



Cleaning up Coles Bay: A Partnership for Justice and Shellfish Restoration

A Submission to the District of North Saanich

Submitted on behalf of:
Pauquachin First Nation

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Cover Image: FIGURE 1: Cedar-woven clam harvesting basket with target-sized *skw'lhay'* and *s'axwa* (Littleneck and butter clams in Hul' q'umi' num language), created in the Coast Salish style by a Lummi Elder. Photo credit: Dr. Marco Hatch, Samish Tribal Member and Professor at Western Washington University, 2019.

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1. Introduction

When the tide is out, the table is set.

Traditional wisdom of W̱SÁNEĆ and other coastal peoples.¹

For thousands of years, the harvest of shellfish has been a central element of the lives and culture of Coast Salish and other coastal Indigenous peoples. The practice of “harvesting, sharing and/or receiving traditional marine resources,” is at the heart of what it means to be W̱SÁNEĆ.² The sharing of marine foods – and the passing of traditional wisdom about harvest, preparation, practice, and ceremony – binds the community and connects elders to youth. The landscape itself stands as striking witness to the long-time importance of shellfish to the Coast Salish. Throughout Salish territory, Indigenous clam gardens have formed beaches and seashell middens have literally shaped coastal bluffs.³ These beaches and bluffs bear powerful witness to centuries of Indigenous shellfish cultivation and harvest, feasts, ceremonies and culture.

Tragically, in recent decades at Coles Bay, sanitary pollution from poorly regulated upland septic systems has flowed to the Bay’s rich shellfish beds. The North Saanich municipal storm drain

¹ Peter Evans, Dave King, Elizabeth Keats, & Kristen Killistoff of Trailmark, *W̱SÁNEĆ Traditional Use Study of the Roberts Bank Terminal 2 Project* (2019 April 12), online: <<https://www.ceaa.gc.ca/050/documents/p80054/129395E.pdf>> at p. viii. BOKÉĆEN (Pauquachin), meaning “the land of cliffs and bluffs,” was originally part of the W̱SÁNEĆ (Saanich) Nation – also comprised of the Tsawout, Tsartlip, and Tseycum. See: Pauquachin First Nation, “About Pauquachin,” online: <<https://www.pauquachin.ca/ourhistory>>. Also see: “Prior to the imposition of the Douglas Treaty and the reserve system in the 1850s, the individual W̱SÁNEĆ Nations did not consider themselves to be separate from one another.” (Peter Evans, Dave King, Elizabeth Keats, & Kristen Killistoff of Trailmark, *W̱SÁNEĆ Traditional Use Study of the Roberts Bank Terminal 2 Project* (2019 April 12), online: <<https://www.ceaa.gc.ca/050/documents/p80054/129395E.pdf>> at p. iii.

² Peter Evans, Dave King, Elizabeth Keats, & Kristen Killistoff of Trailmark, *W̱SÁNEĆ Traditional Use Study of the Roberts Bank Terminal 2 Project* (2019 April 12), online: <<https://www.ceaa.gc.ca/050/documents/p80054/129395E.pdf>> at p. iv.

³ Coles Bay shows evidence of a long-term marine ecosystem management system present in its archeological record. There are extensive shell midden beds, dark, clam shell-filled soils, which is evidence of ancient and long-term occupation by First Nations over a particular space. Additionally, review of midden shellfish sizes over an 11,500-year-old history in the Pacific Northwest indicate an intimate knowledge and management system for bivalves that was locally adjusted which persisted under intensive harvest until European contact. See: Ginevra Toniello et al, “11,500 y of human-clam relationships provide long-term context for intertidal management in the Salish Sea, British Columbia” (2019) 166:44 *Proceedings National Academy Sciences* 22106.

The archeological evidence is overwhelming and includes evidence of management of marine resources: “[t]he number of [clam] gardens, their long usage, and the labour involved in rock wall construction indicate that individual and clustered clam gardens were one of the foundation blocks of Native economy for specific coastal peoples.” Judith Williams, *Clam Gardens – Aboriginal Mariculture on Canada’s West Coast* (Vancouver: Transmontanus New Star Books, 2006) at p. 11.; Clam gardens or sea gardens are simply one management system which are intertwined with multiple other management systems of various sizes and scales, which spanned across intertidal, oceanic, and terrestrial environments. These management systems have struggled to find legitimacy in current settler-colonial fisheries management systems placed over them. See: Darcy Matthews & Nancy Turner, “Ocean Cultures: Northwest Coast Ecosystems and Indigenous Management Systems” in Phillip Levin & Melissa Poe, ed, *Conservation for the Anthropocene Ocean*, (Academic Press, 2017) 169.

network has collected this septic pollution and delivered it unfiltered into the Pauquachin's most important shellfish supply.

In 1997, the Department of Fisheries and Oceans (DFO) closed shellfish harvesting in Coles Bay because of sanitary contamination.⁴ In the quarter century since, state governments have made scant effort to restore the harvest – despite the profound adverse health, cultural, economic and social impacts that closure imposes on the Pauquachin community living at Coles Bay.⁵ The closure has deprived families of a critically important food source, inflated food budgets, and been a major blow to community nutrition and health. Equally important, the closure deprives the Nation of the enjoyment of millennia-old community gathering and feasting; of the bonds created when elders share traditional shellfish knowledge with youth; and of cultural practices, ceremony, language and art deeply connected to shellfish harvest.

Tragically, the shellfish beds have remained closed, with no serious state government effort to identify and correct the sources of pollution, and to re-open this precious resource. This situation is common all along the BC coast.

On behalf of the BOKÉCEN (Pauquachin) First Nation, we ask the District of North Saanich (North Saanich) to act promptly and comprehensively to rectify this matter. The closure of shellfish harvesting in Coles Bay prevents access to a traditional and critical food source upon which the Pauquachin Nation has relied, and the closure must be promptly remedied by North Saanich and other governments.

This submission provides a brief background on the critically important relationship that the Pauquachin people have with shellfish harvesting – and the responsibility and power⁶ North Saanich has to immediately begin to remediate the sanitary pollution at Coles Bay.

The solutions available to North Saanich are outlined in section 2 of this submission and include:

- Develop a Coles Bay *Pollution Identification and Correction* program to eliminate sources of pollution, in partnership with the Pauquachin Nation;

⁴ Erich Kelch, Capital Regional District First Nations Relations, “Coles Bay Project Map: Background and Motivation; Overview of Issues”; March 5, 2020; Also see: Fisheries and Oceans Canada, “Reasons for shellfish harvesting area closures” (2018 March 23), online: <<https://www.dfo-mpo.gc.ca/shellfish-mollusques/reasons-raisons-eng.htm#about>>. Note that sanitary closures are distinct from biotoxin contamination closures. Sanitary closures are concerned with fecal contamination (monitored by Environment and Climate Change Canada) whereas biotoxin contamination closures are concerned with biotoxin or other microbiological concerns (monitored by the Canadian Food Inspection Agency). Through the CSSP, DFO is then responsible for responding to the data related to sanitary conditions and biotoxin conditions, to then administer closures of shellfish harvest areas and monitor harvest activities in these areas – see: Government of Canada, “Canadian Shellfish Sanitation Program (CSSP)” (2021 April 28), online: <<https://inspection.canada.ca/preventive-controls/fish/cssp/eng/1563470078092/1563470123546>>.

⁵ See below for a discussion of these impacts. Note that historically, the Pauquachin and other WSÁNEĆ peoples have been able to cultivate and harvest shellfish in their territory of Coles Bay, sometimes using sophisticated, engineered sea gardens. The Pauquachin are now compelled to use more distant traditional sites for harvesting shellfish such as those on the Southern Gulf Islands of Pender and Saturna, see: Peter Evans, Dave King, Elizabeth Keats, & Kristen Killistoff of Trailmark, *WSÁNEĆ Traditional Use Study of the Roberts Bank Terminal 2 Project* (2019 April 12), online: <<https://www.ceaa.gc.ca/050/documents/p80054/129395E.pdf>> at p. x.

⁶ See below for a discussion of some of the responsibility of North Saanich to act, including responsibility arising from its previous commitments to reform its septic regime and from its obligations under the *Fisheries Act*. Note that other municipal obligations may arise from the Municipality's common law duties to not commit tortious conduct.

- Sign a Memorandum of Understanding with Pauquachin First Nation, agreeing to the goal of re-opening the Coles Bay shellfish harvest by 2026;
- Promptly act to upgrade private septic systems and municipal stormwater infrastructure to meet the re-opening goal;
- adopt the Capital Regional District (CRD)'s Bylaw 3479 to better manage septic systems, and work with the CRD to ensure systems are regularly pumped out and structurally repaired and maintained;
- petition the provincial government to partner with the federal government to establish a *British Columbia Healthy Shellfish Initiative*, modeled on the highly successful Washington State Initiative.

North Saanich and Pauquachin First Nation can work together to remediate the local sources of sanitary pollution in Coles Bay. A successful Municipal-Nation collaboration that restores the Coles Bay shellfish harvest could become a model for the rest of the BC coast, where sanitary harvest closures are commonplace.

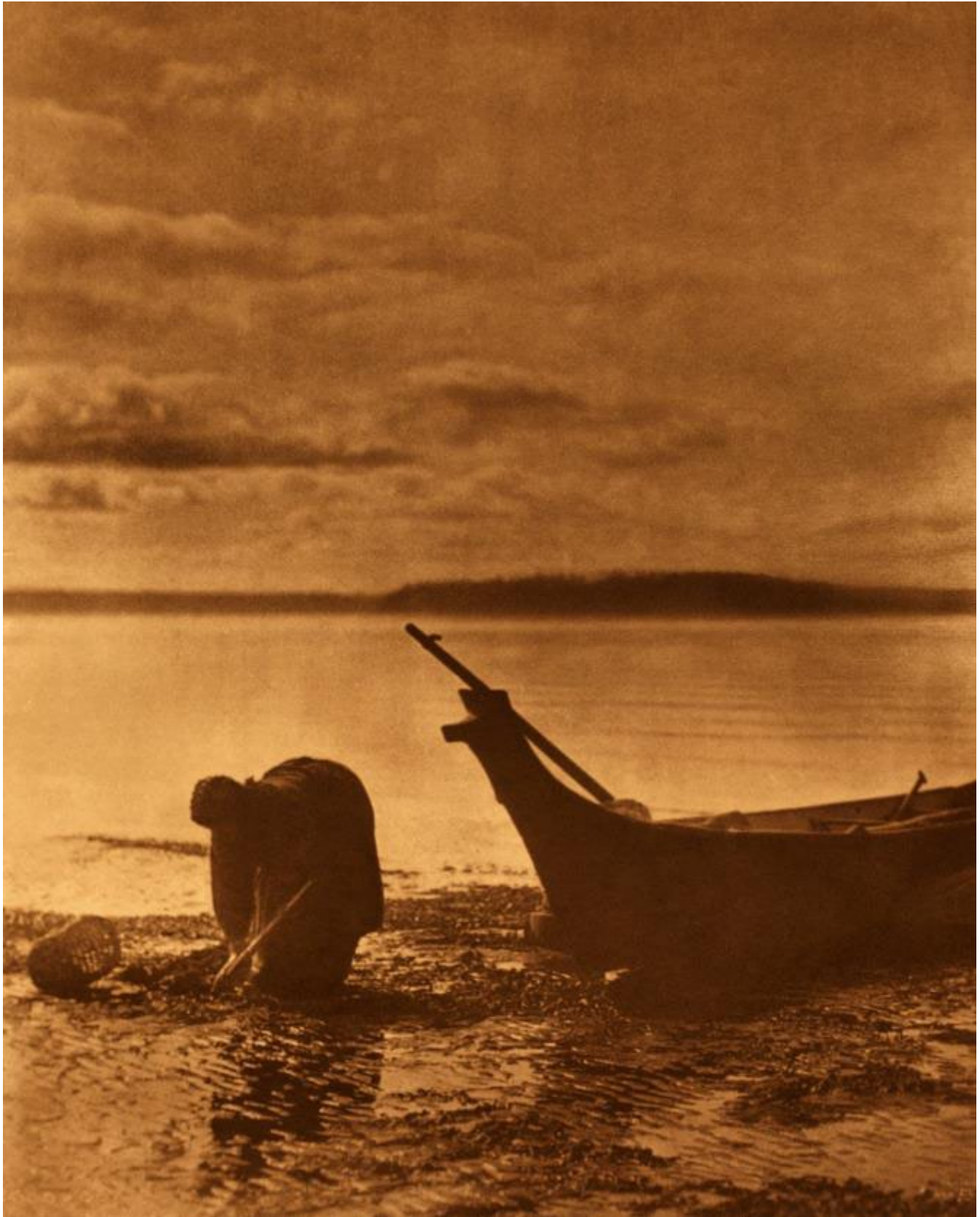


FIGURE 3: Coast Salish person depicting clam digging with a wooden dibble (Dated to 1900). (Photo: courtesy of EdwardCurtisPhotos.com.⁷)

1.1 DISRUPTION OF SHELLFISH HARVESTING PROFOUNDLY IMPACTS THE PAUQUACHIN NATION

*Clams are a much cherished ... resource among Pauquachin families. Every Pauquachin [interviewee] reports harvesting bivalves throughout their lives, beginning in childhood with their parents and grandparents, and in many cases continuing today, despite diminished access due to contamination and restrictions related to pollution in the Saanich Inlet. Most describe clamming in particular as an activity central to their family and community lives growing up and, therefore, to their education and to their very sense of what it means to be Pauquachin.*⁸

We went swimming. We were allowed swimming down there, I don't know how much swimming there is now. But, um, we then... when the tide was low, we'd go digging, digging for clams and along... we'd go digging here. Yeah, here. All along here.

Pauquachin First Nation Elder, discussing use of Coles Bay in their youth.⁹

For over 10,000 years, human relationship with clams has been central to the health, community and culture of the Pauquachin and other Coast Salish peoples.¹⁰ From Alaska to the Salish Sea, Indigenous marine management strategies were sophisticated, involving such things as clam gardens, sea gardens, seasonal round management of species, and other practices honed by

⁷ Edward Curtis, "Clam Digger," online: < <https://edwardcurtisphotos.com/store/coast-salish-indian-photos/clam-digger/>>.

⁸ Peter Evans, Beth Keats, and Dave King from Trailmark Systems and Consulting, *Pauquachin Traditional Marine Use Study – Prepared for Proposed Kinder Morgan TransMountain Expansion, Marine Shipping Component* (2015), online: <<https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90464/90552/548311/956726/2392873/2449925/2450636/2784719/C277-1-2 - Appendix A - Pauquachin Traditional Marine Use Study - A4L6I5.pdf?nodeid=2784803&vernum=-2>> at p.54.

