Form 3 - Public Disclosure Form

*This form shall be submitted by the CAB no less than thirty (30) working days prior to any onsite audit *. Any changes to this information shall be submitted to the ASC within five (5) days of the change and not later than 10 days before the planned audit. If later, a new announcement is submitted and another 30 days rule will apply.*

*The information on this form shall be public * and should be posted on the ASC website within three (3) days of submission.*

This form shall be written to be readable to the stakeholders and other interested parties.

This form should be translated into local languages when appropriate

PDF 1 Public Disclosure Form

PDF 1.1	Name of CAB	SGS Nederland BV
PDF 1.2	**Date of Submission**	16/02/2018
PDF 1.3	**CAB Contact Person**	
PDF 1.3.1	Name of Contact Person	Jack Vader & Judith van der Lelij
PDF 1.3.2	Position in the CAB's organisation	Program Management ASC
PDF 1.3.3	Mailing address	P.O. Box 200 3200 AE Spijkenisse, The Netherlands
PDF 1.3.4	Email address	asc.reports@sgs.com
PDF 1.3.5	Phone number	+31 (0) 88 214 3285 / +31 (0) 88 214 3271
PDF 1.3.6	Other	
PDF 1.4	**ASC Name of Client**	
PDF 1.4.1	Name of Company	Marine Harvest Canada
PDF 1.4.2	Name of Contact Person	Ms. K . (Katherine) Dolmage
PDF 1.4.3	Position in the client's organisation	Certification Manager

* Except unannounced audits, for which this form will be sent to the ASC and AAB without being published

PDF 1.4.4 Mailing address	124-1334 Island Hwy, V9W8C9 Campbell River, BC, Canada
PDF 1.4.5 Email address	katherine.domage@marineharvest.com
PFD 1.4.6 Phone number	250-850-3276x7228
PDF 1.4.7 Other	

PDF 1.5 Unit of Certification

PDF 1.5.1 Single Site	X
PDF 1.5.2 Multi-site	
PDF 1.5.3 Group certification	

PDF 1.6 Sites to be audited

Site Name	GPS Coordinates	Other Location Information	Planned Site Audit(s)	Date of planned audit
Okisollo (Sonora Island)	50 18.603N 125 18.849W	N/A	26-28 March 2018	26-28 March 2018

PDF 1.7 Species and Standards

Standard	Species (scientific name) produced	Included in scope (Yes/No)	ASC endorsed standard to be used	Version Number
Abalone				
Bivalve				
Freshwater Trout				
Pangasius				
Salmon	Salmo Salar	Yes	ASC Salmon Standard	1.1 April 2017
Shrimp				
Talapia				
Seriola/Cobia				
Other				

PDF 1.8 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
Campbell River Council	Government	In person/input submission	In advance of the audit	Email
Sayward Town Council	Government	In person/input submission	In advance of the audit	Email
K'ómoks First Nation	First Nations	In person/input submission	In advance of the audit	Email
We Wai Kai & Wei Wai Ku	First Nations	In person/input submission	In advance of the audit	Email
Homalco First Nation	First Nations	In person/input submission	In advance of the audit	Email
Heiltsuk First Nation	First Nations	In person/input submission	In advance of the audit	Email
Ducks Unlimited	Conservation	In person/input submission	In advance of the audit	Email
Pacific Salmon Foundatior	Conservation	In person/input submission	In advance of the audit	Email
David Suzuki Foundation	Conservation	In person/input submission	In advance of the audit	Email
Living Oceans Society	Conservation	In person/input submission	In advance of the audit	Email
Coast Forestry Products A	Forestry	In person/input submission	In advance of the audit	Email
Canadian Pacific Sustainal	Fisheries	In person/input submission	In advance of the audit	Email
Vancouver Island North T(	Tourism	In person/input submission	In advance of the audit	Email
James Walkus Fishing Con	Contractor/Supllier	In person/input submission	In advance of the audit	Email
Flurers Smokery	Contractor/Supllier	In person/input submission	In advance of the audit	Email
Skretting	Contractor/Supllier	In person/input submission	In advance of the audit	Email
Noboco	Contractor/Supllier	In person/input submission	In advance of the audit	Email
BC Centre for Aquatic Hea	Research	In person/input submission	In advance of the audit	Email
BC Salmon Farmers Assoc	Industry	In person/input submission	In advance of the audit	Email
Canadian Aquaculture Ind	Industry	In person/input submission	In advance of the audit	Email
United Steelworkers	Industry	In person/input submission	In advance of the audit	Email

PDF 1.9 Proposed Timeline

PDF 1.9.1	Contract Signed:	05/03/2018
PDF 1.9.2	Start of audit:	26/03/2018
PDF 1.9.3	Onsite Audit(s):	26-28/03/2018
PDF 1.9.4	Determination/Decision:	23/05/2018

DF 1.10 Audit Team

	Column1	Name	ASC Registration Reference
PDF 1.10.1	Lead Auditor	Conrad Powell	n/a
PDF 1.10.2	Technical Experts	Conrad Powell	n/a
PDF 1.10.3	Social Auditor	Leon Reed	n/a

ASC Audit Report - Opening

1 Title Page

1.1 Name of Applicant	Marine Harvest Canada Inc.
1.2 Report Title [e.g. Public Certification Report]	Draft Assessment Report
1.3 CAB name	SGS Canada
1.4 Name of Lead Auditor	Conrad Powell
1.5 Names and positions of report authors and reviewers	Conrad Powell (lead/Technical Auditor) Leon Reed (Social Auditor) Cormac O'Sullivan (Reviewer)
1.6 Client's Contact person: Name and Title	Katherne Dolmage - Certification Manager
1.7 Date	March 26-28, 2018

2 Table of Contents

1 Title Page
2 Table of Contents
3 Glossary
4 Summary
5 CAB Contact Information
6 Background on the Applicant
7 Scope
8 Audit Plan
10 Audit Report Traceability
11 Findings
12 Evaluation Results
13 Decision
14 Surveillance

3 Glossary

Terms and abbreviations that are specific to this audit report and that are not otherwise defined in the ASC glossary

BTC - Big Tree Creek Hatchery
CAHS - Centre for Aquatic Health Services
CEAA - Canadian Environmental Assessment Act
CFIA - Canadian Food Inspection Agency
COSEWIC - Committee on the Status of Endangered Wildlife in Canada
DAL - Dalrymple Hatchery
DFO - Department of Fisheries & Oceans
IUCN - International Union for the Conservation of Nature
MHC - Marine Harvest Canada
OFH - Ocean Falls Hatchery
SARA - Species at Risk act

