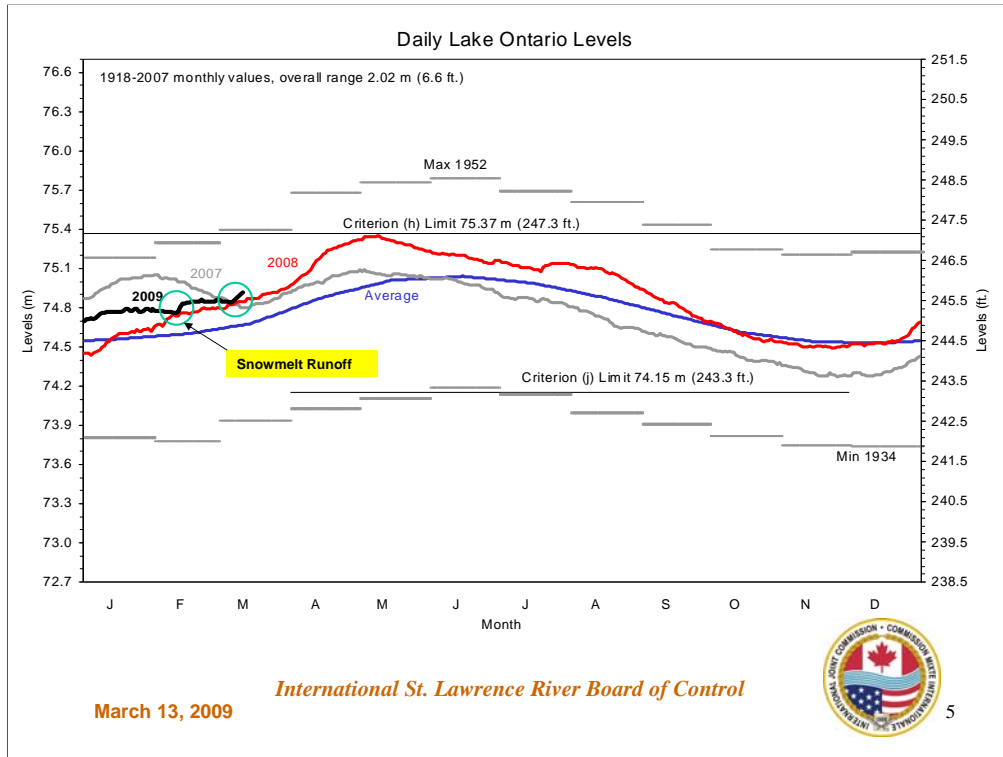
In a moment we will see graphs of levels at several of these locations.



This graph shows the total amount of water that is supplied to Lake Ontario. This is made up of the inflow from Lake Erie, rainfall on the Lake, runoff of rain and snow from the surrounding land and any losses as a result of evaporation from the Lake's surface.

The blue line is the long-term average. The gray line and squares are the values from 2007. The red line and diamonds are for 2008 and the black line and dots are for this year. The maxima and minima of the monthly supplies for the historical period are noted with the black dashes above and below the curves.

Note that the supplies for the past 4 months have been above average.

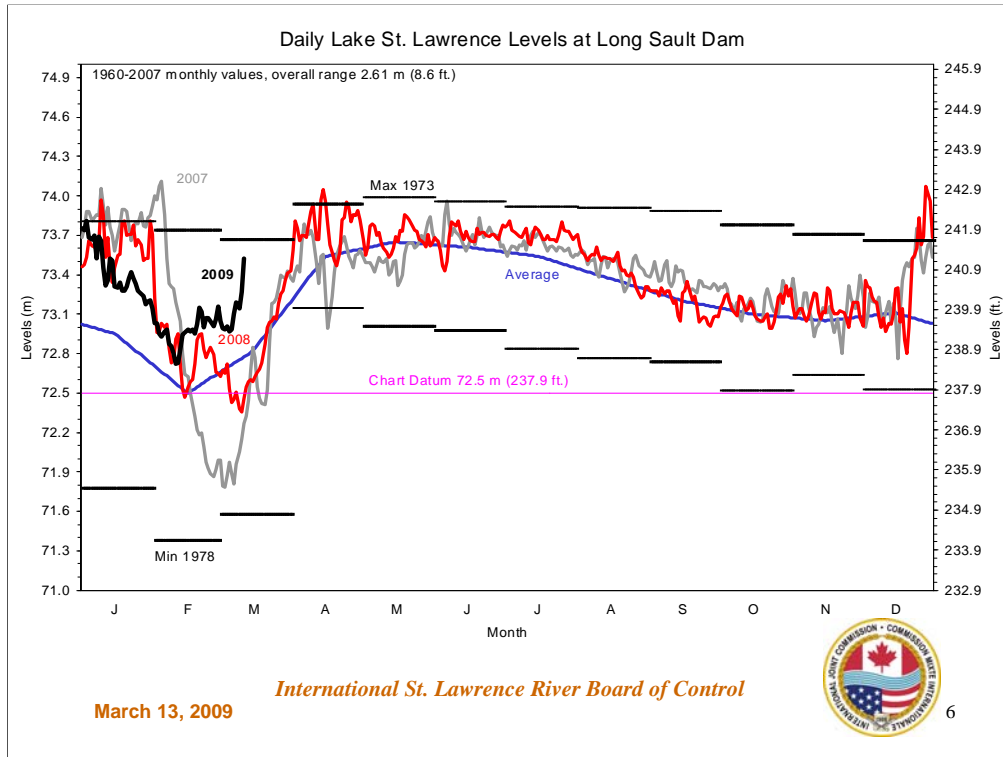


This slide shows how the Lake responded to the changes in the water supplies and the outflows released by the Board. Again the long-term average is shown in blue, 2007 in gray, 2008 in red and this year 2009 in black. The maximum and minimum monthly average levels for the historical period are shown with the gray dashes. We have added the 4-foot range bounded by criterion (h) at the high end and criterion (j) at the low end. This is the range in which the IJC's orders direct us to keep Lake Ontario's levels. Although the levels over the past few years have varied, they have remained within the upper and lower limits at all times.

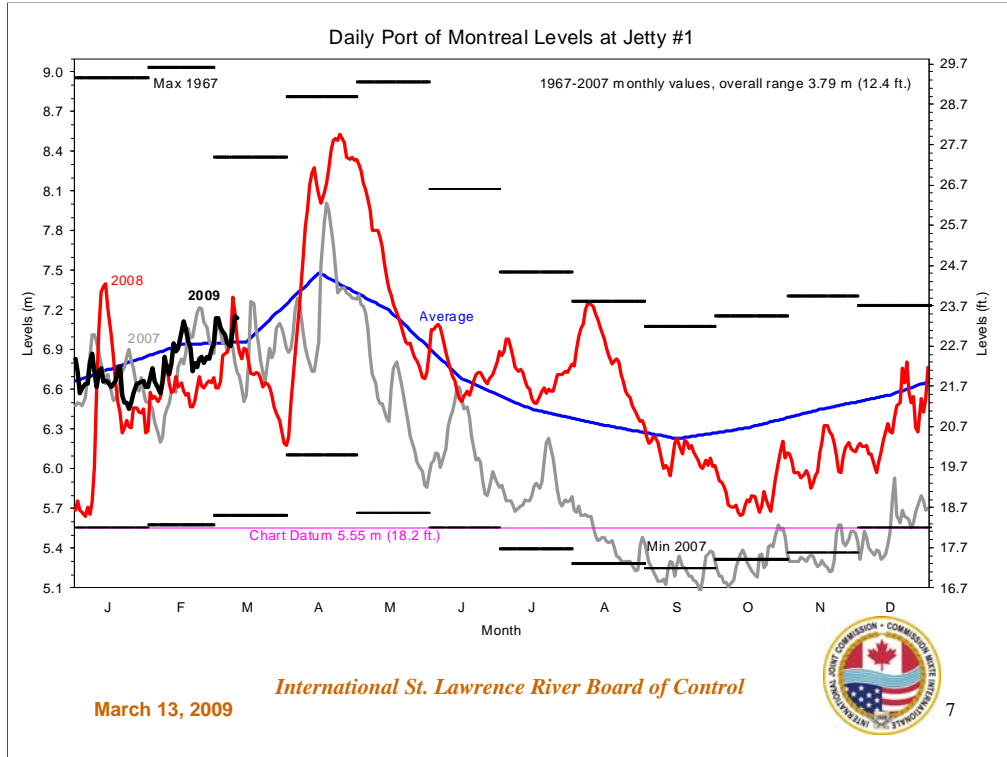
We have highlighted the rise in the level in February of this year. As you recall, we had a thaw that melted almost all of the snow pack within the basin, along with significant rainfall in that period. This caused a jump in the level of 7 centimeters (about 2.5 inches).