⁹ Pauquachin Fisheries Interviews January 22nd, 2016, as cited by Octavio Cruz, Pauquachin Marine Resources Department.

¹⁰ Ginevra Toniello *et al*, "11,500 years of human-clam relationships provide long-term context for intertidal management in the Salish Sea, British Columbia" (2019) 166:44 *Proceedings National Academy Sciences* 22106.

intimate traditional knowledge of natural cycles.¹¹ Indigenous enhancement of shellfish and other marine species productivity has been extensively documented.¹²

For example, clam density was dramatically increased through the creation of sea gardens (also called clam gardens), which required manually moving rocks into a low intertidal wall along a beach. The area within the built walls gradually infills with sediments, creating ideal habitat for clams, as well as many other traditional foods such as red rock crabs, Pacific octopus, California lingcod, various sea lettuce, algae species, fish eggs, oysters and more.¹³ Both clam garden beaches and non-walled clam beaches, such as the rich clam beach at Coles Bay, were vital resources for the Coast Salish.

However, today pollution largely prevents the Pauquachin and other coastal Indigenous peoples from eating foods from their clam gardens and beaches.

The DFO's 1997 Coles Bay shellfish harvesting closure halted a tradition of harvesting that Pauquachin community members have carried on since time immemorial.¹⁴ This has had both short-term and long-term effects on Pauquachin First Nation. Lack of access to country foods on the beach at Coles Bay next to the community means community members must either have (a) their own costly gear to access farther harvest sites or (b) have relationships with folks who could

¹¹ Lorraine Weir, "'Time Immemorial' and Indigenous Rights: A Genealogy and Three Case Studies (*Calder, Van der Peet, Tsilhqot'in*) from British Columbia" (2013) 26:3 J Historical Sociology 383. This territory was expansive and contained various ecosystems that were extensively managed by Indigenous groups in the Salish Sea region. Marine management strategies were complex and involved managing a variety of species in seasonal rounds built into practices and protocols over thousands of years.- Darcy Matthews & Nancy Turner, "Ocean Cultures: Northwest Coast Ecosystems and Indigenous Management Systems" in Phillip Levin & Melissa Poe, ed, *Conservation for the Anthropocene Ocean*, (Academic Press, 2017) 169.

Also see: Madonna L. Moss & Hannah P Wellman (2017). "The Magoun clam garden near Sitka, Alaska: Niche construction theory meets traditional ecological knowledge, but what about the risks of shellfish toxicity?," 15(1-2) *Alaska Journal of Anthropology* 7-24. Amy Groesbeck et al, "Ancient Clam Gardens Increased Shellfish Production: Adaptive Strategies from the Past Can Inform Food Security" (2014) 9:3 PLoS ONE, online:

<<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0091235>>; Douglas Deur et al, "Kwakwaka-wakw 'Clam Gardens': Motive and Agency in Traditional Northwest Coast Mariculture" (2015) 43:2 *Human Ecology* 201.

¹² Fikret Berkes, *Sacred Ecology*, 4th ed. (New York: Routledge, 2017); Amy Groesbeck et al, "Ancient Clam Gardens Increased Shellfish Production: Adaptive Strategies from the Past Can Inform Food Security" (2014) 9:3 PLoS ONE; Douglas Deur et al, "Kwakwaka-wakw 'Clam Gardens': Motive and Agency in Traditional Northwest Coast Mariculture" (2015) 43:2 *Human Ecology* 201; Thomas Thornton, Douglas Deur & Herman Kitka Sr, "Cultivation of Salmon and other Marine Resources on the Northwest Coast of North America" (2015) 43:2 189; Darcy Matthews & Nancy Turner, "Ocean Cultures: Northwest Coast Ecosystems and Indigenous Management Systems" in Phillip Levin & Melissa Poe, ed, *Conservation for the Anthropocene Ocean*, (Academic Press, 2017) 169.

¹³ Professor Marco Hatch states that it has "been observed over and over again ... how clams are, in common parlance, 'fatter and happier' on clam gardens as compared to non-walled areas...clam gardens are much more than clams and sea gardens ... yes there are clams there but if you pull your head out of the sand, you'll see that there is a whole bunch of other stuff growing on the rock wall, many of which are traditional foods." – Marco Hutch, "Using Clam Garden Research to Span the Boundary Between Indigenous Communities and Academic Research" (2021 March 11), *Huxley Speaker Series – Huxley College of the Environment & Western Washington University*, online: <<https://huxley.wvu.edu/speaker-series/hatch>> at 37:10 and 28:20; Amy Groesbeck et al, "Ancient Clam Gardens Increased Shellfish Production: Adaptive Strategies from the Past Can Inform Food Security" (2014) 9:3 PLoS ONE, online:

<<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0091235>>. Other detail provided in personal communication, Octavio Cruz, Director of Pauquachin First Nation Marine Resource Department.

¹⁴ Lorraine Weir, "'Time Immemorial' and Indigenous Rights: A Genealogy and Three Case Studies (*Calder, Van der Peet, Tsilhqot'in*) from British Columbia" (2013) 26:3 J Historical Sociology 383.

share their marine resources. Both are major barriers identified by community members.¹⁵ The Coles Bay shellfish harvesting closure has caused multitudinous impacts on the Pauquachin community's physical health, socio-cultural fabric, and spiritual health.¹⁶

The shellfish harvesting closure at Coles Bay removed a substantial portion of a traditional economic resource, made harvest of a source of sustenance illegal, and profoundly impacted the socio-cultural, spiritual, and physical health of the Pauquachin Nation. Some of the key impacts of closures are documented below.

¹⁵ Peter Evans, Beth Keats, and Dave King from Trailmark Systems and Consulting, *Pauquachin Traditional Marine Use Study – Prepared for Proposed Kinder Morgan TransMountain Expansion, Marine Shipping Component* (2015), online: <<https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90464/90552/548311/956726/2392873/2449925/2450636/2784719/C277-1-2 - Appendix A - Pauquachin Traditional Marine Use Study - A4L6I5.pdf?nodeid=2784803&vernum=-2>> at p.46.

¹⁶ See discussion below.



FIGURE 4: "Mount Douglas Clam Bake," depicting Coast Salish peoples gathered on the beach to participate in a clam bake at Cordova Bay; likely near the site of a WSÁNEĆ historic village called ƛEL,ILĆ.¹⁷ Image G-04230 courtesy of the Royal BC Museum. Dated to 1900.

1.2 SHELLFISH HARVESTING AND MANAGEMENT IS ESSENTIAL TO THE HEALTH OF THE PAUQUACHIN PEOPLE

Interviewer: Did your family do a lot of harvesting of clams and fish and salmon?

[Pauquachin] Elder: Oh, we did. We didn't go to the store... That's why we lived out on the beach there, shellfish and all that stuff. I really liked those days.¹⁸

The closure of the Coles Bay shellfishery has had profound health impacts on the Pauquachin. The physical health of the Pauquachin Nation is dependent on the ability to access and subsist on country foods like shellfish. Interviews conducted with Pauquachin members reveal that marine foods like shellfish and salmon are “a preferred and highly valued part of the Pauquachin diet.”¹⁹ Clams are a source of critically important nutrients including proteins, omega-3 fatty acids, Vitamin B-12, and various essential minerals.²⁰ Shellfish have been a crucial element of the varied marine food supply for coastal peoples -- such that the “famine was practically unknown among the tribes living directly on the coast.”²¹

Clam beds located near the community – like those at Coles Bay – have always been particularly important. For example, it has been noted that Clam gardens acted as food reserves for coastal

¹⁷ WSÁNEĆ Leadership Council, “ᐱᐱᐱᐱᐱ – Cordova Bay Ancestral Village Site”, online: <<https://wsanec.com/ancestral-village-site/>>. Photo courtesy of the Royal BC Museum, online: <<https://search-bcarchives.royalbcmuseum.bc.ca/clam-bake-mount-douglas-beach>>.

¹⁸ Peter Evans, Beth Keats, and Dave King from Trailmark Systems and Consulting, *Pauquachin Traditional Marine Use Study – Prepared for Proposed Kinder Morgan TransMountain Expansion, Marine Shipping Component* (2015), online: <<https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90464/90552/548311/956726/2392873/2449925/2450636/2784719/C277-1-2 - Appendix A - Pauquachin Traditional Marine Use Study - A4L6I5.pdf?nodeid=2784803&vernum=-2>> at p.46.

¹⁹ Peter Evans, Beth Keats, and Dave King from Trailmark Systems and Consulting, *Pauquachin Traditional Marine Use Study – Prepared for Proposed Kinder Morgan TransMountain Expansion, Marine Shipping Component* (2015), online: <<https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90464/90552/548311/956726/2392873/2449925/2450636/2784719/C277-1-2 - Appendix A - Pauquachin Traditional Marine Use Study - A4L6I5.pdf?nodeid=2784803&vernum=-2>> at p.46.

It should be noted that the ethnographic and archeologic knowledge about Coastal Indigenous peoples, devalued the role shellfish played in their societies: “Ethnographically, Northwest Coast women probably were the primary shellfish collectors, although ..., men gathered shellfish and had knowledge of shellfish ecology. The association of women with shellfish undoubtedly does help account for the relatively limited archeological and ethnographic data on this class of resources. Norton (1985) found that Northwest Coast women’s economic contributions consistently received less attention in ethnographic accounts than those of men.” – See: Madonna L. Moss, “Shellfish, Gender, and Status on the Northwest Coast: Reconciling Archeological, Ethnographic, and Ethnohistorical Records of the Tlingit” (1993) 95:3 *American Anthropologist* 631-653.

²⁰ Tricia Brown Fleming, *Health, Risk, and Environmental Justice for Indigenous Shellfish Harvesters in British Columbia, Canada* (Master of Environment and Sustainability, University of Saskatchewan, 2019) [unpublished] at 14.

²¹ Philip Drucker, *Indians of the Northwest Coast* (New York: The Natural History Press, 1955) at p. 74.

First Nations with the “large and immobile populations of clams in actively managed beds [helping] to offset abrupt downturns in the availability of more mobile and variable species.”²²

In a 2015 *Pauquachin Traditional Marine Use Study*, interviews with Pauquachin members revealed that the percentage of country foods in the Pauquachin diet has drastically decreased due to cumulative effects in Saanich Inlet, including Coles Bay. Members shared that they “used to have [seafood] all the time” and that “it’s hard to go down there now” to harvest seafood.²³

Pauquachin members expressed two threads of concern about the conditions of shellfish today:

- 1) Concern about the lack of access to shellfish and other country foods – relegating them to a potentially less healthy Western diet; and
- 2) Concern about the potential impacts of polluted shellfish and other country foods on their health – such that they are hesitant to eat or share marine foods harvested from waters like Coles Bay.²⁴

Clearly, the loss of shellfish harvesting has put the food security and health of the community at risk. Losing access to traditional foods has profound impacts on Indigenous communities. Dr. Maki Ikemura’s testimony about potential impacts from the proposed Northern Gateway oil pipeline/shipping project on the marine food supply of Coastal Nations is instructive.²⁵ Dr. Ikemura has worked in many Indigenous communities and shared the example of the how the James Bay Cree suffer from high rates of diabetes and obesity – because mercury contamination in their waters forced them to “stop their traditional diet of fish and replace it with convenience foods from the south.”²⁶ Convenience foods often lead to serious health impacts for Indigenous peoples, including diabetes, obesity, and cardiovascular disease.²⁷

²² Douglas Deur, Adam Dick, Kim Recalma-Clutesi, Nancy Turner, “Kwakwaka’wakw “Clam Gardens” (26 November 2019) 43 *Human Ecology* 201-212, online: <<https://link.springer.com/article/10.1007/s10745-015-9743-3>>. Kwaxistala (Chief Adam Dick), shares that the Kwakwaka’wakw people would center their winter villages around the clam gardens and beds. – see: aquaCULTURE Pictures Inc, *Ancient Sea Gardens – Mystery of the Pacific Northwest* (2005), DVD.

²³ Peter Evans, Beth Keats, and Dave King from Trailmark Systems and Consulting, *Pauquachin Traditional Marine Use Study – Prepared for Proposed Kinder Morgan TransMountain Expansion, Marine Shipping Component* (2015), online: <<https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90464/90552/548311/956726/2392873/2449925/2450636/2784719/C277-1-2 - Appendix A - Pauquachin Traditional Marine Use Study - A4L6I5.pdf?nodeid=2784803&vernum=-2>> at p.46.

²⁴ Peter Evans, Beth Keats, and Dave King from Trailmark Systems and Consulting, *Pauquachin Traditional Marine Use Study – Prepared for Proposed Kinder Morgan TransMountain Expansion, Marine Shipping Component* (2015), online: <<https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90464/90552/548311/956726/2392873/2449925/2450636/2784719/C277-1-2 - Appendix A - Pauquachin Traditional Marine Use Study - A4L6I5.pdf?nodeid=2784803&vernum=-2>> at p.47.

²⁵ *Joint Review Panel for the Enbridge Northern Gateway Project* – National Energy Board (2012 April 4 – Bella Bella, British Columbia) – Volume 38, online: <<https://iaac-aeic.gc.ca/050/documents/p21799/85674E.pdf>>.

²⁶ *Joint Review Panel for the Enbridge Northern Gateway Project* – National Energy Board (2012 April 4 – Bella Bella, British Columbia) – Volume 38 at paras 28225-28226, online: <<https://iaac-aeic.gc.ca/050/documents/p21799/85674E.pdf>>.

