

July 11, 2022

Sent via email: min@dfo-mpo.gc.ca

The Honourable Joyce Murray
Minister of Fisheries, Oceans and the Canadian Coast Guard
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Dear Minister Murray:

Re: Destruction of Fish Habitat in and around Strawberry Island

We write on behalf of Watershed Watch Salmon Society and researchers at the British Columbia Institute of Technology (“BCIT”) Rivers Institute, regarding the unauthorized destruction of fish habitat in and around Strawberry Island, in contravention of s. 35 of the *Fisheries Act* (the “Act”) and, if the works are completed as planned, will create a high likelihood of ongoing violations of s. 34.4(1) through the death of fish.

Strawberry Island is located within the lower Fraser River watershed, immediately adjacent to the Bert Brink Wildlife Management Area. This site includes a complex of salmon and sturgeon-bearing channels at the confluence of Nicomen Slough and the main Fraser River channel. Strawberry Island floods each year during the spring freshet and provides rearing habitat for juvenile salmonids and White Sturgeon.

Dr. Mike Pearson, PhD, RPBio, visited Strawberry Island on June 10 and 14, 2022 to complete fish sampling under permits from DFO (XHAB-120-2022) and British Columbia (SU22-710098). Dr. Pearson identified several works that are causing ongoing changes to the Fraser River, Nicomen Slough, and Strawberry Slough. Most significantly for this letter, Dr. Pearson observed the construction of a circular dike that will prevent fish access during the spring freshet. A report prepared by Dr. Pearson is attached as **Appendix “A”** to this letter.

Based on Dr. Pearson’s observations, these works appear to be in contravention of both s. 11 of the *Water Sustainability Act* (prohibiting unauthorized changes to a stream) and s. 35 of the *Fisheries Act* prohibiting undertakings that cause harmful alteration, disruption or destruction of fish habitat. It also seems very likely that the works will cause the trapping and death of fish both upstream of a causeway in the Strawberry Slough and through the trapping of fish within the dike, should it be overtopped, resulting in violations of s. 34.4(1) of the *Fisheries Act*.

We wrote to Comptroller Ted White of the provincial Ministry of Fisheries, Lands, Natural Resource Operations and Rural Development on June 24, 2022 to inform him of this regulatory compliance issue. Our letter to Comptroller White is attached as **Appendix “B”** to this letter.

We ask that you conduct an urgent investigation into this apparent compliance issue for the purpose of obtaining the information necessary to sustain charges under the *Fisheries Act*, including requiring the proponent to provide plans and specifications under s. 37(1). We also request that you order that the ongoing dike construction and resulting destruction of fish habitat be stopped and remediated under s. 37(2) if the Dr. Pearson's initial observations are confirmed.

1. Strawberry Island

Strawberry Island is located on the mainstem Fraser River, near Mission, BC. It is one of several islands in the lower Fraser River that, each spring, flood due to high water in the seasonal freshet and become salmon-rearing habitat. Strawberry, along with the Herrling and Carey islands (and associated wetlands) between Mission and Hope have been called the "Heart of the Fraser" by local conservation groups.

Strawberry Island was previously used as a cottonwood plantation for paper products but was deforested after being bought in 2016. When first deforested, Fisheries and Oceans Canada ("DFO") investigated, but no action was taken. The current landowner now intends to convert the island into a diked cranberry farm.

The flooded islands within the Heart of the Fraser are frequented by fish who use and rely on it as habitat. As documented in a 2019 thesis by Lori Bartsch, M.Sc., the un-diked floodplain areas in the lower Fraser River provide critical off-channel habitat for many fish, as well as riparian plant and animal species.¹ White Sturgeon and many Pacific salmon species use these flooded islands to spawn.

According to Dr. Pearson, approximately 34.5 hectares of Strawberry Island floods during the average freshet. The island is currently flooded. Dr. Pearson captured several fish species in two seine hauls on June 14, 2022, including Chinook Salmon, Chum Salmon, Sockeye Salmon, Northern Pikeminnow, Peamouth, Redside Shiner, Threespine Stickleback, and Leopard Dace.² Dr. Pearson estimated a minimum of 30,000 juvenile Chinook, Chum and Sockeye salmon on Strawberry Island on June 14.

Many other species are known to frequent the flooded area,³ and in particular juvenile White Sturgeon, who use the area as rearing habitat. There are six Nationally Significant Populations of White Sturgeon in Canada, including the Lower Fraser Population, which were assessed as endangered, with the Lower Fraser Population) assessed as a threatened species by the Committee on the Status of Endangered Wildlife in Canada ("COSEWIC").⁴ Impacts observed by Dr. Pearson

¹Bartsch, L.S., "Mapping Floodplain Fish Habitat in the Heart of the Fraser River and Restoration Options for Impacted Attributes on Selected Large Mid-Channel Islands. See, pp. 6-8, 15-17 and 29-33. Found at: https://circuit.bcit.ca/repository/islandora/object/repository%3A1001?solr_nav%5Bid%5D=2070fa9a06c5f0b67acb&solr_nav%5Bpage%5D=0&solr_nav%5Boffset%5D=0.

² Pearson report page 7

³ Pearson report page 3

⁴ "Recovery Potential Assessment for Lower Fraser River White Sturgeon 2020", Fisheries and Oceans Canada, Scientific Advisory Report 2021/011, found at: <https://waves-vagues.dfo-mpo.gc.ca/Library/40975691.pdf>.

In June 2022, Dr. Pearson noted the blockage of fish passage, widespread erosion of sediment, and toxic substances released into the water. Specific observations included:

- a recently-constructed access road blocking a seasonal tertiary side channel (Strawberry Channel), where fill material was actively eroding;
- silt fencing overtopped in many places, exposing a dike to water and eroding the dike slope into side channels; and
- two access-road causeways completely blocking the tertiary slough at low to moderate water levels, preventing fish access, even with a culvert (undersized and perched).

Most significantly, the landowner has brought fill onto the island to dike off the entire 85 acres at Strawberry Island Wetland. The effect of the dike is to convert the island from a productive floodplain wetland into a dike enclosed cranberry farm, preventing fish from accessing the area.

These structures will, and have already, affected connected waterways which are known to be high-value juvenile White Sturgeon and juvenile salmon rearing habitat. During Dr. Pearson's site visits, the island was currently underwater due to the seasonal Fraser River freshet. The proposed dike may render the area inaccessible to fish that use the wetland as rearing habitat.

The potential impact of this dike on fish habitat was described by Dr. Pearson as follows:

“Given the large area of habitat damage/loss and extremely high habitat value of Strawberry Island, this constitutes one of the single largest losses of fish habitat in the Lower Fraser since the 1950s, when many of the dikes were constructed.”⁵

2. Section 35, and Section 34.4(1) of the *Fisheries Act*

Section 35(1) of the Act prohibits carrying on any work, undertaking or activity that results in the harmful alteration, disruption or destruction (“HADD”) of fish habitat, unless authorized, prescribed, or permitted under the legislation or prescribed under the regulations.⁶

The Act defines “fish habitat” as water frequented by fish and any other areas on which fish depend on directly or indirectly to carry out their life processes, including spawning grounds and nursery, rearing, food supply and migration areas.⁷ Canadian courts have affirmed that “fish habitat” includes not only the waterways in which fish travel, but also the adjacent land and vegetation, which allows fish to hatch, eat, grow, migrate and ultimately reproduce.⁸ The courts have also made clear that fish habitat can include wetlands used and occupied by fish during high tide or freshets, as is the situation with Strawberry Island.⁹

The Act does not define HADD. However, under the *Fish and Fish Habitat Protection Policy Statement*, HADD is interpreted as “any temporary or permanent change to fish habitat that

⁵ Pearson report page 8.

⁶ [Fisheries Act, RSC 1985, c F-14](#), s 35.

⁷ *Fisheries Act*, RSC 1985, c F-14, s 2.

⁸ [R v Larsen, 2013 BCPC 92](#) at para 40, aff'd 2014 BCSC 2084.

⁹ *R v Golden Eagle Ranch Inc*, [2003 BCPC 205](#).

directly or indirectly impairs the habitat's capacity to support one or more life processes of fish.”¹⁰

The works, undertakings and activities on Strawberry Island are prohibited under section 35(1) of the Act for two reasons.