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	Assessment of compliance to the ASC Salmon Standard regarding production of Atlantic salmon from fish entry to harvest at Marine Harvest Canada Okisollo (Sonora Island) farm.
4.2	A brief description of the operations of the unit of certification	The 49.96 ha site is located in the waters of Okisollo Channel off the southern shore of Sonora Island. There are 10 net pens of dimensions 36m x 36m x 20m. The site has a licensed peak biomass limit of 3,300 mt.
4.3	Type of unit of certification (*select only one type of unit of certification in the list)*	Single farm
4.4	Type of audit (*select all the types of audit that apply in the list)*	Initial
4.5	A summary of the major findings	There were no major findings during the audit. All non-conformities were minors and mainly involved errors and omissions in transparency information submitted to the ASC, as well as some safety issues and the lack of benthic biodiversity data for the current cycle as peak biomass has not yet occurred.
4.6	Did the audit include harvesting activities of the principle product to be audited?	No. No harvesting took place during audit. The Audit Team met with MHC Harvest Manager to discuss aspects of harvesting and view video of the process. The Audit Team has witnessed harvesting at another MHC farm.
4.7	If not, provide a justification for the alternative timing.	No harvesting took place during audit. Some harvesting is expected June 2018, with the majority of harvesting to commence in August 2018 and the Auditors will view Harvesting at the next opportunity. The Applicant is having their first ASC audit at the site.
4.8	The Audit determination	All non-conformances are sufficently addressed by the client, with one addressed through the closure of VR231 and are approved by SGS. There were no stakeholder submissions in response to the publication of the draft report within the public consultation period. Certification is granted as all outstanding items have now been closed out.

5 CAB Contact Information

5.1	CAB Name	SGS Nederland BV
5.2	CAB Mailing Address	P.O. Box 200 3200 AE Spijkenisse The Netherlands
5.3	Email Address	asc.reports@sgs.com
5.4	Other Contact Information	Phone: +31 (0) 88 214 3271

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.	See Form 3 - Public Disclosure
6.2	A description of the unit of certification (*for initial audit)* / changes, if any (*for surveillance and recertification audits)*	The 49.96 ha site is located in the waters of Okisollo Channel off the southern shore of Sonora Island. There are 10 net pens of dimensions 36m x 36m x 20m. The site has a licensed biomass limit of 3,300 mt. There is a large floating structure which houses feed storage, living quarters and office, a mortality storage float and a generator float.
6.3	Other certifications currently held by the unit of certification	The farm is certified to Best Aquaculture Practices (BAP) standard.
6.4	Other certification(s) obtained before this audit	

6.5	Estimated annual production volumes of the unit of certification of the current year	3,300 mt
6.6	Actual annual production volumes of the unit of certification of the previous year *(mandatory for surveillance and recertification*	0
6.7	Production system(s) employed within the unit of certification *(select one or more in the list)*	Pen
6.8	Number of employees working at the unit of certification	5

7 Scope

7.1	The Standard(s) against which the audit was conducted, including version number	ASC Salmon Standard v1.1
7.2	The species produced at the applicant farm	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 covers the marine site from fish entry until harvest at the site. All pens are included in the scope. The fish are all one year class and were transferred in from two other MHC farms. All fish originated from MHC's Dalrymple, Big Tree Creek and Ocean Falls freshwater facilities and were produced from MHC brood stock. Fish are grown to market size and harvested for processing at MHC's Port Hardy Processing Plant.

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	Port Hardy Processing Plant 7200 Coho Road Port Hardy, BC Canada V0N 2P0
7.5	Description of the receiving water body(ies).	The farm is a soft-bottom site located in the Okisollo Channel which runs between the southern shore of Sonora Island and the northern shore of Quadra Island in the archipelago known as the Discovery Islands. There are three other salmon farms in the channel: two are operated by Cermaq Canada (distant from MHC farm by 1.7 km and 3.5 km) and the other by Grieg Seafood BC (4.4 km distant). All six species of wild Pacific salmonids occur naturally in the channel.

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.	Lead/Technical Auditor: Conrad Powell Social Auditor: Leon Reed Audit: 26th - 28th March 2018 Report writing: 30th March - 2nd April 2018 Report reviewing completed: 18th April 2018
8.2	Previous Audits (if applicable):	

8.2.1 Initial audit - 03/2018

NC reference number	Standard clause reference	Closing deadline - status - closing date of each NC
1	6.5.1	28-Jun-18 - Closed - 16-Apr-18
2	2.1.1	28-Jun-18 - Closed - 14-Apr-18
3	2.1.2	28-Jun-18 - Closed - 14-Apr-18
4	2.1.3	28-Jun-18 - Closed - 14-Apr-18
5	3.1.4	28-Jun-18 - Closed - 14-Apr-18
6	3.4.3	28-Jun-18 - Closed - 14-Apr-18
7	4.2.2	28-Jun-18 - Closed - 14-Apr-18
8	4.6.2	28-Jun-18 - Closed - 14-Apr-18
9	4.6.3	28-Jun-18 - Closed - 14-Apr-18
10	5.2.1	28-Jun-18 - Closed - 14-Apr-18

11	8.4	28-Jun-18 - Closed - 22 May-18
12	8.32	28-Jun-18 - Closed - 14-Apr-18
13	8.33	28-Jun-18 - Closed - 14-Apr-18

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 extension audit mm/ yyyy

8.4 Audit plan as implemented including:

		Dates	Locations
8.4.1	Desk Reviews	08-Mar-18	
8.4.2	Onsite audits	26-28 March 2018	Okisollo farm; Marine Harvest Canada offices, Campbell River
8.4.3	Stakeholder interviews and Community meetings		N/A
8.4.4	Draft report sent to client	06-Apr-18	
8.4.5	Draft report sent to ASC	19-Apr-18	
8.5.5	Final report sent to Client and ASC	23-May-18	

8.7 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.

Katherine Dolmage - Certification Manager, MHC
Renee Hamel - Certification Administrator MHC
Dean Dobrinksy - Human Resources Director, MHC
Blaine Tremblay - Health & Safety Manager, MHC
Dan Pattison - Health & Safety Advisor, MHC
Paul Pattison - Site Manager
Ian Roberts - Director of Public Affairs

8.8

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	Response sent to stakeholder
ASC	Standard owner	April 24, '18	Yes	Include a date in 8.1 & adjust footer of the document	Yes	Yes
ASI	Accreditation body	07/06/2018	Yes	Errors in sections: 7.5 (opening) 2.2.1-3, 2.2.3-4 and 5.2.5 (checklist)	Yes, all are amended	Yes

Scope: species belonging to the genus *Salmo* and *Oncorhynchus*

INSTRUCTION TO FARMS/AUDITORS:
This audit manual was developed to accompany version 1.1 of the ASC Salmon Standard.

References in this Audit Manual to Appendices can be found in the ASC Salmon Standard document.