²⁷ See: Makel Batal et al, “Quantifying associations of the dietary share of ultra-processed foods with overall diet quality in First Nations peoples in the Canadian provinces of British Columbia, Alberta, Manitoba and Ontario” (2017 July 25) 21:1 *Public Health Nutrition* 103-113, online: <<https://www.cambridge.org/core/journals/public-health-nutrition/article/quantifying-associations-of-the-dietary-share-of-ultraprocessed-foods-with-overall-diet-quality-in-first>>

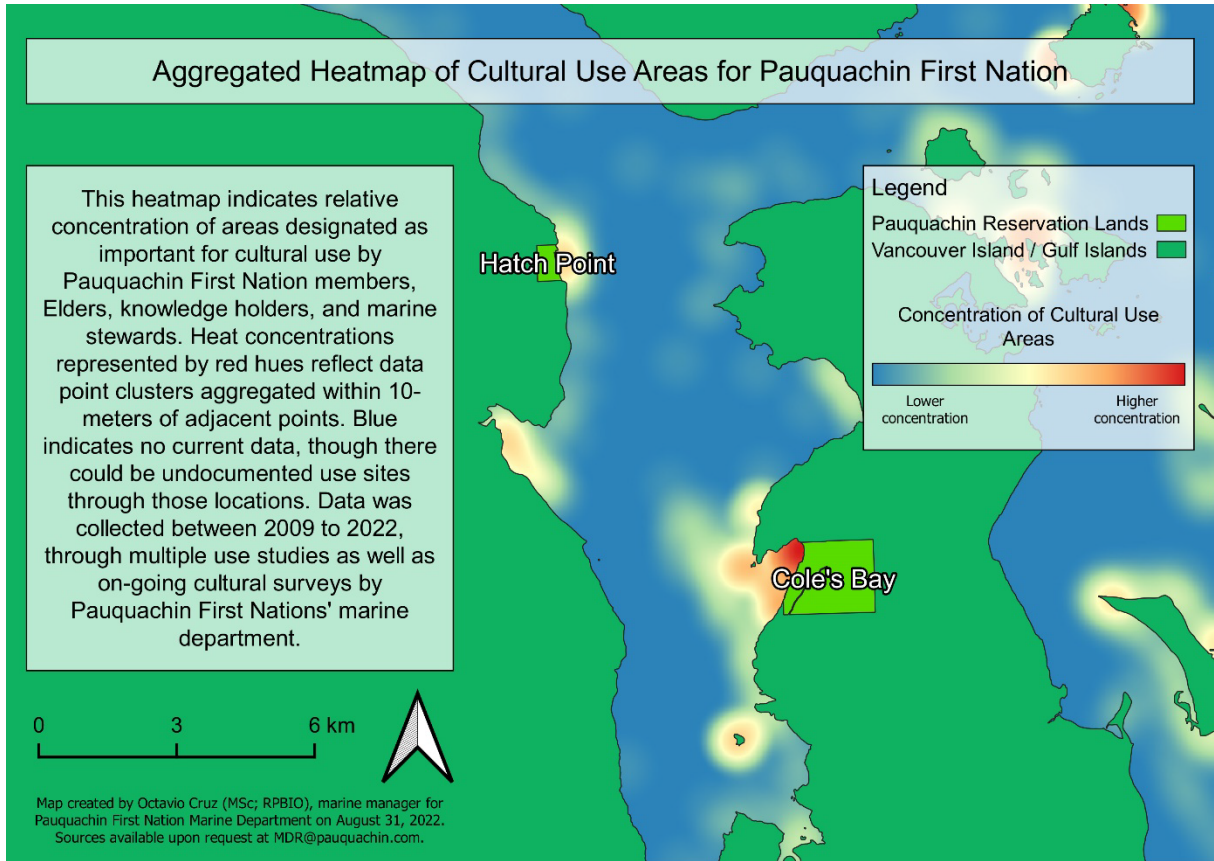


FIGURE 5: Aggregated Heatmap of Cultural Use Areas for Pauquachin First Nation

Dr. Ikemura also concluded that:

...harvesting and sharing traditional foods has an impact on people's health that goes beyond just the nutritional value of what's being eaten.²⁸ ... [The more] insidious and long-term health effect [of loss of country foods] is the disruption of the social fabric in the communities.²⁹

Nourishment from the cultural, social, and spiritual aspects of managing, harvesting, and eating country foods is just as important as the physical nourishment these foods provide. Tricia Brown

[nations-peoples-in-the-canadian-provinces-of-british-columbia-alberta-manitoba-and-ontario/B4D1F48A362D9925C107B563B5BEC508/share/6749cd2e46c509ab68f25bba8ed0b7b13388dfae](https://www.cbc.ca/news/indigenous/nations-peoples-in-the-canadian-provinces-of-british-columbia-alberta-manitoba-and-ontario/B4D1F48A362D9925C107B563B5BEC508/share/6749cd2e46c509ab68f25bba8ed0b7b13388dfae).

²⁸ Joint Review Panel for the Enbridge Northern Gateway Project – National Energy Board (2012 April 4 – Bella Bella, British Columbia) – Volume 38 at para 28259, online: <<https://iaac-aeic.gc.ca/050/documents/p21799/85674E.pdf>>.

²⁹ Joint Review Panel for the Enbridge Northern Gateway Project – National Energy Board (2012 April 4 – Bella Bella, British Columbia) – Volume 38 at para 28280, online: <<https://iaac-aeic.gc.ca/050/documents/p21799/85674E.pdf>>.

Fleming has pointed out the importance of shellfish harvest to the holistic health of Indigenous communities:

*Shellfish strongly influence way of life and are a core component of holistic health, supporting diet and nutrition, cultural traditions and interactions with the land, food security, and community cohesion.*³⁰

Restoration of shellfish harvesting and management at Coles Bay is crucial to reverse adverse health impacts on the Pauquachin people's bodies, minds, and community.

1.3 SHELLFISH HARVESTING AND MANAGEMENT IS ESSENTIAL TO THE NATION'S SOCIAL, CULTURAL, AND SPIRITUAL WELL-BEING

The closure of Coles Bay shellfish harvesting destabilized and disrupted an entire traditional food system which includes the social, cultural, and educational roles involved in harvesting, preparing, and consuming of specific traditional foods.³¹ As management and harvesting took place, traditional knowledge was transferred between those participating.³² That transfer of traditional knowledge from elders to youth is now disrupted, and inter-generational bonding is impacted.

At Pauquachin, shellfish harvesting provided the materials and occasions for key cultural practices.³³ Restoration of the Coles Bay shellfish beds is necessary to revitalize and restore knowledge such as:

- relationships with, and stewardship of, marine resources,

³⁰ Tricia Brown Fleming, *Health, Risk, and Environmental Justice for Indigenous Shellfish Harvesters in British Columbia, Canada* (Master of Environment and Sustainability, University of Saskatchewan, 2019) [unpublished] at 2.

³¹ There are culturally specific ways that shellfish were harvested and prepared. One account from Philip Drucker, *Indians of the Northwest Coast* (New York: The Natural History Press, 1955) at p. 74: "It was the women's duty to dig them, which in former times she accomplished with a digging stick and a large shell. In transporting them she protects herself from the salt water, by placing a mat on her back under the carrying basket. For immediate use these clams are roasted above a fire, or steam-cooked in a box. When larger quantities are being made ready for future use, the cooking is done by steaming under a covering of seaweeds and mats. The clams are then removed from the shells, and strung on sticks of a strand of bark. These are exposed for some time to the heat of a fire, and then placed in smoke until they are thoroughly cured. The very much larger horse clam is also used for food. The shells of these are 8 or 10 inches in length. It is with some difficulty that they are secured, as the clams are capable of withdrawing from the surface with considerable speed. These are cooked by steaming; and are strung on three sticks because of their size. They are then exposed to the action of fire and smoke as are the smaller clams."

³² Darcy Matthews & Nancy Turner, "Ocean Cultures: Northwest Coast Ecosystems and Indigenous Management Systems" in Phillip Levin & Melissa Poe, ed, *Conservation for the Anthropocene Ocean*, (Academic Press, 2017) 169.

³³ Peter Evans, Beth Keats, and Dave King from Trailmark Systems and Consulting, *Pauquachin Traditional Marine Use Study – Prepared for Proposed Kinder Morgan TransMountain Expansion, Marine Shipping Component* (2015), online: <<https://docs2.cer-rec.gc.ca/ll->

- monitoring strategies for targeted traditional foods,
- conservation, based in social structures such as ceremony or stories, and
- community management of resources with specialization of roles, often held by specific members within familial lineages.

Neighbouring W̱SÁNEĆ stories reflect the central role clams played in culture. For example, the clam creation story embeds lessons from Creator on how people should live.³⁴ In a recent video, W̱SÁNEĆ Elder J,SINTEN Elliott has explained the importance of the clam creation story for such life lessons – and for the development of the SENĆOŦEN language itself.³⁵

Indeed, marine harvesting locations and practices “are considered sacred, and involve ritual activities borne of the W̱SÁNEĆ belief that everything in their habitat was once human and intended to demonstrate respect for these equal actors within their environment.”³⁶

The sharing of stories like the clam creation story is tied to place, and to cultural activities like harvesting clams. In essence, the beaches were the schools and community centres for the Pauquachin – and the closure of harvesting beaches has removed important opportunities for cultural knowledge transfer and revitalization.³⁷ Decimation of a way of life like shellfishing has broad impacts on the passing on of culture.

In sum, far more than nutrition and health has been impacted by the shellfish closures at Coles Bay and elsewhere in Pauquachin territory. Critically important cultural, social, educational, and spiritual values have also been profoundly impacted.

eng/llisapi.dll/fetch/2000/90464/90552/548311/956726/2392873/2449925/2450636/2784719/C277-1-2 - Appendix A - Pauquachin Traditional Marine Use Study - A4L6I5.pdf?nodeid=2784803&vernum=-2 at p.33.

³⁴ SENĆOŦEN Videos, “Clam Creation English Version” (2020 May 5), online (video): *Youtube* <<https://www.youtube.com/watch?v=ZEFRO4nLNHU>>.

³⁵ For example, the SENĆOŦEN word for ‘swam’ comes from the SENĆOŦEN word meaning ‘elusive’, alluding to the way clams hide under the surface. SENĆOŦEN Videos, “Clam Creation English Version” (2020 May 5), online (video): *Youtube* <<https://www.youtube.com/watch?v=ZEFRO4nLNHU>>. Note that the Pauquachin community has two traditional spoken and written languages: Hul’qumi’num and SENĆOŦEN. See: The Pauquachin Nation, “A Sacred Journey – Comprehensive Community Plan (2015)” at p. 15, online: <<https://static1.squarespace.com/static/5e5401ebf9becf12d06ff6d9/t/5e62c9cf7d4516293d91160d/1583532508755/pauquachin-CCP-final-version-min.pdf>>.

³⁶ Peter Evans, Beth Keats, and Dave King from Trailmark Systems and Consulting, *Pauquachin Traditional Marine Use Study – Prepared for Proposed Kinder Morgan TransMountain Expansion, Marine Shipping Component* (2015), online: <<https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90464/90552/548311/956726/2392873/2449925/2450636/2784719/C277-1-2 - Appendix A - Pauquachin Traditional Marine Use Study - A4L6I5.pdf?nodeid=2784803&vernum=-2>> at p.33.

³⁷ “Passing on the stories, songs, and language of an entire culture is a difficult process that is steeped in a particular way of life,” aquaCULTURE Pictures Inc, *Ancient Sea Gardens – Mystery of the Pacific Northwest* (2005), DVD.

1.4 SHELLFISH HARVESTING AND MANAGEMENT IS ESSENTIAL TO THE NATION'S ECONOMIC WELL-BEING

Today every Pauquachin family has to spend significantly more money at grocery stores, because of the loss of their traditional shellfish harvest. The Nation has not only lost a source of sustenance, but has lost a major economic resource. While governments delay restoration efforts by citing costs, the Pauquachin First Nation is forced to deal with the very real cost of purchasing Western foods and loss of economic opportunities.

A return of healthy shellfish will provide coastal First Nations the opportunity to meaningfully access the wealth within their territories. Skyler Williams, Mohawk, Wolf Clan member, and member and resident of Six Nations of the Grand River Territory, described such wealth:

*For us, Indigenous economy is that idea that our lands and our language, our culture, our heritage, all of those things that make us Indigenous people, wherever you are from, this is who we are. That is where we put our wealth. That is what wealth is for us.*³⁸

Traditionally shellfish were a significant aspect of coastal nations' wealth and economy. Shellfish were traded between nations and communities in exchange for other material goods of value. In some cases, dried clams themselves were a form of currency for coastal cultures.³⁹ Shells were also used to create other goods like tools and ornamental objects and beads.⁴⁰ Shellfish trade was

³⁸ Yellowhead Institute, "Cash Back – A Yellowhead Institute Red Paper" (2021) at p. 49, online (pdf): <https://cashback.yellowheadinstitute.org/wp-content/uploads/2021/05/Cash-Back-A-Yellowhead-Institute-Red-Paper.pdf>, citing the Ransom Economy webinar. Coral Anne Hilton, the founder of the Indigenomics Institute and of Hesquiaht (Nuu chah nulth) descent, echoes this sentiment in her book: "From an Indigenous worldview, the concept of wealth is strikingly different. It is inherently about relationships, universal connection, continuity across generations and connects abundance to giving. Economy is both social and spiritual in nature from within an Indigenous worldview. The Indigenous economy acts as a platform for Indigenous well-being. Abundance, prosperity, and wealth are based in giving, sharing, community, ceremony, and through the quality of relationships shaped from the experience of the cosmos, to the land and to humanity, and through the recognition of life force in all things." – Carol Anne Hilton, *Indigenomics – Taking a Seat at the Economic Table* (Gabriola Island: New Society Publishers, 2021), at p. 31.

³⁹ "The Tlingit bartered strings of dried clams for hides [48]." - Harriet V Kuhnlein and Murray M Humphries, "Traditional Animal Foods of Indigenous Peoples of North America – the contributions of wildlife diversity to the subsistence and nutrition of Indigenous cultures (Clams)," online: *McGill University* <<http://traditionalanimalfoods.org/marine-invertebrates/bivalves/page.aspx?id=6504>>.

⁴⁰ "The shells of some species provided a source of raw material for a variety of functional tools and ornaments. Mussel shells were chipped and/or ground into knives, harpoon heads, scrapers, adze or chisel bits, and other tools. With little modification, clam shells served as spoons, ladles, or containers. Beads of clamshell and *Olivella* were made by chipping, drilling, and grinding. Rattles were made of large scallop shells that washed up on the beach during storms. Whelk or turban shell opercula were used as decorative insets or inlay. The most highly prized ornamental shells were *Dentalium* and abalone. Most accounts (e.g., Suttles 1990a:28) of *Dentalium* indicate that its geographic distribution is limited to deep waters off the west coast of Vancouver Island. *Dentalium* is also found in shallow waters, however, and has been recorded for the Copper River and Hydaburg areas of Alaska, the Queen Charlotte Islands, the east coast of Vancouver Island, Puget Sound, and the coasts of Washington and Oregon (Barton 1992). These tusklike shells were collected on the beach or caught using rakelike or broomlike fishing implements

widespread. Nations far in the Interior prized the dried clams that they obtained by trading with coastal Nations. For example:

Coast Salish women acquired special baskets and bags from the interior by trading dried clams. The Gitksan (Gitxsan) had no access to the coast and depended on trade to obtain clams which they regarded very highly.⁴¹

Historically, the access to healthy and abundant land and waters ensured that coastal Indigenous communities were able to participate in a rich economy with other coastal and in-land nations. However, the natural evolution of economic activity based on clams and other marine resources was first stifled by the general dispossession of Indigenous lands and resources – and second, by the ongoing pollution of waters where marine resources are harvested.⁴² Preventing shellfish harvesting with little prospect of restoration forecloses future economic aquaculture opportunities that Nations may pursue.

