Form 3 - Public Disclosure Form

Public Disclosure Form

Name of CAB	DNV GL
Date of Submission	24/04/2018
CAB Contact Person	
Name of Contact Person	Paul Casburn
Position in the CAB's-organisation	Lead Auditor
Mailing address	Veritasveien 1, 1363 Høvik, Norway
Email address	paul.casburn@dnvgl.com
Phone number	00353 87 1864429
Other	N/A
ASC Name of Client	
Name of Company	Marine Harvest Canada Inc.
Name of Contact Person	Katherine Dolmage
Position in the client's organisation	Certification Manager
Mailing address	124-1334 Island Hwy, Campbell River, B, V9W 8C9, Canada
Email address	katherine.dolmage@marineharvest.com
Phone number	250-850-3276 ex. 7228
Other	N/A

Unit of Certification

Single Site	X
Multi-site	
Group certification	

Sites to be audited

Site Name	GPS Coordinates	Other Location Information	Planned Site Audit(s)	Date of planned audit
Wanx talis (Heath Bay)	50 53.587 N: 127 53.748 W	NA	June 4th to 8th 2018	June 4th to 8th 2018

Species and Standards

Standard	Species (scientific name) produced	Included in scope (Yes/No)	ASC endorsed standard to be used	Version Number
Salmon	*Salmo Salar*	Yes	ASC Salmon Standard	Version 1.1

Planned Stakeholder Consultation(s) and How Stakeholders can Become Involved

Name/organisation	Relevance for this audit	How to involve this stakeholder (in-person/phone interview/input submission)	When stakeholder may be contacted	How this stakeholder will be contacted
Pacific Salmon Foundation	Conservation	Written notifications with request for submissions and if needed telephone contact.	Before audit and when draft report is published.	written notifications by e-mail.
Ducks Unlimited	Conservation	Written notifications with request for submissions and if needed telephone contact.	Before audit and when draft report is published.	written notifications by e-mail.
David Suzuki Foundation	Conservation	Written notifications with request for submissions and if needed telephone contact.	Before audit and when draft report is published.	written notifications by e-mail.
Living Oceans Society	Conservation	Written notifications with request for submissions and if needed telephone contact.	Before audit and when draft report is published.	written notifications by e-mail.
Coast Forestry Products Association	Forestry	Written notifications with request for submissions and if needed telephone contact.	Before audit and when draft report is published.	written notifications by e-mail.
Canadian Pacific Sustainable Fisheries Society	Fisheries	Written notifications with request for submissions and if needed telephone contact.	Before audit and when draft report is published.	written notifications by e-mail.
Vancouver Island North Tourism	Tourism	Written notifications with request for submissions and if needed telephone contact.	Before audit and when draft report is published.	written notifications by e-mail.
James Walkus Fishing Company	Contractors/Suppliers	Written notifications with request for submissions and if needed telephone contact.	Before audit and when draft report is published.	written notifications by e-mail.
Flurers Smokery	Contractors/Suppliers	Written notifications with request for submissions and if needed telephone contact.	Before audit and when draft report is published.	written notifications by e-mail.
Skretting	Contractors/Suppliers	Written notifications with request for submissions and if needed telephone contact.	Before audit and when draft report is published.	written notifications by e-mail.
Noboco	Contractors/Suppliers	Written notifications with request for submissions and if needed telephone contact.	Before audit and when draft report is published.	written notifications by e-mail.
BC Centre for Aquatic Health Sciences	Research	Written notifications with request for submissions and if needed telephone contact.	Before audit and when draft report is published.	written notifications by e-mail.
BC Salmon Farmers Association	Industry	Written notifications with request for submissions and if needed telephone contact.	Before audit and when draft report is published.	written notifications by e-mail.

Canadian Aquaculture Industry Association	Industry	Written notifications with request for submissions and if needed telephone contact.	Before audit and when draft report is published.	written notifications by e-mail.
United Steelworkers	Industry	Written notifications with request for submissions and if needed telephone contact.	Before audit and when draft report is published.	written notifications by e-mail.
Tlatlasikwala	First Nations	Written notifications with request for submissions and if needed telephone contact.	Before audit and when draft report is published.	written notifications by e-mail.
Heiltsuk	First Nations	Written notifications with request for submissions and if needed telephone contact.	Before audit and when draft report is published.	written notifications by e-mail.
Port Hardy Council	Government	Written notifications with request for submissions and if needed telephone contact.	Before audit and when draft report is published.	written notifications by e-mail.
Campbell River Council	Government	Written notifications with request for submissions and if needed telephone contact.	Before audit and when draft report is published.	written notifications by e-mail.
Sayward Town Council	Government	Written notifications with request for submissions and if needed telephone contact.	Before audit and when draft report is published.	written notifications by e-mail.
Regional District of Mt Waddington	Government	Written notifications with request for submissions and if needed telephone contact.	Before audit and when draft report is published.	written notifications by e-mail.

Proposed Timeline

Contract Signed:	
Start of audit:	June 4th
Onsite Audit(s):	June 4th to 8th 2018
Determination/Decision:	Certified

Audit Team

Title	Name	ASC Registration Reference
Lead Auditor	Paul Casburn	N/A
Social Auditor	Leon Reed	N/A

ASC Audit Report - Opening

General Requirements

C1 Audit reports shall be written in English and in the most common language spoken in the areas where the operation is located.

C2 Audit reports may contain confidential annexes for commercially sensitive information.

C2.1 The CAB shall agree the content of any commercially sensitive information with the applicant, which can still be accessible by the ASC and the appointed accreditation body upon request as stipulated in the certification contract.

C2.2 The public report shall contain a clear overview of the items which are in the confidential annexes.

C2.3 Except for the annexes that contain commercially sensitive information all audit reports will be public.

C3 The CAB is solely responsible for the content of all reports, including the content of any confidential annexes.

C4 Reporting Deadlines for certification and re-certification audit reports (in working day)

C4.1 Within thirty (30) days of the completing of the audit the CAB shall submit a draft report in English and the national or most common language spoken in the area where the operation is located.

C4.2 Within five (5) days the ASC should post the draft report to the ASC website.

C4.3 The CAB shall allow stakeholders and interested parties to comment on the report for fifteen (15) days.

C4.4 Within twenty (20) days of the close of comments, the CAB shall submit the final report to the ASC in English and the national or most common language spoken in the area where the operation is located.

C4.5 Within five (5) days the ASC should post the final report to the ASC website.

C4.6 Audit reports shall contain accurate and reproducable results.

C5 Reporting Deadlines* for surveillance audit reports

C5.1 Within ninety (90) days of the completing of the audit the CAB shall submit a final report in English and the national or most common language spoken in the area where the operation is located.

C5.2 Within five (5) days the ASC should post the final report to the ASC website.

C5.3 Audit reports shall contain accurate and reproducable results.

1 Title Page

1.1 Name of Applicant	Marine Harvest Canada

1.2 Report Title [e.g. Public Draft Certification Report/ Final certification report/Surveillance report]	Initial audit for the site called Heath Bay (Wanx talis)
1.3 CAB name	DNV GL.
1.4 Name of Lead Auditor	Paul Casburn
1.5 Names and positions of report authors and reviewers	Paul Casburn and Leon Reed.
1.6 Client's Contact person: Name and Title	Katherine Dolmage, Certification manager.
1.7 Date	9th June 2018

2 Table of Contents

3 Glossary

Terms and abbreviations that are specific to this audit report and that are not otherwise defined in the ASC glossary	GMO = Genetically modified Organism. ISA=Infectious salmonic anemia. PRV=Piscine rheovirus. BKD = Bacterial Kidney disease. DFO = Department of fisheries and Oceans. BAP = Best Aquaculture practice. PAR = Pacific Aquaculture regulation. DATS = Digital Action Tracking system. HDPE = High density polyethelene.

4 Summary

A concise summary of the report and findings. The summary shall be written to be readable to the stakeholders and other interested parties.

4.1	A brief description of the scope of the audit (*including activities of the UoC being audited*)	The Scope is under the ASC salmon standard V1.1 and CAR V2.1 of the site called Heath Bay located in the Port Hardy area of British Columbia Canada. The Scope includes all farming related activities of the farm site evaluating the Environmental and Social compliance of the farm site to the standard. The related managment systems are also within the Scope of Audit.
4.2	A brief description of the operations of the unit of certification	Farming of Atlantic salmon from smolt to harvest size.
4.3	Type of unit of certification (*select only one type of unit of certification in the list)*	Single site
4.4	Type of audit (*select all the types of audit that apply in the list)*	Initial

4.4.1 Number of sites included in the unit of certification

	Owned by client	Subcontracted by client
Initial audit - 06/2018	1	0
Surveillance audit 1 - mm/ yyyy		
Surveillance audit 2 - mm/ yyyy		
Recertification audit - mm/ yyyy		

4.5	A summary of the major findings	2.1.3: "The Macrofaunal results for Heath Bay are not yet available as the results are being analysed and therefore cannot be reviewed for compliance with the standard at this time. There is no historical data for this site. 6.5.1: "The operations team training on DATS was as low as 12 percent for some workers and supervisors. It was noted that a lot of health and safety training was not completed or had expired. There is no formal process/ management system to show how health safety findings are managed and closed out. Noted on Site tour • Mort box on the crew boat has ropes installed which are used for lifting • Compressor cover has been removed and not replaced • Generator room door is left open due to ventilation problems • Life raft service expired, and the rope to deploy was not connected “ 6.10.1: The shift patterns for the Operations team exceed internationally accepted recommendations. The shift with the highest number of consecutive working days is 24 days on 18 off. (The daily working hours are contracted at 10 hours per day) 6.10.2: "The review of the working hours found; • Operations workers are working more than 16 hours per day on a regular basis • The highest number of working hours in one day was 19 hours. • Rest periods are between shifts are as low as 5 hours • 24 days continuous shift patterns are being used with excessive overtime "

4.6	The Audit determination	The Audit determination at final report stage: Compliant. Corrective/Preventive action plan and corrective/preventive actions for closing or acceptance of Major and Minor Non conformities are presented and approved by DNV GL. • Final certification decision taken and the site is certified and can claim ASC Aquaculture certification status. Decision taken December 6th 2018.

5 CAB Contact Information

5.1	CAB Name	DNV GL
5.2	CAB Mailing Address	Veritasveien 1, 1363 Høvik, Norway
5.3	Email Address	OSL.Certification.ASCfarm@dnvgl.com
5.4	Other Contact Information	NA

6 Background on the Applicant

6.1	Information on the Public Disclosure Form (Form 3) except 1.2-1.3. All information updated as necessary to reflect the audit as conducted.	Y

6.2	A description of the unit of certification (*for intial audit)* / changes, if any (*for surveillance and recertification audits*)	8 x 120m plastic pen circles with nets 20m deep on the walls. There is a service feeding barge where the feeding of all the cages is centraly located. The site has the facility number 7054 and is located at coordinates 50 53.587 N: 127 53.748 W
6.3	Other certifications currently held by the unit of certification	GAA BAP.
6.4	Other certification(s) obtained by the UoC before this audit	GAA BAP.
6.5	Estimated annual production volumes of the unit of certification of the current year	3156.2 mT
6.6	Actual annual production volumes of the unit of certification of the previous year *(mandatory for surveillance and recertification*	n/a
6.7	Production system(s) employed within the unit of certification *(select one or more in the list)*	Marine Pens
6.8	Number of employees working at the unit of certification (*see notes in comment to this cell*)	6
6.9	Size, and/or number of ponds, pens (if multi site, per site)	8 x 120m plastic pen circles with nets 20m deep on the walls.

7 Scope

7.1	The Standard(s) against which the audit was conducted, including version number	ASC Salmon V1.1

7.2	The species produced at the applicant farm (*in English and Latin names)*	Atlantic salmon *Salmo salar*
7.3	A description of the scope of the audit including a description of whether the unit of certification covers all production or harvest areas (i.e. ponds) managed by the operation or located at the included sites, or whether only a sub-set of these are included in the unit of certification. If only a sub-set of production or harvest areas are included in the unit of certification these shall be clearly named.	The Scope includes all farming related activities of the farm site evaluating the Environmental and Social compliance of the farm site to the standard. The related managment systems are also within the Scope of Audit. All the pens harvested are covered by the Scope.
7.4	The names and addresses of any storage, processing, or distribution sites included in the operation (including subcontracted operations) that will potentially be handling certified products, up until the point where product enters further chain of custody.	Marine Harvest Canada have a processing unit in Port Hardy and this is where all the salmon from this site will be primarily processed, packed and sent to customers for onward distribution to the markets. Marine Harvest Canada, Port Hardy processing unit, 7200 Coho Rd, Port Hardy, BC V0N 2P0
7.5	Description of the receiving water body(ies).	The site is located in the Port Hardy area of Canada on the North Eastern side of Vancouver Island.

8 Audit Plan

8.1 The names of the auditors and the dates when each of the following were undertaken or completed: conducting the audit, writing of the report, reviewing the report, and taking the certification decision.

Paul Casburn, Lead auditor
Leon Reed, Social auditor
Kim-Andre Karlsen, Technical reviewer
Audit was finished 08/06/18
Draft report was finished 10/07/18
Technical Review of draft report was finished 24/07/18
Draft submitted to ASC 26/07/18
Final report was finished 25/11/18
Technical Review of final report was finished 05.12.2018
Certification decision was taken 06.12.2018

8.2 Previous Audits (if applicable):

	NC reference number	Standard clause reference	Closing deadline - status - closing date of each NC
8.2.1 Initial audit - 06/2018			
Surveillance audit 1 - mm/ yyyy			
Surveillance audit 2 - mm/ yyyy			
Recertification audit - mm/ yyyy			
Unannounced audit - mm/ yyyy			
NC close-out audit - mm/ yyyyy			
Scope extention audit mm/ yyyy			

8.3 Audit plan as implemented including:

	Dates	Locations
8.3.1 Desk Reviews	May-18	Auditors offices

8.3.2	Onsite audits	4th to 8th June 2018	Offices in Campbell river and the Site.
8.3.3	Stakeholder interviews and Community meetings		None requested.
8.3.4	Draft report sent to client	11th June 2018	Campbell river
8.3.5	Draft report sent to ASC	26th July 2018	
8.3.6	Final report sent to Client and ASC	7th December 2018	

8.4 Names and affiliations of individuals consulted or otherwise involved in the audit including: representatives of the client, employees, contractors, stakeholders and any observers that participated in the audit.

Port Hardy Council
Campbell River Council
Sayward Town Council
Port McNeill Council
Port Alice Council
Regional District of Mt Waddington
Tlowitsis First Nation
Mamalilikulla-Qwe'Qwa'Sot'Em First Nation
Kwicksutaineuk-ah-kwaw-ah-mish First Nation
Quatsino First Nation
Tlatlasikwala First Nation
Heiltsuk First Nation
Pacific Salmon Foundation
Ducks Unlimited
David Suzuki Foundation
Living Oceans Society
Coast Forestry Products Association
Canadian Pacific Sustainable Fisheries Society
Vancouver Island North Tourism
James Walkus Fishing Company
Flurers Smokery
Skretting
Noboco
BC Centre for Aquatic Health Sciences
BC Salmon Farmers Association
Canadian Aquaculture Industry Association
United Steelworkers
Katherine Dolmage, Certification Manager, Marine Harvest Canada.
Blaine Tremblay, Health and Safety Manager, Marine Harvest Canada.
Renee Hamel, Certification assistant, Marine Harvest Canada.
Mykolas Kamaitis, Veterinarian, Marine Harvest Canada
Mike Dodds, Community relations manager, Marine Harvest Canada.
Brett Stricker, Site Manager, Marine Harvest Canada.

8.5 Stakeholder submissions, including written or other documented information and CAB written responses to each submission at different stages of the certification process (audit notification, during on-sitt audit, public comment period)

Name of stakeholder (if permission given to make name public)	Relevance to be contacted	Date of contact	CAB responded Yes/No	Brief summary of points Raised	Use of comment by CAB
Living Oceans	Declared as a Stakeholder in the area of sustainable seafood.	23/08/2018	Yes. Mailed response to the Stakeholder on the 26th August 2018.	Farm eligibility and maturity of cycle.	Full detailed response to each indicator and amendments to audit report where necessary.
				Audit failed to follow 17.3 of the CAR for the following indicatiors: 2.1.1, 2.1.2 and 2.1.3. Benthic indicators	Full detailed response to each indicator and amendments to audit report where necessary.
				Indicators 2.2.3 and 2.2.4 Coastal or regional water targets	Full detailed response to each indicator and amendments to audit report where necessary.

				Indicator 3.1.1 Participation in ABM scheme	Full detailed response to each indicator and amendments to audit report where necessary.
				Indicator 3.2.2 Evidence of scientific research into non native species being farmed.	Full detailed response to each indicator and amendments to audit report where necessary.

I. Farm eligibility and maturity of cycle

The ASC CAR states:

17.1.2: Organisations seeking certification shall have been in operation for no less than eighteen months (18) or one harvest cycle as defined in the standard(s), whichever is less ".

For clarity, the ASC provided an interpretation on “organisations” which is defined at the unit of certification (i.e. the farm). Fish first entered Wanx Tail farm in September 2017, from the intermediary smolt farm Bell Island. At the time of the ASC audit, the farm had been in operation for only nine months. Therefore, the farm is currently ineligible for certification. A re-audit should be conducted when 17.1.2 is fulfilled.

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:

Audit team response:

I. **Farm eligibility and maturity of cycle**
The audit team, the CAB and the farm area aware of this objection from stakeholders. There has been a VR submitted to ASC on CAR 2.1: 17.1.2. VR number is 273 and it can be found on the ASC website.

II. 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 states sampling was conducted at 75% peak biomass for the current production, with results pending. While Appendix I-1 allows for audits to occur at 75% peak biomass, the methodology still requires peak biomass values to confirm Standard conformance: “values and supporting evidence when they come back at peak biomass / end of cycle in order to make a certification decision”. The audit report fails to mention if the farm will be again sampling at peak biomass, as per the rules, and if the auditor plans to close the non-conformities on receipt of the peak biomass results (as per 4 and 5 of the auditing guidelines). Certification can only be granted on receipt of actual peak biomass values for 2.1.1 that demonstrate compliance.

Audit team response:
II. Indicators 2.1.1; 2.1.2; 2.1.3 Benthic monitoring
Its stated in the report that the 75% sampling has been carried out. See indicator 2.1.1 and I draw your attention to the following points:
5) CAB shall not make a certification decision and issue final report until actual values are

III. 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 Wanx Tail 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

Audit team response:

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

In this case there is no need to refer to the VR. The CCME, Canadian council for ministers of the environment set quality guidelines where targets are set. The most recent sampling for the area undertaken by Dr Stephen Cross from Global Aquafoods development Corp with data from 38 farms and 204 samples. This more than meet the requirement to determine the water quality.

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

The CAB incorrectly evaluates this indicator as "N/A" and states, "In this port Hardy area, all the sites are owned by Marine Harvest, and the closest farm site to Heath is Bull harbour. These two sites are coordinated as the same team manages them. The next nearest farm site after that is 25km away."

Yet the Salmon Standard requires all farms except those "that release no water" to participate in an ABM. Therefore, even farms within an area owned by the same company are required to participate in an ABM as outlined by the Standard. The audit fails to demonstrate how MHC meets all components of Appendix II-1.

Audit team response:

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

Checklist has been amended as DFO has in fact got management zones in BC. There are 7 zones known as transfer zones. There are also fish health zones. These fish health zones only require notification for moving fish. Fallowing and lice co-ordination is left up to the farms. DFO do check visit the farms to review fish health and lice levels. The report has been modified to reflect this.

V. 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 concern2. The limited number of snorkel surveys actually conducted by Andres3 and his students, during the peak runs of other species, do not constitute 'monitoring'.

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 monitored4. In the absence of any monitoring at all on half of the streams known to support salmon, including those in the vicinity of Port Hardy, 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.

Audit team response:

V. 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

Papers and surveys reviewed at audit including:

Initial Estimates from an Integrated Study Examining the Residence Period and Migration Timing of Juvenile Sockeye Salmon from the Fraser River through Coastal Waters of British Columbia. Chrys-Ellen M. Neville1, Stewart C. Johnson1, Terry D. Beacham1, Timber Whitehouse2, Joe Tadey3 and Marc Trudel1. An overview of beach seine sampling carried out by Mainstream Biological from 2012 to 2017 with a total review of 85719 juvenile salmon sampled from six geographic locations within BC of which 42296 salmon were sampled in 2017. No Atlantic salmon have been caught. Also reviewed a letter from Salmon Interactions, Ecosystem Science Division, Science Branch, Fisheries and Oceans Canada/Government of Canada stating that Trawl and Purse seine surveys from 2010 to 2017. Surveys covering a similar area (Johnstone Strait north of Hardwick Island and into Desolation Sound and Sutil Channel at the South) have been conducted since 2010. Data collected during these surveys are consistent with the results published in Neville et al. (2016). The surveys conducted in this region from 2010-2017 captured about 250,000 fish by purse seine with approximately 150,000 of these identified as Pacific salmon or steelhead. In addition, over the same time period the trawl survey sampled more than 200,000 fish in this region with approximately 34,000 identified as Pacific salmon or steelhead. Over this seven-year period there was no Atlantic salmon of any age class captured.

8.6.1	E5.1.ii Justification for auditing site(s) meeting conditions under E5.1.i	NA
8.7	E5.1.1.i List of sites removed after the initial audit	NA
8.7.1	E5.2.2 Reason for the removal of sites from the certificate.	NA
8.8	E5.4 Map of sites included in the unit of	NA
8.9	E5.5 Site(s) in fallowing period included in the audit	NA

		Compliance Criteria (Required Client Actions):	Audit evidence 1. Write down all audit evidence. Audit evidence (including evidence of conformity and nonconformity) should be recorded so that the audit can be repeated by a different audit team. 2. Replace explanitory text. 3. If you see any Compliance Criteria which is not listed below, please describe also in the cells below. A. Review compliance with applicable land and water use laws.	Evaluation (Per indicator, select one category in the drop-down menu)	Description of NC Provide an explanation of the reason(s) for the classification of any NCs or non-applicability	Value/ Metric Provide values - if applicable for the respective Indicator
1.1.1	**Indicator:** Presence of documents demonstrating compliance with local and national regulations and requirements on land and water use **Requirement:** Yes **Applicability:** All	a. Maintain digital or hard copies of applicable land and water use laws. b. Maintain original (or legalised copies of) lease agreements, land titles, or concession permit on file as applicable. c. Keep records of inspections for compliance with national and local laws and regulations (if such inspections are legally required in the country of operation). d. Obtain permits and maps showing that the farm does not conflict with national preservation areas.	All applicable laws are available the Marine Harvest quality management system. All updates to the local law are updated within the management system and are available to the whole of the Marine Harvest Group. The system is called Sharepoint, and the sites are required by DFO to have a copy of the PAR licence onsite. Facility reference number 7054. Landfile number 1414225. Aquaculture licence expiry June 20, 2022. The licence of occupation covers the right to use the seafloor and surrounds that is owned by the Crown. In this case, the Licence of occupation is held by the Tlatlasikwala first nation and there is an agreement in place for Marine Harvest to use this tenure under an 'Impact Benefits and Tenure support Agreement' dated 25th July 2015 and is valid for 25 years. Inspections are not legally required however sites occasionally get visits from different divisions such as Benthic division, compliance divisions and Fish health divisions. Reports are not made available to the sites unless there is non-conformity detected. Government grants the lease once it is confirmed that national preservation areas are not affected. Maps are in place.	Compliant		
1.1.2	**Indicator:** Presence of documents demonstrating compliance with all tax laws **Requirement:** Yes **Applicability:** All	a. Maintain records of tax payments to appropriate authorities (e.g. land use tax, water use tax, revenue tax). Note that CABs will not disclose confidential tax information unless client is required to or chooses to make it public. b. Maintain copies of tax laws for jurisdiction(s) where company operates. c. Register with national or local authorities as an “aquaculture activity".	Receipts in place to the ministry of finance dated June 29th, 2017 showing payment of property tax for all the Marine Harvest sites. The tax laws are maintained and reviewed by the companies accountants. Laws are equally available online. The licence and Tenure documents detail the site as an Aquaculture facility.	Compliant		
1.1.3	**Indicator:** Presence of documents demonstrating compliance with all relevant national and local labor laws and regulations **Requirement:** Yes **Applicability:** All	a. Maintain copies of national labor codes and laws applicable to farm (scope is restricted to the farm sites within the unit certification.) b. Keep records of farm inspections for compliance with national labor laws and codes (only if such inspections are legally required in the country of operation).	All national labour codes and laws applicable to the farm are available on the Marine Harvest Human Resources management system. Human Resources management team reviews all codes and regulations and updates as required.	Compliant		
1.1.4	**Indicator:** Presence of documents demonstrating compliance with regulations and permits concerning water quality impacts **Requirement:** Yes **Applicability:** All	a. Obtain permits for water quality impacts where applicable. b. Compile list of and comply with all discharge laws or regulations. c. Maintain records of monitoring and compliance with discharge laws and regulations as required.	No water impact permits are required.	Compliant		
		PRINCIPLE 2: CONSERVE NATURAL HABITAT, LOCAL BIODIVERSITY AND ECOSYSTEM FUNCTION				
		Criterion 2.1 Benthic biodiversity and benthic effects [1]				
Footnote	[1] Closed production systems that can demonstrate that they collect and responsibly dispose of > 75% of solid nutrients from the production system are exempt from standards under Criterion 2.1. See Appendix VI for requirements on transparency for 2.1.1, 2.1.2 and 2.1.3.					
Instruction to Clients and CABs on Criterion 2.1 - Modification of the Benthic Sampling Methodology For farms located in a jurisdiction where specific benthic sampling locations are required under law, clients may request to modify the benthic sampling methodology prescribed in Appendix I-1 to allow for sampling at different locations and/or changes in the total number of samples. Where modifications are sought, farms shall provide a full justification to the CAB for review. Requests for modification shall be supported by mapping of differences in sampling locations. In any event, the sampling locations must at a minimum include samples from the cage edge and samples taken from inside and outside of a defined AZE. CABs shall evaluate client requests to modify benthic methodology based on whether there is a risk that such changes would jeopardize the intent and rigor of the ASC Salmon Standard. If the CAB determines that proposed modifications are low risk, the CAB shall ensure that details of the modified benthic sampling methodology are fully described and justified in the audit report.						
		Note: Under Indicator 2.1.1, farms can choose to measure redox potential (Option #1) or sulphide concentration (Option #2). Farms do not have to demonstrate that they meet both threshold values.				
		a. Prepare a map of the farm showing boundary of AZE (30 m) and GPS locations of all sediment collections stations. If the farm uses a site-specific AZE, provide justification [3] to the CAB.	The map of the site is available and has been put together internally by Marine Harvest. Sampling has been based on the AUTODEPOMOD system with the stations located accordingly. The site has a soft bottom. Option 2 has been chosen The sampling was carried out by qualified staff following the ASC requirements using		The sampling test results have not yet been sent to ASC as some of the biological data is not yet	

2.1.1	**Indicator:** Redox potential or [2] sulphide levels in sediment outside of the Allowable Zone of Effect (AZE) [3], following the sampling methodology outlined in Appendix I-1 **Requirement:** Redox potential > 0 mV or Sulphide ≤ 1,500 µMol/L **Applicability:** All farms except as noted in [1]	b. If benthos throughout the full AZE is hard bottom, provide evidence to the CAB and request an exemption from 2.1.1c-f, 2.1.2 and 2.1.3. c. Inform the CAB whether the farm chose option #1 or option #2 to demonstrate compliance with the requirements of the Standard. d. Collect sediment samples in accordance with the methodology in Appendix I-1 (i.e. at the time of peak cage biomass and at all required stations). e. For option #1, measure and record redox potential (mV) in sediment samples using an appropriate, nationally or internationally recognized testing method. f. For option #2, measure and record sulphide concentration (µM) using an appropriate, nationally or internationally recognized testing method. g. Submit test results to ASC as per Appendix VI at least once for each production cycle. If site has hard bottom and cannot complete tests, report this to ASC.	The sampling was carried out by qualified staff following the ASC requirements using the Van Veen grab. Picture showing grabs and samples were presented. Sampling was carried out at 75% of peak production for the site dated 8th and 9th May 2018. An Orion 4-star meter with appropriate ISE probes is used. Results for all the stations (3) show compliance with the requirements for sulphides. The lowest reading was 8.91, and the highest reading was 130. The sampling results have not yet been sent to ASC as some of the biological data is not yet been processed, and the intention is to submit it to ASC at the same time" **Audit update 7th September 2018:** **The auditor was supplied with the results of the updated benthic sampling that was carried out at peak biomass and dated July 24th 2018. Carried out by Mainstream Environmental. The results show that all 3 outside the AZE stations and for each replicate, the levels of sulphides were all above the requirement. The lowest reading was 9.2 and the highest reading was 130. Mean results were Station A: 85.7, Station B: 41.7 and Station C: 7.49. The reference site reading was 3.66. 60% of the fish has been harvested and the site will be empty by November.**	Minor	been processed, and the intention is to submit it all to ASC at the same time.	The lowest reading was 8.9, and the highest reading was 130. AS per September update: The results show that all 3 outside the AZE stations and for each replicate, the levels of sulphides were all above the requirement. The lowest reading was 9.2 and the highest reading was 130. Mean results were Station A: 85.7, Station B: 41.7 and Station C: 7.49. The reference site reading was 3.66. This minor was closed then.
Footnote	[2] Farm sites can choose whether to use redox or sulphide. Farms do not have to demonstrate that they meet both.					
Footnote	[3] Allowable Zone of Effect (AZE) is defined under this standard as 30 meters. For farm sites where a site-specific AZE has been defined using a robust and credible modeling system such as the SEPA AUTODEPOMOD and verified through monitoring, the site-specific AZE shall be used.					
2.1.2	**Indicator:** Faunal index score indicating good [4] to high ecological quality in sediment outside the AZE, following the sampling methodology outlined in Appendix I-1 **Requirement:** AZTI Marine Biotic Index (AMBI [5]) score ≤ 3.3, or Shannon-Wiener Index score > 3, or Benthic Quality Index (BQI) score ≥ 15, or Infaunal Trophic Index (ITI) score ≥ 25 **Applicability:** All farms except as noted in [1]	Notes: - Under Indicator 2.1.2, farms can choose one of four measurements to show compliance with the faunal index Requirement: AMBI (Option #1); Shannon-Wiener Index (Option #2); BQI (Option #3); or ITI (Option #4). Farms do not have to demonstrate that they meet all four threshold values. - If a farm is exempt due to hard bottom benthos (see 2.1.1b), then 2.1.2 does not apply and this shall be noted in the audit report. a. Prepare a map showing the AZE (30 m or site specific) and sediment collections stations (see 2.1.1). b. Inform the CAB whether the farm chose option #1, #2, #3, or #4 to demonstrate compliance with the requirement. c. Collect sediment samples in accordance with Appendix I-1 (see 2.1.1). d. For option #1, measure, calculate and record AZTI Marine Biotic Index [5] score of sediment samples using the required method. e. For option #2, measure, calculate and record Shannon-Wiener Index score of sediment samples using the required method. f. For option #3, measure, calculate and record Benthic Quality Index (BQI) score of sediment samples using the required method. g. For option #4, measure, calculate and record Infaunal Trophic Index (ITI) score of sediment samples using the required method. h. Retain documentary evidence to show how scores were obtained. If samples were analyzed and index calculated by an independent laboratory, obtain copies of results. i. Submit faunal index scores to ASC (Appendix VI) at least once for each production cycle.	The map in place as described in 2.1.1. Option 4 has been chosen for this site. The ITI scores are not yet available. **Audit update. ASC have granted a VR number 224 in relation to 2.1.2 and 2.1.3. This VR instead relies on the scientifically proven and federally regulated sulfide surrogates. http://variance-requests.asc-aqua.org/questions/vr-224-benthic-biodiversity-and-benthic-effects-salmon-v1-0-2-1-2-2-1-3/**	Minor	The sampling test results have not yet been sent to ASC as some of the biological data is not yet been processed, and the intention is to submit it all to ASC at the same time. Update: A VR has been allowed by ASC number 224.	Closed with a VR in place VR number 224. 25/11/18.
Footnote	[4] "Good" Ecological Quality Classification: The level of diversity and abundance of invertebrate taxa is slightly outside the range associated with the type-specific conditions. Most of the sensitive taxa of the type-specific communities are present.					
Footnote	[5] http://www.azti.es/en/ambi-azti-marine-biotic-index.html.					
	Indicator: Number of macrofaunal taxa in the sediment within the AZE, following the sampling methodology	a. Document appropriate sediment sample collection as for 2.1.1a and 2.1.1c, or exemption as per 2.1.1b. b. For sediment samples taken within the AZE, determine abundance and taxonomic composition of macrofauna using an appropriate testing method.	MHC staff conducted samples at Heath, analysis done by Columbia Science. The Macrofaunal results for Heath Bay are not yet available as the results are being analysed and therefore cannot be reviewed for compliance to the standard at this time. There is no historical benthic data for this site. **Audit update: Email dated 22/10/18 from Marine Harvest, which shows the results for the stations are 15,13 and 7 non pollution indicator species inside the zone of effect.**		The Macrofaunal results for Heath Bay are not yet available as the results are being analysed and therefore cannot be reviewed for compliance	