There was a recent 2<sup>nd</sup> jump in the Lake Ontario level because of the unusual amount of rainfall in a 4-day period, since the initial posting of this presentation back on March 6<sup>th</sup>.

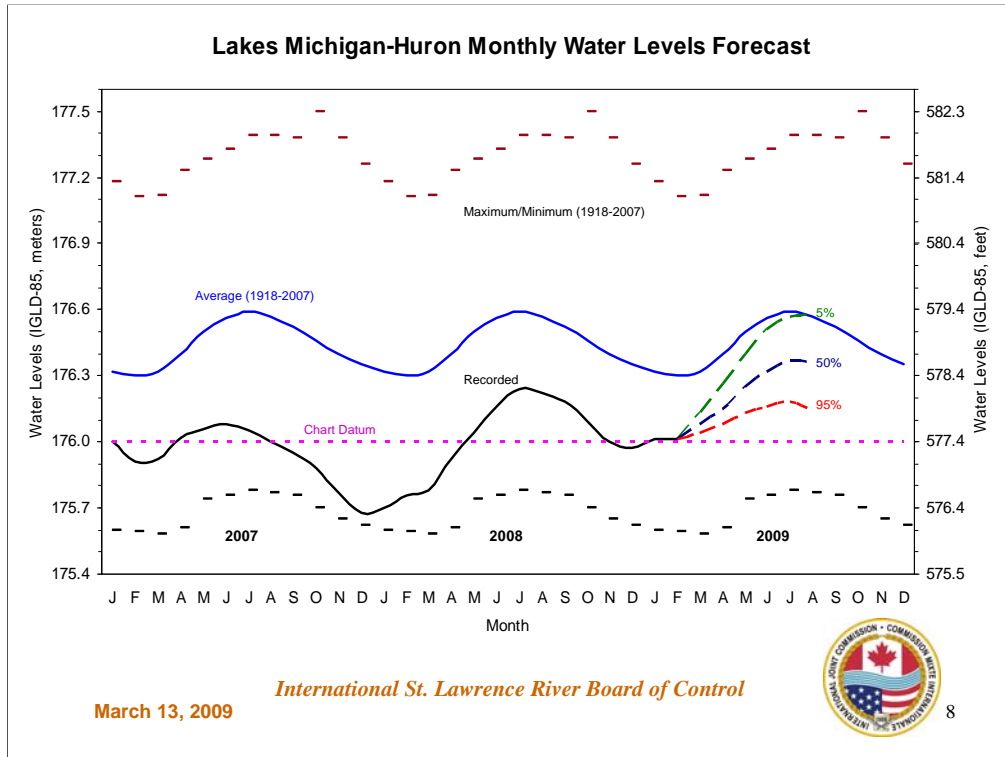
From March 1<sup>st</sup> -12<sup>th</sup>, Lakes Erie and Ontario experienced 78mm (3.09 inches) and 50mm (1.95 inches) of rainfall, respectively. This equated to 292% and 189% of average precipitation, respectively. The entire Great Lakes experienced 155% of average precipitation during that time period.



Moving downstream from the Lake, this chart shows the levels just upstream from the power dam. The same color convention is used here as in the previous slides. Note that the levels are above average in the first 2 months of this year. This is reflective of the relatively smooth ice cover that has formed on the river between the Lake and the dam, resulting in less resistance to the flow and thus higher levels at Long Sault.

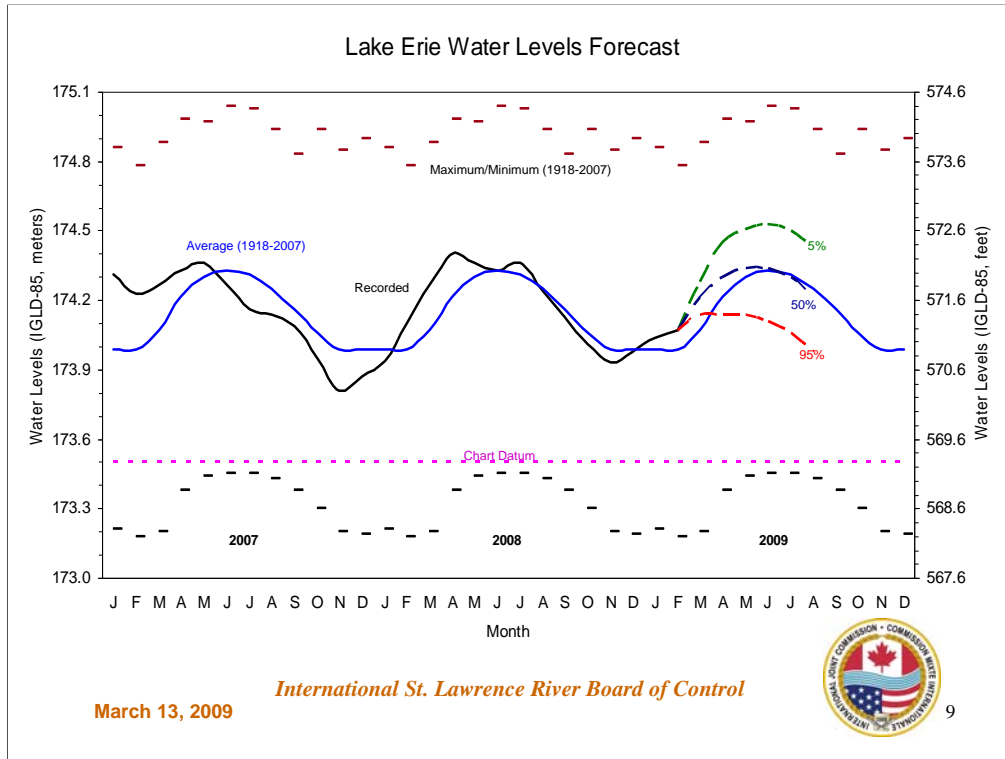


Moving downstream to Montreal, you can see that the levels have been running close to average for the first 2 months of this year.

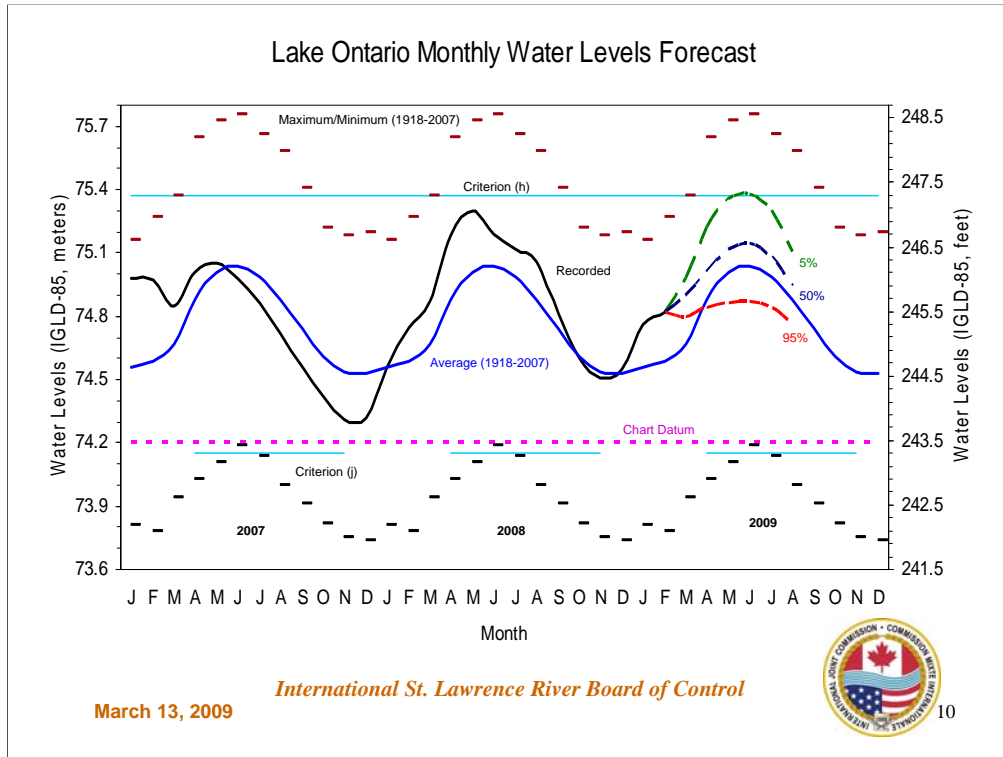


As I noted earlier, the levels in Lakes Michigan and Huron are below average. This slide shows the trend in levels since the beginning of 2007. Our forecast, shown in green for high, black for average and red for low supplies, indicates the range of levels that may be expected over the next few months. Although it is trending upward, it is still forecast to be below average.