PRINCIPLE 1: COMPLY WITH ALL APPLICABLE NATIONAL LAWS AND LOCAL REGULATIONS						
Criterion 1.1 Compliance with all applicable local and national legal requirements and regulations						
Indicator		**Compliance Criteria (Required Client Actions):**	**Audit evidence**	**Evalu-ation**	**Description of NC**	**Value/ Metric**
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.	Digital copies of applicable land and water use laws are available, and MHC provided the following documents: (1) Finfish Aquaculture Licence AQFF 117080 issued by the Department of Fisheries and Oceans (DFO), expiring 12/18/18; (2) Licence of Occupation File No. 883561 issued 05/07/11 by BC Ministry of Agriculture and Lands and valid for 20 years; (3) Conditional Water Licence No. 117429 for the use of water from Colliston Creek, issued 08/22/02 by Land & Water BC Inc.; 4) Navigable Waters Protection Act Permit No. 8200-2002-500873 (T1886) issued 12/19/11 by Transport Canada. DFO auditing and enforcement activities confirm GPS co-ordinates, lice monitoring records, FHMP compliance, benthic surveys and site debris. DFO personnel were on site same day as the ASC Audit Team, i.e., 03/27/18, and also had visited on 09/25/17, as evidenced in the Visitors Log. The farm is not located in any national preservation areas.	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".	MHC is a registered company operating under tax number GST 888050994RT. The company provided a detailed explanation of both the federal and provincial tax schemes, and tax benefits associated with aquaculture in British Columbia. Typical taxes include income tax, federal and provincial consumer taxes, payroll taxes and property taxes. Other than property taxes which are filed annually, most of the taxes are filed monthly.	Compliant		

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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).	The BC Employment Standards Act - this details minimum wages and rights for employees and collective agreements and bargaining. The Minister of Labour, Citizens Services and Open Government is the relevant Authority. The minimum wage is $11.35 per hour and the minimum work age is 15. There is no requirement for inspections re compliance with labour laws and regulations.	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.	There is no permit required to demonstrate requirements for water quality impacts for the marine sites in the licenses required. The farm site does not fall under any discharge laws or regulations. Per licensing requirements, sediments beneath and around the farm must be monitored at peak biomass and data provided to DFO. MHC produced the Okisollo Peak Biomass Survey Report (September 19, 2016), prepared by Ocean Dynamics Inc. and the subsequent DFO letter (November 8, 2016) indicating that the site met requirements. Section 8 of this audit concerns discharges for the hatcheries.	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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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]	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.	Peak biomass sampling has not yet occurred and data was not available. A peak biomass benthic monitoring survey was conducted during the last cycle, and MHC presented the report: Benthic Biodiversity Assessment Okisollo Farm Site. The survey occurred August 24-25, 2016, and peak biomass occurred on August 16. The report contains a map showing the boundary of the AZE as determined on the basis of DEPOMOD simulations. According to the report, the site has both soft and hard bottom substrate. Sampling and analyses were performed according to ASC requirements. Samples collected along transects A and C yielded sufficient material for analysis and the average sulfide concentrations at stations outside the AZE were 35.6 µM and 15.5 µM, respectively. Data for the current cycle will be submitted once peak biomass monitoring has been completed. Peak biomass is expected July 2018.	Minor	Peak biomass sampling has not yet occurred and data was not available.	Sulphides (µM) last cycle: Transect A= 35.6 Transect C= 15.5
		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.				
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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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).	Peak biomass sampling has not yet occurred and data was not available. The Benthic Biodiversity Report (see 2.1.1) contains a map showing the AZE. Samples were collected according to ASC requirements and were analysed by Columbia Science. MHC chose to use option #4 (Infaunal Trophic Index, ITI), and ITI values of 68 and 75 were reported for stations outside the AZE along transects A and C, respectively. Transect B ran along hard bottom substrate and grab samples were not obtained. Data for the current cycle will be submitted once peak biomass monitoring has been completed. Peak biomass is expected July 2018.	Minor	Peak biomass sampling has not yet occurred and data was not available.	ITI score, last cycle: Transect A = 68 Transect B = 75
		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.				
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		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
2.1.3	**Indicator:** Number of macrofaunal taxa in the sediment within the AZE, following the sampling methodology 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]	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. 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.	Peak biomass sampling has not yet occurred and data was not available. The Benthic Biodiversity Report (see 2.1.1) contains a map showing the AZE. Samples were collected according to ASC requirements and were analysed by Columbia Science. Pollution indicator species were excluded from reported data which shows the number of highly abundant taxa to be 5 and 1 at stations within the AZE along transects A and C. The site is deemed compliant on the basis that 0 highly abundant taxa were found at reference station 1,000m from the farm. Data for the current cycle will be submitted once peak biomass monitoring has been completed. Peak biomass is expected July 2018.	Minor	Peak biomass sampling has not yet occurred and data was not available.	Highly abundant taxa, last cycle: Transect A = 5 Transect B = 1
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.	Okisollo Autodepomod was carried out July 2012 following the DFO "Guide to the Pacific Marine Finfish Application". The assessment of Depomod is found in Canadian Scientific Advisory Council Research Document 2005/035: The suitability of DEPOMOD for use in the management of aquaculture sites, with particular reference to Pacific Region (John Chamberlain et al.).	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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.		Compliant		
		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.	More than six months of data is in place. No samples have been missed since the commencement of stocking of the current cycle. There are three AKVA oxygen sensors on site calibrated every six months under contract by AKVA. There is a backup Oxyguard hand held probe. There is a handheld Oxyguard unit on site and staff demonstrated calibration. Weekly average percent saturation data indicated the farm frequently had DO <70% saturation. Reference station data also showed similarly low % saturation values. There were two reference stations: Station 1 was 500 m west of the cage array and Station 2 was 1,000 km east of the array. Data has been submitted to ASC.			
		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.				

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
Footnote	[9] Percent saturation: 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.					
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.	No weekly samples in the current cycle have been < 2 mg/l DO. The lowest reading, 5.34 mg/l, occurred first week of October 2017.	Compliant		DO readings < 2 mg/l = 0%
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.	In 2012, the Canadian Council of Ministers of the Environment (CCME) established the Canadian Water Quality Guidelines for the Protection of Aquatic Life. MHC has been taking water samples from every site from May to October and determining nitrogen, phosphorus, pH and silica. The data is submitted to a third party analyst, Global AquaFoods Development Corp., for verification against the levels established by the CCME.	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, not applicable.	N/A		

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.	BOD for the last cycle was is 5,703,575 kg O2/l, and this information has been submitted to ASC. BOD for the current cycle will be submitted following harvest. MHC has created an Excel spreadsheet which was reviewed during audit and found to be providing accurate calculations of BOD.	Compliant		
		b. Submit calculated BOD as per Appendix VI to ASC for each production cycle.				
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 hygiene that includes all appropriate elements.	MHC has an extensive set of documented and implemented procedures in place to minimize adverse environmental impacts. These include the storage and handling of chemicals and waste, hazardous materials inventory, feeding practices to avoid loss of feed to the environment, fish containment measures, wildlife interaction plan and daily mortality collection and proper storage and disposal of mortalities. All drug usage is under the authority of a veterinarian and is fully documented. Workers are aware of the controls and adequately trained to ensure they are implemented properly.	Compliant		
		b. Apply the systems ensuring that staff are aware, qualified and trained to properly implement them.				
		-				

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.	Under VR 246, MHC uses fines data provided by Skretting Canada from sampling and testing conducted by the supplier. Skretting records (MHC Fines Testing) indicate feed fine levels were either 0.0% or 0.1% in all samples tested Quarters 2, 3 and 4, 2017.	Compliant		
		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.				
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.	MHC presented the data (Sonora Island (Okisollo) Commercial Finfish Farm Operation and Habitat Information for the Purpose of Review Under the CEAA) provided to various government agencies as part of the requirements of the Canadian Environmental Assessment Act in the early 2000s. The farm's impact on biodiversity and ecological systems is one of the elements taken into consideration by DFO as part of the farm licensing process. General farm siting requirements are found on the DFO website (www.pac.dfo-mpo.gc.ca/aquaculture/licence-permis/docs/site-guide-direct-eng.html) with biodiversity and ecological impacts addressed more specifically in section 3.2, Potential fish, fish habitat and environmental impacts.	Compliant		
		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.				

