Point Pelee's Disappearing Act: Sand Suckers, Erosion, and Conflict Along the Shores of a Canadian National Park

Mary Baxter[1]

In the 1900s, residents of Essex County in southern Ontario began to complain to their governments that Point Pelee, a sand spit that extended into Lake Erie, was shrinking. Residents blamed sand suckers, boats that dredged aggregate from water beds for commercial uses; government experts blamed high waters and storms. Both groups' efforts to determine the source of erosion and address its effects prompted new understandings about the relationship between Great Lakes waterbodies and their water beds and resulted in a permanent ban of the extraction of commercial aggregate from the lake bed surrounding Point Pelee, effectively ending the activity in the Ontario portion of Lake Erie. Using primary sources such as newspaper articles, government reports, and scientific studies, this regional history asserts that Pelee's plight became a bellwether of the impact of urbanization and industrialization on the Great Lakes and frustration with American economic imperialism impeding Canadian access to domestic resources.

---

[1] Many thanks to Alan MacEachern, William Turkel, Michael Bartlett, Keith Fleming, Michael Moir, and the anonymous reviewers for their guidance, insight and comments at various stages of this article's development. This research was generously assisted by a SSHRC Canada Graduate Research Scholarship – Master's Program, and the Western University Faculty of Social Science Graduate Research Awards Fund and History Department Travel and Research Fund.

Au début du XXe siècle, les habitants du comté d'Essex, dans le sud de l'Ontario, se sont plaints auprès de leurs gouvernements du rétrécissement de la pointe Pelée, un cordon sablonneux qui s'avance dans le lac Érié. Les habitants accusaient les pompes à sable, des bateaux qui extrayaient les agrégats des fonds marins à des fins commerciales; les experts gouvernementaux, quant à eux, pointaient du doigt les crues et les tempêtes. Les efforts conjoints des deux groupes visant à déterminer la source de l'érosion et en atténuer les effets ont permis de mieux comprendre le rapport entre les plans d'eau des Grands Lacs et leurs fonds marins, et ont entraîné une interdiction permanente de l'extraction commerciale des agrégats des lits des lacs autour de la pointe Pelée, mettant ainsi fin à cette activité dans la section ontarienne du lac Érié. S'appuyant sur des sources primaires telles que des articles de journaux, des rapports gouvernementaux et des études scientifiques, cette histoire régionale atteste que le sort de la pointe Pelée est devenu un indicateur des répercussions de l'urbanisation et de l'industrialisation sur les Grands Lacs, ainsi que des frustrations face à l'impérialisme économique américain qui entrave l'accès des Canadiens à leurs ressources nationales.

Alexander Baird stood near the sandy tip of Point Pelee on Lake Erie and assessed his surroundings. As was the case nearly 40 years earlier in 1881 when he had first surveyed the unusual landform that extended nearly nine kilometres into the lake for the Canadian Department of the Interior, it was fall and the leaves had turned.[2] But now, the season of his visit was all that remained the same. Directly south, where the point should have been, water flowed. Even the sandbar just beyond the point that had once housed a lighthouse to mark the shallow waters had disappeared.

The tip of Point Pelee, declared a naval reserve by the British in 1799 because of the sturdy, mast-worthy stands of oak and pine in its marsh-ridden forest, was the southernmost point of mainland Canada.[3] Over the centuries,

---

2 Alex Baird to Adolphus Armstrong, reeve of Mersea Township, 27 November 1917, RG 1-339-0-33, Sand and Gravel Extraction and Shoreline Damage Monitoring Files (hereafter Damage Monitoring Files), box 3, Archives of Ontario (hereafter AO).

3 J.G. Battin and J.G. Nelson, *Man's Impact on Point Pelee National Park* (National and Provincial Parks Association of Canada, 1978), 54–55 and Hugh Beaumont Goebelle, "The

many First Nations who had occupied the Lake Erie basin including the Caldwell First Nation (Zaaga'iganiniwag), the point's most recent Indigenous occupants, had greatly valued the marshy sand spit for its ready supply of game, nuts, and wild rice.[4] European explorers and colonists, on the other hand, initially dismissed the point as a location for agriculture or settlement. French explorers had named the point "pelee," which translates roughly to the English terms "bleak," "barren," and "waste."[5] In 1721, Pierre Francois Xavier Charlevoix, a Jesuit priest, declared Point Pelee's west side was "well enough wooded," but the east was no more than "a sandy tract of land with nothing but red cedars that are quite small and not in abundant quality." John Lees, who travelled across the point in 1768, noted treacherous waters. "The doubling of this point is reckoned very dangerous on account of a long point of land that runs off. The treachery of the Pointe is not lessened by the fact that its shape and length are subject to change," he wrote.[6] Thomas Smith, surveying the area in 1805 and 1806, noted "extensive swamps and morass [*sic*] perilous places – thickets and water throughout stagnant and ruinous … [S]uch an abominable country … I have never before traversed."[7]

By the turn of the twentieth century, opinions began to change due to the efforts of people like Baird who had worked diligently to make Pelee's ample natural resources available to settlers. Licensed as a surveyor in 1877, Baird had laid out the government drains that helped to transform the marsh occupying much of the point's interior, as well as other Essex County marshes nearby, into farmland.[8] Together with dikes erected near shorelines to prevent flooding from the lake as well as a system of pumps, these drains delivered

---

Research Required to Survey the Bounds of Point Pelee National Park," *Ontario Professional Surveyor* 56, no. 3 (Summer 2013): 23–24.

4 Laurie Leclair, *The Caldwells of Point Pelee and Pelee Island: A Brief History and Survey of Documents* (Treaties and Historical Research Centre, Indian and Northern Affairs Canada, 1988), 1–4. The Caldwell First Nation had not been among the Indigenous peoples who agreed to share the point or Pelee Island, its other principal territory, with the British when the McKee treaty was struck in 1790. Also known as Treaty 2, the treaty covered most of the larger Ontario peninsula that sat between Lakes Huron, St. Clair, Erie, and Ontario. While members of the Caldwell First Nation were eventually forced out of both locations, they pursued their claim for more two centuries, finally succeeding in 2010.

5 Mabel Burkholder, "Out of the Storied Past: Little Journeys to Interesting Places: Pelee, Canada's Southernmost Island," *Hamilton Spectator*, 11 September 1948, 13. Point Pelee was initially called Pointe aux pères.

6 Battin and Nelson, *Man's Impact*, 44.

7 Battin and Nelson, *Man's Impact*, 51.

8 John Ladell, *They left their mark: Surveyors and their role in the settlement of Ontario* (Dundurn Press, 1993), 218.

soils rich in nutrients that were used to grow crops such as tobacco and onions.[9]

Closer to the point, squatters on the government land helped to clear forested portions, and the federal government leased property for logging as well as for oil extraction.[10] As settlement concentrated along Erie's shorelines, both in Canada and to the south in the United States, the spit's abundance of sand and gravel generated keen interest. Local contractors obtained land leases in the naval reserve and dug cartloads of the aggregate to build roads and railroads. Specialized dredges, called sand suckers, routinely dropped anchor near the point's sandy shores to fill their holds with aggregate drawn from the point's long sandbar that curled deep into the lake like a gigantic comma, or from sandbars nearby.[11] Many, although not all, of these boats came from across the nearby border to haul the sand and gravel to locations such as Detroit, Sandusky, and Cleveland for use in a booming construction industry. The impact of these boats was what had brought Baird to the point that day in the fall of 1917. He had been hired by the Mersea Township Point Pelee Committee to investigate widespread concerns about an escalation in erosion along the point's shoreline.

The mission of Baird, whose survey skills had been engaged at one time or another by all levels of Canadian government, was to document the extent of the change and to identify without a doubt the culprit. He did not disappoint. Lake waters had "encroached in upon and submerged the south end of the Point or Lot A on the Reserve and had caused erosion on other lots on the reserve."[12] He estimated that all told, more than a third of a mile of land had been lost "where the south end of the bar existed to the present end of the Point." Banks on the eastern side of the point were under threat, which meant the farmland behind these banks was also under threat. "[T]he only reason I can assign for the change," he wrote, "is the action of the sand suckers that are removing and carrying away the sand and gravel beds from off the end of the Point and thereby changing and diverting the course of the Lake currents there."[13] The change had been rapid, recent, and extensive.

Concern about the impact of lake bed aggregate extraction in western Lake Erie peaked at the turn of the twentieth century and into its first three decades. Although Point Pelee was relatively remote from urban centres,

---

9 A.P. Coleman, "Report on the Erosion of the Shores of Point Pelee, Lake Erie," 25 September 1930, 3, RG 1-339-0-33, Damage monitoring files, box 3, AO.

