

Study on Great Lakes erosion dredges up controversy

December 17 2009, By Dan Egan

The Great Lakes aren't as great as they once were. A U.S.-Canadian study released Tuesday reveals that unexpected erosion in the St. Clair River following a 1962 dredging project has permanently lowered Lakes Michigan and Huron by as much as 5 inches. That is in addition to the 16-inch loss previously blamed on navigational dredging and riverbed mining in the St. Clair, the main outflow for the two lakes.

In other words, walk down to the [Lake Michigan](#) shoreline today, and the big blue freshwater sea is as much as 21 inches _ almost 2 feet -- lower than it would be if dredging and subsequent erosion had not occurred over the last century.

A little perspective: The city of Chicago sucks 2.1 billion gallons away from the lake each day -- and that has caused a mere 2-inch drop in the long-term average of the two lakes.

Lake Michigan has historically fluctuated seasonally -- and from year to year and decade to decade -- sometimes by as much as 6 feet, so measuring water loss is tricky business.

It's done by comparing the levels of Lakes Michigan and Huron with downstream Lake Erie.

Because the two basins are connected by the St. Clair River, they have essentially fluctuated together through the years. Historically, if Michigan and Huron rose a foot, eventually so did Erie. The new study

revealed that the relative difference between the two basins has shrunk by about 9 inches in recent decades, due primarily to [climate change](#) and riverbed erosion.

Still, leaders of the study say the 3-inch to 5-inch drop tied to erosion isn't big enough to warrant some kind of fix.

"It wasn't a significant enough amount," said Ted Yuzyk, co-chair of the study team appointed by the International Joint Commission that has spent about \$3.5 million over the past two years trying to figure out the causes behind the unusually low water levels on Michigan-Huron for much of the past decade.

Study team leaders don't dispute the 16 inches lost from previous dredging, but they say they were not allowed to consider that figure in their deliberations over whether to recommend a possible fix on the St. Clair.

They said they were told by the Joint Commission that they were only allowed to order a fix for any water loss since the last major U.S. Army Corps of Engineers dredging in the St. Clair, which was completed in 1962. And they decided 5 inches or so just isn't a big enough deal.

That's nonsense, according to some conservationists who have been harshly critical of the study since a draft of it was released in May that initially pointed to an ice jam in the mid-1980s as the trigger for the erosion -- an explanation the study team leaders backed away from Tuesday.

"Dredging has had huge impacts and those impacts are ongoing, and there are things we could do help restore the lakes from those negative impacts," said John Jackson of the conservation group [Great Lakes United](#).

He isn't alone.

The National Wildlife Federation says it has seen enough troubling evidence in the study itself that it is time to explore some type of solution. The wildlife federation isn't advocating for a dam-like structure so lake levels could be constantly manipulated by humans, but it is interested in seeing if the river bottom could be restored to more closely resemble its natural condition.

"We have the experts together that could start to examine remediation options," said wildlife federation spokeswoman Melinda Koslow. "This the time to address the water loss issue."

That's not going to happen if the Joint Commission accepts the study board's recommendations.

The study board says some type of control structure in the river might be needed someday, but it will be needed due to big potential decreases driven by climate change, not what it sees as the relatively modest changes caused by erosion.

Study board members also note that restoring the water already lost due to erosion could pose flooding problems if the record-high levels of the 1980s ever return.

The study will now be forwarded to the Joint Commission, which plans a round of public hearings on the matter this spring.

The commission is likely to hear some blistering criticism.

"The way the study was conducted makes us think that the results were pre-determined," said the wildlife federation's Koslow. "The study authors blocked the kind of transparency a public process normally

encounters."

The controversy unleashed by Tuesday's announcement is the latest chapter in a contentious story that started in 2004, when a group of Canadian property owners released a study that alleged the Army Corps' 1962 dredging scraped away a rocky river bottom in a manner that helped to unleash an uncontrollable -- and ongoing -- loss of water from Michigan-Huron.

The Joint Commission created a study board, led by an Army Corps employee, to get to the bottom of the question.

Public relations problems have flooded in since.

Members of the study board's own citizen advisory panel termed the study a "trust-me" document in the days after the draft was released last spring because the board did not release the scientific papers that drove its conclusions.

Responding to questions about the appropriateness of an Army Corps employee co-chairing an investigation into an alleged problem that involves the Army Corps, study co-chair Eugene Stakhiv told the Milwaukee Journal Sentinel last spring that the public had no reason to worry. Prior to the draft study release, he said, everything had been independently peer-reviewed.

That was not true.

The Journal Sentinel subsequently learned that the Joint Commission agreed to pay a total of \$250,000 for independent peer reviews of this study, and its phase two, which will look at the effects of climate change on lake levels.

In explaining why the study board opted not to recommend any remediation in the river, despite finding evidence of some erosion since the 1960s, Stakhiv said he received explicit direction from the Joint Commission on the matter. He said the Joint Commission told him that if the erosion were determined to be caused naturally, no fix could be explored.

Nobody at the Joint Commission has been able to produce such a directive for the Journal Sentinel. And on Tuesday study team co-chair Ted Yuzyk said the study board had since heard from the Joint Commission that the cause of erosion should not factor into any decision whether to remediate for the [water loss](#).

The study board refused to release the public comments it solicited during public hearings over the summer -- some of which offered sharp and focused criticism on how conclusions were reached -- until Tuesday. Study spokesman John Nevin said the study board wanted a chance to respond to those criticisms.

Then on Tuesday, more confusion. Study board co-chairs Stakhiv and Yuzyk told reporters in a conference call that Michigan and Huron have not necessarily dropped the 3 to 5 inches due to erosion since 1962. Those figures only revealed how far the lakes had shrunk in relation to Lake Erie levels _not what anyone would see on the [shoreline](#).

But in a subsequent interview with the Journal Sentinel, Frank Quinn, an eminent hydrologist who was involved in the study, said exactly the opposite.

He said the 3-5 inch range (actually 7 to 14 centimeters) does indeed refer to the amount lost from the lakes due to [erosion](#) on the St. Clair River _ though he personally thinks the actual loss is on the lesser end.

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