First, Strawberry Island's seasonally flooded wetland and channels squarely fall under the Act's definition of fish habitat. Researchers have determined that a diversity of fish species use the area for life processes, particularly for rearing.¹¹ Documented species include juvenile White Sturgeon and multiple juvenile salmonids. In particular, rare river-rearing Sockeye Salmon have been repeatedly found on the island's flooded vegetation shores and the adjacent Nicomen Slough during freshet. Further, in mid-June, 2022, researchers estimated a *minimum* of 30,000 juvenile Chinook, Chum and Sockeye salmon on the island.

Second, causeway upgrades, road construction and dike construction on Strawberry Island constitute the HADD of this fish habitat under the Act.

The works, undertakings or activities described by Dr. Pearson mirror the case of *R v Sapp*. The Court held that a defendant caused the HADD of fish habitat when he installed berms to control stream flooding. The defendant dammed off side channels which fish used for spawning and rearing when wetted, with some fish becoming trapped behind the berms.¹² Ultimately, the damming reduced or eliminated fish habitat. Similarly, the dikes, causeways, and access roads on Strawberry Island have, like berms, dammed off wetlands and channels that juvenile fish species use primarily for rearing. Therefore, the road, causeway and dike construction on Strawberry Island caused the HADD of fish habitat under the Act.

To our knowledge, the works, undertakings or activities at Strawberry Island are not authorized, prescribed or permitted under the Act or regulations.

In addition to the ongoing work that appears to be a current breach of section 35, the works as they currently exist and are planned, will likely result in repeated violations of section 34.4 (1) of the Act, which prohibits any work, undertaking or activity that results in the death of fish. As described in Dr. Pearson's report, a number of the existing works (in particular the north causeway crossing, which has a perched culvert) are likely to strand fish as waters recede, resulting in fish deaths. Similarly, given the dimensions of the dike, once completed the dike will likely be overtopped in high water years leaving fish stranded as waters recede.

3. The Fisheries Act applies within the Agricultural Land Reserve

The area at issue falls within the Agricultural Land Reserve. The owner of Strawberry Island has obtained approval under section 20.3(1)(c) of the *Agricultural Land Commission Act* (“ALCA”) for the proposed placement of fill on Strawberry Island, as required under s. 20.3(2)(b) of the

¹⁰ Fisheries and Oceans Canada, *Fish and Fish Habitat Protection Policy Statement* (Ottawa: Fisheries and Oceans Canada, 2019) at 15, online: < <https://waves-vagues.dfo-mpo.gc.ca/Library/40971193.pdf> >.

¹¹ See Pearson Report and Bartsch thesis, footnotes 1 – 3, *supra*.

¹² *R v Sapp*, [2004 BCPC 442](#) at para 29.

ALCA.¹³ The purpose of the ALCA application is described as “to construct a perimeter dike on the Property to prevent flooding during peak water levels of the Fraser River.” The ALCA approval is attached to this letter as **Appendix “C”**.

The ALCA approval does not resolve the owner’s obligation to comply with relevant federal legislation. As noted in the approval itself, “[t]his approval does not relieve you of your obligation to comply with all applicable Acts, regulations, bylaws of local government, and decisions and orders of any person or body having jurisdiction over the land under an enactment.”¹⁴

Despite this obligation, the DFO has declined to enforce section 35(1) of the Act for the prior deforestation of Strawberry Island and the present dike construction. On numerous occasions, DFO staff have communicated to our clients that the Act does not apply because the area is within the Agricultural Land Reserve.

This conclusion is incorrect for a number of reasons.

First, the Act does not indicate that section 35(1) does not apply within the Agricultural Land Reserve. Canadian courts have made clear that the Act does in fact apply. In *R v Golden Eagle Ranch Inc*, the Crown charged a cranberry farm company with destroying fish habitat under section 35(1). The company had cleared land and constructed dikes in the North Alouette River floodplain, which is largely a wetland and used as fish habitat during freshets and tides.¹⁵ The facts in the current matter are extremely similar. The fact that Strawberry Island is within the Agricultural Land Reserve can not and should not impact DFO’s enforcement of section 35(1) of the Act.

Second, the dominant tide of constitutional interpretation favours, where possible, the operation of statutes enacted by both levels of government.¹⁶ If, however, the Act and ALCA are in direct conflict, the paramountcy doctrine applies. According to this doctrine, where inconsistency exists between validly enacted but overlapping provincial and federal legislation, the provincial legislation is inoperative to the extent of the inconsistency.¹⁷ Therefore, if the provincial ALCA is indeed inconsistent with the federal Act, then the Act must prevail.

Third, the provincial *Farm Practices Protection (Right to Farm) Act* (the “*Right to Farm Act*”) does not preclude farming operations from complying with federal statutes, including the Act. Section 2(1) of the provincial *Right to Farm Act*, subject to requirements, only restricts liability in nuisance and prevents injunctions or other court orders.¹⁸

¹³ Under 20.3(1)(c) of the ALCA, a person must not place fill on agricultural land unless the person is the owner of the land (or has a right of entry) and receives approval under s 20.3(2)(b).

¹⁴ Appendix A.

¹⁵ *R v Golden Eagle Ranch Inc*, [2003 BCPC 205](#) at para 98. The court ultimately acquitted the company of the charge but not because the area was within the Agricultural Land Reserve, instead on the basis of evidentiary issues.

¹⁶ *Canadian Western Bank v Alberta*, [2007 SCC 22](#) at para 37.

¹⁷ *Canadian Western Bank v Alberta*, [2007 SCC 22](#) at para 69; *Rothmans, Benson & Hedges Inc v Saskatchewan*, [2005 SCC 13](#) at para 11.

¹⁸ *Farm Practices Protection (Right to Farm) Act*, [RSBC 1996, c 131](#), s 2(1).

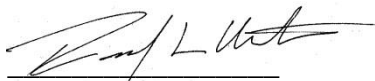
Consequently, the DFO has no reason to conclude that the ALCA supersedes the Act. The DFO must therefore enforce section 35(1) to deter and prohibit future harmful alteration, disruption, or destruction to the biologically significant fish habitat around Strawberry Island.

4. Request

The ongoing developments observed by Dr. Pearson appear to be an ongoing violation of section 35 of the Act. Under section 78, the landowner's violation of this provision constitutes an offence.

We ask that you conduct an urgent investigation into this apparent compliance issue for the purpose of obtaining the information necessary to sustain charges under the *Fisheries Act*, including requiring the proponent to provide plans and specifications under section 37(1). We also request that you order that the ongoing dike construction and resulting destruction of fish habitat be stopped and remediated under section 37(2) if the Dr. Pearson's initial observations are confirmed.

Sincerely,



Randy Christensen
Barrister & Solicitor

Appendix A: Pearson Report



MEMORANDUM

June 16, 2022

RE: Strawberry Island Habitat Assessment



Summary

A site visit on June 10, 2022 revealed multiple environmental issues that are clearly in contravention of Water Sustainability Act. These include blockage of fish passage, widespread erosion of sediment, inadequate erosion control measures, and failure to prevent toxic substances from entering the water (asphalt piles and potentially open gasoline containers). The applicant lacks WSA approval for changes in and around a watercourse including the causeway upgrades, road construction, and dike construction.

Dike construction also clearly constitutes harmful alteration, damage and destruction of fish habitat through the poor construction practices documented above, and by converting a productive floodplain wetland used by fish to a dike enclosed cranberry farm.

On June 14, two hauls of a 20 m bag seine covering approximately 650 m² habitat yielded 52 juvenile salmonids (Chinook, Chum and river rearing Sockeye). Given that approximately 375, 000 m² of the island was flooded at the time, and catch efficiency is always less than 100 percent, I estimate that a minimum of 30,000 juvenile salmonids were present on the flooded portion of Strawberry Island at the time.

Habitat Value

Strawberry Island forms a complex of islands and side-channels in the Fraser River at the mouth of Nicomen Slough (Figure 1). The eastern half of Strawberry Island has been protected as part of the Bert Brink Wildlife Management Area since 2009 to ‘*Conservation of Fraser River floodplain with a biologically diverse habitat mosaic that supports a large number of both resident and migratory fish and wildlife.*’ (Province of BC, 2022). A short distance upstream, the Norrish Creek fan owned by Ducks Unlimited Canada, is protected for similar

reasons. Slightly further upstream, North Nicomen Slough and Taylor Road Slough are partially protected by recent acquisitions of The Nature Trust of BC and significant funding was recently awarded to Resilient Waters Project via a BC SRIF grant to restore fish access and habitat quality. Together, these areas create one of the highest value fish and wildlife habitats on the lower Fraser River.

