

By Email

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MEMORANDUM

To: Wild Salmon Forever
Re: **Regulation of Land Based Closed Containment Aquaculture (“LBCCA”) in British Columbia**
Date: October 19, 2017

1.0 Request

As part of its efforts to preserve wild salmon, Wild Salmon Forever is investigating what regulatory changes would be needed to transition the finfish aquaculture industry from open-net pen aquaculture to LBCCA. Wild Salmon Forever has asked that we assess the current finfish aquaculture regime in British Columbia and recommend how that regime could be improved to facilitate a growth in LBCCA and a transition away from marine aquaculture conducted in open-net pens.

2.0 Summary

The regulation of finfish aquaculture engages both federal and provincial jurisdiction and deals with multiple issues, including environmental protection, health of animals, administration of therapeutants, importation of salmon eggs, water use and effluent discharge to name but a few. Inevitably, regulation of finfish aquaculture will have complexity, but that complexity not be onerous for LBCCA operators. LBCCA engages all those complexities and adds new issues not already addressed by a regulatory regime designed for marine finfish aquaculture.

Given this complexity, regulatory efficiency, effectiveness and certainty is paramount if LBCCA is to be established as an industry that is both environmentally and economically sustainable. Proponents will need to understand quickly and easily what is necessary to satisfy the regulatory regime so they can build and operate LBCCA facilities in a commercially viable manner.

We recommend that, to ensure the protection of fisheries and oceans, the federal government, through DFO, should be the lead regulator for LBCCA. Further, we recommend that the coordination of federal and provincial jurisdiction, and alignment of policy on LBCCA, should be effected through an federal-provincial agreement on LBCCA which addresses, among other things, licensing fees, taxation, siting requirements and environmental regulation and the use of medicines and other therapeutants. Following that agreement, regulations specific to LBCCA should be passed to ensure the regulatory efficiency, effectiveness and certainty and to coordinate the regulatory process across the multiple agencies that will be involved.

The supply of both freshwater and saline water will be integral to LBCCA. So will the discharge of treated effluent. Water supply and effluent discharge both engage federal and provincial jurisdiction, however, changes will be required to existing legislation to ensure regulatory efficiency and certainty on those issues.

As LBCCA may soon develop on a scale not previously undertaken in BC, the environmental assessment process will be important for assessing potential impacts from LBCCA facilities and shaping a regulatory regime that ensures environmental protection and commercial viability. We anticipate that as the LBCCA industry matures, environmental assessment for LBCCA facilities will be the exception rather than the rule and the environmental assessment will only be required for facilities over yet to be determined thresholds for water usage and effluent discharge.

Consultation with Indigenous communities will be necessary to create an effective regime and on an ongoing basis within any regime. This memorandum does that consider that issue. We have prepared a separate memorandum addressing consultation with indigenous communities.

3.0 Background

3.1 Regulation of Finfish Aquaculture in BC

Currently, there are few LBCCA facilities in BC. All are relatively small scale and all are licensed under a licensing regime that was designed for marine open-net finfish farming. Many of the land-based facilities are hatcheries designed to support open-net pen grow-out facilities for open-net pen marine aquaculture. In this memorandum, LBCCA refers to land-based closed containment finfish aquaculture that is conducted entirely on land in closed containment facilities and does not use open-net pens for grow-out facilities.

The current regime for finfish aquaculture, and its history, is complex. Prior to *Morton v British Columbia (Agriculture and Lands)*, 2009 BCSC 136 ("**Morton (2009)**"), the provincial government regulated finfish aquaculture. In *Morton (2009)*, the court held that the federal government's constitutional jurisdiction over fish and fish habitat, under s. 91(12) of the *Constitution Act 1867*, required it to regulate finfish aquaculture.

In 2010, Canada and British Columbia entered into an agreement to regulate aquaculture in BC: "Canada–British Columbia Agreement on Aquaculture Management", (the "**Aquaculture Agreement**")².

The Aquaculture Agreement confirms, among other things, that Canada is responsible for:

- conserving and protecting fish and fish habitat, proper management and control of fisheries, including aquaculture, and management of pollution measures;³
- collecting data regarding the environmental performance of the industry in BC via its licensing activities and its regular scientific research and monitoring programs;⁴

² "Canada–British Columbia Agreement on Aquaculture Management", (10 December 2010) (the "Aquaculture Agreement"), online: http://www.gov.bc.ca/agri/attachments/canada_bc_agree.pdf.

³ *Ibid*, s. 5.2.1.

- ensuring that aquatic animal health matters (disease prevention, detection and control, feed, medication, and biologics) are addressed through Fisheries and Oceans Canada (“**DFO**”), Canadian Food Inspection Agency (“**CFIA**”) and Health Canada (“**HC**”);⁵
- maintaining healthy and productive aquatic ecosystems including the management of aquatic diseases and the use of veterinary drugs administered to food-producing animals, through Health Canada’s Veterinary Drugs Directorate;⁶ and
- determining whether proposed pesticides can be used safely and will be effective for their intended use, through Health Canada’s Pest Management Regulatory Agency.⁷

The Aquaculture Agreement confirms, among other things, that BC is responsible for:

- the strategic development of the aquaculture industry in British Columbia and for interacting with Canada on aquaculture matters through the BC Ministry of Agriculture (“**MOA**”);⁸
- issuing land tenures for the purpose of aquaculture in British Columbia;⁹ and
- the management of waste discharge (except where this is otherwise regulated as part of the proper management and control of fisheries and fish habitat) through the BC Ministry of Environment.¹⁰

3.2 Advancement of LBCCA

BC needs a regime that is suited to the commercial and environmental complexities of LBCCA. LBCCA requires different capital investment and infrastructure than open-net pen finfish farms, which rely on the ocean to dispose of metabolic products effluent, feces and uneaten feed. LBCCA facilities require infrastructure to deliver and discharge water and filtration systems to ensure the water used is safe for the fish being reared and effluent discharged is safe for the environment. The capital expense associated with this infrastructure can be significant.

Proponents of LBCCA are considering operations that would reduce the capital expenditure required for individual LBCCA operators. They believe that this can be done, in part, through the creation of large aquaculture facilities (“**Approved Facilities**”) that would host and house multiple individual LBCCA operators (“**Tenant Operators**”). The Approved Facilities would be licensed primarily for water use and effluent discharge up to maximum amounts under prescribed licence conditions. The Approved Facility licence holder (the “**Approved Facility Licensee**”) would be responsible for ensuring the Approved Facility is operated in safe manner and according to licence conditions, including a health management plan specific to the

⁴ *Ibid*, s. 5.2.4.

⁵ *Ibid*, s. 5.2.6.

⁶ *Ibid*, s. 5.2.7.

⁷ *Ibid*, s. 5.2.8.

⁸ *Ibid*, s. 5.3.1.

⁹ *Ibid*, s. 5.3.5.

¹⁰ *Ibid*, s. 5.3.3.

operations of the Approved Facility. Approved Facilities could be licensed to host operations for one, or multiple, finfish species.

Space within an Approved Facility would be leased to individual Tenant Operators. Tenant Operators would each be licensed to produce a prescribed maximum volume of finfish per year. The licences for Tenant Operators would approve the standing biomass, the annual production limits, the configuration of the equipment specific to their operations, the connection of that equipment to the Approved Facility's infrastructure and the safe handling of the species the Tenant Operator is licensed for. Licence conditions and a health management plan specific to Tenant Operator's operations would prescribe operating procedures that each Tenant Operator would need to comply with.

The licensing regime would need to ensure that the licence conditions and health management plan for the Approved Facility and the licence conditions and health management plans for Tenant Operators were consistent. The regime would also need to ensure compliance and enforcement could be directed to the responsible licensee.

The use of Approved Facilities would facilitate the growth of the LBCCA industry by reducing capital expenditures and pooling expertise. Smaller, start-up, operators would not be excluded from entering the market due to prohibitive capital costs.

A new LBCCA regime would also need to allow for LBCCA operators who do not wish to operate in Approved Facilities ("**Independent Operators**"). Independent Operators would be licensed for both their facilities and their operations.

4.0 Discussion

A new regime to accommodate the growth of LBCCA requires the consideration of multiple issues. This memorandum proceeds by discussing the following issues:

- jurisdiction and regulation;
- environmental assessment and licencing;
- water supply;
- importation of salmon eggs;
- introductions and transfers;
- administration of medicines, therapeutants and pesticides; and
- regulatory efficiency.

Consultation with indigenous communities will be necessary to create an effective regime and on an ongoing basis within any regime. This memorandum does that consider that issue. We have prepared a separate memorandum addressing consultation with indigenous communities.

4.2 Jurisdiction and Regulation

4.2.1 Background

In *Morton (2009)*, the British Columbia Supreme Court found that the jurisdiction to regulate of marine-based finfish aquaculture resided with the federal government under its jurisdiction for sea coast and inland fisheries provided by s. 91(12) of the *Constitution Act, 1867, 30 & 31 Vict, c. 3*: salmon raised in open-net pens operated in the marine environment constituted a fishery. Provincial jurisdiction over management of lands (s. 92(5)), property and civil rights (s. 92(13)),

matters of a local or private nature in a province (s. 92(16)) or agriculture (s. 95) did not prevail over the federal government's jurisdiction and constitutional mandate to protect fisheries.

One of the main issues in *Morton (2009)* was whether finfish aquaculture was a fishery or agriculture. Given the location of open-net pens in the ocean, Mr. Justice Hinkson concluded open-net finfish aquaculture constituted a fishery, not agriculture. When aquaculture moves onto land the analysis changes, but the outcome does not: the federal government's mandate to protect and conserve our national fisheries requires that the federal government be the primary regulator for LBCCA.

In *Morton (2009)*, Mr. Justice Hinkson did not consider if the jurisdiction for promotion of the industry of aquaculture resides with the federal government. Our analysis is that it does not: the jurisdiction for regulating the commercial activities associated with LBCCA does not reside squarely with the federal government. While policy decisions aimed at the protection and conservation of fisheries are squarely within federal jurisdiction under s. 91(12), the provincial government's jurisdiction under s. 92(5), s. 92(13), s. 92(16) and its concurrent jurisdiction with the federal government for agriculture under s. 95 remain operative. For example, the federal government can exercise its jurisdiction under s. 91(12) to determine that, for the protection of fisheries, finfish aquaculture should be transitioned from the marine environment to closed containment facilities on land. However, that decision could not require provincial governments to grant land tenures necessary for such operations, or to promote the LBCCA industry, within its jurisdiction. Similarly, there will be other areas where federal and provincial jurisdiction interact that will require the coordination of federal and provincial jurisdiction, particularly around environmental protection.

