



Attn: Paul Casburn
Auditor
DNV GL Business Assurance Norway
Paul.casburn@dnvgl.com

22nd August 2018,

Stakeholder Submission RE: Initial Full Assessment Report, Marine Harvest Canada's Sargeaunt Pass farm, by DNV GL Business Assurance Norway, published 1st August 2018

Upon review of the draft Aquaculture Stewardship Council (ASC) audit for Marine Harvest Canada's Sargeaunt Pass farm, we find DN GL has failed to comply with the ASC Certification and Accreditation Requirements (CAR) and the ASC audit manual for several Salmon Standard indicators.

Our comments and concerns are provided in detail below. We look forward to hearing how DNV GL will address these outstanding concerns. Furthermore, we ask that our stakeholder submission be included in the final published report.

Sincerely,

Kelly Roebuck
Living Oceans Society

Shannon Arnold
Ecology Action Centre

Stan Proboszcz
Watershed Watch Salmon Society

HEAD OFFICE
Box 320
Sointula, BC V0N 3E0
Tel 250 973 6580

www.livingoceans.org

REGIONAL OFFICE
Suite 2000 – 355 Burrard Street
Vancouver, BC V6C 2G8
Tel 604 696 5044 Fax 604 696 5045

www.livingoceans.org

Salmon Standard Requirements

The ASC CAR stipulates Conformity Assessment Bodies (CABs) must conform with the following audit process requirement:

17.3 Audit methodology

17.3.1 The ASC audit shall use the ASC Audit Manual as guidance for the standard(s) for which the client is being audited.

We find the auditor has failed to follow 17.3 for the following Salmon Standard indicators:

I. Indicators 2.1.1; 2.1.2; 2.1.3 Benthic monitoring

As per the ASC Audit Manual, compliance evidence for benthic criteria should be obtained in accordance with the sampling methodology outlined in *Appendix I-1 Sampling methodology for calculation of faunal index, macrofaunal taxa, sulphide and redox, and copper.*

The release of Salmon Standard Version 1.1 included changes to Appendix I-1. These included the following additional auditing guidelines:

*Although the site visit should coincide with harvest period, it may be undertaken before end of harvest (at >75% peak biomass) and estimates of indicators requiring data from peak biomass / end of cycle provided in the draft report. **The CAB shall review actual figures before the certification decision is made and include these figures in the final report.***

Methodology for auditing indicators relating to peak biomass and end of cycle:

- 1) CABs shall carry out site visit audit at >75% peak biomass.*
- 2) At the time of the audit the farm shall provide the CAB with estimates of values at that date for indicators that rely on information only available with the farm reaches peak biomass / end of cycle. The Farm shall provide the CAB with values of samples taken at peak biomass and end of cycle when they become available.*
- 3) CAB shall raise a non-conformity for indicators where estimated values are used instead of actual values and note the estimated value in the draft audit report. It shall be explained in the draft audit report where figures are estimated and explain that these are to be updated in the final audit report.*
- 4) CAB shall review the actual values and supporting evidence when they come back at peak biomass / end of cycle in order to make a certification decision.*
- 5) CAB shall not make a certification decision and issue final report until actual values are provided for all indicators except biotic indicators 2.1.2 and 2.1.3.*
- 6) In the case that biotic values are not available at the time of drafting the final report the CAB shall carry out a risk assessment to evaluate whether the biotic values are likely to meet the ASC*

standard. If the CAB finds evidence that the results of the biotic analyses are likely to meet the ASC standard then certification can be granted.

7) The CAB shall review biotic findings at the surveillance audit and raise non-conformities as appropriate when results have been found not meet the ASC standard.

The report does not cite any estimates of values (based on the audit date) for the current production cycle for either the benthic (2.1.1;2.1.2;2.1.3) as per 2) of the methodology. Instead, the auditor cites the last completed production cycle values as sufficient evidence for compliance – failing to raise a non-conformity for each of the benthic indicators. While the previous production cycle values could be informative of estimate values for the current production, the Appendix I-1 methodology clearly states a non-conformity should be raised (as per 3) and that actual values are needed to make a certification decision (as per 4-5). Nowhere in the methodology does it allow for a previous production cycle's values to be used as compliance for the current cycle under assessment.