On the other hand, restoration of coastal shellfish harvesting has the potential to support resurgent Indigenous economic development. For example, Metlakatla First Nation is a majority owner of Coastal Shellfish, an Indigenous aquaculture company where three-quarters of the employees are Indigenous.⁴³ The Heiltsuk Nation has also expressed interest in developing additional shellfish aquaculture opportunities by using some of \$36.96 million dollar funding from a recent reconciliation agreement with the federal government.⁴⁴

(Barton 1991). Strings of dentalia were prized wealth items and were traded widely, especially during the historic period when they served as currency.” - Madonna L. Moss, “Shellfish, Gender, and Status on the Northwest Coast: Reconciling Archeological, Ethnographic, and Ethnohistorical Records of the Tlingit” (1993) 95:3 *American Anthropologist* 631-653.

⁴¹ “Cultures living in the interior are also reported to have eaten clams that they acquired through trade with coastal peoples.” - Harriet V Kuhnlein and Murray M Humphries, “Traditional Animal Foods of Indigenous Peoples of North America – the contributions of wildlife diversity to the subsistence and nutrition of Indigenous cultures (Clams),” online: *McGill University* <<http://traditionalanimalfoods.org/marine-invertebrates/bivalves/page.aspx?id=6504>>.

⁴² As Tsimshian (Kitsumkalum/Kitselas) and Nuu-chah-nulth (Ahousaht) scholar Clifford Atleo writes, dispossession places Indigenous communities between a rock and a hard place, since it pushes them to increasingly rely on the mainstream economy for survival despite “almost always attempt[ing] to act in ways that would preserve and perpetuate their political and economic autonomy.” Yellowhead Institute, “Cash Back – A Yellowhead Institute Red Paper” (2021) at p. 10, online (pdf): <<https://cashback.yellowheadinstitute.org/wp-content/uploads/2021/05/Cash-Back-A-Yellowhead-Institute-Red-Paper.pdf>>.

⁴³ Matt Simmons, “An unexpected outcome of the Great Bear Rainforest agreement: tasty sustainable scallops,” *The Narwhal* (2020 October 3), online: <<https://thenarwhal.ca/coastal-shellfish-indigenous-aquaculture-great-bear-rainforest/>>; Michael Uehara, president and CEO of Coastal Shellfish, says, “Our goal has been fairly ambitious to produce ... an economy of inclusion for Indigenous communities in coastal British Columbia...” – this is an example that many other coastal nations may choose to follow if conditions along the coast permit. Also: The Northern Development Initiative Trust, a non-profit funded by BC⁴³, has already recognized the potential for shellfish aquaculture in Northern BC, by recently providing \$375,000 in funding to the Metlakatla Nation to expand its shellfish aquaculture industry. - Keili Bartlett, “Metlakatla awarded \$375,000 for shellfish aquaculture,” *The Northern View* (2018 April 30), online: <<https://www.thenorthernview.com/news/metlakatla-awarded-375000-for-shellfish-aquaculture/>>.

⁴⁴ Crown Indigenous Relations and Northern Affairs Canada (CIRNAC), “Canada and Heiltsuk Sign the Haítcístut Incremental House Post Agreement” (2018 July 25) (News Release), online: <<https://www.newswire.ca/news-releases/canada-and-heiltsuk-sign-the-haítcístut-incremental-house-post-agreement-856381626.html>>.

In many senses, to restore shellfish harvesting is to restore wealth for coastal Indigenous communities like Pauquachin Nation.

1.4.1 Restoration of Coles Bay Will Enhance the General Community Well-Being of the Pauquachin

The overall impact on Pauquachin First Nation from colonization – including the loss of such a critical site as Cole Bay – can be measured. The Government of Canada’s Community Well-Being (CWB) index⁴⁵ demonstrates that First Nations and Inuit communities across Canada consistently score lower than non-Indigenous communities. The most recent Index shows that Pauquachin First Nation has a CWB score of 55 – compared to the surrounding North Saanich area, which has a CWB score of 88.⁴⁶ This is a significant gap that must be addressed.

The restoration of a vibrant shellfishery in the community at Coles Bay would significantly redress some of the damage done to the Pauquachin community. Shellfish restoration will strengthen community well-being – and benefit the community’s nutrition, health, social cohesion, cultural practices, economy, inter-generational bonds and other values.

⁴⁵ Government of Canada, *About the Community Well-Being index* (2019-05-24) online <<https://www.sac-isc.gc.ca/eng/1421245446858/1557321415997#s2>>: The CWB scores are composed of data related to education, labour force activity, income, and housing and is taken from Canadian census data.

⁴⁶ See Government of Canada, *Community Well-Being index map* (2019-05-24) online <<https://www.sac-isc.gc.ca/SAC-ISC/CWB/index-map-en.html>>: the scores are based on 2016 census data.

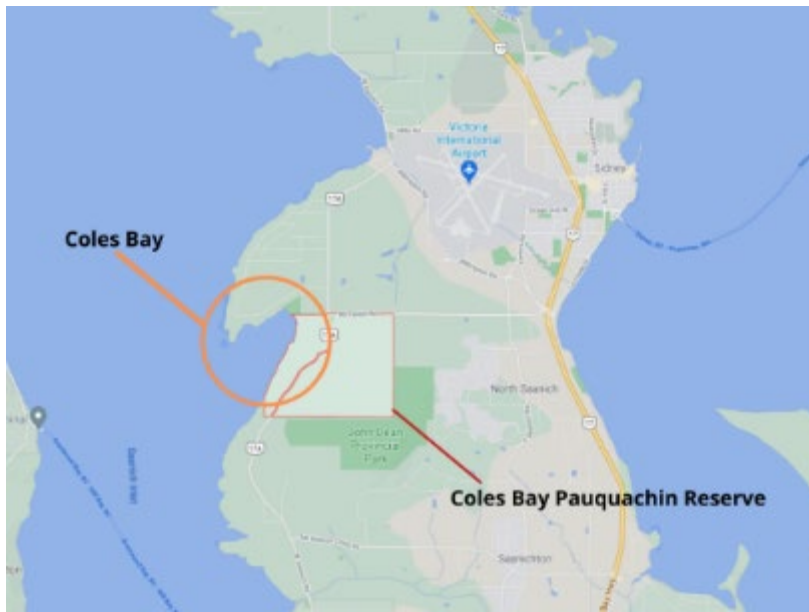


FIGURE 6: Overview of Coles Bay, with Pauquachin First Nations Coles Bay IR 3 highlighted.



FIGURE 7: Coles Bay Storm Water Discharge and respective levels of contamination concern.⁴⁷

⁴⁷ Capital Regional District, "2019 Saanich Peninsula Stormwater Quality Supplemental Data" (2019), online: <https://www.crd.bc.ca/docs/default-source/crd-document-library/plans-reports/wastewater-stormwater/2019-reports/2019-saanpenswqprogram-supplementdata.pdf?sfvrsn=1f4dc7cc_4> at pp. 33 and 3 respectively.

1.5 WHAT IS THE PROBLEM AT COLES BAY? THE COLES BAY CLOSURE

The federal government issued an order closing Coles Bay to shellfish harvesting in 1997 due to sanitary pollution. DFO continued testing the Bay for several years without implementing any effective remediation plan. After not seeing any improvements, they ceased testing in 2014. Thus, this key shellfish harvesting site has been closed to Pauquachin First Nation as a source of food, culture, and community for 25 years. An entire generation has grown up with the Coles Bay closure – and the profound injury that closure represents.

1.5.1 Technical Description

Coles Bay is located adjacent to Pauquachin reserve lands, Cole Bay Indian Reserve 3 (IR3).⁴⁸ The Bay is intersected by private property boundaries on its northern intertidal lines, the boundary of the Capital Regional District (CRD) Coles Bay Regional Park at the eastern-most section of the beach, and the Pauquachin Nation reserve lands at the southern portion of the beach facing into Saanich inlet.

Note that there is a single sewage pump station in Pauquachin reserve lands in the southeast portion of lands adjacent to Coles Bay, which is monitored by North Saanich for sewage overflow during major storm events. This station pumps the sewage waste from Pauquachin Nation to a centralized wastewater collection site in Sydney. There are multiple municipal stormwater outflows directly into Coles Bay, which also funnel out road runoff from two main roads adjacent to the Bay. These watersheds immediately along the coast of Coles Bay are characterized as “urban influenced drainage to shoreline via storm drain networks.”⁴⁹ The two main outflows of concern are at the North and East sides of Coles Bay, respectively, as noted in the above image.

The storm drain outflows in the image below run along residential neighbourhoods to the north of the Bay, collecting road and property runoff, including septic field runoff. When septic systems are not properly maintained; are older, broken or damaged; or are located on soils unsuited to septic fields (like the Ardmore neighbourhood and much of North Saanich), they cease to function effectively and their runoff will often contain fecal contamination. Where the storm drain network is a direct flow system without any design features (*e.g.*, rain gardens, wetlands) to slow water flow and increase nutrient absorption – as here – the contamination from the septic runoff flows directly into waterbodies like Coles Bay. This has led to contamination and shellfish closure.⁵⁰

⁴⁸ Note that the Government of Canada database refers to “Cole Bay” IR, not “Coles”. See: <<https://search.open.canada.ca/openmap/522b07b9-78e2-4819-b736-ad9208eb1067>>.

⁴⁹ See: Capital Regional District, “Watersheds of Greater Victoria” (2015), online: <https://www.crd.bc.ca/docs/default-source/es-watersheds-pdf/regional-watershed-maps/watersheds-of-greater-victoria-map-2015.pdf?sfvrsn=a3c954ca_2>.

⁵⁰ Note that each of the two main problematic storm drains by Coles Bay collects the runoff from approximately 15-30 properties.

Note that Octavio Cruz, Pauquachin Marine Scientific Manager will be presenting North Saanich with further detailed evidence of the link between septic systems, stormwater, and the closure of shellfish harvest at Coles Bay.



FIGURE 8: One of the storm drains that carries septic pollution towards Coles Bay. A build-up of pollutants that are causing a foamy substance at the surface is evident. Note the straight storm drain design that encourages a fast flow rate, without mitigation design such as rain garden or wetland. (Photo: Camille O'Sullivan)

The actions of local and senior governments in:

- permitting development in the area, and
- mismanaging septic and storm water

has created much of the pollution that contaminates Coles Bay shellfish. Governments' failure to remediate this septic and stormwater pollution has led to the federal closure of Coles Bay shellfish harvests since 1997 – and profound impacts on the Pauquachin people.

As documented below, the record of North Saanich in dealing with septic failures at Coles Bay and elsewhere is highly problematic. Clearly, the time has come for North Saanich to rectify that problematic history, and to work with Pauquachin to restore Coles Bay to health.



FIGURE 9: Storm drain outflow at the North end of Coles Bay. See the algae accumulation at the base of the outfall, above the water line, indicating excess nutrients in the water source, likely from septic contamination. (Photo: Camille O'Sullivan)

1.6 THE HISTORY OF NORTH SAANICH FAILURE TO PROPERLY REGULATE SEPTICS AND STORMWATER

North Saanich has long been aware of problems with its septic systems and stormwater – and of the need to strengthen policies and measures to address those problems. Over the decades, several reports have highlighted the shortcomings in North Saanich’s policies and actions on these pollution problems. Unfortunately, those reports have not been adequately heeded.

As early as 1978 North Saanich had identified that the Ardmere area draining into Coles Bay is not actually suitable for conventional on-site waste management systems. Despite the fact that the 1978 *Sewerage Study of the District of North Saanich* identified the Ardmere Area directly above Coles Bay as unsuitable for onsite sewage disposal (septic systems),⁵¹ a majority of the Ardmere-area houses that we reviewed have been built since 1978 and have septic systems.⁵²

In 1985, a Reid Crowther study prepared for North Saanich pointed out a general lack of qualitative and quantitative analysis on the District’s drainage systems and how they function.⁵³ Reid Crowther recommended a comprehensive study of drainage flow, monitoring ditch discharge and outfalls, addressing declining drainage infrastructure and more regulation of drainage installation.⁵⁴ The Reid Crowther report affirmed that the area around Coles Bay had seen issues with storm water pooling and septic malfunctions in the Ardmere area.⁵⁵ The report went on to recommend that the District establish a ‘Deficiencies Fund’ in order to repair and replace failing infrastructure, as well as for system upgrades.⁵⁶

By 1989, the North Saanich Official Community Plan acknowledged that the majority of the North Saanich land base is not rated well for septic field disposal. The Official Community Plan stated “...virtually none of North Saanich is rated as highly suitable (for septic disposal), with many limitations including high water table, lack of surface soil material and surface bedrock.”⁵⁷

⁵¹ As seen in Christine Bender and Erwin Dyck, *Update and Review of On-site Sewage Disposal Failures for North and Central Saanich* (CRD: LWMP Steering Committee, 1996), p.3.

⁵² A cursory review of BC Assessment Authority records indicates that a majority of houses in the Ardmere neighbourhood have likely been built since 1978. A specific review of BC Assessment Authority records for addresses from 547 Ardmere Dr to 773 Ardmere Dr, plus the south side of Aboyne Ave, plus 9175 and 9191 Ardmere Dr North showed that 20 of the 31 houses were constructed after 1978. See <<https://www.bcassessment.ca/>>.

⁵³ Reid Crowther & Partners Ltd, 10th January 1985, as seen in Avreal Perrault, *Saanich Peninsula Liquid Waste Management Audit Report – Final* (CRD: 2019), p. 209-210.

⁵⁴ Reid Crowther & Partners Ltd, 10th January 1985, as seen in Avreal Perrault, *Saanich Peninsula Liquid Waste Management Audit Report – Final* (CRD: 2019), p. 209-210.

⁵⁵ Reid Crowther & Partners Ltd, 10th January 1985 as seen in Avreal Perrault, *Saanich Peninsula Liquid Waste Management Audit Report – Final* (CRD: 2019), p. 231-232.

⁵⁶ Reid Crowther & Partners Ltd, 10th January 1985 as seen in Avreal Perrault, *Saanich Peninsula Liquid Waste Management Audit Report – Final* (CRD: 2019), p. 209-210.

⁵⁷ As cited in Christine Bender and Erwin Dyck, *Update and Review of On-site Sewage Disposal Failures for North and Central Saanich* (CRD: LWMP Steering Committee, 1996), p 10.