4.2.2 **Federal Jurisdiction over Fisheries under s. 91(12)**

Section 91(12) of the *Constitution Act, 1867* gives the federal government jurisdiction over the "Sea Coast and Inland Fisheries". In the 1882 case of *The Queen v Robertson*, the Supreme Court of Canada held that the jurisdiction conferred by s. 91(12) gave the federal government a mandate to protect fisheries:

...the general jurisdiction over the fisheries is secured to the parliament of the Dominion, whereby they are enabled to pass all laws necessary for their preservation and protection, this being the only matter of general public interest in which the whole Dominion is interested in connection with river fisheries in fresh water, non-tidal rivers or streams...¹¹

A long line of case law, flowing from *The Queen v Robertson*, repeatedly confirms that the federal government's jurisdiction over fish and fisheries stems from its constitutional mandate to protect and preserve the fishery. The federal government's jurisdiction over fisheries allows it to legislate in a variety of ways, including preserving the commercial viability of a fishery¹², or pursuing social and economic policy¹³, and can create incidental effects on property¹⁴, but its power to legislate with respect to fish and fisheries must be grounded in its mandate to protect the national resource of the fishery. Two 1980 cases are illustrative: in *Fowler v. The Queen*,

¹¹ *The Queen v Robertson* (1882), 6 SCR 52 at 120–124.

¹² *Ward v. Canada (Attorney General)*, 2002 SCC 17 at para. 28.

¹³ *Gulf Trollers Assn. v. Canada (Minister of Fisheries & Oceans)*, 32 D.L.R. (4th) 737 at para. 17, leave to appeal refused *Gulf Trollers Assn. v. Canada (Minister of Fisheries & Oceans)*, 77 N.R. 157.

¹⁴ *Reference re: British North America Act, 1867, s. 108*, [1898] J.C.J. No. 1, [1898] A.C. 700 at 712 to 713.

[1980] 2 SCR 213, a prohibition of the deposit of logging debris was unconstitutional because it was not linked to the protection of fish; in *Northwest Falling Contractors Ltd. v. The Queen*, [1980] 2 SCR 292, the prohibition of the deposit of deleterious substances was directly linked to the protection of fish and within the jurisdiction granted by s. 91(12).

In *Morton (2009)*, Mr. Justice Hinkson, following *The Queen v Robertson*, said:

Given the specific enumeration of the management and protection of the fisheries in s. 91(12) of the *Constitution Act, 1867*, the national resource of the fisheries is not a matter that should or can be left to a level of government other than Parliament.¹⁵

Following this principle, Mr. Justice Hinkson found that regulation of finfish aquaculture was within the federal government's jurisdiction under s. 91(12), but in doing so, Mr. Justice Hinkson relied on the fact that open-net finfish farms were located in the ocean and occupied habitat that would normally be available to wild salmon¹⁶. Although Mr. Justice Hinkson's reasoning does not address the same set of facts as those that would apply to LBCCA, the federal government's constitutional mandate to protect fisheries and oceans still applies.

As much as LBCCA presents an environmentally better alternative than open-net pens, it would be remiss for the federal government to consider LBCCA failsafe in terms of its potential risks to wild salmon and other species. Mr. Justice Hinkson noted that the federal government has exclusive jurisdiction to preserve fisheries¹⁷ and expressly relied on the judgement of Chief Justice McLachlin in *Ward v. Canada (Attorney General)*, when she said, "Measures that in pith and substance go to the maintenance and preservation of fisheries fall under federal power."¹⁸ As the federal government could not consider any LBCCA facilities entirely risk free, its constitutional obligation to maintain and preserve fisheries requires it to regulate LBCCA to ensure the construction and operation of LBCCA facilities do not pose a risk to wild fisheries.

Further, any federal strategy to protect fisheries and oceans by transitioning marine finfish aquaculture to land could be undermined if the federal government did not also regulate LBCCA. The federal government's constitutional mandate to protect fisheries and oceans requires it to exercise a holistic strategy with respect to finfish aquaculture, both in the ocean and on land. Mr. Justice Hinkson, consistent with this reasoning said that:

[161] The inclusion of fisheries in s. 91(12) of the *Constitution Act, 1867* was a recognition that fisheries, as a national resource, require uniformity of the legislation which affects and protects that national resource.¹⁹

We recommend that the federal government exercise its jurisdiction for the protection of fisheries and oceans by promulgating regulations under the *Fisheries Act* that are specific to the regulation of LBCCA (the "**LBCCA Regulations**"), and that are part of a strategy to transition finfish aquaculture onto land. The LBCCA Regulations would regulate the licensing and operations of LBCCA facilities and have the protection of fisheries and oceans as their primary

¹⁵ *Morton* at para 193.

¹⁶ *Morton*, paras. 154 to 159.

¹⁷ *Morton* at para.158.

¹⁸ *Ward v. Canada (Attorney General)*, 2002 SCC 17 at para. 43.

¹⁹ *Morton*, para. 161.

objective. The LBCCA Regulations could either be part of, or separate from, stand-alone regulations for marine aquaculture.

4.2.3 **Provincial Jurisdiction over Lands, Property and Civil Rights and Local Matters**

As much as Chief Justice McLachlin made it clear in *Ward v. Canada (Attorney General)* that the preservation and maintenance of the fishery is within exclusive federal jurisdiction, she also made it clear that jurisdiction cannot encroach upon provincial jurisdiction:

By contrast, measures that in pith and substance relate to trade and industry within the province have been held to be outside the federal fisheries power and within the provincial power over property and civil rights.²⁰

This is consistent with *Attorney-General for Canada v. Attorney-General for Quebec*, [1914] A.C. 153, and *Re Fisheries Act, 1914 (Canada)*, [1928] S.C.R. 457, in which the Privy Council and then the Supreme Court of Canada respectively, found that detailed regulation of the commerce of the fishing industry, which did not flow from federal jurisdiction to protect oceans and fisheries, was in the jurisdiction of the province. A long line of cases has followed these decisions.

Further, provincial jurisdiction under ss. 92(13) (property and civil rights), 92(16) (matters of a local nature) and 92A (conservation and management of natural resources) allows the province to legislate with respect to environmental protection. In *Ontario v. Canadian Pacific Ltd.*, [1995] 2 SCR 1028, the Supreme Court of Canada found that a federally regulated company was not immune prosecution under provincial laws that were aimed at protecting the environment and the provincial law did not impermissibly encroach on the federal government's jurisdiction to regulate transportation. Such reasoning would apply with equal force to the regulation of LBCCA: the federal government could regulate LBCCA under its constitutional power to protect oceans and fisheries, but LBCCA operations would still be subject to provincial laws regulating commerce and the environment which validly flow from provincial heads of power and do not encroach upon federal jurisdiction.

This overlapping federal and provincial jurisdiction creates the potential for (i) legal challenges over jurisdiction, (ii) legislative gaps and (iii) regulatory inefficiency. To address those potential issues, we recommend that the federal government enter into an agreement with BC to coordinate issues where both federal and provincial jurisdictions are engaged and to define how those areas will be regulated. Both federal and provincial governments should then pass appropriate legislation to give effect to that federal-provincial agreement. For reasons described further below, the federal provincial agreement and coordinated legislation will be necessary to ensure the regulatory effectiveness and efficiency.

4.2.4 **Concurrent Jurisdiction over Agriculture under s. 95**

In *Morton (2009)*, Mr. Justice Hinkson found that open-net fish farms were not agriculture. His reasoning was based in part that the pens were located and used in fish habitat. The facts for LBCCA are significantly different and could potentially result in a finding that LBCCA is agriculture. Under s. 95 of the *Constitution Act, 1867*, the provinces and federal government exercise concurrent jurisdiction over agriculture:

²⁰ *Ward v. Canada (Attorney General)*, 2002 SCC 17 at para. 43.

95. In each Province the Legislature may make Laws in relation to Agriculture in the Province, and to Immigration into the Province; and it is hereby declared that the Parliament of Canada may from Time to Time make Laws in relation to Agriculture in all or any of the Provinces, and to Immigration into all or any of the Provinces; and any Law of the Legislature of a Province relative to Agriculture or to Immigration shall have effect in and for the Province as long and as far only as it is not repugnant to any Act of the Parliament of Canada.

The case law under s. 95 is less-developed than that case law under s. 91 or s. 92, but two consistent patterns emerge from that case law. First, courts only base findings of jurisdiction on s. 95 as a last resort. Courts instead prefer to find jurisdiction resides under an exclusive head of power under s. 91 or s. 92. Second, consistent with the judicial preference not to rely on s. 95 as a source of jurisdiction, cases decided under s. 95 tend to define the scope of “agriculture” very narrowly. Generally, the case law confines the jurisdiction granted by s. 95 to animal husbandry over domestic animals and the care of crops that occurs within the farm gates, with the regulation of agricultural products and industry falling under s. 91 or s. 92 powers as the case may be.²¹

However, federal legislation that has significant effects on the commerce of agricultural products or the trade of agricultural supplies has been found to be valid. In *Brooks v. Moore* [1907] BCJ No. 18, the court found that federal legislation aimed at preventing the spread of disease on farms was within federal jurisdiction. *R. v. Davenport*, [1928] AJ No. 1 confirmed that the federal regulation of animal breeds was within federal jurisdiction. More recently, in *R. v. Neuman*, 1998 ABCA 261, the Alberta Court of Appeal confirmed the constitutional validity of the federal *Animal Pedigree Act*, RSC 1985, c. 8 (4th Supp.) even though the Act had a commercial purpose in ensuring the purity of breeds.

This line of case law suggests that federal jurisdiction over agriculture extends well into the prevention of disease in animals and the preservation and maintenance of animal species. Even if a court were to find that finfish aquaculture was agriculture, and not a fishery, it is very likely that federal laws with the aim of preventing the spread of disease and ensuring the health of fish or fish species would have paramountcy over provincial laws regulating land-based finfish aquaculture.

We have been unable to locate any judicial treatment of the paramountcy provision of s. 95, the text of which is “any Law of the Legislature of a Province relative to Agriculture or to Immigration shall have effect in and for the Province as long and as far only as it is not **repugnant** to any Act of the Parliament of Canada” (emphasis added). Commentators have noted that the use of the word “repugnant” may require an elevated threshold for conflict before federal paramountcy applies: the provincial law must not just be inconsistent, or affect, federal jurisdiction, it must be contrary to a federal Act.²²

Other commentators have noted that s. 95 refers to “any **Law** of the Legislature of a Province”, but to “any **Act** of the Parliament of Canada” (emphasis added) and have suggested that for federal paramountcy to be triggered, there must be a conflict with a federal Act, and not just federal regulations promulgated under an Act.²³ We believe that this would be a very narrow and technical reading of s. 95 and the concurrent jurisdiction it creates. Nevertheless, we

²¹ See for example, *R. v. Manitoba Grain Co.*, [1922] MJ No. 4, 66 DLR 406 at 416 (Man CA).