10 Battin and Nelson, *Man's Impact*, 63–64, 87–89.

11 Coleman, "Report on the Erosion," 5.

12 Baird to Armstrong, 27 November 1917, RG 1-339-0-33, Damage monitoring files, box 3, AO.

13 Coleman, "Report on the Erosion," 5.

the landform's reputation as a wildlife refuge, enshrined in the Dominion government's 1918 decision to change the naval reserve into a national park, had thrust its problems with erosion into the public eye.[14] Think of sand spits like Point Pelee "as geological weather-vanes pointing out the relative strength of the currents and waves from different directions that have been concerned in their formation," wrote Edward Martin Kindle, a palaeontologist and geologist with the Geological Survey of Canada in 1933. "They give the same kind of information about the average direction of the movement of sand and gravel in their vicinity that isolated trees often supply about the general trend of strong winds by the set of their branches and trunks."[15] In effect, Pelee's plight also became a bellwether of the impact of urbanization and industrialization on the Great Lakes and frustration with American economic imperialism impeding Canadian access to domestic resources.

Scientists like Kindle believed gravel and sand resources were abundant enough to keep both shorelines and sand boats filled as long as they were carefully managed. An early North American proponent of this conservationist attitude was George Perkins Marsh. In 1864, the former American diplomat argued, in essence, that "the capacity for [environmental] damage increases with technological power."[16] However, careful management and deployment of technology could produce beneficial environmental effects, which he illustrated with the example of man-made protections to safeguard the sandy shorelines of Holland, Germany, and France from erosion.[17] This conservationist approach to natural resources would lead to the ongoing management, development, and planned renewal of forestry reserves worldwide and to a similar approach applied to other resources such as water, fish, natural gas, and sand. This perspective informed the point of view of Canadian natural science experts such as Kindle and Arthur Coleman, a professor of geology at the University of Toronto, as well as James Hutcheon, a civil engineer employed by the Ontario Department of Lands and Forests – all of whom would monitor the erosion issues at Point Pelee over the years and recommend lake bed aggregate

---

14 Battin and Nelson, *Man's Impact*, 117–18.

15 E.M. Kindle, "Erosion and Sedimentation at Point Pelee," *Forty-Second Annual Report of the Ontario Department of Mines being Vol. XLII, Part II, 1933* (Herbert H. Ball, 1933), 1; Environmental Issues and Reports (not EA Act) – Southwestern Region, Pelee Island: memoranda; EA guidelines, RG 1-345-0-384, Ministry of Natural Resources Environmental Assessment Files, accession 33670, box 7A, AO.

16 David Lowenthal, "Introduction" in George P. Marsh, *Man and Nature*, ed. Lowenthal (Belknap Press of Harvard University Press, 1965), xix.

17 Marsh, *Man and Nature*, 416–18.

extraction continue near the point, although with greater limits.[18]

Local residents and the naturalists who had pushed to have the point designated a national park to preserve the habitat, on the other hand, perceived a much tighter relationship between the commercial activity and the erosion issue. Many of the farmers and fishermen who occupied this section of Lake Erie shores, like the natural scientists and engineers, understood erosion to be part of a larger natural cycle of lake current give and take which moved sand and gravel from one place to another. Many would also have similarly believed that the process existed in a natural balance – what was taken away would soon be replaced. Shoreline fluctuations, therefore, were temporary, brought about by storms or changes in water levels.

Neither group viewed the coastal engineering efforts that had taken place – the dikes and the pumps or jetties to keep the sand in place – as harmful; scientists and residents alike still wholeheartedly believed in the idea that cultivating wilderness, settling it, and bringing it into agricultural production "was to work healing on it" and to improve nature.[19] Development of the land made it resilient and full of vigour, which could be seen in the fruits of its production. And to this end, Mersea Township and its residents had established the drainage and pumping system near the point and on its north end to protect the farm fields from flooding. The system linked a network of deep ditches surrounding low-lying fields that were formerly marsh to pumps stationed along the shoreline. The pumps expelled excess water into the lake; shoreline dikes protected these and the fields from lake surges. So when the point's shorelines began to erode faster than they were being replaced, putting the dikes and pumping system that protected farmers' fields from flooding at risk, township residents concluded that the activities of sand sucker operators had thrown the natural cycle of erosion and deposition out of balance by removing or altering landforms in ways that influenced currents.[20] Scientists, on the other hand, blamed natural processes such as storms and water levels.

The tension between these two views drove a decades-long search to determine which explanation was right. In the process, Point Pelee became a

---

[18] See, for example, Coleman, "Report on the Erosion" and James Hutcheon, "Memo. for the Minister," 16 April 1918, RG 1-339-0-33, Damage monitoring files, box 3, folder 5, AO.

[19] Conevery Bolton Valencius, *The Health of the Country: How American Settlers Understood Themselves and The Land* (Basic Books, 2002), 3–4 and 192.

[20] Judgment by Justice Haughton Lennox in *The Attorney General Ex Bel. The Corporation of the Township of Pelee and Others v. Homegardner, 14 February 1920*, 2–3 in: Dredging operations at Pele [*sic*] Island, Essex County, RG 8-20-0-604, Despatches of the Department of the Provincial Secretary (hereafter Despatches of Provincial Secretary), box 23, folder 100.614, AO.

Suction dredge on the St. Clair River, [1911]. (John Boyd, photographer. C 7-3-0-680, John Boyd fonds, Archives of Ontario)

ground for exploring not only answers about the impact of lake bed aggregate extraction but also methods to solve the point's chronic erosion problem. These explorations contributed to new understandings about the relationship between waterbodies and their water beds and ultimately led to the banning of commercial aggregate extraction in Erie waters.

Commercial dredging in the Great Lakes had emerged in the 1800s as contractors and manufacturers began to use boats to scoop out sand and gravel in shallow waters along shorelines and riverbanks. Dredging had occurred earlier in the Great Lakes, but much of this activity focused on public works that enhanced shipping, such as deepening harbours and rivers, creating navigable lanes, adding land, or improving harbour access.[21] Ladder dredges, which used "an endless chain of buckets" and were more effective in deeper waters, had been used in the St. Lawrence River since the 1830s. Dipper dredges emerged on the scene a few decades later. This form of dredge used a large bucket with "teeth" to dig into material and a crane boom that could swivel to dump

[21] This activity in the Western Basin of Lake Erie and along the Detroit River in particular is documented by Ramya Swayamprakash, "Hellgate to Highway: Island Making, Dredging, and Infrastructure in the Detroit River, 1874–1938" (PhD diss., Michigan State University, 2022).

materials on a waiting barge. By the late 1800s, this dredge had become a frequent sight in the Great Lakes where it operated in shallower waters, such as harbours and along shorelines.[22]

In the late 1800s and early 1900s, the Dominion government used its own, purpose-designed dredges to conduct public works.[23] Early commercial sand suckers, on the other hand, were usually little more than converted wooden "hookers" – boats once used to transport lumber during the height of the Great Lakes logging boom – sometimes self-propelled, sometimes drawn by tugboats. By the 1900s, specialized boats began to emerge. For commercial dredges, steam-powered hydraulic pumping, invented in the mid-1800s to manage water levels in South Carolina rice fields, was a game changer. It meant that sand sucker operators could collect greater amounts of the material in less time.[24]

Urban development along the Great Lakes shorelines and concurrent shifts and innovations in the North American building industry motivated the search for aggregate. Concrete, cement (the material that binds aggregate and water together to make concrete and reinforced concrete), and Portland cement (a fine powder made from silica sand, limestone, clay minerals, and gypsum) had become the materials of everyday construction for projects ranging from paved roads, piers, terminals, and railroad bridges to factories and institutions. In Canada, Portland cement and concrete became the materials of choice for the development of the present-day Welland Canal, on which construction began in 1913. In the United States, cement production surged in the early 1900s, reaching nearly 78 million barrels a year by 1910 and in 1923 more than 137 million barrels a year.[25]

Aggregate consumption followed a similar curve, and over the first decades of the twentieth century commercial dredging rapidly evolved into a prominent supplier of aggregate to Great Lakes communities. The total amount of sand and gravel mined in Ontario jumped from just over 1.1 million tons in 1918 to