Lakes Michigan and Huron levels are an indication of the supplies into Lake Erie.

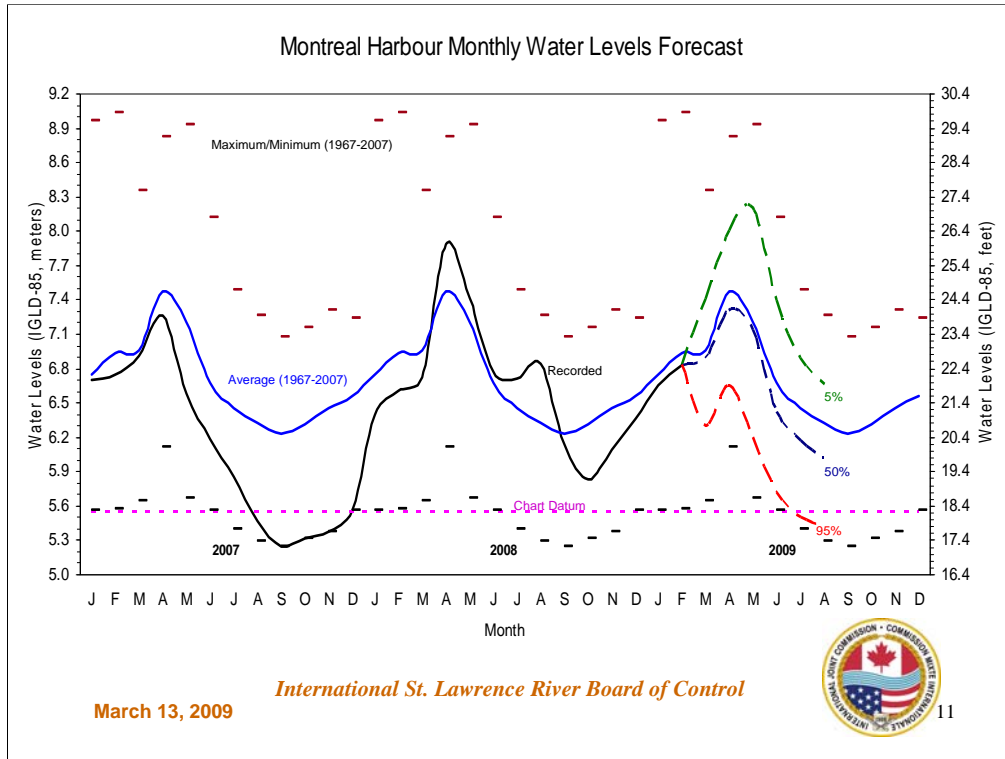


Over the long term, about 85% of Lake Ontario's supply comes for Lake Erie. The level of Lake Erie determines how much water will come down the Niagara River. As shown here, Lake Erie's levels have remained right around average, and are expected to remain so for the next few months.



Tracing the Lake Ontario levels from the beginning of 2007 shows that it has varied about the long term average levels. Currently, it is above average, and is forecast to likely remain above average for the next 6 months into the summer. There is a very small chance with extremely high supplies that the level may approach the upper limit of criterion (h).

If conditions are consistently dry, the levels will drop below average, but there is little risk of reaching the lower limit of criterion (j).



Here is the outlook for Montreal. Under average conditions, we expect the levels to remain near average. If consistently dry conditions persist, the level may approach chart datum later in the summer.

## **Proposed Regulation Strategy**

### **Plan 58-D flows taking into consideration ice conditions in the international section and downstream**

- **Short-term variations, if required, for critical situations**
- **The Board and staff continue to evaluate conditions and take action as necessary**

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The Board met at the beginning of this month and, based on a review of the conditions, have decided to continue to release flows in accordance with the Plan 1958D. Of course, ice conditions in the International section and further downstream are taken into consideration as we make our operational decisions.

As in the past, we will consider short term deviations from the Plan, to assist in critical situations that may develop.

The Board and its staff continually monitor the conditions in both the Lake and the River and are prepared to adapt to changes in the supplies and levels as needed.

**Public Teleconference  
March 17, 2009**

Dorval  
Kingston  
Watertown  
Oswego  
Rochester  
Burlington

**Oswego (SUNY at Oswego) and Call-in  
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In closing, I would like to mention that information about current conditions, and the Board's outflow strategy, can be found on the Board's website at [WWW.ISLRBC.ORG](http://WWW.ISLRBC.ORG)

At this point, we would like to hear from you. I would ask that each person be identified before speaking, and that comments be limited to two minutes. That way, we will get to hear from as many people as possible.

Operator could you please instruct our dial-in participants how they can let us know that they wish to join the discussion.

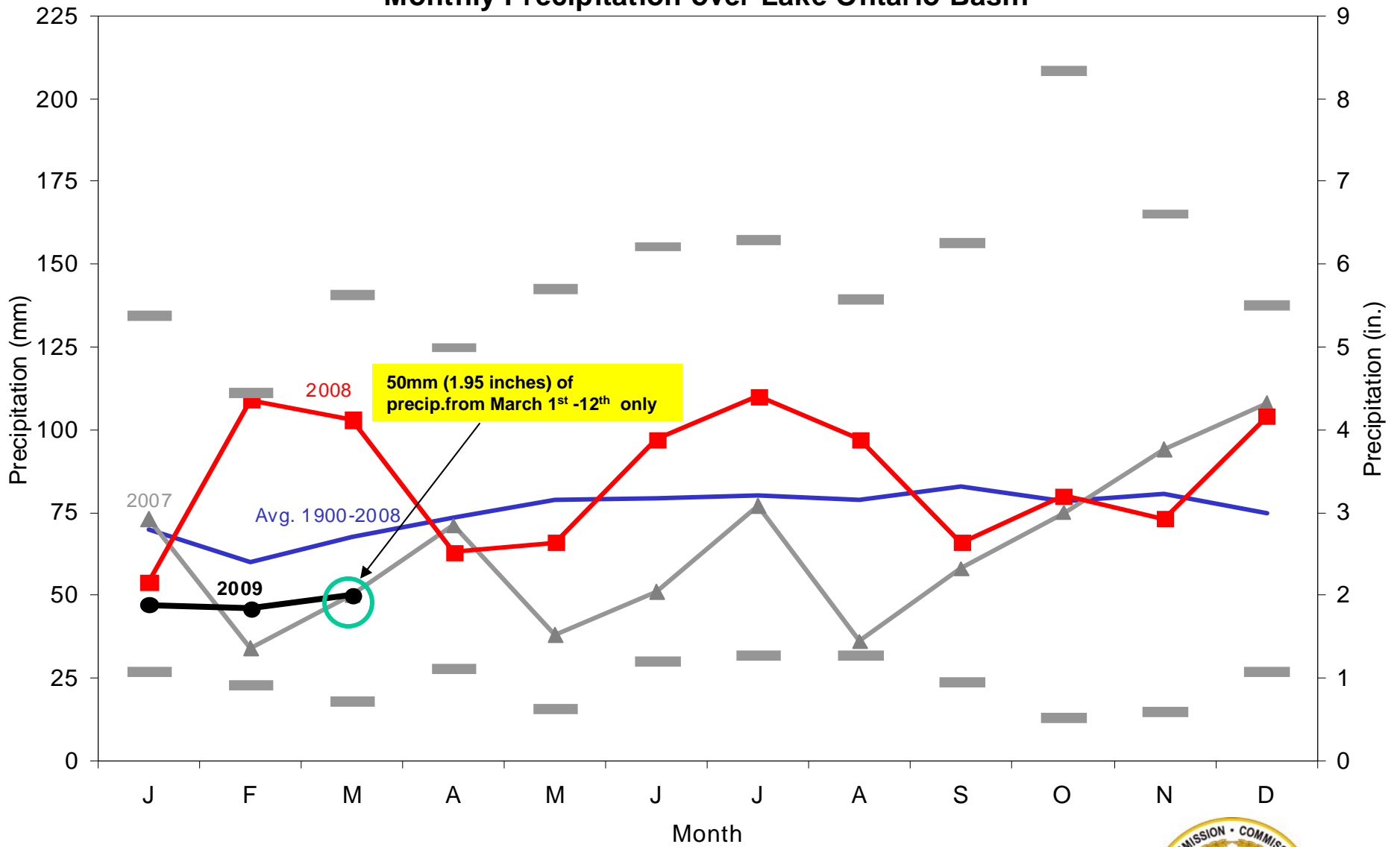
## Additional Information

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# Monthly Precipitation over Lake Ontario Basin