²² See for example, D. Newman, *Natural Resource Jurisdiction in Canada*, pages 149 to 150.

²³ See *Halsbury's Laws of Canada – Agriculture (2014 Reissue)*, HAG-13, “Laws in Relation to Agriculture”.

recommend that any federal regulation of finfish aquaculture should flow directly from an Act of Parliament to insulate against this narrow interpretation. We note that as s. 95 refers to “any Act of Parliament” such legislation would need not be passed under the s. 95 head of power and could flow from a s. 91 head of power such as s. 91(12) making the *Fisheries Act* a potential source of federal paramountcy over provincial laws on finfish aquaculture if LBCCA were found to be agriculture.

Based on our interpretation of s. 95, even if LBCCA were found to be agriculture and not a fishery, the same jurisdictional issues apply when land-based finfish aquaculture is considered a fishery.

4.2.5 **Conclusions**

Whether LBCCA is considered a fishery or agriculture, the split between federal and provincial jurisdiction results in the same outcome. The federal government has the jurisdiction to be the lead regulator under its constitutional mandate to protect oceans and fisheries (s. 91(12)) or under the paramountcy provided by the grant of concurrent jurisdiction over agriculture by s. 95. While the federal government’s jurisdiction to regulate fisheries or agriculture does allow it to incidentally affect commerce, trade and property rights, it cannot regulate directly on this issues without encroaching on provincial jurisdiction.

This constitutional split in jurisdiction results in the federal government having the power to regulate aquaculture in order to protect oceans and fisheries and provincial governments having the jurisdiction to promote the industry of aquaculture under either s. 92(13) or s. 95. Such a jurisdictional division of powers is consistent with the recommendations of Mr. Justice Cohen in *The Uncertain Future of the Fraser River Sockeye*:

As long as DFO has a mandate to promote salmon farming, there is a risk that DFO will act in a manner that favours the interests of the salmon-farming industry over the health of wild fish stocks. The only way to address this potential conflict is by removing from DFO’s mandate the promotion of salmon farming as an industry and farmed salmon as a product, and by transferring the promotion of salmon farming to a different part of the Executive Branch.²⁴

Mr. Justice Cohen made that recommendation because he found that DFO’s dual mandate to protect fisheries and promote aquaculture be placed with different agencies:

...DFO [Fisheries and Oceans Canada] suffers from conflicting institutional mandates – on the one hand to regulate salmon farms for the conservation of wild salmon, and on the other hand to promote salmon farm development and products. The testimony of the deputy minister to the effect that the minister of fisheries and oceans is not well placed to enforce section 36 of the *Fisheries Act* against salmon farms because of a conflict is telling and, in my view, is equally apparent in relation to section 35...DFO faces conflicting roles in having to tell the world that Canada’s farmed salmon products do not threaten the sustainability of wild salmon, yet at the same time credibly examining the possibility that such products are not safe. DFO’s regulatory work – to site farms,

²⁴ Mr. Justice Cohen, “The Uncertain Future of Fraser River Sockeye”, Volume III, The Sockeye Fishery (“Cohen Commission Vol. III”) at 12, online: http://publications.gc.ca/collections/collection_2012/bcp-pco/CP32-93-2012-3-eng.pdf.

to set conditions restricting farm growth, and to monitor farms and take enforcement actions against them – all suffer from this institutional conflict.²⁵

We conclude that the constitutional division of powers between the federal government and the provinces supports Mr. Justice Cohen's recommendation and provides a means of giving effect to it. DFO should be the lead regulator for both marine finfish aquaculture and LBCCA under federal government's jurisdiction to protect fisheries and oceans provided by s. 91(12). Within the province, BC should lead the promotion of LBCCA as an industry. Federal paramountcy would help ensure that the mandate to protect fisheries and oceans prevails in the case of conflicts between the provincial promotion of the industry and the mandate to protect fisheries and oceans.

We recommend that coordination of those separate, but related, jurisdictions should be incorporated through an intergovernmental agreement to ensure policy alignment and to minimize jurisdictional conflicts. Such an agreement should address, among other things, licensing fees, taxation, siting requirements and environmental regulation.

Under s. 91(2) of the *Constitution Act, 1867*, the federal government would still be responsible for interprovincial and international trade with respect to aquaculture. With respect to interprovincial trade, federal jurisdiction to protect fisheries and to regulate food and drugs would still operate through agencies such as DFO and CFIA. Promoting international trade should reside with a federal agency outside of DFO.

4.2.6 **Recommendations**

Based on the conclusions above we make the following recommendations:

1. To ensure the protection of fisheries and oceans, the federal government, through DFO, should be the lead regulator for LBCCA. The Aquaculture Management Directorate within DFO should be reviewed to determine if it is adequate for that task.
2. To respect the constitutional division of powers, and as a means of effecting Mr. Justice Cohen's recommendation to split the mandate to protect fisheries and oceans from the mandate to promote aquaculture, the regulation of commercial aspects of the industry of aquaculture that are not squarely related to the federal mandate to protect fisheries and oceans should reside with the province.
3. The promotion of international trade in both marine aquaculture and LBCCA should be placed with a federal agency outside of DFO.
4. The coordination of federal and provincial jurisdiction and alignment of policy on LBCCA should be effected through an federal-provincial agreement on LBCCA that addresses, among other things, licensing fees, taxation, importation of high performance eggs, siting requirements and environmental regulation and the use of medicines and other therapeutants.

²⁵ Mr. Justice Cohen, "The Uncertain Future of Fraser River Sockeye", Volume I, The Sockeye Fishery, by Mr. Justice Cohen (the "Cohen Commission Vol. I"), at 418, online: http://publications.gc.ca/collections/collection_2012/bcp-pco/CP32-93-2012-1-eng.pdf.

5. To confirm and give effect to the federal government's lead role as the regulator for all forms of finfish aquaculture, s. 2 of the *Fisheries Act*, RSC 1985, c F-14 should be amended to ensure that all finfish aquaculture operations are included in the definition of "fishery".
6. The federal government should promulgate regulations under the *Fisheries Act* for the regulation of LBCCA. Those regulation could either be stand-alone regulations or part of regulations effecting the regulation of marine finfish aquaculture and its transition to land. Those LBCCA Regulations should be the primary regulations for LBCCA and should provide for the coordination of issues under provincial jurisdiction, such as environmental regulation, to ensure regulatory effectiveness and efficiency.

4.3 Environmental Assessment and Licensing

Since its inception, the finfish aquaculture industry in Canada has faced a "legitimacy challenge".²⁶ That is, a significant percentage of the population has questioned whether or not finfish aquaculture can be sustainably practiced in tidal waters. The transition to LBCCA should ensure that stringent environmental assessment and licensing requirements are in place to ensure that LBCCA does not face the same problem.

4.3.1 Environmental Assessment

As a new industry, environmental assessment can ensure that LBCCA facilities are assessed for environmental impacts before they begin operations. If the industry is to proceed and flourish in BC, then environmental assessment should be sensitive to the needs and capabilities of the various parties in the LBCCA industry, specifically, Approved Facility Licensees, Tenant Operators and Independent Operators.

4.3.1.1 Current Environmental Assessment Requirements

LBCCA is not included as a designated physical activity under the *Canadian Environmental Assessment Act, 2012*, SC 2012, c 19 s 52 and does not trigger an environmental screening under s. 8 of that Act. Nor is LBCCA a designated project requiring a federal environmental assessment.

Similarly, the BC *Environmental Assessment Act*, SBC 2002, c 43 does not expressly require an environmental assessment for LBCCA facilities. However, the *Reviewable Projects Regulation*, BC Reg 370/2002 does require environmental assessments for Water Diversion Projects, Groundwater Extraction Projects and Shoreline Modifications Projects that meet certain thresholds. Depending on the size of the LBCCA facility to be constructed, an environmental assessment could be triggered under the BC *Environmental Assessment Act* under one of those categories.

Given the large volumes of freshwater and saline water that LBCCA facilities are likely to use and the large volumes of effluent that they may discharge, the potential environmental impacts could be significant, depending on the size of the facility.

²⁶ See *The Aquaculture Controversy in Canada*, by Nathan Young and Ralph Matthew, page 229.

To ensure that potential environmental impacts are avoided or mitigated, and to ensure the legitimacy of the LBCCA industry, we recommend that all LBCCA facilities be subject to both federal and provincial environmental assessment on a transitional basis. We recommend that the federal and provincial governments come to an agreement on a process for coordinating the environmental assessment of LBCCA facilities so that each level of government can assess potential environmental impacts under its respective heads of power. We further recommend that both levels of government commit to reviewing the need to environmental assessment as the industry matures at intervals of 5, 7 and 10 years. We anticipate that such re-assessment of the need for environmental assessment would result in environmental assessment only for LBCCA facilities over certain water-usage and effluent-discharge levels.

4.3.1.2 Current Licensing Requirements

In BC, finfish aquaculture facilities are currently licensed under the *Pacific Aquaculture Regulations*, SOR/2010-270. The *Aquaculture Activities Regulations*, SOR/2015-177 also apply. Neither of those regulations under the *Fisheries Act* are suitable for a significant LBCCA industry as they were not specifically drafted with the requirements of LBCCA in mind. Indeed, the *Aquaculture Activities Regulations* were expressly promulgated under s. 36(5) of the *Fisheries Act* for the purposes of authorizing the deposit of deleterious substances in water frequented by fish. Section 36(5) would not provide a basis for the promulgation of LBCCA regulations. We recommend that s. 43 of the *Fisheries Act* be amended to give the Minister power to promulgate regulations specific to LBCCA.

Both the federal and provincial government have applications available online for the approval of LBCCA facilities.²⁷ The provincial application is more directly focused on freshwater aquaculture operations but it also coordinates the submission of information to DFO for consideration under the *Pacific Aquaculture Regulations* and the *Aquaculture Activities Regulations*.

Neither the federal nor the provincial licencing applications provide for the licencing of an Approved Facility in which other parties could conduct LBCCA operations. The licensing regime under the *Pacific Aquaculture Regulations* and the *Aquaculture Activities Regulations* does not contemplate LBCCA facilities and LBCCA operations being run by separate parties. Significant revisions would need to be made to the regulation of LBCCA and the licensing process to accommodate such an arrangement.

We recommend that LBCCA Regulations be promulgated that allow for the licensing of Approved Facility Licensees, and Tenant Operators who conduct operations in an Approved Facility and Independent Operators who conduct finfish aquaculture in their own LBCCA facilities.

²⁷ The federal application can be found here: <http://www.pac.dfo-mpo.gc.ca/aquaculture/licence-permis/docs/licence-cond-permis-fresh-douce/licence-cond-permis-fresh-douce-eng.pdf>. The provincial application can be found here: http://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/crown-land-uses/aquaculture/pacific_freshwater_land-based_new_site_application.pdf.