2.1.3	outlined in Appendix I-1 **Requirement:** ≥ 2 highly abundant [6] taxa that are not pollution indicator species **Applicability:** All farms except as noted in [1]	c. Identify all highly abundant taxa [6] and specify which ones (if any) are pollution indicator species. d. Retain documentary evidence to show how taxa were identified and how counts were obtained. If samples were analyzed by an independent lab, obtain copies of results. e. Submit counts of macrofaunal taxa to ASC (Appendix VI) at least once for each production cycle.		Major	with the standard at this time. There is no historical data for this site.	15,13 and 7.
Footnote	[6] Highly abundant: Greater than 100 organisms per square meter (or equally high to reference site(s) if natural abundance is lower than this level).					
2.1.4	**Indicator:** Definition of a site-specific AZE based on a robust and credible [7] modeling system **Requirement:** Yes **Applicability:** All farms except as noted in [1]	a. Undertake an analysis to determine the site-specific AZE and depositional pattern. b. Maintain records to show how the analysis (in 2.1.4a) is robust and credible based on modeling using a multi-parameter approach [7]. c. Maintain records to show that modeling results for the site-specific AZE have been verified with > 6 months of monitoring data.	Marine Harvest uses the DEPOMOD modelling tool to determine the AZE. This site was first modelled in 2009. The model allows parameters can be changed to reflect whats happening. The model is based on feed use of 1055kg/cage/day. DEPOMOD is used as the modelling tool and is favoured by DFO. The model was developed in Scotland in conjunction with SEPA. Verification is being done using the sampling results specifically for Sulphides as required in Canada.	Compliant		
Footnote	[7] Robust and credible: The SEPA AUTODEPOMOD modeling system is considered to be an example of a credible and robust system. The model must include a multi-parameter approach. Monitoring must be used to ground-truth the AZE proposed through the model.					
	Criterion 2.2 Water quality in and near the site of operation [8]					
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			
Footnote	[8] See Appendix VI for transparency requirements for 2.2.1, 2.2.2, 2.2.3 and 2.2.5.					
2.2.1	**Indicator**: Weekly average percent saturation [9] of dissolved oxygen (DO) [10] on farm, calculated following methodology in Appendix I-4 **Requirement:** ≥ 70% [11] **Applicability:** All farms except as noted in [11]	**Instruction to Clients for Indicator 2.2.1 - Monitoring Average Weekly Percent Saturation of Dissolved Oxygen** Appendix I-4 presents the required methodology that farms must follow for sampling the average weekly percent saturation of dissolved oxygen (DO). Key points of the method are as follows: - measurements may be taken with a handheld oxygen meter or equivalent chemical method; - equipment is calibrated according to manufacturer's recommendations; - measurements are taken at least twice daily: once in the morning (6 -9 am) and once in the afternoon (3-6 pm) as appropriate for the location and season; - salinity and temperature must also be measured when DO is sampled; - sampling should be done at 5 meters depth in water conditions that would be experienced by fish (e.g. at the downstream edge of a net pen array): - each week, all DO measurements are used in the calculation of a weekly average percent saturation. If monitoring deviates from prescribed sampling methodology, the farm shall provide the auditor with a written justification (e.g. when samples are missed due to bad weather). In limited and well-justified situations, farms may request that the CAB approve reduction of DO monitoring frequency to one sample per day. Exception [see footnote 12] If a farm does not meet the minimum 70 percent weekly average saturation requirement, the farm must demonstrate the consistency of percent saturation with a reference site. The reference site shall be at least 500 meters from the edge of the net pen array, in a location that is understood to follow similar patterns in upwelling to the farm site and is not influenced by nutrient inputs from anthropogenic causes including aquaculture, agricultural runoff or nutrient releases from coastal communities. For any such exceptions, the auditor shall fully document in the audit report how the farm has demonstrated consistency with the reference site. Note 1: *Percent saturation* is the amount of oxygen dissolved in the water sample compared to the maximum amount that could be present at the same temperature and salinity.				
		a. Monitor and record on-farm percent saturation of DO at a minimum of twice daily using a calibrated oxygen meter or equivalent method. For first audits, farm records must cover ≥ 6 months. b. Provide a written justification for any missed samples or deviations in sampling time. c. Calculate weekly average percent saturation based on data. d. If any weekly average DO values are < 70%, or approaching that level, monitor and record DO at a reference site and compare to on-farm levels (see Instructions). e. Arrange for auditor to witness DO monitoring and calibration while on site. f. Submit results from monitoring of average weekly DO as per Appendix VI to ASC at least once per year.	The records show that no sampling period was below 70%. There are at least three sensors on site of which two are in pens, and one is outside the pens. The sensors are from Pentair. There is a backup handheld probe. The staff are capable of calibrating if required.	Compliant		

Footnote	0					
Footnote	[10] Averaged weekly from two daily measurements (proposed at 6 am and 3 pm).					
Footnote	[11] An exception to this standard shall be made for farms that can demonstrate consistency with a reference site in the same water body.					
2.2.2	**Indicator**: Maximum percentage of weekly samples from 2.2.1 that fall under 2 mg/L DO **Requirement:** 5% **Applicability:** All	a. Calculate the percentage of on-farm samples taken for 2.2.1a that fall under 2 mg/L DO. b. Submit results from 2.2.2a as per Appendix VI to ASC at least once per year.	There are no samples recorded below 2mg/l and results have been submitted.	Compliant		
2.2.3	**Indicator**: For jurisdictions that have national or regional coastal water quality targets [12], demonstration through third-party analysis that the farm is in an area recently [13] classified as having “good” or “very good” water quality [14] **Requirement:** Yes [15] **Applicability:** All farms except as noted in [15]	a. Inform the CAB whether relevant targets and classification systems are applicable in the jurisdiction. If applicable, proceed to "2.2.3.b". If not applicable, take action as required under 2.2.4 b. Compile a summary of relevant national or regional water quality targets and classifications, identifying the third-party responsible for the analysis and classification. c. Identify the most recent classification of water quality for the area in which the farm operates.	The CCME, Canadian council for ministers of the environment set quality guidelines. The parameters covered in the Marine environment are Nitrate, Nitrite and Phosphorus though Phosphorus has no levels set. The report which is a literature review from Dr Stephen Cross and Sherrington on water quality conditions of Coastal British Columbia and Nutrient release from net cage aquaculture in Quatsino sound. Papers reviewed from 1982 to 2005. Following this sampling onsite has taken place by Marine Harvest for plankton and nutrient monitoring which was carried out from May to October 2016 and is updated every two years. Under the data summary, the author states that the results indicate good conditions. The most recent sampling for the area undertaken by Dr Stephen Cross from Global Aquafoods development Corp with data from 38 farms and 204 samples.	Compliant		
Footnote	[12] Related to nutrients (e.g., N, P, chlorophyll A).					
Footnote	[13] Within the two years prior to the audit.					
Footnote	[14] Classifications of “good” and “very good” are used in the EU Water Framework Directive. Equivalent classification from other water quality monitoring systems in other jurisdictions are acceptable.					
Footnote	[15] Closed production systems that can demonstrate the collection and responsible disposal of > 75% of solid nutrients as well as > 50% of dissolved nutrients (through biofiltration, settling and/or other technologies) are exempt from standards 2.2.3 and 2.2.4.					
2.2.4	**Indicator**: For jurisdictions without national or regional coastal water quality targets, evidence of monitoring of nitrogen and phosphorous [16] levels on farm and at a reference site, following methodology in Appendix I-5 **Requirement:** Consistency with reference site **Applicability:** All farms except as noted in [16]	a. Develop, implement, and document a weekly monitoring plan for N, NH4, NO3, total P, and ortho-P in compliance with Appendix I-5. For first audits, farm records must cover ≥ 6 months. b. Calibrate all equipment according to the manufacturer's recommendations. c. Submit data on N and P to ASC as per Appendix VI at least once per year.	See 2.2.3	N/A		
Footnote	[16] Farms shall monitor total N, NH4, NO3, total P and Ortho-P in the water column. Results shall be submitted to the ASC database. Methods such as a Hach kit are acceptable.					
2.2.5	**Indicator**: Demonstration of calculation of biochemical oxygen demand (BOD [17]) of the farm on a production cycle basis **Requirement:** Yes **Applicability:** All	**Instruction to Clients for Indicator 2.2.5 - Calculating Biochemical Oxygen Demand** Biochemical Oxygen Demand (BOD) can be calculated based on cumulative inputs of N and C to the environment over the course of the production cycle. BOD = ((total N in feed – total N in fish)*4.57) + ((total C in feed – total C in fish)*2.67). • A farm may deduct N or C that is captured, filtered or absorbed through approaches such as IMTA or through direct collection of nutrient wasted. In this equation, “fish” refers to harvested fish. In this case, farm must submit breakdown of N & C captured/filtered/absorbed to ASC along with method used to estimate nutrient reduction. • Reference for calculation methodology: Boyd C. 2009. Estimating mechanical aeration requirement in shrimp ponds from the oxygen demand of feed. In: Proceedings of the World Aquaculture Society Meeting; Sept 25-29, 2009; VeraCruz, Mexico. And: Global Aquaculture Performance Index BOD calculation methodology available at http://web.uvic.ca/~gapi/explore-gapi/bod.html. Note 1: Calculation requires a full production cycle of data and is required beginning with the production cycle first undergoing certification. If it is the first audit for the farm, the client is required to demonstrate to the CAB that data is being collected and an understanding of the calculations. Note 2: Farms may seek an exemption to Indicator 2.2.5 if: the farm collects BOD samples at least once every two weeks, samples are independently analyzed by an accredited laboratory, and the farm can show that BOD monitoring results do not deviate significantly from calculated annual BOD load.				
		a. Collect data throughout the course of the production cycle and calculate BOD according to formula in the instruction box. b. Submit calculated BOD as per Appendix VI to ASC for each production cycle.	BOD data is collected on all ASC sites as per the requirements. The BOD to date is 2,160,625kg. The metric will be submitted at the end of the current cycle.	Compliant		
Footnote	[17] BOD calculated as: ((total N in feed – total N in fish)*4.57) + ((total C in feed – total C in fish)*2.67). A farm may deduct N or C that is captured, filtered or absorbed through approaches such as IMTA or through direct collection of nutrient wasted. In this equation, “fish” refers to harvested fish. Reference for calculation methodology: Boyd C. 2009. Estimating mechanical aeration requirement in shrimp ponds from the oxygen demand of feed. In: Proceedings of the World Aquaculture Society Meeting; Sept 25-29, 2009; VeraCruz, Mexico. And: Global Aquaculture Performance Index BOD calculation methodology available at http://web.uvic.ca/~gapi/explore-gapi/bod.html.					

2.2.6	**Indicator**: Appropriate controls are in place that maintain good culture and hygienic conditions on the farm which extends to all chemicals, including veterinary drugs, thereby ensuring that adverse impacts on environmental quality are minimised. **Requirement:** Yes **Applicability:** All	a. Document control systems in good culture and hygene that includes all appropriate elements. b. Apply the systems ensuring that staff are aware, qualified and trained to proberly implement them. -	All chemicals observed were bunded and controlled. The MSD sheets were in place. Staff were questioned on the use of Tricaine when sampling fish and doing lice checks. Staff are trained on the DATS system in relation to chemical handling and health and safety.	Compliant		
Criterion 2.3 Nutrient release from production						
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			
2.3.1	**Indicator**: Percentage of fines [18] in the feed at point of entry to the farm [20] (calculated following methodology in Appendix I-2) **Requirement:** < 1% by weight of the feed **Applicability:** All farms except as noted in [19]	Note: The methodology given in Appendix I-2 is used to determine the fines (dust and small fragments) in finished product of fish feed which has a diameter of 3 mm or more. a. Determine and document a schedule and location for quarterly testing of feed. If testing prior to delivery to farm site, document rationale behind not testing on site. b. If using a sieving machine, calibrate equipment according to manufacturer's recommendations. c. Conduct test according to detailed methodology in Appendix I-2 and record results for the pooled sample for each quarter. For first audits, farms must have test results from the last 3 months.	Variance number 246 in place to allow for the feed company to carry out the samples. Results are in place from the feed company which is Skretting. Lot numbers sampled are in place and reported to the site. Fines results for the 1st quarter for 2018 show that three types of feed with five subsamples within each lot shows no more than 0.1% of fines.	Compliant		0.01%
Footnote	[18] Fines: Dust and fragments in the feed. Particles that separate from feed with a diameter of 5 mm or less when sieved through a 1 mm sieve, or particles that separate from feed with a diameter greater than 5 mm when sieved through a 2.36 mm sieve. To be measured at farm gate (e.g., from feed bags after they are delivered to farm).					
Footnote	[19] To be measured every quarter or every three months. Samples that are measured shall be chosen randomly. Feed may be sampled immediately prior to delivery to farm for sites with no feed storage where it is not possible to sample on farm. Closed production systems that can demonstrate the collection and responsible disposal of > 75% of solid nutrients and > 50% of dissolved nutrients (through biofiltration, settling and/or other technologies) are exempt.					
Criterion 2.4 Interaction with critical or sensitive habitats and species						
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			
2.4.1	**Indicator**: Evidence of an assessment of the farm's potential impacts on biodiversity and nearby ecosystems that contains at a minimum the components outlined in Appendix I-3 **Requirement:** Yes **Applicability:** All	Note: If a farm has previously undertaken an independent assessment of biodiversity impact (e.g. as part of the regulatory permitting process), the farm may use such documents as evidence to demonstrate compliance with Indicator 2.4.1 as long as all components in Appendix I-3 are explicitly covered. a. Perform (or contract to have performed) a documented assessment of the farm's potential impact on biodiversity and nearby ecosystems. The assessment must address all components outlined in Appendix I-3. b. If the assessment (2.4.1a) identifies potential impact(s) of the farm on biodiversity or nearby critical, sensitive or protected habitats or species, prepare plan to address those potential impacts. c. Keep records to show how the farm implements plan(s) from 2.4.1b to minimize potential impacts to critical or sensitive habitats and species.	The company has a wildlife interaction plan ID SW965 that is a BAP requirement for its certification. The plan was put in place several years ago, but the current update is dated February 9th, 2018. Risks include fish mortalities as an attractant, and the control measures include routine mort retrieval, appropriate mort disposal and containment and mortalities stored away from the main production area. Mortality records are in place on the farm site. All records are added to the company's database, and records for disposal are documented.	Compliant		

2.4.2	**Indicator**: Allowance for the farm to be sited in a protected area [20] or High Conservation Value Areas [21] (HCVAs) **Requirement:** None [22] **Applicability:** All farms except as noted in [22]	**Instruction to Clients for Indicator 2.4.2 - Exceptions to Requirements that Farms are not sited within Protected Areas or HCVAs** The following exceptions shall be made for Indicator 2.4.2: Exception #1: For protected areas classified by the International Union for the Conservation of Nature (IUCN) as Category V or VI (these are areas preserved primarily for their landscapes or for sustainable resource management). Exception #2: For HCVAs if the farm can demonstrate that its environmental impacts are compatible with the conservation objectives of the HCVA designation. The burden of proof would be placed on the farm to demonstrate that it is not negatively impacting the core reason an area has been identified as a HCVA. Exception #3: For farms located in a protected area if it was designated as such after the farm was already in operation and provided the farm can demonstrate that its environmental impacts are compatible with the conservation objectives of the protected area and it is in compliance with any relevant conditions or regulations placed on the farm as a result of the formation/designation of the protected area. The burden of proof would be placed on the farm to demonstrate that it is not negatively impacting the core reason an area has been protected. **Definitions** Protected area: "A clearly defined geographical space, recognized, dedicated and managed through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values." High Conservation Value Areas (HCVA): Natural habitats where conservation values are considered to be of outstanding significance or critical importance. HCVA are designated through a multi-stakeholder approach that provides a systematic basis for identifying critical conservation values—both social and environmental—and for planning ecosystem management in order to ensure that these high conservation values are maintained or enhanced				
		a. Provide a map showing the location of the farm relative to nearby protected areas or High Conservation Value Areas (HCVAs) as defined above (see also 1.1.1a).	There is a declaration from the company's regulatory affairs manager sent by e-mail dated March 2018 declaring that all finfish tenures are not sited in an HCVA protected area. However, there can be protection for individual species of animals or fish. In this case, there is a rockfish preservation area. These are Rockfish 'no take' area even though commercial fishing is not restricted. The site is not located in an HCVA.	Compliant		
		b. If the farm is not sited in a protected area or High Conservation Value Area as defined above, prepare a declaration attesting to this fact. In this case, the requirements of 2.4.2c-d do not apply.				
		c. If the farm is sited in a protected area or HCVA, review the scope of applicability of Indicator 2.4.2 (see Instructions above) to determine if your farm is allowed an exception to the requirements. If yes, inform the CAB which exception (#1, #2, or #3) is allowed and provide supporting evidence.				
		d. If the farm is sited in a protected area or HCVA and the exceptions provided for Indicator 2.4.2 do not apply, then the farm does not comply with the requirement and is ineligible for ASC certification.				
Footnote	[20] Protected area: "A clearly defined geographical space, recognized, dedicated and managed through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values." Source: Dudley, N. (Editor) (2008), Guidelines for Applying Protected Area Management Categories, Gland, Switzerland: IUCN. x + 86pp.					
Footnote	[21] High Conservation Value Areas (HCVA): Natural habitats where conservation values are considered to be of outstanding significance or critical importance. HCVA are designated through a multi-stakeholder approach that provides a systematic basis for identifying critical conservation values—both social and environmental—and for planning ecosystem management in order to ensure that these high conservation values are maintained or enhanced (http://www.hcvnetwork.org/).					
Footnote	[22] The following exceptions shall be made for Standard 2.4.2: • For protected areas classified by the International Union for the Conservation of Nature (IUCN) as Category V or VI (these are areas preserved primarily for their landscapes or for sustainable resource management). • For HCVAs if the farm can demonstrate that its environmental impacts are compatible with the conservation objectives of the HCVA designation. The burden of proof would be placed on the farm to demonstrate that it is not negatively impacting the core reason an area has been identified as a HCVA. • For farms located in a protected area if it was designated as such after the farm was already in operation and provided the farm can demonstrate that its environmental impacts are compatible with the conservation objectives of the protected area and it is in compliance with any relevant conditions or regulations placed on the farm as a result of the formation/designation of the protected area. The burden of proof would be placed on the farm to demonstrate that it is not negatively impacting the core reason an area has been protected.					
Criterion 2.5 Interaction with wildlife, including predators [23]						
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			
Footnote	[23] See Appendix VI for transparency requirements for 2.5.2, 2.5.5 and 2.5.6.					
2.5.1	**Indicator**: Number of days in the production cycle when acoustic deterrent devices (ADDs) or acoustic harassment devices (AHDs) were used **Requirement:** 0 **Applicability:** All	a. Compile documentary evidence to show that no ADDs or AHDs have been used by the farm.	The PAR licence prohibits the use of ADD's. Found in section 11.2 page 17 prohibits their use. No evidence of devices onsite.	Compliant		0
		-				

2.5.2	**Indicator**: Number of mortalities [25] of endangered or red-listed [26] marine mammals or birds on the farm **Requirement:** 0 (zero) **Applicability:** All	a. Prepare a list of all predator control devices and their locations. b. Maintain a record of all predator incidents. c. Maintain a record of all mortalities of marine mammals and birds on the farm identifying the species, date, and apparent cause of death. d. Maintain an up-to-date list of endangered or red-listed marine mammals and birds in the area (see 2.4.1) -	No lethal predator control devices are used since 2012. MHC have switched to the HDPE nets manufactured in India with an electrified wire one ft above the water line. There is a DFO web page showing all the farm sites in BC, and the lethal deaths of Mammals and these must be reported. There have been no deaths of endangered or red-listed vertebrates in the last cycles. Records in place but no red-listed or endangered species mortalities. Wildlife interaction plan and there is a list of red-listed animals on site. There are ID cards for cetaceans available on site. BAP requires that records are maintained.	Compliant		0
Footnote	[25] Mortalities: Includes animals intentionally killed through lethal action as well as accidental deaths through entanglement or other means.					
Footnote	[26] Species listed as endangered or critically endangered by the IUCN or on a national endangered species list.					
2.5.3	**Indicator**: Evidence that the following steps were taken prior to lethal action [27] against a predator: 1. All other avenues were pursued prior to using lethal action 2. Approval was given from a senior manager above the farm manager 3. Explicit permission was granted to take lethal action against the specific animal from the relevant regulatory authority **Requirement:** Yes [28] **Applicability:** All except cases where human safety is endangered as noted in [28]	a. Provide a list of all lethal actions that the farm took against predators during the previous 12-month period. Note: "lethal action" is an action taken to deliberately kill an animal, including marine mammals and birds. b. For each lethal action identified in 2.5.4a, keep record of the following: 1) a rationale showing how the farm pursued all other reasonable avenues prior to using lethal action; 2) approval from a senior manager above the farm manager of the lethal action; 3) where applicable, explicit permission was granted by the relevant regulatory authority to take lethal action against the animal. c. Provide documentary evidence that steps 1-3 above (in 2.5.4b) were taken prior to killing the animal. If human safety was endangered and urgent action necessary, provide documentary evidence as outlined in [28].	No lethal actions in the past year. There were no reports on the DFO website of lethal measures having taken place.	Compliant		
Footnote	[27] Lethal action: Action taken to deliberately kill an animal, including marine mammals and birds.					
Footnote	[28] Exception to these conditions may be made for a rare situation where human safety is endangered. Should this be required, post-incident approval from a senior manager should be made and relevant authorities must be informed.					
Instruction to Clients and CABs on Indicators 2.5.4, 2.5.5, and 2.5.6 - Clarification about the ASC Definition of "Lethal Incident" The ASC Salmon Standard has defined "Lethal incident" to include all lethal actions as well as entanglements or other accidental mortalities of non-salmonids [footnote 29]. For the purpose of assisting farms and auditors with understanding how to evaluate compliance with Indicators 2.5.4, 2.5.5, and 2.5.6, ASC has clarified this definition further: Total number of lethal Incidents = sum of all non-salmonid deaths arising from all lethal actions taken by the farm during a given time period There should be a 1:1 relationship between the number of animal deaths and the number of lethal incidents reported by the farm. For example, if a farm has taken one (1) lethal action in past last two years and that single lethal action resulted in killing three (3) birds, it is considered three (3) lethal incidents within a two year period. The term "non-salmonid" was intended to cover any predatory animals which are likely to try to feed upon farmed salmon. In practice these animals will usually be seals or birds.						
2.5.4	**Indicator**: Evidence that information about any lethal incidents [30] on the farm has been made easily publicly available [29] **Requirement:** Yes **Applicability:** All	a. For all lethal actions (see 2.5.3), keep records showing that the farm made the information available within 30 days of occurrence. a. For all lethal actions (see 2.5.3), keep records showing that the farm made the information available within 30 days of occurrence. b. Ensure that information about all lethal actions listed in 2.5.4a are made easily publicly available (e.g. on a website).	There have been no lethal incidents. Information relating to incidents is posted on the ASC dashboard if there are any incidents to report. The dashboard reports zero issues as well. DFO website also showed no incidents.	Compliant		
Footnote	[29] Posting results on a public website is an example of “easily publicly available.” Shall be made available within 30 days of the incident and see Appendix VI for transparency requirements.					
2.5.5	**Indicator**: Maximum number of lethal incidents [30] on the farm over the prior two years **Requirement:** < 9 lethal incidents [31], with no more than two of the incidents being marine mammals	a. Maintain log of lethal incidents (see 2.5.3a) for a minimum of two years. For first audit, > 6 months of data are required. b. Calculate the total number of lethal incidents and the number of incidents involving marine mammals during the previous two year period.	The log is maintained as required by the standard. No mammal incidences in the past two years. Mammalian deaths are required to be reported to DFO. There were mammalian deaths previously in 2015.	Compliant		0

	than two of the incidents being marine mammals **Applicability:** All	c. Send ASC the farm's data for all lethal incidents [30] of any species other than the salmon being farmed (e.g. lethal incidents involving predators such as birds or marine mammals). Data must be sent to ASC on an ongoing basis (i.e. at least once per year and for each production cycle).				
Footnote	[30] Lethal incident: Includes all lethal actions as well as entanglements or other accidental mortalities of non-salmonids.					
Footnote	[31] Standard 2.5.6 applicable to incidents related to non-endangered and non-red-listed species. This standard complements, and does not contradict, 2.5.3.					
2.5.6	**Indicator**: In the event of a lethal incident, evidence that an assessment of the risk of lethal incident(s) has been undertaken and demonstration of concrete steps taken by the farm to reduce the risk of future incidences **Requirement:** Yes **Applicability:** All	a. Keep records showing that the farm undertakes an assessment of risk following each lethal incident and how those risk assessments are used to identify concrete steps the farm takes to reduce the risk of future incidents. b. Provide documentary evidence that the farm implements those steps identified in 2.5.6a to reduce the risk of future lethal incidents.	Animal incident de-brief document in place. Origin date 4th August 2016. The form includes an investigation into the incident and corrective action. Staff are aware of the reporting, and corrective actions process and emails are sent to other sites to make sure that all are aware of the corrective actions.	Compliant		0
PRINCIPLE 3: PROTECT THE HEALTH AND GENETIC INTEGRITY OF WILD POPULATIONS						
Criterion 3.1 Introduced or amplified parasites and pathogens [34, 35]						
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			
Footnote	[32] Farm sites for which there is no release of water that may contain pathogens into the natural (freshwater or marine) environment are exempt from the standards under Criterion 3.1.					
Footnote	[33] See Appendix VI for transparency requirements for 3.1.1, 3.1.3, 3.1.4, 3.1.6 and 3.1.7.					
Instruction to Clients and CABs on Exemptions to Criterion 3.1 According to footnote [32], farm sites for which there is no release of water that may contain pathogens into the natural (freshwater or marine) environment are exempt from the requirements under Criterion 3.1. More specifically, farms are only eligible for exemption from Criterion 3.1 if it can be shown that either of the following holds: 1) the farm does not release any water to the natural environment; or 2) any effluent released by the farm to the natural environment has been effectively treated to kill pathogens (e.g. UV and/or chemical treatment of water with testing demonstrating efficacy). Auditors shall fully document the rationale for any such exemptions in the audit report.						
3.1.1	**Indicator**: Participation in an Area-Based Management (ABM) scheme for managing disease and resistance to treatments that includes coordination of stocking, fallowing, therapeutic treatments and information-sharing. Detailed requirements are in Appendix II-1. **Requirement:** Yes **Applicability:** All except farms that release no water as noted in [32]	a. Keep record of farm's participation in an ABM scheme. b. Submit to the CAB a description of how the ABM (3.1.1a) coordinates management of disease and resistance to treatments, including: - coordination of stocking; - fallowing; - therapeutic treatments; and - information sharing. c. Provide the CAB access to documentation which is sufficient for the auditor to evaluate the ABM's compliance with all requirements in Appendix II-1, including definition of area, minimum % participation in the scheme, components, and coordination requirements. d. Submit dates of fallowing period(s) as per Appendix VI to ASC at least once per year.	In this port Hardy area, all the sites are owned by Marine Harvest, and the closest farm site to Heath is Bull harbour. These two sites are coordinated as the same team manages them. The next nearest farm site after that is 25km away. Heath will be fallow in November and will not be re-stocked for one year. This is the first stocking for this site. DFO has management zones in BC. There are 7 zones known as transfer zones. There are also fish health zones. These fish health zones only require notification for moving fish. http://www.dfo-mpo.gc.ca/aquaculture/bc-cb/maps-cartes-eng.html	Compliant		
3.1.2	**Indicator**: A demonstrated commitment [34] to collaborate with NGOs, academics and governments on areas of mutually agreed research to measure possible impacts on wild stocks **Requirement:** Yes **Applicability:** All except farms that release no water as noted in [32]	Note: Indicator 3.1.2 requires that farms demonstrate a commitment to collaborate with NGOs, academics and governments on areas of mutually agreed research to measure possible impacts on wild stocks. If the farm does not receive any requests to collaborate on such research projects, the farm may demonstrate compliance by showing evidence of commitment through other proactive means such as published policy statements or directed outreach to relevant organizations. a. Retain records to show how the farm and/or its operating company has communicated with external groups (NGOs, academics, governments) to agree on and collaborate towards areas of research to measure impacts on wild stocks, including records of requests for research support and collaboration and responses to those requests. b. Provide non-financial support to research activities in 3.1.2a by either: - providing researchers with access to farm-level data; - granting researchers direct access to farm sites; or - facilitating research activities in some equivalent way. c. When the farm and/or its operating company denies a request to collaborate on a research project, ensure that there is a written justification for rejecting the proposal.	Research is mainly focused through the BC salmon farmers. One member of Marine Harvest sits on the science advisory council. All research is listed on the www.bcsalmonfarmers.ca, and the four principal areas of research are listed that include 'Understanding the interactions between salmon farms and the environment and investigating potential impacts while developing mitigations as appropriate'. DFO and academics site on the science advisory council of the BC salmon farmers association. Both funding and non-funding support are given. Depending on the project information is provided from the farm sites to the council. There was a tag monitoring device was located in Okisolo (Sonora Island). Cleaner fish is also being researched by the Vancouver Aquarium and the Center for Aquatic health sciences.	Compliant		

		d. Maintain records from research collaborations (e.g. communications with researchers) to show that the farm has supported the research activities identified in 3.1.2a.				
Footnote	[34] Commitment: At a minimum, a farm and/or its operating company must demonstrate this commitment through providing farm-level data to researchers, granting researchers access to sites, or other similar non-financial support for research activities.					
3.1.3	**Indicator**: Establishment and annual review of a maximum sea lice load for the entire ABM and for the individual farm as outlined in Appendix II-2 **Requirement:** Yes **Applicability:** All except farms that release no water as noted in [32]	a. Keep records to show that a maximum sea lice load has been set for: - the entire ABM; and - the individual farm.	The sea lice load is based on the maximum number of fish multiplied by the maximum number of sea lice at trigger level that is three motiles. The number is set as 1,654,650.	Compliant		
		b. Maintain evidence that the established maximum sea lice load (3.1.3a) is reviewed annually as outlined in Appendix II-2, incorporating feedback from the monitoring of wild salmon where applicable (See 3.1.6).				
		c. Provide the CAB access to documentation which is sufficient for the auditor to evaluate whether the ABM has set (3.1.3a) and annually reviewed (3.1.3.b) maximum sea lice load in compliance with requirements in Appendix II-2.				
		d. Submit the maximum sea lice load for the ABM to ASC as per Appendix VI at least once per year.				
3.1.4	**Indicator**: Frequent [35] on-farm testing for sea lice, with test results made easily publicly available [36] within seven days of testing **Requirement:** Yes **Applicability:** All except farms that release no water as noted in [32]	a. Prepare an annual schedule for testing sea lice that identifies timeframes of routine testing frequency (at a minimum, monthly) and for high-frequency testing (weekly) due to sensitive periods for wild salmonids (e.g. during and immediately prior to outmigration of juveniles).	There is an SOP called SW 822 called sea lice monitoring in marine sites Last updated December 2017. Lice numbers are counted weekly for which 40 are counted every week and every other week there are 60 fish counted to comply with the DFO requirements. 20 from each cage are sampled. The is one reference cage which is the first cage stocked onsite and then up to 2 others depending on if the site is counting the 40 or 60 fish. Information sampling counts are logged on the Marine Harvest dashboard. The company also maintains a spreadsheet. DFO is given the counts monthly and if there is a lice level exceedance. The certification administrator submits the counts to the Dashboard, and the information is kept on count days and posting dates. This is reviewed every Monday.	Compliant		
		b. Maintain records of results of on-farm testing for sea lice. If farm deviates from schedule due to weather [35] maintain documentation of event and rationale.				
		c. Document the methodology used for testing sea lice ('testing' includes both counting and identifying sea lice). The method must follow national or international norms, follows accepted minimum sample size, use random sampling, and record the species and life-stage of the sea lice. If farm uses a closed production system and would like to use an alternate method (i.e. video), farm shall provide the CAB with details on the method and efficacy of the method.				
		d. Make the testing results from 3.1.4b easily publicly available (e.g. posted to the company's website) within seven days of testing. If requested, provide stakeholders access to hardcopies of test results.				
		e. Keep records of when and where test results were made public.				
		f. Submit test results to ASC (Appendix VI) at least once per year.				
Footnote	[35] Testing must be weekly during and immediately prior to sensitive periods for wild salmonids, such as outmigration of wild juvenile salmon. Testing must be at least monthly during the rest of the year, unless water temperature is so cold that it would jeopardize farmed fish health to test for lice (below 4 degrees C). Within closed production systems, alternative methods for monitoring sea lice, such as video monitoring, may be used.					
Footnote	[36] Posting results on a public website is an example of “easily publicly available.”					
3.1.5	**Indicator**: In areas with wild salmonids [37], evidence of data [38] and the farm’s understanding of that data, around salmonid migration routes, migration timing and stock productivity in major waterways within 50 kilometers of the farm **Requirement:** Yes	**Instruction to Clients for Indicator 3.1.5 - Evidence for Wild Salmonid Health and Migration** In writing this indicator, the SAD Steering Committee concluded that relevant data sets on wild salmonid health and migration are publicly available in the vast majority of, if not all, jurisdictions with wild salmonids. The information is likely to come from government sources or from research institutions. Therefore farms are not responsible for conducting this research themselves. However farms must demonstrate that they are aware of this basic information in their region, as such information is needed to make management decisions related to minimizing potential impact on those wild stocks. This Indicator requires collection and understanding of general data for the major watersheds within approximately 50 km of the farm. A farm does not need to demonstrate that there is data for every small river or tributary or subpopulation. Information should relate to the wild fish stock level, which implies that the population is more or less isolated from other stocks of the same species and hence self-sustaining. A "conservation unit" under the Canadian Wild Salmon Policy is an example of an appropriate fish stock-level definition. However, it must be recognized that each jurisdiction may have slight differences in how a wild salmonid stock is defined in the region. For purposes of these standards, “areas with wild salmonids” are defined as areas within 75 kilometers of a wild salmonid migration route or habitat. This definition is expected to encompass all, or nearly all, of salmon-growing areas in the northern hemisphere [39]. Potentially affected species in these areas are salmonids (i.e. including all trout species). Where a species is not natural to a region (e.g. Atlantic or Pacific Salmon in Chile) the areas are not considered as "areas with wild salmonids" even if salmon have escaped from farms and established themselves as a reproducing species in “the wild”. Farms do not need to conduct research on migration routes, timing and the health of wild stocks under this standard if general information is already available. Farms must demonstrate an understanding of this information at the general level for salmonid populations in their region, as such information is needed to make management decisions related to minimizing potential impact on those stocks. Such “evidence” would consist of, for example, peer review studies; publicly available government monitoring and reporting.				