In 1996, the CRD produced a report – *Update and Review of On-Site Sewage Disposal Failures for North and Central Saanich* – that summarized these aforementioned studies documenting serious issues with septic system, stormwater and wastewater management in the District of North Saanich.⁵⁸

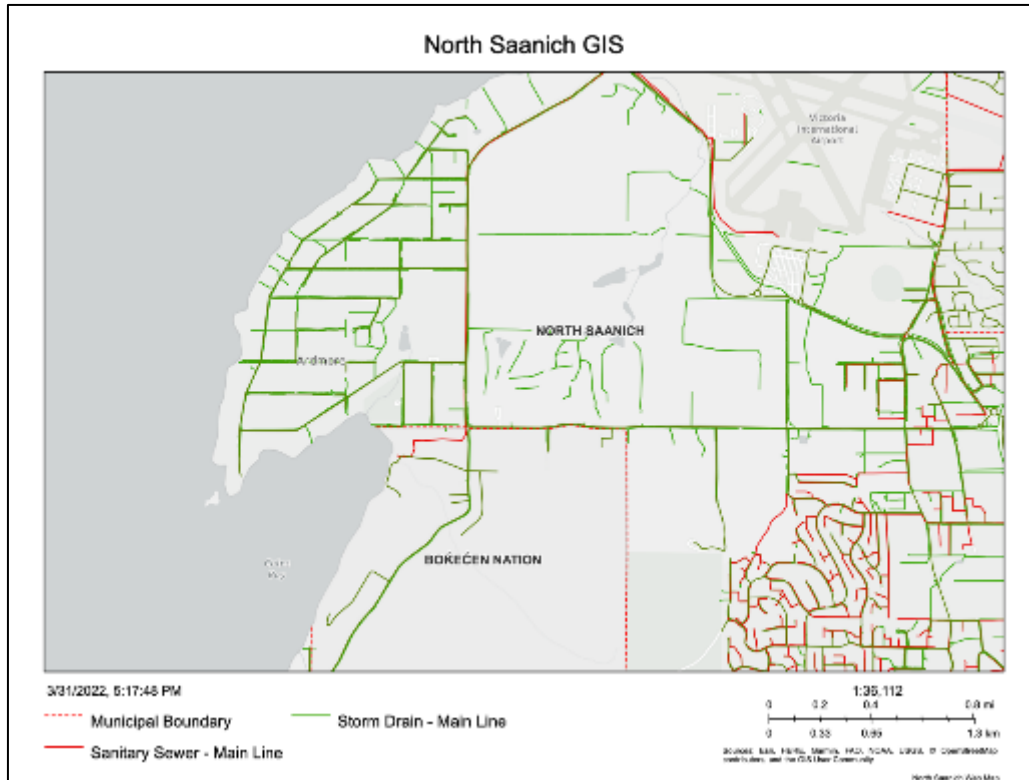


FIGURE 10: Map Created using the North Saanich GIS tool¹ with the Storm Drain and Sanitary Sewer layers activated. Note that evidence of sanitary sewer lines in the Ardmore area directly North of Coles Bay is conspicuously missing.

Recently, a CRD report noted that as early as 1996:

- “...the Ardmore area (Coles Bay) was identified as a potential problem area for onsite systems due to poor site conditions.”
- The Ministry of Environment required a new Saanich Peninsula Liquid Waste Management Plan to achieve “permanent solutions with firm commitments with acceptable timelines for the areas of North Saanich that are exhibiting on-site sewage disposal problems.”⁵⁹

⁵⁸ Christine Bender and Erwin Dyck, *Update and Review of On-site Sewage Disposal Failures for North and Central Saanich* (CRD: LWMP Steering Committee, 1996); Note that the 1996 *Update and Review of On-site Sewage Disposal Failures for Central and North Saanich* was prepared for the Liquid Waste Management Plan Steering Committee and consolidated in 2009.

⁵⁹ Jody Watson & Tara Stott, *Rectification of Onsite Sewage Problems in Coles Bay*, CRD Memo to Glenn Harris (Senior Manager, Environmental Protection), (November 8, 2021).

1.6.1 North Saanich Broken Commitments to reform on-site wastewater management systems

At the turn of the last century, as a result of the well-documented problems with septic runoff and stormwater, North Saanich Council finally made commitments to mitigate the ongoing contamination. North Saanich made a number of commitments to address sewage and stormwater problems. However, as documented below, North Saanich has failed to live up to those commitments.

The *Saanich Peninsula Liquid Waste Management Plan* – adopted in 1996 and consolidated in 2009 – contained several formal commitments from North Saanich regarding improvements to on-site sewage system maintenance and stormwater improvements.⁶⁰ Some of the key commitments – and the North Saanich failure to meet the commitments – are highlighted below.

1.6.1.1 Section 4.4.4 Liquid Waste Management in Areas Outside of Sewerage Areas – Community Plan

In 1996⁶¹ North Saanich committed to participating in a regional program to regulate septic system maintenance. The *Saanich Peninsula Liquid Waste Management Plan* described North Saanich’s formal commitment:

*...to participation in the regional program for maintenance management of onsite [septic] systems and to apply the maintenance requirements throughout the District of North Saanich no later than December 31, 2007. In the event that the regional program does not proceed on schedule, the District of North Saanich commits to implementation of a program applicable within the boundaries of the District of North Saanich that requires compulsory pumping of septage tanks and compulsory maintenance of small treatment plants no later than December 31, 2007.*⁶²

[emphasis added]

⁶⁰ *Saanich Peninsula Liquid Waste Management Plan, Consolidated Version* (CRD, 2009), Attachment B, Amendment No. 2, 4.4.4

⁶¹ *Saanich Peninsula Liquid Waste Management Plan, Consolidated Version* (CRD, 2009), Attachment B, Amendment No. 2. (The Amendments cited were made to the 1996 LWMP were made in 2005 per the date of approval. 1996 is set as the date as it is the date of the Liquid Waste Management Plan commitments and is confirmed in a CRD memo prepared in regards to the onsite sewage problems at Coles Bay. See Memorandum from Jody Watson and Tara Stott to Glenn Harris on “Rectification of Onsite Sewage Problems in Coles Bay” (November 8, 2021) p 1.

⁶² See Commitment 4.4.4, *Saanich Peninsula Liquid Waste Management Plan, Consolidated Version* (CRD, 2009), Attachment B, Amendment No. 2, 4.4.4.

The 2019 audit of the *Saanich Peninsula Wastewater Plan* found North Saanich to be non-compliant with its above commitment to either:

- join a regional program to regulate septic system maintenance, or
- establish its own septic regulatory program

by December 31, 2007.

In contrast to North Saanich’s failure to live up to its commitment, the regional septic system regulatory program has been implemented in Langford, View Royal, Colwood, and Saanich through the Capital Regional District (CRD)’s bylaw 3479 – “A Bylaw to Regulate the Maintenance of Onsite Sewage Systems in the Capital Regional District.” This Bylaw established a comprehensive septic maintenance management scheme and was adopted on April 9, 2008 (a mere three months past the deadline established in North Saanich’s commitment above).⁶³

Nevertheless, North Saanich refused to join the regional CRD program. The CRD audit report notes that North Saanich “Council did not agree to participate in the regional onsite system program. Therefore, the program is not currently in place...”⁶⁴ Simply put, North Saanich failed to fulfill the first alternative commitment.

One might argue that North Saanich was not strictly obligated to join the regional program on the technicality that the regional program was three months late in being established. However, North Saanich had clearly committed that if a regional program was not established by that date, that North Saanich would take alternative action and implement its own program requiring “compulsory pumpage of septage tanks and compulsory maintenance...” Despite this, the 2019 CRD Audit pointed out that North Saanich has failed to live up to this alternative commitment as well.⁶⁵

1.6.1.2 Commitment 4.4.4 Liquid Waste Management in Areas Outside of Sewerage Areas – New Subdivisions

In 2005, North Saanich made a further commitment to raise the standards for on-site sewage disposal in new subdivisions. The District committed:

...to require that all new subdivisions which will not be connected to a community sewer system shall be designed such that cumulative hydraulic loading from onsite sewage disposal systems can be safely handled by overall soils environment and, to meet this requirement, all such subdivisions shall comply with the requirements of the most current version of the Subdivision

⁶³ CRD Bylaw 3479, *Onsite Sewage Maintenance Bylaw, 2007* online, <<https://www.crd.bc.ca/docs/default-source/septic-pdf/onsite-sewage-systems-bylaw-crd-bylaw-no-3479.pdf?sfvrsn=6>>.

⁶⁴ Avreal Perrault, *Saanich Peninsula Liquid Waste Management Audit Report – Final* (CRD: 2019) p. 16, Reference 59

⁶⁵ Avreal Perrault, *Saanich Peninsula Liquid Waste Management Audit Report – Final* (CRD: 2019) p. 16, Reference 59

*Assessment Standards prepared by the Vancouver Island Health Authority.*⁶⁶

North Saanich made the commitment to new standards, in response to the studies that showed that septic runoff was an issue in several areas where septic systems operated on land with poor soil quality. This commitment made sense. Indeed, to allow new subdivisions in areas with pre-existing septic runoff problems (such as above Coles Bay) was bound to exacerbate existing problems, if new standards were not applied.

Yet, the 2019 CRD Audit of the *Saanich Peninsula Liquid Waste Management Plan* showed that North Saanich was not in compliance with this commitment to raise subdivision septic standards. Perhaps even more disconcerting, the audit found that, “North Saanich Staff were not aware of this commitment...”⁶⁷

North Saanich staff’s lack of basic awareness of this formal municipal commitment to new standards – and the failure to implement that commitment– is indicative of a level of apathy on septic issues that simply cannot continue.

1.6.2 Additional North Saanich broken stormwater commitments, as found in 2019 CRD Audit

In addition to being found non-compliant on the above two commitments related to on-site waste disposal, the 2019 CRD audit report found North Saanich to be non-compliant on several commitments related to *stormwater* management. These are listed below:

1. Working cooperatively with the Tseycum Band to resolve stormwater runoff problems associated with Tseycum Creek and its tributaries.⁶⁸
2. The Provision of oil/water separators for stormwater runoff from paved areas associated with commercial, industrial and institutional properties.⁶⁹
3. Regular inspection and maintenance of the storm drainage system.⁷⁰
4. Working towards understanding the needs of agriculture and habitat in stormwater management.⁷¹

Yet, improvement of stormwater management is necessary if the pollution at Coles Bay is to be addressed. Much of the current pollution problem is exacerbated by a stormwater system that delivers septic pollution directly to Coles Bay shellfish – without filtering it through a rain garden or wetland. The problem is that poorly managed septic systems are contaminating stormwater systems – and an outdated stormwater drain network directly ferries the unfiltered contamination into Coles Bay.

⁶⁶ *Saanich Peninsula Liquid Waste Management Plan, Consolidated Version* (CRD, 2009), Attachment B, Amendment No. 2, at 4.4.4; Amendment No. 2 was approved by CRD on May 25, 2005, and the Ministry of Water, Land and Air Protection in November 17, 2005.

⁶⁷ Avreal Perrault, *Saanich Peninsula Liquid Waste Management Audit Report – Final* (CRD: 2019), at page 15.

⁶⁸ Avreal Perrault, *Saanich Peninsula Liquid Waste Management Audit Report – Final* (CRD: 2019) p 16, Reference 91

⁶⁹ Avreal Perrault, *Saanich Peninsula Liquid Waste Management Audit Report – Final* (CRD: 2019) p 17, Reference 94

⁷⁰ Avreal Perrault, *Saanich Peninsula Liquid Waste Management Audit Report – Final* (CRD: 2019) p 17, Reference 96

⁷¹ Avreal Perrault, *Saanich Peninsula Liquid Waste Management Audit Report – Final* (CRD: 2019) p 17, Reference 97

In sum, it is imperative that North Saanich finally address its longstanding commitments to improve regulation of both septic systems and stormwater systems. The municipality can promptly implement bylaws and enforcement to cut the septic effluent flowing from its jurisdiction towards Coles Bay shellfish. It can also make some cost-effective changes to drainage ditches (installing things like rain gardens/wetlands) to filter out such pollution. The District of North Saanich is well-positioned as one of the most effective spheres of governance to enact change for immediate results.

Fortuitously, positive action by North Saanich can also help the municipality comply with other legal obligations, including s. 35(1) and s. 36(3) of the *Fisheries Act*. Section 35(1) prohibits carrying on a work, undertaking or activity that results in the harmful alteration, disruption or destruction of fish habitat. Section 36(3) makes it an offence to “deposit or permit the deposit of a deleterious substance of any type in water frequented by fish...”⁷²

Under these provisions, in certain circumstances a municipality may be liable for operating a storm drain network that deposits deleterious substances into fish habitat. See the legal opinion of the Environmental Law Centre submitted to the Municipality of Saanich on the question of municipal liability under s. 35(1) and s. 36(3) for pollution deposited by a municipal stormwater system. For that legal memo, see <https://moundouglaspark.ca/UVIC-ELC.pdf>.⁷³ Note that in recent years Saanich has taken extensive action to clean up their stormwater drain system.

1.7 RESPONSIBILITIES OF NORTH SAANICH

Many levels of government are obliged to act, to remedy the breach of Pauquachin rights. However, North Saanich is one level of government with direct and appropriate jurisdiction to act immediately to clean up the Coles Bay shellfish beds. Undoubtedly, to reopen Coles Bay for Shellfish Harvesting, action is required from all levels of government, including North Saanich. But the role municipalities play in addressing stormwater and pollution from faulty septic fields is critical. North Saanich can implement both immediate and long-term measures to significantly reduce sanitary pollution in Coles Bay. This is the Pauquachin request.

⁷² *Fisheries Act*, RSC 1985, cF-14, s. 35(1) and s. 36(3). Note that s. 34(1)(a) defines “deleterious substance” to include: “...any substance that, if added to any water, would degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water...” See also: *Chapman v British Columbia*, [2007] BCJ No 703, 2007 BCPC 85, 28 CELR (3d) 99, 74 WCB (2d) 187, 2007 CarswellBC 701.

⁷³ In the present situation, North Saanich municipal storm drains appear to be the most significant conveyors of the “deleterious substance” of septic pollution into Coles Bay “water frequented by fish”. Because North Saanich owns and maintains the storm drains, it might be argued that it is permitting the deposit of the polluted water into Coles Bay and is therefore in violation of the *Fisheries Act*. A successful defence of due diligence depends upon the municipality taking all reasonable actions to avoid depositing a deleterious substance.