The LBCCA Regulations should allow Approved Facility Licensees to:

- operate an Approved Facility up to maximum fresh and saline water usage and effluent discharge volumes, provided the appropriate environmental protections are followed;
- construct and operate infrastructure for fresh and saline water intake and effluent discharge under prescribed conditions;
- host aquaculture operations for multiple Tenant Operators in one Approved Facility in a manner that allows Approved Facility Licensees to scale up production in an Approved Facility;
- host aquaculture operations that raise different species in one Approved Facility under prescribed conditions; and
- comply with a health management plan for the Approved Facility that ensures health, safety and environmental protection for various species raised in the Approved facility.

The LBCCA Regulations should allow for an Approved Facility Licensee to amend the layout approved by the licence for the Approved Facility to reflect changes and modifications within the Approved Facility as production operations in the Approved Facility change, provided there is no associated change in the approved infrastructure for water intake or effluent discharge.

Tenant Operators should be able to apply for a licence to operate in an Approved Facility that would be specific to the Tenant Operator's production requirements and operations. While we recommend that an Approved Facility be subject to an environmental assessment, the Tenant Operator should not be subject to the environmental assessment process and should be screened only through the LBCCA licensing process.

The Tenant Operator would be specifically licensed to operate the equipment associated with its operations and to handle and care for the species being reared according to its biological requirements. A Tenant Operator licensee would be required to comply with a health management plan specific to its operations and consistent with the health management plan for the Approved Facility in which it operates. The Tenant Operator would be responsible for obtaining all approvals required to import or transfer eggs, smolts or fish and to apply pesticides, medicines and therapeutants.

Under a licencing arrangement in which Tenant Operators conduct finfish aquaculture operations in an Approved Facility, the Approved Facility Licensee would be solely responsible for complying with the conditions of the licence for Approved Facility. The Tenant Operator would be solely responsible to for complying with the conditions specific to the Tenant Operator's licence. LBCCA Regulations and licence conditions will need clearly identify how responsibilities are divided between the Approved Facility Licensee and Tenant Operators.

The LBCCA Regulations should not prohibit an Approved Facility Licensee from obtaining indemnities good against a Tenant Operator for breaches of its licence conditions that result in breaches of the conditions of the licence for the Approved Facility.

The LBCCA Regulations should also allow for a separate licensing process for Independent Operators. The process for licencing Independent Operators would more closely follow the current licensing regime.

4.4 **Water Supply**

Unlike open-net, marine finfish aquaculture facilities, LBCCA facilities will need large quantities of freshwater and saline water drawn from other sources.

Below we consider the how freshwater and saline water could be supplied under the existing regulatory regime and modifications needed to accommodate the development of a LBCCA industry.

4.4.1 **Supply of Freshwater**

4.4.1.1 *Provincial Regulation*

The primary regulator responsible for approving the use of freshwater is the BC Ministry of Forests, Lands and Natural Resource Operations (“**FLNRO**”). Section 6 of the BC *Water Sustainability Act* (“**WSA**”)²⁸ requires that water can only be diverted from a stream or aquifer if person holds an authorization under the WSA to do so. The WSA’s definition of stream includes all natural bodies of water including rivers, lakes, ponds and glaciers.²⁹

4.4.1.2 *Rental Rates and Beneficial Use*

Under the WSA, rentals for fish hatcheries are set at \$0.11 per 1,000 m³ with a minimum charge of \$200. Ponds and aquaculture currently enjoy a flat rental fee of \$50. We recommend that the *Water Sustainability Fees, Rentals and Charges Tariff Regulation*, BC Reg 37/2016 be amended to clarify what rate will apply to all LBCCA facilities. The province should consider maintaining as low a rate as possible for LBCCA to support its growth.

When a water licence is authorised under the WSA, a maximum usage amount is set. LBCCA facilitates would have to pay the annual rental fees on that amount regardless of how much water they used.

Further, the WSA requires that holders of water licences beneficially use the water they are licensed to use each year. Under the WSA, if the licence holder has not put the amount allotted under the water licence to beneficial use within three years, the licence can be cancelled or suspended.

To support a transition to LBCCA, we recommend that Approved Facilities not be required to pay the full annual rental amount until they are at full capacity. We further recommend that the WSA be amended so that Approved Facilitates are not required to put their full water allotment under their licence to beneficial use for 15 years to provide such time for them reach full production capacity.

²⁸ *Water Sustainability Act*, SBC 2014, c 15.

²⁹ WSA, s. 2.

4.4.1.3 Precedence of Water Rights

The WSA defines specific purposes in respect of which water may be diverted from a stream or an aquifer. These purposes include conservation, domestic, industrial, irrigation, land improvement, mineralized water, mining, oil and gas, power, storage, and waterworks.³⁰

Designated industrial purposes include the following:

- Fish hatchery, which is described as the “use of water to produce fish eggs and to propagate fish by hatching fish eggs, rearing fry or sustaining brood stock under controlled conditions in a containment facility;” and
- Pond and aquaculture, which is described as the “diversion and use of water for floating logs, fur farming, fish farming or keeping fish for recreational purposes, but does not include a fish hatchery.”³¹

Accordingly, a land-based aquaculture facility is classified as industrial water use purpose for the purposes of the WSA.

The precedence of water diversion rights is based on the dates of precedence set out in existing authorizations for a subject water body.³² When the dates of precedence are the same for two or more authorizations, precedence is based on the specific water use purpose.³³ Water use purposes are ranked from highest to lowest as follows: (1) domestic; (2) waterworks; (3) irrigation; (4) mineralized water; (5) mining; (6) industrial; (7) oil and gas; (8) power; (9) storage; (10) conservation; and, (11) land improvement.³⁴ Industrial water use purpose has relatively low precedence and ranks below uses such as oil and gas.

4.4.1.4 Increasing Precedence

If conflicts were to occur between a LBCCA facility and another licence holder under the existing precedence regime, there is substantial risk that an LBCCA facility would not enjoy precedence and substantial loss of finfish could result.

Under the current regulatory regime, LBCCA Facilities fall under the industrial water use purpose, thereby attracting a relatively low precedence (i.e., sixth in line with respect to precedence of rights). Of the five other water use purposes that have higher precedence than the industrial purpose, the waterworks (second highest precedence) and irrigation (third highest precedence) water use purposes are arguably the most applicable to LBCCA Facilities. These uses are defined as follows in the WSA:³⁵

“waterworks purpose” means the carriage or supply of water by one person or entity for the use in British Columbia of another person or entity;

³⁰ WSA, s. 2.

³¹ WSA, s. 2; *Water Sustainability Regulation*, BC Reg 36/2016, s. 2(1), Schedule A.

³² WSA, s. 22(1).

³³ WSA, ss. 22(2), (4).

³⁴ WSA, s. 22(7).

³⁵ WSA, s. 2.

“irrigation purpose” means the use of water on cultivated land or hay meadows to nourish crops or on pasture to nourish forage.

We recommend that LBCCA use be re-classified. Water is the medium that delivers oxygen to finfish and is necessary to keep them alive. A water shortage could result in animal cruelty and significant loss of animal life. A reclassification to minimize the chances of this outcome could be done in one of three ways. It could be re-classified as a “waterworks purpose”, “irrigation purpose” or be given its water own use purpose, “LBCCA purpose”, which would be ranked above “irrigation purpose”.

The waterworks purpose could arguably apply as sourcing the water needs for LBCCA facilities would entail “the carriage or supply of water by one person or entity for the use in British Columbia of another person or entity”. Alternatively, as the definition for the irrigation purpose focuses on providing water to nourish a living organism, it could arguably be expanded to also cover LBCCA facilities which require water to nourish fish.

To give effect to either of those options, fish hatcheries and aquaculture operations would need to be removed from the *Water Sustainability Regulation* schedule designating industrial uses. In addition, if the provincial government found that the irrigation purpose was the most applicable water use purpose, it may be advisable to also remove greenhouse and nursery,³⁶ and livestock and animal,³⁷ from the *Water Sustainability Regulation* schedule designating industrial uses as these water uses nourish living organisms. Concurrently, renaming the irrigation purpose to something broader that captures the water needs for nourishing both plants and animals may be appropriate for clarity. This approach may also attract political support for the proposed amendment from the greenhouse, nursery, livestock and animal industries.

Another option would be to introduce a new water use purpose in the WSA that is either specific to LBCCA or that entails a broader category that would capture LBCCA. Based on the current structure of the WSA, with water use purposes generally broadly covering a variety of activities and uses, it is likely that the latter approach would be favourable from a regulator’s standpoint. Accordingly, a new category could be developed to cover water needs for nourishing fish and animal rearing industries. In light of its similarity to the irrigation water use purpose, such a new water use purpose category could be granted a similar precedence to the irrigation use.

4.4.1.5 Federal Regulation of Freshwater

Given the quantity of water that LBCCA facilities could use it is likely that drawing freshwater from either aquifers or streams would have the potential to affect fish and fish habitat and thereby trigger a need for an authorization under 35(2) of the *Fisheries Act*.

We recommend that FLNRO and DFO work together to provide guidance with respect to the approvals necessary for LBCCA to use freshwater. Ideally, an applicant who wishes to licence

³⁶ *Water Sustainability Regulation*, Schedule A (Greenhouse and nursery is defined as “The diversion and use of water in a facility for the indoor propagation of fruits, vegetables or other plants, or at a facility for the propagation of trees, plants or turf”).

³⁷ *Water Sustainability Regulation*, Schedule A (Livestock and animal is defined as “The diversion and use of water for drinking water and sanitation requirements in the operation or maintenance of a kennel, an animal shelter or boarding facility, a ranch or feedlot operation, or a game farm, dairy farm, pig farm or poultry farm, or a similar enterprise for rearing livestock”).

a LBCCA facility should be able to provide all of the information required in a coordinated application that would lead to all approvals necessary for obtaining necessary freshwater.

4.4.2 **Sourcing Saline Water from Well on Foreshore**

Sourcing saline water from a well on the foreshore would trigger both provincial and federal jurisdiction.

Provincially, the WSA prohibits the operation of a well in a manner that causes, or is likely to cause, the intrusion of saline groundwater or sea water into: (i) the aquifer from which that well diverts water; (ii) another aquifer; or (iii) a stream that is hydraulically connected to such aquifers.³⁸ Care must therefore be taken to ensure that no such impacts occur. When bringing a prosecution, the Crown is not required to prove that the saline groundwater or sea water, if diluted subsequent to the intrusion, continued to cause or to be likely to cause a significant adverse impact.³⁹

Well drilling creates risks of contamination to aquifers and hydraulically connected surface water bodies. Accordingly, it is critical that regulatory requirements apply to drilling activities and well installations and closures. Such requirements currently exist under the provincial WSA regime. We recommend that the WSA be amended to clarify that these provisions apply to wells drilled on the foreshore, including for the purposes of sourcing saline water for LBCCA facilities, or that new provisions specific to foreshore wells be drafted.