	Applicability: All farms operating in areas with wild salmonids except farms that release no water as noted in [32]	a. Identify all salmonid species that naturally occur within 75 km of the farm through literature search or by consulting with a reputable authority. If the farm is not in an area with wild salmonids, then 3.1.5b and c do not apply.	All five species of Pacific Salmon occur plus steelhead trout in the area, and there is a list on the DFO website. BC salmon farmers post a map showing all the active salmon farms from all companies during the migration time. There are multiple websites and fishery bulletins available showing the active runs of salmon for the wild fisheries for commercial purposes. DFO control lice testing and call for more testing during the smolt migration. The DFO identify the sensitive periods which is primarily based on the pink salmon. The most critical is the Pinks and the Chums as they are the smallest smolt. The critical period is defined as March 1st to June 30th. There is a website called kintama.com that has active research graphs showing migration routes of tagged salmon smolts during migration.	Compliant		
		b. For species listed in 3.1.5a, compile best available information on migration routes, migration timing (range of months for juvenile outmigration and returning salmon), life history timing for coastal resident salmonids, and stock productivity over time in major waterways within 50 km of the farm.				
		c. From data in 3.1.5b, identify any sensitive periods for wild salmonids (e.g. periods of outmigration of juveniles) within 50 km of the farm.				
		-				
Footnote	[37] For purposes of these standards, “areas with wild salmonids” are defined as areas within 75 kilometers of a wild salmonid migration route or habitat. This definition is expected to encompass all, or nearly all, of salmon-growing areas in the northern hemisphere.					
Footnote	[38] Farms do not need to conduct research on migration routes, timing and the health of wild stocks under this standard if general information is already available. Farms must demonstrate an understanding of this information at the general level for salmonid populations in their region, as such information is needed to make management decisions related to minimizing potential impact on those stocks.					
3.1.6	**Indicator**: In areas of wild salmonids, monitoring of sea lice levels on wild out-migrating salmon juveniles or on coastal sea trout or Arctic char, with results made publicly available. See requirements in Appendix III-1. **Requirement:** Yes **Applicability:** All farms operating in areas with wild salmonids except farms that release no water as noted in [32]	a. Inform the CAB if the farm operates in an area of wild salmonids. If not, then Indicator 3.1.6 does not apply.	The company has informed the CAB that they operate in a wild Salmonid area. All the reports on outward smolt number assessments are available on the Marine Harvest website. Beach seines are used up to 30 smolts from each station are retained for submission to the Centre for Aquatic Health Sciences to verify the species of fish and lice. Quantification of all species caught is carried out. In the Port Hardy area, the sampling is carried out by the Tlatlasikwala first nation and Pacificus Biological services also based in Port Hardy. Sampling took place at the end of May for the second set of samples and will be available in July online. The ASC has had the link to the information sent to them with data and reports covering a number of years.	Compliant		
		b. Keep records to show the farm participates in monitoring of sea lice on wild salmonids.				
		c. Provide the CAB access to documentation which is sufficient for the auditor to evaluate whether the methodology used for monitoring of sea lice on wild salmonids is in compliance with the requirements in Appendix III-1.				
		d. Make the results from 3.1.6b easily publicly available (e.g. posted to the company's website) within eight weeks of completion of monitoring.				
		e. Submit to ASC the results from monitoring of sea lice levels on wild salmonids as per Appendix VI.				
3.1.7	**Indicator**: In areas of wild salmonids, maximum on-farm lice levels during sensitive periods for wild fish [39]. See detailed requirements in Appendix II, subsection 2. **Requirement:** 0.1 mature female lice per farmed fish **Applicability:** All farms operating in areas with wild salmonids except farms that release no water as noted in [32]	a. Inform the CAB if the farm operates in an area of wild salmonids. If not, then Indicator 3.1.7 does not apply.	Wild salmonids are in the area. Sensitive periods are set as March 1st to June 30th under pacific regulation 7.3. There is a variance request in place number 141 for Canada which allows up to 3 motiles. Records of lice levels are retained and posted with DFO and weekly on the companies dashboard. Counts from this week have been the highest so far in the sensitive, and the counts are 0.725. The site is due to begin harvest in August.	Compliant		NA VR 141
		b. Establish the sensitive periods [39] of wild salmonids in the area where the farm operates. Sensitive periods for migrating salmonids is during juvenile outmigration and approximately one month before.				
		c. Maintain detailed records of monitoring on-farm lice levels (see 3.1.4) during sensitive periods as per Appendix II-2.				
		d. Provide the CAB with evidence there is a 'feedback loop' between the targets for on-farm lice levels and the results of monitoring of lice levels on wild salmonids (Appendix II-2).				
Footnote	[39] Sensitive periods for migrating salmonids is during juvenile outmigration and approximately one month before.					
	Criterion 3.2 Introduction of non-native species					
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			
		Note: For the purposes of Indicator 3.2.1, "area" is defined as a contiguous body of water with the bio-chemical and temperature profile required to support the farmed species' life and reproduction (e.g. the Northern Atlantic Coast of the U.S. and Canada). Appendix II-1A elaborates further on this definition: "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." The intent is that the area relates to the spatial extent that is likely to be put at risk from the non-native salmon. Areas will only rarely coincide with the boundaries of countries.				
	Indicator: If a non-native species is being produced, demonstration that the species was widely commercially produced in the area by the date of publication of the ASC	a. Inform the CAB if the farm produces a non-native species. If not, then Indicator 3.2.1 does not apply.	Marine Harvest Canada farm Atlantic Salmon Salmo salar on this site. According to the Fisheries and Oceans Canada website, Atlantic salmon were first farmed in British Columbia in the 1980's. There are reports of Atlantic Salmon being introduced for angling purposes back as early as 1874 to California and 1905 to British Columbia. The DFO website shows that the first importation of salmon eggs for farming came from Scotland in 1985 when 130,000 eggs were imported. All egg imports are logged on the website as public reporting on Aquaculture.			
		b. Provide documentary evidence that the non-native species was widely commercially produced in the area before June 13, 2012.				

3.2.1	Salmon standard **Requirement:** Yes [40] **Applicability:** All farms except as noted in [40]	c. If the farm cannot provide evidence for 3.2.1b, provide documentary evidence that the farm uses only 100% sterile fish that includes details on accuracy of sterility effectiveness. d. If the farm cannot provide evidence for 3.2.1b or 3.2.1c, provide documented evidence that the production system is closed to the natural environment and for each of the following: 1) non-native species are separated from wild fish by effective physical barriers that are in place and well maintained; 2) barriers ensure there are no escapes of reared fish specimens that might survive and subsequently reproduce [40]; and 3) barriers ensure there are no escapes of biological material [40] that might survive and subsequently reproduce (e.g. UV or other effective treatment of any effluent water exiting the system to the natural environment). -		Compliant		
Footnote	[40] Exceptions shall be made for production systems that use 100 percent sterile fish or systems that demonstrate separation from the wild by effective physical barriers that are in place and well-maintained to ensure no escapes of reared specimens or biological material that might survive and subsequently reproduce.					
3.2.2	**Indicator**: 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 [42] **Requirement:** Yes **Applicability:** All [43]	**Instruction to Clients for Indicator 3.2.2 - Exceptions to Allow Production of Non-Native Species** Farms have had five years to demonstrate compliance with this standard from the time of publication of the ASC Salmon Standard (i.e. full compliance by June 13, 2017). Farms are exempt from this standard if they are in a jurisdiction where the non-native species became established prior to farming activities in the area and the following three conditions are met: eradication would be impossible or have detrimental environmental effects; the introduction took place prior to 1993 (when the Convention on Biological Diversity (CBD) was ratified); the species is fully self-sustaining. Note: For the purposes of Indicator 3.2.2, "jurisdiction" is defined the same as "area" in 3.2.1.				
		a. Inform the ASC of the species in production (Appendix VI).	Canadian Technical Report Of Fisheries and Aquatic Sciences 3061 dated from 2015 reporting on catches and sightings in BC of Atlantic salmon based on fieldwork conducted in 2011 and 2012 indicated none found. Declarations in place from Mainstream Biological and DFO stating that no Atlantic salmon have been caught in the annual Beach seine surveys. DFO also conduct trawl surveys and no Atlantics have been caught. The number of stations sampled is 103 that are sampled twice per year, and this is only for the salmon farms for the five production areas where Marine Harvest are located.	Compliant		
		b. Inform the CAB if the farm produces a non-native species. If not, then Indicator 3.2.2 does not apply.				
		c. If yes to 3.2.2b, provide evidence of scientific research completed within the past five years that investigates the risk of establishment of the species within the farm's jurisdiction. Alternatively, the farm may request an exemption to 3.2.2c (see below).				
		d. If applicable, submit to the CAB a request for exemption that shows how the farm meets all three conditions specified in instruction box above.				
		e. Submit evidence from 3.2.2c to ASC for review.				
Footnote	[41] The research must at a minimum include multi-year monitoring for non-native farmed species, use credible methodologies and analysis, and undergo peer review.					
Footnote	[42] If the review demonstrates there is increased risk, the ASC will consider prohibiting the certification of farming of non-native salmon in that jurisdiction under this standard. In the event that the risk tools demonstrate "high" risks, the SAD expects that the ASC will prohibit the certification of farming of non-native salmon in that jurisdiction. The ASC intends to bring this evidence into future revision of the standard and those results taken forward into the revision process.					
Footnote	[43] Farms are exempt from this standard if they are in a jurisdiction where the non-native species became established prior to farming activities in the area and the following three conditions are met: eradication would be impossible or have detrimental environmental effects; the introduction took place prior to 1993 (when the Convention on Biological Diversity (CBD) was ratified); the species is fully self-sustaining.					
3.2.3	**Indicator**: Use of non-native species for sea lice control for on-farm management purposes **Requirement:** None **Applicability:** All	a. Inform the CAB if the farm uses fish (e.g. cleaner fish or wrasse) for the control of sea lice. b. Maintain records (e.g. invoices) to show the species name and origin of all fish used by the farm for purposes of sea lice control. c. Collect documentary evidence or first hand accounts as evidence that the species used is not non-native to the region.	None are used though there is research taking place using native species only.	N/A		
Criterion 3.3 Introduction of transgenic species						
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			
		a. Prepare a declaration stating that the farm does not use transgenic salmon.	Global and Marine Harvest Canada statement on the fact that the company does not use transgenic salmon. Dated 4th April 2018.			

3.3.1	**Indicator**: Use of transgenic [44] salmon by the farm **Requirement:** None **Applicability:** All	b. Maintain records for the origin of all cultured stocks including the supplier name, address and contact person(s) for stock purchases. c. Ensure purchase documents confirm that the culture stock is not transgenic.		Compliant		
Footnote	[44] Transgenic: Containing genes altered by insertion of DNA from an unrelated organism. Taking genes from one species and inserting them into another species to get					
Criterion 3.4 Escapes [47]						
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			
Footnote	[45] See Appendix VI for transparency requirements for 3.4.1, 3.4.2 and 3.4.3.					
3.4.1	**Indicator**: Maximum number of escapees [46] in the most recent production cycle **Requirement:** 300 [47] **Applicability:** All farms except as noted in [47]	a. Maintain monitoring records of all incidences of confirmed or suspected escapes, specifying date, cause, and estimated number of escapees. b. Aggregate cumulative escapes in the most recent production cycle. c. Maintain the monitoring records described in 3.4.1a for at least 10 years beginning with the production cycle for which farm is first applying for certification (necessary for farms to be eligible to apply for the exception noted in [47]). d. If an escape episode occurs (i.e. an incident where > 300 fish escaped), the farm may request a rare exception to the Standard [47]. Requests must provide a full account of the episode and must document how the farm could not have predicted the events that caused the escape episode. e. Submit escape monitoring dataset to ASC as per Appendix VI on an ongoing basis (i.e. at least once per year and for each production cycle).	There have been no escapes. There have been no reported escapes in this most recent production cycle. DFO publishes escape reports and goes back as far as 2011. The site now uses Saphire nets that have ID tags and net history certificates.	Compliant		0
Footnote	[46] Farms shall report all escapes; the total aggregate number of escapees per production cycle must be less than 300 fish. Data on date of escape episode(s), number of fish escaped and cause of escape episode shall be reported as outlined in Appendix VI.					
Footnote	[47] A rare exception to this standard may be made for an escape event that is clearly documented as being outside the farm's control. Only one such exceptional episode is allowed in a 10-year period for the purposes of this standard. The 10-year period starts at the beginning of the production cycle for which the farm is applying for certification. The farmer must demonstrate that there was no reasonable way to predict the events that caused the episode. See auditing guidance for additional details.					
3.4.2	**Indicator**: Accuracy [48] of the counting technology or counting method used for calculating stocking and harvest numbers **Requirement:** ≥ 98% **Applicability:** All	a. Maintain records of accuracy of the counting technology used by the farm at times of stocking and harvest. Records include copies of spec sheets for counting machines and common estimates of error for hand-counts. b. If counting takes place off site (e.g. pre-smolt vaccination count), obtain and maintain documents from the supplier showing the accuracy of the counting method used (as above). c. During audits, arrange for the auditor to witness calibration of counting machines (if used by the farm). - e. Submit counting technology accuracy to ASC as per Appendix VI on an ongoing basis (i.e. at least once per year and for each production cycle).	The counters used are VAKI and Aquascan counters. Records are kept of counting accuracy on a freshwater production spreadsheet. There is a new SOP reference FW269 called Smolt Inventory control. This provides guidelines as to which count to use. The smolt suppliers are all MHC owned. Both off-site and onsite counting takes place. There are various counts such as Hatchery book count, Hatchery dispatch count and smolt input count as well as vaccination counts. Witnessed calibration not done as there was no well boat available on the day of the site visit. Protocols on calibration are used from the VAKI manual and followed by relevant staff. VAKI manuals can be accessed online at www.vaki.com. Spec sheet from VAKI was stating an accuracy of over 99%. The Aquascan states accuracy between 98% and 100%. Common estimates of error for any hand-counts.	Compliant		>98%
Footnote	[48] Accuracy shall be determined by the spec sheet for counting machines and through common estimates of error for any hand-counts.					
		Instruction to Clients for Indicator 3.4.3 - Calculation of Estimated Unexplained Loss The Estimated Unexplained Loss (EUL) of fish is calculated at the end of each production cycle as follows: EUL = (stocking count) - (harvest count) - (mortalities) - (recorded escapes) Units for input variables are number of fish (i.e. counts) per production cycle. Where possible, farms should use the pre-smolt vaccination count as the stocking count. This formula is adapted from footnote 59 of the ASC Salmon Standard.				

3.4.3	**Indicator**: Estimated unexplained loss [49] of farmed salmon is made publicly available **Requirement:** Yes **Applicability:** All	a. Maintain detailed records for mortalities, stocking count, harvest count, and escapes (as per 3.4.1). b. Calculate the estimated unexplained loss as described in the instructions (above) for the most recent full production cycle. For first audit, farm must demonstrate understanding of calculation and the requirement to disclose EUL after harvest of the current cycle. c. Make the results from 3.4.3b available publicly. Keep records of when and where results were made public (e.g. date posted to a company website) for all production cycles. d. Submit estimated unexplained loss to ASC as per Appendix VI for each production cycle. -	All records of mortalities are maintained and recorded both on the site and on the Aquafarmer database. This is the first audit, and the farm keeps all records and intends to post final figures on the company's website following harvest.	Compliant		
Footnote	[49] Calculated at the end of the production cycle as: Unexplained loss = Stocking count – harvest count – mortalities – other known escapes. Where possible, use of the pre-smolt vaccination count as the stocking count is preferred.					
3.4.4	**Indicator**: Evidence of escape prevention planning and related employee training, including: net strength testing; appropriate net mesh size; net traceability; system robustness; predator management; record keeping and reporting of risk events (e.g., holes, infrastructure issues, handling errors, reporting and follow up of escape events); and worker training on escape prevention and counting technologies **Requirement:** Yes **Applicability:** All	a. Prepare an Escape Prevention Plan and submit it to the CAB before the first audit. This plan may be part of a more comprehensive farm planning document as long as it addresses all required elements of Indicator 3.4.4. b. If the farm operates an open (net pen) system, ensure the plan (3.4.4a) covers the following areas: - net strength testing; - appropriate net mesh size; - net traceability; - system robustness; - predator management; - record keeping; - reporting risk events (e.g. holes, infrastructure issues, handling errors); - planning of staff training to cover all of the above areas; and - planning of staff training on escape prevention and counting technologies. c. If the farm operates a closed system, ensure the plan (3.4.4a) covers the following areas: - system robustness; - predator management; - record keeping; - reporting risk events (e.g. holes, infrastructure issues, handling errors); - planning of staff training to cover all of the above areas; and - planning of staff training on escape prevention and counting technologies. d. Maintain records as specified in the plan. e. Train staff on escape prevention planning as per the farm's plan. -	As part of the PAR licence (Pacific aquaculture regulation), there is an escape prevention plan SW 951. There is also a fish containment plan for SW 962. There is an Escape response flowchart located on the sites. The staff were questioned on the escape prevention plan, and there is regular training for onsite staff in relation to implementing the escape prevention plan including annual DATS training online. The site has an escape prevention box with netting, needles, weights, ropes etc. and once per year, there is a mock escape drill. There is specific site escape risk analysis detailing the history of escapes in the area. Escape prevention kits and they were inspected on the site. Cameras that pan and tilt are in each cage with excellent resolutions monitor the behaviour of the fish. The diver checks the cages every 60 days on every site and updates the net log as to what was found. The minimum allowed strength for nets is 156lbs above and 169lbs below the water line. Net ID G120-1705 on Pen 2 was reviewed. It was manufactured in March 2017 and had an initial strength of 400lbs breaking tension.	Compliant		
PRINCIPLE 4: USE RESOURCES IN AN ENVIRONMENTALLY EFFICIENT AND RESPONSIBLE MANNER						
Criterion 4.1 Traceability of raw materials in feed						
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			

Instruction to Clients for Indicators 4.1.1 through 4.4.2 - Sourcing of Responsibly Produced Salmon Feeds

Farms must show that all feeds used by the farm are produced in compliance with the requirements of Indicators 4.1.1 through 4.4.4. To do so, farms must obtain documentary evidence that the feed producers (see note 1) are audited at regular intervals by an independent auditing firm or a conformity assessment body against a recognized standard which substantially incorporate requirements for traceability. Acceptable certification schemes include GlobalGAP or other schemes that have been acknowledged by the ASC (see 4.1.1c below). Results from these audits shall demonstrate that feed producers have robust information systems and information handling processes to allow the feed producers to be able to bring forward accurate information about their production and supply chains. Declarations from the feed producer that are provided to the farm to demonstrate compliance with these indicators must be supported by the audits. Farms must also show that all of their feed producers are duly informed of the requirements of the ASC Salmon Standard relating to sourcing of responsibly produced salmon feed (see 4.1.1b below).

In addition to the above, farms must also show that their feed suppliers comply with the more detailed requirements for traceability and ingredient sourcing that are specified under indicators 4.1.1 through 4.4.2. The ASC Salmon Standard allows farms to use one of two different methods to demonstrate compliance of feed producers:

Method #1: Farms may choose to source feed from feed producers who used only those ingredients allowed under the ASC Salmon Standards during the production of a given batch of feed. For example, the farm may request its feed supplier to produce a batch of feed according to farm specifications. Audits of the feed producer will independently verify that manufacturing processes are in compliance with ASC requirements.

Method #2: Farms may choose to source feed from feed producers who demonstrate compliance using a "mass-balance" method. In this method, feed producers show that the balance of all ingredients (both amount and type) used during a given feed production period meets ASC requirements. However, mixing of ingredients into the general silos and production lines is allowed during manufacturing. Audits of the feed producer will independently verify that manufacturing processes are in compliance with ASC requirements. The mass balance method can be applied, for example, to integrated feed production companies that handle all steps of feed manufacturing (purchasing of raw materials, processing to finished feed, and sales) under the management of a single legal entity.

Note 1: The term "feed producer" is used here to identify the organization that produces the fish feed (i.e. it is the "feed manufacturer"). In most cases, the organization supplying feed to a farm (i.e. the feed supplier) will be the same organization that produced the feed, but there may be instances where feed suppliers are not directly responsible for feed production. Regardless of whether the farm sources feeds directly from a feed producer or indirectly through an intermediary organization, it remains the farm's obligation to show evidence that all feeds used are in compliance with requirements.

4.1.1	**Indicator**: Evidence of traceability, demonstrated by the feed producer, of feed ingredients that make up more than 1% of the feed [50]. **Requirement:** Yes **Applicability:** All	a. Maintain detailed records of all feed suppliers and purchases including contact information and purchase and delivery records. b. Inform each feed supplier in writing of ASC requirements pertaining to production of salmon feeds and send them a copy of the ASC Salmon Standard. c. For each feed producer used by the farm, confirm that an audit of the producer was recently done by an audit firm or CAB against an ASC-acknowledged certification scheme. Obtain a copy of the most recent audit report for each feed producer. d. For each feed producer, determine whether the farm will use method #1 or method #2 (see Instructions above) to show compliance of feed producers. Inform the CAB in writing. e. Obtain declaration from feed supplier(s) stating that the company can assure traceability of all feed ingredients that make up more than 1% of the feed to a level of detail required by the ASC Salmon Standard [50]. -	The only feed supplier is Skretting. The location of the production unit is in Richmond BC. Skretting Canada has GAA BAP certification that includes a traceability element. Valid until 21st October 2018. Cert number IN17/50409. SGS is the CB. Skretting also assures traceability for all ingredients that make up more than 1% of the feed. The feed company has declared that they will be adopting method 2 for mass balance. They also hold certifications such as ISO 9001:2008, HACCP, BAP and Skrettings Nutrace internal standard.	Minor	There are no quantities of Marine Ingredients shown to allow verification, which the ASC compliant ingredients are greater than the non-ASC compliant Marine Ingredients based on option 2 and Mass balance.	
Footnote	[50] Traceability shall be at a level of detail that permits the feed producer to demonstrate compliance with the standards in this document (i.e., marine raw ingredients must be traced back to the fishery, soy to the region grown, etc.). Feed manufacturers will need to supply the farm with third-party documentation of the ingredients covered under this standard.					
Criterion 4.2 Use of wild fish for feed [51]						
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			
Footnote	[51] See Appendix VI for transparency requirements for 4.2.1 and 4.2.2.					
4.2.1	**Indicator**: Fishmeal Forage Fish Dependency Ratio (FFDRm) for grow-out (calculated using formulas in Appendix IV- 1) **Requirement:** < 1.2 **Applicability:** All	**Instruction to Clients for Indicator 4.2.1 - Calculation of FFDRm** Farms must calculate the Fishmeal Forage Fish Dependency Ration (FFDRm) according to formula presented in Appendix IV-1 using data from the most recent complete production cycle. Farms must also show that they have maintained sufficient information in order to make an accurate calculation of FFDRm as outlined below. For first audits, farms may be exempted from compliance with Indicator 4.2.1 for the most recent complete production cycle (i.e. if the FFDRm of the most recent crop was > 1.2) if the farm can satisfactorily demonstrate to the auditor that: - the client understands how to accurately calculate FFDRm; - the client maintains all information needed to accurately calculate FFDRm (i.e. all feed specs for > 6 months) for the current production cycle; and - the client can show how feed used for the current production cycle will ensure that the farm will meet requirements at harvest (i.e. FFDRm < 1.2).				
		a. Maintain a detailed inventory of the feed used including: - Quantities used of each formulation (kg); - Percentage of fishmeal in each formulation used; - Source (fishery) of fishmeal in each formulation used; - Percentage of fishmeal in each formulation derived from trimmings; and - Supporting documentation and signed declaration from feed supplier.	Feed supplier declaration is signed and dated April 25th, 2018. Percentage of fishmeal used, and oil is on the feed bags. Trimmings included 0.39% for meal and 0.56% for oil for feed used in 2017. The 14 species listed are not broken down into whole fish fishery source and trimmings fishery sources. This is the sites first audit, and the 2015-year class is being used to demonstrate compliance. The current eFCR for the site is 1.137. The FFDRm is 0.35.	Compliant		0.35
		b. For FFDRm calculation, exclude fishmeal derived from rendering of seafood by-products (e.g. the "trimmings" from a human consumption fishery.				

		c. Calculate eFCR using formula in Appendix IV-1 (use this calculation also in 4.2.2 option #1).				
		d. Calculate FFDRm using formulas in Appendix IV-1.				
		e. Submit FFDRm to ASC as per Appendix VI for each production cycle.				
4.2.2	**Indicator**: Fish Oil Forage Fish Dependency Ratio (FFDRo) for grow-out (calculated using formulas in Appendix IV-1), or, Maximum amount of EPA and DHA from direct marine sources [52] (calculated according to Appendix IV-2) **Requirement:** FFDRo < 2.52 or (EPA + DHA) < 30 g/kg feed **Applicability:** All	Note: Under Indicator 4.2.2, farms can choose to calculate FFDRo (Option #1) or EPA & DHA (Option #2). Farms do not have to demonstrate that they meet both threshold values. Client shall inform the CAB which option they will use.				
		a. Maintain a detailed inventory of the feed used as specified in 4.2.1a.	Inventory of the Skretting feed used is in place for every site. Trimmings were not excluded from the original calculation, but this was remedied at audit. Option 1 is being used. The FFDRo is currently 1.55 and results have been submitted to ASC.	Compliant		1.55
		b. For FFDRo and EPA+DHA calculations (either option #1 or option #2), exclude fish oil derived from rendering of seafood by-products (e.g. the "trimmings" from a human consumption fishery.				
		c. Inform the CAB whether the farm chose option #1 or option #2 to demonstrate compliance with the requirements of the Standard.				
		d. For option #1, calculate FFDRo using formulas in Appendix IV-1 and using the eFCR calculated under 4.2.1c.				
		e. For option #2, calculate amount of EPA + DHA using formulas in Appendix IV-2.				
		f. Submit FFDRo or EPA & DHA to ASC as per Appendix VI for each production cycle.				
Footnote	[52] Calculation excludes DHA and EPA derived from fisheries by-products and trimmings. Trimmings are defined as by-products when fish are processed for human consumption or if whole fish is rejected for use of human consumption because the quality at the time of landing does not meet official regulations with regard to fish suitable for human consumption. Fishmeal and fish oil that are produced from trimmings can be excluded from the calculation as long as the origin of the trimmings is not any species that are classified as critically endangered, endangered or vulnerable in the IUCN Red List of Threatened Species (http://www.iucnredlist.org).					
	Criterion 4.3 Source of marine raw materials					
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			
4.3.1	**Indicator**: Timeframe for all fishmeal and fish oil used in feed to come from fisheries [53] certified under a scheme that is an ISEAL member [54] and has guidelines that specifically promote responsible environmental management of small pelagic fisheries **Requirement:** Not required **Applicability:** N/A	**NA**				
Footnote	[53] This standard and standard 4.3.2 applies to fishmeal and oil from forage fisheries, pelagic fisheries, or fisheries where the catch is directly reduced (including krill) and not to by-products or trimmings used in feed.					
Footnote	[54] Meets ISEAL guidelines as demonstrated through full membership in the ISEAL Alliance, or equivalent as determined by the Technical Advisory Group of the ASC.					
4.3.2	**Indicator**: Prior to achieving 4.3.1, the FishSource score [55] for the fishery(ies) from which all marine raw material in feed is derived **Requirement:** All individual scores ≥ 6, and biomass score ≥ 6	**Instruction to Clients for Indicator 4.3.2 - FishSource Score of Fish Used in Feed** To determine FishSource scores of the fish species used as feed ingredients, do the following: -go to http://www.fishsource.org/ - type the species into the search function box and choose the accurate fishery -confirm that the search identifies the correct fishery then scroll down or click on the link from the menu on the left reads "Scores" For first audits, farms must have scoring records that cover all feeds purchased during the previous 6-month period. Note: Indicator 4.3.2 applies to fishmeal and oil from forage fisheries, pelagic fisheries, or fisheries where the catch is directly reduced (including krill) and not to by-products or trimmings used in feed.				
		a. Record FishSource score for each species from which fishmeal or fish oil was derived and used as a feed ingredient (all species listed in 4.2.1a).	Skretting provided a table for the species and sources of fishmeal and fish oil and score from Fishsource.org. Geographical areas were also listed. There are 14 species listed on the data provided by the feed company. All 14 species are on the fish source website except for Bullet Tuna (Auxis rochei). However, Bullet Tuna assessment in place for IFFO RS as a by-product and the assessment was conducted September 2017 by SAI Global. The species is of least			
		b. Confirm that each individual score ≥ 6 and the biomass score is ≥ 6.				