---

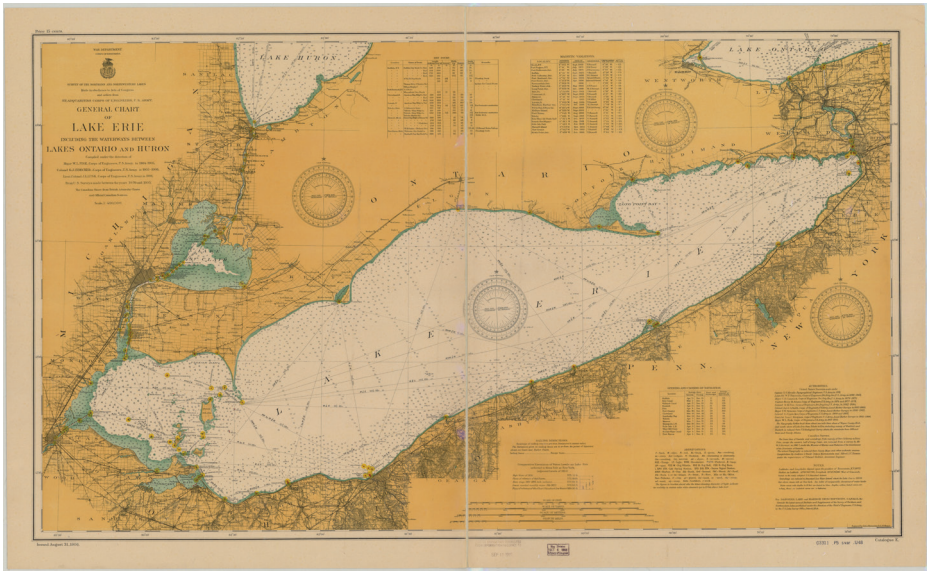
22 Gilberto Fernandes, "Reshaping the Ways of Commerce and Civilization: Modern Construction Machines and the Building of Canada's Mobility Infrastructure, 1860s–1920s," *Journal of History* 58, no. 2–3 (2023): 125, DOI: 10.3138/jh-2022-0064.

23 Fernandes, "Reshaping the Ways of Commerce and Civilization," 125.

24 William Lafferty, email message to author, 12 January 2023; Lafferty, "Odd Boats, Part Four: Lake Sand Company," unpublished manuscript obtained from the author, 2023; and W. Wes Oleszewski, "Lumber Hookers the Backbone of the Great Lakes Timber Industry: How They Developed and Vanished," 11 June 2021, YouTube, https://www.youtube.com/watch?v=VX4tg-00f48..

25 United States Department of Commerce, *Statistical Abstract of the United States 1925* (Government Printing Office, 1926), 709. One barrel of Portland cement equals about 375 pounds (170 kilograms).

well over 10 million tons in 1930; dredging represented just under a third of the total volume in the latter year.[26] In 1928, US ships operating on the American side of the St. Clair River and Lake St. Clair mined 1.6 million tons of sand and gravel.[27] In 1929, water bed mining in the Canadian portion of the Great Lakes basin generated more than 2 million tons of aggregate.[28] Indeed, by the



US War Department, Corps of Engineers, *General Chart of Lake Erie, 31 August 1906*. (Historical Map and Chart Collection, Office of Coast Survey, National Oceanic and Atmospheric Administration, US Department of Commerce)

---

26 *Twenty-eighth Annual Report of the Ontario Bureau of Mines, 1919, being Vol. XXVIII and Consisting of Parts I and II,* pt. 1 (A.T. Wilgress, 1919), 2, 44; *Fortieth Annual Report of the Ontario Department of Mines Being Vol. XL, Part I, 1931* (Herbert H. Ball, 1931), 2, 39. While figures about what proportion lake- and river-based mining contributed to the 1918 figure are unavailable, provincial officials did note that "large quantities of both have been recovered by dredging or sand-sucking vessels, principally in the neighbourhood of the larger towns and cities along the border."

27 "Sand and Gravel," "Brief of Sundry Detroit Building Supply Dealers," *Tariff Act of 1929: Hearings Before the Committee on Finance, United States Senate, Seventy-first Congress, First Session on H.R. 2667, An Act to Provide Revenue, to Regulate Commerce with Foreign Countries, to Encourage the Industries of the United States, to Protect American Labor, and for Other Purposes. Schedule 16, Free List, July 11, 12, and 13, 1929* (Government Printing Office, 1929) (hereafter *Tariff Act of 1929*), 641–42, https://www.google.ca/books/edition/Tariff_Act_of_1929/G1p1replPTYC?hl=en&gbpv=1. The values are 1.8 million and 0.23 million metric tonnes respectively.

28 *Fortieth Annual Report of the Ontario Department of Mines*, 39.

latter half of the 1920s, the industry's operations in Canadian waters (which included both American- and Canadian-owned companies) was so powerful that pit gravel producers in Michigan and Ohio complained to the US federal government and lobbied to introduce a protective tariff on Canadian sand and gravel imports.[29]

Geology was what made the lower Great Lakes such an attractive source of aggregate. The lakes were born from repeated events of glaciation that eroded and ground bedrock and altered their contours.[30] As glaciers advanced, they pushed clay, sand, and gravel to new locations and then deposited long, finger-like trails of this material, known in geological terms as moraines, as they melted. Isostatic uplift, the earth rebounding as the weight of the glaciers disappeared, helped to further define the lakes' morphology and shorelines. In Lake Erie, as ice sheets advanced and receded they eroded shales – softer forms of sedimentary rock – and left behind the more erosion-resistant Silurian and Devonian limestone and dolomites that make up much of the 22 islands of the Lake Erie archipelago that divide Lake Erie's shallow western basin from the deeper central and eastern basins.[31] The sheets deposited the shales in ridges such as one that stretches southward from Point Pelee and another, the Pelee Lorain, which stretches north from Ohio waters outside Sandusky toward and around Pelee Island.

The variety of aggregates available in these deposits meant that dredges could visit many locations to collect material suited to different purposes. Glass production, for instance, requires sand with high silica content. Concrete and cement require grains with sharp edges so the cement can adhere. Plaster sand had to be fine and of a colour that would not bleed through paint.[32]

A contractor who worked on water did not need a lot of equipment or workers to dig the material out, just a specialized boat and the crew to run it. The aggregate did not even need to be washed, as it would have needed to be at a quarry, because its aquatic environment did that for sand sucker operators. Nor did contractors have to worry about costs of transport to get

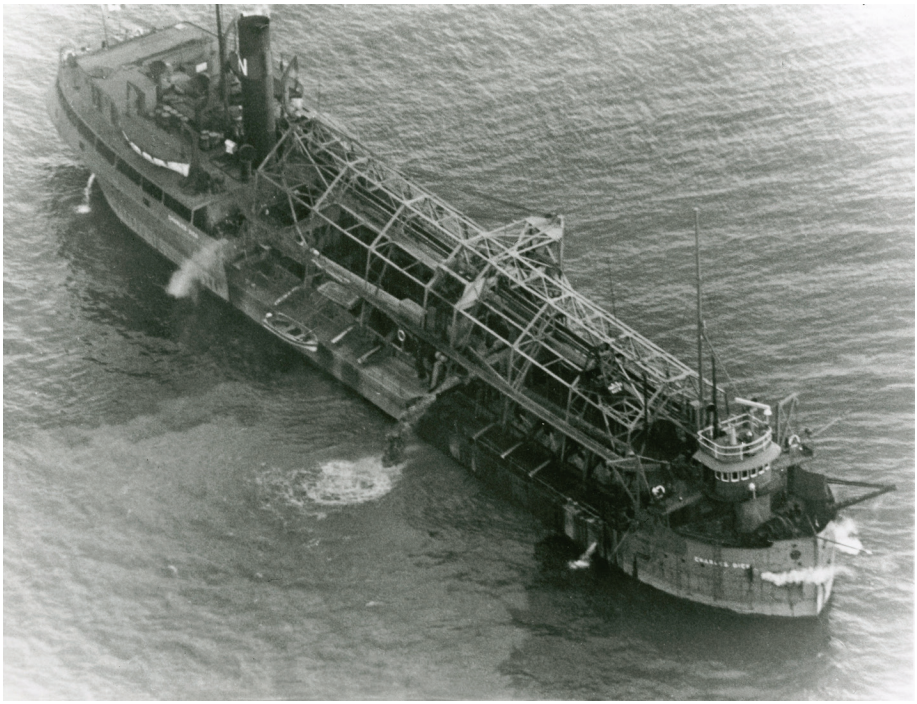
---

29 "Statement of William P. Kelly, Cleveland, Ohio, Representing Dolomite (Inc.), of Ohio; the Sturgeon Bay Co., of Wisconsin; and the Wagner Cos., of Ohio," *Tariff Act of 1929*, 634–38.