Federal jurisdiction under the *Fisheries Act* would also apply if withdrawal rates are sufficiently high to kill fish, or permanently alter or destroy fish habitat, which fish is part of, or supports, a commercial, recreational or Aboriginal fishery. As this prohibition under the *Fisheries Act* is tied to fisheries, the location of the well, as well as the timing in the fish cycle and fisheries season, will be important considerations for assessing possible permanent alteration or destruction of fish habitat.

If sufficiently large volumes of water are to be pumped from a well drilled into the foreshore, care needs to be taken to minimize disturbance to sensitive foreshore habitats, especially during low tides or during times of sensitive aquatic life lifecycles (such as spawning, migration, etc.). Impacts on these lifecycles could also have significant socio-economic impacts on local communities who rely on the aquatic species. We recommend that DFO provide guidance on the socio-economic and environmental studies are carried out before a well may be drilled on the foreshore so that the findings of such studies can guide the approved location of wells, well depths, withdrawal rates (possibly different for different seasons / tidal movements) and other related matters.

As with other areas of overlapping jurisdiction, we recommend that DFO and FLNRO develop joint guidance on this issue.

4.4.3 **Sourcing Saline Water from Deep Land-based Well**

Groundwater, which is defined as “water naturally occurring below the surface of the ground” is generally regulated under the provincial WSA regime.⁴⁰ The *Water Sustainability Regulations*⁴¹

³⁸ WSA, s. 58(2)(a).

³⁹ WSA, s. 58(4).

⁴⁰ WSA, s. 1(1).

contain specific provisions for use of deep groundwater. Deep groundwater is generally defined as groundwater that is found in a defined subject area at a depth greater than at least 300 m (in some circumstances), and at least 600 m (in other circumstances), below the earth's surface.⁴²

These provisions exempt oil and gas users from obtaining an authorization for using deep groundwater under certain conditions.⁴³ Those provisions would not apply to an LBCCA Facility seeking to pump deep saline water for its operation. Specific requirements apply, including the requirement to obtain an authorization for the diversion or use, requirements for drilling the well, operational requirements for the well, and general prohibitions to introducing foreign matter into the well.⁴⁴

Existing well drilling, installation and closure requirements under the WSA protect groundwater aquifers and hydraulically connected surface water bodies. The WSA regime is, however, somewhat unclear with respect to its application to deep saline groundwater not used for an oil and gas purpose. We recommend that the WSA be amended so that the use of deep saline water for LBCCA facilities not drawing water from foreshore wells is given the same treatment under the WSA as the use of deep saline waters for oil and gas purposes. In the alternative, we recommend that the WSA be amended to include specific provisions to address the use of deep saline groundwater and the construction of related infrastructure when it is required for LBCCA facilities.

For saline water sourced from a deep well located on the land, the federal *Fisheries Act* would apply if there is any risk of harm to fish or fish habitat. While this possibility may be more remote with deep saline groundwater, we recommend that DFO prepare guidance on when the use of deep saline groundwater may trigger the need for an authorization under the *Fisheries Act*.

4.4.4 **Sourcing Saline Water from the Ocean**

We are not aware of any approval that is necessary to draw water from the ocean. However, in doing so it would be important not to contravene the *Fisheries Act* and obtain any permits necessary under the federal *Navigation Protection Act*.⁴⁵

The *Fisheries Act* prohibits carrying on any work, undertaking or activity that results in serious harm⁴⁶ to fish⁴⁷ that are part of a commercial, recreational or Aboriginal fishery,⁴⁸ or to fish that

⁴¹ *Water Sustainability Regulation*, BC Reg 36/2016.

⁴² *Water Sustainability Regulation*, s. 51.

⁴³ *Water Sustainability Regulation*, s. 52(1) and (2).

⁴⁴ WSA, ss. 6(1) (authorization required to use or divert water from an aquifer), 49-57 (well drilling requirements), 58 (well operation requirements), 59 (prohibitions on introducing foreign matters into a well); See also the *Groundwater Protection Regulation*, BC Reg 39/2016 for specific well requirements.

⁴⁵ *Navigation Protection Act*, RSC 1985, c N-22.

⁴⁶ *Fisheries Act*, s. 2(2) (Serious harm to fish means the death of fish or any permanent alteration to, or destruction of, fish habitat); s. 2(1) (fish habitat means spawning grounds and any other areas, including nursery, rearing, food supply and migration areas, on which fish depend directly or indirectly in order to carry out their life processes).

⁴⁷ *Fisheries Act*, s. 2(1) (Fish includes (a) parts of fish, (b) shellfish, crustaceans, marine animals and any parts of shellfish, crustaceans or marine animals, and (c) the eggs, sperm, spawn, larvae, spat and juvenile stages of fish, shellfish, crustaceans and marine animals).

⁴⁸ *Fisheries Act*, s. 2(1) (Fisheries include the area, locality, place or station in or on which a pound, seine, net, weir or other fishing appliance is used, set, placed or located, and the area, tract or stretch of water in or from which

support such a fishery.⁴⁹ Accordingly, any unauthorized or unprescribed withdrawal of ocean water that kills fish, or permanently alters or destroys fish habitat, which fish is part of, or supports, a commercial, recreational or Aboriginal fishery, would be an offence under the federal *Fisheries Act*, unless a permit authorizing such an undertaking was issued in accordance with the *Fisheries Act*. Authorization usually requires the provision of plans and specifications to the Minister.⁵⁰

The *Navigation Protection Act*⁵¹ protects the public right of navigation, ensuring infrastructure and other works in navigable waterways are appropriately reviewed and regulated. This legislation prohibits the construction and maintenance of works in navigable waters listed in its schedule, which includes the Pacific Ocean.⁵² “Work” broadly includes any structure, device or thing, whether temporary or permanent, that is made by humans.⁵³ If the Minister determines that the work is likely to substantially interfere with navigation, such work can only proceed on receipt of an approval from the Minister.⁵⁴

A licence issued under the *Aquaculture Activities Regulations* or the *Pacific Aquaculture Regulations* allows a licence holder authorized to install, operate, maintain or remove an aquaculture facility,⁵⁵ provided reasonable measures are taken to mitigate the harm to fish and fish habitat. Arguably, a licence for a LBCCA facility issued under the *Aquaculture Activities Regulations* or the *Pacific Aquaculture Regulations* would allow a LBCCA licence holder to construct infrastructure to draw water from the ocean. In our view, relying on such an interpretation would be unsafe: both the *Aquaculture Activities Regulations* and *Pacific Aquaculture Regulations* are more properly directed at open-net marine finfish aquaculture and those facilities do not require that water be removed from the ocean.

We recommend that any LBCCA Regulations address specifically what conditions would be required to ensure that a pipe drawing water from the ocean would be authorized under the *Fisheries Act*.

4.5 Effluent Discharge

4.5.1 Current Federal Requirements for Discharges to Aquatic Receiving Environments

The federal government generally regulates the discharge of effluent into aquatic environments by way of the *Fisheries Act*. Section 36(3) of the *Fisheries Act* makes it an offence to deposit a deleterious substance. Regulations promulgated under the *Fisheries Act* allow persons to obtain authorizations to deposit deleterious substances without violating s. 36(3) provided they comply with the conditions of the authorization. Such authorizations generally require that the effluent not exceed stipulated concentrations and not exceed a stipulated volume of effluent within a prescribed period.

fish may be taken by the said pound, seine, net, weir or other fishing appliance, and also the pound, seine, net, weir, or other fishing appliance used in connection therewith).

⁴⁹ *Fisheries Act*, s. 35(1).

⁵⁰ *Fisheries Act*, ss. 37(1), 37(1.1).

⁵¹ *Navigation Protection Act*, RSC 1985, c N-22.

⁵² *Navigation Protection Act*, s. 3.

⁵³ *Navigation Protection Act*, s. 2.

⁵⁴ *Navigation Protection Act*, s. 6(1).

⁵⁵ *Aquaculture Activities Regulations*, s. 1 (aquaculture is defined as the cultivation of fish).

The *Aquaculture Activities Regulations*⁵⁶ provide that an owner or operator of an aquaculture facility may, subject to the specified conditions, deposit a designated deleterious substance in any water or place referred to in subsection 36(3) of the *Fisheries Act*.⁵⁷ The following are designated deleterious substances:⁵⁸

- drugs whose sale is permitted or otherwise authorized, or whose importation is not prohibited, under the *Food and Drugs Act*;⁵⁹
- pest control products that are registered, or whose use is authorized, under the *Pest Control Products Act*;⁶⁰ and
- biochemical oxygen demanding matter.

The specific conditions that permit the deposit of a designated deleterious substance include the following:

- the facility must be operated under an aquaculture licence;⁶¹
- reasonable measures must be taken to minimize detriment to fish and fish habitat outside the facility;⁶²
- notification is required if fish morbidity or mortality is observed outside the aquaculture facility;⁶³ and
- annual reports must be submitted.⁶⁴

It is unlikely that the provisions of the *Aquaculture Activities Regulations* would apply to LBCCA that wished to discharge effluent into either marine or freshwater environments. The *Aquaculture Activities Regulations* presume that prescribed deleterious substances will be deposited directly into open-net pens located in the ocean. LBCCA facilities would discharge effluent from a pipe after the effluent has been treated and filtered. Although treatment and filtration would reduce suspended solids and other compounds, discharge through a pipe would concentrate and localize both the quantity and contents of the effluent in a particular receiving environment. The potential environmental impacts are significantly different than deposits of substances in open-net pens in the ocean.

⁵⁶ *Aquaculture Activities Regulations*, SOR/2015-177.

⁵⁷ *Aquaculture Activities Regulations*, s. 3.

⁵⁸ *Aquaculture Activities Regulations*, s. 2.

⁵⁹ *Food and Drugs Act*, RSC 1985, c F-27.

⁶⁰ *Pest Control Products Act*, SC 2002, c 28.

⁶¹ *Aquaculture Activities Regulations*, s. 4.

⁶² *Aquaculture Activities Regulations*, s. 7.

⁶³ *Aquaculture Activities Regulations*, s. 13.

⁶⁴ *Aquaculture Activities Regulations*, s. 14.