	Applicability: All	c. If the species is not on the website it means that a FishSource assessment is not available. Client can then take one or both of the following actions: 1. Contact FishSource via Sustainable Fisheries Partnerships to identify the species as a priority for assessment. 2. Contract a qualified independent third party to conduct the assessment using the FishSource methodology and provide the assessment and details on the third party qualifications to the CAB for review.	concern according to the assessment.	Compliant		
		-				
Footnote	[55] Or equivalent score using the same methodology. See Appendix IV-3 for explanation of FishSource scoring.					
4.3.3	**Indicator**: Prior to achieving 4.3.1, demonstration of third-party verified chain of custody and traceability for the batches of fishmeal and fish oil which are in compliance with 4.3.2. **Requirement:** Yes **Applicability:** All	**Instruction to Clients for Indicator 4.3.3 - Third-Party Verification of Traceability** Indicator 4.3.3 requires that farms show that their feed producers can demonstrate chain of custody and traceability as verified through third-party audits. Farms may submit reports from audits of feed producers (see 4.1.1c) as evidence that traceability systems are in compliance. Alternatively, farms may show that their feed producers comply with traceability requirements of Indicator 4.3.3 by submitting evidence that suppliers, and the batches of fishmeal and oil, are certified to the International Fishmeal and Fish Oil Organization's Global Standard for Responsible Supply or to the Marine Stewardship Council Chain of Custody Standard. For the first audit, a minimum of 6 months of data on feed is required and evidence shall relate to species used in said dataset.				
		a. Obtain from the feed supplier documentary evidence that the origin of all fishmeal and fish oil used in the feed is traceable via a third-party verified chain of custody or traceability program.	Skretting Vancouver is certified under the BAP standard for feed mills. Valid until 21/10/2018. BAP require a verified chain of custody for compliance to their standard for feed ingredients. This is found in indicators 3.1 to 3.5 of the BAP standard.	Compliant		
		b. Ensure evidence covers all the species used (as consistent with 4.3.2a, 4.2.1a, and 4.2.2a).				
4.3.4	**Indicator**: Feed containing fishmeal and/or fish oil originating from by-products [56] or trimmings from IUU [57] catch or from fish species that are categorized as vulnerable, endangered or critically endangered, according to the IUCN Red List of Threatened Species [58], whole fish and fish meal from the same species and family as the species being farmed **Requirement:** None [59] **Applicability:** All except as noted in [59]	a. Compile and maintain, consistent with 4.2.1a and 4.2.2a, a list of the fishery of origin for all fishmeal and fish oil originating from by-products and trimmings.	The 14 species listed are not broken down into whole fish fishery source and trimmings fishery sources. Skretting has a signed declaration that there are no IUU species used. Under Nutreco supplier code of conduct. This is also a BAP requirement that the feed company is certified to. Skretting (Nutreco), under their sustainable procurement policy for Marine products version 2010 state under section 7 criteria that the supplier needs to provide documentation that the meal and oil are IFFO RS or MSC certified. Under section 7.2 of the Skretting (Nutreco) criteria for Marine raw materials, it mentions Endangered or critically endangered but not vulnerable. Skretting has further provided a table showing that no vulnerable species are registered in their list of supplied raw material.	Compliant		
		b. Obtain a declaration from the feed supplier stating that no fishmeal or fish oil originating from IUU catch was used to produce the feed.				
		c. Obtain from the feed supplier declaration that the meal or oil did not originate from a species categorized as vulnerable, endangered or critically endangered, according to the IUCN Red List of Threatened Species [58] and explaining how they are able to demonstrate this (i.e. through other certification scheme or through their independent audit).				
		d. If meal or oil originated from a species listed as "vulnerable" by IUCN, obtain documentary evidence to support the exception as outlined in [59].				
4.3.5	**Indicator:** Presence and evidence of a responsible sourcing policy for the feed manufacturer for marine ingredients that includes a commitment to continuous improvement of source fisheries **Requirement:** Yes **Applicability:** All	a. Request a link to a public policy from the feed manufacturer stating the company's support of efforts to shift feed manufacturers purchases of fishmeal and fish oil to fisheries certified under a scheme that is an ISEAL member and has guidelines that specifically promote responsible environmental management of small pelagic fisheries and committing to continuous improvement of source fisheries.	Nutreco has a supplier code of conduct that is online that includes no IUU and declares responsible sourcing and commitment to the environment. Marine Harvest has a policy on sustainable Salmon feed. It states no IUU and sources must come from MSC or IFFO RS schemes or the fish source scores being greater than 6. It's dated April 2018. The 14 species listed by the feed manufacturer includes Gulf Menhaden (Gulf of Mexico), Blue Whiting (NE Atlantic) and Bullet Tuna (Eastern Pacific).	Compliant		
		b. Prepare a letter stating the farm's intent to source feed containing fishmeal and fish oil originating from fisheries certified under the type of certification scheme noted in indicator 4.3.1.				
		c. Compile a list of the origin of all fish products used as feed ingredients in all feed.				
Footnote	[56] Trimmings are defined as by-products when fish are processed for human consumption or if whole fish is rejected for use of human consumption because the quality at the time of landing does not meet official regulations with regard to fish suitable for human consumption.					
Footnote	[57] IUU: Illegal, Unregulated and Unreported.					
Footnote	[58] The International Union for the Conservation of Nature reference can be found at http://www.iucnredlist.org/.					
Footnote	[59] For species listed as "vulnerable" by IUCN, an exception is made if a regional population of the species has been assessed to be not vulnerable in a National Red List process that is managed explicitly in the same science-based way as IUCN. In cases where a National Red List doesn't exist or isn't managed in accordance with IUCN guidelines, an exception is allowed when an assessment is conducted using IUCN's methodology and demonstrates that the population is not vulnerable.					
Criterion 4.4 Source of non-marine raw materials in feed						

		Compliance Criteria (Required Client Actions):	Auditor Evaluation (Required CAB Actions):			
4.4.1	**Indicator**: Presence and evidence of a responsible sourcing policy for the feed manufacturer for feed ingredients that comply with recognized crop moratoriums [60] and local laws [61] **Requirement:** Yes **Applicability:** All	a. Compile and maintain a list of all feed suppliers with contact information. (See also 4.1.1a) b. Obtain from each feed manufacturer a copy of the manufacturer's responsible sourcing policy for feed ingredients showing how the company complies with recognized crop moratoriums and local laws. c. Confirm that third party audits of feed suppliers (4.1.1c) show evidence that supplier's responsible sourcing policies are implemented.	The Client uses only Skretting feed. Skretting is part of the Nutreco group, and a vendor policy is in a place where all suppliers must sign applicable declarations guaranteeing source. Skretting is BAP certified until October 2018. BAP has a similar principle in place.	Compliant		
Footnote	[60] Moratorium: A period of time in which there is a suspension of a specific activity until future events warrant a removal of the suspension or issues regarding the activity have been resolved. In this context, moratoriums may refer to suspension of the growth of defined agricultural crops in defined geographical regions.					
Footnote	[61] Specifically, the policy shall include that vegetable ingredients, or products derived from vegetable ingredients, must not come from areas of the Amazon Biome that were deforested after July 24, 2006, as geographically defined by the Brazilian Soy Moratorium. Should the Brazilian Soy Moratorium be lifted, this specific requirement shall be reconsidered.					
4.4.2	**Indicator**: Percentage of soya or soya-derived ingredients in the feed that are certified by the Roundtable for Responsible Soy (RTRS) or equivalent [62] **Requirement:** 100% **Applicability:** All	a. Prepare a policy stating the company's support of efforts to shift feed manufacturers' purchases of soya to soya certified under the Roundtable for Responsible Soy (RTRS) or equivalent. b. Prepare a letter stating the farm's intent to source feed containing soya certified under the RTRS (or equivalent) c. Notify feed suppliers of the farm's intent (4.4.2b). d. Obtain and maintain declaration from feed supplier(s) detailing the origin of soya in the feed. e. Provide evidence that soya used in feed is certified by the Roundtable for Responsible Soy (RTRS) or equivalent [62]	Declaration from the supplier Archer Daniels Midland Company with a membership status of RTRS0066 and is found on the Responsible soy website. The source region is South America of the countries Brazil, Bolivia, Paraguay, Uruguay and Argentina.	Compliant		
Footnote	[62] Any alternate certification scheme would have to be approved as equivalent by the Technical Advisory Group of the ASC.					
4.4.3	**Indicator**: Evidence of disclosure to the buyer [63] of the salmon of inclusion of transgenic [64] plant raw material, or raw materials derived from transgenic plants, in the feed **Requirement:** Yes, for each individual raw material containing > 1% transgenic content [65] **Applicability:** All	a. Obtain from feed supplier(s) a declaration detailing the content of soya and other plant raw materials in feed and whether it is transgenic. b. Disclose to the buyer(s) a list of any transgenic plant raw material in the feed and maintain documentary evidence of this disclosure. For first audits, farm records of disclosures must cover > 6 months. c. Inform ASC whether feed contains transgenic ingredients (yes or no) as per Appendix VI for each production cycle.	There is a supplier quality assurance letter, sent to customers, that is used to declare that there may be transgenic plant material used in the feed.	Compliant		
Footnote	[63] The company or entity to which the farm or the producing company is directly selling its product. This standard requires disclosure by the feed company to the farm and by the farm to the buyer of their salmon.					
Footnote	[64] Transgenic: Containing genes altered by insertion of DNA from an unrelated organism. Taking genes from one species and inserting them into another species to get that trait expressed in the offspring.					
Footnote	[65] See Appendix VI for transparency requirement for 4.4.3.					
	Criterion 4.5 Non-biological waste from production					
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			
4.5.1	**Indicator**: Presence and evidence of a functioning policy for proper and responsible [66] treatment of non-biological waste from production (e.g., disposal and recycling) **Requirement:** Yes **Applicability:** All	a. Prepare a policy stating the farm's commitment to proper and responsible treatment of non-biological waste from production. It must explain how the farm's policy is consistent with best practice in the area of operation. b. Prepare a declaration that the farm does not dump non-biological waste into the ocean. c. Provide a description of the most common production waste materials and how the farm ensures these waste materials are properly disposed of. d. Provide a description of the types of waste materials that are recycled by the farm.	Materials storage and waste disposal plan SFW 963. The declaration is in the plan, and it refers to the ASC standard. Each site has separation of waste for recycling purposes, and this includes domestic and industrial waste. Cages are re-purposed, ropes go for recycling, plastics and batteries are all recycled.	Compliant		
Footnote	[66] Proper and responsible disposal will vary based on facilities available in the region and remoteness of farm sites. Disposal of non-biological waste shall be done in a manner consistent with best practice in the area. Dumping of non-biological waste into the ocean does not represent “proper and responsible” disposal.					

4.5.2	**Indicator**: Evidence that non-biological waste (including net pens) from grow-out site is either disposed of properly or recycled **Requirement:** Yes **Applicability:** All	a. Provide a description of the most common production waste materials and how the farm ensures these waste materials are properly disposed of. (see also 4.5.1c) b. Provide a description of the types of waste materials that are recycled by the farm. (See also 4.5.1d) c. Inform the CAB of any infractions or fines for improper waste disposal received during the previous 12 months and corrective actions taken.. d. Maintain records of disposal of waste materials including old nets and cage equipment.	Nets ropes and other production equipment are also included but would not occur as often as the packing materials. The company has a website for used equipment sales www.marineharvestusedsales.com. Disposal forms are used by the site managers when equipment is being de-commissioned, and there is a column for describing what happens to the item, i.e. either sold, recycled or donated. Equipment is also donated to enhancement facilities. There was no evidence of waste build up on the site. Waste such as pallets, feed bags and plastic is returned to shore via the feed delivery boat. The delivery docket supplied with the feed itemises the removal quantities of wooden pallets, plastic liners and feed bags.	Compliant		
Criterion 4.6 Energy consumption and greenhouse gas emissions on farms [67]						
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			
Footnote	[67] See Appendix VI for transparency requirements for 4.6.1, 4.6.2 and 4.6.3.					
4.6.1	**Indicator**: Presence of an energy use assessment verifying the energy consumption on the farm and representing the whole life cycle at sea, as outlined in Appendix V- 1 **Requirement:** Yes, measured in kilojoule/t fish produced/production cycle **Applicability:** All	**Instruction to Clients for Indicator 4.6.1 - Energy Use Assessment** Indicator 4.6.1 requires that farms must have an assessment to verify energy consumption. The scope of this requirement is restricted to operational energy use for the farm site(s) that is applying for certification. Boundaries for operational energy use should correspond to the sources of Scope 1 and Scope 2 emissions (see Appendix V-1). Energy use corresponding to Scope 3 emissions (i.e. the energy used to fabricate materials that are purchased by the farm) is not required. However the SAD Steering Committee encourages companies to integrate energy use assessments across the board in the company. For the purposes of calculating energy consumption, the duration of the production cycle is the entire life cycle "at sea" - it does not include freshwater smolt production stages. Farms that have integrated smolt rearing should break out the grow-out stage portion of energy consumption if possible. Quantities of energy (fuel and electricity) are converted to kilojoules. Verification is done by internal or external assessment following either the GHG Protocol Corporate Standard or ISO 14064-1 (see Appendix V-1 for more details).				
		a. Maintain records for energy consumption by source (fuel, electricity) on the farm throughout each production cycle. b. Calculate the farm's total energy consumption in kilojoules (kj) during the last production cycle. c. Calculate the total weight of fish in metric tons (t) produced during the last production cycle. d. Using results from 4.6.1b and 4.6.1c, calculate energy consumption on the farm as required, reported as kilojoule/mt fish/production cycle. e. Submit results of energy use calculations (4.6.1d) to ASC as per Appendix VI for each production cycle. f. Ensure that the farm has undergone an energy use assessment that was done in compliance with requirements of Appendix V-1.	There is a GHG Energy assessment excel sheet used. Items recorded include petrol, Diesel and gas (propane). The total energy used to the end of February was 1,901,095,236 Kj.	Compliant		
4.6.2	**Indicator**: Records of greenhouse gas (GHG [68]) emissions [69] on farm and evidence of an annual GHG assessment, as outlined in Appendix V-1 **Requirement:** Yes **Applicability:** All	**Instruction to Clients for Indicator 4.6.2 - Annual GHG Assessment** Indicator 4.6.2 requires that farms must have an annual Greenhouse Gas (GHG) assessment. Detailed instructions are presented in Appendix V-1 and references therein. The scope of this requirement is restricted to operational boundaries for the farm site(s) that is applying for certification. However the SAD Steering Committee encourages companies to integrate GHG accounting practices across the board in the company. Verification may be done by internal or external assessment following either the GHG Protocol Corporate Standard or ISO 14064-1 (see Appendix V-1 for more details). Note: For the purposes of this standard, GHGs are defined as the six gases listed in the Kyoto Protocol: carbon dioxide (CO_2); methane (CH_4); nitrous oxide (N_2O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulphur hexafluoride (SF_6).				
		a. Maintain records of greenhouse gas emissions on the farm. b. At least annually, calculate all scope 1 and scope 2 GHG emissions in compliance with Appendix V-1. c. For GHG calculations, select the emission factors which are best suited to the farm's operation. Document the source of those emissions factors. d. For GHG calculations involving conversion of non-CO_2 gases to CO_2 equivalents, specify the Global Warming Potential (GWP) used and its source. e. Submit results of GHG calculations (4.6.2d) to ASC as per Appendix VI at least once per year.	Records are maintained using the DEFRA diagnostic tool database. The original GHG calculations and the GWP conversions all originated from DEFRA in the UK where Scotland has been using these calculations for longer than Canada. The greenhouse gas emissions to date are 129,107 mT/Co2 equivalents	Compliant		

		f. Ensure that the farm undergoes a GHG assessment as outlined in Appendix V-1 at least annually.				
Footnote	[68] For the purposes of this standard, GHGs are defined as the six gases listed in the Kyoto Protocol: carbon dioxide (CO_2); methane (CH4); nitrous oxide (N_2O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulphur hexafluoride (SF_6).					
Footnote	[69] GHG emissions must be recorded using recognized methods, standards and records as outlined in Appendix V.					
4.6.3	**Indicator**: Documentation of GHG emissions of the feed [70] used during the previous production cycle, as outlined in Appendix V, subsection 2 **Requirement:** Yes **Applicability:** All	**Instruction to Clients for Indicator 4.6.3 - GHG Emissions of Feed** Indicator 4.6.3 requires that farms document the greenhouse gas emissions (GHG) associated with any feeds used during salmon production. Farms will need to obtain this information from their feed supplier(s) and thereafter maintain a continuous record of Feed GHG emissions throughout all production cycles. This requirement applies across the entire previous production cycle. Therefore farms should inform their feed supplier(s) and: - the farm provides its feed suppliers with detailed information about the requirements including a copy of the methodology outlined in Appendix V, subsection 2; - the farm explain what analyses must be done by feed suppliers; and - the farm explains to feed suppliers what documentary evidence will be required by the farm to demonstrate compliance. Note1: Farms may calculate GHG emissions of feed using the average raw material composition used to produce the salmon (by weight) rather than using feed composition on a lot-by-lot basis. Note2: Feed supplier's calculations must include Scope 1, Scope 2, and Scope 3 GHG emissions as specified in Appendix V, subsection 2.				
		a. Obtain from feed supplier(s) a declaration detailing the GHG emissions of the feed (per kg feed).	The requirement was communicated to the feed company Skretting. The company has only supplied the scope one emissions is 3.83kg CO2 per Kg of feed produced. For this cycle to date the GHG emissions 6,376,884 kg CO2 equivalents.	Compliant		
		b. Multiply the GHG emissions per unit feed by the total amount of feed from each supplier used in the most recent completed production cycle.				
		c. If client has more than one feed supplier, calculate the total sum of emissions from feed by summing the GHG emissions of feed from each supplier.				
		d. Submit GHG emissions of feed to ASC as per Appendix VI for each production cycle.				
Footnote	[70] GHG emissions from feed can be given based on the average raw material composition used to produce the salmon (by weight) and not as documentation linked to each single product used during the production cycle. Feed manufacturer is responsible for calculating GHG emissions per unit feed. Farm site then shall use that information to calculate GHG emissions for the volume of feed they used in the prior production cycle.					
Criterion 4.7 Non-therapeutic chemical inputs [71,72]						
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			
Footnote	[71] Closed production systems that do not use nets and do not use antifoulants shall be considered exempt from standards under Criterion 4.7.					
Footnote	[72] See Appendix VI for transparency requirements for 4.7.1, 4.7.3 and 4.7.4.					
4.7.1	**Indicator**: For farms that use copper-treated nets [73], evidence that nets are not cleaned [74] or treated in situ in the marine environment **Requirement:** Yes **Applicability:** All farms except as noted in [71]	a. Prepare a farm procedure for net cleaning and treatment that describes techniques, technologies, use of off-site facilities, and record keeping.	No copper nets are used. This was verified during the site visit.	N/A		
		b. Maintain records of antifoulants and other chemical treatments used on nets.				
		c. Declare to the CAB whether copper-based treatments are used on nets.				
		d. If copper-based treatments are used, maintain documentary evidence (see 4.7.1b) that farm policy and practice does not allow for heavy cleaning of copper-treated nets in situ.				
		e. Inform ASC whether copper antifoulants are used on farm (yes or no) as per Appendix VI for each production cycle.				
Footnote	[73] Under the SAD, "copper-treated net" is defined as a net that has been treated with any copper-containing substance (such as a copper-based antifoulant) durng the previous 18 months, or has not undergone thorough cleaning at a land-based facility since the last treatment. Farms that use nets that have, at some point prior in their lifespan, been treated with copper may still consider nets as untreated so long as sufficient time and cleaning has elapsed as in this definition. This will allow farms to move away from use of copper without immediately having to purchase all new nets.					
Footnote	[74] Light cleaning of nets is allowed. Intent of the standard is that, for example, the high-pressure underwater washers could not be used on copper treated nets under this standard because of the risk of copper flaking off during this type of heavy or more thorough cleaning.					
4.7.2	**Indicator**: For any farm that cleans nets at on-land sites, evidence that net-cleaning sites have effluent treatment [75] **Requirement:** Yes	a. Declare to the CAB whether nets are cleaned on-land.	Insitu net cleaning is carried out on the site using a RONC.	N/A		
		b. If nets are cleaned on-land, obtain documentary evidence from each net-cleaning facility that effluent treatment is in place.				

	Applicability: All farms except as noted in [71]	c. If yes to 4.7.2b, obtain evidence that effluent treatment used at the cleaning site is an appropriate technology to capture of copper in effluents.				
Footnote	[75] Treatment must have appropriate technologies in place to capture copper if the farm uses copper-treated nets.					
4.7.3	**Indicator**: For farms that use copper nets or copper-treated nets, evidence of testing for copper level in the sediment outside of the AZE, following methodology in Appendix I-1 **Requirement:** Yes **Applicability:** All farms except as noted in [71]	Note: If the benthos throughout and immediately outside the full AZE is hard bottom, provide evidence to the CAB and request an exemption from Indicator 4.7.3 (see 2.1.1c).				
		a. Declare to the CAB whether the farm uses copper nets or copper-treated nets. (See also 4.7.1c). If "no", Indicator 4.7.3 does not apply.	No copper nets are used. This was verified during the site visit.	N/A		
		b. If "yes" in 4.7.3a, measure and record copper in sediment samples from the reference stations specified in 2.1.1d and 2.1.2c which lie outside the AZE.				
		c. If "yes" in 4.7.3a, maintain records of testing methods, equipment, and laboratories used to test copper level in sediments from 4.7.3b.				
4.7.4	**Indicator**: Evidence that copper levels [76] are < 34 mg Cu/kg dry sediment weight, or, in instances where the Cu in the sediment exceeds 34 mg Cu/kg dry sediment weight, demonstration that the Cu concentration falls within the range of background concentrations as measured at three reference sites in the water body **Requirement:** Yes **Applicability:** All farms except as noted in [71] and excluding those farms shown to be exempt from Indicator 4.7.3	a. Inform the CAB whether: 1) farm is exempt from Indicator 4.7.4 (as per 4.7.3a), or 2) Farm has conducted testing of copper levels in sediment.	No copper nets are used. This was verified during the site visit.	N/A		
		b. Provide evidence from measurements taken in 4.7.3b that copper levels are < 34 mg Cu/kg dry sediment weight.				
		c. If copper levels in 4.7.4b are ≥ 34 mg Cu/kg dry sediment weight, provide evidence the farm tested copper levels in sediments from reference sites as described in Appendix I-1 (also see Indicators 2.1.1 and 2.1.2).				
		d. Analyze results from 4.7.4c to show the background copper concentrations as measured at three reference sites in the water body.				
		e. Submit data on copper levels in sediments to ASC as per Appendix VI for each production cycle.				
Footnote	[76] According to testing required under 4.7.3. The standards related to testing of copper are only applicable to farms that use copper-based nets or copper-treated nets.					
4.7.5	**Indicator**: Evidence that the type of biocides used in net antifouling are approved according to legislation in the European Union, or the United States, or Australia **Requirement:** Yes **Applicability:** All farms except as noted in [71]	a. Identify all biocides used by the farm in net antifouling.	No antifouling is used.	N/A		
		b. Compile documentary evidence to show that each chemical used in 4.7.5a is approved according to legislation in one or more of the following jurisdictions: the European Union, the United States, or Australia.				
PRINCIPLE 5: MANAGE DISEASE AND PARASITES IN AN ENVIRONMENTALLY RESPONSIBLE MANNER						
Criterion 5.1 Survival and health of farmed fish [77]						
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			
Footnote	[77] See Appendix VI for transparency requirements for 5.1.4, 5.1.5 and 5.1.6.					
5.1.1	**Indicator**: Evidence of a fish health management plan for the identification and monitoring of fish diseases, parasites and environmental conditions relevant for good fish health, including implementing corrective action when required **Requirement:** Yes **Applicability:** All	a. Prepare a fish health management plan that incorporates components related to identification and monitoring of fish disease and parasites. This plan may be part of a more comprehensive farm planning document.	Fish health management plan dated October 2017. The updates include requirements for moving fish and refers to the SOP's SW955, SW 138, SW 819 and FW 260. The plan is submitted to the DFO for part of the licence requirements. The Fish health plan was approved by Diane Morrison DVM the company Vet in October 2017.	Minor	The Veterinary health plan advises the removal of moribund fish and they should be humanely euthanized however there is no appropriate tool or method in place on site for this action.	
		b. Ensure that the farm's current fish health management plan was reviewed and approved by the farm's designated veterinarian [78].				
5.1.2	**Indicator**: Site visits by a designated veterinarian [78] at least four times a year, and by a fish health manager [79] at least once a month **Requirement:** Yes **Applicability:** All	a. Maintain records of visits by the designated veterinarian [78] and fish health managers [82]. If schedule cannot be met, a risk assessment must be provided.	The health unit maintains a record of all health visits on a database. This records site records, comments, the number of fish examined and tests done. External lab results are linked to the results. Diane Morrison, DVM, Fish health and food safety director. The other fish health managers employed and their initials appear on the database. Diane Morrison, DVM. Checked qualifications for Diane who has been a vet since 1992. There is one other vet and three other fish health team members all based in Campbell River. The last veterinarian visit was on February 8th, 2018. There was also a previous Vet inspection on November 16th.	Compliant		
		b. Maintain a current list of personnel who are employed as the farm's designated veterinarian(s) [78] and fish health manager(s) [79].				
		c. Maintain records of the qualifications of persons identified in 5.1.2b.				
Footnote	[78] A designated veterinarian is the professional responsible for health management on the farm who has the legal authority to diagnose disease and prescribe medication. In some countries such as Norway, a fish health biologist or other professional has equivalent professional qualifications and is equivalent to a veterinarian for purposes of these standards. This definition applies to all references to a veterinarian throughout the standards document.					

Footnote	[79] A fish health manager is someone with professional expertise in managing fish health, who may work for a farming company or for a veterinarian, but who does not necessarily have the authority to prescribe medicine.					
5.1.3	**Indicator**: Percentage of dead fish removed and disposed of in a responsible manner **Requirement:** 100% [80] **Applicability:** All	a. Maintain records of mortality removals to show that dead fish are removed regularly and disposed of in a responsible manner. b. Collect documentation to show that disposal methods are in line with practices recommended by fish health managers and/or relevant legal authorities. c. For any exceptional mortality event where dead fish were not collected for post-mortem analysis, keep a written justification.	There are Mortality Collection and disposal procedure for Marine sites SW 124. This procedure cover classification, records and disease outbreak. Mortality records were reviewed on site during the visit. Mortalities are placed into totes and put onto a tote barge adjacent to the farm. The farm updates the information database on the number of totes full of morts and this triggers a pickup from the site if the mort totes are full. Following removal, to the land site, the mortalities are transported to a company called Seasoil / Foenix Forest technology and is used for a composted product called Seasoil. Removal of mortalities on May 26th. Invoice number 3615.	Compliant		
Footnote	[80] The SAD recognizes that not all mortality events will result in dead fish present for collection and removal. However, such situations are considered the exception rather than the norm.					
5.1.4	**Indicator**: Percentage of mortalities that are recorded, classified and receive a post-mortem analysis **Requirement:** 100% [81] **Applicability:** All	Note: Farms are required to maintain mortality records from the current and two previous production cycles. For first audit, records for the current and prior production cycle are required. It is recommended that farms maintain a compiled set of records to demonstrate compliance with 5.1.3 - 5.1.6. a. Maintain detailed records for all mortalities and post-mortem analyses including: - date of mortality and date of post-mortem analysis; - total number of mortalities and number receiving post-mortem analysis; - name of the person or lab conducting the post-mortem analyses; - qualifications of the individual (e.g. veterinarian [78], fish health manager [79]); - cause of mortality (specify disease or pathogen) where known; and - classification as 'unexplained' when cause of mortality is unknown (see 5.1.6). b. For each mortality event, ensure that post-mortem analyses are done on a statistically relevant number of fish and keep a record of the results. c. If on-site diagnosis is inconclusive and disease is suspected or results are inconclusive over a 1-2 week period, ensure that fish are sent to an off-site laboratory for diagnosis and keep a record of the results (5.1.4a). d. Using results from 5.1.3a-c, classify each mortality event and keep a record of those classifications. e. Provide additional evidence to show how farm records in 5.1.4a-d cover all mortalities from the current and previous two production cycles (as needed). f. Submit data on numbers and causes of mortalities to ASC as per Appendix VI on an ongoing basis (i.e. at least once per year and for each production cycle).	The mortality records on the farm were reviewed along with the protocols for assigning the cause of mortality. Daily mort checks are carried out using uplifts on the site. All the staff have been trained in assigning reasons for mortality. The vet confirmed that he does this onsite training with the staff. Staff interviews confirmed this. Unknown reasons for mortality or assigning disease not previously diagnosed must be referred to the fish health team. Mort sheets have all required information to allow assignation of mortality reasons. The offsite lab used is only when unknown mortalities need to be assessed. The lab is situated in Campbell River. Third party labs can also be used such as Centre for Aquatic Health Sciences in Campbell River.	Compliant		
Footnote	[81] If on-site diagnosis is inconclusive, this standard requires off-site laboratory diagnosis. A qualified professional must conduct all diagnosis. One hundred percent of mortality events shall receive a post-mortem analysis, not necessarily every fish. A statistically relevant number of fish from the mortality event shall be analyzed.					
5.1.5	**Indicator**: Maximum viral disease-related mortality [82] on farm during the most recent production cycle **Requirement:** ≤ 10% **Applicability:** All	a. Calculate the total number of mortalities that were diagnosed (see 5.1.4) as being related to viral disease. b. Combine the results from 5.1.5a with the total number of unspecified and unexplained mortalities from the most recent complete production cycle. Divide this by the total number of fish produced in the production cycle (x100) to calculate percent maximum viral disease-related mortality. c. Submit data on total mortality and viral disease-related mortality to ASC as per Appendix VI on an ongoing basis (i.e. at least once per year and for each production cycle).	There have been no viral mortalities reported in the just recently harvested crop. There have been 1.66% unexplained deaths in this cycle. N=4,578 fish.	Compliant		1.66%
Footnote	[82] Viral disease-related mortality count shall include unspecified and unexplained mortality as it could be related to viral disease.					
5.1.6	**Indicator**: Maximum unexplained mortality rate from each of the previous two production cycles, for farms with total mortality > 6% **Requirement:** ≤ 40% of total mortalities **Applicability:** All farms with > 6% total mortality in the	a. Use records in 5.1.4a to calculate the unexplained mortality rate (%) for the most recent full production cycle. If rate was ≤ 6%, then the requirement of 5.1.6 does not apply. If total mortality rate was > 6%, proceed to 5.1.6b. b. Calculate the unexplained mortality rate (%) for each of the two production cycles immediately prior to the current cycle. For first audit, calculation must cover one full production cycle immediately prior to the current cycle.	This is the first audit for this site with no previous cycles in place.	N/A		NA

	most recent complete production cycle.	c. Submit data on maximum unexplained mortality to ASC as per Appendix VI for each production cycle.				
5.1.7	**Indicator**: A farm-specific mortalities reduction program that includes defined annual targets for reductions in mortalities and reductions in unexplained mortalities **Requirement:** Yes **Applicability:** All	Note: Farms have the option to integrate their farm-specific mortality reduction program into the farm's fish health management plan (5.1.1). a. Use records in 5.1.4a to assemble a time-series dataset on farm-specific mortalities rates and unexplained mortality rates. b. Use the data in 5.1.7a and advice from the veterinarian and/or fish health manager to develop a mortalities-reduction program that defines annual targets for reductions in total mortality and unexplained mortality. c. Ensure that farm management communicates with the veterinarian, fish health manager, and staff about annual targets and planned actions to meet targets.	The company uses a spreadsheet to recorded monthly mortalities in both percentage terms for count and Biomass. Done on an overall company basis and based on historical information and how each site has produced in the past. Updated regularly in real time. This is done company wide and per site. There is a companywide reduction plan and targets set for the production. The current target set for 2018 is for 90% survival. This is up from 2011 when the target set was 86%. Mort causes include Plankton, winter lesions and on some site jellyfish. It depends on the area. The plan indicates that that plankton mitigation measures and monitoring are taking place. Plans are broken down to their KPIs on each site. There are weekly tactical meetings for the staff on the site. There are bonuses set for each site depending on criteria such as survival, FCR, cost etc.	Compliant		
		Criterion 5.2 Therapeutic treatments [83]				
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			
Footnote	[83] See Appendix VI for transparency requirements for 5.2.1, 5.2.5, 5.2.6 and 5.2.10.					
Instruction to Clients and CABs for Criterion 5.2 - Records Related to Therapeutic Treatments Indicator 5.2.1 requires that farms maintain detailed record of all chemical and therapeutant use. Those records maintained for compliance with 5.2.1, if all consolidated into a single place, can be used to demonstrate performance against subsequent Indicators (5.2.1 through 5.2.10) under Criterion 5.2.						
5.2.1	**Indicator**: On-farm documentation that includes, at a minimum, detailed information on all chemicals [84] and therapeutants used during the most recent production cycle, the amounts used (including grams per ton of fish produced), the dates used, which group of fish were treated and against which diseases, proof of proper dosing, and all disease and pathogens detected on the site **Requirement:** Yes **Applicability:** All	a. Maintain a detailed record of all chemical and therapeutant use that includes: - name of the veterinarian prescribing treatment; - product name and chemical name; - reason for use (specific disease) - date(s) of treatment; - amount (g) of product used; - dosage; - t of fish treated; - the WHO classification of antibiotics (also see note under 5.2.8); and - the supplier of the chemical or therapeutant. b. If not already available, assemble records of chemical and therapeutant use to address all points in 5.2.1a for the previous two production cycles. For first audits, available records must cover one full production cycle immediately prior to the current cycle. c. Submit information on therapeutant use (data from 5.2.1a) to ASC as per Appendix VI on an ongoing basis (i.e. at least once per year and for each production cycle).	There have been no antibiotic treatments in Heath Bay. The fish were on an intermediate site called Bell Harbour in the March 2017 and were moved to Heath in September /October. The fish had one Antibiotic treatment for Mouthrot while in Bell Island. While being moved from Bell to Heath the fish had a Hydrogen Peroxide treatment in the Well boat while on Heath they have had a SLICE treatment in December 2017.	Compliant		
Footnote	[84] Chemicals used for the treatment of fish.					
5.2.2	**Indicator**: Allowance for use of therapeutic treatments that include antibiotics or chemicals that are banned [85] in any of the primary salmon producing or importing countries [86] **Requirement:** None **Applicability:** All	a. Prepare a list of therapeutants, including antibiotics and chemicals, that are proactively banned for use in food fish for the primary salmon producing and importing countries listed in [86]. b. Maintain records of voluntary and/or mandatory chemical residue testing conducted or commissioned by the farm from the prior and current production cycles. -	Marine Harvest International has an extensive list of countries and their allowable and unallowable contaminants, drugs and microbiology and statutory limits for fish for all these growing areas. This database is updated when a country changes its limits by anybody in the Marine harvest organisation that has the current information. Every possible worldwide therapeutant is listed. Marine Harvest Canada also have a medicine positive list showing drugs allowable however in the case of Tribrissen even though its allowed MHC no longer uses it for the US market. Even though there is a positive list, it does not mean that the treatments are used. Following the use and a therapeutant, the Aquafarmer system locks in place the withdrawal time. Time is documented on the prescriptions. Maxxam in Vancouver carries out residue testing for each site prior to harvest. They are accredited to Standards Council of Canada no. 117. Testing is mandatory from CFIA.	Compliant		
Footnote	[85] "Banned" means proactively prohibited by a government entity because of concerns around the substance. A substance banned in any of the primary salmon-producing or importing countries, as defined here, cannot be used in any salmon farm certified under the SAD, regardless of country of production or destination of the product. The SAD recommends that ASC maintain a list of a banned therapeutants.					
Footnote	[86] For purposes of this standard, those countries are Norway, the UK, Canada, Chile, the United States, Japan and France.					