30 William Ashworth, *The Late Great Lakes* (Wayne State University Press, 1987), 5. The basin itself was formed from three different sets of mountain-building events and, in the Cambrian period, the development of a deep rift that nearly severed North America into two.

31 Michael C. Hansen, "The History of Lake Erie," *Ohio Geology Newsletter* (Fall 1989): 1.

32 Vince Beiser, *The World in a Grain: The Story of Sand and How It Transformed Civilization* (Riverhead Books, 2018), 8–10; "Statement of L.C. Hinslea, Representing the Kelley Island Lime & Transport Co., Cleveland, Ohio, and Others," *Tariff Act of 1929*, 640; and "Canada Forbids Taking of Sand at Pelee Island by Sanduskians: Appeal Case," *The Sandusky Star-Journal*, 28 June 1920, 7.



The *Charles Dick* was Canada's first steel boat specially designed to extract sand and gravel from water beds, wash and grade its spoils, and carry the aggregate to processing plants. It was built in Collingwood and launched in 1922. The sand sucker was also self-unloading – an innovation that water-based aggregate mining helped to popularize on the Great Lakes, although the industry did not invent it. (Point Pelee – Lake Erie, RG 1-339-0-11, Damage Monitoring Files, box 1, folder 7520.3, Archives of Ontario)

the material to market because it was already safely stowed in the primary method of transportation, and, often, it only took a few hours to reach markets by water. The use of these boats also meant sand sucker operators could cross state and international borders to obtain spoils (the materials dredged) from prized locations and make deliveries. These features of the industry offered significant advantage over land-based quarry operations where aggregate types were limited by their property lines and which often had to rely on pricy transport, such as rail, to deliver its product to market.[33]

---

[33] Mark Shumaker, "National Sand and Material Company's *Charles Dick*," unpublished manuscript obtained from the author, 2023; "Statement of William P. Kelly, Cleveland, Ohio, Representing Dolomite (Inc.), of Ohio; The Sturgeon Bay Co., of Wisconsin; and the Wagner Cos., of Ohio," *Tariff Act of 1929*, 634–38; and V.P. Ahern, "Brief of the National Sand and Gravel Association (Inc.), Washington, D.C.," *Tariff Act of 1929*, 657–58.

Yet, pulling sand and gravel out of water presented all sorts of risks. Boats, barges, and tugs frequently collided with other vessels in crowded harbours and busy navigation lanes. As was the case for the broader Great Lakes shipping industry, sinkings were common.[34] In May 1925, the *Kelley Island*, a sand sucker named after its Ohio owner, Kelley Island Lime and Transport Company, capsized near Point Pelee because of rough waters, killing nine of its crew of 16.[35] A decade later, in 1936, the *Sand Merchant*, purpose-built in Collingwood to mine aggregate from the beds of the Great Lakes, capsized in rough waters on route to Cleveland, killing 19 people. The vessel, owned by the National Sand and Material Company Limited of Welland, was the second sand sucker to sink on the Great Lakes that year.[36]

Finding the labour to support these operations was also challenging. Records from the International Sand and Gravel Company, a subsidiary of Nicholson Transit Company, which was based in Ecorse, Michigan, show that in 1922, the men it employed as deckhands and "firemen" (workers who stoked coal to fuel steam-powered engines) rarely lasted more than a month in their positions. James Nicols, paid $80 a month to be a fireman on the *Annie Moiles*, a tugboat that hauled the company's dredging barge *Ontario*, was one of the exceptions: he worked from March to September. But Gordon Perry from Tupperville, Kent County, Ontario, worked as a deckhand for six days in August at a rate of $55 per month; Isaac Hasse worked on *Ontario*, possibly as a deckhand, from 2 to 18 August for $55 a month before falling ill and being hospitalized in Sarnia for typhoid; *Ontario* fireman George Sullivan, hired in

---

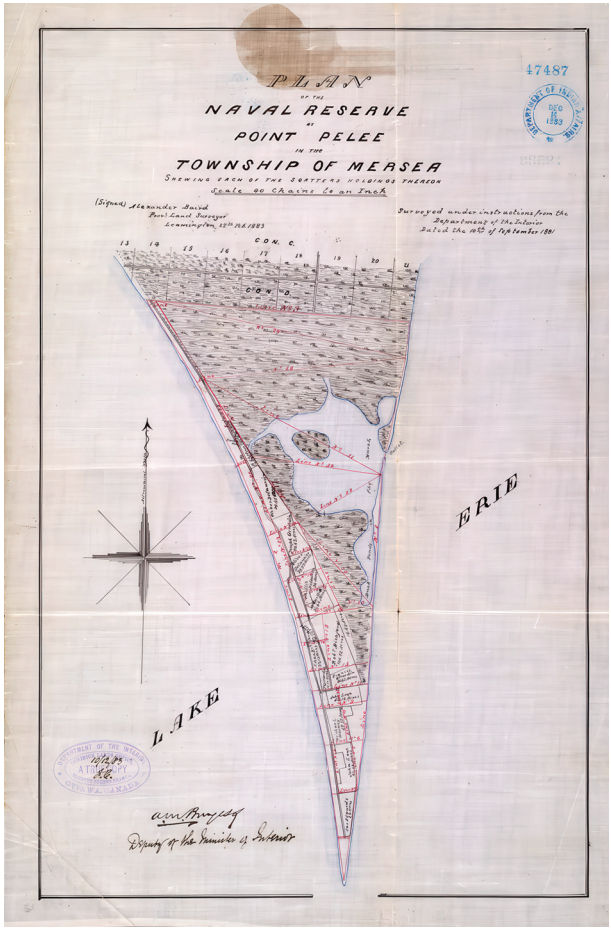
34 *Lake Erie Shipwrecks and Maritime Tales* (Ohio State University, 2017), https://ohioseagrant.osu.edu/products/i0049/lake-erie-shipwrecks-amp-maritime-tales. While the Ontario Department of Mines had begun to keep records of mining accidents by 1920, it did not include these incidents in its statistics, even though accidents involving sand suckers frequently injured or even killed crew members and generated considerable repair bills and legal costs. Of 23 sinkings in the American waters surrounding the Lake Erie archipelago listed in *Lake Erie Shipwrecks and Maritime Tales*, three were sand suckers and a further two were linked to the stone trade. By way of comparison, at least four other boats that sank carried coal as cargo. The wrecks took place from the early 1800s to the mid-1900s; most occurred in the late 1800s and first decades of the 1900s.

35 "Boat Capsized: Seven Drown at Point Pelee," *Daily British Whig*, 4 May 1925, 1; news story dated 12 June 1925 in *Echo Soundings: Marine News from the Amherstburg Echo, 1920–1929*, vol. 17 (Marsh Collection, 2021), 99; and "Nine Sailors Perish When Ship founders in Storm-Tossed Erie," *The Globe*, 4 May 1925, 1. As frequently as these boats sank, salvagers raised them for repair or parts. A little more than a month after it sank, *Kelley Island* was raised by Reid Wrecking Company of Sarnia.

36 "18 Men, 1 Woman Are Drowned as Sand Ship Sinks Off City: 7 Saved," *Cleveland Plain Dealer*, 19 October 1936, https://ohioshipwrecks.org/shipwreckdetail.php?Wreck=14.

June, lasted only a day.[37]

Wherever sand suckers went, complaints by shoreline residents and communities about localized erosion soon followed. In nearly all lower Great Lakes jurisdictions, these complaints led to government intervention, such as the imposition of licenses and royalties. In Ontario, legislation against shoreline predation predated the formation of the province (it was introduced some time in the mid-1850s in Canada West, the jurisdiction that became the Province of Ontario in 1867).[38] The Three Rod Law, as it was known



Alexander Baird, "Plan of the Naval Reserve at Point Pelee in the Township of Mersea, Each of the Squatters Holdings Thereon," 1883. Baird was a provincial land surveyor. (Department of Public Works fonds, RG10, volume 2043, file 8986, part 3, Library and Archives Canada)

37 International Sand and Gravel Company correspondence, box 8, folder 52, Nicholson Transit Company records, GLMS-0052, Center for Archival Collections, Bowling Green State University Libraries (hereafter BGSUL).