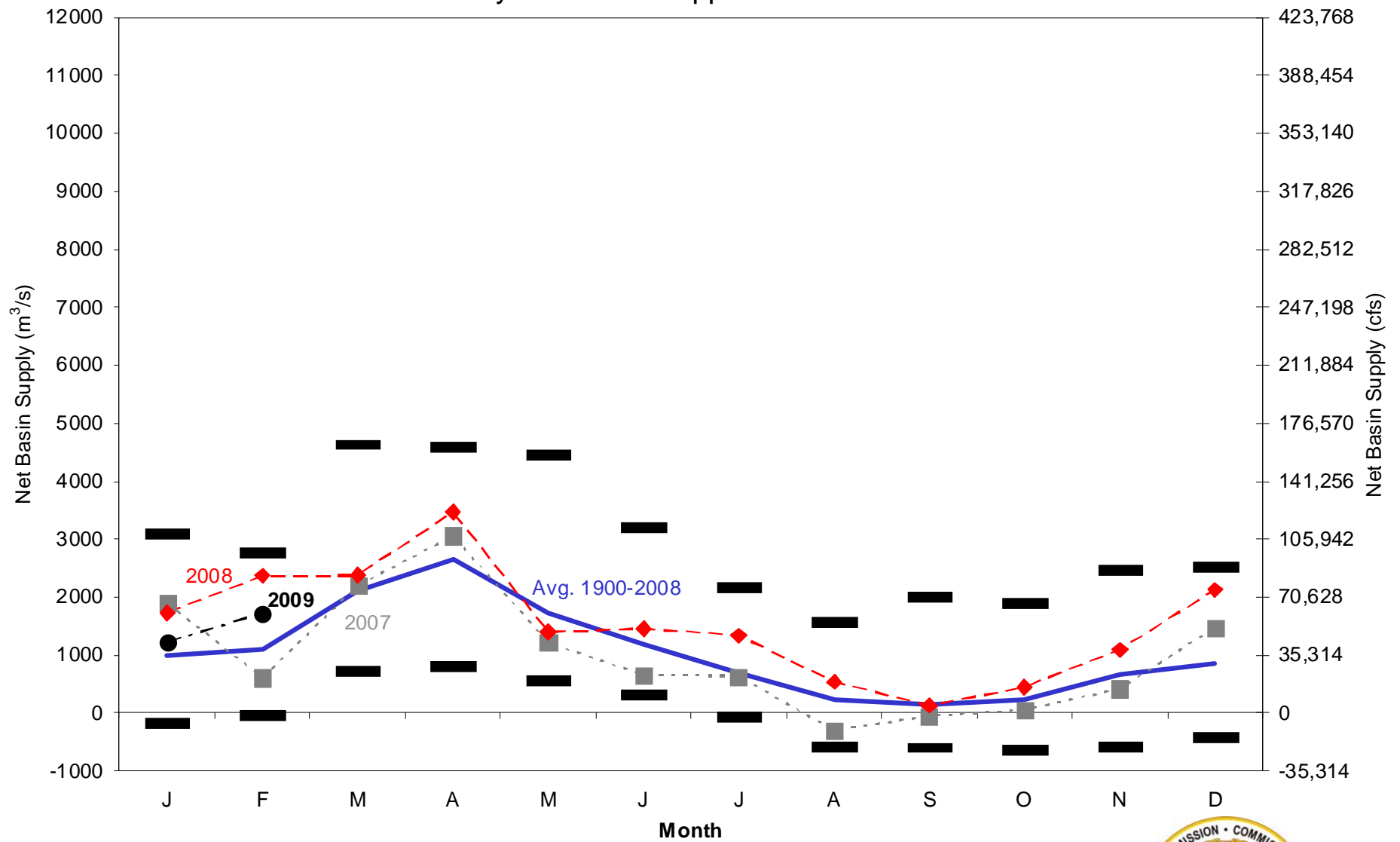


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# Monthly Net Basin Supplies to Lake Ontario

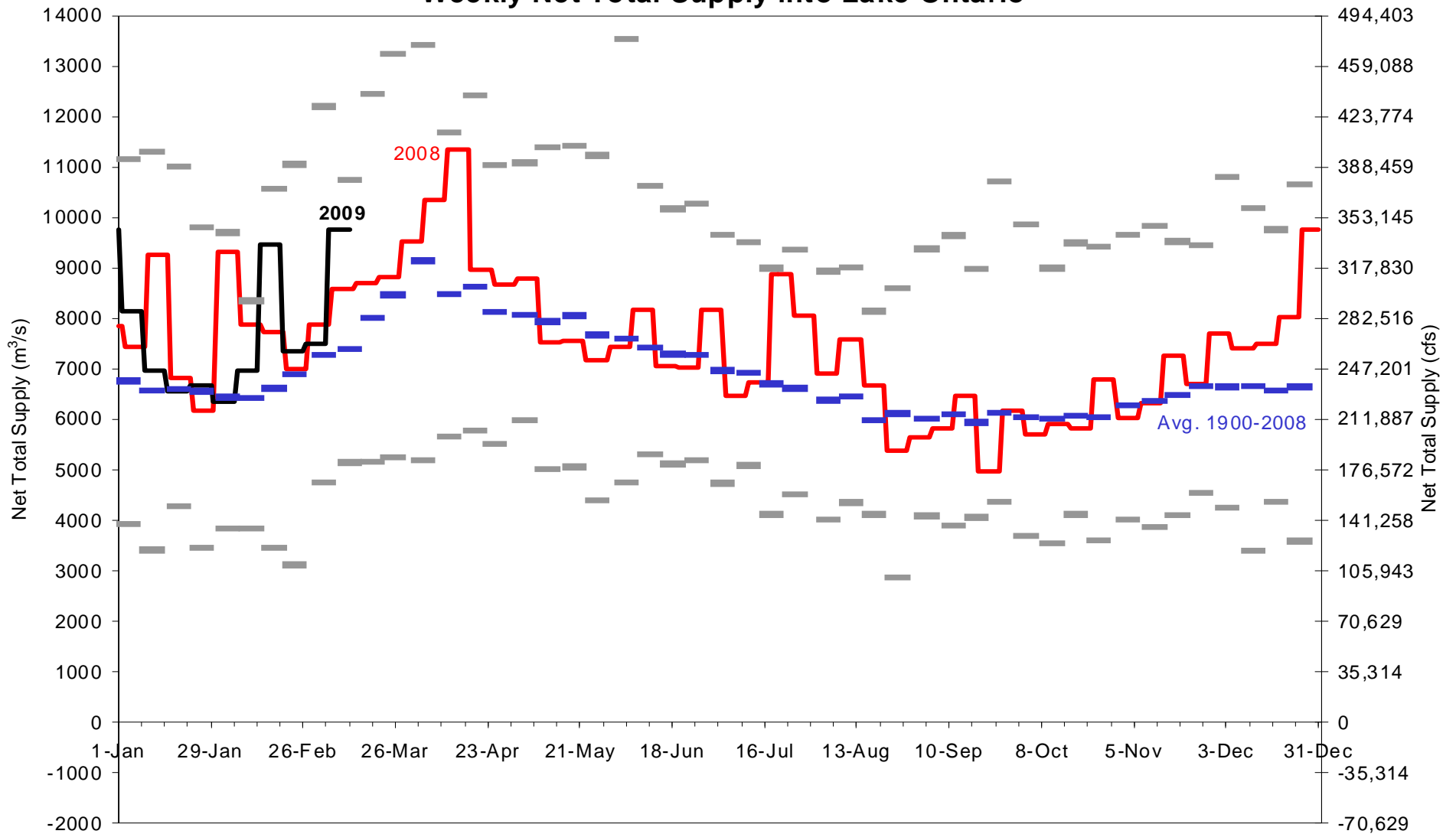


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# Weekly Net Total Supply into Lake Ontario