5.2.3	**Indicator**: Percentage of medication events that are prescribed by a veterinarian **Requirement:** 100% **Applicability:** All	a. Obtain prescription for all therapeutant use in advance of application from the farm veterinarian (or equivalent, see [78] for definition of veterinarian). b. Maintain copies of all prescriptions and records of veterinarian responsible for all medication events. Records can be kept in conjunction with those for 5.2.1 and should be kept for the current and two prior production cycles.	The farm has the original prescription located in the drug record file on site as required by its DFO operating licence. All the prescriptions for the current year class were reviewed during the site visit. Reviewed prescription DM18-007. Dated 6th February 2018. Hydrogen Peroxide treatment for AGD which was conducted on the well boat and a copy of the prescription is kept onsite.	Compliant		
5.2.4	**Indicator**: Compliance with all withholding periods after treatments **Requirement:** Yes **Applicability:** All	a. Incorporate withholding periods into the farm's fish health management plan (see 5.1.1a). b. Compile and maintain documentation on legally-required withholding periods for all treatments used on-farm. Withholding period is the time interval after the withdrawal of a drug from the treatment of the salmon before the salmon can be harvested for use as food. c. Show compliance with all withholding periods by providing treatment records (see 5.2.1a) and harvest dates for the most recent production cycle.	Health Canada website lists all drugs allowed for use in the culture of fish for food and includes details of withdrawal periods. http://www.hc-sc.gc.ca/dhp-mps/vet/legislation/pol/aquaculture_anim-eng.php The prescriptions include the withdrawal period that is placed onto Aquafarmer so that the fish cannot be selected for harvest until the period has expired.	Compliant		
5.2.5	**Indicator**: Maximum farm level cumulative parasiticide treatment index (PTI) score as calculated according to the formula in Appendix VII **Requirement:** PTI score ≤ 13 **Applicability:** All	a. Using farm data for therapeutants usage (5..2.1a) and the formula presented in Appendix VII, calculate the cumulative parasiticide treatment index (PTI) score for the most recent production cycle. Calculation should be made and updated on an ongoing basis throughout the cycle by farm manager, fish health manager, and/or veterinarian. b. Provide the auditor with access to records showing how the farm calculated the PTI score. c. Submit data on farm level cumulative PTI score to ASC as per Appendix VI for each production cycle.	The calculation took into account all therapeutant use. The site has had one scoring treatment of SLICE, so the PTI is 3.2.	Compliant		3.2
5.2.6	**Indicator**: For farms with a cumulative PTI ≥ 6 in the most recent production cycle, demonstration that parasiticide load [87] is at least 15% less that of the average of the two previous production cycles **Requirement:** Yes **Applicability:** All farms with a cumulative PTI ≥ 6 in the most recent production cycle	a. Review PTI scores from 5.2.5a to determine if cumulative PTI ≥ 6 in the most recent production cycle. If yes, proceed to 5.2.6b; if no, Indicator 5.2.6 does not apply. b. Using results from 5.2.5 and the weight of fish treated (kg), calculate parasiticide load in the most recent production cycle [90]. c. Calculate parasiticide load in the two previous production cycles as above (5.2.6b) and compute the average. Calculate the percent difference in parasiticide load between current cycle and average of two previous cycles. For first audit, calculation must cover one full production cycle immediately prior to the current cycle. d. As applicable, submit data to ASC on parasiticide load for the most recent production cycle and the two previous production cycles (Appendix VI).	PTI is below 6.	N/A		<6
Footnote	[87] Parasiticide load = Sum (kg of fish treated x PTI). Reduction in load required regardless of whether production increases on the site. Farms that consolidate production across multiple sites within an ABM can calculate reduction based on the combined parasiticide load of the consolidated sites.					
5.2.7	**Indicator**: Allowance for prophylactic use of antimicrobial treatments [88] **Requirement:** None **Applicability:** All	a. Maintain records for all purchases of antibiotics (invoices, prescriptions) for the current and prior production cycles. b. Maintain a detailed log of all medication-related events (see also 5.2.1a and 5.2.3) c. Calculate the total amount (g) and treatments (#) of antibiotics used during the current and prior production cycles (see also 5.2.9).	Prescriptions available and reviewed on site as required by DFO and licencing. Logs are present. Treatments can be observed on the Aquafarmer program and the fish health files. Antibiotic use has been detailed elsewhere in the report. DFO also visit the sites for fish health purposes and review the prescriptions. The last visit was April 11th.	Compliant		
Footnote	[88] The designated veterinarian must certify that a pathogen or disease is present before prescribing medication.					
	Indicator: Allowance for use of antibiotics listed as critically important for human medicine by the World Health Organization (WHO [89])	Note 1: Farms have the option to certify only a portion of the fish or farm site when WHO-listed [89] antibiotics have been used at the production facility (see 5.2.8d). To pursue this option, farms must request an exemption from the CAB in advance of the audit and provide sufficient records giving details on which pens were treated and traceability of those treated fish. Note 2: It is recommended that the farm veterinarian review the WHO list [see 89] in detail and be aware that the list is meant to show examples of members of each class of drugs, and is not inclusive of all drugs.				
		a. Maintain a current version of the WHO list of antimicrobials critically and highly important for human health [89].	The company uses the WHO website on critically important antimicrobials for human medicine. Checked florfenicol use and its classed as highly important and not of critical importance.			

5.2.8	Health Organization (WHO [89]) **Requirement:** None [90] **Applicability:** All	b. If the farm has <u>not</u> used any antibiotics listed as critically important (5.2.8a) in the current production cycle, inform the CAB and proceed to schedule the audit. c. If the farm <u>has</u> used antibiotics listed as critically important (5.2.8a) to treat any fish during the current production cycle, inform the CAB prior to scheduling audit. d. If yes to 5.2.8c, request an exemption from the CAB to certify only a portion of the farm. Prior to the audit, provide the CAB with records sufficient to establish details of treatment, which pens were treated, and how the farm will ensure full traceability and separation of treated fish through and post- harvest.		Compliant		
Footnote	[89] The fifth edition of the WHO list of critically and highly important antimicrobials was released in 2009 and is available at: http://www.who.int/foodsafety/publications/antimicrobials-fifth/en/.					
Footnote	[90] If the antibiotic treatment is applied to only a portion of the pens on a farm site, fish from pens that did not receive treatment are still eligible for certification.					
5.2.9	**Indicator**: Number of treatments [91] of antibiotics over the most recent production cycle **Requirement:** ≤ 3 **Applicability:** All	Note: for the purposes of Indicator 5.2.9, "treatment" means a single course of medication given to address a specific disease issue and that may last a number of days and be applied in one or more pens (or cages). a. Maintain records of all treatments of antibiotics (see 5.2.1a). For first audits, farm records must cover the current and immediately prior production cycles in a verifiable statement. b. Calculate the total number of treatments of antibiotics over the most recent production cycle and supply a verifiable statement of this calculation.	There have been no antibiotic treatments in Heath Bay. The fish were on an intermediate site called Bell Harbour in the March 2017 and were moved to Heath in September /October. The fish had one Antibiotic treatment for Mouthrot while in Bell Harbour. While being moved from Bell to Heath the fish had a Hydrogen Peroxide treatment in the Well boat. While on Heath they have had a SLICE treatment in December 2017.	Compliant		0
Footnote	[91] A treatment is a single course medication given to address a specific disease issue and that may last a number of days.					
5.2.10	**Indicator**: If more than one antibiotic treatment is used in the most recent production cycle, demonstration that the antibiotic load [92] is at least 15% less that of the average of the two previous production cycles **Requirement:** Yes [93] **Applicability:** All	Note: Indicator 5.2.10 requires that farms must demonstrate a reduction in load required, regardless of whether production increases on the site. Farms that consolidate production across multiple sites within an ABM can calculate reduction based on the combined antibiotic load of the consolidated sites. a. Use results from 5.2.9b to show whether more than one antibiotic treatment was used in the most recent production cycle. If not, then the requirement of 5.2.10 does not apply. If yes, then proceed to 5.2.10b. b. Calculate antibiotic load (antibiotic load = the sum of the total amount of active ingredient of antibiotic used in kg) for most recent production cycle and for the two previous production cycles. For first audit, calculation must cover one full production cycle immediately prior to the current cycle. c. Provide the auditor with calculations showing that the antibiotic load of the most recent production cycle is at least 15% less than that of the average of the two previous production cycles. d. Submit data on antibiotic load to ASC as per Appendix VI (if applicable) for each production cycle.	This site is in its first production cycle and has no previous history of Antibiotic load.	N/A		0
Footnote	[92] Antibiotic load = the sum of the total amount of active ingredient of antibiotics used (kg).					
Footnote	[93] Reduction in load required, regardless of whether production increases on the site. Farms that consolidate production across multiple sites within an ABM can calculate reduction based on the combined antibiotic load of the consolidated sites.					
5.2.11	**Indicator**: Presence of documents demonstrating that the farm has provided buyers [94] of its salmon a list of all therapeutants used in production **Requirement:** Yes **Applicability:** All	a. Prepare a procedure which outlines how the farm provides buyers [94] of its salmon with a list of all therapeutants used in production (see 4.4.3b). b. Maintain records showing the farm has informed all buyers of its salmon about all therapeutants used in production.	Once per year in January MHC supply their customers with a 'Suppliers Quality Assurance Certificate'. It mentions potential treatments and refers the reader to web links with the Canadian Food inspection agency for regulatory status. It lists the possible supply plants. On the bottom of the Suppliers QA certificate, there is a statement from the Food Safety assurance technician to contact her if there are any questions. Her number and extension are included.	Compliant		
Footnote	[94] Buyer: The company or entity to which the farm or the producing company is directly selling its product.					
Criterion 5.3 Resistance of parasites, viruses and bacteria to medicinal treatments						
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			

5.3.1	**Indicator**: Bio-assay analysis to determine resistance when two applications of a treatment have not produced the expected effect **Requirement:** Yes **Applicability:** All	**Instruction to Clients for Indicator 5.3.1 - Identifying the 'Expected Effect' of Medicinal Treatment** Indicator 5.3.1 requires that farms identify treatments that have not produced the expected effect. The SAD Steering Committee recognizes that the "expected effect" will vary with health condition and type of medicinal treatment. Therefore farms and auditors will need to review the pre- and post-treatment condition of fish in order to understand and evaluate the impact of treatment. <u>Example: sea lice treatment with emamectin benzoate</u> The SAD SC recommends that a typical baseline for effectiveness of emamectin benzoate is a minimum of 90 percent reduction in abundance of lice on the farmed fish. To determine whether treatment has produced the expected effect, farm and auditor must review pre- and post-treatment lice counts. If the calculated percent reduction in lice is < 90% then the treatment did not produce the expected effect and a bio-assay should be performed to determine whether sea lice have developed resistance. Note: If field-based bio-assays for determining resistance are ineffective or unavailable, the farm shall have samples analyzed by an independent laboratory to detemine resistance formation. The auditor shall record in the audit report why field-based bio-assays were deemed ineffective and shall include results from the laboratory analyses of resistance formation.				
		a. In addition to recording all therapeutic treatments (5.2.1a), keep a record of all cases where the farm uses two successive medicinal treatments.	Medicinal treatments other than Antibiotics are Emmamectin (Slice) and Hydrogen peroxide. One of the company's veterinarians was questioned during the audit, and he confirmed the bioassays have shown no resistance being formed. Neither has there been two successive treatment.	Compliant		
		b. Whenever the farm uses two successive treatments, keep records showing how the farm evaluates the observed effect of treatment against the expected effect of treatment.				
		c. For any result of 5.3.1b that did not produce the expected effect, ensure that a bio-assay analysis of resistance is conducted.				
		d. Keep a record of all results arising from 5.3.1c.				
5.3.2	**Indicator**: When bio-assay tests determine resistance is forming, use of an alternative, permitted treatment, or an immediate harvest of all fish on the site **Requirement:** Yes **Applicability:** All	a. Review results of bio-assay tests (5.3.1d) for evidence that resistance has formed. If yes, proceed to 5.3.2b. If no, then Indicator 5.3.2 is not applicable.	No resistance being formed.	N/A		
		b. When bio-assay tests show evidence that resistance has formed, keep records showing that the farm took one of two actions: - used an alternative treatment (if permitted in the area of operation); or - immediately harvested all fish on site.				
Criterion 5.4 Biosecurity management [95]						
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			
Footnote	[95] See Appendix VI for transparency requirements for 5.4.2 and 5.4.4.					
5.4.1	**Indicator**: Evidence that all salmon on the site are a single-year class [96] **Requirement:** 100% [97] **Applicability:** All farms except as noted in [97]	a. Keep records of the start and end dates of periods when the site is fully fallow after harvest.	The salmon on site were found to be one year class following the site visit. The fish were stocked in Spring 2017.	Compliant		
		b. Provide evidence of stocking dates (purchase receipts, delivery records) to show that there were no gaps > 6 months for smolt inputs for the current production cycle.				
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Footnote	[96] Gaps of up to six months between inputs of smolts derived from the same stripping are acceptable as long as there remains a period of time when the site is fully fallow after harvest.					
Footnote	[97] Exception is allowed for: 1) farm sites that have closed, contained production units where there is complete separation of water between units and no sharing of filtration systems or other systems that could spread disease, or, 2) farm sites that have ≥95% water recirculation, a pre-entry disease screening protocol, dedicated quarantine capability and biosecurity measures for waste to ensure there is no discharge of live biological material to the natural environment (e.g. UV or other effective treatment of effluent) .					
5.4.2	**Indicator**: Evidence that if the farm suspects an unidentifiable transmissible agent, or if the farm experiences unexplained increased mortality, [98] the farm has: 1. Reported the issue to the ABM and to the appropriate regulatory authority 2. Increased monitoring and surveillance [99] on the farm and within the ABM 3. Promptly [100] made findings publicly available	a. For mortality events logged in 5.1.4a, show evidence that the farm promptly evaluated each to determine whether it was a statistically significant increase over background mortality rate on a monthly basis [98]. The accepted level of significance (for example, p < 0.05) should be agreed between farm and CAB.	The site does not suspect any unidentifiable transmissible agents. There have been no unexplained mortality events. There is a red and green system in place that asses the mortality trends. There were no large or unusual mortality events, and all mortality is diagnosed. DFO must be informed if 4000kg of mort's or 2% of the inventory in 24 hours or 10000kg or more or 5% of total fish in 5 days of mortalities occur. Hatcheries test for PRV, IHN, BKD, VHS and ISA with PCR plus bacteriology testing prior to transfer.	Compliant		
		b. For mortality events logged in 5.1.4a, record whether the farm did or did not suspect (yes or no) an unidentified transmissible agent.				
		c. Proceed to 5.4.2d if, during the most recent production cycle, either: - results from 5.4.2a showed a statistically significant increase in unexplained mortalities; or - the answer to 5.4.2b was 'yes'. Otherwise, Indicator 5.4.2 is not applicable.				

	Requirement: Yes **Applicability:** All	d. If required, ensure that the farm takes and records the following steps: 1) Report the issue to the ABM and to the appropriate regulatory authority; 2) Increase monitoring and surveillance [99] on the farm and within the ABM; and 3) Promptly (within one month) make findings publicly available.				
		e. As applicable, submit data to ASC as per Appendix VI about unidentified transmissible agents or unexplained increases in mortality. If applicable, then data are to be sent to ASC on an ongoing basis (i.e. at least once per year and for each production cycle).				
Footnote	[98] Increased mortality: A statistically significant increase over background rate on a monthly basis.					
Footnote	[99] Primary aim of monitoring and surveillance is to investigate whether a new or adapted disease is present in the area.					
Footnote	[100] Within one month.					
5.4.3	**Indicator**: Evidence of compliance [101] with the OIE Aquatic Animal Health Code [102] **Requirement:** Yes **Applicability:** All	**Instruction to Clients for Indicator 5.4.3 - Compliance with the OIE Aquatic Animal Health Code** Indicator 5.4.3 requires that farms show evidence of compliance with the OIE Aquatic Animal Health Code (see http://www.oie.int/index.php?id=171). Compliance is defined as farm practices consistent with the intentions of the Code. For purposes of the ASC Salmon Standard, this means that the farm must have written procedures stating how the farm will initiate an aggressive response to detection of an exotic OIE-notifiable disease on the farm ['exotic' = not previously found in the area or had been fully eradicated (area declared free of the pathogen)]. An aggressive response will involve, at a minimum, the following actions: - depopulation of the infected site; - implementation of quarantine zones (see note below)in accordance with guidelines from OIE for the specific pathogen; and - additional actions as required under Indicator 5.4.4. To demonstrate compliance with Indicator 5.4.3, clients have the to option to describe how farm practices are consistent with the intentions of the OIE Aquatic Animal Health Code by developing relevant policies and procedures and integrating them into the farm's fish health management plan. Note: The Steering Committee recognizes that establishment of quarantine zones will likely incorporate mandatory depopulation of sites close to the infected site and affect some, though not necessarily all, of the ABM.				
		a. Maintain a current version of the OIE Aquatic Animal Health Code on site or ensure staff have access to the most current version.	A copy of the OIE code is available to all staff through the 'SharePoint'. This appendix 1 in the Fish Health plan includes a link for OIE and refers to the Code.	Compliant		
		b. Develop policies and procedures as needed to ensure that farm practices remain consistent with the OIE Aquatic Animal Health Code (5.4.3a) and with actions required under indicator 5.4.4.				
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Footnote	[101] Compliance is defined as farm practices consistent with the intentions of the Code, to be further outlined in auditing guidance. For purposes of this standard, this includes an aggressive response to detection of an exotic OIE-notifiable disease on the farm, which includes depopulating the infected site and implementation of quarantine zones in accordance with guidelines from OIE for the specific pathogen. Quarantine zones will likely incorporate mandatory depopulation of sites close to the infected site and affect some, though not necessarily all, of the ABM. Exotic signifies not previously found in the area or had been fully eradicated (area declared free of the pathogen).					
Footnote	[102] OIE 2011. Aquatic Animal Health Code. http://www.oie.int/index.php?id=171.					
5.4.4	**Indicator**: If an OIE-notifiable disease [103] is confirmed on the farm, evidence that: 1. the farm has, at a minimum, immediately culled the pen(s) in which the disease was detected 2. the farm immediately notified the other farms in the ABM [104] 3. the farm and the ABM enhanced monitoring and conducted rigorous testing for the disease 4. the farm promptly [105] made findings publicly available **Requirement:** Yes **Applicability:** All	a. Ensure that farm policies and procedures in 5.4.3a describe the four actions required under Indicator 5.4.4 in response to an OIE-notifiable disease on the farm.	Notifiable diseases are immediately conveyed to the DFO and the CFIA who take control and determine the action. There is a legal onus on the fish health team to do this. Notifiable diseases in this area are IHN, IPN, VHS, ISA, OMV, Whirling disease and Coldwater Vibriosis. There is a variance in place and granted by ASC as VHS is endemic in the area and DFO have not required to cull the fish. This was allowed for other sites in BC, and the variance number was 89 and 91.	Compliant		
		b. Inform the CAB if an OIE-notifiable disease has been confirmed on the farm during the current production cycle or the two previous production cycles. If yes, proceed to 5.4.4c. If no, then 5.4.4c an 5.4.4d do not apply.				
		c. If an OIE-notifiable disease was confirmed on the farm (see 5.4.4b), then retain documentary evidence to show that the farm: 1) immediately culled the pen(s) in which the disease was detected; 2) immediately notified the other farms in the ABM [104] 3) enhanced monitoring and conducted rigorous testing for the disease; and 4) promptly (within one month) made findings publicly available.				
		d. As applicable, submit data to ASC as per Appendix VI about any OIE-notifiable disease that was confirmed on the farm. If applicable, then data are to be sent to ASC on an ongoing basis (i.e. at least once per year and for each production cycle).				
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Footnote	[103] At the time of publication of the final draft standards, OIE-notifiable diseases relevant to salmon aquaculture were: Epizootic haematopoietic necrosis, Infectious haematopoietic necrosis (IHN), Infectious salmon anemia (ISA), Viral hemorrhagic septicemia (VHS) and Gyrodactylosis (Gyrodactylus salaris).					
Footnote	[104] This is in addition to any notifications to regulatory bodies required under law and the OIE Aquatic Animal Health Code.					
Footnote	[105] Within one month.					
Social requirements in the standards shall be audited by an individual who is a lead auditor in conformity with SAAS Procedure 200 section 3.1.						
PRINCIPLE 6: DEVELOP AND OPERATE FARMS IN A SOCIALLY RESPONSIBLE MANNER						
6.1 Freedom of association and collective bargaining [106]						
		Compliance Criteria				
Footnote	[106] Bargain collectively: A voluntary negotiation between employers and organizations of workers in order to establish the terms and conditions of employment by means of collective (written) agreements.					
6.1.1	**Indicator:** Evidence that workers have access to trade unions (if they exist) and union representative(s) chosen by themselves without managerial interference **Requirement:** Yes **Applicability:** All	a. Workers have the freedom to join any trade union, free of any form of interference from employers or competing organizations set up or backed by the employer. Farms shall prepare documentation to demonstrate to the auditor that domestic regulation fully meets these criteria. b. Union representatives (or worker representatives) are chosen by workers without managerial interference. ILO specifically prohibits “acts which are designated to promote the establishment of worker organizations or to support worker organizations under the control or employers or employers’ organizations." c. Trade union representatives (or worker representatives) have access to their members in the workplace at reasonable times on the premises. d. Be advised that workers and union representatives (if they exist) will be interviewed to confirm the above.	No trade unions exist however the Code of Conduct, which is provided to all employees and they are tested to show they have understood the Code of conducts. The Code of Conduct is accessible via the intranet, which also allows access to human resources Policy & Procedure Manual. Code of Conduct section 5.3. Relates to this area and states "Marine Harvest recognises the right of all workers and employees freely to form and join groups for the promotion and defence of their occupational interests, including the right to engage in collective bargaining". Employees confirmed that they have signed the Contract of Employment and felt that their rights are not affected. They also confirmed that they receive a Contract of Employment and a copy of the Employee Handbook.	Compliant		
6.1.2	**Indicator:** Evidence that workers are free to form organizations, including unions, to advocate for and protect their rights **Requirement:** Yes **Applicability:** All	a. Employment contract explicitly states the worker's right of freedom of association. b. Employer communicates that workers are free to form organizations to advocate for and protect work rights (e.g. farm policies on Freedom of Association; see 6.12.1). c. Be advised that workers will be interviewed to confirm the above.	The worker's right to freedom of association is Stated in the contract of employment and within 5.3 of the code of conduct. Employees sign to state that they have been trained and tested on the Code of Conduct. The workers confirmed that the Code of Conduct was provided to them and that they had been trained and tested. The training records show that training happened, and the results are available on the training systems.	Compliant		
6.1.3	**Indicator:** Evidence that workers are free and able to bargain collectively for their rights **Requirement:** Yes **Applicability:** All	a. Local trade union, or where none exists a reputable civil-society organization, confirms no outstanding cases against the farm site management for violations of employees’ freedom of association and collective bargaining rights. a. Local trade union, or where none exists a reputable civil-society organization, confirms no outstanding cases against the farm site management for violations of employees’ freedom of association and collective bargaining rights. b. Employer has explicitly communicated a commitment to ensure the collective bargaining rights of all workers. c. There is documentary evidence that workers are free and able to bargain collectively (e.g. collective bargaining agreements, meeting minutes, or complaint resolutions).	No outstanding cases against the farm site management for violations of employees’ freedom of association and collective bargaining rights. The employer has explicitly communicated a commitment to ensure the collective bargaining rights of all workers as stated in 6.1.1 & 6.1.2. The documentary evidence shows that workers are free and able to bargain collectively. Detailed in the Code of Conduct and training records.	Compliant		
Criterion 6.2 Child labor						
		Compliance Criteria (Required Client Actions):				
6.2.1	**Indicator:** Number of incidences of child [107] labor [108] **Requirement:** None **Applicability:** All except as noted in [107]	a. In most countries, the law states that minimum age for employment is 15 years. There are two possible exceptions: - in developing countries where the legal minimum age may be set to 14 years (see footnote 108); or - in countries where the legal minimum age is set higher than 15 years, in which case the legal minimum age of the country is followed. If the farm operates in a country where the legal minimum ages is not 15, then the employer shall maintain documentation attesting to this fact. b. Minimum age of permanent workers is 15 or older (except in countries as noted above). c. Employer maintains age records for employees that are sufficient to demonstrate compliance.	Ages of all workers stored on Human Resources management system. There are no persons employed under the age of 15. Marine Harvest state in section 5.4 of the code of conduct " Marine Harvest is committed to the abolition of child labour, and all forms of forced or compulsory labour." "Marine Harvest considers the minimum age for employment as not lower than the age of completion of compulsory schooling as set by national law, and in any event not lower than 15 years of age." Identification is held on file for all farm employees and is signed and verified by senior Management at the point of employment.	Compliant		
Footnote	[107] Child: Any person under 15 years of age. A higher age would apply if the minimum age law of an area stipulates a higher age for work or mandatory schooling. Minimum age may be 14 if the country allows it under the developing country exceptions in ILO convention 138.					
Footnote	[108] Child Labor: Any work by a child younger than the age specified in the definition of a child.					
6.2.2	**Indicator:** Percentage of young workers [109] that are protected [110] **Requirement:** 100%	a. Young workers are appropriately identified in company policies & training programs, and job descriptions are available for all young workers at the site. b. All young workers (from age 15 to less than 18) are identified and their ages are confirmed with copies of IDs. c. Daily records of working hours (i.e. timesheets) are available for all young workers. d. For young workers, the combined daily transportation time and school time and work time does not exceed 10 hours. e. Young workers are not exposed to hazards [111] and do not perform hazardous work [112]. Work on floating cages in poor weather conditions shall be considered	There is a policy stating the rules on employing young workers. The Marine Harvest code of conduct section 5.4 sets out the primary controls. Young workers risk assessments are carried out and displayed in the working areas. All young workers assessed before employment commences. All workers including young workers have the working hours recorded on a time management system. No young workers employed at the time of the audit.	Compliant		

	Applicability: All	hazardous. f. Be advised that the site will be inspected and young workers will be interviewed to confirm compliance.				
Footnote	[109] Young Worker: Any worker between the age of a child, as defined above, and under the age of 18.					
Footnote	[110] Protected: Workers between 15 and 18 years of age will not be exposed to hazardous health and safety conditions; working hours shall not interfere with their education and the combined daily transportation time and school time, and work time shall not exceed 10 hours.					
Footnote	[111] Hazard: The inherent potential to cause injury or damage to a person's health (e.g., unequipped to handle heavy machinery safely, and unprotected exposure to harmful chemicals).					
Footnote	[112] Hazardous work: Work that, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of workers (e.g., heavy lifting disproportionate to a person's body size, operating heavy machinery, exposure to toxic chemicals).					
Criterion 6.3 Forced, bonded or compulsory labor						
		Compliance Criteria				
6.3.1	**Indicator:** Number of incidences of forced, [113] bonded [114] or compulsory labor **Requirement:** None **Applicability:** All	a. Contracts are clearly stated and understood by employees. Contracts do not lead to workers being indebted (i.e. no 'pay to work' schemes through labor contractors or training credit programs). b. Employees are free to leave workplace and manage their own time. c. Employer does not withhold employee's original identity documents. d. Employer does not withhold any part of workers' salaries, benefits, property or documents in order to oblige them to continue working for employer. e. Employees are not to be obligated to stay in job to repay debt. f. Maintain payroll records and be advised that workers will be interviewed to confirm the above.	All employees are provided with contracts of employment. Workers have signed all contracts of employment. The employer does not withhold employee's original identity documents. Through documentation checks, it confirmed that all working hours are conducted on a voluntary basis. The employer does not withhold employee's original identity documents. The employer does not withhold any part of workers' salaries, benefits, property or documents to oblige them to continue working for the employer. No employees are repaying debt. The employees confirmed all of the above within the interviews.	Compliant		
Footnote	[113] Forced (Compulsory) labor: All work or service that is extracted from any person under the menace of any penalty for which a person has not offered himself/herself voluntarily or for which such work or service is demanded as a repayment of debt. "Penalty" can imply monetary sanctions, physical punishment, or the loss of rights and privileges or restriction of movement (e.g., withholding of identity documents).					
Footnote	[114] Bonded labor: When a person is forced by the employer or creditor to work to repay a financial debt to the crediting agency.					
Criterion 6.4 Discrimination [118]						
		Compliance Criteria				
Footnote	[115] Discrimination: Any distinction, exclusion or preference that has the effect of nullifying or impairing equality of opportunity or treatment. Not every distinction, exclusion or preference constitutes discrimination. For instance, a merit- or performance-based pay increase or bonus is not by itself discriminatory. Positive discrimination in favor of people from certain underrepresented groups may be legal in some countries.					
6.4.1	**Indicator:** Evidence of comprehensive [116] and proactive anti-discrimination policies, procedures and practices **Requirement:** Yes **Applicability:** All	a. Employer has written anti-discrimination policy in place, stating that the company does not engage in or support discrimination in hiring, remuneration, access to training, promotion, termination or retirement based on race, caste, national origin, religion, disability, gender, sexual orientation, union membership, political affiliation, age or any other condition that may give rise to discrimination. b. Employer has clear and transparent company procedures that outline how to raise, file, and respond to discrimination complaints. c. Employer respects the principle of equal pay for equal work and equal access to job opportunities, promotions and raises. d. All managers and supervisors receive training on diversity and non-discrimination. All personnel receive non-discrimination training. Internal or external training acceptable if proven effective.	Stated in Marine Harvest Code of conduct section 5.2 & 6.1. The anti-discrimination policy that is in place, indicates that the company does not engage in or support discrimination in hiring, remuneration, access to training, promotion, termination or retirement based on race, caste, national origin, religion, disability, gender, sexual orientation, union membership, political affiliation, age or any other condition that may give rise to discrimination. Discrimination complaints are dealt with through the grievance procedures. Grievance procedures are communicated to all workers. All employees are respected with regards equal treatment." All managers have been trained in equality and diversity, and evidence of the training is recorded on DATS.	Compliant		
Footnote	[116] Employers shall have written anti-discrimination policies stating that the company does not engage in or support discrimination in hiring, remuneration, access to training, promotion, termination or retirement based on race, caste, national origin, religion, disability, gender, sexual orientation, union membership, political affiliation, age or any other condition that may give rise to discrimination.					
6.4.2	**Indicator:** Number of incidences of discrimination **Requirement:** None **Applicability:** All	a. Employer maintains a record of all discrimination complaints. These records do not show evidence for discrimination. b. Be advised that worker testimonies will be used to confirm that the company does not interfere with the rights of personnel to observe tenets or practices, or to meet needs related to race, caste, national origin, religion, disability, gender, sexual orientation, union membership, political affiliation or any other condition that may give rise to discrimination.	The facility has a procedure in place to document all discrimination complaints. To date, there have not been any complaints. There is no evidence of discrimination. Workers interviewed stated that the company did not discriminate against them. Workers interviewed had not experienced or heard of any issues with regards to discrimination.	Compliant		
Criterion 6.5 Work environment health and safety						
		Compliance Criteria				
			The facility has established procedures and policies to protect employees. These are communicated within the Human Resources policy and the Marine Harvest Code of Conduct section 4.1. Employees are trained in emergency response procedures. The training has been recorded in the onsite training systems (DATS) and displayed on the employee notice		The operations team training on DATS was as low as 12 percent for some workers and supervisors. It was noted that a lot of health and safety training	