The north-western quarter of Strawberry Island consisted of a seasonally flooded forested wetland connected by side channels to the Bert Brink WMA (Figure 2). Approximately 34.5 hectares (85 acres) floods during an average freshet, and is underwater at present. The connection to Nicomen slough was over 2 m deep at the time of our site visit on June 10.

It would be difficult to overstate value of this wetland and its connecting channels as fish habitat. Lower Nicomen Slough is a documented rearing area for juvenile White Sturgeon and juvenile salmonids. Juvenile Chinook Salmon are found throughout the spring and summer around Strawberry Island (Marvin Rosenau, pers. comm.), at the Norrish Creek Fan (Murray Manson, DFO pers. comm) and as far upstream as North Nicomen Slough (Pearson unpub. data). Rare river-rearing Sockeye have been found repeatedly in flooded vegetation along the shores of Strawberry Island and adjacent Nicomen Slough during freshet (Rosenau pers. comm). There are no records of fish sampling in the flooded wetland to date. A list of indigenous fish species expected to use this habitat is provided in Table 1.



Figure 1: Lower Nicomen Slough in June 2015 showing Strawberry Island, prior to clearing. The subject property is outlined in yellow.

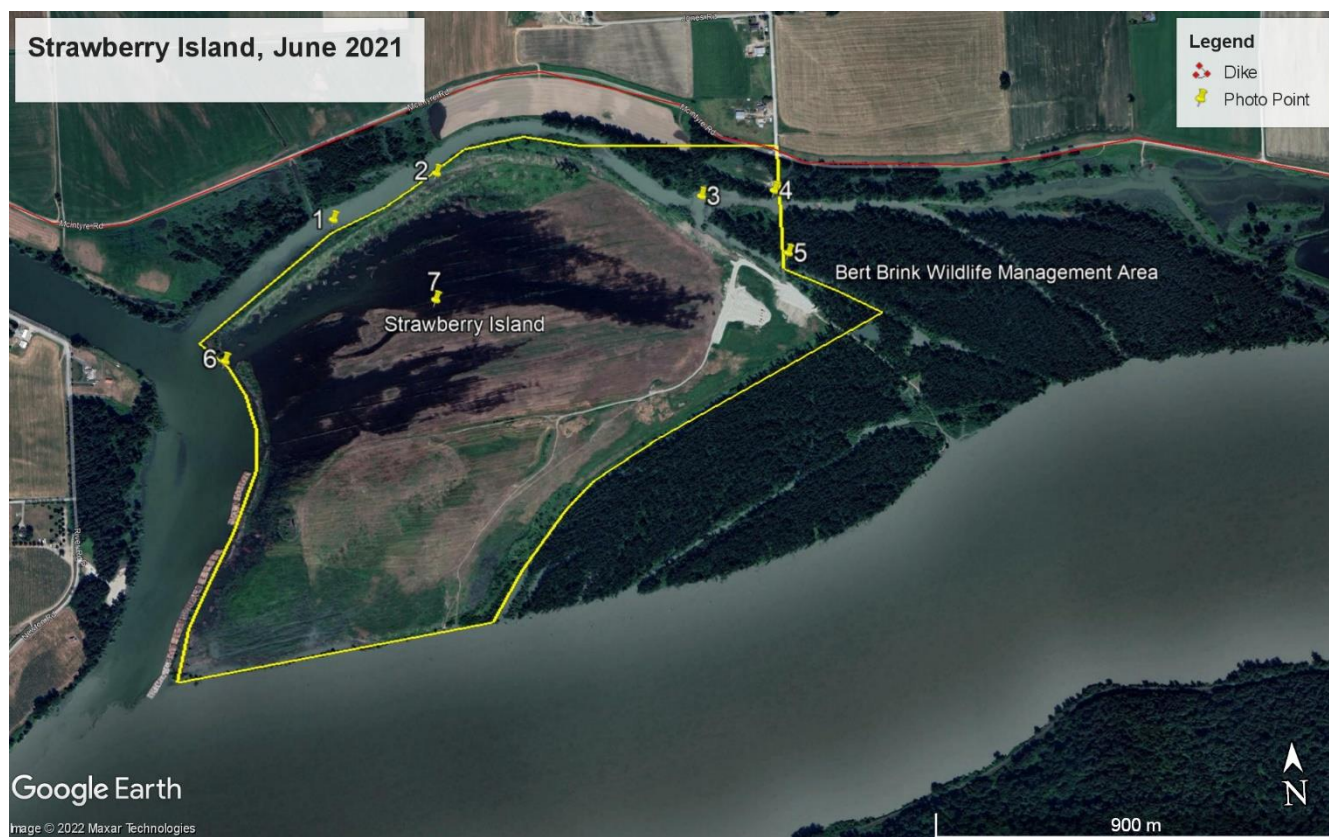


Figure 2: Strawberry Island in June 2021, at moderate freshet level. The Island was clearcut to the border of the Bert Brink WMA in 2015-2016. Numbered points correspond to site photos and descriptions below.

Table 1: Indigenous fish expected to use seasonally flooded wetland and channel habitats of Strawberry Island. Halq'emeylem names provided by Carrielynn Victor, Ayelstexw Consulting, Cheam

English Name	Halq'emeylem Name	Scientific Name	Status
Coho Salmon	Kwóxweth	<i>Oncorhynchus kisutch</i>	
Chinook Salmon	Tl'éxxel	<i>Oncorhynchus tshawytscha</i>	Some stocks COSEWIC Endangered
Chum Salmon	Kw'ó:lexw	<i>Oncorhynchus keta</i>	
Pink Salmon	Hóliya	<i>Oncorhynchus gorbuscha</i>	
Sockeye Salmon	Sthéqi	<i>Oncorhynchus nerka</i>	Many stocks COSEWIC Endangered
Rainbow Trout/Steelhead	Qéywx	<i>Oncorhynchus mykiss</i>	Some stocks COSEWIC Endangered
Coastal Cutthroat Trout	Kw'sí:ts	<i>Oncorhynchus clarkii clarkii</i>	BC Blue-list
Bull Trout	Sthexó:ts	<i>Salvelinus confluentus</i>	BC Blue List, SARA Special Concern
Dolly Varden	Sthexó:ts	<i>Salvelinus malma</i>	
White Sturgeon	Skwó:wech	<i>Acipenser transmontonus</i>	BC Red List, COSEWIC Threatened
Largescale Sucker	Q'ó:xel	<i>Catostomus macrocheilus</i>	
Cordilleran Sucker	Qw'á:ts	<i>Catostomus bondi</i>	BC Blue List, SARA Special Concern
Prickly Sculpin		<i>Cottus asper</i>	
Coastrange Sculpin		<i>Cottus aleuticus</i>	
Longnose Dace		<i>Rhinichthys cataractae</i>	
Leopard Dace		<i>Rhinichthys falcatus</i>	
Brassy Minnow	Sqíqemlò	<i>Hybognathus hankinsoni</i>	BC Blue-list, COSEWIC Special Concern
Northern Pikeminnow		<i>Ptychocheilus oregonensis</i>	
Peamouth		<i>Mylocheilus caurinus</i>	
Redside Shiner	Sqíqemlò	<i>Richardsonius balteatus</i>	
Threespine Stickleback	Smó:txw	<i>Gasterosteus aculeatus</i>	

Issues Observed

Significant damage occurred with the clearcutting of the island in 2015-2016 with the loss of riparian areas and forest cover over the wetland and channels. Indigenous trees and shrubs provide soil stability, physical cover for fish during floods, and large influxes of terrestrial invertebrate food sources in freshet and other floods. The total area of forested island habitat has declined significantly in the past century (Ham and Church 2002) and losses have accelerated since then, with Strawberry Island being one of the largest single losses.

The recent and ongoing issues observed on June 10 are summarized in the following sections. Location numbers refer to sites shown on Figure 2. Unless noted otherwise all photos were taken on June 10, 2022.

Site 1: Strawberry Slough

The north-west edge of Strawberry Island (right side of photo) retains a narrow band of intact riparian area. The slough is 50 m wide when full, but dries upstream of this point in late summer.