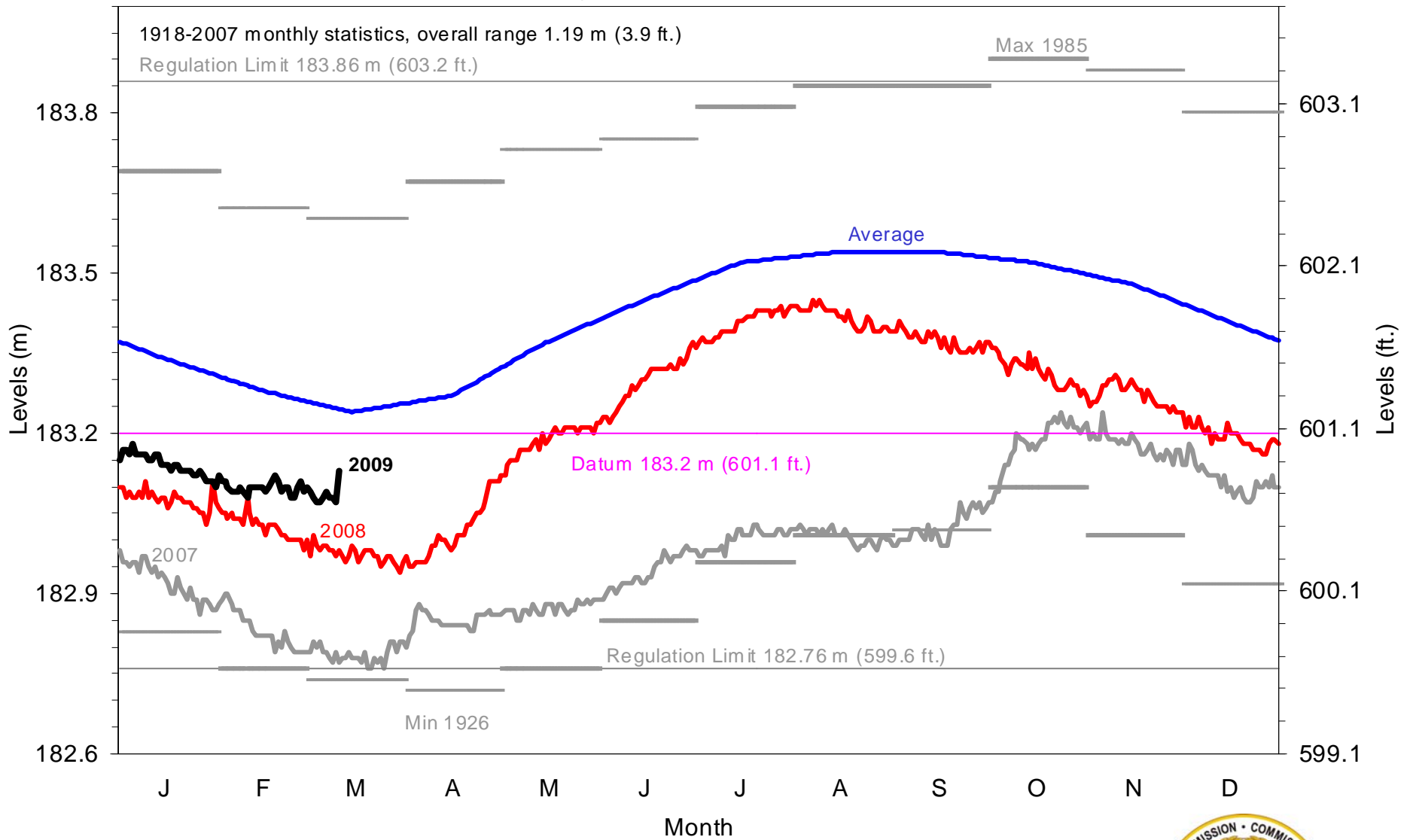


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# Daily Lake Superior Levels

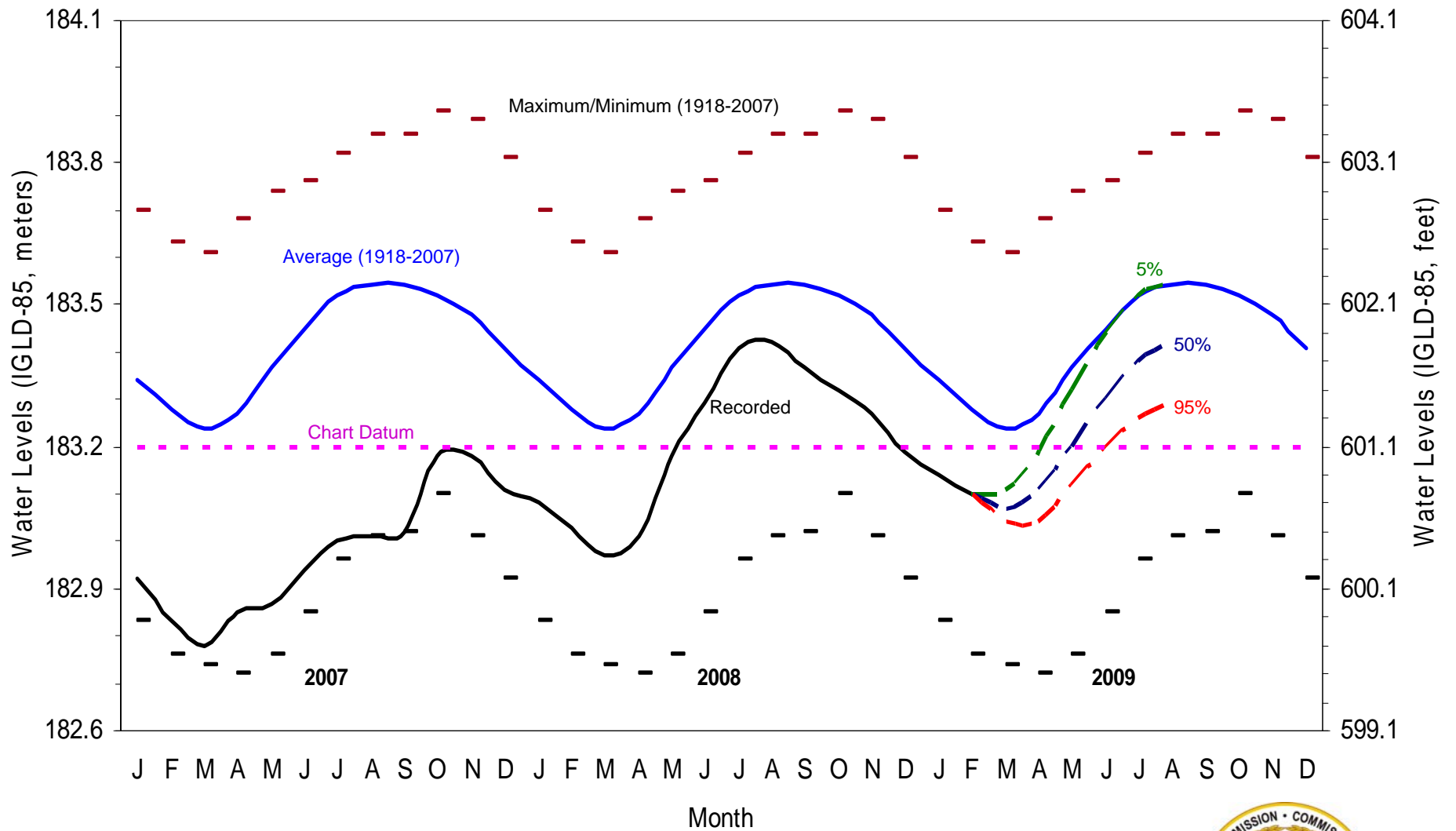


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# Lakes Superior Monthly Water Levels Forecast