6.5.1	**Indicator:** Percentage of workers trained in health and safety practices, procedures [117] and policies on a yearly basis **Requirement:** 100% **Applicability:** All	a. Employer has documented practices, procedures (including emergency response procedures) and policies to protect employees from workplace hazards and to minimize risk of accident or injury. The information shall be available to employees. b. Employees know and understand emergency response procedures. c. Employer conducts health and safety training for all employees on a regular basis (once a year and immediately for all new employees), including training on potential hazards and risk minimization, Occupational Safety and Health (OSH) and effective use of PPE.	boards. Health and safety training is carried out by an external company every year. Ongoing training carried out on an online training software management systems. Marine Harvest tries to ensure that the overall training levels are above 75 percent. It is the responsibility of the site managers to ensure that this level is achieved. The marine Harvest Code of Conduct section 4.1 sets out the Health & Safety rules All sites shall establish annual safety targets with action plans (what, who, when) • All sites shall have high standards of housekeeping • All managers shall carry out safety walks (Walk – Observe – Communicate) • All employees shall participate in safety meetings on a regular basis • The use of personal protective equipment and life jackets shall be specified for employees, contractors and visitors • A risk assessment concerning safety shall be made for all jobs, equipment, and potentially hazardous materials, with an annual review made of those, considered most critical • A work permit system shall be in place, to include lock-out tag-out procedures and to safeguard work in confined spaces • An approval system for contractors shall be in place • All accidents and near-misses shall be reported and investigated, to include root-cause analysis, and with the subsequent implementation of corrective actions within the planned time • An emergency response plan shall be in place and tested at least once every year • All Business Units shall have a safety committee, to include site managers and other members, to reflect a safety focus throughout the organization • A programme for systematic and regular safety training shall be in place	Major	was not completed or expired. There is no formal process/ management system to show how health safety findings are managed and closed out. Noted on Site tour • Mort box on the crew boat has ropes installed which are used for lifting • Compressor cover has been removed and not replaced • Generator room door is left open due to ventilation problems • Life raft service expired, and the rope to deploy was not connected	
Footnote	[117] Health and safety training shall include emergency response procedures and practices.					
6.5.2	**Indicator:** Evidence that workers use Personal Protective Equipment (PPE) effectively **Requirement:** Yes **Applicability:** All	a. Employer maintains a list of all health and safety hazards (e.g. chemicals). b. Employer provides workers with PPE that is appropriate to known health and safety hazards. c. Employees receive annual training in the proper use of PPE (see 6.5.1c). For workers who participated in the initial training(s) previously an annual refreshment training may suffice, unless new PPE has been put to use. d. Be advised that workers will be interviewed to confirm the above.	A full list of MSDS is available within the health and safety standards documentation and stored on all site computers. The site has carried out risk assessments for all operations and has identified the PPE required for each task. The site uses the risk assessment to understand the risks and eliminate the risks where possible. The site understands that Personal Protective Equipment should only be used where it is not possible to reduce the risk without the use of Personal Protective Equipment. Employees all receive induction training which includes the correct and proper use of Personal Protective Equipment. There are modules that are built into the online health & Safety management system that employees have to complete each year. The site manager ensures this training is carried out and recorded. Workers confirmed within interview process that Personal Protective Equipment was provided and training was provided if required."	Compliant		
6.5.3	**Indicator:** Presence of a health and safety risk assessment and evidence of preventive actions taken **Requirement:** Yes **Applicability:** All	a. Employer makes regular assessments of hazards and risks in the workplace. Risk assessments are reviewed and updated at least annually (see also 6.5.1a). b. Employees are trained in how to identify and prevent known hazards and risks (see also 6.5.1c). c. Health and safety procedures are adapted based on results from risk assessments (above) and changes are implemented to help prevent accidents.	Risk assessments are carried by the site manager every year. All reviews are documented. Changes are made sooner if the process changes or new machinery is implemented Risk assessments are used to identify the risk and employees are trained against the risk assessments. The site has trained employees that carry out risk assessments. This training is recorded on the MH internal DATS system. Health and safety procedures are adapted based on results from risk assessments. Risk assessments are reviewed when changes are made to the processes to avoid potential accidents.	Compliant		
6.5.4	**Indicator:** Evidence that all health- and safety-related accidents and violations are recorded and corrective actions are taken when necessary **Requirement:** Yes **Applicability:** All	a. Employer records all health- and safety-related accidents. b. Employer maintains complete documentation for all occupational health and safety violations and investigations. c. Employer implements corrective action plans in response to any accidents that occur. Plans are documented and they include an analysis of root cause, actions to address root cause, actions to remediate, and actions to prevent future accidents of similar nature. d. Employees working in departments where accidents have occurred can explain what analysis has been done and what steps were taken or improvements made.	Facility records all health & safety related accidents. The Health & Safety Manager investigates accidents. The Health & Safety Manager investigation looks and the Root Cause and implements a corrective action plan and review of the working procedures. Employees stated during the interview process that accidents were investigated and steps were taken and improvements made if required.	Compliant		

6.5.5	**Indicator:** Evidence of employer responsibility and/or proof of insurance (accident or injury) for 100% of worker costs in a job-related accident or injury when not covered under national law **Requirement:** Yes **Applicability:** All	a. Employer maintains documentation to confirm that all personnel are provided sufficient insurance to cover costs related to occupational accidents or injuries (if not covered under national law). Equal insurance coverage must include temporary, migrant or foreign workers. Written contract of employer responsibility to cover accident costs is acceptable evidence in place of insurance.	Insurance is available for all workers to ensure that they are compensated to cover costs related to occupational accidents. Public liability insurance is also available to cover all over parties.	Compliant		
6.5.6	**Indicator:** Evidence that all diving operations are conducted by divers who are certified **Requirement:** Yes **Applicability:** All	Note: If the farm outsources its diving operations to an independent company, the farm shall ensure that auditors have access to specified information sufficient to demonstrate compliance with Indicator 6.5.6. It is the farm's responsibility to obtain copies of relevant documentation (e.g. certificates) from the dive company. a. Employer keeps records of farm diving operations and a list of all personnel involved. In case an external service provider was hired, a statement that provider conformed to all relevant criteria must be made available to the auditor by this provider. b. Employer maintains evidence of diver certification (e.g. copies of certificates) for each person involved in diving operations. Divers shall be certified through an accredited national or international organization for diver certification.	Employer keeps records of farm diving operation. All external divers are given full details of the operations that are required. All diving certification was provided. All divers have the required accreditations. Checks of certifications are made by Marine Harvest every 60 days.	Compliant		
		Criterion 6.6 Wages				
		Compliance Criteria				
6.6.1	**Indicator:** The percentage of workers whose basic wage [118] (before overtime and bonuses) is below the minimum wage [119] **Requirement:** 0 (None) **Applicability:** All	a. Employer keeps documents to show the legal minimum wage in the country of operation. If there is no legal minimum wage in the country, the employer keeps documents to show the industry-standard minimum wage. b. Employer's records (e.g. payroll) confirm that worker's wages for a standard work week (≤ 48 hours) always meet or exceed the legal minimum wage. If there is no legal minimum wage, the employer's records must show how the current wage meets or exceeds industry standard. If wages are based on piece-rate or pay-per-production, the employer's records must show how workers can reasonably attain (within regular working hours) wages that meet or exceed the legal minimum wage. c. Maintain documentary evidence (e.g. payroll, timesheets, punch cards, production records, and/or utility records) and be advised that workers will be interviewed to confirm the above.	Wages are recorded in an electronic accounting system and verified. All pay is in line or above minimum wage requirements. All workers confirmed that wages are paid correctly. The months reviewed for hours and pay were; May 2018 December 2017 July 2017	Compliant		
Footnote	[118] Basic wage: The wages paid for a standard working week (no more than 48 hours).					
Footnote	[119] If there is no legal minimum wage in a country, basic wages must meet the industry-standard minimum wage.					
6.6.2	**Indicator:** Evidence that the employer is working toward the payment of basic needs wage [120] **Requirement:** Yes **Applicability:** All	a. Proof of employer engagement with workers and their representative organizations, and the use of cost of living assessments from credible sources to assess basic needs wages. Includes review of any national basic needs wage recommendations from credible sources such as national universities or government. b. Employer has calculated the basic needs wage for farm workers and has compared it to the basic (i.e. current) wage for their farm workers. c. Employer demonstrates how they have taken steps toward paying a basic needs wage to their workers.	MHC use Hays group to assist with setting pay levels and carry out here own reviews to ensure that levels are correct. There are details of living wages for BC available which states the living wage is $16.42 MHC starting wage is $17.50	Compliant		
Footnote	[120] Basic needs wage: A wage that covers the basic needs of an individual or family, including housing, food and transport. This concept differs from a minimum wage, which is set by law and may or may not cover the basic needs of workers.					
6.6.3	**Indicator:** Evidence of transparency in wage-setting and rendering [121] **Requirement:** Yes **Applicability:** All	a. Wages and benefits are clearly articulated to workers and documented in contracts. b. The method for setting wages is clearly stated and understood by workers. c. Employer renders wages and benefits in a way that is convenient for the worker (e.g. cash, check, or electronic payment methods). Workers do not have to travel to collect benefits nor do they receive promissory notes, coupons or merchandise in lieu of payment. d. Be advised that workers will be interviewed to confirm the above.	Wages and benefits are documented before the point of employment and written into the contract of employment. Employees are paid bi-weekly by electronic bank transfer. Employees are paid bi-weekly by electronic bank transfer, and the workers clearly understand this. Employees confirmed within interview process that information was available and electronic transfer payments are made directly to their bank accounts.	Compliant		
Footnote	[121] Payments shall be rendered to workers in a convenient manner.					
		Criterion 6.7 Contracts (labor) including subcontracting				
		Compliance Criteria				
6.7.1	**Indicator:** Percentage of workers who have contracts [122] **Requirement:** 100% **Applicability:** All	a. Employer maintains a record of all employment contracts. b. There is no evidence for labor-only contracting relationships or false apprenticeship schemes. c. Be advised that workers will be interviewed to confirm the above.	All employees are provided with a contract of employment, and a copy of the contract was available in the personnel files. There was no evidence of Labor only contracts or false apprenticeships. Employees confirmed that there are no Labor only contracts or false apprenticeships.	Compliant		
Footnote	[122] Labor-only contracting relationships or false apprenticeship schemes are not acceptable. This includes revolving/consecutive labor contracts to deny benefit accrual or equitable remuneration. False Apprenticeship Scheme: The practice of hiring workers under apprenticeship terms without stipulating terms of the apprenticeship or wages under contract. It is a "false" apprenticeship if its purpose is to underpay people, avoid legal obligations or employ underage workers. Labor-only contracting arrangement: The practice of hiring workers without establishing a formal employment relationship for the purpose of avoiding payment of regular wages or the provision of legally required benefits, such as health and safety protections.					

6.7.2	**Indicator:** Evidence of a policy to ensure social compliance of its suppliers and contractors **Requirement:** Yes **Applicability:** All	a. Farm has a policy to ensure that all companies contracted to provide supplies or services (e.g. divers, cleaning, maintenance) have socially responsible practices and policies. b. Producing company has criteria for evaluating its suppliers and contractors. The company keeps a list of approved suppliers and contractors. c. Producing company keeps records of communications with suppliers and subcontractors that relate to compliance with 6.7.2.	Where Marine Harvest uses subcontractors, they check that the companies have socially responsible practices and policies. Marine Harvest keeps a list of approved suppliers and contractors. Marine Harvest keeps records of communications with suppliers and subcontractors.	Compliant		
Criterion 6.8 Conflict resolution						
		Compliance Criteria				
6.8.1	**Indicator:** Evidence of worker access to effective, fair and confidential grievance procedures **Requirement:** Yes **Applicability:** All	a. Employer has a clear labor conflict resolution policy for the presentation, treatment, and resolution of worker grievances in a confidential manner. b. Workers are familiar with the company's labor conflict policies and procedures. There is evidence that workers have fair access. c. Maintain documentary evidence (e.g. complaint or grievance filings, minutes from review meetings) and be advised that workers will be interviewed to confirm the above.	There is a complaint procedure detailed in the HR Policy which explains the reporting procedure including bullying and harassment and confidentiality policy. All employees have access to policies through the intranet. This was confirmed through employee interviews. All communication such as Complaints, grievances and discipline is recorded in the employee personnel file. All communications are detailed in writing with the employee personnel files.	Compliant		
6.8.2	**Indicator:** Percentage of grievances handled that are addressed [123] within a 90-day timeframe **Requirement:** 100% **Applicability:** All	a. Employer maintains a record of all grievances, complaints and labor conflicts that are raised. b. Employer keeps a record of follow-up (i.e. corrective actions) and timeframe in which grievances are addressed. c. Maintain documentary evidence and be advised that workers will be interviewed to confirm that grievances are addressed within a 90-day timeframe.	The established grievance policy and procedures are well documented. Any grievances that are raised are recorded in the employee personnel files and have agreed on action plans if required. Through workers interviewed it was noted that grievances had been made and the grievances were handled following the MH grievance procedures. The company policy is to respond to each stage of the process within 14 days. Also, see 6.8.1	Compliant		
Footnote	[123] Addressed: Acknowledged and received, moving through the company's process for grievances, corrective action taken when necessary.					
Criterion 6.9 Disciplinary practices						
		Compliance criteria				
6.9.1	**Indicator:** Incidences of excessive or abusive disciplinary actions **Requirement:** None **Applicability:** All	a. Employer does not use threatening, humiliating or punishing disciplinary practices that negatively impact a worker's physical and mental health or dignity. b. Allegations of corporeal punishment, mental abuse [124], physical coercion, or verbal abuse will be investigated by auditors. c. Be advised that workers will be interviewed to confirm there is no evidence for excessive or abusive disciplinary actions.	None of the policies or procedures used is threatening, humiliating or has any punishing disciplinary practices. The practice of the disciplinary does not impact the workers physical or mentally. The workers confirmed there are no excessive or abusive disciplinary actions	Compliant		
Footnote	[124] Mental Abuse: Characterized by the intentional use of power, including verbal abuse, isolation, sexual or racial harassment, intimidation or threat of physical force.					
6.9.2	**Indicator:** Evidence of a functioning disciplinary action policy whose aim is to improve the worker [125] **Requirement:** Yes **Applicability:** All	a. Employer has written policy for disciplinary action which explicitly states that its aim is to improve the worker [125]. b. Maintain documentary evidence (e.g. worker evaluation reports) and be advised that workers will be interviewed to confirm that the disciplinary action policy is fair and effective.	The company has written policy disciplinary action that "explicitly" states to improve the worker. The company has performance management policy, so this should be noted alongside the disciplinary procedure. None of the workers had been involved in a disciplinary procedure the workers confirmed this. The workers confirmed that they are regularly evaluated and reviewed.	Compliant		
Footnote	[125] If disciplinary action is required, progressive verbal and written warnings shall be engaged. The aim shall always be to improve the worker; dismissal shall be the last resort. Policies for bonuses, incentives, access to training and promotions are clearly stated and understood, and not used arbitrarily. Fines or basic wage deductions shall not be acceptable disciplinary practices.					
Criterion 6.10 Working hours and overtime						
		Compliance criteria				
6.10.1	**Indicator:** Incidences, violations or abuse of working hours and overtime laws [126] **Requirement:** None **Applicability:** All	Note: Working hours, night work and rest periods for workers in agriculture should be in accordance with national laws and regulations or collective agreements (e.g. The Safety and Health in Agriculture Convention, 2001). Additional information can be found on the website of the International Labour Organization (www.ilo.org).				
		a. Employer has documentation showing the legal requirements for working hours and overtime in the region where the farm operates. If local legislation allows workers to exceed internationally accepted recommendations (48 regular hours, 12 hours overtime) then requirements of the international standards apply. b. Records (e.g. time sheets and payroll) show that farm workers do not exceed the number of working hours allowed under the law. c. If an employer requires employees to work shifts at the farm (e.g. 10 days on and six days off), the employer compensates workers with an equivalent time off in the calendar month and there is evidence that employees have agreed to this schedule (e.g. in the hiring contract). d. Be advised that workers will be interviewed to confirm there is no abuse of working hours and overtime laws.	The company holds document for Employment Standards Act for BC for working regulations. The working shift pattern is carried out over two weeks. The shift pattern consists of 8 days on and 6 days off. The averaged hours over the 2 weeks is 40 hours per week. Working hours are provided by site managers to the payroll and working hours' department. The workers confirmed that working hours are correct before this. Records on the attendance system show that workers are not exceeding the working hours that are allowed. The shift pattern is agreed before the commencement of employment. The contract of employment clearly stated the contracted working hours. Workers confirmed that the facility did not abuse the working hour's regulations and laws.	Major	The shift patterns for the Operations team exceed internationally accepted recommendations. The shift with the highest number of consecutive working days is 24 days on 18 off. (The daily working hours are contracted at 10 hours per day)	
Footnote	[126] In cases where local legislation on working hours and overtime exceed internationally accepted recommendations (48 regular hours, 12 hours overtime), the international standards will apply.					
6.10.2	**Indicator:** Overtime is limited, voluntary [127], paid at a premium rate [128] and restricted to exceptional circumstances **Requirement:** Yes	a. Payment records (e.g. payslips) show that workers are paid a premium rate for overtime hours. b. Overtime is limited and occurs in exceptional circumstances as evidenced by farm records (e.g. production records, time sheets, and other records of working hours). c. Be advised that workers will be interviewed to confirm that all overtime is voluntary except	The employees are paid a premium rate for overtime hours they are paid 150% for the first 2 hours and 200% for any hours worked after that. The time and attendance system confirmed that overtime is infrequent. The employees confirmed that overtime is rare and is voluntary.	Major	The review of the working hours found; • Operations workers are working more than 16 hours per day on a regular basis	

	Applicability: All except as noted in [130]	where there is a collective bargaining agreement which specifically allows for compulsory overtime.			• The highest number of working hours in one day was 19 hours.	
Footnote	[127] Compulsory overtime is permitted if previously agreed to under a collective bargaining agreement.					
Footnote	[128] Premium rate: A rate of pay higher than the regular work week rate. Must comply with national laws/regulations and/or industry standards.					
	Criterion 6.11 Education and training					
		Compliance criteria				
6.11.1	**Indicator:** Evidence that the company regularly performs training of staff in fish husbandry, general farm and fish escape management and health and safety procedures **Requirement:** Yes **Applicability:** All	a. Company has written policies related to continuing education of workers. Company provides incentives (e.g. subsidies for tuition or textbooks, time off prior to exams, flexibility in work schedule) that encourage workers to participate in educational initiatives. Note that such offers may be contingent on workers committing to stay with the company for a pre-arranged time. b. Employer maintains records of worker participation in educational opportunities as evidenced by course documentation (e.g. list of courses, curricula, certificates, degrees). c. Be advised that workers will be interviewed to confirm that educational initiatives are encouraged and supported by the company.	The company encourages employees to increase knowledge and participate in training courses and supports the workers in doing this. As stated in HR policy section 9 Employee training and development and education assistance programs. All training records are maintained on the DATS system. Workers confirmed that they are encouraged to learn and be involved with training courses. Other than compulsory health and safety training workers dictate the speed of additional training.	Compliant		
	Criterion 6.12 Corporate policies for social responsibility					
		Compliance criteria				
6.12.1	**Indicator:** Demonstration of company-level [129] policies in line with the standards under 6.1 to 6.11 above **Requirement:** Yes **Applicability:** All	a. Company-level policies are in line with all social and labor requirements presented in 6.1 through 6.11. b. Company-level policies (see 6.12.1a) are approved by the company headquarters in the region where the site applying for certification is located. c. The scope of corporate policies (see 6.12.1a) covers all company operations relating to salmonid production in the region (i.e. all smolt production facilities, grow-out facilities and processing plants). d. The site that is applying for certification provides auditors with access to all company-level policies and procedures as are needed to verify compliance with 6.12.1a (above).	The Code of Conduct Policy and the HR Policy are in line with all social and labour requirements. The Senior Management Team approves corporate policy at Campbell River. The scope of all corporate policies cover all company operations. All requested documentation was provided and reviewed.	Compliant		
Footnote	[129] Applies to the headquarters of the company in a region or country where the site applying for certification is located. The policy shall relate to all of the company's operations in the region or country, including grow-out, smolt production and processing facilities.					
	Social requirements in the standards shall be audited by an individual who is a lead auditor in conformity with SAAS Procedure 200 section 3.1.					
PRINCIPLE 7: BE A GOOD NEIGHBOR AND CONSCIENTIOUS CITIZEN						
	Criterion 7.1 Community engagement					
		Compliance Criteria				
7.1.1	**Indicator:** Evidence of regular and meaningful [130] consultation and engagement with community representatives and organizations **Requirement:** Yes **Applicability:** All	a. The farm pro-actively arranges for consultations with the local community at least twice every year (bi-annually). b. Consultations are meaningful. OPTIONAL: the farm may choose to use participatory Social Impact Assessment (pSIA) or an equivalent method for consultations. c. Consultations include participation by representatives from the local community who were asked to contribute to the agenda. d. Consultations include communication about, or discussion of, the potential health risks of therapeutic treatments (see Indicator 7.1.3). e. Maintain records and documentary evidence (e.g. meeting agenda, minutes, report) to demonstrate that consultations comply with the above. f. Be advised that representatives from the local community and organizations may be interviewed to confirm the above.	There is a community engagement letter that is sent to the mayor of each community. it covers the direction of the company and initiatives that are being developed. The company recently sent out communication to all the local communities with details on new technology, Therapeutic Treatments, opportunities for future growth and information regarding certification. The community engagement letter states the agenda. Notes are taken during the meeting and follow up emails are sent out to stake holders No representatives made themselves available for the audit	Compliant		
Footnote	[130] Regular and meaningful: Meetings shall be held at least bi-annually with elected representatives of affected communities. The agenda for the meetings should in part be set by the community representatives. Participatory Social Impact Assessment methods may be one option to consider here.					
7.1.2	**Indicator:** Presence and evidence of an effective [131] policy and mechanism for the presentation, treatment and resolution of complaints by community stakeholders and organizations **Requirement:** Yes **Applicability:** All	a. Farm policy provides a mechanism for presentation, treatment and resolution of complaints lodged by stakeholders, community members, and organizations. b. The farm follows its policy for handling stakeholder complaints as evidenced by farm documentation (e.g. follow-up communications with stakeholders, reports to stakeholder describing corrective actions). c. The farm's mechanism for handling complaints is effective based on resolution of stakeholder complaints (e.g. follow-up correspondence from stakeholders). d. Be advised that representatives from the local community, including complaintants where applicable, may be interviewed to confirm the above.	Marine Harvest has a policy Doc#5/FW905 External Complaint resolution. A log has been created. The Log details who raised the complaint and the nature of the complaint. The company policy is all complaints are passed to the communications manager and then forwarded to senior management should it be required. The complaints procedure is detailed and sets out the requirements for handling each complaint No representatives made themselves available for the audit.	Compliant		
Footnote	[131] Effective: In order to demonstrate that the mechanism is effective, evidence of resolutions of complaints can be given.					
7.1.3	**Indicator:** Evidence that the farm has posted visible notice [132] at the farm during times of therapeutic treatments and has, as part of consultation with communities under 7.1.1, communicated about potential health risks from treatments	a. Farm has a system for posting notifications at the farm during periods of therapeutic treatment. (use of aneastatic baths is not regarded a therapeutant) b. Notices (above) are posted where they will be visible to affected stakeholders (e.g. posted on waterways for	Notices are posted on the site if Therapeutic Treatments are being carried out. The signage that is used was seen during the farm inspection. The signage used is clear and can be seen by anyone passing the farm. This has been communicated in the engagement letter as detailed 7.1.1.	Compliant		

7.1.3	health risks from treatments **Requirement:** Yes **Applicability:** All	fishermen who pass by the farm). c. Farm communicates about the potential health risks from treatments during community consultations (see 7.1.1) d. Be advised that members of the local community may be interviewed to confirm the above.	Notices are posted on the side farmhouse so that anyone entering the site can see it. No representatives made themselves available for the audit.	Compliant		
Footnote	[132] Signage shall be visible to mariners and, for example, to fishermen passing by the farm.					
	Criterion 7.2 Respect for indigenous and aboriginal cultures and traditional territories					
		Compliance Criteria				
Instruction to Clients and CABs on Criterion 7.2 - Traditional Territories of Indigenous Groups The ASC Salmon Standard requires that farms must be respectful of the traditional territiories of indigenous groups. The Indicators listed under Criterion 7.2 were designed to fulfill this purpose in a manner consistent with the United Nations Declaration on the Rights of Indigenous Peoples. In many locales, the territorial boundaries of indigenous groups have a defined legal status according to local or national law. In such cases, it is straightforward to know whether a farm is operating in close proximity to indigenous people. However, when boundaries of indigenous territories are undefined or unknown, there is no simple way to establish whether the farm is operating in close proximity to indigenous groups. Here ASC provides the following guidance. The intent behind the ASC Salmon Standard is that the farm will identify all neighboring groups who are potentially negatively impacted by the farm's activities. The actual physical distance between the farm and an indigenous group is less important than understanding whether the farm is having a detrimental impact upon its neighbors. Effective community consultations are one of the best ways to identify such impacts to neighbor groups. Through a transparent process of consultation, indigenous groups who are put under "stress" by the farm will identify themselves and voice their concerns about the nature of the farm's impacts. Continued consultations between farm and neighbors should create a forum where any key issue can be discussed and resolved.						
7.2.1	**Indicator:** Evidence that indigenous groups were consulted as required by relevant local and/or national laws and regulations **Requirement:** Yes **Applicability:** All farms that operate in indigenous territories or in proximity to indigenous or aboriginal people [133]	a. Documentary evidence establishes that the farm does or does not operate in an indigenous territory (to include farms that operate in proximity to indigenous or aboriginal people [133]). If not then the requirements of 7.2.1 do not apply. a. Documentary evidence establishes that the farm does or does not operate in an indigenous territory (to include farms that operate in proximity to indigenous or aboriginal people [133]). If not then the requirements of 7.2.1 do not apply. b. Farm management demonstrates an understanding of relevant local and/or national laws and regulations that pertain to consultations with indigenous groups. c. As required by law in the jurisdiction: - farm consults with indigenous groups and retains documentary evidence (e.g. meeting minutes, summaries) to show how the process complies with 7.2.1b; OR - farm confirms that government-to-government consultation occurred and obtains documentary evidence. d. Be advised that representatives from indigenous groups may be interviewed to confirm	Marine Harvest is operating in some indigenous territories and has several agreements (IBA) in place with FN groups. The agreements demonstrate that Marine Harvest is aware of Local, national laws and regulations for each FN group. Tlatlasikwala First Nation has been granted the formal tenure and Marine Harvest operate the site under formal agreement with Tlatlasikwala First Nation. No representatives made themselves available for the audit.	Compliant		
7.2.2	**Indicator:** Evidence that the farm has undertaken proactive consultation with indigenous communities **Requirement:** Yes [133] **Applicability:** All farms that operate in indigenous territories or in proximity to indigenous or aboriginal people [133]	a. See results of 7.2.1a (above) to determine whether the requirements of 7.2.2 apply to the farm. b. Be advised that representatives from indigenous communities may be interviewed to confirm that the farm has undertaken proactive consultations.	Tlatlasikwala First Nation has been granted the formal tenure and Marine Harvest operate the site under formal agreement with Tlatlasikwala First Nation. No representatives made themselves available for the audit.	Compliant		
Footnote	[133] All standards related to indigenous rights only apply where relevant, based on proximity of indigenous territories.					
7.2.3	**Indicator:** Evidence of a protocol agreement, or an active process [134] to establish a protocol agreement, with indigenous communities **Requirement:** Yes **Applicability:** All farms that operate in indigenous territories or in proximity to indigenous or aboriginal people [133]	a. See results of 7.2.1a (above) to determine whether the requirements of 7.2.3 apply to the farm. b. Maintain evidence to show that the farm has either: 1) reached a protocol agreement with the indigenous community and this fact is documented; or 2) continued engagement in an active process [134] to reach a protocol agreement with the indigenous community. c. Be advised that representatives from indigenous communities may be interviewed to confirm either 7.2.3b1 or b2 (above) as applicable.	The agreements demonstrate that Marine Harvest is aware of Local, national laws and regulations for each FN. There are agreements in place as detailed in 7.2.1 and continuous engagements as detailed 7.2.1. No representatives made themselves available for the audit.	Compliant		
Footnote	[134] To demonstrate an active process, a farm must show ongoing efforts to communicate with indigenous communities, an understanding of key community concerns and responsiveness to key community concerns through adaptive farm management and other actions.					
	Criterion 7.3 Access to resources					
		Compliance Criteria				
7.3.1	**Indicator:** Changes undertaken restricting access to vital community resources [135] without community approval **Requirement:** None **Applicability:** All	a. Resources that are vital [135] to the community have been documented and are known by the farm (i.e. through the assessment process required under Indicator 7.3.2). b. The farm seeks and obtains community approval before undertaking changes that restrict access to vital community resources. Approvals are documented. c. Be advised that representatives from the community may be interviewed to confirm that the farm has not restricted access to vital resources without prior community approval.	There is no restriction of access and report notes the FN's have no issues with the use of the location. Tlatlasikwala First Nation has been granted the formal tenure and Marine Harvest operate the site under formal agreement with Tlatlasikwala First Nation. Tlatlasikwala are involved in all decision making No representatives made themselves available for the audit.	Compliant		
Footnote	[135] Vital community resources can include freshwater, land or other natural resources that communities rely on for their livelihood. If a farm site were to block, for example, a community's sole access point to a needed freshwater resource, this would be unacceptable under the Dialogue standard.					
7.3.2	**Indicator:** Evidence of assessments of company's impact on access to resources	a. There is a documented assessment of the farm's impact upon access to resources. Can be completed as part of community consultations under 7.1.1. b. Be advised that	See 7.2.1, 7.2.2, and 7.3.1 No representatives made themselves available for the audit.	Compliant		

7.3.2	**Requirement:** Yes **Applicability:** All	representatives from the community may be interviewed to generally corroborate the accuracy of conclusions presented in 7.3.2a.		Compliant		
INDICATORS AND STANDARDS FOR SMOLT PRODUCTION A farm seeking certification must have documentation from all of its smolt suppliers to demonstrate compliance with the following standards. The requirements are, in general, a subset of the standards in Principles 1 through 7, focusing on the impacts that are most relevant for smolt facilities. In addition, specific standards are applied to open systems (net pens), and to closed and semi-closed systems (recirculation and flow-through). [136]						
Footnote	[136] The SAD SC proposes this approach to addressing environmental and social performance during the smolt phase of production. In the medium term, the SC anticipates a system to audit smolt production facilities on site. In the meantime, farms will need to work with their smolt suppliers to generate the necessary documentation to demonstrate compliance with the standards. The documentation will be reviewed as part of the audit at the grow-out facility.					
SECTION 8: STANDARDS FOR SUPPLIERS OF SMOLT						
		Standards related to Principle 1				
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			
8.1	**Indicator**: Compliance with local and national regulations on water use and discharge, specifically providing permits related to water quality **Requirement:** Yes **Applicability:** All Smolt Producers	a. Identify all of the farm's smolt suppliers. For each supplier, identify the type of smolt production system used (e.g. open, semi or closed systems) and submit this information to ASC (Appendix VI). b. Where legal authorisation related to water quality are required, obtain copies of smolt suppliers' permits. c. Obtain records from smolt suppliers showing monitoring and compliance with discharge laws, regulations, and permit requirements as required. -	The hatcheries involved for Marine Harvest Canada are Ocean falls, Big tree Creek and Dalrymple. The Aquaculture Licence numbers are AQFW 112568 2015, AQFW 112572 2015 and AQFW 112571 2015 respectively. Ocean Falls a flow through farm and is compliant with the discharge conditions. Big tree Creek and Dalrymple have been converted to re-circulation and are not compliant to the old flow through discharge licences. There is a letter in place from the Ministry of environment and signed by the Environmental protection officer stating that it's not going to press enforcement as long as the company continue to installing advanced treatment systems for water treatment. Both dated April 2014.	Compliant		
8.2	**Indicator**: Compliance with labor laws and regulations **Requirement:** Yes **Applicability:** All Smolt Producers	a. Obtain declarations from smolt suppliers affirming compliance with labor laws and regulations. b. Keep records of supplier inspections for compliance with national labor laws and codes (only if such inspections are legally required in the country of operation; see 1.1.3a)	See prinnciple 6 as the hatcheries are owned by Marine Harvest.	Compliant		
		Standards related to Principle 2				
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			
8.3	**Indicator**: Evidence of an assessment of the farm's potential impacts on biodiversity and nearby ecosystems that contains the same components as the assessment for grow-out facilities under 2.4.1 **Requirement:** Yes **Applicability:** All Smolt Producers	Note: If the smolt facility has previously undertaken an independent assessment of biodiversity impact (e.g. as part of the regulatory permitting process), the farm may obtain and use such documents as evidence to demonstrate compliance with Indicator 8.3 as long as all components are covered.				
		a. Obtain from the smolt supplier(s) a documented assessment of the smolt site's potential impact on biodiversity and nearby ecosystems. The assessment must address all components outlined in Appendix I-3.	Biodiversity impact assessment for the hatchery was drawn up in November 2014. There are a series of recommendations at the end of the report mainly to do with the effluent discharge and its effect. Work is on-growing, and the farm is being turned into 100% re-circulation. There have been some modifications to the hatcheries that have not been assessed in the impact assessment.	Minor	There have been some modifications and modernisations to the hatcheries that have not been assessed in the impact assessment.	
		b. Obtain from the smolt supplier(s) a declaration confirming they have developed and are implementing a plan to address potential impacts identified in the assessment.				
	Indicator: Maximum total amount of phosphorus released into the environment per metric ton (mt) of fish produced over a 12-month period (see Appendix VIII-1)	**Instruction to Clients for Indicator 8.4 - Calculating Total Phosphorus Released per Ton of Fish Produced** Farms must confirm that each of their smolt suppliers complies with the requirement of indicator 8.4. This specifies the maximum amount of phosphorus that a smolt production facility can release into the environment per metric ton (mt) of fish produced over a 12-month period. The requirement is set at 4 kg/mt. The calculation of total phosphorus released is made using a "mass balance" approach. Detailed instructions and formulas are given in Appendix VIII-1. If applicable, farms may take account of any physical removals of phosphorus in the form of sludge provided there is evidence to show: - the smolt supplier has records showing the total quantity of sludge removed from site over the relevant time period; - the supplier determined phosphorus concentration (% P) in removed sludge by sampling and analyzing representative batches; and - the sludge was properly disposed off site and in accordance with the farm's biosolid management plan.				
		a. Obtain records from smolt suppliers showing amount and type of feeds used for smolt production during the past 12 months.	There is a new Variance in place number 231 that allows Phosphorus to be calculated in the effluent water rather than the sludge. There is also a VR for Ocean falls number 92 as they are discharging to the marine environment. For Big tree Creek, the total was 384 tons with a total phosphorus discharge to the environment of 34.05kg and a 0.0885 kg of Phosphorus per ton of production. Dalrymple production is 718.217 tons. Total Phosphorus discharge is 917.287 kg. The effluent of Phospurus is 1.277 kg/Mt.			
		b. For all feeds used by the smolt suppliers (result from 8.4a), keep records showing phosphorus content as determined by chemical analysis or based on feed supplier declaration (Appendix VIII-1).				

