LEVEL news

Great Lakes - St. Lawrence River Water Levels

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December Storm Causes a 3.9 m Tilt in the Surface of Lake Erie

IJC Establishes Study Board

On December 11 and 12 a major winter storm belted Southern and Central Ontario, dumping 20-30 cm of snow in the Toronto area and as much as 50-70 cm in the Orillia area.

The storm also had a significant affect on short-term water levels on Lake Erie. Sustained southwest winds in the 60 knot range pushed the water to the eastern end of the lake causing lake levels to rise, or set-up, above pre-storm levels by 2.8 m at Buffalo, NY and 2.1 m at Port Colborne, ON. As levels rose at the eastern end of the lake, there was a corresponding drop, or set-down, in water levels at the western end of the lake. At Toledo, OH and Bar Point, ON, levels fell about 1.3 m and 1.0 m below pre-storm levels, respectively. At one point during the storm, the difference between water levels recorded at opposite ends of the lake was more than 3.9 m.

The storm set-up at the eastern end of the lake was one of the largest on record, but fortunately lasted only two hours and occurred at a time of below average Lake Erie static levels. Flooding of roads and a park were reported in Ontario, while damages to and evacuation of some houses occurred near Buffalo. Although the magnitude of the set-down at the western end of the lake was much smaller than the set-up at the eastern end, the **(continued on next page)**

IJC establishes International Lake Ontario - St. Lawrence River Study Board

On December 18, 2000, the International Joint Commission (IJC) announced the establishment of an International Lake Ontario-St. Lawrence River Study Board. The Study Board will have seven U.S. and seven Canadian members. Lynn Cleary and Doug Cuthbert of Environment Canada have been appointed to the Study Board.

Over the next few years, the Study Board will undertake the work needed to evaluate options for regulating levels and flows in the Lake Ontario-St. Lawrence River system. The Study Board will carry out its work independent of the work of the International St. Lawrence River Board of Control, which is responsible for overseeing the regulation of the outflows from Lake Ontario.

It has been nearly 50 years since an assessment was performed of water levels and flows regulation in the Lake Ontario-St. Lawrence River system. In April 1999, the IJC informed the Governments of the United States and Canada that it was becoming increasingly urgent to review the regulation of Lake Ontario outflows in view of dissatisfaction on the part of some interests and in light of environmental concerns and climate change issues. Formation of the Study Board is the result of both Governments allocating funds for the multi-year study.

Environment Canada Environnement Canada

Canada

set-down lasted much longer, posing a potential hazard for commercial navigation.

Water Level Update

The levels on all of the Great Lakes remain below average. At the beginning of January, the levels of Lakes Superior, Michigan-Huron, Erie and Ontario were 37, 59, 18 and 4 cm below their seasonal averages, respectively.

The first cold front entered the Great Lakes region in early December. By mid-month, ice covers were forming in parts of the St. Lawrence River. The broken ice caused extensive delays for ships that used the locks between Lake Ontario and Montréal. On December 26, the 2000 Seaway navigation season ended when the last vessel exited the system.

Lake Ontario Outflow

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December Precipitation Over Great Lakes

As a percentage of the long-term December average:

Great Lakes Basin	**105%**	**Lake Erie (including Lake St. Clair)**	**131%**
Lake Superior	**69%**		
Lakes Michigan-Huron	**116%**	**Lake Ontario**	**103%**

NOTE: These figures are preliminary

Strategy

Last spring, the International St. Lawrence River Board of Control announced that it would conserve 10 cm of water on Lake Ontario in light of low upstream water levels. This was completed in May by releasing less water than called for by the lake's outflow regulation plan. The Board then announced that it would use this water for critical needs during the summer and fall. As of mid-December, 4.3 cm of this storage remained.

The Board met by conference call on December 12, 2000 to consider current and potential future water level conditions and establish an appropriate regulation strategy for Lake Ontario. In light of their assessment, and the fact that conditions at the time of their discussions were much dryer than the previous year at the same time, the Board announced the following regulation strategy for the winter: Lake Ontario outflows will generally be as specified by Plan 1958-D. Some of the stored water may be used to meet critical needs for navigation. If opportunities arise, up to an additional 5 cm of water will be conserved on Lake Ontario. Both this strategy and weather conditions will be continuously monitored and reviewed by the Board.

December Outflows From the Great Lakes

As a percentage of the long-term December average:

Lake Superior	**76%**	**Lake Erie**	**95%**
Lake Huron	**82%**	**Lake Ontario**	**90%**

NOTE: These figures are preliminary