Site 2:

A recently-constructed access road is blocking a seasonal side channel. The Fill material is fully saturated (like quicksand), actively eroding and will be overtopped within a day or two. An open jerry can was found floating at the site.



Site 3. Confluence of side channels

Under current freshet conditions water extends past silt fencing to toe of the dike. Silt fencing is overtopped in places and does not extend the full length of the dike that is exposed to water. Rill erosion on the dike slope is evident along its entire length.



Site 4: North causeway crossing

The access road causeways completely block the slough. The culvert in the causeway is grossly undersized and perched, blocking fish access at all but the highest water levels. The access road is currently completely submerged with flowing water eroding stockpiled gravel and ground asphalt (black piles near centre of drone photo).



Site 5: South Causeway crossing

The causeway is completely submerged and eroding. The silt fencing is overtopped and unsecured pressure-treated poles about to float away.



Site 6: Strawberry Island Wetland connection to Nicomen Slough

Water was over 2 m deep at the connection between the wetland and Nicomen Slough channel on June 10.



Site 7: Strawberry Island Wetland

Approximately 85 acres are currently underwater and accessible to fish, as they are virtually every year during freshet. It appears that the landowner intends to dike off the entire area.



Fish Presence

On June 14, two hauls of a 20 m bag seine covering approximately 650 m² habitat 7 indigenous species of fish including 52 juvenile salmonids (Figure 8, Table 2). Given that approximately 375, 000 m² of the island was flooded at the time, and catch efficiency is always less than 100 percent, an minimum of 30,000 juvenile salmonids are estimated to have been present were present on the flooded portion of Strawberry Island at the time.



Figure 1: Seine haul on Strawberry Island, June 14, 2022.

Table 2: Fish species captured on flooded portion of Strawberry Island in two seine hauls covering up to 650 m² of Strawberry Island

Species	Halq'emeylem	Scientific Name	Number
Chinook Salmon	Tl'éxxel	<i>Oncorhynchus tshawytscha</i>	10
Chum Salmon	Kw'ó:lexw	<i>Oncorhynchus keta</i>	1
Sockeye Salmon	Sthéqi	<i>Oncorhynchus nerka</i>	41
Northern Pikeminnow		<i>Ptychocheilus oregonensis</i>	2
Peamouth		<i>Mylocheilus caurinus</i>	1
Redside Shiner	Sqíqemlò	<i>Richardsonius balteatus</i>	1
Threespine Stickleback	Smó:txw	<i>Gasterosteus aculeatus</i>	28
Leopard Dace		<i>Rhinichthys falcatus</i>	1
All Species			85

The majority of salmonids caught (41) were river-rearing sockeye fry, presumably of Harrison River origin. Identification was confirmed by the number and morphology of gill rakers on two individuals (Figure 9). Fin clips from all Chinook and 10 Sockeye were collected and will be included with samples from sites across the lower Fraser collected by Resilient Waters to be submitted to the DFO conservation genetics laboratory at the end of the field season (late fall) to confirm stock identification.

Fish sampling was completed under fish collection permits from DFO (XHAB-120-2022) and British Columbia (SU22-710098) issued to Pearson Ecological.

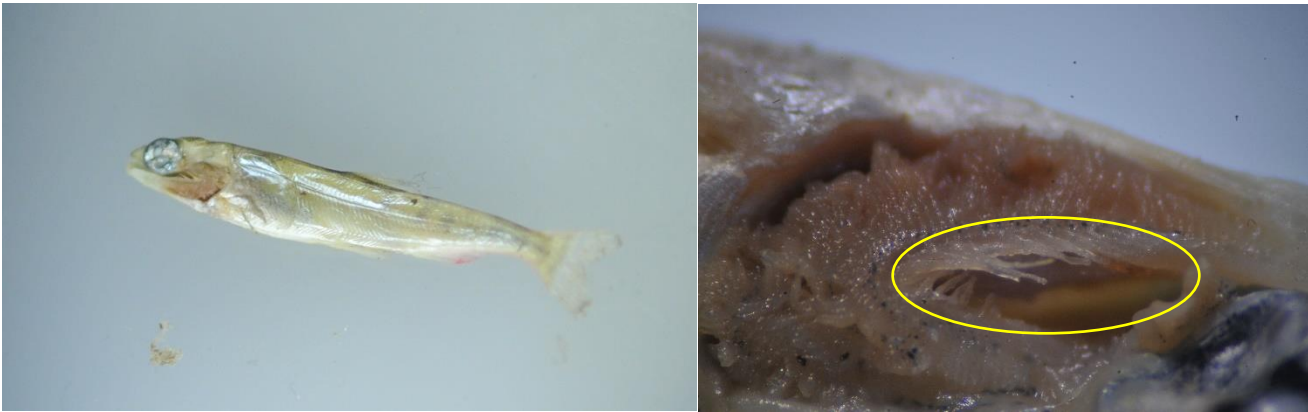


Figure 9: Sockeye salmon fry (39 mm) showing over 20 long slender gill rakers (right). Chum Salmon would have short, stubby gill rakers fewer in number (McPhail 2007)

Overall Assessment

Multiple issues were identified that are clearly in contravention of Water Sustainability Act. These include blockage of fish passage, widespread erosion of sediment, inadequate erosion control measures, and failure to prevent toxic substances from entering the water (asphalt piles and potentially open gasoline containers. The applicant lacks WSA approval for changes in and around a watercourse including the causeway upgrades, road construction, and dike construction.

Dike construction also clearly constitutes harmful alteration, damage and destruction of fish habitat through the poor construction practices documented above and by converting a productive floodplain wetland to a dike enclosed cranberry farm. The presence of an estimated minimum of 30,000 juvenile Chinook, Chum and Sockeye salmon on the Island on June 14, speaks to the importance of this habitat under freshet conditions.

Given the large area of habitat damage/loss and extremely high habitat value of Strawberry Island, this constitutes one of the single largest losses of fish habitat in the Lower Fraser since the 1950s, when many of the dikes were constructed. That this is occurring without agency recognition that Strawberry Island even constitutes fish habitat and at a time when government is committing tens of millions of dollars to habitat restoration and salmon recovery in the Lower Fraser is shocking.

References

- Ham, D. and M. Church. 2002. Channel island and active channel stability in the lower Fraser River gravel reach. Department of Geography, University of British Columbia. Available at: <https://ibis.geog.ubc.ca/fraser/river/reports/channelreport2002.pdf>
- McPhail, J.D. 2007. The freshwater fishes of British Columbia. University of Alberta Press.
- Province of British Columbia. 2022. Bert Brink Wildlife Management Area. <https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/wildlife/wildlife-habitats/conservation-lands/wma/wmas-list/bert-brink>. Accessed June 12, 2022.



Appendix B: Letter to Comptroller White

June 24, 2022

Sent via email: Ted.White@gov.bc.ca

Ted White
Director/Comptroller of Water Rights
FLNR Water Management Branch
PO BOX 9340 Stn Prov Govt
Victoria, BC, V8W 9M1

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Dear Mr. White,

Re: Unauthorized Stream Changes around Strawberry Island

We write on behalf of Watershed Watch Salmon Society and researchers at the British Columbia Institute of Technology (“BCIT”) Rivers Institute, regarding unauthorized changes to streams in and around Strawberry Island, on the mainstem Fraser River, near Mission, BC.

Strawberry Island is located within the lower Fraser River watershed, immediately adjacent to the Bert Brink Wildlife Management Area. This site includes a complex of salmon and sturgeon-bearing channels at the confluence of Nicomen Slough and the main Fraser River channel. Strawberry Island, along with other islands in the area, floods each year during the spring freshet and provides rearing habitat for juvenile salmonids and White Sturgeon for some or all of its physical surface.

Dr. Mike Pearson, PhD, RPBio, visited Strawberry Island on June 10 and 14, 2022 to complete fish sampling under permits from DFO (XHAB-120-2022) and British Columbia (SU22-710098). Dr. Pearson identified several works that appear to have been constructed without *Water Sustainability Act* approvals, including causeway upgrades, road construction, and dike construction. These works are causing immediate and ongoing changes to the Fraser River, Nicomen Slough, and Strawberry Slough, and the flow patterns therein. A report prepared by Dr. Pearson describing these changes is attached as **Appendix “A”** to this letter.