38 Digital Heritage Assistant, "A brief history of Bronte's harbour area," Oakville Images, 2019, https://vitacollections.ca/kl-digitalarchive/518/exhibit/4.

informally, addressed the unsanctioned removal of aggregate from shorelines and river banks and nearshore waters within three rods (roughly 15 metres or 50 feet) of the waterbody's high-water mark. It also applied to a related activity called stone hooking, the practice of removing limestone slabs from shallow waters along the Lake Ontario shoreline for use in the construction of nearby communities.[39]

The beach protection legislation, revised in 1897 and again in 1912, applied to Lakes Ontario, Erie, and Huron. By 1914, when this legislation was revised once again because of widespread concerns about sand sucker operations causing erosion, it required boat operators to obtain written permission from a neighbouring shoreline owner or the province before commencing extractions. The legislation, however, did not apply to Crown land in the federal domain such as the naval reserve at the tip of Point Pelee. What was even less clear at this and other locations controlled by the Dominion government, such as at the headwaters of the St. Clair River, was which level of government, provincial or national, was responsible for regulating sand sucker operations? At Point Pelee, the blurring of jurisdictional lines would at times complicate the monitoring and supervision of sand sucker activity even as it would, at other times, help to enhance protections and boost the volume of scientific expertise that was brought to resolve the point's issues with chronic erosion.

The Dominion government leased to operators the rights to extract sand and gravel both from the point itself and from some of its surrounding waters. In 1910, it leased Pelee's tip to Charles Cadwell, a Windsor builder specializing in concrete sidewalk construction. Cadwell was charged 50 cents per acre for extracting sand and gravel plus a royalty of two cents per cubic yard of material removed for the right to operate on the property. Cadwell, in turn, sublet the right to mine the area to other sand-sucking operations.[40] The Dominion government ended the 21-year lease after only five years to locate a life-saving station on the property.[41] However, in 1910 the province had also granted the company title to a sandbar, locally known as Dummy Island, that extended south from the point. The area covered 84 acres. It also gave the company the ability to lease dredging rights to other sand sucker

---

[39] Digital Heritage Assistant, "A brief history of Bronte's harbour area."

[40] Lease Lot A, Naval Reserve, Point Pelee, to C.W. Cadwell of Windsor – Minister of the Interior, 16 April 1910, Order-in-Council 1910-0779, Privy Council Office fonds, RG2 A-1-a, Library and Archives Canada (hereafter LAC).

[41] Point Pelee Naval Reserve – cancellation of lease C.W. Cadwell of Lot "A" and transfer balance of said lot to Naval Service Department for life saving station – Minister of the Interior, 10 October 1915, Order-in-Council 1915-1381, RG2 A-1-a, LAC.

operators.[42] Many of these were American operators, such as Kelley Island Lime and Transport, which was the largest supplier of limestone and lime in the Great Lakes watershed at the turn of the twentieth century.

It was the impact of this activity that Baird identified as a concern in his 1917 survey. In July 1914, Vice Admiral C.E. Kingsmill, director of Canada's Naval Service, sounded the alarm about the volume of dredging at the point.[43] He estimated that the activity had shortened the Pelee spit by one and a half kilometres in just two years. He worried that the erosion was altering the direction of currents near the point. T.H. Conover, superintendent of Point Pelee Park, also worried about the impact of the activity. He estimated that each day, including Sundays and through the night during shipping season, 11 cargoes "averaging 75 to 90 carloads in one 'hold'" were being removed from the waters surrounding the point. All it took was two hours to fill a hold, he estimated, and noted that the Dummy Island sandbar, which had at one time stretched "two and three quarter miles long and prior to dredging operations made a natural harbor for the marine in easterly as well as westergales," was now 27 feet under water. He warned that not only were the Pelee shorelines at risk of erosion but so was the great Pelee Reef, "noted for productiveness in Lake Erie fisheries" and a known spawning ground of sturgeon and smaller fry.[44]

Dominion and provincial experts remained skeptical. Kindle, who examined the point within a similar time frame to Baird's report, recognized that removal of sand and gravel directly from the point contributed to its erosion problems and recommended that activity cease. However, he also advised that the activity could continue 5,000 feet away from the tip on the south end of the Dummy Point sand bar.[45] Hutcheon, the Ontario Department of Mines engineer who visited the point in April 1918, disputed the claim that the point had been shortened, despite observing high waters in the lake. "At the extreme point there had been little change in the shore line since my visit in October of last year," he observed in a report to the Ontario minister of Lands and Forests. However, erosion had taken place on the east shore of the point where a bank had been eroded "about 6 feet. Farther north on the east shore, where there is only a narrow sand bank between the lake and the marsh land,

---

42 Rondeau Harbour and Pelee Point, license to Spencer Stone of Chatham, Ontario, 6 September 1911, Order-in-Council 1911-2211, RG2 A-1-a, LAC. Such a provision existed in a 1911 lease the dominion government issued to Spencer Stone of Chatham to dredge off the shores of Rondeau Harbour and Point Pelee.

43 Battin and Nelson, *Man's Impact*, 90.

44 T.H. Conover, "American Sand," *The Border Cities Star*, 13 August 1920, 6.

45 Battin and Nelson, *Man's Impact*, 115 and 117.

there is evidence of considerable erosion within the last few years, as trees standing on the bank are being destroyed by the encroachment of the lake."[46]

Nine miles south of Point Pelee, residents on Pelee Island were dealing with similar concerns at Fish Point, the island's southern-most point. They too had tried to convince provincial officials to take action to stem the activity that appeared to be triggering severe shoreline erosion and putting the island's protective diking and pumping system at risk. Fish Point and adjacent waters were owned by William Hendrickson and John Homegardner, Ohio businessmen who operated sand and gravel businesses. They had bought the point in 1909 but had leased it from previous owners to mine since the late 1890s. The men also leased mining rights at the point to other companies. Up to 10 dredges a day worked the area during the navigation season.[47]

Dr. Charles N. Anderson, member of provincial parliament for Essex South, told Pelee Island township representatives that there was nothing the province could do because the businessmen were operating within their legal rights as property owners.[48] So, in 1919, Pelee Island residents and their township, with the support of the province, took the property owners to court. The court case failed early in 1921. With a judicial solution temporarily out of the question (the Pelee Island residents announced intentions to appeal the decision to a higher court), residents at both Pelees resumed lobbying the provincial government to take legislative action before the 1921 dredging season began.

Even the Ontario Historical Society joined their call. In April, the society passed a resolution entreating the province and the Dominion government to take action against sand sucker operators, warning that all could be lost if "these fertile historic landmarks and their worthy patriotic inhabitants" were not rescued "from the exploitation of foreign profiteers."[49] The historical society's resolution described both the island and Point Pelee as sites of significant natural and cultural heritage, "rich in the historical achievements of our people, showing frequent and abundant traces of prehistoric habitation; the

---

46 Hutcheon, memorandum, 16 April 1918, 1–3, RG 1-339-0-33, Damage monitoring files, box 3, folder 5, AO.

47 "Hauling Away Pelee Island: Uncle Sam's Sand Suckers Busy: Fifty Acres a Year Vanish: Provincial Government Inactive in Spite of Petitions for Relief," *London Advertiser*, republished in *Amherstburg Echo*, 30 April 1914, in *Echo Soundings: Marine News of 1913–1914: Excerpts from the Amherstburg Echo*, vol. 10 (Marsh Historical Collection, 2007), 81; and Lennox, *Attorney General Ex Bel. The Corporation of the Township of Pelee and Others v. Homegardner*, 2.

48 "Hauling Away Pelee Island," *London Advertiser* in *Echo Soundings*, vol. 10, 81.