We submit the CAB has failed to follow Salmon Standard v1.1. Appendix I-1 and its methodology for auditing indicators relating to peak biomass and end of cycle. Non-conformities should have been raised for indicators 2.1.1 – 2.1.3 and certification granted only on receipt of actual values for 2.1.1 that demonstrate compliance.

II. Indicator 2.2.3 For Jurisdictions that have national or regional coastal water targets...; and Indicator 2.2.4 Evidence of weekly monitoring...

The draft Sargeaunt Pass audit report fails to reference or apply variance 198 to Indicator 2.2.3. VR 198 appropriately states,

“Chile and Canada are amongst the salmon production regions which do not have such a national classification and therefore they are bound by indicator 2.2.4.”

As acknowledged by the variance request, with no national water classification, Canadian farms are required to comply with Indicator 2.2.4. The Canadian Council of Ministers of the Environment (CCME) 2012 guidelines for water quality referenced here do not meet the definition of “national or regional water quality targets”. The ASC standard identifies nitrate, phosphorus and chlorophyll A (footnote 16) as the relevant nutrients for water quality targets. CCME guidelines only measure nitrate (as acknowledged in the draft report) and cannot be used as evidence of “national water classification”.

VR 198 was approved by the ASC VR-committee on the 13th November 2016. As per the ASC's variance process, the reapplication of an approved variance occurs when a “certifier encounters an identical situation for which an earlier variance request has been submitted and approved”.¹

The farm ought to be required to demonstrate compliance with Indicator 2.2.4; or an application should be made to apply the provisions of Variance 198 to this audit.

¹ <https://www.asc-aqua.org/what-you-can-do/get-certified/about-our-certification/>

III. Indicator 3.1.1 Participation in an Area-Based Management scheme.

The CAB incorrectly evaluates this indicator as “N/A” and states, “The two closest sites to this site are 7.5km (Doctor Islets ASC certified) and 8km (Humphry Rock) away. Both are owned by Marine Harvest, so an ABM is not required”.

The Salmon Standard Appendix II-1 specifies the following definition of “area”:

“II-1. A Definition of “area”

If area-based management is already a regulatory requirement of the farm’s jurisdiction, then farms will use this definition of “area” for the purposes of these requirements. In jurisdictions where ABM is not a regulatory requirement, the area covered under the ABM must reflect a logical geographic scope such as a fjord or a collection of fjords that are ecologically connected. The boundaries of an area should be defined, taking into account the zone in which key cumulative impacts on wild populations may occur, water movement and other relevant aspects of ecosystem structure and function.”

Considering the key cumulative impacts on wild populations, which would include the potential disease and pathogen impacts, Sargeaunt Pass farm resides in two important juvenile salmon migration routes that are shared with several other salmon farms. Figure 1 illustrates the key migration routes. This includes a major route that encompasses Knight Inlet, Tribune Channel and Fife Sound; both Marine Harvest and Cermaq farms share this route. Sargeaunt Pass farms also resides in the minor route of Knight Inlet and Clio Channel; both Marine Harvest and Grieg Seafood farms share these waterways.



Figure 1. Broughton Archipelago salmon farms. Source: Living Oceans Society. Note: since the creation of this map, two new Grieg Seafood farms were established in Clio Channel (near the location of their 'Bennet Point' farm).

Figure 2 illustrates the collection of narrow and confined fjords the three companies share that encompass Knight and Kingcome Inlets. In particular, Grieg Seafood has three farms (Noo-La, Wa-kwa and Tsa-ya) located in Clio Channel which are within close proximity to the Sargeaunt Pass farm. Grieg's farms are the three green farms identified on figure 2.

