NIROVERSY

Strong Cross-Currents in the Great Lakes:

The Need to Eliminate Crude Oil in Enbridge Line 5 in the Straits of Mackinac

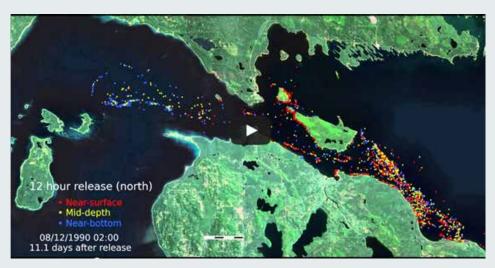
The Straits of Mackinac

The Straits of Mackinac is the geographical and cultural heart of the Great Lakes. The narrow passage and strong currents in the Straits of Mackinac define Michigan's heritage, art, recreation, tourism, our water-dependent quality of life, and economy.²





By Jim Olson¹



The University of Michigan oil spill simulation video by Dr. David Schwab which shows where the oil could be transported after a spill.

Public Trust in the Great Lakes and Citizen Beneficiaries

Michigan Supreme Court decisions have declared the value of the Great Lakes to be of such a high character, that they are subject to a paramount public trust – an immutable and "perpetual duty" of the state, as trustee, to protect these waters and the bottomland beneath them, for benefit of citizens, the legally recognized beneficiaries, for navigation, fishing, boating, drinking water, swimming, bathing and sustenance. The State cannot sell, transfer, or subordinate these public trust lands and waters to a private person except in two narrow instances: (1) where the transfer does not surrender the control of the state or interfere with or impair these special uses, or (2) where there is no impairment and the purpose promotes protection of the public trust, like navigation, boating, swimming or fishing. Any other transfer or occupancy for private purpose is forbidden.

Crude Oil Pipelines in the Great Lakes

The strong flow between these revered waters is not the only consequential currents in the Straits.

In 2010, citizens and state officials discovered to the fact that there was another current in the Straits, one that was pernicious, man-made: a pair of pipelines transporting 23 million

gallons of crude a day. The discovery was triggered by the rupture and release of one million gallons of tar sands crude in the Kalamazoo River and its watershed from Line 6b, owned and operated by Enbridge, the same Canadian company that owns the Straits pipelines. Officials and citizens realized that water, people, communities, and the environment of Michigan were at grave risk. The Kalamazoo disaster has cost approximately \$1 billion to clean up, to the extent possible, the river and creeks. A look at an oil pipeline system map revealed veins of pipelines pulsing with crude oil from Alberta and North Dakota and through the Great Lakes region and across Michigan into Sarnia, Ontario. While these veins of oil pipelines crossed streams and ran along many of Michigan's lakes, one line stunned everyone - Enbridge Line 5 in the Straits of Mackinac, center of the Great Lakes. It was discovered that in the last few years, Enbridge has increased its capacity for the flow of oil in Line 5 by eighty percent – from the initially allowed 300,000 to 540,000 barrels per day or 23 gallons in the 4.5 mile segment in the Straits. (A barrel equals 42 gallons).

(Continued on page 23)

Strong Cross-Currents in the Great Lakes:



(Continued from page 21)



Map of evolving crude oil pipeline system into, thru, and out of Great Lakes basin region.

A 62-Year Old Pipeline

In 1953, the Canadian Lakehead Pipeline Company (now Enbridge) proposed a 645-mile pipeline for carrying crude oil from Alberta to Ontario, via Wisconsin, the Upper Peninsula, Straits of Mackinac, and Lower Peninsula to Sarnia. When the company asked Michigan for an easement and permission to build and operate the pipeline in the Straits, the state's attorney general advised that it could not be done, unless the legislature expressly authorized it. In a matter of a few months, the legislature passed Act 10. After reviewing and imposing limitations and conditions, the state granted an easement for the pipeline in the Straits.



Underwater photo taken by NWF diver inspecting the pipelines, covered in zebra and quagga mussels.

The easement was little more than a privilege, since the right to use and operate is subject to the legal stipulation that the pipeline can never subordinate or impair the paramount public trust of the State. The State stipulated that Lakehead "at all times shall exercise the due care of a reasonably prudent person" to protect private and public property and safety. The company also promised to install support structures to protect the pipelines, obtain state approval for any major changes, supply inspection reports, indemnify any harm or damages, and obtain at least \$1 million in insurance - a shockingly low number even by 1953 standards. To date these provisions have not been satisfied.