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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).	The applicant presented the Plan Area Zoning Designations map (06/25/14) from the North Vancouver Island Marine Plan which shows that the Okisollo farm is not in a protected area or HCVA, but is in a Special Management Zone conditionally allowing off-bottom finfish aquaculture. A check of the DFO website for Rockfish Conservation Areas shows that the farm is not within such an area.	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/).					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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. -	ADDs and AHDs are prohibited under 10.2 of the Finfish Aquaculture License (Pacific Aquaculture Regulations) where it is stated: "Marine mammal acoustical deterrent devices must not be used." The auditor did not observe any ADDs or AHDs at the farm site.	N/A	ADDs and AHDs are prohibited by law.	
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) -	Predator control is achieved with the use of predator nets, bird nets and electric fencing. Under Section 10 of the Finfish Aquaculture Licence, marine mammal mortalities must be reported to DFO. Records are in place and these indicate there have been no lethal incidents recorded in the past two years. MHC has a Wildlife Interaction Plan (SOP# SW965, 03/24/17) that contains a list of species that are red-listed (endangered) by the BC government. The list has been taken from the BC Species and Ecosystems Explorer website owned by the Ministry of Environment. There have been no mortalities of endangered or red-listed mammals or birds on the farm. Mortalities are posted to MHC website.	Compliant		
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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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 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].	The farm has not taken any lethal action in the past 12 months. MHC favors passive, non-lethal methods of predator control. Prior to 2012, the applicant exercised lethal methods of predator control only as a last resort. In Q4 2011, the applicant adopted a policy of no use of lethal deterrence and states in its Predator Avoidance Plan (SOP# SW137, 08/30/16): "Lethal measures are used when all available avenues have been exhausted." No lethal encounters have occurred at the site since the adoption of the no-kill policy.	N/A	The farm has not taken any lethal action in the past 12 months.	
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).	Per MHC policy, no lethal actions have been taken.	N/A	Per MHC policy, no lethal actions have been taken.	
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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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 **Applicability:** All	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. 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)	Wildlife Interaction Logs are in place at all MHC farms, and lethal incidents at ASC-certified and under assessment farms can be viewed on the MHC website under Planet. Okisollo data is found at http://marineharvest.ca/planet/salmon_certification/sites-under-assessment-for-asc/data-reporting-for-okisollo/. Marine mammal mortalities are publicly accessible in the DFO website. The Okisollo farm has not had a lethal incident in the prior two years, and this information has been submitted to ASC.	Compliant		Number of lethal incidents in prior two years = 0
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.	The farm has not had any lethal incidents.	N/A	The farm has not had any lethal incidents.	

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.	The MHC Okisollo farm operates in the Okisollo Channel along with three other salmon farms: two are operated by Cermaq Canada (distant from MHC farm by 1.7 km and 3.5 km) and the other by Grieg Seafood BC (4.4 km distant). There is a Memorandum of Understanding in place between the three companies regarding "Okisollo Area Management". The document is dated February 1, 2012 and states automatic renewal on the five year anniversary unless any of the company advises otherwise. The MOU covers stocking, treatments, fallowing, vaccinations, cost-sharing and coordination of phytoplankton monitoring and bioassays and regular meetings of the companies. The site was fallow for 224 days, from December 21, 2016 to August 12, 2017.	Compliant		

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.	MHC has been involved in numerous collaborations, involving NGOs, acadenic institutions and government agencies. Together with DFO, the NGO group CAAR (Coastal Alliance for Aquaculture Reform) and scientists from University the Otago and University of Prince Edward Island, MHC participated in the Broughton Archipelago Management Plan (BAMP) which was a multi-year (2009-2012) study of sea lice in wild and farmed fish in the Broughton Archipelago. The report *Spatial patterns of sea lice infection among wild and captive salmon in western Canada* which appeared in the July 2015 issue of the journal Landscape Ecology and was co-authored by Sharon DeDominicis, MHC Director of Environmental Performance and Certification. MHC is also active with Genome BC in its Strategic Salmon Health Initiative (SSHI) investigating microbes in wild salmon and possible links to farmed salmon. The lead groups in the SSHI are DFO and the Pacific Salmon Association. MHC is also an active member of the British Columbia Salmon Farmers Association (BCSFA) and its Director of Fish Health and Food Safety sits on the association's Science advisory Board. BCSFA has its own Marine Environmental Research Program (MERP) which accepts applications for research on issues associated with salmon aquaculture, wild fisheries and the environment. Details are available on the BCSFA website. One MERP project, the use of native perch as cleaner fish, is a collaboration of MHC and DFO, the BC Centre for Aquatic Health Sciences, Sea Pact and the Vancouver Aquarium Marine Science Centre.	Compliant		
		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.				
		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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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. 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.	The maximum sea lice load for the ABM and the farm is established on the basis of the number of fish at the farm times three (i.e., DFO trigger level of 3 motile Lepeophtherius per fish). The maximum sea lice load for the ABM is 7,800,000 lice (3 x 2,600,000 fish) and, at Okisollo, 1,950,000 lice (3 x 650,000 fish). Lice load is reviewed annually. The maximum sea lice load for the farm and the ABM has been submitted to ASC.	Compliant		
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). 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.	Sea lice data has not been submitted to ASC. Sea lice data was presented at time of audit. MHC conducts weekly sampling year-round and data were available for all weeks of the current cycle, including the sensitive period which had just begun March 1. The sensitive period runs from March 1 to June 30 each year and is the period of out-migration for wild smolts. The most recent lice count at the site is posted on the MHC website, and MHC maintains a log of sampling date and posting date to verify counts are entered within the seven day timeframe.	Minor	Sea lice data has not been submitted to ASC.	
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.”					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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 **Applicability:** All farms operating in areas with wild salmonids except farms that release no water as noted in [32]	**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".				
		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.	There are six salmonid species in the area. 5 are pacific salmon: chinook (Oncorhynchus tshawytscha); sockeye (O. nerka); coho (O. kitsutch); pink (O. gurbuscha); and, chum (O. keta). The sixth species is the rainbow trout or steelhead (O. mykiss). The sensitive period for this area is listed as March 1st to June 30th. DFO compiles an annual outlook for salmon stocks and posts same to its website. The Preliminary 2018 Salmon Outlook report, dated December 2017, was viewed. Information is provided for individual river systems and for each of the five species of Pacific salmon. Farm personnel are aware of the sensitive period.	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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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. 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.	The three salmon companies operating in the Okisollo Channel jointly contract Mainstream Biological Consulting to monitor sea lice on wild salmonids. The 2017 report *Wild Juvenile Salmonid Monitoring Program - Discovery Islands* was presented. It covers the data gathered from sampling events April 18-20 and May 20-24, 2017. Data from the report has been submitted to ASC and is publicly available on the MHC website.	Compliant		
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. 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).	There are wild salmonids in the area (see 3.1.5) and sensitive periods are from March 1st to June 30th. The ASC has granted Variance 88 allowing the farm to use the DFO trigger level of three motile Lepeophtherius salmonis per fish rather than the ASC level of 0.1 female lice per fish. In the current cycle, there have been no actionable lice counts during the sensitive period. Counts did exceed the trigger level in October 2017 which is not during the sensitive period. Wild fish lice counts and farm lice counts are being looked at for trends and to date there has been no action needed. Lice levels on wild fish seem to be generally low.	Compliant		
Footnote	[39] Sensitive periods for migrating salmonids is during juvenile outmigration and approximately one month before.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.				
3.2.1	**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 Salmon standard **Requirement:** Yes [40] **Applicability:** All farms except as noted in [40]	a. Inform the CAB if the farm produces a non-native species. If not, then Indicator 3.2.1 does not apply. b. Provide documentary evidence that the non-native species was widely commercially produced in the area before June 13, 2012. 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). -	The farm produces Atlantic salmon (Salmo salar) which is a non-native species. The aquaculture site authorizes production of Atlantic salmon and information from DFO indicates that Atlantic salmon eggs were first imported into British Columbia in 1985. MHC presented aquaculture licence dated 07/09/04 authorizing Salmo salar at Sonora Island, Okisollo Channel.	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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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).	The farm produces Atlantic salmon (Salmo salar) which is a non-native species. MHC provided 2015 DFO research paper (Andres., 2015. *Summary of reported Atlantic salmon (Salmo salar) catches and sightings in British Columbia and results of field work conducted in 2011 and 2012.* Can. Tech. Rep. Fish. Aqua. Sci. 30161: 19pp.) in which is reported that no Atlantic salmon were captured during stream surveys in 2011 and 2012. MHC also provided correspondence dated December 2017 from the Program Head, Salmon Interactions, Ecosystem Science Division, Pacific Biological Station, DFO revealing that no Atlantic salmon have been taken in seven years of capturing salmon for studies. Also, correspondence dated December 2017 from Mainstream Biological Consulting reports that Atlantic salmon have not been encountered during the wild salmonids lice monitoring the company has been conducting for the past four years.	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.	The farm does not use fish for sea lice control.	N/A	The farm does not use fish for sea lice control.	
		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.				