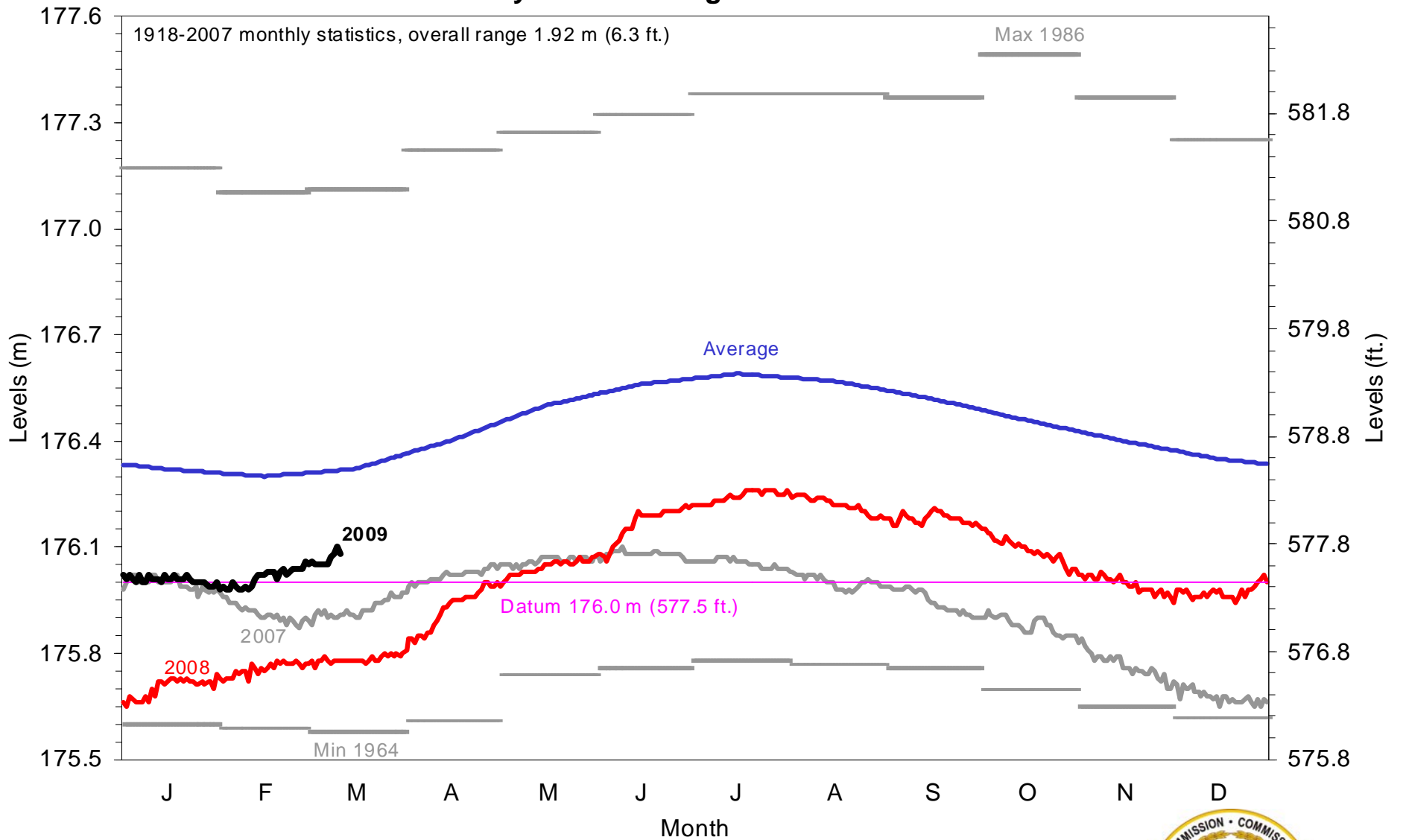


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# Daily Lakes Michigan-Huron Levels

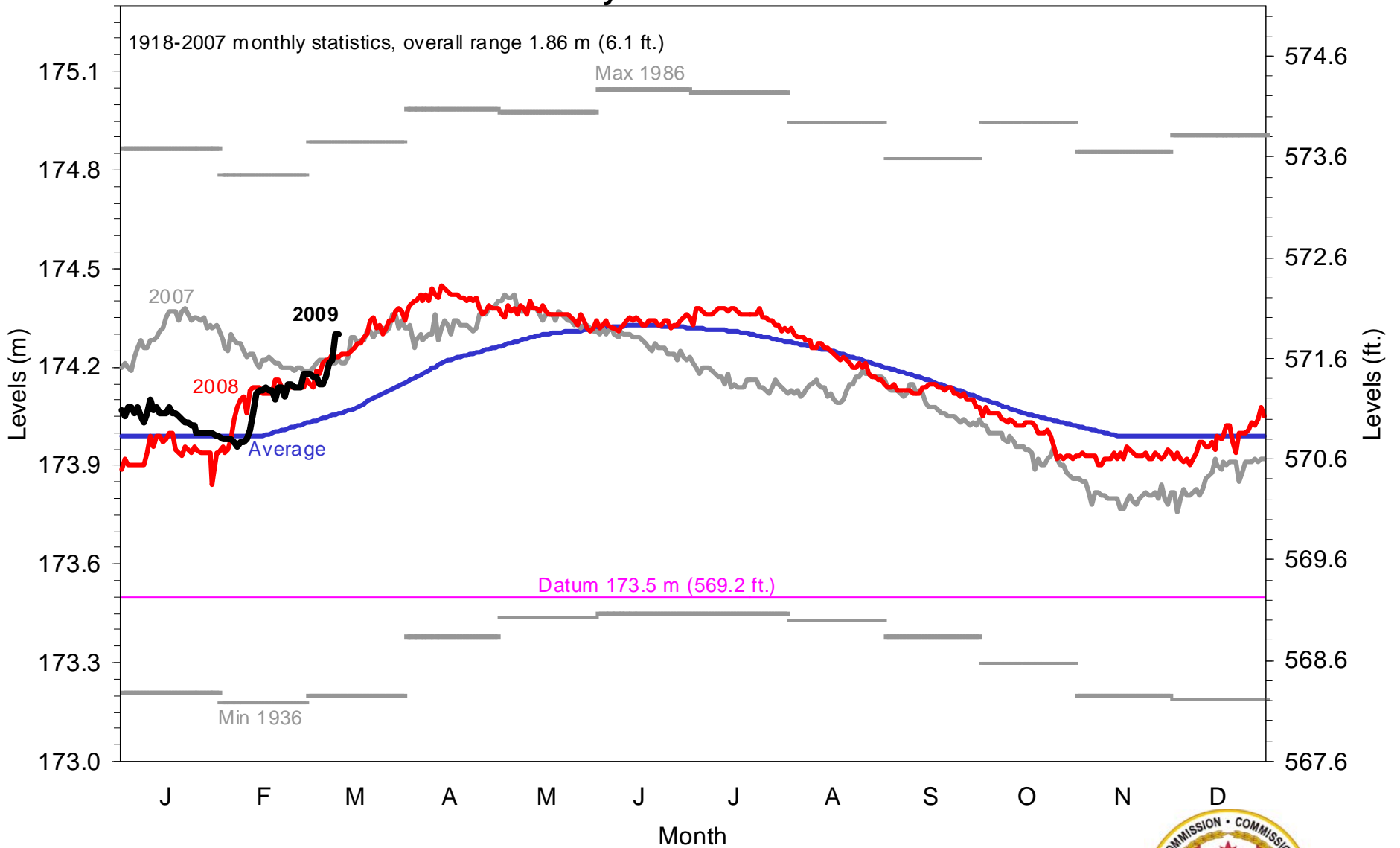


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# Daily Lake Erie Levels

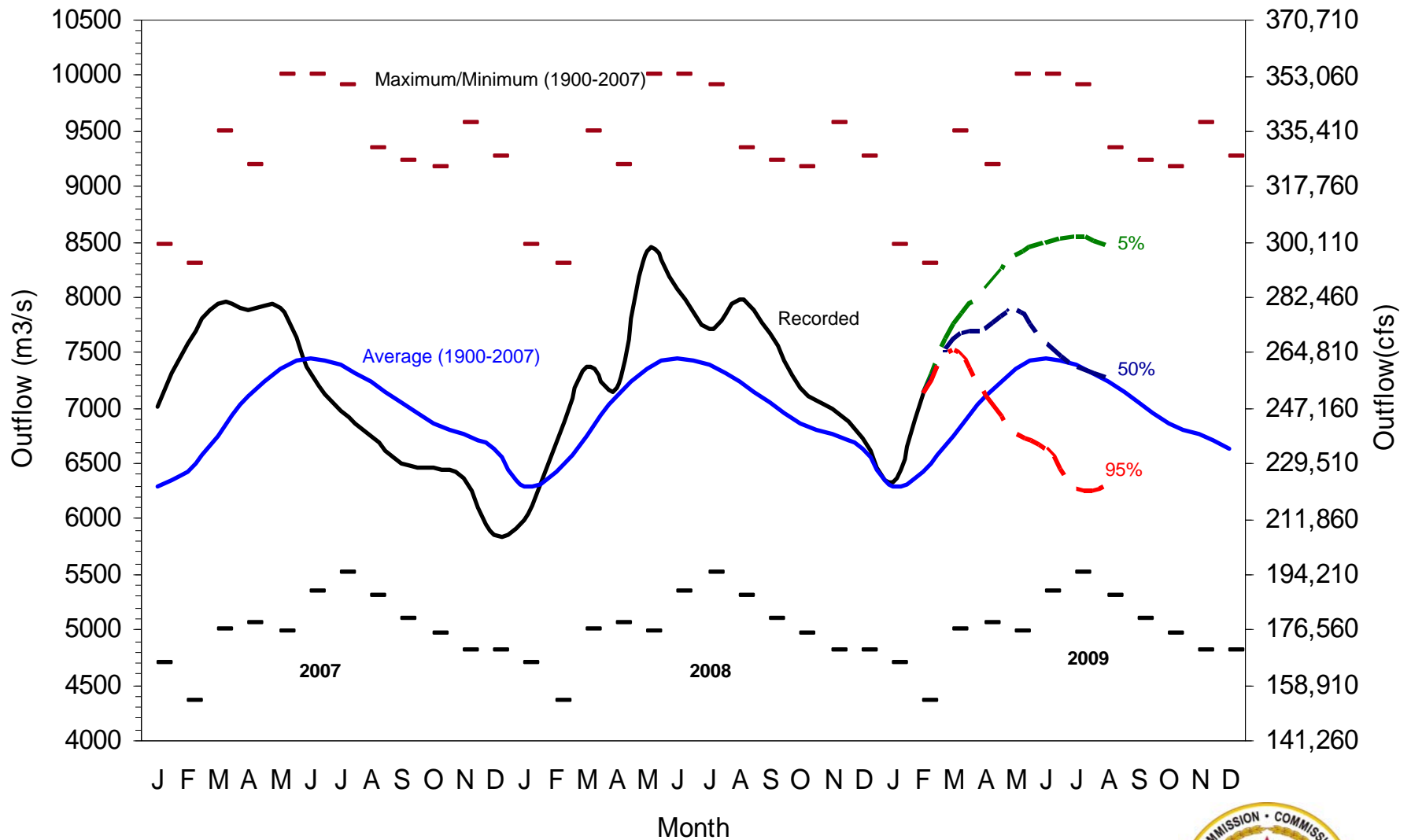


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# Lake Ontario Monthly Mean Outflows Forecast