High Magnitude or Catastrophic Harm

Everyone agrees that a rupture or leak of crude oil from Line 5 in the Straits is unacceptable.

In 2012, the National Wildlife Federation published a report showing the dire risks to the Straits and Great Lakes from Line 5. University of Michigan Water Center's David Schwab released a video simulation of an oil spill from Line 5 that showed wide-spread impact to wildlife, fishing, the Great Lakes ecosystem, and coastal towns and residents.6 Within a matter of hours, the animated release spread south along the coast of Lake Huron, providing a stirring snapshot of an oil spill. Within a few days, the animated dyes swarmed around Mackinac Island, Drummond Island, along the Michigan coast as far south as Rogers City, and back into Lake Michigan, west to Escanaba and south to Beaver Island. Dr. Schwab noted that the currents in the Mackinac Straits are ten times greater than at Niagara Falls, and that Line 5 in the Straits was "worst possible place for an oil spill in the Great Lakes."7

John Austin, expert on the economic value of water resources, has said the impact of a spill "would be environmentally and economically devastating." U.S. Senator Gary Peters said it would be "catastrophic." The Michigan Petroleum Pipeline Task Force concluded that a release would be "very significant," and Attorney General Bill Schuette warned that "Line 5's days are numbered."

(Continued on page 35)

Strong Cross-Currents in the Great Lakes

(Continued from page 23)

Unacceptable High Level of Risk and Imminent Hazard

The Pipeline Task Force released its report in July 2015, ¹⁰ finding that the high magnitude of harm coupled with the imminent risk of a release from Line 5 required immediate action. The report recommended an independent risk analysis and financial assurance to cover the hundreds of millions of dollars in damages likely if there was a release – perhaps a billion dollars or more, if the Kalamazoo disaster is the benchmark. Because of the catastrophic harm, the report required an independent, comprehensive alternatives analysis to oil transport in the Straits, including decommissioning Line 5.

In September 2015, Flow for Love of Water (FLOW), a Great Lakes policy center, submitted a scientific and legal analysis of Line 5 and Task Force Report, and concluded that the risk of erosion, strong currents and lack of stability, and the weight and corrosive nature of the underwater segment of the Line 5 pipeline created an imminent hazard. Underscored by the Coast Guard's observation that a response to an oil spill in the Straits during winter months would be nearly impossible, FLOW's found that a rigorous schedule for immediate action to eliminate or lower the risk was critical.

Suitable Alternatives to Line 5

In October 2015, Governor Rick Snyder's Executive Order 2015-12 created the Michigan Pipeline Safety Advisory Board, and charged it with completing an alternatives analysis to the transport of oil through Line 5. The Board met in early December to review what it would require of experts to complete the report within 12 to 18 months.

In December, FLOW advisors, analyzed the larger crude oil pipeline system in the Great



Mackinac Bridge in winter

Lakes region and submitted a report to the Pipeline Safety Advisory Board to demonstrate that this larger system has the capacity and flexibility to meet the needs of oil transport from Canada or elsewhere to meet the needs of refineries in Sarnia, Detroit and two in Toledo, without transporting oil through Line 5 in the Straits. ¹¹

Enbridge has claimed that Line 5 is critical to Michigan's economy, and propane could no longer be transported to customers in the Upper Peninsula without it. FLOW report shows that propane is stripped from Line 5 in the U.P. near Escanaba and delivered to customers without passing through the Straits. It also shows that most of the oil in Line 5 goes to

(Continued on page 36)

Strong Cross-Currents in the **Great Lakes**:

(Continued from page 35)

Sarnia, and that no more than 10 percent of the oil goes to the Detroit or Toledo refineries, a need that can be met through suitable options and adjustments within the larger pipeline system.



Since the 2010 Kalamazoo River debacle surrounding Line 6b, Enbridge has nearly completed its own version of the now-rejected "Keystone XL pipeline." Enbridge almost doubled the capacity of its "Alberta Clipper" pipeline from 450,000 to 800,000 bpd, then doubled its pipeline capacity to 800,000 bpd from the Alberta Clipper through Wisconsin and around the southern end of Lake Michigan. To complete it "Keystone XL" clone, the company doubled its pipeline capacity in 6b across southern Michigan. In the past few years, Enbridge filed applications with the Michigan Public Service Commission for what it characterized as maintenance and integrity work for small segments of Line 6b. By the time the segmented projects were completed, Enbridge had replaced the failed old Line 6b with a new Line 6b with twice the capacity-800,000 bid, which matches the doubled capacity of its Alberta Clipper. As a result of the segmented approach, Enbridge avoided the rigorous impact and alternative analyses required by state environmental laws.