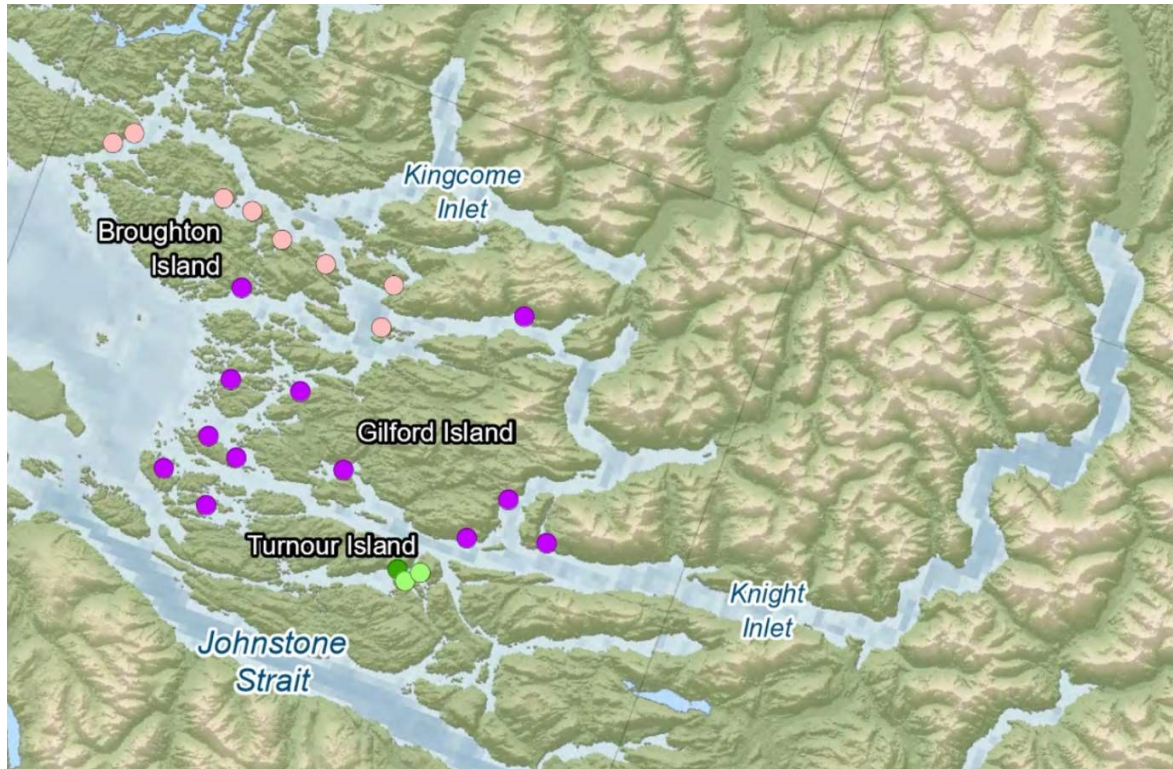


Figure 2. Broughton Archipelago salmon farms. Source: DFO. Legend: Purple = Marine Harvest; Pink = Cermaq; Green = Grieg Seafood

Particle disbursement modeling conducted at Broughton Archipelago farm sites indicate the potential for long-range transportation of particles exists and is influenced by a number of factors.² Linear distance alone is a poor indicator of the “zone in which key cumulative impacts on wild populations may occur”. The results show transfers between multiple farms with yellow to red demonstrating the connectivity (with red being the greatest) as per figure 3.

² DFO 2018. Assessment of the Ability of Hydrodynamic and Particle Tracking Models to Inform Decisions on Siting and Management of Marine Finfish Aquaculture Facilities in British Columbia. CSAS Report 2018/023. May 2018. http://www.dfo-mpo.gc.ca/csas-sccs/Publications/SAR-AS/2018/2018_023-eng.pdf

capture farm	release farm																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	29863	4078	2372	135	339	25	85	28	3	14	118	1	3	13	25	1	4			
2	282	32400	3032	4	47	82	205	5	9	96	442		3	3	180	11	11	2		
3	236	833	22134	20	80		3	3		1	14	1		1	1					
4	1241	311	363	23133	64		1	20				5	4	4						
5	1030	369	448	620	21784	1	2	281	51		2	121	61	148	7	1				
6	29	14	16	41	14	32400	390	294	339	463	665	158	255	322	1445	41	33	6	10	20
7						8	32400			517	225				265	801	1078	521	86	31
8	1887	640	528	3241	954	69	81	32400	3576	103	322	3284	2595	9972	795	4	1		1	1
9	50	9	19	85	25	111	120	429	32400	137	454	231	323	548	968	10	5			
10		2	2			13	585	2	4	19473	471		1	1	322	86	74	22	5	6
11	4	218	190	2		346	982	40	85	616	16899	13	34	53	877	87	98	28	9	13
12	291	64	69	416	814	3	1	943	229	1	6	15775	1383	517	38					
13	528	147	181	808	393	5	5	2113	850	12	32	4770	15449	1437	88	1		3	7	
14	1403	464	380	2337	681	39	48	12473	3068	71	227	2755	2365	32400	565	5	1		2	2
15	4	58	61	14	5	883	1865	156	213	2165	5917	85	127	190	32400	211	221	53	31	34
16						96	136	4	11	23	16	1	12	10	20	21945	10017	5482	2058	908
17				1		36	9	4	3	1			6	6	2	2014	12431	4827	658	381
18						17	4	1					3	7		1164	1641	19349	289	169
19	4	1	3	9	1	805	36	112	164	16	28	90	140	178	69	1850	1016	656	32400	10229
20	21		4	11	2	1125	31	160	195	19	31	150	197	236	100	1274	689	459	14866	32400

