

Water levels very high now? False!

Reprint - Restore Our Water International – Roger Gauthier

Recent storm surges have led some news media to report that the levels on the Great Lakes are at or close to record highs. Not true!

Yes, we have had extreme cold weather conditions with above average precipitation on the upper lakes for a year and a half. And we have had many extreme storm events with strong winds that resulted in storm surges in some locations with shoreline erosion.

So the lakes have risen dramatically to levels not seen since 1998. But the reality is that the Great Lakes' levels are only a little above the long-term averages. Humans often have a short memory for such facts, and after 14 years of close to record lows, we somehow began to think the low levels were the normal or average ones.

The True Story

From 2001 until 2013 Lakes Michigan and Huron (M-H) levels met the definition of "crisis low" levels outlined in the 1993 Levels Reference Study of the International Joint Commission (IJC). That study recommended actions to address crisis high and crisis low-level conditions for M-H. Restore Our Water International (ROWI) supports those measures.

Currently, of all the Great Lakes only M-H has an overall downward trend line - the result of over 100 years of human alterations (dredging, sand and gravel mining, shoreline hardening) in the St. Clair River. IJC acknowledged that the St. Clair River alterations have permanently lowered M-H by at least 20 inches or 50 cm, and the IJC's April 2013 report called for immediate remedial action in the St. Clair River. ROWI strongly supports that recommendation to the two federal governments.

Further Food For Thought

Did you know that M-H has a range of 6 ½ feet, while Lakes Ontario and Superior have ranges of only 2-3 feet? Cont'd on Page 2.

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 Help to advance clean creeks and beaches, fish habitat, East Bay water quality/quantity, re-build beaches with clean sand, assess public spending, and protect clean bountiful groundwater for water wells, streams and wetlands. Quarterly TNN News continues to address public policy in local Townships.

GROUNDWATER, SURFACE WATER INTERFACE (GSI) ASSESSMENT

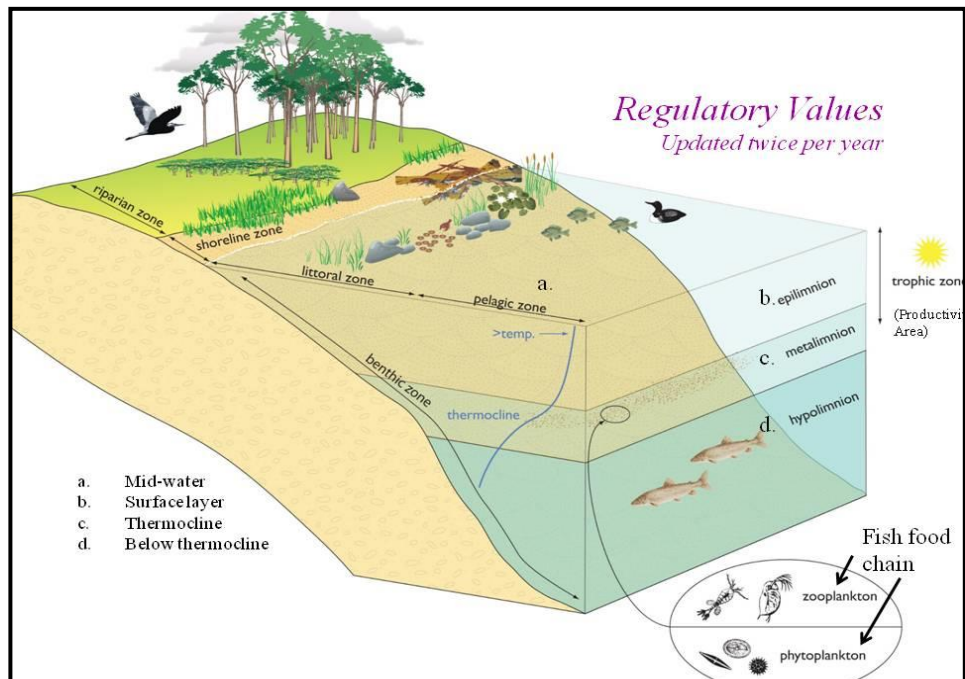
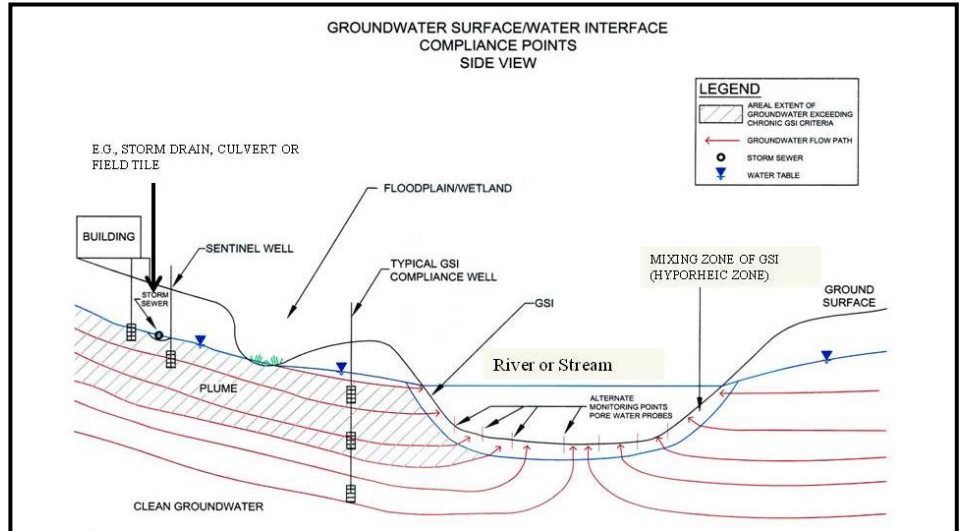
Dennis McCauley, Great Lakes Environmental Center, Inc.