Based on Dr. Pearson’s observations, these works appear to be in contravention of ss. 11 and 106(2)(b)(ii) of the *Water Sustainability Act* which prohibit unauthorized changes in and about a stream. While the landowner does have an *Agricultural Land Commission Act* (“ACLA”) permit to place fill on Strawberry Island, this permit does not address the general prohibition on unauthorized changes in and about a stream.

We ask that you conduct an investigate this apparent compliance issue, and if necessary, order that the ongoing stream changes be immediately stopped and remediated.

1. Changes observed by Dr. Pearson

Dr. Pearson observed many changes to the streams adjacent to Strawberry Island, including:

- a recently-constructed access road is blocking a seasonal tertiary side channel (Strawberry Channel), where fill material was actively eroding;
- silt fencing was overtopped in many places, exposing a dike to water and eroding the dike slope into side channels;
- two access-road causeways completely block the tertiary slough at low to moderate water levels, blocking fish access and eroding gravel and ground asphalt into the water column;
- one of these causeways was completely submerged and eroding on June 10, both will be submerged at current water levels; and
- the landowner appears to intend to dike off 85 acres of the island with a massive ring dike.

As described by Dr. Pearson, these and other observations indicate “blockage of fish passage, widespread erosion of sediment, inadequate erosion control measures, and failure to prevent toxic substances from entering the water”. See Figures 1-3 attached at the end of this letter for the location of Strawberry Island and diagrams of the proposed dike.

These structures will, and have already, affected connected waterways which are known to be high-value juvenile white sturgeon and juvenile salmon rearing habitat. During Dr Pearson’s site visits, the island was currently underwater due to the seasonal Fraser River freshet. The proposed dike may render the area inaccessible to fish that use the wetland as rearing habitat.

The construction of this dike will alter the flow of the mainstem Fraser River potentially increase the water surface elevation on the Nicomen Island flood dike through backwatering, re-direct flows via the dike and causeway against the Nicomen Island flood dike and compromise the structural integrity via erosion.

A full description of these changes and more, with photos, is included in the report of Dr. Pearson attached to this letter as Appendix A.

2. Section 11 of the Water Sustainability Act

Section 11(2) of the *Water Sustainability Act* provides that changes in and about a stream can only be made in accordance with:

- (a) the terms and conditions of a change approval,
- (b) the regulations,
- (c) the terms and conditions of an authorization, or
- (d) an order.¹

¹ [Water Sustainability Act, SBC 2014, c 15](#) at s 11.

“Changes in and about a stream” is a defined term, defined as (a) any modification to the nature of a stream, including any modification to the land, vegetation and natural environment of a stream or the flow of water in a stream, or (b) any activity or construction within a stream channel that has or may have an impact on a stream or a stream channel.

To our knowledge the owner of Strawberry Island has no change approval, authorization, or order permitting changes to these watercourses. Moreover, it is clear that this project will profoundly affect fish and wildlife habitat (including species at risk), in addition to potentially compromising the main Fraser River/Nicomén Island freshet dikes.

The exception under section 11(2)(b), for changes permitted under the regulations, is also not applicable here. Part 3 of the *Water Sustainability Regulation* (and specifically section 39) sets out authorized changes to a stream if all relevant conditions are met. Changes from the construction of culverts for the purposes of a road, trail or footpath are only permissible under certain conditions, including:²

- if the stream is fish-bearing, the culvert allows fish in the stream to pass up or down stream under all flow conditions;
- the culvert inlet and outlet incorporate measures to protect the structure and the stream channel against erosion;
- the installation, maintenance or removal of the culvert does not destabilize the stream channel; and
- the culvert capacity is equivalent to the hydraulic capacity of the stream channel, or is capable of passing the 1 in 200 year maximum daily flow without the water level at the culvert inlet exceeding the top of the culvert.

Dr. Pearson’s report indicates that these and many other mandatory conditions have not been met. There is no statutory exception under Part 3 of the Regulation for new dikes, instead only for the repair or maintenance of existing dikes or other erosion protection.³

Further, even changes authorized under the Regulation must be designed, constructed and maintained so that the change does not pose a significant risk of harm to public safety, the environment, land or other property.⁴ Given the significant environmental harms documented by Dr. Pearson, even if the works were presumptively authorized by Regulation, they have not been conducted in accordance with this requirement.

Given the observations described by Dr. Pearson, it is our opinion that there is serious concern that these works are not in compliance with section 11. Under section 106(2)(b)(ii), it is an offence to make changes in and about a stream without lawful authority.

² [Water Sustainability Regulation, BC Reg 36/2016](#) at s 39(1)(a).

³ Water Sustainability Regulation at s 39(1)(k).

⁴ Water Sustainability Regulation at s 41(3).

3. Agricultural Land Commission Act Permit

The owner of Strawberry Island does have an approval under section 20.3(1)(c) of the ALCA for the proposed placement of fill on Strawberry Island, which falls within the Agricultural Land Reserve. The ALCA approval is attached to this letter as **Appendix “B”**.

Section 20.3(1)(c) of the ALCA provides that a person must not place fill on agricultural land unless the person is the owner of the land (or has a right of entry) and receives approval under s 20.3(2)(b).

In the approval, the purpose of the application is described as “to construct a perimeter dike on the Property to prevent flooding during peak water levels of the Fraser River.” This planned dike is presumably the one observed and described in Dr. Pearson’s report.

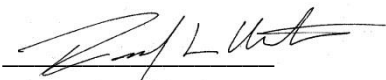
The ALCA approval does not resolve the owner’s obligation to comply with relevant provincial and federal statutes, including the *Water Sustainability Act* and the prohibition against disruption/destruction of fish habitat under s. 35 of the federal *Fisheries Act*. Section 39 of the Regulation creates exceptions for approvals made under other statutes and regulations, but not under the ALCA. And as noted in the ALCA approval to the permit holder, “[t]his approval does not relieve you of your obligation to comply with all applicable Acts, regulations, bylaws of local government, and decisions and orders of any person or body having jurisdiction over the land under an enactment.”

4. Conclusion

Dr. Pearson observed and described significant changes to streams around Strawberry Island, including the Fraser River, Nicomen Slough, and Strawberry Slough. These changes appear to be unauthorized and in contravention of ss. 11 and 106(2)(b)(ii) of the *Water Sustainability Act*. Immediate action must be taken to prevent further changes to these streams, and harm to fish and fish habitat.

Sections 91 and 93 provide you with the authority to order a person who makes changes in and about a stream to stop work, and restore or remediate those changes. We ask that you conduct an investigation, and if ss. 11 and 106(2)(b)(ii) are being violated, you immediately order these ongoing works to cease and be remediated.

Sincerely,



Randy Christensen
Barrister & Solicitor



Daniel Cheater
Barrister & Solicitor

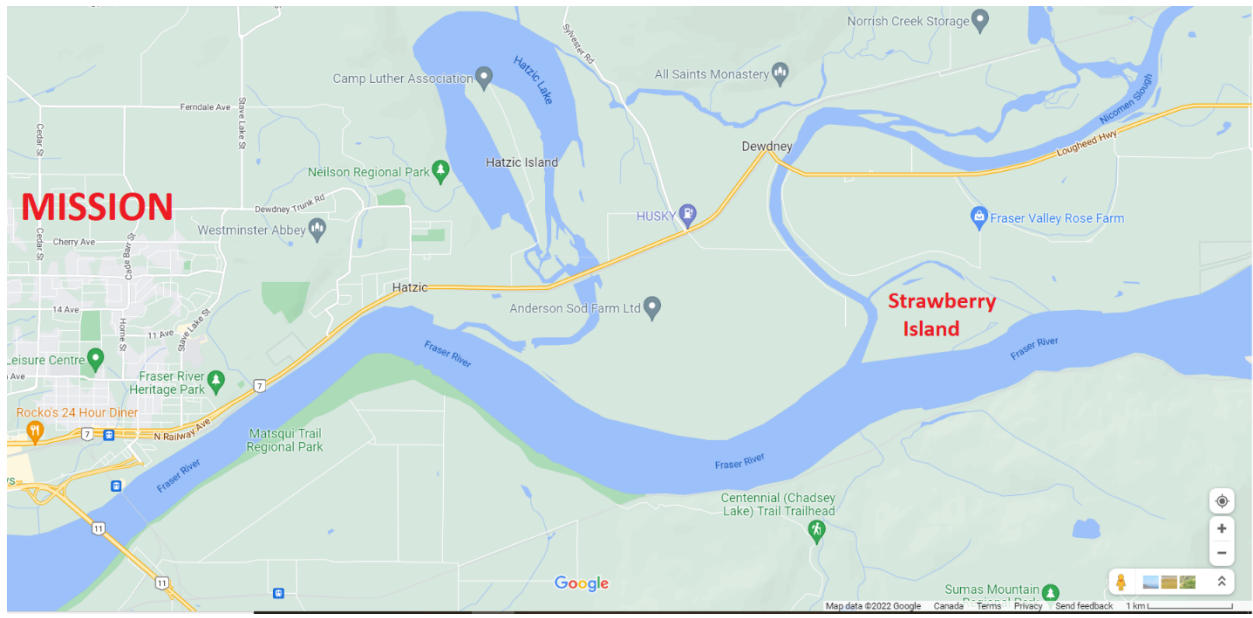


Figure 1: Location of Strawberry Island east of Mission, British Columbia, on the Fraser River.