The *Canadian Environmental Protection Act, 1999*⁶⁵ imposes requirements on toxic substances. Substances are deemed to be toxic if they enter or may enter the environment in a quantity or concentration or under conditions that:

- a) has or may have an immediate or long-term harmful effect on the environment or its biological diversity;
- b) constitutes or may constitute a danger to the environment on which life depends; or
- c) constitutes or may constitute a danger in Canada to human life or health.⁶⁶

Where a release occurs or there is a likelihood of a release into the environment of a substance specified on the List of Toxic Substances in Schedule 1 of the Act, any person who (i) owns or has the charge, management or control of a substance immediately before its release or its likely release into the environment, or (ii) causes or contributes to the release or increases the likelihood of the release, must report the release and take remedial measures.⁶⁷ In addition, the Minister is empowered to issue environmental objectives, release guidelines and codes of practice to prevent and reduce marine pollution from land-based sources.⁶⁸

4.5.2 **Current Provincial Requirements for Discharges to Water and Land**

Under the provincial *Environmental Management Act*⁶⁹, the *Waste Discharge Regulation*⁷⁰ defines what industries, activities and operations require authorizations to discharge or release waste to the air, water, and land. Waste is broadly defined to include effluent, which is defined as follows:⁷¹

“effluent” means a substance that is introduced into water or onto land and that

- (a) injures or is capable of injuring the health or safety of a person,
- (b) injures or is capable of injuring property or any life form,
- (c) interferes with or is capable of interfering with visibility,
- (d) interferes with or is capable of interfering with the normal conduct of business,
- (e) causes or is capable of causing material physical discomfort to a person, or
- (f) damages or is capable of damaging the environment;

⁶⁵ *Canadian Environmental Protection Act, 1999*, SC 1999, c 33.

⁶⁶ *Canadian Environmental Protection Act, 1999*, s. 64.

⁶⁷ *Canadian Environmental Protection Act, 1999*, s. 95.

⁶⁸ *Canadian Environmental Protection Act, 1999*, s. 121.

⁶⁹ *Environmental Management Act*, SBC 2003, c 53.

⁷⁰ *Waste Discharge Regulation*, BC Reg 320/2004.

⁷¹ *Environmental Management Act*, s. 1(1).

Sections 6(2) and (3) of the *Environmental Management Act* state that a person must not introduce or cause or allow waste to be introduced into the environment in the course of conducting a prescribed industry, trade or business, and must not introduce or cause or allow to be introduced into the environment, waste produced by a prescribed activity or operation.⁷² Land-based aquaculture is a prescribed industry under Schedule 2 of the *Waste Discharge Regulation*; however, there is currently no code of practice governing this industry. Accordingly, a person must not contravene ss. 6(2) and (3) unless an authorization is in place permitting the disposition of waste.⁷³ More onerous requirements will apply if the effluent falls within the definition of hazardous waste.⁷⁴

Specific requirements are also outlined in the *Land-based Finfish Waste Control Regulation*.⁷⁵ These include requirements to submit a receiving water quality report in specified circumstances,⁷⁶ a registration for exemption from the waste discharge provisions of the *Environmental Management Act*,⁷⁷ and prohibitions from discharging to surface water or ground water the following:⁷⁸

- a) sand, silt, mud, solids, sludges, filter backwash, debris or other pollutants arising from treatment or control of water supply or effluent;
- b) untreated cleaning wastes such as those obtained from a vacuum or standpipe bottom drain system;
- c) accumulated solids from raceways or ponds;
- d) detergents, disinfecting agents, cleaning agents or chemicals, if the effluent does not pass a 96 hour LC20 bioassay test as defined by Environment Canada's Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout; and
- e) dead fish, blood, or processing wastes.

Finally, the *Land-based Finfish Waste Control Regulation* also establishes effluent standards, which prohibit the following effluents from being discharged to the environment:⁷⁹

- f) if the non-filterable residue concentration in the effluent exceeds:
 - i) 10 mg/L and the dilution ratio is less than 20 to 1, or
 - ii) 20 mg/L and the dilution ratio is 20 to 1 or greater,

⁷² *Environmental Management Act*, ss. 6(2), (3).

⁷³ *Waste Discharge Regulation*, s. 4(8).

⁷⁴ *Hazardous Waste Regulation*, BC Reg 63/88, s. 1(1) (hazardous waste includes specified dangerous goods, waste oil, waste containing polycyclic aromatic hydrocarbon, and other specified wastes).

⁷⁵ *Land-based Finfish Waste Control Regulation*, BC Reg 68/94, s. 1 ("land-based finfish facility" means a fish hatchery, rearing pond, or other similar facility where finfish are fed, nurtured, held, maintained or reared in fresh water to reach a size for release or for market sale, but does not include a net pen facility or spawning channel).

⁷⁶ *Land-based Finfish Waste Control Regulation*, s. 3.

⁷⁷ *Land-based Finfish Waste Control Regulation*, s. 4.

⁷⁸ *Land-based Finfish Waste Control Regulation*, s. 7(1).

⁷⁹ *Land-based Finfish Waste Control Regulation*, s. 6(1).

- g) if the total phosphorous concentration in the effluent exceeds
 - i) 0.1 mg/L and the dilution ratio is less than 20 to 1, or
 - ii) 0.2 mg/L and the dilution ratio is 20 to 1 or greater, or
- h) if the effluent has detectable chlorine as measured by the amperometric titration method as defined by the American Public Health Association, Standard Methods 17th Edition, New York, 1989.

The *Land-based Finfish Waste Control Regulation* is likely outdated. It expressly relies on dilution as a means of addressing pollution. Such an approach is no longer considered best practice.

4.5.3 **Current Local Government Requirements for Discharges to Wastewater Systems**

Municipal wastewater systems in British Columbia are governed by the *Municipal Wastewater Regulation*.⁸⁰ This regulation establishes maximum effluent quality requirements that must not be exceeded.⁸¹ Specific requirements are established for “non-domestic waste”, meaning liquid waste other than domestic wastewater.⁸² In particular, a person must not discharge non-domestic waste to a municipal wastewater facility unless such person ensures that the pre-discharge quality of the non-domestic waste meets the standards or is within the ranges specified in the Standard for Discharges Directed to Municipal or Industrial Effluent Treatment Works under Column 3 of Schedule 1.2 of the *Hazardous Waste Regulation*.⁸³

A municipality must not accept non-domestic waste to a municipal wastewater collection system unless the municipality:

- a) regulates the introduction of non-domestic waste through a source control bylaw, or equivalent measures, that provides for the pre-treatment of industrial, commercial and institutional discharges to the system, or
- b) demonstrates, by way of a study, that a source control bylaw, or equivalent measures, is not required to protect:
 - i) the wastewater facility that receives and processes the municipal wastewater, or
 - ii) the receiving environment.⁸⁴

4.5.4 **Recommendations**

As the discharge of effluent into the environment is currently governed by both the federal and provincial governments, we recommend that specific effluent regulations be drafted by both levels of government that would apply specifically for LBCCA facilities and their effluent discharges – be they onto the land or water. We also recommend the application of existing

⁸⁰ *Municipal Wastewater Regulation*, BC Reg 87/2012.

⁸¹ *Municipal Wastewater Regulation*, s. 3.

⁸² *Municipal Wastewater Regulation*, s. 7(1).

⁸³ *Municipal Wastewater Regulation*, s. 7(2).

⁸⁴ *Municipal Wastewater Regulation*, s. 7(3).

provisions under the *Canadian Environmental Protection Act, 1999* should be considered as means to regulate the discharge into the environment of substances from the activities of LBCCA facilities – for example:

- inclusion of substances that meet the definition of toxic substances onto the List of Toxic Substances in Schedule 1 of the Act;
- issuance of environmental objectives, release guidelines and codes of practice to prevent and reduce marine pollution from land-based sources; and
- requirements for disposal of substances at sea that aim to protect the marine environment.

We also recommend that specific effluent standards developed for LBCCA facilities should also be considered in reviewing the existing maximum effluent quality standards for municipal wastewater system, recognizing, however, the importance of maintaining strong minimum standards to protect local communities and ecosystems.

4.6 Sourcing and Moving Finfish Stock

Marine open-net pen finfish farms are required to adhere to strict requirements when importing eggs or brood stock or transferring stock from one location to another. Those requirements should be examined for their application to LBCCA. In most instances, those standards in place are there to ensure the protection of wild populations from disease.

4.6.1 Importation of Salmon Eggs and Brood Stock

CFIA is mandated to safeguard Canada's food, animals, and plants and to protect public health. The CFIA National Aquatic Animal Health Program (“**NAAHP**”) regulates the import of all aquatic animals into Canada primarily by way of the *Health of Animals Act* and the accompanying *Health of Animals Regulations*.⁸⁵

Import requirements differ based on the susceptibility of the aquatic animal species to Canada's diseases of concerns. Susceptible species of aquatic animals are listed in Schedule III of the *Health of Animals Regulations*.⁸⁶ Imports of susceptible aquatic animals require an Aquatic Animal Health Import Permit for entry into Canada.⁸⁷

⁸⁵ *Health of Animals Act*, SC 1990, c 21, s. 2(1) (animal includes an embryo and a fertilized egg or ovum); *Health of Animals Regulations*, CRC, c 296, ss. 192, 193 (imports of susceptible aquatic animals to be used as pets or for personal use do not require an Aquatic Animal Health Import Permit);

In accordance with its responsibilities as a member of the World Trade Organization, Canada implemented the NAAHP as a co-delivered program between the CFIA, the lead regulatory and administrative authority, and the Department of Fisheries and Oceans, responsible for providing the diagnostic testing, research, and scientific advice to support the program. Specific infectious disease agents affecting fish are covered under the NAAHP (Fisheries and Oceans Canada, National Aquatic Animal Health Program, online: <<http://www.dfo-mpo.gc.ca/science/aah-saa/naahp-pnsas-eng.html>>).

⁸⁶ *Health of Animals Regulations*, CRC, c 296; susceptible species of aquatic animals are also listed on CFIA website, online: <<http://www.inspection.gc.ca/animals/aquatic-animals/diseases/susceptible-species/eng/1327162574928/1327162766981>>.

⁸⁷ *Health of Animals Regulations*, ss. 160(1.1), 191.

Import permits contain specific requirements based on the disease risks associated with the aquatic animal, the origin, the commodity type, and the end use of the aquatic animals in Canada and must contain such conditions as are necessary to prevent the introduction of communicable disease into Canada or into any other country from Canada and the spread of communicable disease within Canada.⁸⁸ Aquatic animals not listed on Schedule III may only be imported if accompanied by a document that includes information on the exporter, importer, taxonomic name and life stage of the aquatic animal, country in which the aquatic animal was born, and whether it was born in captivity or in the wild.⁸⁹

Notably, the Minister is required to issue an import permit if the Minister is satisfied that, to the best of the Minister's knowledge and belief, the activity for which the permit or licence is issued would not, or would not be likely to, result in the introduction into Canada, the introduction into another country from Canada or the spread within Canada, of a vector, disease or toxic substance.⁹⁰

Imported susceptible aquatic animals require export health certification or other documentation from the country of origin to ensure that the aquatic animals imported into Canada meet Canadian aquatic animal health requirements. Pursuant to the NAAHP, Canada requires health certification of fish and seafood exports free of pathogens of international importance from countries wishing to export fish and seafood to Canada. This is intended to protect Canada from the introduction of pathogens into the country. The CFIA has developed a list of reportable and notifiable pathogens affecting aquatic animals for Canada;⁹¹ some of the listed aquatic pathogens are endemic throughout Canada, while others only occur regionally or are exotic (foreign) to Canada.