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
Criterion 3.3 Introduction of transgenic species						
		Compliance Criteria (Required Client Actions):	**Auditor Evaluation (Required CAB Actions):**			
3.3.1	**Indicator**: Use of transgenic [44] salmon by the farm **Requirement:** None **Applicability:** All	a. Prepare a declaration stating that the farm does not use transgenic salmon. 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.	The farm does not produce transgenic fish. MHC declaration (Marine Harvest position on genetically modified salmon) dated April 15 2016 states: "Marine Harvest does not produce, farm or sell transgenic salmon." All fish farmed by MHC are from MHC brood stock and hatcheries and can be traced to origin.	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 that trait expressed in the offspring (reference USDA).					
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 from this site. Morts are collected daily and numbers entered to the Aquafarmer database. Final numbers on the site with assessment of unexplained loss is carried out following count at harvest. Net checks are carried out by divers at least once every 60 days. There are cameras in every cage with excellent resolution and they can pan, tilt and move up and down in the cages for inspection purposes. Escape monitoring data has been submitted.	Compliant		

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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).	Vaki and AquaScan counters are used, and specifications indicate accuracies of 99% and 98-100%, respectively. The well boat count, i.e., the count of fish being loaded onto the boat, is used. Calibration takes place at the beginning of every pen transfer, and is performed by well boat crew. Counting technology accuracy has been submitted.	Compliant		
Footnote	[48] Accuracy shall be determined by the spec sheet for counting machines and through common estimates of error for any hand-counts.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
3.4.3	**Indicator**: Estimated unexplained loss [49] of farmed salmon is made publicly available **Requirement:** Yes **Applicability:** All	**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.				
		a. Maintain detailed records for mortalities, stocking count, harvest count, and escapes (as per 3.4.1).	The estimated unexpected loss reported to ASC was incorrect. The correct estimated unexpected loss was provided during audit. Records of stocking count, mortalities, escapes and harvest count are maintained on the Aquafarmer system. Estimated unexplained loss (EUL) for the last production cycle was 5,577 pieces, or 0.85% of expected harvest number. MHC posts EUL information on the on its website, and data for Okisollo farm will be posted once the farm is certified. EUL for the last cycle has been submitted to ASC, and EUL for current cycle will be posted once harvest is completed.	Minor	The estimated unexpected loss reported to ASC was incorrect.	
		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.				
		-				
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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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. -	The Finfish Aquaculture Licence contains detailed requirements for fish containment in the following: (1) Section 8: Escape Prevention, Reporting and Response; (2) Appendix VIII: Escape Prevention and Response Plan Guidance; (3) Appendix IX: Escape Notification Form. To comply, the applicant has developed and implemented: (1) Fish Containment Plan (SOP# SW 962, 04/04/16); (2) Site Specific Escape Risk Analysis; (3) Escape and Investigation Report; (4) Net testing and maintenance procedures. Containment practices in place include: monthly net inspections; daily system inspections; mooring practices, including monthly mooring Inspections; net strength tests prior to deployment; diver inspections of nets if increased predator activity observed, following storms with winds >55 knots and/or seas >2m, and for any nets >6 years old; and, staff training and escape response drills. The site has a Containment Kit with twine, needles, rope, netting and weights. The containment plan also has response procedures for known or suspected escapes, and communication of same to DFO. Predator avoidance measures are in place. Records of daily net and system surface inspections and wildlife/predator interactions are found in the Daily Site Log. Net history and traceability records, include Net Service Record and Net Maintenance Logs, are held in binder on-site, as are records of net inspections by divers. Training and drill records are available. Copies of Monthly Escape Reports were provided as evidence of compliance with DFO reporting requirements. The company has a DATS system to aid in the management of training activities. There is annual training on the escape plan for all staff, and Escape Response drills are conducted annually. Interviews indicated appropriate level of knowledge re daily inspections, escape response procedures and use of Containment Kit.	Compliant		

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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 feed supplier is Skretting Canada, based in Vancouver, BC, and is aware of relevant ASC requirements. All delivery numbers are recorded into the Aquafarmer record system. The mill is BAP-certified (SGS Certificate No. IN17/50409, expiring 11/22/18) and Global GAP-certified (Certification No. C834006-01.2017, expiring 11/26/18). The farm uses method #2 to show compliance of the feed producer. Regarding traceability of ingredients, a Skretting Canada declaration dated 11/05/15 and signed by the Commercial Manager was available.	Compliant		
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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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	The feed company has provided information on the percentage of fishmeal in each formulation, the sources of fishmeal used and the percentage of fishmeal in each formulation derived from whole fish or trimmings. Farm records show the quantities of each formulation used. For the previous cycle, the FFDRm was 0.37 and FCR was 1.20. Calculations were done properly, and FFDRm was submitted to ASC.	Compliant		
		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.	The FFDRo value submitted to ASC was incorrect. Inventory of feed used is in the Aquafarmer system. The farm uses option 1 and by-products are excluded from the FFDRo calculation. The FFDRo value for the last cycle was 2.05, whereas the submitted value was 2.01.	Minor	The FFDRo value submitted to ASC was incorrect.	
		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.				