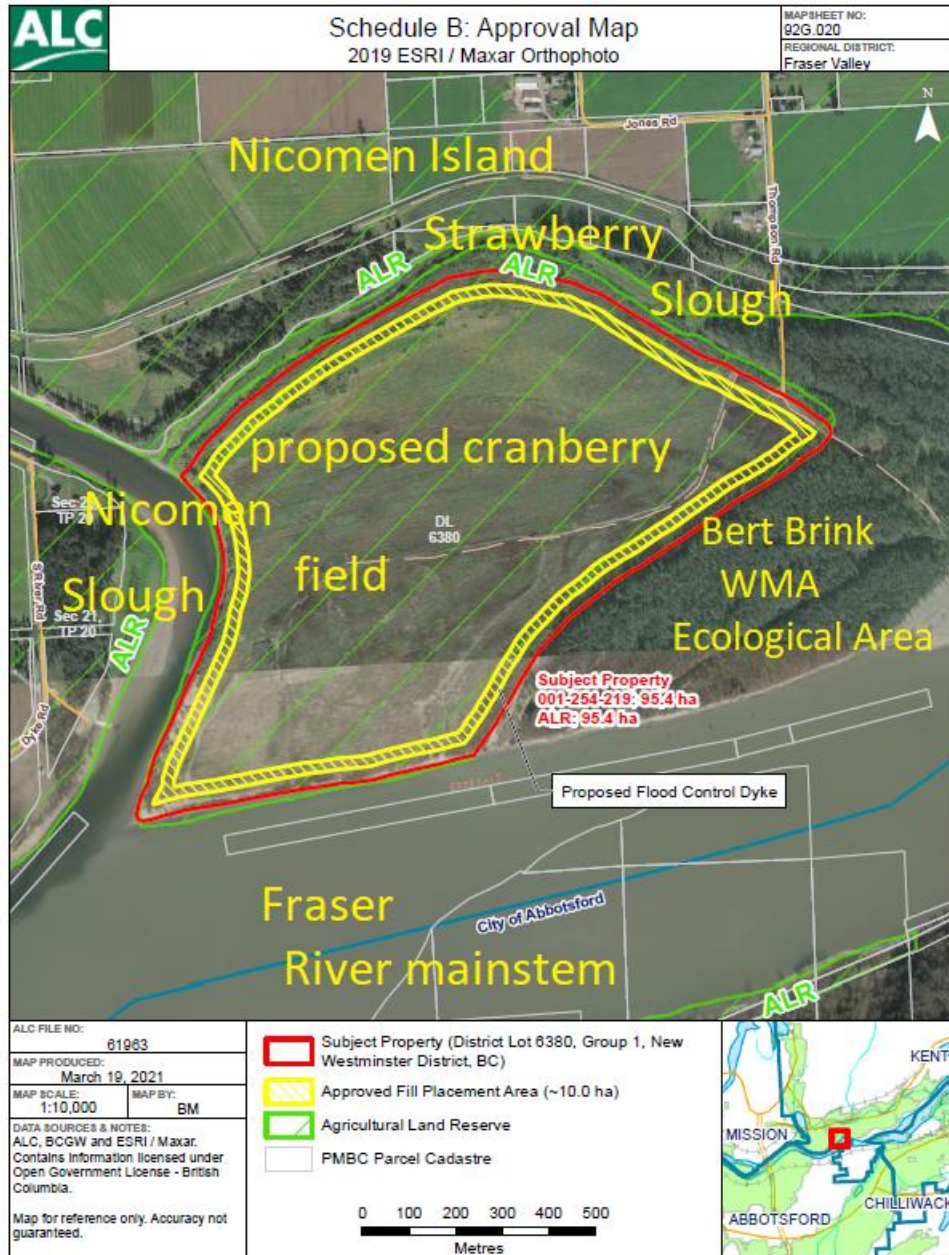


Figure 2: Extent of impact to Strawberry Island by cranberry farm proposal, with modifications. Map from letter sent by the ALC (Agricultural Land Commission) to agent of proponent, March 22, 2021, ALC File: 61963, regarding **Approval Subject to Limits and Conditions Under Section 20.3(2)b(ii) of the Agricultural Land Commission Act** Re: Notice of intent to place fill on Land in the Agricultural Land Reserve PID: 001-254-219; Legal Description: District Lot 6380 Group 1 New Westminster District; Civic Address: N/A.

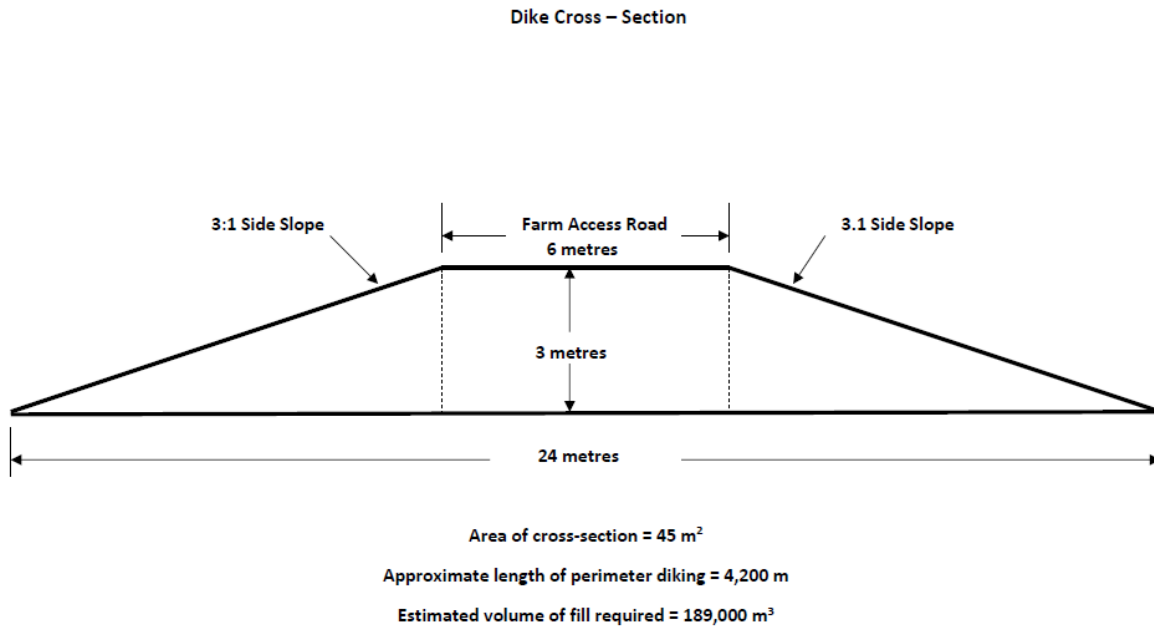


Figure 3: Conceptual dike design for Strawberry Island cranberry farm proposal. Map from letter sent by the ALC (Agricultural Land Commission) to agent of proponent, March 22, 2021, ALC File: 61963, regarding **Approval Subject to Limits and Conditions Under Section 20.3(2)b(ii) of the Agricultural Land Commission Act** Re: Notice of intent to place fill on Land in the Agricultural Land Reserve PID: 001-254-219; Legal Description: District Lot 6380 Group 1 New Westminster District; Civic Address: N/A.