Figure 3. Particle modelling connectivity between Broughton Archipelago salmon farms. Source: DFO
Legend: Connectivity range – Blue (none) to Red (very high).

As study of Broughton Archipelago estuarine and tidal currents observed “the bottom estuarine flow in Knight Inlet actually comes from Queen Charlotte Strait via the “back-door” of Fife Sound and Tribune Passage” and that “the surface estuarine flow coming down Knight Inlet bifurcates with part going down Tribune Channel and Fife Sound and part continuing down Knight Inlet”.³ The authors conclude “Consequently, these surface flows can be expected to have important implications for the potential interactions (e.g., transfer of sea lice and viruses) between farmed and wild salmon”.

Located within the critically important migration route of wild salmon, the collection of narrow and confined fjords including the Knight Inlet (and its tributaries including Clio Channel), Tribune Channel and Fife Sound in the Broughton Archipelago meet the boundary definition of “area” as per the ASC salmon standard Appendix II-1.

Compliance with salmon standard indicator 3.1.1 should therefore be determined on the basis of the Broughton Archipelago “area” and as per Appendix II-1. B Requirements related to participation in the scheme, compliance requires that at least 80 percent of farmed production in the Broughton is participating in the ABM scheme. Compliance with this indicator would require Cermaq to demonstrate

³ Foreman, M, Stuchhi, D, Zhang, Y & Baptiste, A 2005. Estuarine and Tidal Currents in the Broughton Archipelago, *Atmosphere-Ocean*, vol. 44 <https://doi.org/10.3137/ao.440104>

co-ordination with Marine Harvest and Grieg Seafood for the following ABM components and guidance, as per Appendix II-

1.C ABM components and guidance:

1. Application and rotation of treatments;
2. Stocking;
3. Fallowing;
4. Monitoring schemes; and
5. Setting and revising a maximum ABM lice load.

IV. Indicator 3.2.2 If a non-native species is being produced, evidence of scientific research [41] completed within the past five years that investigates the risk of establishment of the species within the farm's jurisdiction and these results submitted to ASC for review

Footnote 41 of Indicator 3.2.2, states:

"The research must at a minimum include multi-year monitoring for non-native farmed species, use credible methodologies and analysis, and undergo peer review."

Specifically, the audit manual's evidence of compliance for 3.2.2C requires CABs to:

"C. Confirm that the scientific research included: multi-year monitoring for non-native farmed species; used credible methodologies & analyses; and underwent peer review..."

The auditor cites Andres (2015). Scientific studies show escapes remain a concern⁴. The limited number of snorkel surveys actually conducted by Andres⁵ and his students, during the peak runs of other species, do not constitute 'monitoring'. More specifically, the Andres study did not include any water bodies within the Broughton Archipelago region (i.e. of relevance to the Sargeaunt Pass farm).

The ASC also requires:

... evidence of scientific research completed within the past five years that investigates the risk of establishment of the species within the farm's jurisdiction

⁴ Volpe, J., B. Glickman et al. (2001). "Reproduction of aquaculture Atlantic salmon in a controlled stream channel on Vancouver Island, British Columbia." Transactions of the American Fisheries Society 130: 489-494.

Volpe, J., E. Taylor, et al. (2000). "Evidence of natural reproduction of aquaculture-escaped Atlantic salmon in a coastal British Columbia river." Conservation Biology 14: 899-903.