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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	-		N/A	ASC position	
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 **Applicability:** All	**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).	The feed supplier has submitted FishSource scores for each species used in feed. All species are on the FishSource website and Individual and biomass scores are ≥ 6.	Compliant		
		b. Confirm that each individual score ≥ 6 and the biomass score is ≥ 6.				
		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				
		-				

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.	The feed mill has BAP and Global GAP certification. BAP: SGS Certificate No. IN17/50409, expiry 10/22/18 Global GAP: Control Union Certificate No. C834006-01.2017, expiry 11/26/18	Compliant		
		b. Ensure evidence covers all the species used (as consistent with 4.3.2a, 4.2.1a, and 4.2.2a).				

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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. 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].	Skretting Canada has provided a list of all species and fishery of origin for meal and oil derived from trimmings. The Nutreco Supplier Code of Conduct (January 2018) contains the following: "IUU fishing activity: Fishery material shall not be from illegal, unreported and unregulated (IUU) fishing activity nor sourced from vessels officially listed as engaging in IUU fishing activity." "Threatened species: Suppliers shall not process species or by-products from species that are classified as Critically Endangered or Endangered in the IUCN Red List. Species that are listed as Vulnerable are not eligible for use as by-products, unless for fisheries from a discrete sub- population assessed to be responsibly managed." Neither meal or oil are derived from species deemed vulnerable by IUCN.	Compliant		
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. 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.	The Supplement for Marine Products forms part of the Nutreco Supplier Code of Conduct. It contains section on Fishery Improvement Programmes in which all suppliers sourcing from fisheries that do not comply with the FAO Code of Conduct for Responsible Fisheries are encouraged to assist these fisheries to improve their management practices so they are able to comply.	Compliant		
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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.	Only Skretting feed is used by MHC. Skretting are part of the Nutreco group and a vendor policy (Supplier Code of Conduct) is in place where all suppliers must sign applicable declarations guaranteeing source. The code contains the Supplement for Agricultural Products. Third-party audits of the feed supplier include review of responsible sourcing policy and implementation.	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]	Skretting Canada began using soya in MHC feeds in August 2017 at an inclusion rate of 0.72%. Feed in the last cycle at Okisollo did not contain soya. The document Marine Harvest Policy on Sustainable Salmon Feed contains commitment to sourcing feeds using non-marine ingredients from verified sustainable sources, including soya certified under the RTRS, Proterra or equivalent. Email from Skretting 03/27/18 indicates its soya supplier is a member of the RTRS and attachments verified this: supplier's statement regarding its membership and RTRS Member Annual Public Report confirming same.	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.	Declaration from the feed supplier was on hand. GMO canola and corn may be used. MHC Supplier's Quality Assurance Certificate dated 01/02/18 and sent to all customers states that the salmon feed includes canola oil and corn gluten that are transgenic. ASC has been informed of GMO ingredients in 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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.	The farm's commitment to the responsible disposal of non-biological waste is detailed in Document# S/FW 963, Materials Storage, Handling and Waste Disposal Plan - Marine + FW Sites (06/22/16) and supported by recycling procedure (document# S/FW903). The plan covers household recyclables, household and production garbage, oil, fuel, antifoulants, therapeutants, chemical disinfectants, net cleaning, feed waste, empty feed bags, household grey water, human waste, printer cartridges, retired technology, damaged and out-of-service production equipment. Document# S/FW 963 also contains declaration regarding not dumping non-biological waste into the ocean. The most common waste materials are pallets, feed bags and domestic waste. Waste materials are sorted by type and are removed from site by the feed barge to be disposed of by the feed supplier. As much material as possible is recycled and MHC has website page for advertising used farm equipment for sale.	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.	The most common waste materials are pallets, feed bags and domestic waste. Waste materials are sorted by type and there are separate receptacles for each type. Pallets, empty feed bags and liners are removed from site by the feed delivery company to be disposed of or reused by the feed supplier. Other waste materials are taken off-site by vessels that have delivered supplies, and Okisollo Backhaul records detailing waste shipped from the farm are available on SharePoint. Everything is recycled where possible. Pallets are returned to the feed company. Pens are reused. Nets and other pieces of equipment that have been taken out of service are available for purchase on the company website . There have been no fines for improper waste disposal.	Compliant		

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.	All energy sources and consumption are recorded. Total energy consumption in the last production cycle was 4,726,990,503 kJ. Biomass produced in the last cycle was 3,246 mt. Energy consumption for the last cycle was 1,456,370 kJ/mt. Energy use data have been submitted to ASC. The international Marine Harvest has set up an Excel spreadsheet that each country uses to report the energy use.	Compliant		
		b. Calculate the farm's total energy consumption in kilojoules (Ki) 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.				

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.	The value submitted for greenhouse gas emissions to was incorrect. The correct value was available during the audit. Records are maintained using the DEFRA (Department of Environment, Food and Rural Affairs) diagnostic tool database. There are no scope 2 GHG emissions, and scope 1 emissions in the last cycle were 176,625 kg CO2e. Emissions factors are recorded on the GHG Energy Assessment Sheet reviewed and data is reviewed and updated every four months.	Minor	The value submitted for greenhouse gas emissions to was incorrect.	
		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.				
		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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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 greenhouse gas emissions from feed value submitted to ASC was incorrect. The correct GHG value was provided during the audit. For the previous year class, the GHG from feed value 173,625 kg CO_2eq. GHG for the current cycle will be submitted once the cycle is completed.	Minor	The greenhouse gas emissions from feed value submitted to ASC was incorrect.	
		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.	MHC is not using copper-treated nets.	N/A	MHC is not using copper-treated nets	
		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.				

Indicator	Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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) during 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.				

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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 **Applicability:** All farms except as noted in [71]	a. Declare to the CAB whether nets are cleaned on-land.	Nets are cleaned in situ. MHC net cleaning vessel and crew were on-site during the farm visit portion of the ASC audit.	N/A	Nets are cleaned in situ	
		b. If nets are cleaned on-land, obtain documentary evidence from each net-cleaning facility that effluent treatment is in place.				
		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.	MHC is not using copper-treated nets.	N/A	MHC is not using copper-treated nets.	
		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.	MHC is not using copper-treated nets.	N/A	MHC is not using copper-treated nets.	
		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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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. 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.	MHC is not using biocides for net antifouling purposes.	N/A	MHC is not using biocides for net antifouling purposes.	
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. b. Ensure that the farm's current fish health management plan was reviewed and approved by the farm's designated veterinarian [78].	The Salmonid Health Management Plan (HMP), dated October 2017, covers both freshwater and marine operations. It covers the requirements of the Finfish Aquaculture Licence and references a comprehensive set of applicable SOPs. The HMP was signed off by MHC veterinarian. Section 1.1.1 designates the veterinarian's duties and responsibilities, including the responsibility for overseeing matters of fish health management for Marine Harvest Canada.	Compliant		
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. 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.	Review of the Visitors Log showed that an MHC veterinarian visited the site three times (September 27 and December 20, 2017 and March 21, 2018) in the eight months since the site was stocked, and that Fish Health Technicians are on site at least monthly. Records of visits by Fish Health personnel are recorded in SharePoint and details observations, samples collected and results of tests.	Compliant		