1.7.1 Powers conferred by the *Community Charter*

Under the *Community Charter*, North Saanich has broad powers to deal with the issues of septic contamination of stormwater running into Coles Bay.⁷⁴ The *Community Charter* empowers municipalities to regulate the design and installation of drainage and sewerage (septic) works, and the proper flow of water through such works.⁷⁵ Council is authorized to implement bylaws to regulate “drains, cesspools, septic tanks and outhouse,” “unsanitary conditions on property” and “the accumulation of water on property.”⁷⁶ Clearly, North Saanich has the power to create bylaws to regulate, and impose requirements on, septic systems and drainage.⁷⁷

Furthermore, under sections 8 and 9 of the *Community Charter*, a local government holds – concurrent with the provincial government – further powers to regulate to protect the “natural environment.” If it is necessary to pass broader and farther-reaching bylaws to resolve Coles Bay pollution, further powers are available to the municipality, if the provincial government agrees.⁷⁸

In addition, the *Community Charter* recognizes that municipalities must have the authority to deliver stormwater drainage and other services.⁷⁹ A municipality like North Saanich has the specific power to provide such drainage services and regulate such services.⁸⁰ The changes to the North Saanich drainage system proposed below (*e.g.*, constructing rain gardens and wetlands, *etc.*) are clearly within municipal jurisdiction.

Thus, it is clear that North Saanich has jurisdiction to regulate private septic systems, modernize the District’s own storm water systems, and implement other changes to reduce the septic pollution that is contaminating Coles Bay and damaging Pauquachin’s rights to “carry on our fisheries as formerly.”⁸¹

In brief, North Saanich has an important role to play, by:

- making long-overdue changes to local septic and other bylaws;
- improving its own storm water infrastructure; and
- acting as an advocate to the provincial and federal governments to make long-term systemic changes to re-open shellfisheries up and down the coast.

⁷⁴ *Community Charter*, SBC 2003, c.26, See also Gordon McGuire, *et. al*, *Re-Inventing Rainwater Management* (Victoria: ELC, 2010) online <<https://elc.uvic.ca/publications/stormwater-report/>> pp 102-107: Appendix A outlines the powers conferred to municipalities by the *Local Government Act* and *Community Charter* to manage rainwater and municipal drainage systems.

⁷⁵ *Community Charter*, [SBC 2003] Chapter 26, s. 69(a) and (b).

⁷⁶ *Community Charter*, [SBC 2003] Chapter 26, s. 8(3)(h); ss. 64((f), (g) and (h); and s. 69.

⁷⁷ *Community Charter*, [SBC 2003] Chapter 26, s 8(3)(h); ss. 64 (f) (g) (h) and 69

⁷⁸ *Community Charter*, [SBC 2003] Chapter 26, s 9. Under s. 9 (3), a municipal bylaw solely addressing protection of the natural environment generally requires provincial assent, through provincial agreement, regulation or ministerial approval.

⁷⁹ *Community Charter*, [SBC 2003] Chapter 26, s 1(2)(a) and (e).

⁸⁰ *Community Charter*, [SBC 2003] Chapter 26, ss. 8(2) and (3)(a).

⁸¹ The right to “carry on our fisheries as formerly” is a treaty right of the Pauquachin dealt with in the North Saanich Treaty of February 1852 and is recognized and affirmed by s. 35 of the *Constitution Act*, 1982.



FIGURE 11: Pauquachin First Nation environmental stewards partnering with Swinomish tribal members at Kiket Island, lining up to pass stones for the creation of the first newly built clam garden in living memory, created by Swinomish for the first time in approximately 200 years, in August 2022. (Photo by Dr. Marco Hatch, Western Washington University professor and Samish Tribal Member.)

2. Solutions That North Saanich Can Implement

The Douglas Treaties affirm the ongoing right to “carry on our fisheries as formerly,”⁸² which establishes obligations for all levels of government to uphold this treaty right. Pauquachin’s most important shellfishery is at Coles Bay, and the 25-year closure of this fishery must be promptly rectified. Considering treaty and other legal obligations, and considering North Saanich’s clear authority and capacity to fix the shellfish contamination problem, North Saanich must act.

⁸² “Treaty Texts – Douglas Treaties” (August 30, 2013), online: *Government of Canada* <<https://www.rcaanc-cirnac.gc.ca/eng/1100100029052/1581515763202#saanichNorth>>.

With a combination of short term and long-term solutions, North Saanich can move toward fulfilling its obligations by:

- promptly mitigating septic contamination that has caused the ongoing harvesting closure and
- working collaboratively with multiple levels of government to ensure that a closure of this important shellfishery does not recur.

This will ultimately require a multi-faceted action plan that involves all levels of government working together. However, this is not a reason for North Saanich to delay acting. There are immediate and practicable solutions North Saanich can apply right now to remediate the sanitary pollution in Coles Bay. North Saanich must act promptly on those solutions.

2.1 CAPITAL REGIONAL DISTRICT BYLAW 3479

An obvious step North Saanich can take to remediate Coles Bay pollution is to finally act on the commitment North Saanich made in 1996 to either develop or join an onsite septic maintenance management regulatory program. The CRD currently has such a program in place, CRD Bylaw 3479. As discussed above, Langford, Colwood, View Royal and Saanich collaborated with the CRD to establish this regulatory program in 2008,⁸³ but North Saanich declined to join this regional initiative, contrary to previous commitments.⁸⁴

For participating municipalities, the CRD has established an existing regulatory program for on-site wastewater disposal that North Saanich can join by approving implementation of CRD Bylaw 3479 in North Saanich. This bylaw regulates the maintenance of Type 1, Type 2, and Type 3 on-site wastewater solutions (septic systems).⁸⁵ The regulatory scheme established in this bylaw requires:

- Type 1 systems to be pumped out by December 31, 2010;⁸⁶ and
- Type 1 systems to be regularly pumped out every five years.⁸⁷

⁸³ Bylaw 3479 was adopted in 2008 and implemented as part of the Capital Regional District Core Area Liquid Waste Management Plan, which covers Langford, Colwood, View Royal, and Saanich. Section 14 of the Capital Regional District Regulation BC Reg. 65/90 grants the CRD the powers of a municipality under section 8(3)(i) of the *Community Charter* to regulate, prohibit and impose requirements in relation to public health and has the authority to regulate for the maintenance of sanitary conditions per section 523 of the *Local Government Act*. CRD Bylaw 3479, *Onsite Sewage Maintenance Bylaw, 2007* online, <<https://www.crd.bc.ca/docs/default-source/septic-pdf/onsite-sewage-systems-bylaw-crd-bylaw-no-3479.pdf?sfvrsn=6>>.

⁸⁴ *Saanich Peninsula Liquid Waste Management Plan, Consolidated Version* (CRD, 2009), Attachment B Note that North Saanich had a representative participate on the CRD committee that developed the bylaw 3479.

⁸⁵ For more information on Type 1, Type 2, and Type 3 septic systems, see: <<https://groundstone.ca/2018/07/different-types-of-septic-systems/>>.

⁸⁶ CRD Bylaw 3479, *Onsite Sewage Maintenance Bylaw, 2007* online, <<https://www.crd.bc.ca/docs/default-source/septic-pdf/onsite-sewage-systems-bylaw-crd-bylaw-no-3479.pdf?sfvrsn=6>>, s.3.1 (a).

⁸⁷ CRD Bylaw 3479, *Onsite Sewage Maintenance Bylaw, 2007* online, <<https://www.crd.bc.ca/docs/default-source/septic-pdf/onsite-sewage-systems-bylaw-crd-bylaw-no-3479.pdf?sfvrsn=6>>, s. 3.1(b).

- Type 2 and 3 systems to be maintained according to that system’s maintenance plan;⁸⁸ and,
- Type 2 and 3 systems to be maintained by an authorized person at least once per calendar year.⁸⁹

In participating municipalities, landowner compliance with Bylaw 3479 has been relatively high – regularly seeing a compliance rate of 80-85% for Type 1 systems.⁹⁰ Pump-outs of systems are logged and tracked in a computerized CRD database – making it possible to identify when systems are overdue for a pump-out and send follow-up notices. By adopting Bylaw 3749, North Saanich will access the resources the CRD has established to implement this systematic maintenance program.⁹¹

Regulating regular septic *pump-outs* is only part of the story. Assessment of septic systems to identify broken septic infrastructure and the need for a system *repair* or replacement is equally important. North Saanich should work with the CRD to better identify broken septic systems and ones that need replacement. In 2015, the CRD implemented a Type 1 Systems Inspection Study, which included the development of an Authorized Contractor List and a 75% reimbursement of the cost of Maintenance Assessment inspections. The Maintenance Assessments were more than a simple pump-out and involved an” **examination of all of the components of the system**, a recommendation for pumping frequency, and a detailed written report with standardized language and recommendations for repair, maintenance, and improvements.”⁹² [emphasis added]

In addition to the reimbursement for the Assessment, if the homeowner made the repairs recommended, the CRD offered 100% reimbursement (up to \$700).⁹³

The Study conducted a Maintenance Assessment on 130 Type 1 onsite sewage systems over five years and found that 80% of the systems were 20 years old or more,⁹⁴ and that only 8% of the systems were operating as intended by design.⁹⁵ Of the malfunctioning systems, 50% of them were experiencing performance malfunctions and 6% of the systems required complete replacement or connection to a sewer line.⁹⁶ *The CRD concluded that merely regularly pumping*

⁸⁸ CRD Bylaw 3479, *Onsite Sewage Maintenance Bylaw, 2007* online, <<https://www.crd.bc.ca/docs/default-source/septic-pdf/onsite-sewage-systems-bylaw-crd-bylaw-no-3479.pdf?sfvrsn=6>>, s.3.2(a).

⁸⁹ CRD Bylaw 3479, *Onsite Sewage Maintenance Bylaw, 2007* online, <<https://www.crd.bc.ca/docs/default-source/septic-pdf/onsite-sewage-systems-bylaw-crd-bylaw-no-3479.pdf?sfvrsn=6>>, s.3.2(b), <<https://www.crd.bc.ca/docs/default-source/septic-pdf/onsite-sewage-systems-bylaw-crd-bylaw-no-3479.pdf?sfvrsn=6>>.

⁹⁰ Compliance has been more variable for Type 2 and 3 systems, but still sits at around 70% compliance. Tara Stott (CRD Program Coordinator, Parks & Environmental Services Department), personal communication with Camille O’Sullivan (ELC Student) (22 October 2021) Re: Bylaw 3479.

⁹¹ Including such things as the centralized database of records ensuring compliance and the authorized list of services providers.

⁹² CRD Memorandum from Tara Stott to Peter Kickham, Dale Green, and Jody Watson on “Type 1 System Inspection Study under Regulatory Bylaw 3479” (January 13, 2021) at page 2.

⁹³ CRD Memorandum from Tara Stott to Peter Kickham, Dale Green, and Jody Watson on “Type 1 System Inspection Study under Regulatory Bylaw 3479” (January 13, 2021) at page 2.

⁹⁴ CRD Memorandum from Tara Stott to Peter Kickham, Dale Green, and Jody Watson on “Type 1 System Inspection Study under Regulatory Bylaw 3479” (January 13, 2021) at page 2.

⁹⁵ CRD Memorandum from Tara Stott to Peter Kickham, Dale Green, and Jody Watson on “Type 1 System Inspection Study under Regulatory Bylaw 3479” (January 13, 2021) at page 3.

⁹⁶ CRD Memorandum from Tara Stott to Peter Kickham, Dale Green, and Jody Watson on “Type 1 System Inspection Study under Regulatory Bylaw 3479” (January 13, 2021) at page 3.

out Type 1 systems is insufficient to prevent them from contributing to poor water quality issues. These systems need more involved Maintenance Assessment inspections to ensure they are functioning correctly.⁹⁷ North Saanich should work with the CRD to ensure that such assessments take place – along with community education and financial incentives for assessment/repairs.

North Saanich must finally fulfill its 1996 commitment to mitigate sanitary pollution by adopting the CRD septic system maintenance requirements embodied in CRD Bylaw 3479. In addition, it should work to add new CRD assessment requirements to ensure systems are in good repair.

2.2 WORK WITH PAUQUACHIN TO DEVELOP A VIGOROUS POLLUTION IDENTIFICATION AND CORRECTION (PIC) PROGRAM

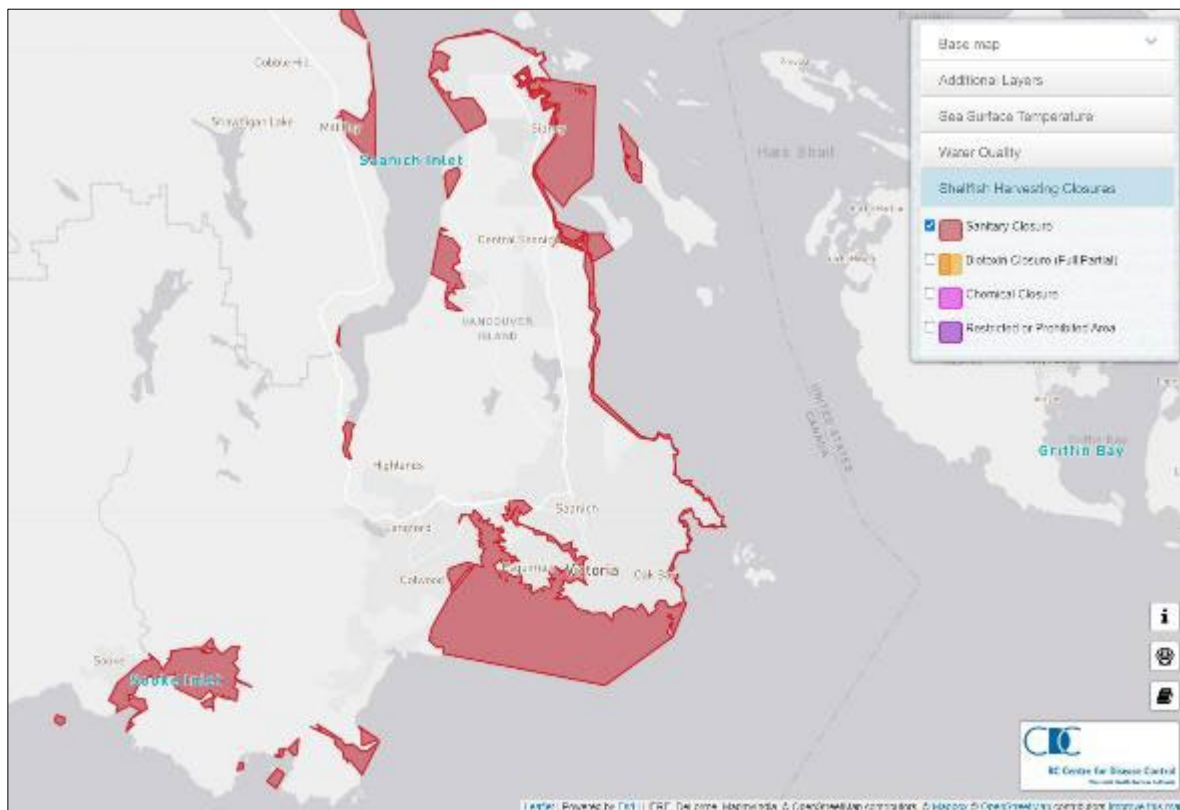


FIGURE 12: British Columbia Centre for Disease Control, Shellfish Harvesting Status Map, Accessed September 14, 2022 online: <<https://maps.bccdc.ca/shellfish/>>.