8.4	**Requirement:** 4 kg/mt of fish produced over a 12-month period **Applicability:** All Smolt Producers	c. Using the equation from Appendix VIII-1 and results from 8.4a and b, calculate the total amount of phosphorus added as feed during the last 12 months of smolt production. d. Obtain from smolt suppliers records for stocking, harvest and mortality which are sufficient to calculate the amount of biomass produced (formula in Appendix VIII-1) during the past 12 months. e. Calculate the amount of phosphorus in fish biomass produced (result from 8.4d) using the formula in Appendix VIII-1. f. If applicable, obtain records from smolt suppliers showing the total amount of P removed as sludge (formula in Appendix VIII-1) during the past 12 months. g. Using the formula in Appendix VIII-1 and results from 8.4a-f (above), calculate total phosphorus released per ton of smolt produced and verify that the smolt supplier is in compliance with requirements.		Compliant		0.0885kg/ton and 1.277kg/ton
Standards related to Principle 3						
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			
8.5	**Indicator**: If a non-native species is being produced, the species shall have been widely commercially produced in the area prior to the publication of the ASC Salmon Standard **Requirement:** Yes [137] **Applicability:** All Smolt Producers except as noted in [137]	a. Obtain written evidence showing whether the smolt supplier produces a non-native species or not. If not, then Indicator 8.5 does not apply. b. Provide the farm with documentary evidence that the non-native species was widely commercially produced in the area before publication of the ASC Salmon Standard. (See definition of area under 3.2.1). c. If the smolt supplier cannot provide the farm with evidence for 8.5b, provide documentary evidence that the farm uses only 100% sterile fish. d. If the smolt supplier cannot provide the farm with evidence for 8.5b or 8.5c, provide documented evidence for each of the following: 1) non-native species are separated from wild fish by effective physical barriers that are in place and well maintained; 2) barriers ensure there are no escapes of reared fish specimens that might survive and subsequently reproduce; and 3) barriers ensure there are no escapes of biological material that might survive and subsequently reproduce. e. Retain evidence as described in 8.5a-d necessary to show compliance of each facility supplying smolt to the farm.	Non-native Atlantic salmon are farmed. The DFO website shows that introductions occurred in 1985 from Scotland. Evidence provided in the form of the information on the DFO website showing egg importations.	Compliant		
Footnote	[137] Exceptions shall be made for production systems that use 100 percent sterile fish or systems that demonstrate separation from the wild by effective physical barriers that are in place and well-maintained to ensure no escapes of reared specimens or biological material that might survive and subsequently reproduce.					
8.6	**Indicator**: Maximum number of escapees [138] in the most recent production cycle **Requirement:** 300 fish [139] **Applicability:** All Smolt Producers except as noted in [139]	a. Obtain documentary evidence to show that smolt suppliers maintained monitoring records of all incidences of confirmed or suspected escapes, specifying date, cause, and estimated number of escapees. b. Using smolt supplier records from 8.6a, determine the total number of fish that escaped. Verify that there were fewer than 300 escapees from the smolt production facility in the most recent production cycle. c. Inform smolt suppliers in writing that monitoring records described in 8.6a must be maintained for at least 10 years beginning with the production cycle for which the farm is first applying for certification (necessary for farms to be eligible to apply for the exception noted in [139]). d. If an escape episode occurs at the smolt production facility (i.e. an incident where > 300 fish escaped), the farm may request a rare exception to the Standard [139]. Requests must provide a full account of the episode and must document how the smolt producer could not have predicted the events that caused the escape episode.	There are no escapes reported. The system is a full re-circulation with grids and screens in place. The hatcheries are, and two of them are full re-circulation system. All monitoring records are submitted to DFO who keep them indefinitely and are available on their website. The hatcheries all have reporting conditions with their PAR licences the same as the marine sites.	Compliant		0
Footnote	[138] Farms shall report all escapes; the total aggregated number of escapees per production cycle must be less than 300 fish.					

Footnote	[139] A rare exception to this standard may be made for an escape event that is clearly documented as being outside of the farm's control. Only one such exceptional episode is allowed in a 10-year period for the purposes of this standard. The 10-year period starts at the beginning of the production cycle for which the farm is applying for certification. The farmer must demonstrate that there was no reasonable way to predict the events that caused the episode. Extreme weather (e.g., 100-year storms) or accidents caused by farms located near high-traffic waterways are not intended to be covered under this exception.					
8.7	**Indicator**: Accuracy [140] of the counting technology or counting method used for calculating the number of fish **Requirement:** ≥98% **Applicability:** All Smolt Producers	a. Obtain records showing the accuracy of the counting technology used by smolt suppliers. Records must include copies of spec sheets for counting machines and common estimates of error for hand-counts. B. Review records to verify that accuracy of the smolt supplier's counting technology or counting method is ≥ 98%.	Vaki automatic counters are used with a reported accuracy of +/- 2%. The smolts are counted three times at vaccination, Loading for transfer and then by the well boat into the pens. There is a new Smolt inventory control SOP for hatchery sites Document FW269.	Compliant		
Footnote	[140] Accuracy shall be determined by the spec sheet for counting machines and through common estimates of error for any hand counts.					
Standards related to Principle 4						
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			
8.8	**Indicator**: Evidence of a functioning policy for proper and responsible treatment of non-biological waste from production (e.g., disposal and recycling) **Requirement:** Yes **Applicability:** All Smolt Producers	a. From each smolt supplier obtain a policy which states the supplier's commitment to proper and responsible treatment of non-biological waste from production. It must explain how the supplier's policy is consistent with best practice in the area of operation.	The hatcheries are part of Marine Harvest Canada. The feed bags, pallets and plastic are all sent back to the feed company. There is a waste management plan in place for MHC. The policy also covers the sea. S/FW963. There is a declaration on Environmental and biodiversity policy and signed by the Managing director of MHC stating that there is a commitment to environmental certification programs such as ASC.	Compliant		
8.9	**Indicator**: Presence of an energy-use assessment verifying the energy consumption at the smolt production facility (see Appendix V subsection 1 for guidance and required components of the records and assessment) **Requirement:** Yes, measured in kilojoule/mt fish/production cycle **Applicability:** All Smolt Producers	Note: see instructions for Indicator 4.6.1. a. Obtain records from the smolt supplier for energy consumption by source (fuel, electricity) at the supplier's facility throughout each year. b. Confirm that the smolt supplier calculates total energy consumption in kilojoules (kj) during the last year. c. Obtain records to show the smolt supplier calculated the total weight of fish in metric tons (mt) produced during the last year. d. Confirm that the smolt supplier used results from 8.9b and 8.9c to calculate energy consumption on the supplier's facility as required and that the units are reported as kilojoule/mt fish/production cycle. e. Obtain evidence to show that smolt supplier has undergone an energy use assessment in compliance with requirements of Appendix V-1. Can take the form of a declaration detailing a-e.	All records of fuel and electricity use are recorded for each of the facilities. These records make up part of the reporting into MH on global use of energy. The hatcheries all record energy use. The calculations are in place for the 2016 energy consumption in Kilojoules use however the 2017 calculations are not yet complete.	Minor	The calculations are in place for the 2016 energy consumption in Kilojoules use however the 2017 calculations are not yet complete.	
8.10	**Indicator**: Records of greenhouse gas (GHG [141]) emissions [142] at the smolt production facility and evidence of an annual GHG assessment (See Appendix V, subsection 1) **Requirement:** Yes **Applicability:** All Smolt Producers	Note: see instructions for Indicator 4.6.2. a. Obtain records of greenhouse gas emissions from the smolt supplier's facility. b. Confirm that, on at least an annual basis, the smolt supplier calculates all scope 1 and scope 2 GHG emissions in compliance with Appendix V-1. c. For GHG calculations, confirm that the smolt supplier selects the emission factors which are best suited to the supplier's operation. Confirm that the supplier documents the source of the emissions factors. d. For GHG calculations involving conversion of non-CO2 gases to CO2 equivalents, confirm that the smolt suppliers specify the Global Warming Potential (GWP) used and its source. e. Obtain evidence to show that the smolt supplier has undergone a GHG assessment in compliance with requirements Appendix V-1 at least annually.	Connected to 8.9 the greenhouse gas emissions calculation for 2017 is not yet been completed.	Minor	Connected to 8.9 the greenhouse gas emissions calculation for 2017 is not yet been completed.	
Footnote	[141] For the purposes of this standard, GHGs are defined as the six gases listed in the Kyoto Protocol: carbon dioxide (CO_2); methane (CH_4); nitrous oxide (N2O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulphur hexafluoride (SF_6).					
Footnote	[142] GHG emissions must be recorded using recognized methods, standards and records as outlined in Appendix V.					
Standards related to Principle 5						
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			

8.11	**Indicator**: Evidence of a fish health management plan, approved by the designated veterinarian, for the identification and monitoring of fish diseases and parasites **Requirement:** Yes **Applicability:** All Smolt Producers	a. Obtain a copy of the supplier's fish health management plan for the identification and monitoring of fish disease and parasites. b. Keep documentary evidence to show that the smolt supplier's health plans were approved by the supplier's designated veterinarian.	The fish health management plan is the same as the FHMP used on the seawater sites for MHC. The veterinarian Diane Morrison covers all the MHC operations.	Compliant		
8.12	**Indicator**: Percentage of fish that are vaccinated for selected diseases that are known to present a significant risk in the region and for which an effective vaccine exists [143] **Requirement:** 100% **Applicability:** All Smolt Producers	a. Maintain a list of diseases that are known to present a significant risk in the region, developed by farm veterinarian and supported by scientific evidence. b. Maintain a list of diseases for which effective vaccines exist for the region, developed by the farm veterinarian and supported by scientific evidence. c. Obtain from the smolt supplier(s) a declaration detailing the vaccines the fish received. d. Demonstrate, using the lists from 8.12a-c above, that all salmon on the farm received vaccination against all selected diseases known to present a significant risk in the regions for which an effective vaccine exists.	Vaccinating for viruses is not compulsory in Canada, but the three companies in the BC area have agreed to vaccinate as part of the regional management plan. All fish are vaccinated with two injections with three vaccines. All smolts at this site were vaccinated against IHN, Furunculosis, BKD and Vibrio. The vaccine used is APEX-IHN, Renogen and Forte micro.	Compliant		
Footnote	[143] The farm's designated veterinarian is responsible for undertaking and providing written documentation of the analysis of the diseases that pose a risk in the region and the vaccines that are effective. The veterinarian shall determine which vaccinations to use and demonstrate to the auditor that this decision is consistent with the analysis.					
8.13	**Indicator**: Percentage of smolt groups [144] tested for select diseases of regional concern prior to entering the grow-out phase on farm **Requirement:** 100% **Applicability:** All Smolt Producers	**Instruction to Clients for Indicator 8.13-- Testing of Smolt for Select Diseases** The farm is responsible for developing and maintaining a list of diseases of regional concern for which each smolt group should be tested. The list of diseases shall include diseases that originate in freshwater and are proven or suspected to occur in seawater (and for which seawater fish-to-fish transmission is a concern). The designated veterinarian to the smolt supplier is required to evaluate, based on scientific criteria and publicly available information, which diseases should be tested for. This analysis shall include an evaluation of whether clinical disease or a pathogen carrier state in fresh water is deemed to have a negative impact on the grow-out phase, thereby disqualifying a smolt group from being transferred. The analysis must be available to the CAB upon request. Note: A "smolt group" is defined as a population that shares disease risk, including environment, husbandry, and host factors that might contribute to sharing disease agents for each group.				
		a. Obtain from the smolt supplier a list of diseases of regional concern for which smolt should be tested. List shall be supported by scientific analysis as described in the Instruction above. b. Obtain from the smolt supplier(s) a declaration and records confirming that each smolt group received by the farm has been tested for the diseases in the list (8.13a).	Prior to transfer, smolts are tested for diseases such as VHS, BKD, IPN, ISA and bacterial diseases.	Compliant		
Footnote	[144] A smolt group is any population that shares disease risk, including environment, husbandry and host factors that might contribute to sharing disease agents for each group. Only diseases that are proven, or suspected, as occurring in seawater (and for which seawater fish-to-fish transmission is a concern) but originating in freshwater should be on the list of diseases tested. The designated veterinarian to the smolt farm is required to evaluate, based on scientific criteria and publicly available information, which diseases should be tested for. This analysis shall include an evaluation of whether clinical disease or a pathogen carrier state in fresh water is deemed to have a negative impact on the grow-out phase, thereby disqualifying a smolt group from being transferred. A written analysis must be available to the certifier on demand.					
8.14	**Indicator**: Detailed information, provided by the designated veterinarian, of all chemicals and therapeutants used during the smolt production cycle, the amounts used (including grams per ton of fish produced), the dates used, which group of fish were treated and against which diseases, proof of proper dosing and all disease and pathogens detected on the site **Requirement:** Yes **Applicability:** All Smolt Producers	a. Obtain from the smolt supplier(s) a detailed record of all chemical and therapeutant use for the fish sold to the farm that is signed by their veterinarian and includes: - name of the veterinarian prescribing treatment; - product name and chemical name; - reason for use (specific disease) - date(s) of treatment; - amount (g) of product used; - dosage; - mt of fish treated; - the WHO classification of antibiotics (also see note under 5.2.8); and - the supplier of the chemical or therapeutant.	There has been only one use of an antibiotic used in one of the hatcheries and this was to treat 4 tanks due to ERM at Ocean falls. This was in 2016. See 8.16. Incoming water is disinfected with Ozone. All other chemical or therepeutant use is recorded on Aquafarmer for example MS222 used for anesthetizing fish. Formalin used to treat Fungus.	Compliant		
	Indicator: Allowance for use of therapeutic treatments that include antibiotics or chemicals that are banned [145] in any of the primary salmon producing or importing countries [146]	a. Provide to the smolt supplier the list (see 5.2.2a) of therapeutants, including antibiotics and chemicals, that are proactively banned for use in food fish for the primary salmon producing and importing countries listed in [146]. b. Inform smolt supplier that the treatments on the list cannot be used on fish sold to a farm with ASC certification.	Marine Harvest International has an extensive list of countries and their allowable and unallowable contaminants, drugs and microbiology and statutory limits for fish for all these growing areas. This database is updated when a country changes its limits by anybody in the Marine harvest organisation that has the current information. Every possible worldwide therapeutant is listed. Marine Harvest Canada also have a medicine positive list showing drugs allowable however in the case of Tribrissen even though its allowed MHC no longer uses it for the US market. Even though there is a positive list, it does not mean that the treatments are used			

8.15	importing countries [146] **Requirement:** Yes **Applicability:** All Smolt Producers	c. Compare therapeutant records from smolt supplier (8.14) to the list (8.15a) and confirm that no therapeutants appearing on the list (8.15a) were used on the smolt purchased by the farm.	positive list, it does not mean that the treatments are used. Following the use and a therapeutant, the Aquafarmer system locks in place the withdrawal time. Time is documented on the prescriptions. Maxxam in Vancouver carries out residue testing for each site prior to harvest. They are accredited to Standards Council of Canada no. 117. Testing is mandatory from CFIA.	Compliant		
Footnote	[145] "Banned" means proactively prohibited by a government entity because of concerns around the substance.					
Footnote	[146] For purposes of this standard, those countries are Norway, the UK, Canada, Chile, the United States, Japan and France.					
8.16	**Indicator**: Number of treatments of antibiotics over the most recent production cycle **Requirement:** ≤ 3 **Applicability:** All Smolt Producers	a. Obtain from the smolt supplier records of all treatments of antibiotics (see 8.14a). b. Calculate the total number of treatments of antibiotics from their most recent production cycle.	Four of the tanks in Ocean falls were treated with Florfenicol on the 3rd March 2016 for Yersinia ruckeri. Tanks numbers were 3, 20, 21 and 23. Prescription number RX16-024 and 025. This was the only treatment in all the hatcheries.	Compliant		1
8.17	**Indicator**: Allowance for use of antibiotics listed as critically important for human medicine by the WHO [147] **Requirement:** None [148] **Applicability:** All Smolt Producers	a. Provide to smolt supplier(s) a current version of the WHO list of antimicrobials critically and highly important for human health [147]. b. Inform smolt supplier that the antibiotics on the WHO list (8.17a) cannot be used on fish sold to a farm with ASC certification. c. Compare smolt supplier's records for antibiotic usage (8.14, 8.15a) with the WHO list (8.17a) to confirm that no antibiotics listed as critically important for human medicine by the WHO were used on fish purchased by the farm.	The company uses the WHO website on critically important antimicrobials for human medicine. Checked florfenicol use and its classed as highly important and not of critical importance.	Compliant		0
Footnote	[147] The 3rd edition of the WHO list of critically and highly important antimicrobials was released in 2009 and is available at: http://www.who.int/foodborne_disease/resistance/CIA_3.pdf.					
Footnote	[148] If the antibiotic treatment is applied to only a portion of the pens on a farm site, fish from pens that did not receive treatment are still eligible for certification.					
8.18	**Indicator**: Evidence of compliance [149] with the OIE Aquatic Animal Health Code [150] **Requirement:** Yes **Applicability:** All Smolt Producers	Note: see instructions for Indicator 5.4.3 regarding evidence of compliance with the OIE Aquatic Animal Health Code. a. Provide the smolt supplier with a current version of the OIE Aquatic Animal Health Code (or inform the supplier how to access it from the internet). b. Inform the supplier that an ASC certified farm can only source smolt from a facility with policies and procedures that ensure that its smolt production practices are compliant with the OIE Aquatic Animal Health Code. c. Obtain a declaration from the supplier stating their intent to comply with the OIE code and copies of the smolt suppliers policies and procedures that are relevant to demonstrate compliance with the OIE Aquatic Animal Health Code.	A copy of the OIE code is available to all staff through the 'SharePoint'. This appendix 1 in the Fish Health plan includes a link for OIE and refers to the Code.	Compliant		
Footnote	[149] Compliance is defined as farm practices consistent with the intentions of the Code, to be further outlined in auditing guidance. For purposes of this standard, this includes an aggressive response to detection of an exotic OIE-notifiable disease on the farm, which includes depopulating the infected site and implementation of quarantine zones in accordance with guidelines from OIE for the specific pathogen. Exotic signifies not previously found in the area or had been fully eradicated (area declared free of the pathogen).					
Footnote	[150] OIE 2011. Aquatic Animal Health Code. http://www.oie.int/index.php?id=171.					
Standards related to Principle 6						
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			
8.19	**Indicator**: Evidence of company-level policies and procedures in line with the labor standards under 6.1 to 6.11 **Requirement:** Yes **Applicability:** All Smolt Producers	a. Obtain copies of smolt supplier's company-level policies and procedures and a declaration of compliance with the labor standards under 6.1 to 6.11. b. Review the documentation and declaration from 8.19a to verify that smolt supplier's policies and procedures are in compliance with the requirements of labor standards under 6.1 to 6.11.	The same policies apply as detailed in Principle 6 as it is the same company.	N/A		
Standards related to Principle 7						
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			
8.20	**Indicator**: Evidence of regular consultation and engagement with community representatives and organizations **Requirement:** Yes	**Instruction to Clients for Indicator 8.20 - Consultation and Engagement with Community Representatives** Farms must comply with Indicator 7.1.1 which requires that farms engage in regular consultation and engagement with community representatives and organizations. Under Indicator 8.20, farms must show how each of their smolt suppliers complies with an equivalent requirement. Farms are obligated to maintain evidence that is sufficient to show their suppliers remain in full compliance. Evidence shall be documentary (e.g. meeting agenda, minutes, report) and will substantiate the following: - the smolt supplier engaged in "regular" consultations with the local community at least twice every year (bi-annually); - the supplier's consultations were effective (e.g. using participatory Social Impact Assessment (pSIA) or similar methods); and - the supplier's consultations included participation by elected representatives from the local community who were asked to contribute to the agenda.				

	Applicability: All Smolt Producers	a. From each smolt supplier obtain documentary evidence of consultations and engagement with the community. b. Review documentation from 8.20a to verify that the smolt supplier's consultations and community engagement complied with requirements.	The same consultations as detailed in principle 7.	N/A		
8.21	**Indicator**: Evidence of a policy for the presentation, treatment and resolution of complaints by community stakeholders and organizations **Requirement:** Yes **Applicability:** All Smolt Producers	a. Obtain a copy of the smolt supplier's policy for presentation, treatment and resolution of complaints by community stakeholders and organizations.	The same consultations as detailed in principle 7.	N/A		
8.22	**Indicator**: Where relevant, evidence that indigenous groups were consulted as required by relevant local and/or national laws and regulations **Requirement:** Yes **Applicability:** All Smolt Producers	a. Obtain documentary evidence showing that the smolt supplier does or does not operate in an indigenous territory (to include farms that operate in proximity to indigenous or aboriginal people (see Indicator 7.2.1). If not then the requirements of 8.22 do not apply. b. Obtain documentation to demonstrate that, as required by law in the jurisdiction: smolt supplier consulted with indigenous groups and retains documentary evidence (e.g. meeting minutes, summaries) to show how the process complies with 7.2.1b; OR smolt supplier confirms that government-to-government consultation occurred and obtains documentary evidence.	The same consultations as detailed in principle 7.	N/A		
8.23	**Indicator**: Where relevant, evidence that the farm has undertaken proactive consultation with indigenous communities **Requirement:** Yes **Applicability:** All Smolt Producers	a. See results of 8.22a (above) to determine whether the requirements of 8.23 apply to the smolt supplier. b. Where relevant, obtain documentary evidence that smolt suppliers undertake proactive consultations with indigenous communities.	The same consultations as detailed in principle 7.	N/A		
ADDITIONAL REQUIREMENTS FOR OPEN (NET-PEN) PRODUCTION OF SMOLT In addition to the requirements above, if the smolt is produced in an open system, evidence shall be provided that the following are met:						
Instruction to Clients for Indicators 8.24 through 8.31 - Requirements for Smolt Produced in Open Systems Client shall provide documentary evidence to the CAB about the production system(s) from which they source smolt. If smolt used by the farm are produced, for part or all of the growth phase from alevin to smolt, in open (net-pen) systems, indicators 8.24 - 8.31 are applicable.						
	Indicator: Allowance for producing or holding smolt in net pens in water bodies with native salmonids **Requirement:** None **Applicability:** All Smolt Producers Using Open Systems	a. Obtain a declaration from the farm's smolt supplier stating whether the supplier operates in water bodies with native salmonids. b. Request smolt suppliers to identify all water bodies in which they operate net pens for producing smolt and from which facilities they sell to the client. c. For any water body identified in 8.24b as a source of smolt for the farm, determine if native salmonids are present by doing a literature search or by consulting with a reputable authority. Retain evidence of search results.	Land-based hatcheries.	N/A		
8.25	**Indicator**: Allowance for producing or holding smolt in net pens in any water body **Requirement:** Yes **Applicability:** All Smolt Producers Using Open Systems	a. Take steps to ensure that the farm does not source smolt that was produced or held in net pens.	Land-based hatcheries.	N/A		
8.26	**Indicator**: Evidence that carrying capacity (assimilative capacity) of the freshwater body has been established by a reliable entity [151] within the past five years [152] and total biomass in the water body is within the limits established by that study (see Appendix VIII-5 for minimum requirements)	a. For the water body(s) where the supplier produces smolt for the client (see 8.24b), obtain a copy of the most recent assessment of assimilative capacity. b. Identify which entity was responsible for conducting the assessment (8.26a) and obtain evidence for their reliability. c. Review the assessment (8.26a) to confirm that it establishes a carrying capacity for the water body, it is less than five years old, and it meets the minimum requirements presented in Appendix VIII-5.	Land-based hatcheries.	N/A		

	Requirement: Yes **Applicability:** All Smolt Producers Using Open Systems	d. Review information to confirm that the total biomass in the water body is within the limits established in the assessment (8.26a).				
		e. If the study in 8.26a is more than two years old and there has been a significant increase in nutrient input to the water body since completion, request evidence that an updated assessment study has been done.				
Footnote	[151] E.g., Government body or academic institution.					
Footnote	[152] If the study is older than two years, and there has been a significant increase in nutrient input to the water body since the completion of the study, a more recent assessment is required.					
8.27	**Indicator**: Maximum baseline total phosphorus concentration of the water body (see Appendix VIII-6) **Requirement:** ≤ 20 µg/l [153] **Applicability:** All Smolt Producers Using Open Systems	**Instruction to Clients for Indicator 8.27 and 8.28 - Monitoring TP and DO in Receiving Water for Open Smolt Systems** Farms must confirm that any smolt supplier using an open (net-pen) system is also engaged in monitoring of water quality of receiving waters. Requirements for the supplier's water quality monitoring program are presented in detail in Appendix VIII-6 and only re-stated briefly here. Monitoring shall sample total phosphorus (TP) and dissolved oxygen (DO). TP is measured in water samples taken from a representative composite sample through the water column to a depth of the bottom of the cages. Samples are submitted to an accredited laboratory for analysis of TP to a method detection limit of < 0.002 mg/L. DO measurements will be taken at 50 centimeters from the bottom sediment. The required sampling regime is as follows: - all stations are identified with GPS coordinates on a map of the farm and/or available satellite imagery; - stations are at the limit of the farm management zone on each side of the farm, roughly 50 meters from the edge of enclosures; - the spatial arrangement of stations is shown in the table in Appendix VIII-6; - sampling is done at least quarterly (1X per 3 months) during periods without ice, including peak biomass; and - samples are also collected at two reference stations located ~ 1-2 km upcurrent and downcurrent from the farm. Note: Some flexibility on the exact location and method of sampling is allowed to avoid smolt suppliers needing to duplicate similar sampling for their local regulatory regime.				
		a. Obtain documentary evidence to show that smolt suppliers conducted water quality monitoring in compliance with the requirements of Appendix VIII-6.	Land-based hatcheries.	N/A		
		b. Obtain from smolt suppliers a map with GPS coordinates showing the sampling locations.				
		c. Obtain from smolt suppliers the TP monitoring results for the past 12 months and calculate the average value at each sampling station.				
		d. Compare results to the baseline TP concentration established below (see 8.29) or determined by a regulatory body.				
		e. Confirm that the average value for TP over the last 12 months did not exceed 20 ug/l at any of the sampling stations nor at the reference station.				
Footnote	[153] This concentration is equivalent to the upper limit of the Mesotrophic Trophic Status classification as described in Appendix VIII-7.					
8.28	**Indicator**: Minimum percent oxygen saturation of water 50 centimeters above bottom sediment (at all oxygen monitoring locations described in Appendix VIII-6) **Requirement:** ≥ 50% **Applicability:** All Smolt Producers Using Open Systems	Note: see instructions for Indicator 8.27.				
		a. Obtain evidence that smolt supplier conducted water quality monitoring in compliance with the requirements (see 8.27a).	Land-based hatcheries.	N/A		
		b. Obtain from smolt suppliers the DO monitoring results from all monitoring stations for the past 12 months.				
		c. Review results (8.28b) to confirm that no values were below the minimum percent oxygen saturation.				
8.29	**Indicator**: Trophic status classification of water body remains unchanged from baseline (see Appendix VIII-7) **Requirement:** Yes **Applicability:** All Smolt Producers Using Open Systems	a. Obtain documentary evidence from the supplier stating the trophic status of water body if previously set by a regulator body (if applicable).	Land-based hatcheries.	N/A		
		b. If the trophic status of the waterbody has not been classified (see 8.29a), obtain evidence from the supplier to show how the supplier determined trophic status based on the concentration of TP.				
		c. As applicable, review results from 8.29b to verify that the supplier accurately assigned a trophic status to the water body in accordance with the table in Appendix VIII-7 and the observed concentration of TP over the past 12 months.				
		d. Compare the above results (8.29c) to trophic status of the water body as reported for all previous time periods. Verify that there has been no change.				