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.	100% of mortalities are retrieved. Mortality collection occurs at least daily. Mortalities are stored in sealed and water-tight tote boxes on a designated Mort Float. As the totes become full, a contracted vessel removes them to shore where they are picked up by Phoenix Forest Technology Inc., which uses the material in its compost product, Sea Soil. Invoices for mortalities pick-up were available. There have been no exceptional mortality events.	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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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;	All mortalities are recorded and classified. A report generated from Aquafarmer shows the numbers of mortalities by classification. About 50 reasons can be made for cause of death, including Predator, Transport Loss, Gill Damage and Treatment Loss. Workers are trained in the classification of mortalities according to the SOP# SW816, Mortality Classification - Marine Sites (10/06/15) and, during the site visit, demonstrated thorough understanding of the classification process. When mortality classification is inconclusive or disease is suspected, samples for further analysis are sent to MHC's internal laboratory and may be sent to the Centre for Aquatic Health Sciences (CAHS) and the Animal Health Centre (AHC). Mortality numbers and post-mortem analysis data have been submitted to ASC.	Compliant		
		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).				
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.	There were no viral disease-related mortalities in the last cycle. The total of uncodeable mortalities in the last cycle was 10,090, or 1.41%. Thus, on the basis that uncodeable mortalities may have been due to viral disease, the maximum viral disease-related mortalities for the last cycle was 1.41%. Mortality data has been submitted to ASC.	Compliant		Maximum viral disease-related mortality = 1.41%
		b. Combine the results from 5.1.5a with the total number of unsp				
		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).				
Footnote	[82] Viral disease-related mortality count shall include unspecified and unexplained mortality as it could be related to viral disease.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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 most recent complete production cycle.	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.	Total mortality in the last cycle was 72,199 fish, or 10.06%. Of the total mortalities, there were 10,090, or 13.98%, that were unexplained. Mortality data has been submitted to ASC.	Compliant		Unexplained mortality rate = 13.98%
		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.				
		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.	The farm mortality records are detailed in the Aquafarmer database which enables datasets to be compared and analysed. The Site Specific Mortality Reduction Program for the Okisollo farm was presented. MHC has set the mortality rates for its farms at 90% survival over the period from 2016 to 2021. Workers confirm that the Fish Health team liases with them on mortality collection and classification.	Compliant		
		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.				

Indicator	Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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).	Data submitted to ASC was incomplete as the florfenicol treatment October-November 2017 was missing. The Aquafarmer database system is used to record all therapeutant use. Records identify the prescribing veterinarian, the product and chemical name, reason for use, treatment dates, pens treated, amount of drug and dosage, biomass treated, WHO classification and drug supplier. Prescriptions are maintained at the farm as per DFO requirements. There has been one SLICE treatment for sea lice thus far in the current cycle, and one antibiotic treatment for atypical furunculosis. In the last cycle, there were two SLICE treatments and no antibiotic treatments.	Minor	Data submitted to ASC was incomplete as the florfenicol treatment October-November 2017 was missing.	
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 Norway maintains a matrix showing therapeutants and chemical and microbial contaminants by importing country and limits in each country, also indicating which substances are banned by the respective countries. All Marine Harvest operations share the database. Following a treatment with emamectin benzoate, MHC has samples of treated fish tested for resiudes of the therapeutant. In addition, within two months of the expected harvest commencement date, samples from the pen holding the largest fish are tested for drug residues. Aquafarmer and on-site records (prescriptions and Drug Treatment Record) indicate no usage of any banned therapeutant in either the last or current production cycles.	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.				

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.	100% of treatments are under veterinarian's prescription. Original prescriptions are maintained at the farm per DFO requirements, and digital copies are maintained.	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.	Withdrawal periods are noted on prescriptions, and treatment records indicate last date of treatment and date when withholding period ends. In the Aquafarmer system, a treated pen is blocked (i.e., cannot be selected for harvest) until the withholding period has passed. Withholding periods are specified on the Health Canada website: Tribrissen, 80 days; Romet 30, 42 days; Florfenicol, 12 days; emamectin benzoate, "no pre-slaughter withdrawal period is required when this drug product is used according to label directions. To ensure residues do not exceed the maximum residue limit, Atlantic salmon should not be treated more than once in the 60 days prior to the first fish being harvested for human consumption". In the last cycle, 108 days elapsed between the last day of SLICE treatment and the start of harvest. Withdrawal time was fulfilled. Antibiotics were not used in the last cycle.	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.	There has been one SLICE treatment in the current cycle and the PTI is 3.2. PTI for the last completed cycle was 12.8. PTI data has been submitted to ASC.	Compliant		

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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).	Treatment records indicate the cumulative PTI for the current cycle is less than 6. PTI values for the current and three most recent complete cycles has been submitted to ASC.	N/A	Cumulative PTI for the current cycle is less than 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).	Medicated feed purchase records and coinciding prescriptions are available. A log of all medication-related events is available in Aquafarmer, and hard copy log (Drug Treatment Record) are maintained at farm. In the current cycle, Okisollo fish have been treated with 119.086 kg of florfenicol. There was no antibiotic usage in the previous cycle.	Compliant		
Footnote	[88] The designated veterinarian must certify that a pathogen or disease is present before prescribing medication.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
5.2.8	**Indicator**: Allowance for use of antibiotics listed as critically important for human medicine by the World Health Organization (WHO [89]) **Requirement:** None [90] **Applicability:** All	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 WHO Critically Important Antimicrobials for Human Medicine 5th Revision 2016 is available on MHC SharePoint. The farm has not used any critically important antibiotics in the current production cycle.	Compliant		
		b. If the farm has not 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 has 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.				
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.	Antibiotic treatment records are maintained on-site in the from of prescriptions and the form Drug Treatment Record, and treatment data is entered to Aquafarmer. Site usage information and prescriptions correspond with one another, and match the information found in Aquafarmer. There has been one treatment (florfenicol) in the current cycle as of time of audit.	Compliant		Number of antibiotic treatments = 1
		b. Calculate the total number of treatments of antibiotics over the most recent production cycle and supply a verifiable statement of this calculation.				
Footnote	[91] A treatment is a single course medication given to address a specific disease issue and that may last a number of days.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.	There has been one treatment (florfenicol) in the current cycle as of time of audit.	N/A	There has not been more than one antibiotic treatment in the current cycle.	
		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.				
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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.	Customers are adequately informed of therapeutants in the Supplier's Quality Assurance Certificate letter sent at the beginning of every year and signed by the Food Safety Assurance Technician. The current letter (01/02/18) was available and there is a customer database that includes the dates the letters are sent to the customers.	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. Example: sea lice treatment with emamectin benzoate 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 determine 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. 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.	There has not been an incidence where two successive applications of a treatment have not produced the expected results.	N/A	There has not been an incidence where two successive applications of a treatment have not produced the expected results.	