North Saanich needs to work with the Pauquachin to promptly establish a program to *identify* and *correct* the sources of pollution that are contaminating Coles Bay shellfish. In stark contrast to the quarter century of inaction since the Coles Bay shellfishery was closed, Washington State law

⁹⁷ CRD Memorandum from Tara Stott to Peter Kickham, Dale Green, and Jody Watson on “Type 1 System Inspection Study under Regulatory Bylaw 3479” (January 13, 2021) at page 4.

requires that an active Pollution Identification and Correction (PIC) program must begin no less than 180 days after a shellfish closure.

Therefore, we submit that North Saanich must collaborate with the Pauquachin First Nation to:

- Thoroughly and comprehensively investigate and *identify* all sources of pollution into Coles Bay, focusing on the septic systems and storm water systems under North Saanich jurisdiction; and
- Promptly implement a remediation plan to *correct* the pollution.

Measures should include stopping pollution at source, and mitigation measures such as construction of rain gardens and wetlands near storm drain outputs.

Since the long-term solution will require action by other levels of government, North Saanich should also petition the Province and Canada to establish a BC *Healthy Shellfish Initiative* and effective PIC programs. (See section below.)

The ability of Pollution Identification and Correction programs to quickly re-open shellfish harvesting is demonstrated in Washington State. That state has implemented a systematic *Pollution Identification and Correction* (PIC) program to address shellfish sanitary closures. The US Environmental Protection Agency (EPA) has documented the powerful success that the US PIC program has achieved in Puget Sound – and has contrasted it with Canadian inaction in adjacent waters of the Georgia Basin:

Despite increasing population growth and urbanization across the region, between 2007 and 2019 over 6,400 acres of previously closed shellfish beds in Puget Sound have been upgraded or re-opened for harvesting due to improvements in water quality. However, in the [British Columbia] Georgia Basin between 2007 and 2019, there was an increase in closed shellfish beds.⁹⁸

In Washington State, the Puget Sound Partnership set a goal of upgrading 10,800 acres of shellfish beds by 2020.⁹⁹ **There was a net increase of 6,659 acres of harvestable shellfish beds between 2007 and 2020, or 62% of the 2020 target.¹⁰⁰**

Washington State has demonstrated that a Pollution Identification and Correction program can often solve sanitary shellfish closures. A number of the PIC programs that Washington Tribes and government agencies have collaborated on show that a positive solution is possible for the Coles Bay contamination.

⁹⁸ United States Environmental Protection Agency, “EPA issues report on health of Salish Sea” (2021 July 14) News Release, online: <<https://www.epa.gov/newsreleases/epa-issues-report-health-salish-sea>>.

⁹⁹ Christopher Dunagan, “Winding Down Puget Sound’s 2020 Targets, As Approved Shellfish Acreage Keeps Going Up” (22 February 2021), online: *Puget Sound Institute* <<https://www.pugetsoundinstitute.org/2021/02/winding-down-puget-sounds-2020-targets-as-approved-shellfish-acreage-keeps-going-up/>>.

¹⁰⁰ See Puget Sound Info, “Area of Harvestable Shellfish Beds,” online: *Puget Sound Vital Signs* <<https://vitalsigns.pugetsoundinfo.wa.gov/VitalSignIndicator/Detail/40#>>.

2.2.1 The Difference that Tribes and Pollution Identification and Correction Programs Have Made

2.2.1.1 Compare Drayton Harbor Washington with Semiahmoo Bay BC



FIGURE 13: Lummi youth dig clams at Portage Bay WA. The beach was closed in 2014 because of fecal coliform, but successfully reopened in 2019 after Pollution Identification and Correction efforts. (Photo: Kari Neumeyer, Northwest Indian Fisheries Commission)

The difference that a *Pollution Identification and Correction* program can make is obvious, when you compare shellfish harvesting conditions for the Lummi Tribe near Drayton Harbor, WA,¹⁰¹ and the Semiahmoo Band at Semiahmoo Bay, immediately north in BC.

Both peoples reside within the Boundary Bay Basin, and have traditionally relied upon shellfish, which have been subject to pollution over the years. For the Semiahmoo Tribe in Canada, shellfish harvesting in their waters is still unhealthy and illegal – while the Lummi Tribe just next door in the US, is now able to safely harvest shellfish because of State restoration efforts. The different policies and laws in Washington and BC create these radically different outcomes.

¹⁰¹ Betsy Peabody, “Engaging the community in Drayton Harbor’s comeback story” (Presentation delivered at the Salish Sea Ecosystem Conference, Seattle, Washington, 2018), [unpublished]; Christopher Dunagan, “Bringing the shellfish back: How Drayton Harbor overcame a legacy of pollution” (07 March 2017), online: *Encyclopedia of Puget Sound* <<https://www.eopugetsound.org/magazine/is/drayton-shellfish>> [https://perma.cc/YW5S-7FH2].

Drayton Harbor is just south of the Canadian-American border, near Blaine. Drayton Harbor experienced shellfish harvesting closures in the 1980s and 1990s. A Pollution Identification and Correction program documented that 128 of 400 septic systems tested in Drayton Harbour “were found to be failing or were suspected of problems.”¹⁰² However, after extensive collaboration, community involvement, tracking and addressing pollution sources, 575 acres were conditionally re-opened to harvest in 2004. An additional 235 more acres upgraded in 2016 allowing Drayton Harbour to reopen for year-round shellfish harvesting for commercial, tribal, and recreational harvest.¹⁰³ As a result of monitoring and restoration, the Lummi tribe have been able to return to harvesting for cultural and commercial purposes. The Lummi Nation manages fisheries and leads study efforts related to water quality standards and shellfish consumption.¹⁰⁴

By contrast, immediately north in Canada the Semiahmoo First Nation has been subject to DFO closures of shellfish harvesting sites close to their community since 1962.¹⁰⁵ And those closures continue to this day.

¹⁰² Christopher Dunagan, “Bringing the shellfish back: How Drayton Harbor overcame a legacy of pollution” (07 March 2017), online: *Encyclopedia of Puget Sound* <<https://www.eopugetsound.org/magazine/is/drayton-shellfish>>.

¹⁰³ Betsy Peabody, “Engaging the community in Dr Engaging the community in Drayton Harbor on Harbor's comeback story” (2018 April 6) Presentation at the 2018 Salish Sea Ecosystem Conference, online (pdf): <<https://cedar.wvu.edu/cgi/viewcontent.cgi?article=2867&context=ssec>>.

¹⁰⁴ See: Lummi Indian Business Council, “Lummi Seafood Consumption Study,” online: <<https://www.lummi-nsn.gov/Website.php?PageID=180>> and the Lummi Nation also manages their own fisheries, including shellfish, see: Lummi Indian Business Council, “Fisheries Management,” online: <<https://www.lummi-nsn.gov/Website.php?PageID=102>>.

¹⁰⁵ Emma S Norman, *Governing Transboundary Waters – Canada, the United States, and Indigenous Communities* (New York: Routledge, 2015) at p. 105.

2.2.1.2 The Hood Canal Pollution Identification and Correction Program



FIGURE 14: Seth Book, Skokomish Tribe water quality biologist, uses a refractometer to measure the salinity of a water sample from Hood Canal. (Photo: Tiffany Royal, Northwest Indian Fisheries Commission)

The Hood Canal Regional Pollution Identification and Correction (PIC) Program is another successful Washington initiative which “works to protect and restore water quality, particularly to clean up and prevent fecal pollution from human and animal waste that threatens public health and our economy.”¹⁰⁶ Partners of the Hood Canal Regional PIC Program include the Skokomish and Port Gamble S’Klallam Tribes, local county health jurisdictions, conservation districts within the counties of Mason, Kitsap, and Jefferson, storm water programs, educators and the Hood Canal Coordinating Council.¹⁰⁷ The Hood Canal Regional PIC Program monitors for septic system leakages, investigates and finds the source. “This work is essential to maintain and improve water quality by reducing bacterial and nutrient pollution sources.”¹⁰⁸

The Skokomish Tribe worked with other partners to assess and improve water quality – specifically by assessing shoreline drainages and identifying bacterial “hotspots.”¹⁰⁹ Seth Book of the

¹⁰⁶ Hood Canal Coordinating Council, “Pollution Identification & Correction” online: *Hood Canal Coordinating Council* <<https://hccc.wa.gov/PIC>>.

¹⁰⁷ Hood Canal Coordinating Council, “Pollution Identification & Correction” online: *Hood Canal Coordinating Council* <<https://hccc.wa.gov/PIC>>.

¹⁰⁸ Hood Canal Coordinating Council, “Pollution Identification & Correction” online: *Hood Canal Coordinating Council* <<https://hccc.wa.gov/PIC>>.

¹⁰⁹ Hood Canal Coordinating Council, “Hood Canal Regional Pollution Identification and Correction Program – Phase II Implementation – Final Report” (2017 March 31), at p. 2, online:

Skokomish Tribe Natural Resources Water Quality Department, stresses the importance of having Skokomish Tribe staff monitor septic and agricultural pollution across the territory. Skokomish Tribe staff:

- Identify and monitor individual septic problems and inform health authorities about where problems exist;
- Work with landowners to facilitate pump-out and maintenance of their septic systems;
- Facilitate the offering of monetary rebates to those pumping out their septic systems and getting filters;
- Monitor and identify sources of agricultural waste pollution and potential remedies; and
- Identify creative and cost-effective practical solutions like community septic systems.¹¹⁰

The Port Gamble S’Klallam Tribe was also an active partner in the development and implementation of the Hood Canal PIC Program. For example, the Tribe led separately-funded water quality research to address data gaps.¹¹¹ The Port Gamble S’Klallam Tribe also developed their own outreach and education materials to raise awareness about the Pollution Identification and Correction goals amongst tribal members and college and grade school students.¹¹²

The Hood Canal Coordinating Council has acknowledged that the partnership with the Port Gamble S’Klallam Tribe and the Skokomish Tribe was highly valuable because the Tribes’:

*...science and technical staff conducted research and tested investigative techniques to find tools to identify fecal pollution sources in areas where traditional PIC [Pollution Identification and Correction] methods have not been successful.*¹¹³

A representative success was celebrated last year at Hoodspout, Washington. Thanks to implementation of the Hood Canal Regional PIC and strategies such as incentives for landowners to maintain septic systems, the State Health Department re-opened 66 acres for shellfish

https://hccc.wa.gov/sites/default/files/resources/downloads/HCRPIC%20Phase%20II%20Report_w-Appendices_reduced_20170331_0.pdf.

¹¹⁰ Personal communications with Seth Book.

¹¹¹ Hood Canal Coordinating Council, “Hood Canal Regional Pollution Identification and Correction Program – Phase II Implementation – Final Report” (2017 March 31), at p. 10, online:

https://hccc.wa.gov/sites/default/files/resources/downloads/HCRPIC%20Phase%20II%20Report_w-Appendices_reduced_20170331_0.pdf.

¹¹² Hood Canal Coordinating Council, “Hood Canal Regional Pollution Identification and Correction Program – Phase II Implementation – Final Report” (2017 March 31), at p. 12, online:

https://hccc.wa.gov/sites/default/files/resources/downloads/HCRPIC%20Phase%20II%20Report_w-Appendices_reduced_20170331_0.pdf.

¹¹³ Hood Canal Coordinating Council, “Hood Canal Regional Pollution Identification and Correction Program – Phase II Implementation – Final Report” (2017 March 31), at p. 13, online:

https://hccc.wa.gov/sites/default/files/resources/downloads/HCRPIC%20Phase%20II%20Report_w-Appendices_reduced_20170331_0.pdf.

harvesting. This was an area that had been closed for the last 45 years – long preventing local Tribes from accessing a critical traditional food source.¹¹⁴

Such success has been widespread along much of Hood Canal. Indeed, the entire region of Lower Hood Canal is now listed as an inactive Shellfish Protection District – because it has “successfully implemented [its] pollution control plan which reduced pollution impacts and improved water quality.”¹¹⁵

Next door to the Lower Hood Canal Shellfish Protection District, successful remediation efforts have also been celebrated in Annas Bay. In 2006, 300 acres of shellfish beds in that Bay – one of the largest clam harvesting areas in Hood Canal – were closed to harvest due to pollution from on-site septic systems, storm-water discharge, agricultural source and wildlife.¹¹⁶ **The local county’s public health unit worked closely with the Skokomish Tribe and the local conservation district to come up with a *Pollution Identification and Correction* plan that “successfully reduced fecal coliform contamination in Annas Bay by identifying four failing septic systems and assisting homeowners with corrective actions.”¹¹⁷ The three hundred acres of shellfish beds were re-opened for harvest in 2008¹¹⁸**

The lessons from Washington State are clear. Local governments, Tribes, and state and federal agencies have worked together to fix this type of problem. If local governments and other agencies collaborate with BC Nations to design and implement Pollution Identification and Correction programs, we can expect the same successes. With such Pollution Identification and Correction efforts, the Pauquachin First Nation should be able to fully access their traditional shellfish resource once again.

However, note that a Pollution Identification and Correction program at Coles Bay must be **promptly** implemented. The Pauquachin have waited 25 years since closure. This is in sharp contrast to the **immediate** response to closure that Washington State implements in collaboration with Tribes.

In Washington State, if water quality fails to meet the health standards, then that area is restricted or closed to shellfish harvesting and the State takes action to restore the area for harvesting. Washington State mandates by law that within 180 days “**the county authority must create a shellfish protection district and implement a program to find and correct the pollution source(s)**”

¹¹⁴ Christopher Dunagan, “A Mile of Shellfish Beach Near Hoodspout Has Been Declared Safe for Harvesting” (12 May 2021), online: *Puget Sound Institute* <<https://www.pugetsoundinstitute.org/2021/05/a-mile-of-shellfish-beach-near-hoodspout-has-been-declared-safe-for-harvesting/>> [https://perma.cc/V69W-RC3U].

¹¹⁵ Washington State Department of Health, “Shellfish Growing Area Restoration,” online: <<https://www.doh.wa.gov/CommunityandEnvironment/Shellfish/GrowingAreaRestoration>>.

¹¹⁶ Barbara Clark, “\$142K Grant Will Help Clean Up Water Pollution Problems,” *Kitsap Sun* (2006 Feb 21), online: <<http://archive.kitsapsun.com/news/local/142k-grant-will-help-clean-up-water-pollution-problems-ep-423696649-359499641.html>>.

