

Attn: Jack Vader & Judith van der Lelij  
Program Management ASC  
SGS Nederland BV  
asc.reports@sgs.com

13<sup>th</sup> December 2018,

**Stakeholder Submission RE: Initial Full Assessment Report, Marine Harvest Canada's Humphrey Rock farm, by SGS.**

Upon review of the draft Aquaculture Stewardship Council (ASC) audit for Marine Harvest Canada's Humphrey Rock farm, we find SGS 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 SGS 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

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

[www.livingoceans.org](http://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](http://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. 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 Humphrey Rock 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 17) as the relevant nutrients for water quality targets. CCME guidelines only measure nitrate and cannot be used as evidence of a national water classification.

VR 198 was approved by the ASC VR-committee on the 13<sup>th</sup> 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”.<sup>1</sup>

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.

---

<sup>1</sup> <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.

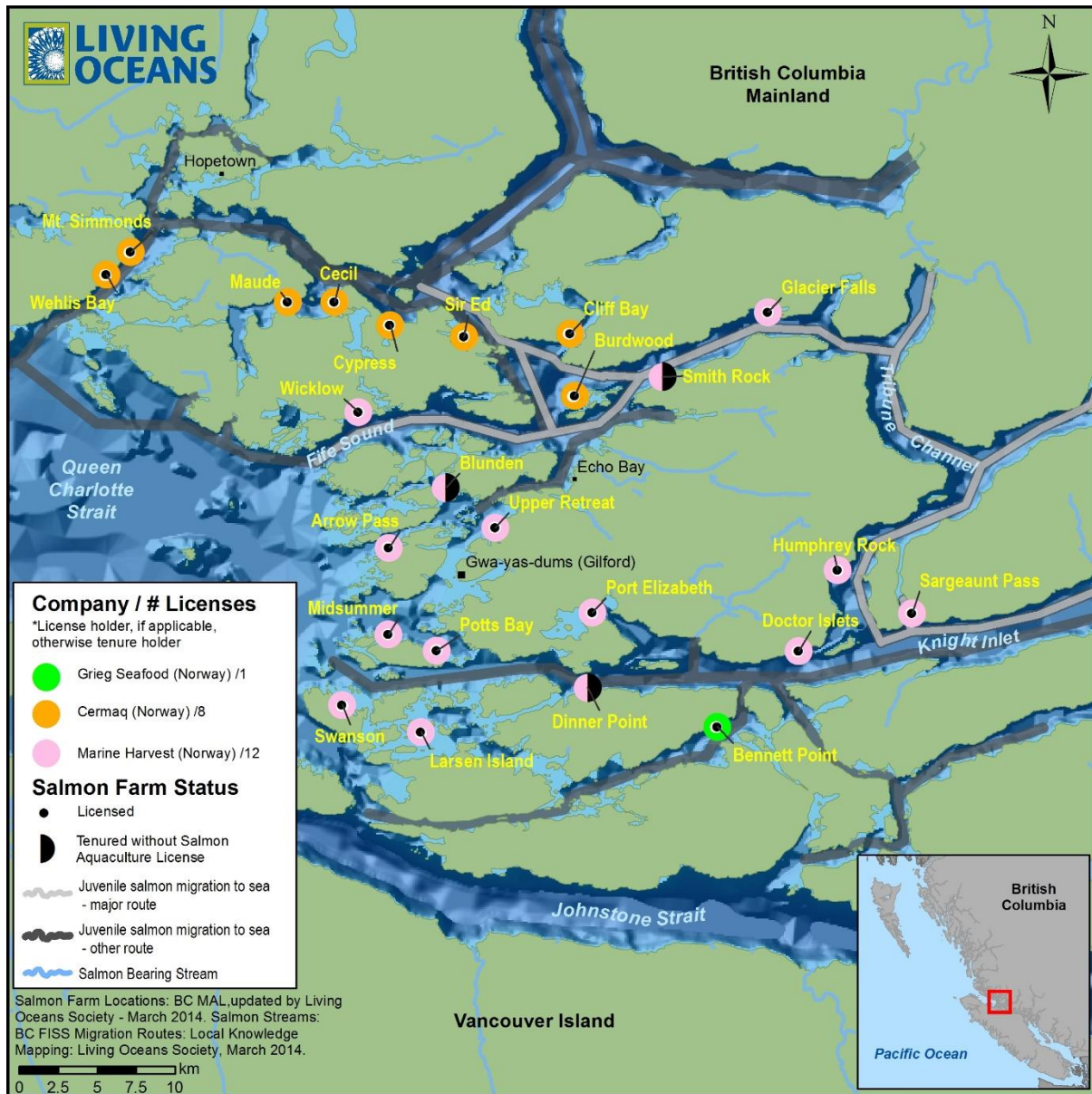
The CAB incorrectly evaluates this indicator as “compliant” and states, “There is no ABM scheme. The Humphrey Rock farm is one of several [sic] located in the area of the Tribune Channel. All the farms are MHC -operated, and there are no other salmon companies operating in the area”.