Notably, the Minister is also empowered to designate a country or part of a country as being free of a disease or as posing a negligible risk for a disease – the availability of such a designation is based on prescribed criteria, including: the prevalence of the disease; the time since the most recent outbreak of the disease; the disease surveillance programs in effect; the measures taken to prevent the introduction or spread of the disease; and the natural barriers to the movement of the disease.⁹²

We recommend that as part of the development of a regime regulating LBCCA, the federal government review the requirements of s. 160(1.1) of the *Health of Animals Regulations* for their applicability to LBCCA facilities. A risk assessment should be conducted to determine if LBCCA have protective measures to satisfy the Minister that eggs or brood stock could be imported into Canada such that they would not result in the spread within Canada, of a vector, disease or toxic substance. We also recommend that if the requirements of s. 160(1.1) were relaxed, that movement from LBCCA facilities to non-LBCCA facilities be prohibited and that prohibition be strictly enforced.

Similarly, we recommend that the federal government review Minister's ability to be satisfied that imports from specific countries pose a negligible risk to the spread of disease when the

⁸⁸ *Health of Animals Regulations*, s. 160(2)(b); Canadian Food Inspection Agency, *Aquatic Animal Imports*, online: <<http://www.inspection.gc.ca/animals/aquatic-animals/imports/eng/1299156741470/1320599337624>>.

⁸⁹ *Health of Animals Regulations*, s. 194.

⁹⁰ *Health of Animals Regulations*, s. 160(1.1).

⁹¹ Canadian Food Inspection Agency, *Aquatic Animal Diseases*, online:

<<http://www.inspection.gc.ca/animals/aquatic-animals/diseases/eng/1299156296625/1320599059508>>.

⁹² *Health of Animals Regulations*, ss. 7(1), (1.1).

eggs are to be imported to a LBCCA facility. Again, we recommend that if such standards were relaxed for LBCCA facilities that that movement from LBCCA facilities to non-LBCCA facilities be prohibited and that prohibition be strictly enforced.

4.6.2 *Introductions and Transfers*

The *Health of Animals Act, SC 1990, c 2* governs the introductions and transfer of aquatic animals. Under the *Health of Animals Act* the Canadian Food Inspection Agency (“**CFIA**”) implements the National Aquatic Animal Health Program (“**NAAHP**”). Under the NAAHP, CFIA has a federal leadership role in managing the disease risks associated with movements of aquatic animals. Previously DFO carried out this function. We recommend that as part of its review of the finfish aquaculture regime, the federal government consider if CFIA is the appropriate agency for overseeing the introduction and transfers of aquatic species. The risks identified with by Mr. Justice Cohen with respect to DFO holding a dual mandate to promote and regulate aquaculture may apply to CFIA’s role in regulating the introductions and transfers of finfish species and the promotion of the food industry.

Under the NAAHP, Introductions and Transfers Committees operate in each province and territory to oversee introductions and transfers of finfish. Introductions and transfers of finfish can be granted as part of a licence for a finfish aquaculture facility issued under the *Pacific Aquaculture Regulations* or as a separate licence approved by the Introductions and Transfer Committee for a specific transfer. Licences to introduce or transfer finfish must comply with s. 56 of the *Fishery (General) Regulations*.

In making decisions regarding introductions and transfers of finfish the Introductions and Transfers Committee must consider the risk posed by disease or disease agents associated with the finfish to be transferred or introduced. When doing so, each Introduction and Transfer Committee follows the *National Code on the Introductions and Transfers of Aquatic Organisms* (the “**Code**”). Each Introductions and Transfers Committee also considers the origin and destination of the finfish to be transferred. Transfers and introductions may be restricted from zones within a province (BC for example has nine salmonid transfer zones) or from countries where disease agents or diseases are known to be present.

Under the Code, Introduction and Transfer Committees identify the hazards associated with a transfer, assess what mitigations measures are in place to address the risk, or probability, that the identified hazards will materialize. LBCCA facilities, by being on land and by being closed containment facilities provide mitigation measures and protections from the spread of disease that open-net pen finfish aquaculture do not provide. As the Code was largely developed for open-net pen finfish aquaculture, we recommend that the Code be reviewed and specific conditions for licencing transfers and introductions of finfish species to or between LBCCA be developed. We further recommend that such a reconsideration of the Code take place during the environmental assessment for the initial LBCCA facilities as the environmental assessment process provides an important opportunity to assess potential risks and impacts. The environmental assessment process could determine that the mitigation measures provided by LBCCA facilities are significantly stronger than those provided by open-net pen facilities such that the conditions for introductions and transfers for LBCCA should be relaxed. The environmental assessment process may also determine that a wider range of introductions and transfers may be permitted as part of the licence for a LBCCA operator whether or not that operator is operating in an Approved Facility or independently.

4.7 Administration of Medicines, Therapeutants and Pesticides

The administration the medicines, therapeutants and pesticides for open-net pen aquaculture is regulated under various pieces of legislation, including, the *Health of Animals Act*, *Food and Drugs Act* and the *Canadian Environmental Protection Act*.

With respect to the administration of medicines, therapeutants and pesticides to ensure the health of the finfish species being reared, we do not recommend any changes to their application with respect to LBCCA.

We do recommend that provisions related to environmental protection should be reviewed in light of the requirements discussed above related to the discharge of effluent.

4.8 Regulatory Efficiency

LBCCA will engage numerous agencies across two levels of government. The regulation of the open-net marine finfish aquaculture is extremely complex. Many of those same complexities are present for LBCCA and some others are introduced such as water supply and effluent discharge. That regulatory complexity is a barrier for entry to industry and will slow the development of LBCCA in BC.

We recommend that LBCCA Regulations be drafted such that they coordinate matters within federal and provincial jurisdiction. This will be particularly important for water use and effluent discharge.

We also recommend that the licencing process be coordinated through one federal agency, preferably DFO.

5.0 Summary of Recommendations

Based on the analysis above we provide the following recommendations.

5.1 Jurisdiction and Regulation

To ensure that constitutional jurisdiction is respected and coordinated effectively we make the following recommendations:

- To ensure the protection of fisheries and oceans, the federal government, through DFO, should be the lead regulator for LBCCA. The Aquaculture Management Directorate within DFO should be reviewed to determine if it is adequate for that task.
- To respect the constitutional division of powers, and as a means of effecting Mr. Justice Cohen's recommendation to split the mandate to protect fisheries and oceans from the mandate to promote aquaculture, the regulation of commercial aspects of the industry of aquaculture that are not squarely related to the federal mandate to protect fisheries and oceans should reside with the province.
- The promotion of international trade in both ocean-based aquaculture and LBCCA should be placed with a federal agency outside of DFO.

- The coordination of federal and provincial jurisdiction and alignment of policy on LBCCA should be effected through an federal-provincial agreement on LBCCA that addresses, among other things, licensing fees, taxation, siting requirements and environmental regulation and the use of medicines and other therapeutants.
- To confirm and give effect to the federal government's lead role as the regulator for all forms of finfish aquaculture, s. 2 of the *Fisheries Act*, RSC 1985, c F-14 should be amended to ensure that all finfish aquaculture operations are included in the definition of "fishery".
- The federal government should promulgate regulations under the *Fisheries Act* for the regulation of LBCCA. Those regulation could either be stand-alone regulations or part of regulations effecting the regulation of ocean-based finfish aquaculture and its transition to land. Those LBCCA Regulations should be the primary regulations for LBCCA and should provide for the coordination of issues under provincial jurisdiction, such as environmental regulation, to ensure regulatory certainty, effectiveness and efficiency.
- Section. 43 of the *Fisheries Act* be amended to give the Minister power to promulgate regulations specific to LBCCA.

5.2 Environmental Assessment and Licencing

To ensure that environmental impacts are mitigated and the LBCCA industry is appropriately licenced, we make the following recommendations:

- All LBCCA facilities should be subject to both federal and provincial environmental assessment on a transitional basis.
- The federal and provincial governments should come to an agreement on a process for coordinating the environmental assessment of LBCCA facilities so that each level of government can assess potential environmental impacts under its respective heads of power.
- Both the provincial and federal governments should commit to reviewing the need for environmental assessment as the industry matures at intervals of 5, 7, and 10 years.
- LBCCA Regulations should be promulgated that allow for the licensing of Approved Facility Licensees, Tenant Operators, and Independent Operators who conduct finfish aquaculture in their own LBCCA facilities.
- The LBCCA Regulations should allow Approved Facility Licensees to:
 - (i) operate an Approved Facility up to maximum water usage and effluent discharge volumes, provided the appropriate environmental protections are followed;
 - (ii) construct and operate infrastructure for water intake and effluent discharge under prescribed conditions;

- (iii) host aquaculture operations for multiple Tenant Operators in one Approved Facility in a manner that allows Approved Facility Licensees to scale up production in an Approved Facility;
- (iv) host aquaculture operations that raise different species in one Approved Facility under prescribed conditions; and
- (v) comply with a health management plan for the Approved Facility that ensures health, safety and environmental protection for various species raised in the Approved Facility.

5.3 Water Supply

To ensure that the supply of both freshwater and saline water is managed effectively we make the following recommendations:

- We recommend that the *Water Sustainability Fees, Rentals and Charges Tariff Regulation*, BC Reg 37/2016 be amended to clarify what rate will apply to all LBCCA facilities. The province should consider maintaining a low a rate as possible for LBCCA to support its growth.
- To support a transition to LBCCA, Approved Facilities should not be required to pay the full annual rental amount until they are at full capacity.
- To provide time for Approved Facilities to reach full production capacity, the WSA should be amended so that Approved Facilities are not required to put their full water allotment under their licence to beneficial use for 15 years.
- To ensure a high precedence of water diversion rights, LBCCA use of water should be classified as “waterworks purpose”, “irrigation purpose,” or be given its own water use purpose, which would be ranked above “irrigation purpose”.
- To streamline the application process for a LBCCA facility wishing to acquire all approvals necessary for obtaining necessary freshwater, FLNRO and DFO should work together to provide guidance with respect to the approvals necessary for LBCCA to use freshwater.
- To minimize the risks of contamination to aquifers and hydraulically connected surface water bodies, the WSA should be amended to clarify that regulatory requirements that apply to drilling activities, well installations, and closures also apply to wells drilled on the foreshore, including for the purposes of sourcing saline water for LBCCA facilities, or new provisions specific to foreshore wells be drafted.
- So that the findings of socio-economic and environmental studies can guide the approved location of wells, well depths, withdrawal rates, and other related matters, DFO should provide guidance for these studies to be carried out before a well may be drilled on the foreshore. This guidance should be developed jointly by DFO and FLNRO.