49 Council of the Ontario Historical Society, "Resolution concerning Erosion of Pelee Island and Point Pelee," 9 April 1920, RG 3-4-0-178, Premier E.C. Drury correspondence, box 26, AO.

last resting-place, in the spring and fall of our migratory birds of all varieties."[50] The organization's resolution brought voice to the growing wildlife and nature conservationist movement in southwestern Ontario whose members had seen their efforts to protect Point Pelee's inland marshes and forests rewarded in 1918 with the federal designation of the point as a national park.[51]

The province responded in May by altering the Beach Protection Act once again, this time to require all commercial dredges operating in Canadian waters in Lakes Ontario, Erie, and Huron to obtain a licence from the Department of Mines regardless of what other arrangements were in place to access the locations being excavated.[52] This action effectively ended sand mining at Pelee Island, but dredging continued off the shores of Point Pelee at the greater distance as advised by Kindle. The Dominion government also moved a customs official to the point from the island to monitor the taking of sand.[53]

Local residents remained resentful that the two upper-tier governments had not banned American sand suckers from the point. "Instead of heeding the petitions of residents the government allows them [American sand sucker operators] to come to shore," observed *The Windsor Star* in June 1921,

---

50 Council of the Ontario Historical Society, "Resolution."

51 Henrietta T. O'Neill, *Birding at Point Pelee: A Birder's History of One of Canada's Most Famous Birding Spots* (James Lorimer & Company, 2006), 46–47; Bob Montgomerie, "Great Lakes Ornithological Club," American Ornithology Society, 7 August 2017, https://americanornithology.org/great-lakesornithological- society/; Tina Merrill Loo, *States of Nature: Conserving Canada's Wildlife in the Twentieth Century* (UBC Press, 2006), 88; and Sharon Hill, "Playground or Protection? 100-Year-Old Point Pelee National Park Finds a Balance," *Windsor Star*, 19 March 2018. The point had earned a reputation in Canada and the United States as a highly valued destination for naturalists and ornithologists well before it became Canada's eighth national park in 1918. That reputation resulted from the efforts of the Great Lakes Ornithological Club members, who had built their clubhouse near the tip of the point in the early 1900s. Their members were highly influential in advancing the study of natural sciences in Canada. They were among the first to identify the point as a significant stop-over place for migrating birds. Percy Taverner, one of the club's members and the Dominion's first ornithologist, became the first in Canada to band birds to track their migrations. Taverner also initiated the effort to make the Dominion-held lands at the tip of the point into a national park. These conservationists recognized that the point and its remaining wetland areas offered an essential resting point in migratory birds' twice-yearly journeys. Over their years of visiting and studying the point, the club's members also realized that area development that included aggregate extraction (on and offshore), farming, and logging were threatening the wildlife habitat. Establishing the area as a park brought added legislation to control such activities within its boundaries, and the point became Canada's first conservation park.

52 Correspondence and notes in the file "Sessional Material – Beach Protection Amendment Act" discuss the changes in 1920 to the Beach Protection Act of 1914; RG 8-5-0-5400, Provincial Secretary's Correspondence, box 109A, AO.

53 "Marine," *The Sandusky Star Journal*, 18 July 1921, 2.

suggesting that the provincial and federal governments had betrayed their southwestern Ontario constituents by not implementing a dredging ban at the point as it had at Pelee Island.[54] That month, representatives from South Essex met with William Raney, the province's attorney general, to air their concerns and make clear they aimed their resentment at American boats and the American sand trade. "We cannot so much as take a stone from the American shore without risk of prosecution," Dr. J.W. Brien, the area's member of parliament, told the province's attorney general.[55] Brien may have been referring to the precedent-setting 1911 Ohio ruling that compelled Hendrickson's Buckeye Sand Company to move its operations from Cedar Point; he could also have been referring to the US Jones Act, which prevented Canadian and other ships of international origin from picking up cargo from one point along American shores and delivering it to another.[56] Raney promised a thorough investigation and action; two months later, on a visit to Point Pelee to review the damage, Harry Mills, the Ontario minister of Mines, reiterated the promise.[57] Over the next several months, however, the provincial government took no action.

No one challenged the southwestern Ontario residents' tendency to blame American operations and markets for the erosion problems. During the late 1800s and early 1900s American businesses had poached an extraordinary volume of Great Lakes borderlands resources to sell south of the border, especially in Ontario's Niagara and southwestern peninsulas. These resources included hydroelectricity generated on the Canadian side of Niagara and natural gas drawn from reserves in Essex and Welland counties to supply fast-growing cities such as Buffalo and Detroit.[58] The reluctance of the Liberal Dominion government to interfere in the affairs of business by tightening border controls and its desire to attract American investment to develop Canadian resources exacerbated the issue. Regulation, therefore, fell to the Ontario government which was hamstrung by its inability to conduct international negotiations with the states on the other side of the lake. Indeed, even as the Ontario government

---

54 "Sand Suckers Continue Taking Sand at Pelee," *Windsor Star*, 2 June 1921, 7.

55 "Promises Immediate Heed to Erosion at Pt. Pelee," *The Globe*, 18 August 1921, 2.

56 John Frittelli, "Shipping Under the Jones Act: Legislative and Regulatory Background," R45725, version 5 (Congressional Research Service, 21 November 2019), 1, https://www.congress.gov/crs-product/R45725. See "The Dredging Fleet" on page 18 for discussion of the Dredging Act of 1906, and "Cedar Point company wins in a suit to protect beach," *The Sandusky Register*, 2 May 1911, 1.

57 "Promises Immediate Heed To Erosion at Pt. Pelee," *The Globe*, 18 August 1921, 2.

58 Karl Froschauer, *White Gold: Hydroelectric Power in Canada* (UBC Press, 1999), 55–76, and Mary Baxter, "Border Gas: How the early efforts to transport natural gas across the Canada–U.S. Great Lakes border shaped an industry," *American Review of Canadian Studies, Thomas O. Enders Special Issue*, forthcoming 2026.

wrestled with managing American sand sucker activity in Canadian Great Lakes waters, it was embroiled in another fight on both sides of the border over its taxation of unprocessed pulpwood exports to the United States.[59]

These early century tussles also fuelled intense debates in southwestern Ontario at the municipal level about who was best positioned to control these resources, including managing sand sucker activity. For the municipalities of Essex, Kent, and Lambton, shoreline erosion was not the only concern. While sand and gravel could be found in the region's rivers and lake beds, the region lacked the land-based gravel deposits that were easily found in the province's central and eastern regions.[60] Industrializing centres such as Windsor, Chatham, Wallaceburg, and Sarnia needed access to reasonably priced aggregate to ensure a foothold in the fast-evolving modern economy, and by 1923, southwestern Ontario municipalities were demanding the province establish a local gravel control board. That year, Robert Bracken, West Kent County Liberal member of provincial parliament, introduced a private members' bill to prohibit all export of gravel from the province and to establish a board to control aggregate extraction and set product prices for Ontario municipalities. Bracken also proposed that the board license anyone who wanted to take aggregate and be imbued with the power to refuse or cancel these permits at its discretion.[61] Locally, the expectation was that the wardens of Essex, Kent, and Lambton Counties would manage the board.[62] However, Bracken failed to obtain support by the province's United Farmers of Ontario government, which doubted the Dominion government would support the idea, and the bill failed to obtain a second reading.[63]

Meanwhile at Point Pelee, dredging continued. The introduction of licensing reduced the volume of activity, as did a provincial quota on annual

---

59 See, for example, the file on pulpwood exports in Premier E.C. Drury Correspondence, 1920, RG 3-4-0-187, AO.

60 *Twenty-Ninth Annual Report of the Ontario Department of Mines being Vol. XXIX, Part I, 1920* (A.T. Wilgress, 1920), 35. Only one land-based gravel pit was listed as operating in the deep southwestern Ontario region: the Windsor Sand & Gravel Company in Walkerville.

61 "Gravel Control Act Introduced by R.L. Bracken," news story attributed to *Chatham News* (based on handwritten note), n.d., and "Gravel Pits Not Plentiful in District," unattributed news story, n.d., International Sand and Gravel Company correspondence, box 8, folder 90, Nicholson Transit Company records, GLMS-0052, BGSUL.

62 G.A. Sharen to Frank Deane, 4 February 1923, International Sand and Gravel Company correspondence, box 8, folder 90, Nicholson Transit Company records, GLMS-0052, BGSUL.

63 *Journals of the Legislative Assembly of the Province of Ontario: 23rd January to 8th May 1923, Both Days Inclusive in the Thirteenth Year of the Reign of Our Sovereign Lord, King George V, being the Fourth Session of the Fifteenth Legislature of Ontario, Session 1923*, vol. 57 (Clarkson W. James, 1923), liv.

removals that was introduced after the Second World War. Nevertheless, erosion continued to plague the point's shorelines with many residents believing that the mining activity, both previous and at present, had permanently altered how the water circulated around the point.