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

*“II-1. A Definition of “area”*

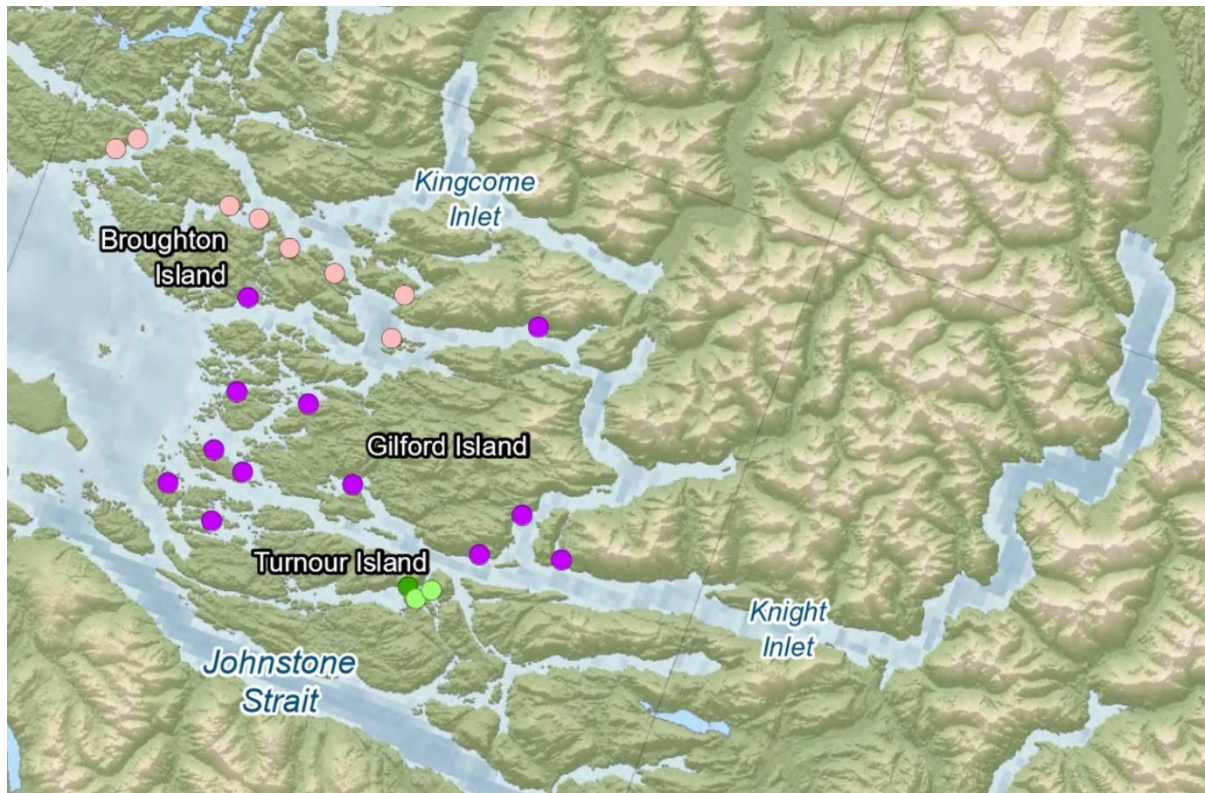
*If area-based management is already a regulatory requirement of the farm’s jurisdiction, then farms will use this definition of “area” for the purposes of these requirements. In jurisdictions where ABM is not a regulatory requirement, the area covered under the ABM must reflect a logical geographic 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, Humphrey Rock farm resides in a major juvenile salmon migration route that is 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.