Appendix C: ALCA Permit



Agricultural Land Commission
201 – 4940 Canada Way
Burnaby, British Columbia V5G 4K6
Tel: 604 660-7000
Fax: 604 660-7033
www.alc.gov.bc.ca

March 22, 2021

ALC File: 61963

SENT BY E-MAIL: colin.fry.associates@gmail.com

Colin Fry & Associates Consulting Ltd.
903 Edinburgh St
New Westminster, BC V3M 2V2

Attention: Colin Fry – Agent

Dear Colin Fry:

**Approval Subject to Limits and Conditions Under Section 20.3(2)(b)(ii) of the
Agricultural Land Commission Act**

Re: Notice of Intent to place fill on Land in the Agricultural Land Reserve

PID: 001-254-219

Legal Description: District Lot 6380 Group 1 New Westminster District

Civic Address: N/A

(the "Property")

On January 22, 2021 the Chief Executive Officer (CEO) of the Agricultural Land Commission received a Notice of Intent (NOI) pursuant to section 20.3(1)(c) of the *Agricultural Land Commission Act* (ALCA) for the proposed placement of fill on the Property (the Proposed Fill Placement Activities). The CEO also received a fee of \$150 with respect to the NOI pursuant to subsection 20.3(1)(c)(ii).

As delegate CEO pursuant to subsection 20.3(6) of the ALCA, I understand the following about the Proposed Fill Placement Activities from the NOI and accompanying documents:

- The landowner of the Property is 1113918 B.C. LTD., INC.NO. BC1113918;
- Renato Martini is the registered director of 1113918 B.C. LTD.;
- Colin Fry of Colin Fry & Associates Consulting Ltd. was appointed as agent by Renato Martini;
- The total area of the Proposed Fill Placement Activities is 10 ha (100,000 m²);
- The agricultural capability of the property is 4IA (2AT), 6:5IW~4:4IA (6:3W~4:2AT), 6:4IA~4:5IW (6:2AT~4:2W), 6:4I~4:5IW (6:2T~4:2W); 6:4IA~4:3IA (6:2AT~4:2T), 6:4TIA~4:3ITA (6:4T~4:3T), 6:4I~4:3IAT (8:2T~2:3T), and 5WI (4W);
- The purpose of the Proposed Fill Placement Activities is to construct a perimeter dike on the Property to prevent flooding during peak water levels of the Fraser River;
 - As per the submitted NOI, "the subject property is situated outside the Nicomen Island Diking District and has no flood protection at the moment;"
 - The proposed dike would have 3:1 slopes and would be approx. 24 m wide;

- The approximate length of the perimeter dike would be approximately 4,200 m;
- A farm road will be constructed on the crest of the dike, which would be approximately 6 m wide;
- The proposed dike would be sited to meet the 30 m riparian setback required by Fraser Valley Regional District (FVRD);
- The proposed dike appears to be a private dike (i.e. a dike built on private property that protects only that one property);
- In the future, the landowner plans to increase the agricultural investment in the Property to support cranberry production;
 - The landowner, who is associated with Coast Cranberries, currently farms over 120 ha of cranberries and over 24 ha of blueberries in the Township of Langley;
- The type of material proposed to be placed on the Property is clean fill;
 - The material has not been sourced yet;
- The proposed volume of materials to be placed on the Property is 189,000 m³;
- The proposed maximum depth of material to be placed on the Property is 3 m; and
- The proposed duration of the Proposed Fill Placement is three (3) years.

Upon review of the Notice of Intent and accompanying documents, I hereby approve the Proposed Fill Placement Activities subject to the attached Schedule A: Limits and Conditions under section 20.3(2)(b)(ii) of the Act.

Please note that the submission of a \$150 administrative fee may be required for the administration, processing, preparation, review, execution, filing or registration of documents required as a condition of the attached Decision in accordance with s. 11(2)(b) of the ALR General Regulation.

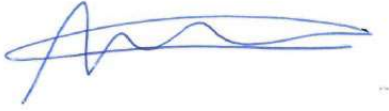
Please note it is recommended that any private dike should be built to provincial standards (i.e. [Dike Design and Construction Guide Best Management Practices for British Columbia](#)), which should also include procuring the services of a professional engineer.

This approval is only for the Proposed Fill Placement Activities. This approval does not constitute approval for any other activity on the Property for which CEO or Commission approval would otherwise be required. This approval does not relieve you of your obligation to comply with all applicable Acts, regulations, bylaws of local government, and decisions and orders of any person or body having jurisdiction over the land under an enactment.

Should you not agree to restrictions on the intended specified use, as set out in the above 'terms and conditions', the option of submitting a formal application to the Commission is available. Information on application process can be found on the ALC website under [Applications and Decisions](#).

As agent, it is your responsibility to advise your client of this, and any future, correspondence. Further correspondence with respect to this letter should be directed to Jenny Huynh at ALC.soil@gov.bc.ca.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Avtar S. Sundher', is positioned below the word 'Sincerely,'.

Avtar S. Sundher
Delegate of the Chief Executive Officer

Enclosure: Schedule A: Limits and Conditions
 Schedule B: Approval Map
 Schedule C: Cross-Section

cc: Fraser Valley Regional District (planning@fvr.d.bc.ca)

61963d1

Schedule A:

Limits and Conditions on the Proposed Fill Placement Activities

GENERAL

1. The Proposed Fill Placement Activities must be conducted in compliance with the limits and conditions set out in this NOI approval;
2. The Proposed Fill Placement Activities are restricted to the 10 ha area shown in the Schedule B: Approval Map attached to this NOI approval;
3. The total allowed volume of material to be placed is limited to 189,000 m³;
4. The total fill placement must be limited in depth to achieve the finished grade elevations as identified in the Schedule C: Cross-Section attached to this NOI approval;
5. The crest of the dike is limited to a maximum width of 6 m, as identified in the Schedule C: Cross-Section;
6. Approval for placement of fill on the Property is granted for the sole benefit of the Applicant and is non-transferable without the written approval of the ALC;

PRIOR TO CONDUCTING PROPOSED FILL PLACEMENT ACTIVITIES

Administrative Fees

7. Each review of a report will incur a \$150 administrative fee, as per section 11 of the Agricultural Land Reserve General Regulation.
8. There are four (4) reports required for the term of the project. **Therefore, the ALC requires \$600 in administrative fees to be paid in advance of project commencement.** The administrative fee is non-refundable and is separate from the Financial Security.
9. An administrative fee can be paid by either cheque or by credit card. For cheque payment, please include the ALC number in the memo section. For credit card payment please call the Agricultural Land Commission and quote the file number for the administrative fee.

CONDUCTING PROPOSED FILL PLACEMENT ACTIVITIES

Vehicular Traffic

10. Access and egress of all vehicle traffic associated with the Proposed Fill Placement Activities and other related activities, must be restricted to a single access road onto the Property;
11. Dust suppression practices and/or restrictions on Proposed Fill Placement Activities related vehicle traffic must be applied when necessary to minimize air-borne dust from traffic on the access road;

Fill Material

12. As per Section 36 of the *Agricultural Land Reserve Use Regulation*, prohibited fill must not be placed on the Property. Prohibited fill includes:
 - a. construction or demolition waste, including masonry rubble, concrete, cement, rebar, drywall and wood waste;
 - b. asphalt;
 - c. glass;
 - d. synthetic polymers;
 - e. treated wood;
 - f. unchipped lumber;

Weed Control

13. Appropriate weed control must be practiced on all disturbed areas;

Status Reports

14. Status reports must be submitted on an annual basis to update the ALC on the progress of the Proposed Fill Placement Activities;
15. The status report must include, but is not limited to:
 - a. Confirmation that operations are in compliance with the terms and conditions set by the ALC;
 - b. Evidence that fill quality meets the conditions of this NOI (supported by photographs, etc.);
 - c. A record of fill volume and fill source locations;