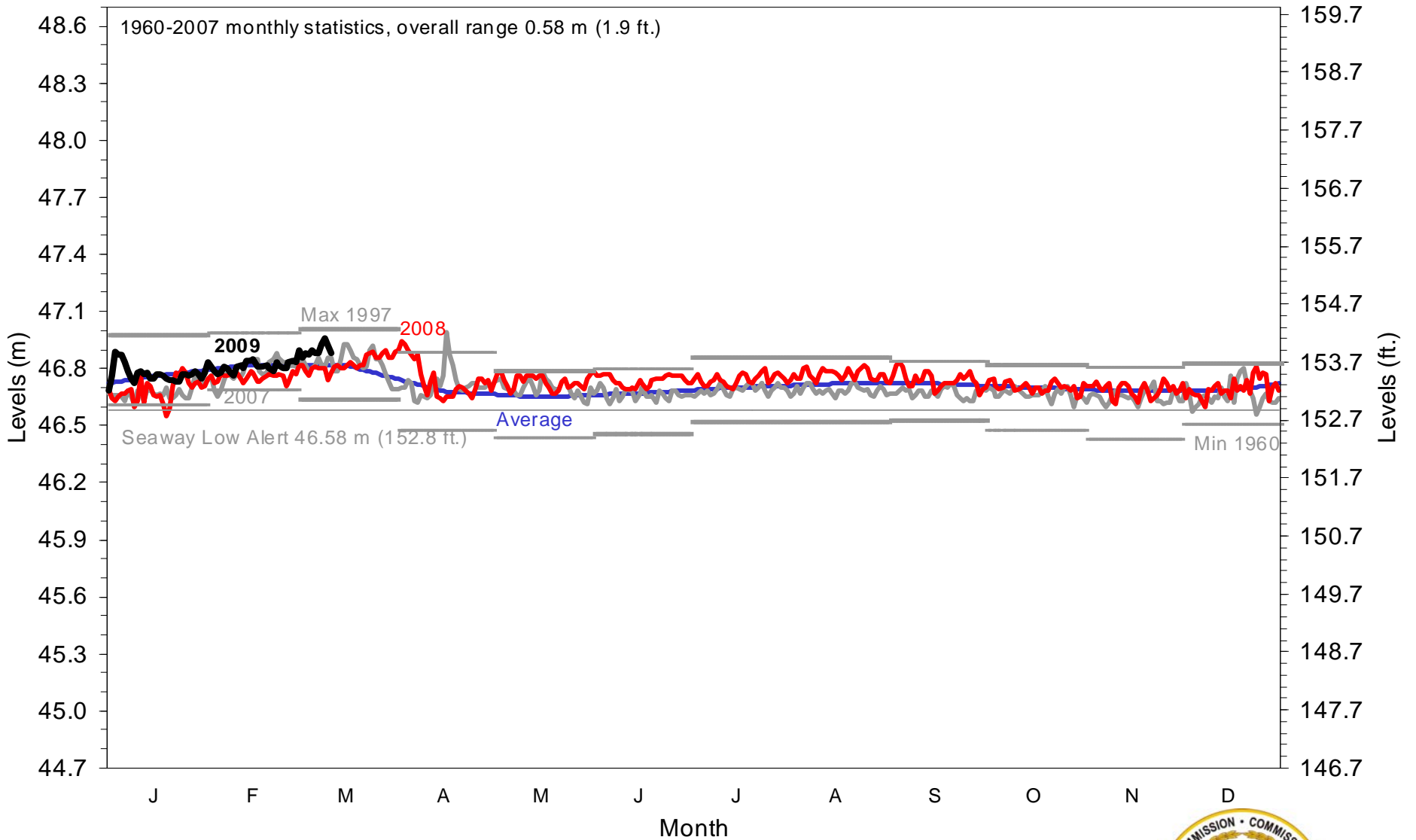


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## Daily Lake St. Francis Levels @ Summerstown

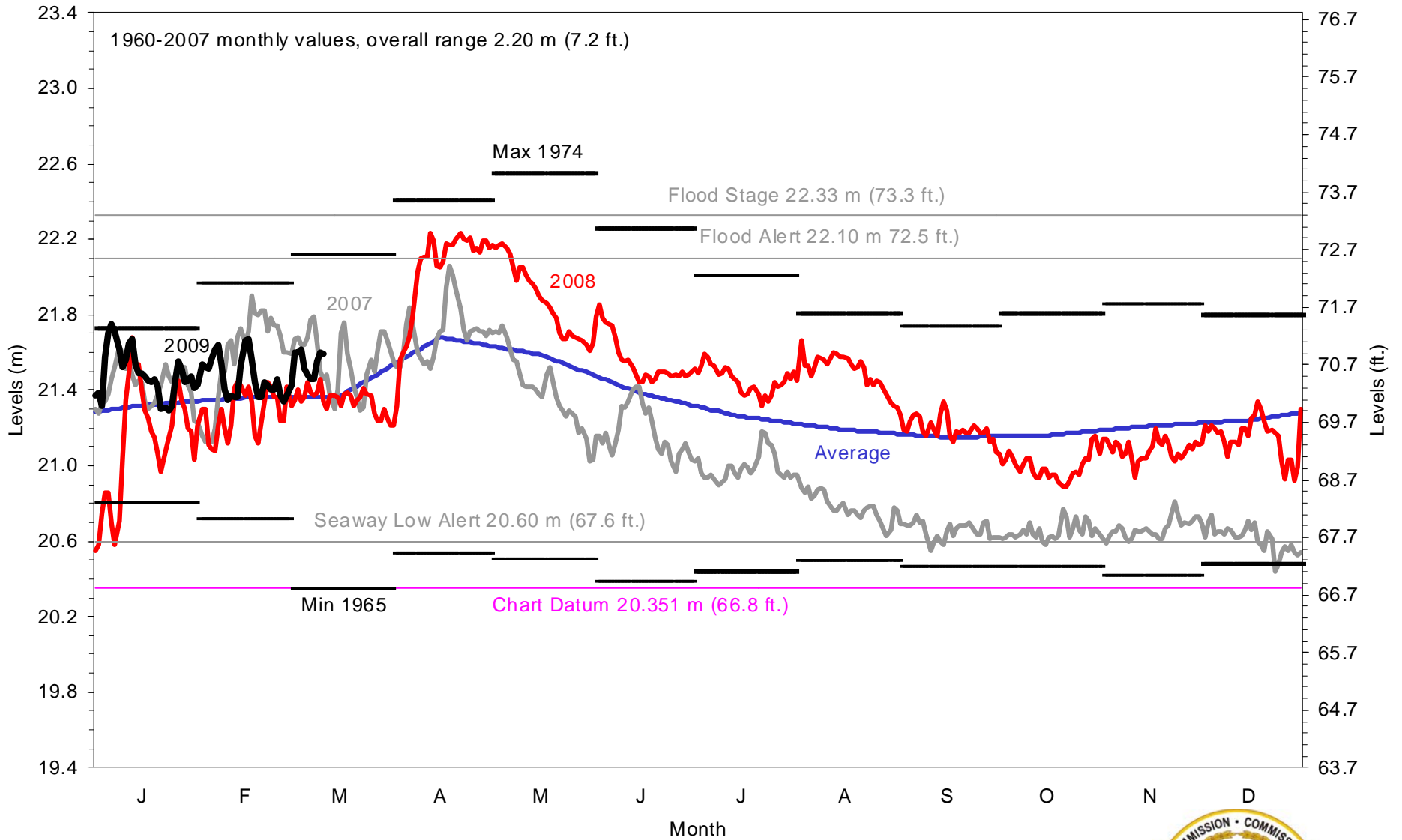


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# Daily Lake St. Louis Levels at Pointe-Claire