**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 (Tribune Channel and Fife Sound).



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

Particle disbursement modelling conducted at Broughton Archipelago farm sites indicate the potential for long-range transportation of particles exists and is influenced by a number of factors.<sup>2</sup> 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.

<sup>2</sup> 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](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	29867	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	21113	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	39473	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	15725	1383	517	38					
13	528	147	181	808	393	5	5	2113	850	12	32	4770	13449	1437	88	1			3	7
14	1403	464	380	2337	681	39	48	32477	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	11945	10017	5482	2058	908
17				1		36	9	4	3	1			6	6	2	2014	12491	4827	658	381
18						17	4	1					3	7		1164	1641	19149	289	169
19	4	1	3	9	1	805	36	112	164	16	28	90	140	178	69	1850	1016	656	12400	10229
20	21		4	11	2	1125	31	160	195	19	31	150	197	236	100	1274	689	459	14566	32400

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

As a study of the 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”.<sup>3</sup> 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, Tribune Channel and Fife Sound in the Broughton Archipelago meet the boundary definition of “area” as per the ASC salmon standard Appendix II-1.

In addition, the audit report refers to Variance Request 146 for indicator 3.1.1 in aim that MHC can simply defer to current DFO management in the absence of an Area-Based Management (ABM) scheme. The Variance (#146) refers to a different BC salmon farming company, Mitsubishi/Cermaq and their farms located in a different area, Clayoquot Sound. Mitsubishi/Cermaq are the only company in Clayoquot Sound north of Tofino. This is unlike the MHC Humphrey Rock farm in the Broughton Archipelago “area” where other companies also operate, therefore requiring area-based coordination

<sup>3</sup> 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>

beyond company best management practices and DFO management. The variance is also specific to the ABM stocking requirement only.

Consequently, we submit the quoted variance request (146) is not applicable, as per our reasons outlined above.

In addition, we provide evidence in the form of a recent peer review study that shows DFO's management policy to be inadequate for meeting ABM requirements for the application and rotation of treatments.

Appendix II-1 (Application and rotation of treatments) states: "Farmers must be able to demonstrate a coordinated treatment plan and evidence that the schedule and rotation of treatments are being implemented."

Analysis by Bateman et al. (2016)<sup>4</sup> suggest the combination of unusual environmental factors and delayed management action by farms contributed to the factors leading to the 2015 Broughton Archipelago sea louse outbreak. The study found DFO sea lice management policy to be "not sufficient" and instead recommended a cooperative coordinated ABM approach be adopted. Specifically, the study observed a lack of coordination between farms, as demonstrated by the offset treatment schedules at some farms, including those owned by the same company.

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

Therefore, in the absence of a relevant variance request, and most notably, in the absence of participation in an ABM scheme (as detailed in Appendix II-1) for the Broughton Archipelago "area" with the two other operating companies, Humphrey Rock farm does not conform to Indicator 3.1.1.

---

<sup>4</sup> Bateman, A, Peacock, SJ, Connors, B, Polk, Z, Berg, D, Krkošek, M & Morton, A 2016, 'Recent failure to control sea louse outbreaks on salmon in the Broughton Archipelago, British Columbia', *Canadian Journal of Fisheries and Aquatic Sciences*, vol. 73(8), pp.1164-1172.

**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 concern<sup>5</sup>. The limited number of snorkel surveys actually conducted by Andres<sup>6</sup> 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 Humphrey Rock 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*

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 monitored<sup>7</sup>. 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.

---

<sup>5</sup> 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

<sup>6</sup> 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.

<sup>7</sup> 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>



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.

The draft report also inappropriately suggests industry commissioned sea lice monitoring is a sufficient substitute for an invasive species scientific study.

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 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. As the deadline of the 30<sup>th</sup> November negotiations has now passed, the audit report should be updated to demonstrate compliance before awarding certification.