- To clarify whether the WSA regime is applicable to deep saline groundwater not used for an oil and gas purpose, the WSA should be amended so that the use of deep saline water for LBCCA facilities not drawing water from foreshore wells is given the same treatment under the WSA as the use of deep saline waters for oil and gas purposes. In the alternative, the WSA should be amended to include specific provisions to address the use of deep saline groundwater and the construction of related infrastructure when it is required for LBCCA facilities.
- To clarify the application of the federal Fisheries Act, DFO should prepare guidance on when the use of deep saline groundwater may trigger the need for an authorization under the Fisheries Act.
- To ensure a LBCCA licence holder is permitted to construct infrastructure to draw water from the ocean, any LBCCA Regulations should address specifically what conditions would be required to ensure that a pipe drawing water from the ocean would be authorized under the Fisheries Act.

5.4 Effluent Discharge

To ensure that effluent is appropriately managed we make the following recommendations:

- As the discharge of effluent into the environment is currently governed by both the federal and provincial levels of government, specific effluent regulations should be drafted by both levels of government that would apply specifically for LBCCA facilities and their effluent discharges – be they onto the land or water.
- The application of existing provisions under the *Canadian Environmental Protection Act, 1999* should be considered as means to uniformly regulate the discharge into the environment of substances from the activities of LBCCA facilities.
- Specific effluent standards developed for LBCCA Facilities should also be considered in reviewing the existing maximum effluent quality standards for municipal wastewater system, recognizing, however, the importance of maintaining strong minimum standards to protect local communities and ecosystems.

5.5 Sourcing and Moving Finfish Stock

To ensure that finfish stock for LBCCA facilities is available without jeopardising the health of wild fish populations we make the following recommendations:

- To ensure the National Code on the Introductions and Transfers of Aquatic Organisms, which was largely developed for open-net pen finfish aquaculture, is appropriate for LBCCA, that Code should be reviewed and specific conditions for licencing transfers and introductions of finfish species to or between LBCCA should be developed. The environmental assessment process should be used to inform any review or revision of that Code to address issues specific to LBCCA.
- As part of the development of a regime regulating LBCCA, the federal government review the requirements of s. 160(1.1) of the *Health of Animals*

Regulations for their applicability to LBCCA facilities. A risk assessment should be conducted to determine if LBCCA have protective measures to satisfy the Minister that eggs or brood stock could be imported into Canada such that they would not result in the spread within Canada, of a vector, disease or toxic substance.

- If the requirements of s. 160(1.1) were relaxed, that movement from LBCCA facilities to non-LBCCA facilities be prohibited and that prohibition be strictly enforced.
- The federal government review the Minister's ability to be satisfied that imports from specific countries pose a negligible risk to the spread of disease when the eggs are to be imported to a LBCCA facility.
- If such standards were relaxed for LBCCA facilities that that movement from LBCCA facilities to non-LBCCA facilities be prohibited and that prohibition be strictly enforced.

5.6 Administration of Medicines, Therapeutants and Pesticides

To ensure that medicines, therapeutants and pesticides are used appropriately we make the following recommendations:

- There should not be any changes to the application of the regulations with respect to the administration of medicines, therapeutants, and pesticides.
- Provisions related to environmental protection should be reviewed to determine if they are applicable to LBCCA facilities.

5.7 Regulatory Efficiency

To ensure regulatory efficiency, we make the following recommendations:

- To ensure efficiency across two levels of government, the LBCCA Regulations should be drafted such that they coordinate matters within federal and provincial jurisdiction.
- The licensing process should be coordinated through one federal agency, preferably DFO.

By Email

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MEMORANDUM

To: Wild Salmon Forever
Re: **Consultation with Indigenous Communities for Marine and Land-Based Closed-Containment Finfish Aquaculture**
Date: October 19, 2017

Request

As part of its efforts to preserve wild salmon, Wild Salmon Forever is investigating what regulatory changes would be needed to transition the finfish aquaculture industry from open-net pens to land-based closed containment aquaculture (“**LBCCA**”). You have asked us to consider the requirements to consult with Indigenous communities with respect to that transition. You have also asked us to provide an overview of how consultation with Indigenous communities could be improved for both marine open-net pen finfish aquaculture and LBCCA.

The Crown’s Obligation to Consult Indigenous Communities

In the case *Haida Nation v. British Columbia (Minister of Forests)*, 2004 SCC 73, the Supreme Court of Canada confirmed that the honour of the Crown requires that the Crown consult Indigenous communities when “the Crown has knowledge, real or constructive, of the potential existence of the Aboriginal right or title and contemplates conduct that might adversely affect it”.⁹³ The Crown’s duty to consult Indigenous communities is triggered whether the potentially affected Aboriginal title or rights are asserted or have been proven.

Article 18 of the United Nations Declaration on the Rights of Indigenous Peoples (the “**Declaration**”) requires that the Crown obtain the free, prior and informed consent Indigenous communities before establishing fish farms in their territories. The Supreme Court of Canada has confirmed the requirement for consent when a First Nation holds Aboriginal title in *Tsilhqot’in Nation v. British Columbia*, 2014 SCC 44. Article 26 of the Declaration recognizes that Indigenous Peoples have the right to own, use, develop and control the lands and territories they have traditionally occupied. Article 28 builds on this recognition and requires redress and restitution, including fair and equitable compensation, for lands and resources that have been taken, used, occupied or damaged without the free, prior and informed consent. Likewise, Article 32 recognizes that Indigenous Peoples have the right to determine their own priorities and strategies for the use and development of their lands and requires states to consult with

⁹³ *Haida*, para. 35.

Indigenous Peoples to obtain their free, prior and informed consent with respect to developments in their territory.

Salmon is an iconic species that has been integral to the lives of Indigenous communities from time immemorial. Any change to the government's strategy for the preservation and conservation of salmon would trigger the duty to consult and the provisions of the Declaration.

Transition from Marine, Open-net Pen Aquaculture to LBCCA

A transition to LBCCA is exactly the type of strategic decision that the Supreme Court of Canada identified as triggering the duty to consult.⁹⁴ In developing any regulatory regime for LBCCA, both federal and provincial governments should consult with Indigenous communities on how the LBCCA industry should be regulated and how that regulation could potentially affect rights protected under s. 35 of the *Constitution Act, 1982*. Strategic level consultations with Indigenous communities should include consideration of siting requirements, water usage, effluent treatment and economic participation, among other things.

Strategic level consultations regarding the regulation of marine open-net pen aquaculture should also be undertaken with Indigenous communities with respect to how incentives and disincentives may be applied to facilitate a transition to LBCCA.

Both the Declaration and the common-law under the s. 35 of the *Constitution Act, 1982* support co-management between the Crown and Indigenous communities for the preservation and conservation of salmon off the coast of BC. Any strategic level consultations with respect to a transition from marine aquaculture to LBCCA should be aimed at creating an effective co-management regime that would provide a vehicle to implement the Declaration and to effectively discharge the duty to consult and accommodate Indigenous communities with respect to their rights to harvest salmon.

Reform of the finfish marine aquaculture regime and the creation of a new LBCCA regulatory regime provides both the provincial and federal governments a very significant opportunity to implement the principles of the United Nations Declaration on the Rights of Indigenous Peoples and to move reconciliation forward.

Improvements to Consultation on Marine Finfish Aquaculture

The regulation of marine finfish aquaculture should be revised and reformed to include co-management with Indigenous communities. Co-management is necessary if the federal and provincial governments are going to honour their promises to implement the Declaration.

Co-management would entail involving Indigenous communities in strategic level decisions with respect to the development of the industry. Implementing the Declaration's requirement of free prior and informed consent, and adhering to *Tsilhqot'in Nation v. British Columbia* on obtaining consent from Indigenous communities who hold Aboriginal title and would require that no marine finfish farms are operated in the territories of Indigenous communities who do not consent to their operations.

Co-management would also involve Indigenous communities in strategic decisions regarding siting criteria for marine finfish facilities as well as the construction and operating requirements

⁹⁴ *Haida*, para. 76.

for marine finfish facilities. Indigenous communities should be consulted on whether or not marine finfish aquaculture facilities should be subject to environmental assessments. We note that if conducted in accordance with the common-law on the honour of the Crown, environmental assessment of marine finfish farms could be a viable means for discharging the Crown's duty to consult.

It is our experience that Indigenous communities have almost no involvement in the compliance and enforcement components of the marine finfish aquaculture regime. If co-management is to be implemented, greater transparency and involvement of Indigenous communities is required. As currently implemented, the marine finfish aquaculture regime does not involve Indigenous communities in decisions involving the treatment of parasites or the screening and testing for pathogens. We recommend that Indigenous communities have a co-management role in those strategic decisions. We also recommend that the federal government recognize the inherent jurisdiction of Indigenous communities and they be provided roles with authority in the compliance and enforcement of marine finfish aquaculture. Participation by Indigenous communities in the compliance and enforcement regime could be done through the expansion of the Fishery Guardian program under the *Fisheries Act*, RSC 1985, c F-14 or the expansion of the observer program under the *Fishery (General) Regulations*, SOR/93-53.

We note that Indigenous communities are currently not consulted on the approvals for introductions and transfers issued by the Introductions and Transfers Committee. In our view, in many instances the decision to transfer finfish into territory in which Indigenous communities exercise title and rights would trigger the duty to consult. The operations of the Introductions and Transfers Committee should be revised and reformed so that it is able to uphold the honour of the Crown and discharge the duty to consult and accommodate.

Consultation with respect to LBCCA

For any new LBCCA regime to function with efficiency and in accord with the honour of the Crown and the United Nations Declaration on the Rights of Indigenous Peoples, it will need to include meaningful participation of potentially affected Indigenous communities in both the approval phase and the compliance and enforcement phase of LBCCA operations.

If conducted in accordance with the common-law on the honour of the Crown, environmental assessment of LBCCA facilities could be a viable means for discharging the Crown's duty to consult.

We recommend that a regime for LBCCA be founded on co-management with potentially affected Indigenous communities. We recommend that co-management include meaningful participation and authority in both the approval of licences for all LBCCA facilities and operators. We also recommend that the inherent jurisdiction of Indigenous communities be recognized such that they be provided roles with authority to issue fines and citations in the compliance and enforcement of LBCCA operations. Participation by Indigenous communities in the compliance and enforcement regime could be done through the expansion of the Fishery Guardian program under the *Fisheries Act* or the expansion of the observer program under the *Fishery (General) Regulations*.

We also recommend that the operations of the Introductions and Transfers Committee be reviewed to ensure that its operations adhere to the duty to consult. We have not been able to identify any consultation on the issuance of licences or approvals of transfers by the Introductions and Transfer Committee.