Efforts turned to the question of how to save Point Pelee's shorelines. Government scientists and officials initially recommended driving a wedge between erosion and deposition cycles to interrupt the currents that transported aggregate away from the point's shores. Park officials introduced plantings to secure soil and sandy beaches. In 1929, they planted black willow trees on the east beach to anchor the remaining soils and planted white willow poles along the east side of the point in 1931 to trap sand. O.S. Scheifele, of the Waterloo-based Natural Process Engineering Company, had sold national park officials on a program of "laying the poles about four feet apart in trenches in harmony with the slope of the bank, their feet in water or damp ground and their heads in the sun and air." Doing so, he advised, would promote root and tree growth "that will defy the ravages of wave and storm action."[64] After he planted them, Scheifele tied the poles together with wire and anchored them "to protect them from damage until the roots have become established."[65] Scheifele claimed the approach promoted rapid and "prolific" growth throughout the poles. He also introduced steel wire-mesh groynes 33 yards (30.5 metres) apart on the beach to help accumulate sand. Within a year, waves and ice had destroyed the groynes and the supporting poles.[66]

Provincial officials also commissioned Scheifele to apply the interventions to the Ontario-controlled shoreline areas north of the park towards the base of the peninsula. They expressed optimism even as they acknowledged the approach needed some revision. In December 1933, J.F. McFarland, then acting supervisor of dredging operations, wrote the acting deputy minister of the Department of Mines about changes to the approach, including introducing a trench nearly at water level to better anchor the willow poles and employing sand to further secure the poles. "This new scheme seems to be much superior to the original plan of lacing the poles on the beach and covering them with a shallow layer of sand," he wrote.[67] But the interventions had taken place in a

---

64 O.S. Scheifele, "Beach and Bank Protection and Reclamation," reprinted from *Contract Record and Engineering Review*, 5 August 1931, 1, in: Point Pelee – Lake Erie, RG 1-339-0-11, Damage Monitoring Files, box 1, folder 7520.3, AO.

65 Scheifele, "Beach and Bank Protection and Reclamation," 1.

66 Battin and Nelson, *Man's Impact*, 67.

67 Acting Supervisor of Dredging Operations, Memo to Acting Deputy Minister, Re: Willows Planted at Point Pelee, 2 December 1933, Point Pelee – Lake Erie, RG 1-339-0-11, Damage Monitoring Files, box 1, folder 7520.3, AO.

low-water cycle and, as higher waters returned, the system failed.

The trial-and-error approach to protection continued. Up next in the late 1930s were "timber" groynes and "willow plantings" near the tip. They did not work either. In the early 1940s, Charles Clarke, a provincial forester and zoologist, recommended adding groynes and trees and planting more willows once the cyclical water levels receded. Storms in 1947 and 1948 overcame the groynes and undercut treed areas, which ended up "hurling literally tons of sand 30 or more yards within the woods, visibly altering the vegetation."[68] Despite the poor record of success, experimentation continued. Some strategies worked for a time; others not at all. Some produced erosion in new spots.

Officials and others began to use the erosion situation at Point Pelee as a cautionary tale about the evils of sand sucking and as evidence of the need to view lake processes as vulnerable to cumulative human interventions. In 1965, Clarke, then chief of the fish and wildlife branch of the Ontario Department of Lands and Forests, cited the experience at Point Pelee in a memo to R.V. Scott, director of the Department of Mines' Mining Land Branch, to explain why he objected to a dredging business being allowed to prospect for a pumping ground near Long Point in Lake Erie. "Dredging over the last hundred years appears to have altered currents and the shape of Point Peelee [*sic*] continuously and the total area of Point Peelee and adjacent marsh is only half of what it was previously."[69] If dredging took place at Long Point, not only would it affect the fishery but the point itself, he wrote.

At Point Pelee and throughout the region, residents continued to believe that the sand sucker operations produced a detrimental environmental impact.[70] In 1971, a Mersea Township landowner took National Sand and Gravel, the sole company that continued to actively dredge off the point (Ontario Lake Erie Sand Limited also held a license but was inactive in the area), to court for dredging outside the area permitted by the company's licence. The landowner claimed the dredging was causing shoreline erosion.[71]

---

68 Battin and Nelson, *Man's Impact*, 67, 119–20.

69 Department of Lands and Forests, Fish and Wildlife Branch to M.R.V. Scott, Director, Re: National Sand and Material Company Limited, 17 November 1965, Point Pelee – Lake Erie, RG 1-339-0-11, Damage Monitoring Files, box 1, folder 7520.3, AO.

70 See, for example, untitled editorial, CKWW Radio, 12 August 1969 attached to a letter from Bernard Newman, Member of Provincial Parliament for Windsor-Walkerville to A.F. Lawrence, Minister of Mines, 22 August 1969, and John H. Kerr, Examiner of Surveys, to R.V. Scott, Director, Mining Lands Branch, 14 July 1969, Point Pelee – Lake Erie, RG 1-339-0-11, Damage Monitoring Files, box 1, folder 7520.3, AO.

71 "Judge visits sandsucker," *Windsor Star*, 4 June 1971, 3; Shumaker, "National Sand and Material Company's *Charles Dick*." Shumaker notes that Pennsylvania-based Erie Sand & Gravel Company also held a licence to remove aggregate in the vicinity of Point Pelee close

This case and the Lake Erie pollution crisis that erupted in the late 1950s and persisted into the 1970s propelled new research into lake bed dredging and its impacts. In a 1977 study that looked at dredging in harbours at Port Stanley on Lake Erie and Bronte on Lake Ontario, P.G. Sly, a federal researcher, studied how the removal and open-lake dumping of water bed materials affected the chemistry of the waters involved and the duration of these effects. Sly found "that total and reactive phosphorus levels increased rapidly in the receiving waters both at the removal site and at the open lake dumping site; similar increases in other nutrient elements and heavy metals were observed." Concentrations appeared to reduce within a few hours, he added.[72]

J.P. Coakley sought to know whether dredging had produced systemic erosion along Point Pelee by studying lake bed morphology, currents, and geology. In a 1976 study, he tentatively concluded that past dredging on the shoal south of the point did have an impact, as did the near-shore dredging of the more recent operations.[73] More geomorphological studies of the Point Pelee area took place.[74] Some offered new insights into the area's geology, such as a 1997 finding that the ridged moraine to which it was believed that Point Pelee belonged was actually two ridges, and the ridge that contained Point Pelee was separate from the ridge that contained the sand at Pelee Island's Fish Point.[75] These studies produced no definitive answer about the impact of commercial dredging on the point's shores. Without data collected

---

to the international boundary and bought Ontario-Lake Erie Sand in 1969 and National Sand and Gravel in 1973, likely anticipating, incorrectly as it would turn out, that these companies' licences would eventually be renewed.

72 P.G. Sly, "A Report on Studies of the Effects of Dredging and Disposal in the Great Lakes with Emphasis on Canadian Waters," Scientific Series No. 77 (Inland Waters Directorate, Canada Centre for Inland Waters, 1977), vii.

73 John Phillip Coakley, *A Study of Processes in Sediment Deposition and Shoreline Changes in the Point Pelee Area, Ontario* (Hydraulics Research Division, Canada Centre for Inland Waters, 1976), https://publications.gc.ca/collections/collection_2020/eccc/en36-522/En36-522-87-1976-eng.pdf.

74 For examples of this research, see: J.R. Shaw, "Coastal Response at Point Pelee – Lake Erie," Manuscript Report Series No. 4 (Centre for Inland Waters, Fisheries and Environment Canada, 1978); Coakley, *A Study of Processes in Sediment Deposition*; Troy L. Holcombe, John S. Warren, Lisa A. Taylor, David F. Reid, and Charles E. Herdendorf, "Lakefloor Geomorphology of Western Lake Erie," *Journal of Great Lakes Research* 23, no. 2 (1997): 190–201; W.F. Baird & Associates, *Sustainable Management Strategy for Southeast Leamington – Phase 2 Report* (Essex Region Conservation Authority, 2007); Alex Smith and Chris Houser, "Perspectives on Great Lakes Coastal Management: A Case Study of the Point Pelee Foreland, Canada," *Ocean and Coastal Management* 228 (1 September 2022), https://doi.org/10.1016/j.ocecoaman.2022.106329.