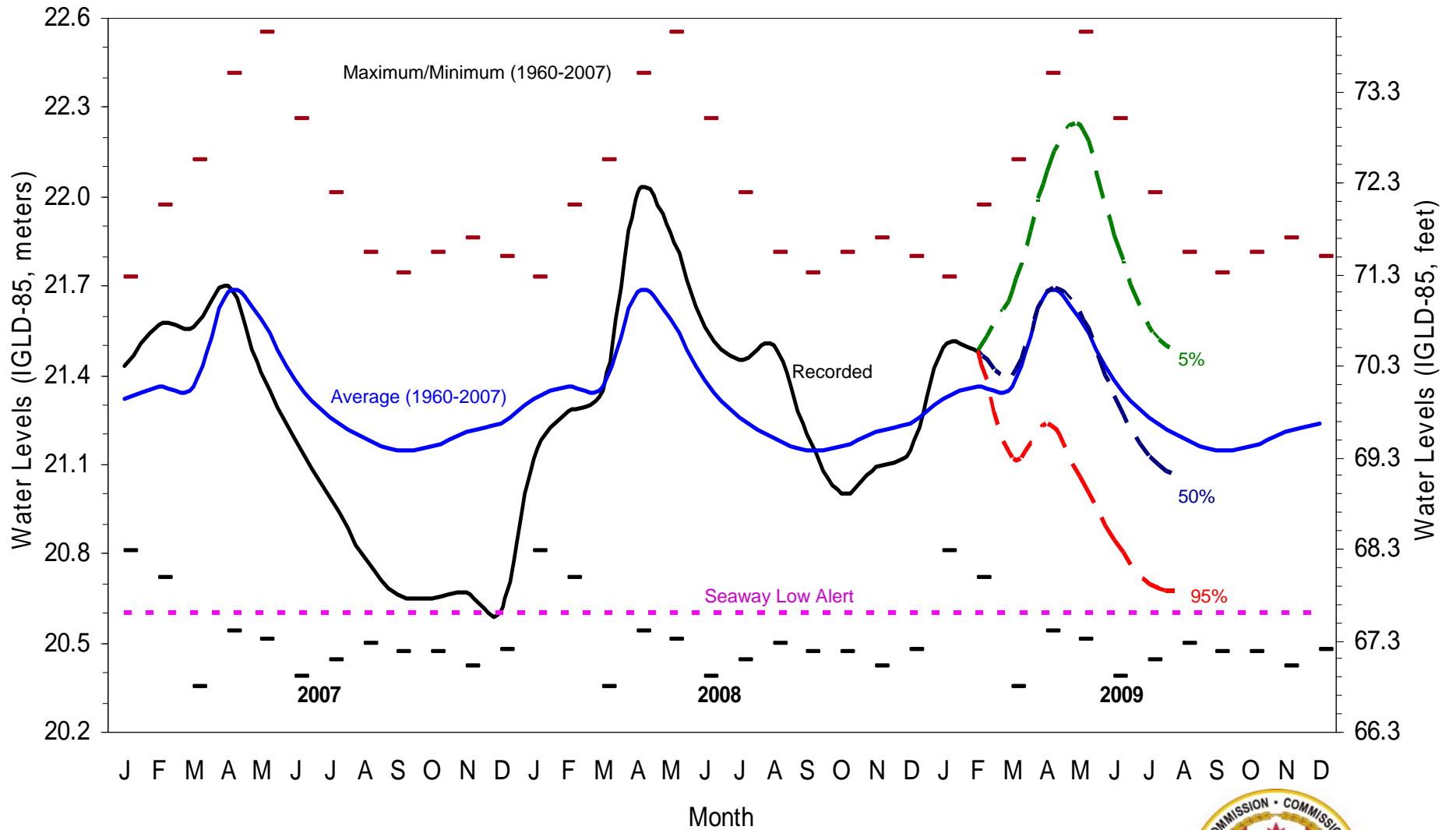


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# Lake St. Louis Monthly Water Levels Forecast

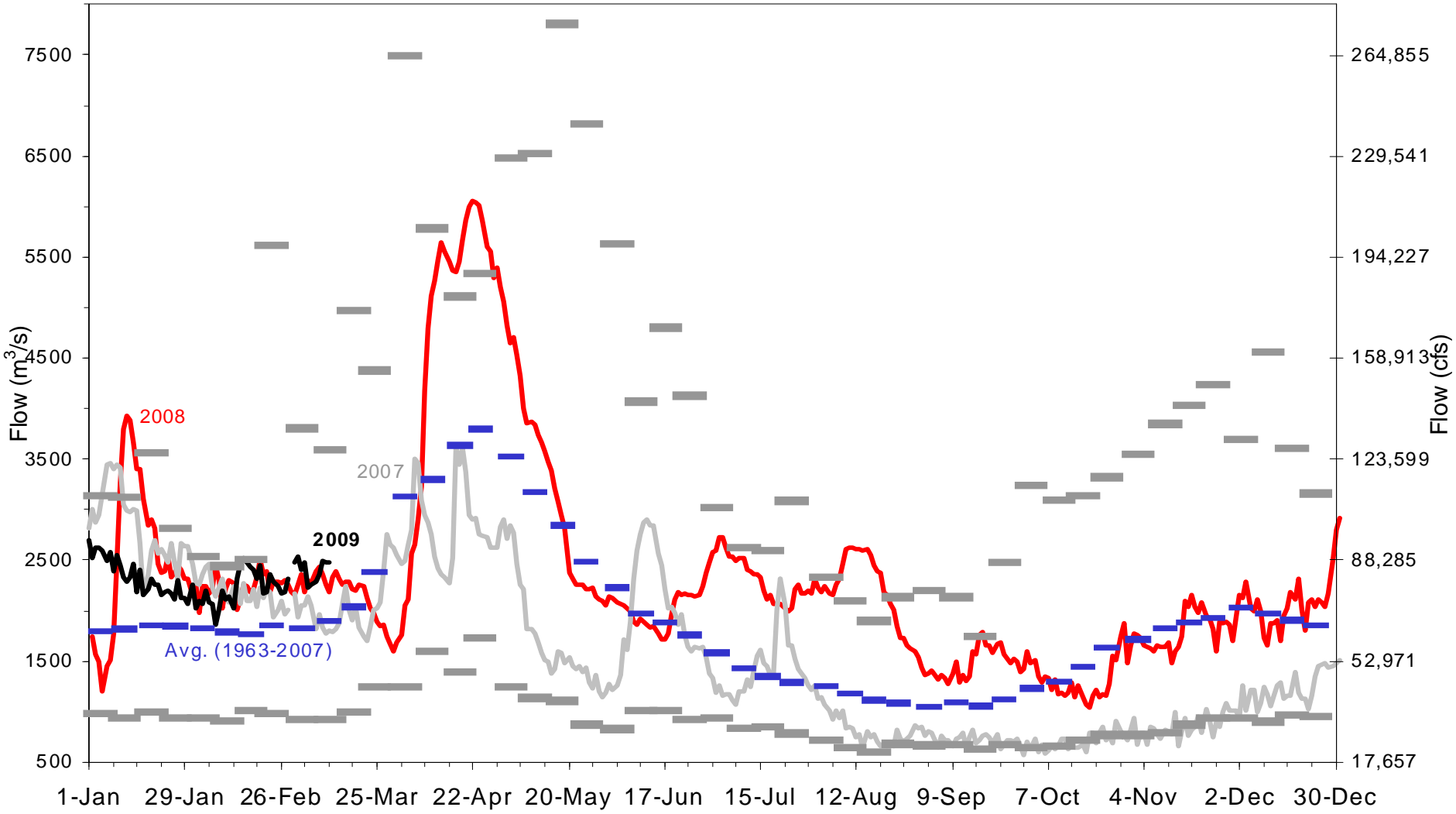


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### Daily Ottawa River Flow @ Carillon



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# Summary of IJC Criteria (1956)

- a) Don't reduce minimum level at Montreal Harbour below level which would have occurred in the past with like supplies (unregulated)
- b) Winter flows as high as feasible
- c) Flow during breakup in Montreal Harbour no greater than unregulated
- d) Flow during Ottawa River freshet no greater than unregulated
- e) Keep minimum flows as high as feasible
- f) Keep maximum flows as low as possible

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# Summary of IJC Criteria (continued)

- g) Reduce extremes in Lake Ontario levels
- h) Maximum monthly mean Lake Ontario level 75.37 m (247.3 ft).
- i) Reduce frequency of monthly mean levels above 75.07 m (246.3 ft) compared to unregulated.
- j) Minimum monthly mean Lake Ontario level in navigation season 74.15 m (243.3 ft).
- k) If supplies **greater** than past, operate to benefit riparians.  
If supplies **less** than past, operate for navigation and power.

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## IJC Orders also specify:

- Minimum levels for navigation in Lake St. Lawrence
- Maximum current velocity in river to maintain safe navigation
- Iroquois Dam to limit high levels on Lake St. Lawrence

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