¹¹⁷ Mason County Public Health, “Final Project Report for Skokomish Annas Bay Restoration Study” (2008 July 1) at p. 14, online: <https://masoncountywa.gov/health/environmental/water-quality/reports/annas-bay/annas_bay_final_report_2008.pdf>.

¹¹⁸ Washington State Department of Health, “Annas Bay Shellfish Protection District – General Information and Funding,” online: <<https://www.doh.wa.gov/CommunityandEnvironment/Shellfish/GrowingAreaRestoration/ShellfishProtectionDistrictsLibrary/OrganizedbySPD/AnnasBaySPD>>.

that are causing water quality decline.”¹¹⁹ Additionally, implementation of a shellfish protection program must begin just 60 days after it has been established.¹²⁰

This Washington legal requirement for swift response stands in vivid contrast to the situation at Coles Bay where:

- the Department of Fisheries and Oceans did not sample the water there between 2014 and 2022, because the pollution source had not been removed or remediated¹²¹ – and
- for a quarter century, governments have failed to act to identify and correct the pollution sources.

It is significant to note that the effective Washington programs are driven by strong judicial recognition of Tribal rights to shellfish in the *Boldt* and *Rafeedie* decisions – which affirmed treaty rights to shellfish harvesting and management.¹²² Strong treaty rights exist here as well.

¹¹⁹ Washington State Department of Health, “Shellfish Growing Area Restoration,” online <<https://www.doh.wa.gov/CommunityandEnvironment/Shellfish/GrowingAreaRestoration>>; also see the relevant text of the Washington Code:

“The county legislative authority shall create a shellfish protection district and establish a shellfish protection program developed under RCW 90.72.030 or an equivalent program to address the causes or suspected causes of pollution within one hundred eighty days after the department of health, because of water quality degradation due to ongoing nonpoint sources of pollution has closed or downgraded the classification of a recreational or commercial shellfish growing area within the boundaries of the county. The county legislative authority shall initiate implementation of the shellfish protection program within sixty days after it is established.

A copy of the program must be provided to the departments of health, ecology, and agriculture. An agency that has regulatory authority for any of the sources of nonpoint pollution covered by the program shall cooperate with the county in its implementation. The county legislative authority shall submit a written report to the department of health annually that describes the status and progress of the program. If rates or fees are collected under RCW 90.72.070 for implementation of the shellfish protection district program, the annual report shall provide sufficient detail of the expenditure of the revenue collected to ensure compliance with RCW 90.72.070.” - *Revised Code of Washington*, 90.72.045, online: *Washington State Legislature* <<https://app.leg.wa.gov/rcw/default.aspx?cite=90.72.045>>.

¹²⁰ *Revised Code of Washington*, 90.72.045, online: *Washington State Legislature* <<https://app.leg.wa.gov/rcw/default.aspx?cite=90.72.045>>.

¹²¹ The reasoning for ceasing sampling are from a Canadian Shell Sanitation Program representative’s slides at presentation given at North Saanich City Council on October 4, 2021. See: The same presentation outlines that if Environment and Climate Change Canada (ECCC) deems that an area can be re-sampled for water quality, a minimum of 15 acceptable samples are necessary to reclassify an area for harvesting – a process that could take 3 years based on the testing frequency. In the meantime, the Federal agencies/departments have instead been relying on the Capital Regional District’s monitoring data since then, to determine whether closures should continue in Coles Bay.

¹²² The *Boldt* Decision (*United States v. Washington*, 384 F Supp 312 (WD Wash 1974), *aff’d*, 520 F (2d) 676 (9th Cir. 1975)) and *Rafeedie* Decision (*United States v. Washington*, 86 F (3d) 1499 (9th Cir.1996)) allocated 50% of all harvestable shellfish within the usual and accustomed grounds of a tribe, to the tribe as per the Stevens Treaties. These decisions also recognized the tribes as co-managers of commercial shellfisheries. See: Raye Evrard, “Washington Shellfish Aquaculture: Assessment of the Current Regulatory Frameworks” (2017) – thesis at the University of Washington, online:

<https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/38654/Evrard_washington_02500_16923.pdf?sequence=1> ; Also see: Office of Governor Chris Gregoire, “Gov. Gregoire announces new initiative to create jobs, restore Puget Sound” (2011 December 9 – news release), online: <<https://www.digitalarchives.wa.gov/GovernorGregoire/news/news-view.asp?pressRelease=1815&newsType=1>>.

2.2.2 North Saanich Should Collaborate with Pauquachin First Nation to Develop a Memorandum of Understanding to Establish a Coles Bay Pollution Identification and Correction Program

In order to establish a successful Pollution Identification and Correction program at Coles Bay, North Saanich should negotiate and sign a Memorandum of Understanding with the Pauquachin Nation to work with other levels of government to clean up Coles Bay pollution.

North Saanich should take heart from the numerous Washington State communities that have collaborated with Tribes to clean up contaminated beaches – to mutual benefit. In recognition of the availability of practical, short-term and long-term solutions to the Coles Bay sanitary pollution problem, Pauquachin First Nation would like to develop and sign a Memorandum of Understanding (MoU) with North Saanich. This MoU will be a record of a solution-oriented partnership-between Pauquachin and North Saanich.

At a minimum, the MoU should call on North Saanich and the Pauquachin Nation to collaborate to:

- **conduct a comprehensive investigative study to identify the sources of sanitary and other pollution into Coles Bay; and**
- **develop and implement a Pollution Identification and Correction program at Coles Bay.**

The MoU will also serve as a means of formalizing the District of North Saanich’s commitment to reconciliation in recognizing Aboriginal rights, the rights set out in the oral and written aspects of the Douglas Treaties and the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), which was recently ratified by the BC *Declaration on the Rights of Indigenous Peoples Act*. It is important to note that one of the crucial specific outcomes British Columbia has committed to in the *Declaration on the Rights of Indigenous Peoples Act Action Plan* is:

*Indigenous Peoples have meaningful and sufficient access to abundant and healthy traditional foods and have peaceful enjoyment of their harvesting rights.*¹²³

Such a written Memorandum of Understanding would set the goal of re-opening Coles Bay harvesting sites in 2026. In order to accomplish this goal, North Saanich would agree to:

- **promptly act to upgrade the stormwater ditches, drains and watercourses above Coles Bay with appropriate filtration mechanisms (e.g., rain gardens, constructed wetlands, and others); and**

¹²³ *Declaration on the Rights of Indigenous Peoples Act Action Plan: 2022-2027*, British Columbia (30 March 2022) 14 online <https://engage.gov.bc.ca/app/uploads/sites/121/2022/03/declaration_act_action_plan.pdf>. A petition to the Province in favour of the *Healthy Shellfish Initiative* is in line with the actions outlined in the Action Plan, which includes establishing co-developing strategic policies, programs and initiatives for collaborative stewardship of the lands and resources as well as co-developing with local First Nations sustainable water management at the watershed level. [*Declaration on the Rights of Indigenous Peoples Act Action Plan: 2022-2027*, British Columbia (30 March 2022) at 15 (actions 2.6 and 2.7) online <https://engage.gov.bc.ca/app/uploads/sites/121/2022/03/declaration_act_action_plan.pdf>]

- **take prompt municipal action to identify and correct septic systems draining into Coles Bay.**

The timeline for further long-term commitments would be determined upon receiving and analyzing the results from the Pollution Identification and Correction research, the research of the Pauquachin Nation and other data and information.

There is a recent local precedent for such a Memorandum of Understanding. The W̱SÁNEĆ Leadership Council (WLC) signed the ÁTOL,NEUEL Memorandum of Understanding with the District of Saanich on December 3, 2021. Among other things, this MoU establishes a commitment to remediation of priority environmental features identified by the WLC with an emphasis on multi-jurisdictional collaboration, the development of an Integrated Marine Ecosystem Management Study, and the development of a plan to increase W̱SÁNEĆ access to important cultural and harvesting sites.¹²⁴ This MoU could be used in the development of a similar agreement between the District of North Saanich and Pauquachin First Nation

2.3 PETITION THE PROVINCIAL AND FEDERAL GOVERNMENTS FOR A BC HEALTHY SHELLFISH INITIATIVE

North Saanich and other local governments should petition the Province to work with the federal government to establish a BC Healthy Shellfish Initiative, and provide the resources for success.

Coles Bay is not the only beach closed to harvest because of contamination from sanitary pollution, agricultural runoff, and other sources. Hundreds of kilometres of coast is now closed to shellfish harvest because of sanitary closures.¹²⁵ Yet, BC does not now have a current action plan to comprehensively remediate contamination to shellfish harvesting areas. With your encouragement and vision, it can establish such a constructive initiative.

The Pauquachin First Nations and the ELC are providing a simultaneous submission to the provincial government requesting that they work with Ottawa to implement a *British Columbia Healthy Shellfish Initiative* that would lead to broad re-openings of shellfisheries along BC's coastline – as has occurred in Washington State. This provincial submission recommends the model of pollution identification and correction programs as applied in Washington State.

North Saanich can support this request by asking the Province of BC to implement a comprehensive response to contamination of shellfish beds along the entire coast, as proposed in our submission to the Province. Among other things, North Saanich could champion this cause with the Union of BC Municipalities. A Resolution from the Union of BC Municipalities in support of

¹²⁴ ÁTOL,NEUEL Memorandum of Understanding between the W̱SÁNEĆ Leadership Council and the District of Saanich (3 December 2021) online:

<<https://www.saanich.ca/assets/News~and~Events/Documents/%C3%81TOL,NEUEL%20MOU.pdf>>

¹²⁵ See the current extensive sanitary shellfish closures along the BC coast at: <<https://maps.bccdc.ca/shellfish/>>.

the implementation of the *British Columbia Healthy Shellfish Initiative* could move the Province to implement a provincial program to provide the resources necessary for success.

Because beach closures impacts so much of BC's coastlines, we are confident such a resolution would receive broad support from many local governments and First Nations – and from the public at large. What could be better news than the restoration of BC coastal shellfish beds to vibrant health?



FIGURE 15: Pauquachin community members and youth learning together at the beach, on how to turn over beach sediments for management and history of the area in July 2022, as part of new marine youth program efforts. (Photo provided by the Pauquachin First Nation.)

3. Conclusion

Coles Bay has been closed to shellfish harvesting since 1997 due to sanitary pollution contamination. This has not only profoundly affected an important and reliable source of food, but also an epicentre of Pauquachin cultural practice. The closure has had far-reaching impact on the community because shellfish harvest at Coles Bay has been a source of nutrition and health; an economic resource; a cultural site; a site of education; a place where generations bonded and traditional knowledge was passed; a place where language and stories were learned, and where laws and obligations to one another and the world was learned.

This type of tragic and unjust closure is all too common along British Columbia's coastline.

The source of the closure at Coles Bay is largely a result of *e coli* pollution that comes from poorly regulated neighbouring septic systems. An outdated municipal storm drain network fails to mitigate the problem, and delivers unfiltered septic and other pollutants to Coles Bay shellfish beds.

North Saanich has been aware of the unsuitability of this area for septic fields and has failed to mitigate septic impacts for decades. Many years ago, North Saanich made a number of formal commitments to address maintenance management of septic systems as well as several stormwater commitments. However, as the 2019 CRD Audit concluded, North Saanich was non-compliant with its own commitments regarding septic systems and stormwater runoff.

Meanwhile damage to the Pauquachin people from a quarter of a century of shellfish closures has not been addressed. This is not just, it is not legal, and it must change.

Fortunately, positive change can now occur. The remarkable success in implementing *Pollution Identification and Correction* achieved by local, state and federal officials working with Tribes in Washington State gives us hope for a solution that will benefit all.

In light of the grave ongoing injury that contamination of Coles Bay shellfish is causing to the rights, interests, and community well-being of the Pauquachin Nation, North Saanich should:

- **Develop and sign a Memorandum of Understanding (MoU) with Pauquachin First Nation, to:**
 - **conduct a comprehensive investigative study to identify all sources of sanitary and other pollution into Coles Bay;**
 - **develop and implement a Pollution Identification and Correction program at Coles Bay to correct the sources of pollution; and**
 - **set the goal of re-opening Coles Bay shellfish harvesting sites in 2026, with North Saanich agreeing to:**
 - **promptly act to upgrade the stormwater ditches, drains and watercourses above Coles Bay with appropriate filtration mechanisms (e.g., rain gardens, constructed wetlands, and others); and**
 - **take prompt municipal action to identify and correct septic systems draining into Coles Bay.**

- Finally fulfill its 1996 commitment to mitigate sanitary pollution by adopting the CRD septic system maintenance requirements embodied in CRD Bylaw 3479 and joining the CRD’s regulatory scheme for on-site sewage system management.
- Work with the CRD to add new CRD assessment requirements to ensure on-site sewage systems are in good repair – and provide community education and financial incentives for assessment/repairs.
- Address the other on-site sewage system and stormwater commitments the District has previously made, but not fulfilled.
- Work to ensure vigorous monitoring and enforcement of septic standards.
- Work with the CRD and others to *educate the public and landowners about* the practical steps that residents can take to facilitate reopening the shellfishery.¹²⁶
- Ultimately, replace the septic systems above Coles Bay with sewers or the equivalent. Connecting this neighbourhood to a sewage system would ensure all wastewater is pumped away from Coles Bay, and protect the extraordinary shellfish values of the Bay.¹²⁷

Finally, we ask that you work with neighbouring municipalities and the CRD to petition the provincial government to work with the federal government to implement a *British Columbia Healthy Shellfish Initiative*. Such an initiative will provide the resources essential to achieve a solution to this problem that afflicts hundreds of kilometres of the BC coastline.

¹²⁶ Public education programs that could be of assistance are described in *Angela Barna et. al., Recommendations for Optimal Implementation of the Elk/Beaver Lake Watershed Management Plan (Victoria: ELC, 2020) online <<https://elc.uvic.ca/publications/elk-beaver-watershed-management/>>*. Measures could include: “Septic socials” where neighbours can gather with a septic tank expert and learn about proper maintenance [p. 9]; Septic “welcome wagon” baskets that are provided to new residents in North Saanich [p. 9]; Community awards to acknowledge excellent septic system management [p. 10]; Financial and other Incentives to encourage homeowners to be good environmental stewards [p. 11]; and Mobilizing Community Stewardship efforts. [pp. 19-22]

¹²⁷ *Angela Barna et. al., Recommendations for Optimal Implementation of the Elk/Beaver Lake Watershed Management Plan (Victoria: ELC, 2020) online <<https://elc.uvic.ca/publications/elk-beaver-watershed-management/>>* p.12.