8.30	**Indicator**: Maximum allowed increase in total phosphorus concentration in lake from baseline (see Appendix VIII-7) **Requirement:** 25% **Applicability:** All Smolt Producers Using Open Systems	a. Determine the baseline value for TP concentration in the water body using results from either 8.29a or 8.29b as applicable. b. Compare the baseline TP concentration (result from 8.30a) to the average observed TP concentration over the past 12 months (result from 8.27e). c. Verify that the average observed TP concentration did not increase by more than 25% from baseline TP concentration.	Land-based hatcheries.	N/A		
8.31	**Indicator**: Allowance for use of aeration systems or other technological means to increase oxygen levels in the water body **Requirement:** None **Applicability:** All Smolt Producers Using Open Systems	a. Obtain a declaration from the farm's smolt supplier stating that the supplier does not use aeration systems or other technological means to increase oxygen levels in the water bodies where the supplier operates.	Land-based hatcheries.	N/A		
ADDITIONAL REQUIREMENTS FOR SEMI-CLOSED AND CLOSED PRODUCTION OF SMOLTS Additionally, if the smolt is produced in a closed or semi-closed system (flow through or recirculation) that discharges into freshwater, evidence shall be provided that the following are met [157]:						
Instructions to Client for Indicators 8.32-8.35 - Requirement for smolts produced in open systems Client shall provide documentary evidence to the CAB about the production system(s) from which they source smolt. -If smolt used by the farm are not produced, for part or all of the growth phase from alevin to smolt, in open (net-pen) systems, indicators 8.32 - 8.35 are applicable. -If the production system is closed or semi-closed and does not discharge into freshwater, Indicators 8.32 - 8.35 are not applicable to smolt producers as per [154]. For such an exemption, farms must provide documentary evidence to the CAB. Auditors shall fully document their rationale for awarding exemptions in the audit report.						
Footnote	[154] Production systems that don't discharge into fresh water are exempt from these standards.					
8.32	**Indicator**: Water quality monitoring matrix completed and submitted to ASC (see Appendix VIII-2) **Requirement:** Yes [155] **Applicability:** All Smolt Producers Using Semi-Closed or Closed Production Systems	a. Obtain records from smolt suppliers showing that water quality monitoring was conducted at least quarterly (i.e. once every 3 months) over the last 12 months. b. Obtain water quality monitoring matrix from smolt suppliers and review for completeness. c. Submit the smolt supplier's water quality monitoring matrix to ASC as per Appendix VIII-2 and Appendix VI at least once per year.	The sampling is carried out monthly. Testing includes Total ammonia, BOD, Nitrate, Nitrite, Total phosphorus and TSS. The data has been submitted to ASC.	Compliant		
Footnote	[155] See Appendix VI for transparency requirements for 8.32.					
8.33	**Indicator**: Minimum oxygen saturation in the outflow (methodology in Appendix VIII-2) **Requirement:** 60% [156,157] **Applicability:** All Smolt Producers Using Semi-Closed or Closed Production Systems	a. Obtain the water quality monitoring matrix from each smolt supplier (see 8.32b). b. Review the results (8.33a) for percentage dissolved oxygen saturation in the effluent to confirm that no measurements fell below 60% saturation. c. If a single DO reading (as reported in 8.33a) fell below 60%, obtain evidence that the smolt supplier performed daily continuous monitoring with an electronic probe and recorder for a least a week demonstrating a minimum 60% saturation at all times (Appendix VIII-2).	Bigtree Creek Oxygen levels in the effluent averages 86.5% and lowest reading was 77%. Dalrymple Oxygen levels in the effluent averages 75.3% and lowest reading was 57.8%, and this resulted in daily readings that showed readings above 60%. Ocean falls oxygen levels in the affluent area all above 80%.	Compliant		
Footnote	[156] A single oxygen reading below 60 percent would require daily continuous monitoring with an electronic probe and recorder for at least a week demonstrating a minimum 60 percent saturation at all times.					
Footnote	[157] See Appendix VI for transparency requirements for 8.33.					
8.34	**Indicator**: Macro-invertebrate surveys downstream from the farm's effluent discharge demonstrate benthic health that is similar or better than surveys upstream from the discharge (methodology in Appendix VIII-3) **Requirement:** Yes **Applicability:** All Smolt Producers Using Semi-Closed or Closed Production Systems	a. Obtain documentation from smolt supplier(s) showing the results of macro-invertebrate surveys. b. Review supplier documents (8.34a) to confirm that the surveys followed the prescribed methodology (Appendix VIII-3). c. Review supplier documents (8.34a) to confirm the survey results show that benthic health is similar to or better than upstream of the supplier's discharge.	For Big Tree, the report from 2016 is based on samples taken by Mainstream biological and was analysed and written up by Biological based in Victoria. The report states that the water downstream shows no effect on the water and benthos from the hatchery. Dalrymple has seen a slight impact from effluent and the company has been sampling twice per year. The report in section 3.1.4 states that the macroinvertebrate community upstream and downstream is both classed as Category 4 communities.	Compliant		
8.35	**Indicator**: Evidence of implementation of biosolids (sludge) Best Management Practices (BMPs) (Appendix VIII-4)	a. Maintain a copy of smolt supplier's biosolids (sludge) management plan and confirm that the plan addresses all requirements in Appendix VIII-2. b. Obtain from smolt suppliers a process flow diagram (detailed in Appendix VIII-2) showing how the farm is dealing with biosolids responsibly.	As Ocean falls discharges to the sea its exempt from this indicator. Big tree Creek sludge removal by Able and ready February 2018. Invoice number 16651 and 750 gallons removed. Invoice dated 27/4/18 and number 34978 Details were for Vacuum up fish compost at Dalrymple hatchery. The provider was Walco Industries Ltd, Port Alberni.	Compliant		

8.3.3	**Requirement:** Yes **Applicability:** All Smolt Producers Using Semi-Closed or Closed Production Systems	c. Obtain a declaration from smolt supplier stating that no biosolids were discharged into natural water bodies in the past 12 months.		Compliant		
		d. Obtain records from smolt suppliers showing monitoring of biosolid (sludge) cleaning maintenance, and disposal as described in Appendix VIII-2.				

11 Findings

11.1 DELETE ANY COLUMN
11.2 ly populated from the species checklist/audit manual
11.3 ndard indicator or a CAR requirement
11.4 o your liking (e.g. grading, status, closure deadline, etc.)
11.5 d new rows as needed
11.6 ide as needed - to show the whole text

NC reference	Indicator	Grade of NC	Description of NC	Evidence	Date of detection	Status	Related VR (#)	Root cause (by client)	Corrective/ preventive actions proposed by UoC and accepted by CAB	Deadline for NC close-out	Evaluation by CAB (including evidence)	Actual date of close-out	Date request for delay received	Justification for delay	Next deadline	Request evaluation by CAB	Date request approved
1	2.1.1	Minor	The sampling test results have not yet been sent to ASC as some of the biological data is not yet been processed, and the intention is to submit it all to ASC at the same time.	The map of the site is available and has been put together internally by Marine Harvest. Sampling has been based on the AUTODEPOMOD system with the stations located accordingly. The site has a soft bottom. Option 2 has been chosen The sampling was carried out by qualified staff following the ASC requirements using the Van Veen grab. Picture showing grabs and samples were presented. Sampling was carried out at 75% of peak production for the site dated 8th and 9th May 2018. An Orion 4-star meter with appropriate ISE probes is used. Results for all the stations (3) show compliance with the requirements for sulphides. The lowest reading was 8.91, and the highest reading was 130. The sampling results have not yet been sent to ASC as some of the biological data is not yet been processed, and the intention is to submit it to ASC at the same time" Audit update 7th September 2018: The auditor was supplied with the results of the updated benthic sampling that was carried out at peak biomass and dated July 24th 2018. Carried out by Mainstream Environmental. The results show that all 3 outside the AZE stations and for each replicate, the levels of sulphides were all above the requirement. The lowest reading was 9.2 and the highest reading was 130. Mean results were Station A: 85.7, Station B: 41.7 and Station C: 7.49. The reference site reading was 3.66. 60% of the fish has been harvested and the site will be empty by November.	08/06/2018	Closed	NA	Not all benthic parameters are complete, and final report has not been written.	Sulfide results are wtihin ASC limits, and will be submitted with a final benthic report once biological parameters are analysed.	8/9/18 or by agreed plan	Sulfide results are wtihin ASC limits, and will be submitted with a final benthic report once biological parameters are analysed. Update from the 7/9/18. Sampling was carried out at peak biomass and dated July 24th 2018 and conducted by Mainstream Environmental. The results show that all 3 outside the AZE stations and for each replicate, the levels of sulphides were all compliant to the metrics required by a very wide margin. The lowest reading was 9.2 and the highest reading was 130. Mean results were Station A: 85.7, Station B: 41.7 and Station C: 7.49. The reference site level was 3.66. Accepted Paul Casburn	7/9/18	NA	NA	NA	NA	NA
2	2.1.2	Minor	The sampling test results have not yet been sent to ASC as some of the biological data is not yet been processed, and the intention is to submit it all to ASC at the same time. Update: A VR has been allowed by ASC number 224.	The map in place as described in 2.1.1. Option 4 has been chosen for this site. The ITI scores are not yet available. Audit update. ASC have granted a VR number 224 in relation to 2.1.2 and 2.1.3. This VR instead relies on the scientifically proven and federally regulated sulfide surrogates. http://variance-requests.asc-aqua.org/questions/vr-224-benthic-biodiversity-and-benthic-effects-salmon-v1-0-2-1-2-2-1-3/	08/06/2018	Closed	NA	Sample analysis takes up to three months, while samples have been taken, analysis has not yet been completed	Analysis underway by Columbia Science. Results expected in late July. Future cycles will rely on historical data and samples will continue to be taken/analysed at peak biomass.	8/9/18 or by agreed plan	Update from the 7/9/18. Sampling was carried out at peak biomass and dated July 24th 2018 and conducted by Mainstream Environmental. Results are pending. Plan to submit these results when they become available accepted. Paul Casburn Update 25/11/18. VR 224 has been allowed.	25/11/18	NA	NA	NA	NA	NA
3	2.1.3	Major	The Macrofaunal results for Heath Bay are not yet available as the results are being analysed and therefore cannot be reviewed for compliance with the standard at this time. There is no historical data for this site.	MHC staff conducted samples at Heath, analysis done by Columbia Science. The Macrofaunal results for Heath Bay are not yet available as the results are being analysed and therefore cannot be reviewed for compliance to the standard at this time. There is no historical benthic data for this site. Audit update: Email dated 22/10/18 from Marine Harvest, which shows the results for the stations are 15,13 and 7 non pollution indicator species inside the zone of effect.	08/06/2018	Closed	NA	Sample analysis takes up to three months, while samples have been taken, analysis has not yet been completed	Analysis underway by Columbia Science. Results expected in late July. Future cycles will rely on historical data and samples will continue to be taken/analysed at peak biomass.	8/9/18	Update from the 7/9/18. Sampling was carried out at peak biomass and dated July 24th 2018 and conducted by Mainstream Environmental. Results are pending. Update 8/10/18. An email was received by the auditor from Shaw analytical dated the 1st of October. This mail reported that 'AT LEAST 6 Highly Dominant Taxa at the Inside AZE-A station'. Futher email dated 22/10/18 which shows the results for the stations are 15,13 and 7 non pollution indicator species inside the zone of effect,	22/10/18	NA	NA	NA	NA	NA
4	4.1.1	Minor	There are no quantities of Marine Ingredients shown to allow verification, which the ASC compliant ingredients are greater than the non-ASC compliant Marine Ingredients based on option 2 and Mass balance.	The only feed supplier is Skretting. The location of the production unit is in Richmond BC. Skretting Canada has GAA BAP certification that includes a traceability element. Valid until 21st October 2018. Cert number IN17/50409. SGS is the CB. Skretting also assures traceability for all ingredients that make up more than 1% of the feed. The feed company has declared that they will be adopting method 2 for mass balance. They also hold certifications such as ISO 9001:2008, HACCP, BAP and Skrettings Nutrace internal standard.	08/06/2018	Closed	NA	Oversight from feed supplier	E mail sent from Marine Harvest Canada dated 6th July with information supplied from the feed company EWOS. They provided 'Raw material purchase period: Jan 2017 - Dec 2017'. This broke down the information that was missing from the audit explaing the mass balance.	8/9/18 or by agreed plan	Email and evidence reviewed by the auditor. Evidence accepted. Paul Casburn.	14th July 2018	NA	NA	NA	NA	NA
5	5.1.1	Minor	The Veterinary health plan advises the removal of moribund fish and they should be humanely euthanized however there is no appropriate tool or method in place on site for this action.	Fish health management plan dated October 2017. The updates include requirements for moving fish and refers to the SOP's SW955, SW 138, SW 819 and FW 260. The plan is submitted to the DFO for part of the licence requirements. The Fish health plan was approved by Diane Morrison DVM the company Vet in October 2017.	08/06/2018	Closed	NA	Site using a handmade device rather than a proper tool.	Fish bonker has been purchased by site and will be used in future.	8/9/18 or by agreed plan	Email and evidence reviewed by the auditor. Evidence accepted. Paul Casburn.	19th July 2018.	NA	NA	NA	NA	NA

6	6.5.1	Major	The facility has established procedures and policies to protect employees. These are communicated within the Human Resources policy and the Marine Harvest Code of Conduct section 4.1. Employees are trained in emergency response procedures. The training has been recorded in the onsite training systems (DATS) and displayed on the employee notice boards. Health and safety training is carried out by an external company every year. Ongoing training carried out on an online training software management systems. Marine Harvest tries to ensure that the overall training levels are above 75 percent. It is the responsibility of the site managers to ensure that this level is achieved. The marine Harvest Code of Conduct section 4.1 sets out the Health & Safety rules All sites shall establish annual safety targets with action plans (what, who, when) • All sites shall have high standards of housekeeping • All managers shall carry out safety walks (Walk – Observe – Communicate) • All employees shall participate in safety meetings on a regular basis • The use of personal protective equipment and life jackets shall be specified for employees, contractors and visitors • A risk assessment concerning safety shall be made for all jobs, equipment, and potentially hazardous materials, with an annual review made of those, considered most critical • A work permit system shall be in place, to include lock-out tag-out procedures and to safeguard work in confined spaces • An approval system for contractors shall be in place • All accidents and near-misses shall be reported and investigated, to include root-cause analysis, and with the subsequent implementation of corrective actions within the planned time • An emergency response plan shall be in place and tested at least once every year • All Business Units shall have a safety committee, to include site managers and other members, to reflect a safety focus throughout the organization • A programme for systematic and regular safety training shall be in place	The operations team training on DATS was as low as 12 percent for some workers and supervisors. It was noted that a lot of health and safety training was not completed or expired. There is no formal process/ management system to show how health safety findings are managed and closed out. Noted on Site tour • Mort box on the crew boat has ropes installed which are used for lifting • Compressor cover has been removed and not replaced • Generator room door is left open due to ventilation problems • Life raft service expired, and the rope to deploy was not connected	08/06/2018	Closed	NA	Changes to operations team structure and lack of oversight in specific training for some staff. H&S issues had not been identified in previous safety audits.	Operations leadership developing plan for improving training compliance and oversight for DATS. Blower installation complete (see H&S tab). Straps in place on mort box, ropes removed and disposed of. Life raft determined not to be required by Transport Canada, but has been shipped for servicing anyways. New position of Marine Boat Planner recently established and will create database of all safety requirements, service schedules (see Wave Jumper). Powerserve electrical providing quote for gen room fan (H&S). To be verified at next ASC audit for the company. Next visit to the company by the social auditor is set at the 3rd September 2018.	8/9/18	Operations leadership developing plan for improving training compliance and oversight for DATS. Blower installation complete (see H&S tab). Straps in place on mort box, ropes removed and disposed of. Life raft determined not to be required by Transport Canada, but has been shipped for servicing anyways. New position of Marine Boat Planner recently established and will create database of all safety requirements, service schedules (see Wave Jumper). Powerserve electrical providing quote for gen room fan (H&S). To be verified at next ASC audit for the company. Next visit to the company by the social auditor is set at the 3rd September 2018. On the week beginning the 3rd September the same audit team were at Marine Harvest Canada to conduct 3 further ASC audits. AT that time the review of this NC on this site was carried out. The DATS system had improved to an extent that it was possible to see that corrective action for the operations team. Equally the H+S issues were reviewed and the photograph and documentary evidence was reviewed with the H+S manager of the company. Accepted Leon Reed.	7/9/18	NA	NA	NA	NA	NA
7	6.10.1	Major	"The company holds document for Employment Standards Act for BC for working regulations. The working shift pattern is carried out over two weeks. The shift pattern consists of 8 days on and 6 days off. The averaged hours over the 2 weeks is 40 hours per week. Working hours are provided by site managers to the payroll and working hours' department. The workers confirmed that working hours are correct before this. Records on the attendance system show that workers are not exceeding the working hours that are allowed. The shift pattern is agreed before the commencement of employment. The contract of employment clearly stated the contracted working hours. Workers confirmed that the facility did not abuse the working hour's regulations and laws. "	The shift patterns for the Operations team exceed internationally accepted recommendations. The shift with the highest number of consecutive working days is 24 days on 18 off. (The daily working hours are contracted at 10 hours per day)	08/06/2018	Closed	NA	Shift pattern legally allowed in Canada.	Shift pattern to be adjusted to allow time off in 24 days, HR team working on changes, to be verified at next ASC audit. Next visit to the company by the social auditor is set at the 3rd September 2018.	8/9/18	Shift pattern to be adjusted to allow time off in 24 days, HR team working on changes, to be verified at next ASC audit. Next visit to the company by the social auditor is set at the 3rd September 2018. On the week beginning the 3rd September the same audit team were at Marine Harvest Canada to conduct 3 further ASC audits. At that time the review of this NC on this site was carried out. The two individuals who were working excessive hours from the operations team had received new contracts and they were given rest periods during their shift. The company had provided an email of undertaking and the social auditor has accepted their corrective actions. Also this issue was not raised again on the other 3 audits taking place for the same CB on the same company systems. Accepted Leon Reed.	7/9/18	NA	NA	NA	NA	NA
8	6.10.2	Major	The employees are paid a premium rate for overtime hours they are paid 150% for the first 2 hours and 200% for any hours worked after that. The time and attendance system confirmed that overtime is infrequent. The employees confirmed that overtime is rare and is voluntary.	The review of the working hours found; • Operations workers are working more than 16 hours per day on a regular basis • The highest number of working hours in one day was 19 hours. • Rest periods are between shifts are as low as 5 hours • 24 days continuous shift patterns are being used with excessive overtime . There have been some improvement since July 2017 but still needs some controls to ensure that working hours are compliant with the requirements set by ASC	08/06/2018	Closed	NA	Changes to operations team structure and policy for overtiem have been introduced, but not fully rolled out.	Cap on working hours introduced, which has reduced excessive hours, HR policy updated to reflect 12 hour cap on working hours. Policy appears to have reduced overtime as per guidelines, to be verified at next audit. Breaks have been applied in 24 day shift. To be verified at next ASC audit for the company. Next visit to the company by the social auditor is set at the 3rd September 2018. The same audit ream visited the company office for further ASC audits on the week beginning the 3rd of September. The new HR policy had been introduced and working hours on the site were reviewed since the last audit. Corrective actions had been effective, and overtime had been significantly reduced. Accepted Leon Reed.	8/9/18	Cap on working hours introduced, which has reduced excessive hours, HR policy updated to reflect 12 hour cap on working hours. Policy appears to have reduced overtime as per guidelines, to be verified at next audit. Breaks have been applied in 24 day shift. To be verified at next ASC audit for the company. Next visit to the company by the social auditor is set at the 3rd September 2018. The same audit ream visited the company office for further ASC audits on the week beginning the 3rd of September. The new HR policy had been introduced and working hours on the site were reviewed since the last audit. Corrective actions had been effective, and overtime had been significantly reduced. Accepted Leon Reed.	7/9/18	NA	NA	NA		

9	8.3	Minor	There have been some modifications and modernisations to the hatcheries that have not been assessed in the impact assessment.	Biodiversity impact assessment for the hatchery was drawn up in November 2014. There are a series of recommendations at the end of the report mainly to do with the effluent discharge and its effect. Work is on-growing, and the farm is being turned into 100% re-circulation. There have been some modifications to the hatcheries that have not been assessed in the impact assessment.	08/06/2018	Closed	NA	Recent updates to hatchery not yet reflected.	Cap on working hours introduced, which has reduced excessive hours, HR policy updated to reflect 12 hour cap on working hours. Policy appears to have reduced overtime as per guidelines, to be verified at next audit. Breaks have been applied in 24 day shift. To be verified at next ASC audit for the company. Next visit to the company by the social auditor is set at the 3rd September 2018.	8/9/18 or by agreed plan	Cap on working hours introduced, which has reduced excessive hours, HR policy updated to reflect 12 hour cap on working hours. Policy appears to have reduced overtime as per guidelines, to be verified at next audit. Breaks have been applied in 24 day shift. To be verified at next ASC audit for the company. Next visit to the company by the social auditor is set at the 3rd September 2018. The same audit ream visited the company office for further ASC audits on the week beginning the 3rd of September. The new HR policy had been introduced and working hours on the site were reviewed since the last audit. Corrective actions had been effective, and overtime had been significantly reduced. Accepted Leon Reed.	Extended	Bio diversity assessment being carried out over the summer.	Time required to carry out assessment.	31/12/18	NA	NA
10	8.9	Minor	The calculations are in place for the 2016 energy consumption in Kilojoules use however the 2017 calculations are not yet complete.	All records of fuel and electricity use are recorded for each of the facilities. These records make up part of the reporting into MH on global use of energy. The hatcheries all record energy use. The calculations are in place for the 2016 energy consumption in Kilojoules use however the 2017 calculations are not yet complete.	08/06/2018	Closed	NA	Changes to key account manager position have resulted in delays in aquiring energy information from supplier	Energy updates completed - BTC 42,581,999kJ/mT, 2,065,926 GHG equivalents. Dalrymple 30,850,530 kJ/mT, 2,799,343 GHG equivalents. Calcuations now in place. Evidence accepted.	8/9/18 or by agreed plan	Email with data provided. Accepted Paul Casburn	14th July 2018	NA	NA	NA	NA	NA
11	8.10	Minor	Connected to 8.9 the greenhouse gas emissions calculation for 2017 is not yet been completed.	Connected to 8.9 the greenhouse gas emissions calculation for 2017 is not yet been completed.	08/06/2018	Closed	NA	Changes to key account manager position have resulted in delays in aquiring energy information from supplier	Energy updates completed - BTC 42,581,999kJ/mT, 2,065,926 GHG equivalents. Dalrymple 30,850,530 kJ/mT, 2,799,343 GHG equivalents. Calcuations now in place. Evidence accepted.	8/9/18 or by agreed plan	Email with data provided. Accepted Paul Casburn	14th July 2018	NA	NA	NA	NA	NA

ASC Audit Report - Traceablity

10	Traceability Factor	Description of risk factor if present.	Describe any traceability, segregation, or other systems in place to manage the risk.
10.1	The possibility of mixing or substitution of certified and non-certified product, including product of the same or similar appearance or species, produced within the same operation.	There are adequate controls in place to prevent accidental substitution and although deliberate substitution could take place, staff are well trained, and the risk is low. The company is listed on the stock exchange and substituion if it was discovered, would have severe consequences for the company.	The company runs a product CV that accompanies the fish whenever they are moved from a cage including harvest. The CV has all the history for the fish in that cage including hatchery of origin, any medications or treatments, the feed that was used and any other relevant historical information eg family history.
10.2	The possibility of mixing or substitution of certified and non-certified product, including product of the same or similar appearance or species, present during production, harvest, transport, storage, or processing activities.	Only deliberate substitution could take place, staff are well trained. No fish are sold as ASC certified.	Unlikely due to system in place at central harvest facility.The fish are killed on site and are transferred to the harvest unit directly using Refridgerated seawater vessels RSW's. The processing unit is based in Port Hardy and is owned by Marine Harvest. Only Marine harvest fish are harvested and processed in this processing unit. The site fills in a drug declaration sheet at harvest and its given to the Well Boat. The Well Boat also gives a copy of the quantity of fish harvested to the site before it leaves for the processsing unit. It is possible, though unlikely, that the harvest boat would have a different site load in seperate holds.
10.3	The possibility of subcontractors being used to handle, transport, store, or process certified products.	The fishing company owned by and called J. Walkus is used to harvest however they only harvest for Marine Harvest Canada.	The same trace system is used as described earlier in the audit. The fish are still under the control of Marine Harvest. The processing unit is also owned by Marine Harvest.
10.4	Any other opportunities where certified product could potentially be mixed, substituted, or mislabelled with non-certified product before the point where product enters the chain of custody.	No other opportunities.	None.

Owned by client **Subcontracted by client**

10.4.a	Total number of sites owned/subcontracted by client producing the same species that is included in the scope of certification	1	0
	Number of sites included in the unit of certification	1	0

		Site name(s)	Reason(s)
10.4.b	Site(s) within UoC that has product to be excluded from entering the chain of custody	NA	NA

10.5	Detail description of the flow of certified product within the operation and the associated traceability system which allows product to be traced from final sale back to the unit of certification	The fish are harvested on site and transported to the Port Hardy processing plant by James Walkus fishing company. There are 3 harvest / killing boats which are the Nicole Joye, Amarissa Joye and the Serina Joye. There are 2 other RSW boats that transport the fish from the point of harvest to the processing plant. They are the Pacific Joye and the Island Joye. The traceability system consisits of a 3 copy document that is filled in on the harvest boat that describes the site, cage number, date, time and fish number harvested plus any other comments. One copy is left on the farm, one copy is left on the harvest baot and the last copy goes to the Processing plant. A further 3 copy document is filled in by the farm itemising the last treatments of anasthetic, antibiotics and lice treatments if any. This document details the withdrawl of any therapeutants of chemicals and is used in the history of the harvest fish. Again the farm keeps a copy, the harvest boat keeps a copy and the processing plant does not procede with processing without their copy.

10.6 **Traceablity Determination:**

10.6.1	The traceability and segregation systems in the operation are sufficient to ensure all products identified and sold as certified by the operation originate from the unit of certification, or	The company has GAA BAP certification for all its sites including the processing facility. The processing facility also has MSC CoC certification. The farm does not sell the fish as ASC certified. There is a requirement for a chain of custody for when the fish are no longer in the control of the farm.
10.6.2	The traceability and segregation systems are not sufficient and a separate chain of custody certification is required for the operation before products can be sold as ASC-certified or can be eligible to carry the ASC logo.	See 10.6.1

10.6.3	The point from which chain of custody is required to begin	Products are authorised to enter an ASC Chain of Custody certification at the point where the fish is moved from the well boat and delivered directly to the processing plant. From this point the ASC Salmon Standard certificate stops and the ASC CoC certificate takes over. The harvest plant, “Marine Harvest Canada – Port Hardy”, is ASC CoC certified, certificate code ASC-C-00540 the certificate is valid until 14.01.2021. Ref. to www.asc-aqua.org where updated information is available. As the scope of this ASC Salmon Standard audit is the complete farm and all salmon at the site is included in the scope of this audit, and the fact that the harvest plant has an ASC CoC certification, the risk associated to substitution and mixing of certified with not certified products is very limited or not existing at the site and before the point when the ASC CoC as specified is needed and takes over in the ASC Salmon/ASC CoC certification process
10.6.4	If a sepearate chain of custody certificate is required for the unit of certification	No, not for the unit of certification (Wanx Talis; Heath Bay). A separate ASC CoC certification is needed as specified earlier in the report for activites e.g slaughtering, processing and trading of certified products performed after the ASC Salmon Standard certificate scope stops.

For Multi-site clients

ASC Audit Report - Closing

12 Evaluation Results

12.1	A report of the results of the audit of the operation against the specific elements in the standard and guidance documents	The audit was comprehensive and well executed. The operation understands the ASC requirements and standard. The evaluation of the company`s compliance to the requirements in the ASC Salmon Standard and all references and findings is described in detail in the report section II Audit template and section IV Audit Report Closing. The principles where full compliance was found is listed below: Principle 1; "Compliance with all applicable local and national legal requirements and regulations". Principle 3; "Protect the health and integrity of wild populations". Principle 7; "Be a good neighbour and conscientious citizen". For the rest of the principles listed below: Principle 2; "Conserve natural habitat local biodiversity and ecosystem function". Principle 4; "Use resources in an environmentally efficient and responsible manner". Principle 5; "Manage disease and parasites in an environmentally responsible manner". Principle 6; "Develop and operate farms in a social responsible manner". Principle 8; " Standards for supplier of smolt". Full compliance was not found, although most of these were mainly compliant. The audit hence resulted in a limited number of Major and Minor category Non-Conformities. Reference is made to ASC Farm certification and Accreditation Requirement 17.4.2 and 17.4.3. As the fish were not at harvest size during the audit, harvest was not overseen by the auditor. The audit was timed without including harvest activities to allow the farm to benefit from certification during the initially audited production cycle. The QMS system used related to harvest and procedures and methodology used for harvesting salmon at the site/company was assessed. Harvest is planned to be observed and assessed during relevant surveillance audit of the site/company at a later date. VR used during audit: VR nr.89 approved 27.9.15 by ASC on indicator 5.4.4. Rationale for use of VR 89 during audit is that VHS is endemic in BC and does not require compulsory culling. VR nr.91 approved 27.9.15 by ASC on indicator 5.4.4. Rationale for use of VR 91 during audit is that VHS is endemic in BC and does not require compulsory culling. VR nr.92 approved 23.9.15 by ASC on indicator 8.4. Rationale for use of VR 92 during audit is the smolt producers discharge effluent to seawater not freshwater. VR nr.141 approved 28.3.16 by ASC on indicator 3.1.7. Rationale for use of VR 141 during audit is that the DFO requirements for Lice levels on farmed salmon is accepted by ASC. VR nr.224 approved November 2018 by ASC on indicator 2.1.2 and 2.1.3 Rationale for use: BC salmon farms have been granted a variance to Indicators 2.1.2 and 2.1.3 and instead rely on the scientifically proven and federally regulated sulfide surrogates. VR nr.231 approved 14.7.17 by ASC on indicator 8.4. Rationale for use of VR 231 during audit is that the hatcheries are allowed to measure phosphorus in the effluent water rather than the sludge. VR nr.246 approved 17.1.18 by ASC on indicator 2.3.1. Rationale for use of VR 246 during audit is that the feed companies are allowed to measure the fines rather than the site. VR list and updated documentation for VR can be found on the ASC website: http://www.asc-aqua.org/
12.2	A clear statement on whether or not the audited unit of certification has the capability to consistently meet the objectives of the relevant standard(s)	This site has the capability to consistently meet the objectives of the ASC salmon standard as required. This is the sites first audit. The site had 5 minor and 4 Major NC and they have been closed . Corrective actions for closing the minors (in the form of a plan or closed where possible) and the Major (in the form of supplied evidence) are approved by DNV GL.

123	In cases where BEIA or PSIA is available, it shall be added in full to the audit report. IF these documents are not in English, then a synopsis in English shall be added to the report.	NA

13 Decision

13.1	Has a certificate been issued? (yes/no)	Yes. The final certification decision has been taken after closing of the major findings and all minor findings are closed or have an agreed plan in place, as per ASC Farm Certification and Accreditation Requirements Version 2.1 August 2017. • Compliant and thus certified
13.2	The Eligiblity Date (if applicable)	The Eligiblity Date is the date of certification 06.12.2018 Certificate validity 06.12.2018 - 06.12.2021
13.3	Is a separate CoC certificte required for the producer? (yes/no)	No, not for the unit of certification (Heath Bay also called Wanx talis). A separate ASC CoC certification is needed as specified earlier in the report for activities e.g slaughtering, processing and trading of certified products performed after the ASC Salmon Standard certificate scope stops.
13.4	If a certificate has been issued this section shall include:	
13.4.1	The date of issue and date of expiry of the certificate.	Certificate validity 06.12.2018 - 06.12.2021
13.4.2	The scope of the certificate	Production of Atlantic salmon (Salmo salar).

13.4.3	Instructions to stakeholders that any complaints or objections to the CAB decision are to be subject to the CAB's complaints procedure. This section shall include information on where to review the procedure and where further information on complaints can be found.	Stakeholders can contact DNV GL and/or Lead Auditor as specified in report section I Audit report opening, contact information is also available in notifications received as stakeholder from DNV GL. Information and documents related to contacting or complaints to DNV GL is available at www.dnvgl.com

14 Surveillence

14.1	Next planned Surveillance	
14.1.1	Planned date	2019 - Specific date not decided at this stage.
14.1.2	Planned site	Heath Bay
14.2	Next audit type	
14.2.1	Surveillence 1	SA 1 - 2019
14.2.2	Surveillance 2	
14.2.3	Re-certification	
14.2.4	Other (specify type)	