75 Holcombe et al., "Lakefloor Geomorphology of Western Lake Erie," 194.

before sand sucker activities, researchers simply could not fully determine if a trench found in the former Cadwell sandbar off the tip of the point was linked to historic sand-mining activity.[76]

Ending commercial dredging at Point Pelee, however, took political maneuvers, not scientific findings, as once again upper-level governments found themselves initially working at cross purposes. In 1974, Leo Bernier, Ontario's minister of Mines, refused to renew dredging licences for the two companies that remained registered to take sand from the area. The decision appeared to be issued with some reluctance because Bernier had noted it would end more than 50 jobs in the industry even as he offered that the suspension would help a two-year federal study about the issue that was getting underway. Some questioned his decision coming just a week after he was contacted by Eugene Whelan, the federal member of parliament who represented Essex, and Jean Chretien, then minister of Indian Affairs and Northern Development. The federal politicians had urged him to suspend the licences. But a lawyer representing two sand-sucking companies intimated that the study was a ploy to halt the mining activity near the point. He claimed Chretien had threatened to publish a news release about the study if Bernier did not suspend the licensing.[77]

Bernier, however, would subsequently declare sand mining "an important causal factor" in the erosion of the point, a statement criticized by the two companies who appealed the decision to the province's lands and mining commissioner.[78] At the commission hearing, the province, local municipalities, residents, environmental groups (such as Windsor chapters of Pollution Probe and the Canadian Environmental Law Association), and local fishermen banded together and successfully opposed the appeal. The era of aggregate mining along the vulnerable shores of Erie's western basin finally came to an end.

---

[76] R.V. Scott, "Report to D.F. Douglass, Deputy Minister Re: Sand and Gravel Removals Near Point Pelee," 30 July 1969, Point Pelee – Lake Erie, RG 1-339-0-11, Damage Monitoring Files, box 1, folder 7520.3; J.F. McFarland, "Memo to Deputy Minister Re: Walpole Island," 14 December 1945, St. Clair River – General, RG 1-339-0-22, Damage Monitoring Files, box 3, folder 7528, AO. In 1969, the Department of Mines knew that there was little-to-no movement below six metres in the lake, so a dug trench would not fill in over time. Years earlier, dredging at Walpole Island similarly demonstrated that the holes left from removing sand had not filled in. A naturally occurring trench would also be unlikely to fill in for the same reason.

[77] "Removal denied," *The Windsor Star*, 13 March 1974, 3 and Mike McAteer, "Contempt charge for lawyer requested at hearing," *The Windsor Star*, 10 October 1974, 3.

[78] "Provisional renewal," *The Windsor Star*, 29 June 1974, 4.

Conclusion

Researchers today continue to assess the extent of the impact of dredging upon Point Pelee; their estimates of the volume of material extracted range from four to 25 million cubic yards, which would make enough concrete to build dozens of CN Towers. One study published in 2022 concluded that "[w]hile it is believed that the sediment budgets of the eastern and western barriers were in a relative balance prior to European settlement, human altered littoral cell processes have contributed to the accelerated erosion of the foreland throughout the observational record."[79] Echoing the words of scientists nearly a century earlier, the authors suggest a balance had existed between erosion and deposition in the region before all the human interventions. Unlike their predecessors, however, contemporary researchers are willing to consider commercial dredging as one of the factors that interrupted this balance, along with the ongoing efforts to prevent shoreline loss by introducing jetties, seawalls and groynes, and the dikes that protect farmlands.

Point Pelee's continued struggles with erosion gain contemporary relevance as our need for aggregate grows even greater. Of the 16 kilograms of non-metallic minerals that we used per person daily in 2011, nearly a third was sand, gravel, and crushed rock.[80] The only natural resource we use more than sand is water. We use more than 50 billion tons of sand yearly to make everything from buildings to computer chips. Increasingly, we are turning to aquatic and marine environments to supply these needs.

These past American incursions on Canadian shorelines to obtain natural resources also bring fresh context to the contemporary strained relations between the two countries, although it is important to distinguish essential differences between the two situations. In the early 1900s, the US federal government mostly kept its distance as sand sucker operators preyed on Canadian shores.[81] In contrast, the present-day US government has vowed to

---

[79] Smith and Houser, "Perspectives on Great Lakes," 4–5.

[80] Organisation for Economic Co-operation and Development, *Global Material Resources Outlook to 2060: Economic Drivers and Environmental Consequences* (OECD Publishing, 2018), 5, https://www.oecd.org/environment/waste/highlights-global-material-resources-outlook-to-2060.pdf.

[81] It did support William Hendrickson and John Homegardner's fight to dredge their Fish Point property but argued that the Ontario approach to licensing dredging was discriminatory and violated the Ohio businessmen's property rights. However, the US federal government dropped the issue after the Dominion government determined in 1921 that the approach was not biased. Chas. J. Doherty, "Report to the Governor-General-in-Council," 1 June 1921, 6–7 in: Dredging operations at Pele Island, Essex County, RG 8-20-0-604, Despatches of Provincial Secretary, box 23, file 100.614, AO.

advance the interests of its businesses in the Western Hemisphere, including a determination to "resist and reverse measures such as targeted taxation, unfair regulation, and expropriation that disadvantage U.S. businesses."[82]

This policy can be seen at work in US President Donald Trump's threats in 2025 to annex Canada in part because of its critical mineral deposits, but its impact on Canadian sand and gravel resources is more complicated. According to the US Geological Survey, from 2020 to 2023 Canada supplied the United States with the greatest volume of any country of sand and gravel imports intended for construction (93 per cent). At the time of writing, this material was covered by the CUSMA free-trade agreement. However, last year, Canada briefly applied a retaliatory tariff on US exports of specialized sand used by the Alberta oil industry. The retaliatory tariff was removed in July 2025. It is not clear whether the US decision in 2025 to relax rules about offshore mining for critical minerals will affect the demand for Canadian sand and gravel imports. US industry organizations have been vocal about the need to maintain the option to exempt Canadian aggregate from tariffs. "Including aggregates in the scope of tariffs would have significant unintended consequences," the National Stone, Sand and Gravel Association wrote President Trump in January 2025. "In areas of the country where natural deposits of aggregates meeting applicable specifications are limited, imports from Mexico and Canada are crucial to meeting market demands for public and private construction." Trade negotiations between Canada, the United States and Mexico slated to begin this year may bring some clarity to the cross-border trade treatment of these products.[83] In one respect, however, these current circumstances

---

82 *National Security Strategy of the United States of America* (White House, November 2025), 19, https://www.whitehouse.gov/wp-content/uploads/2025/12/2025-National-Security-Strategy.pdf.

83 Michele Stanley, Interim CEO, National Stone, Sand and Gravel Association to President Donald Trump, 31 January 2025, https://www.nssga.org/sites/default/files/2025-01/NSSGA_Letter_to_President_Trump_Regarding_Tariffs1.31.25.pdf; Lauren Krugel, "Oilfield service group says relief from counter-tariffs on U.S. sand 'fantastic news,'" CBC, 17 July 2025, https://www.cbc.ca/news/canada/calgary/oilfield-service-group-says-relief-from-counter-tariffs-on-u-s-sand-fantastic-news-1.7587654; "Fact Sheet: President Donald J. Trump Unleashes America's Offshore Critical Minerals and Resources" (White House, 24 April 2025), https://www.whitehouse.gov/fact-sheets/2025/04/fact-sheet-president-donald-j-trump-unleashes-americas-offshore-critical-minerals-and-resources/; Jason Christopher Willett, "Sand and Gravel (Construction)," Mineral Commodity Summaries, US Geological Survey, January 2025, https://pubs.usgs.gov/periodicals/mcs2025/mcs2025-sand-gravel.pdf; and "Canada Tariff Finder," Business Development Canada, Export Development Canada and Government of Canada Trade Commissioner Service, https://www.tariffinder.ca/en/search/export/US/2517100015/2517100015.

strongly resemble those surrounding the resource extraction at Point Pelee in the past: the drive to prioritize and resolve the economic and territorial issues surrounding sand and gravel extraction is deflecting attention from the more complicated problem of long-term environmental impact. A hundred years after the fact, we continue to deal with an erosion problem at Point Pelee so acute that it is jeopardizing the largest remaining wildlife habitat in Ontario's extreme southwest.

Yet the resource extraction that took place at Point Pelee is not simply about environmental damage, conflict, or loss; it is also about transformation and connection. Sand and gravel deposits in the western Erie watershed have built highways, roads, and railway beds. These materials have erected buildings, roads, sidewalks, docks, and piers in places such as Detroit, Sandusky, Cleveland, Chatham, and Windsor. Today, we continue to use many of the amenities that the aggregate at Point Pelee built. In effect, the drive to settlement and industrialization in this region became a new current that removed sand from one place and left it in another. In this way, places like Point Pelee are as inextricably linked to our cities and their supporting infrastructure as a river or lake is to the water bed it occupies. Each has shaped the other, and if there are any lessons to be learned from this history, it might be how important it is to understand our environmental interdependencies, especially in the face of so many current environmental challenges.

Mary Baxter is a history PhD candidate at Western University. She specializes in histories of the environment and the Great Lakes. http://orcid.org/0009-0000-9121-9048.