16. The first status report is due **December 22, 2021**;

COMPLETION OF THE PROPOSED FILL PLACEMENT ACTIVITIES

Closure Letter

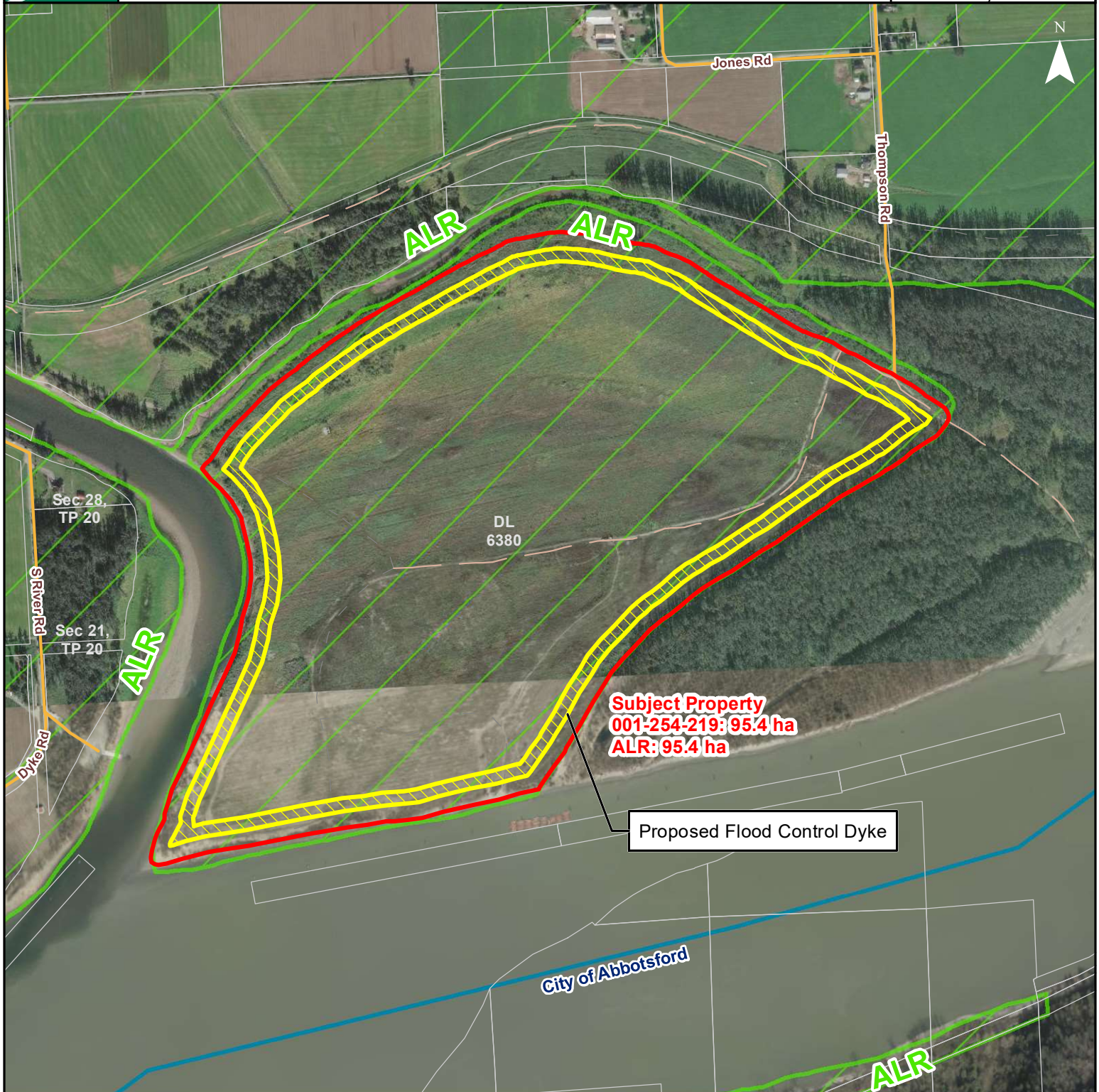
17. A closure letter must be submitted to the ALC upon completion of the Proposed Fill Placement Activities. The closure letter must include, but is not limited to, the following:
- A written description of the completed Proposed Fill Placement Activities;
 - Evidence that the Proposed Fill Placement Activities has been completed as described in the limits and conditions of this NOI;
18. The agent is responsible for notifying the ALC if status reports and/or the closure letter are not provided to the ALC as per the conditions and timelines in this approval. If the ALC does not receive the reports, a **stop work order** may be issued.
19. The closure letter must be submitted to the ALC no more than three (3) months after the completion of the Proposed Fill Placement Activities and no later than **December 22, 2024**.

APPROVAL TERM

The Proposed Fill Placement Activities must be completed within three (3) years and six (6) months from the release of this NOI approval (**September 22, 2024**).

NOTE: Unless the ALC first approves an NOI made under section 20.3(5) of the *Agricultural Land Commission Act (ALCA)* as described in the cover letter, proceeding with the Proposed Fill Placement Activities other than in accordance with the above limits and conditions contravenes the ALCA and is subject to compliance and enforcement measures under sections 49-54 of the ALCA.

This approval does not relieve you of your obligation to comply with all applicable Acts, regulations, bylaws of local government, and decisions and orders of any person or body having jurisdiction over the land under an enactment.



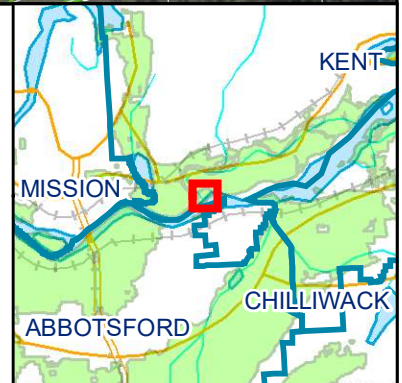
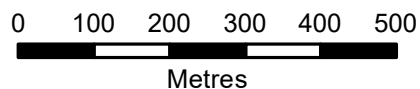
Subject Property
001-254-219: 95.4 ha
ALR: 95.4 ha

Proposed Flood Control Dyke

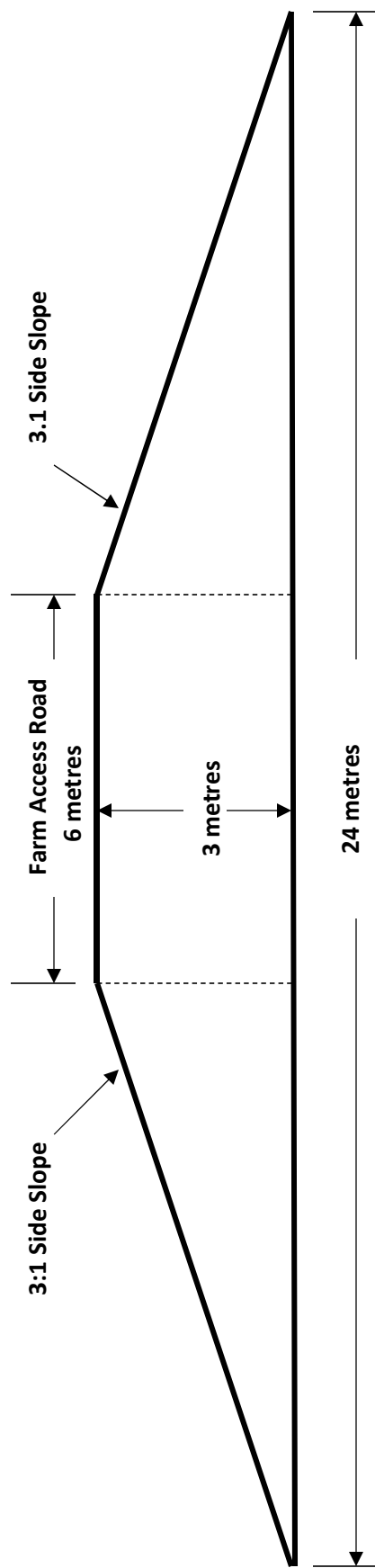
City of Abbotsford

ALC FILE NO: 61963	
MAP PRODUCED: March 19, 2021	
MAP SCALE: 1:10,000	MAP BY: BM
DATA SOURCES & NOTES: ALC, BCGW and ESRI / Maxar. Contains information licensed under Open Government License - British Columbia.	
Map for reference only. Accuracy not guaranteed.	

- Subject Property (District Lot 6380, Group 1, New Westminster District, BC)
- Approved Fill Placement Area (~10.0 ha)
- Agricultural Land Reserve
- PMBC Parcel Cadastre



Dike Cross – Section



Area of cross-section = 45 m²
Approximate length of perimeter diking = 4,200 m
Estimated volume of fill required = 189,000 m³