GSI Pathway

"The GSI pathway is relevant when groundwater is or is reasonably expected to vent to surface waters of the State at concentrations in excess of generic GSI criteria."

Basis: data or best professional judgment



PROTECT AND PRESERVE LOCAL WATERS.

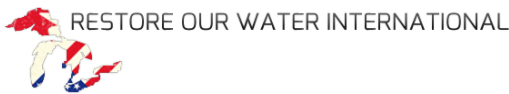
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Groundwater in local lands between the Lakes feed water wells, wetlands and about forty streams. Your donation will help TNN measure water quality and flows to safeguard the watershed for the East Bay Shoreline Watershed Basin. TNN will partner with GT Bay Watershed Center and Tip of the Mitt Watershed Council as part of the official GT Bay Watershed Protection Plan.

Please donate tax exempt – any sum helps.

(Please use the form). Help TNN protect local watersheds and address local public policy.

UPDATE - Fracking related lawsuit. The case was settled last year. TNN wishes to thank all of you for your sustained support and helping TNN continue its mission.



Water levels very high now? Cont'd

Wetland biologists have confirmed that wetlands need 4-5 feet ranges to be able to maintain diversity of plants and fish species. Lake Ontario's wetlands in particular have lost that diversity due largely to this very narrow water level range. What is left of wetland habitat here has been converted to marshes dominated by cattails that provide little fish spawning or nursery habitat.

Government action based on the IJC's "crisis low" and "crisis high" water levels could eliminate the 2 extremes of M-H's 6 ½ range. It could also help bring back the Lake Ontario wetlands by expanding that 2½ feet range.

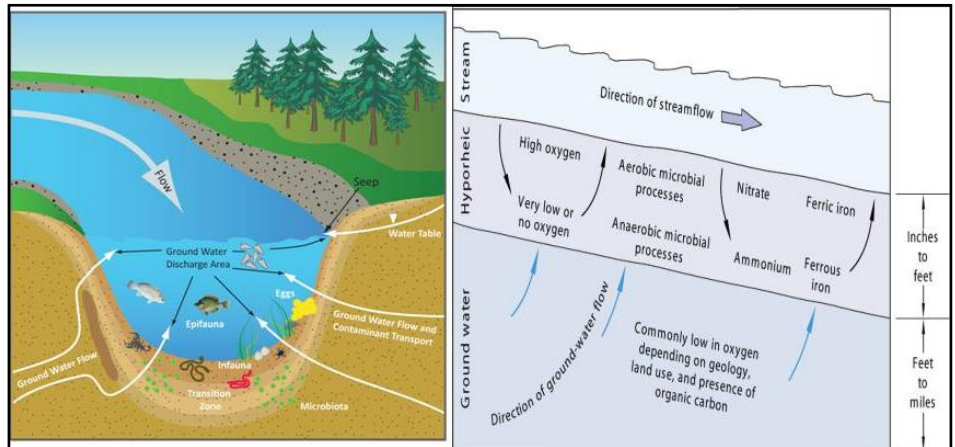
A Solution

ROWI's team of experts has been working on this issue for 12 years. We know there is a responsible way of managing lake levels that would take into consideration the damage done to M-H by human altering of the St. Clair River.

The installation of flexible submerged structures in the St. Clair River would alleviate low M-H water level conditions, and the use of ice booms at the head of the St. Clair River during very high-level conditions would remove excess water. This approach is both manageable and relatively inexpensive.

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Groundwater Transition Zone and Bioavailability



Habitat Evaluation

- Substrate
- Channel Flow
- Available cover
 - large wood debris
 - Vegetative cover
- Riparian zone
- Sediment Deposition



GSI Compliance Tool-Box

10 WAYS TO Demonstrate Compliance with GSI

- 3 of the 10 Utilize Ecological Assessment
 - Chemistry (groundwater and surface water)
 - Toxicity (sediment and surface water)
 - Biology
 - Fish population (number, diversity, % salmonids, anomalies)
 - Macroinvertebrate population (e.g. aquatic bugs)
 - Habitat and wetland evaluation
 - Standard metrics for wadeable streams and lakes