Fisher, A.C., Volpe, J.P. & Fisher, J.T. 2014. Occupancy dynamics of escaped farmed Atlantic salmon in Canadian Pacific coastal salmon streams: implications for sustained invasions Biol Invasions (2014) 16: 2137. doi:10.1007/s10530-014-0653-x

⁵ Andres, B. 2015. Summary of reported Atlantic salmon (Salmon salar) catches and sightings in British Columbia and results of field work conducted in 2011 and 2012. Can. Tech. Rep. Fish. Aquat. Sci. 3061: 19 p.

Andres' surveys were completed in 2011 and 2012 - more than five years ago. DFO has not monitored for non-native establishment and, until recently, their Atlantic Salmon Watch program was defunct. A recent study found DFO wild salmon monitoring to be woefully inadequate, with around half of B.C. wild salmon streams not monitored⁶. In the absence of any monitoring at all on half of the streams known to support salmon, including those in the vicinity of Broughton, the potential to detect impacts from escapes is vastly reduced.

The Andres summary report is not peer reviewed, did not use a credible methodology and looked at only a limited number of Vancouver Island streams in both of the 2 years' field work reported. The only prior monitoring of those streams was conducted more than a decade earlier and it did find evidence of multiple year-classes of juvenile Atlantic salmon in two of those same streams.

No such scientific study, as required by the ASC, currently exists for the B.C. region. An independent scientific research study that is multi-year, with credible and appropriate methodology and analyses and underwent peer review should be required for B.C. salmon farmers to demonstrate compliance with Indicator 3.2.2.

V. Criterion 7.2 Respect for indigenous and aboriginal cultures and traditional territories (Indicators: 7.2.1; 7.2.2; 7.2.3) & Criterion 7.3 Access to resources (Indicators: 7.3.1; 7.3.2)

The draft audit report fails to acknowledge that the Doctor Islets farm resides in the Musmagw Dzawada'enuwx Nation territory. The report also omits the fact that the Musmagw Dzawada'enuwx have vocally declared their opposition to fish farms in their territory for nearly 30 years.⁷

Audit evidence for farm "compliance" included the auditors' general comments that the farming company operates in some Indigenous territories and have several agreements in place. While salmon farming companies do have agreements in place with some B.C. First Nations, it is unequivocally clear that they do not apply to the territories in which this opposed farm operates, where no protocol agreement is in place.

Indicator 7.2.3 requires "continued engagement in an active process to reach a protocol agreement with the indigenous community". The audit report relies on the company's "proactive outreach to multiple First Nations". But fails to provide evidence that such an 'active process' or 'continued consultations' are applicable for the Musmagw Dzawada'enuwx Nations. Far from an active process, there have been

⁶ Price, MHH, English, KK, Rosenberger, AG, MacDuffee, M & Reynolds, JD (2017). Canada's Wild Salmon Policy: an assessment of conservation progress in British Columbia, Canadian Journal of Fisheries and Aquatic Sciences, <https://doi.org/10.1139/cjfas-2017-0127>

⁷ <http://www.mdmc.ca/cleansing-our-waters>

numerous legal actions involving these opposed farms.^{8 9 10 11} Regarding the First Nations salmon farming opposition in the Broughton Archipelago, Marine Harvest recently stated: “Meaningful dialogue with First Nations, where we have been operating salmon farms for 30 years, remains a priority for Marine Harvest. Unfortunately, our efforts to date have not been successful, but we remain hopeful”.¹²

The intent of criterion 7.2, to address potential negative impacts on indigenous communities by ensuring proactive consultation and protocol agreements, is lost in circumstances where First Nations adamantly oppose salmon farming in their traditional territories – as the audit report omits this public fact and instead awards ‘compliance’ to the farm regardless.

MHC’s Sargeant Pass farm clearly does not conform to Criteria 7.2 and 7.3 of the salmon standard.

⁸ <https://thetyee.ca/News/2018/05/16/Marine-Harvest-No-Go-Zone-Fish-Farms/>

⁹ <https://thetyee.ca/News/2018/08/03/Court-Temporary-Injunction-First-Nation-Fish-Farm-Protestors/>

¹⁰ <https://www.cbc.ca/news/indigenous/marine-harvest-cermaq-fish-farms-court-injunction-1.4712988>

¹¹ <https://www.mycornwallvalleynow.com/33089/marine-harvest-opposing-namgis-first-nation-lawsuit/>

¹² <https://seawestnews.com/court-orders-protestors-to-stop-harassing-fish-farm-workers/>