FLOW's December report makes it clear that a proper alternatives analysis would demonstrate ample capacity and flexibility within this expanded system to meet the needs of Michigan and the Midwest. In other words, transporting oil through Line 5 in the Straits, the heart of the Great Lakes, is not necessary.

Breach of Public Trust and Prudent Standard of Care

A leak or spill in the Mackinac Straits would devastate the ecosystem, fishing, and riparian properties, shut down drinking water on Mackinac Island, and ruin one of the pinnacles of Michigan's waterand tourist-based economy. The communities, beaches, wildlife, and fishery along the Gulf of Mexico have not recovered from the Deepwater Horizon spill five years ago. A dark cloud overshadows recovery of tourism and economy of the Gulf region.

State officials have a solemn duty to prevent harm to the public trust waters and uses of the Great Lakes. This duty is perpetual, and Enbridge's oil pipeline easement is subordinate to overriding public trust. In its easement. Enbridge agreed that it "shall exercise the due care of a reasonably prudent person" and "at all times." The catastrophic harm from a rupture or leak of oil in the Straits is unacceptable. The continued transport of crude oil in Line 5 in the Straits is not prudent, reasonable, or compatible with the public trust. In the face of alternatives to be taken to accommodate crude oil transports within the larger system, Line 5 in the Straits is not essential. State leaders, as trustees of the public trust, and Enbridge should step forward and eliminate this unnecessary risk of unthinkable harm now; and stop gambling with the people, the Great Lakes and our State's economy and future.





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References

¹President and Policy Advisor, Jim Olson, For Love of Water (FLOW), Great Lakes Law and Policy; water and environmental attorney, Olson, Bzdok & Howard, P.C., Traverse City, Michigan. For background reports and information from FLOW and its programs, see www.flowforwater.org.

²David Schwab, University of Michigan Water Center, lecture, Mackinac Island, Aug. 12, 2015. Schwab discovered a journal entry by an early French explorer that observed the strong currents moving back and forth between Lake Huron and Lake Michigan.

³Collins v Gerhardt, 237 Mich 38 (1926).

⁴State v Venice of America, 160 Mich 680 (1910); Collins v Gerhardt, supra; Obrecht v National Gypsum Co., 361 Mich 399 (1960).

⁵Illinois Central Railroad v. Illinois, 146 U.S. 387 (1892).

⁶Video showing what would happen if there was an oil spill in the Straits, David Schwab, University of Michigan Water Center.

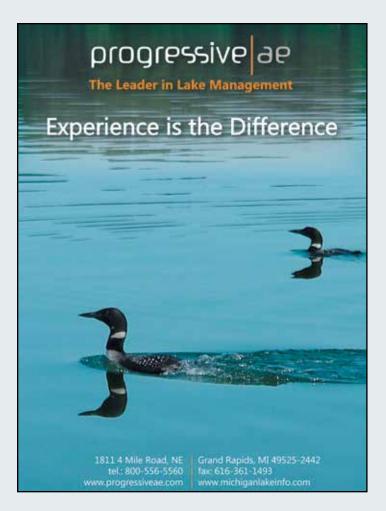
⁷Andy Buchsbaum, "Summer Disaster Movie? No Thanks," National Wildlife Federation, Wildlife Promise Blog, Aug. 9, 2015; Keith Matheny, "State Pipeline Break Would Devastate Great Lakes," Detroit Free Press, Oct. 13, 2015.

⁸John Austin, "Michigan's Mounting Water Failures," Detroit Free Press, Guest Writer, Oct. 15, 2015.

⁹WTCM Radio, July 15, 2015.

¹⁰Michigan Petroleum Task Force Report, September 2015.

¹¹"Eliminating Line 5 Oil Pipeline's Unacceptable Risk to the Great Lakes through a Comprehensive Alternatives Analysis," FLOW, Dec. 14, 2015, www.flowforwater.org.





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