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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. 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.	As a part of the AMA (see 3.1.1), the three salmon companies cost-share the cost of at least one bio-assay are performed once per year. The CAHS Sea Lice Bioassay Results report related to tests performed 10/19/17 was available. The results do not indicate that resistance is forming.	Compliant		
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. 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. -	The site was fallow for 233 days, from 12/21/16 to 08/11/17. Fish were entered at the farm over the eighteen day period 08/12/17- 08/29/17. All fish on-site are from the 2017 year class.	Compliant		

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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 **Requirement:** Yes **Applicability:** All	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.	No mortality event has been a statistically significant increase over background mortalities and the farm has not suspected an unidentified transmissible agent in any mortality event.	N/A	The farm has not suspected an unidentifiable transmissible agent.	
		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.				
		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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.	MHC provided its document OIE Aquatic Animal Health Code Compliance 19th Edition 2016 which is contained in Appendix I,Certification Requirements, of its Fish Health Management Plan. The policies are consistent as the FHMP is reviewed annually. Appendix I will be reviewed as and when there are changes to certification requirements. Policies are implemented and the staff are well informed.	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.				
		-				
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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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. 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). -		N/A	The farm has not experienced an OIE-notifiable disease.	
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.						

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
PRINCIPLE 6: DEVELOP AND OPERATE FARMS IN A SOCIALLY RESPONSIBLE MANNER						
Criterion 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 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 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 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		

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
Criterion 6.2 Child labor						
Compliance Criteria						
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 125); 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.	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		
		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.				

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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% **Applicability:** All	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 [129] and do not perform hazardous work [130]. Work on floating cages in poor weather conditions shall be considered hazardous. f. Be advised that the site will be inspected and young workers will be interviewed to confirm compliance.	There is a policy stating the rules on employing young workers. The Marine Harvest code of conduct section 5.4 sets out the main rules. 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		
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. All of the above was confirmed by the employees 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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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 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, states 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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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		

Indicator	Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
Criterion 6.5 Work environment health and safety					
Compliance Criteria					
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.	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 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. This site has achieved 96 percent 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 with respect to 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 Noted on the safety tour that there were a few Health & Safety items that were observed.	Minor	Noted on the safety tour that there were a few Health & Safety items that were observed. 1. First Aid box was missing from the crew boat (Silver Bullet) 2. Confined space harness was last inspected in April 2015 3. Two (2) life rings were incorrectly attached to the system 4. One hard hat was noted not to have been tested to any certified standard. (Climbing helmet)	
Footnote	[117] Health and safety training shall include emergency response procedures and practices.				

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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		

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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).	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		
		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.				
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.	Facility records all health & safety related accidents. Accidents are investigated by the Health & Safety Manager. 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		
		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.				
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.		Compliant		
		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.	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.			
		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.				

Indicator	Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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; Feb 2018 November 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 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 this is clearly understood by the workers. 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.				

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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 documented 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 in accordance with 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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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 [144], 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 [143]. 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 policy. None of the workers had been involved in a disciplinary procedure this was confirmed by the workers. The worker 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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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	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.	Compliant		
		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.				
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 **Applicability:** All except as noted in [130]	a. Payment records (e.g. payslips) show that workers are paid a premium rate for overtime hours.	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.	Compliant		
		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 where there is a collective bargaining agreement which specifically allows for compulsory overtime.				
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	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		
		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.				

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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 complainants where applicable, may be interviewed to confirm the above.	Marine Harvest has a policy Doc#5/FW905 External Complaint resolution. External complaints are logged by Public Affairs Director Ian Roberts. 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 **Requirement:** Yes **Applicability:** All	a. Farm has a system for posting notifications at the farm during periods of therapeutic treatment. (use of anaesthetic 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 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 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" Notices are posted on the side farm house so that it can be seen by anyone entering the site. 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.					

Indicator	Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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 territories 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 [152]). 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 the above.	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. There is a spreadsheet detailing agreements with each FN. There is also a log sheet that records all meetings, calls and communication. No representatives made themselves available for the audit.	Compliant		

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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	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.	Marine Harvest is operating in some indigenous territories and has several agreements (IBA) in place with FN. These agreements have been achieved by proactive communication. 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 [153] 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 [155] 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.	As detailed in CEAA screening report Marine Harvest does not have exclusive use of the location the farms are located in. There is no restriction of access and report notes the FN's have no issues with the use of the location. 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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
7.3.2	**Indicator:** Evidence of assessments of company's impact on access to resources **Requirement:** Yes **Applicability:** All	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 representatives from the community may be interviewed to generally corroborate the accuracy of conclusions presented in 7.3.2a.	The CEAA report for the site includes consultation with FN, local community and government. It is noted in the report that FN has no issues with the license application. No representatives made themselves available for the audit.	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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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 smolt suppliers were MHC's Ocean Falls Hatchery (OFH), Dalrymple Hatchery (DAL) and Big Tree Creek Hatchery (BTC). Smolts from the three hatcheries were entered to the MHC Sargeaunt Pass farm and then transferred to Okisollo in August 2017. OFH: (1) Freshwater/Land-based Aquaculture Licence Under the Fisheries Act, Licence No. AQFW 112568 2015, issued by DFO and expiring 06/18/24; (2) Provincial Aquaculture Licence Number 5406670 issued by the BC Ministry of Forests, Lands and Natural Resource Operations, expiring 06/30/27; (3) Conditional Water Licence No. 116629 for Link Lake, issued by Land & Water BC 11/18/02; (4) NWPA Permit No 8200-02-8389 issued 01/15/03 by Transport Canada. DAL: (1) Freshwater/Land-based Aquaculture Licence Under the Fisheries Act, Licence No. AQFW 112571 2015, issued by DFO 06/19/15 and expiring 06/18/24; (2) Permit PE07082 issued 05/03/94 by the BC Ministry of Environment, Lands and Parks specifying effluent volume and load limits and requiring annual reporting of monitoring data. BTC: (1) Freshwater/Land-based Aquaculture Licence Under the Fisheries Act, Licence No. AQFW 112572 2015, issued by DFO 06/19/15 and expiring 06/18/24. Monthly effluent monitoring data shows that OFH is in compliance with Ministry of Environment (MOE) requirements. Monthly effluent monitoring data shows that the DAL frequently fails to comply with Ministry of Environment (MOE) requirements for TSS and total phosphorus. MOE letter dated O4/03/14 contains the statement: "The Ministry of Environment has not pressed enforcement regarding excursions to permitted quality limits and is not likely to do so as long as Marine Harvest continues to make progress on installing advanced treatment systems at the hatchery -- or there is evidence of significant adverse impact to the environment attributable to the hatchery." MHC continues to submit required effluent monitoring data and construction of a new effleunt treatment system is underway at the DAL site.	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)	All fish on-site originate from within MHC's brood stock and hatchery facilities which operate under the same labor laws and regulations as described in Section 6 of this report.	Compliant		

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.	Mainstream Biological Consulting conducted assessments of DAL and OFH in February 2014 and March 2014, respectively. The resulting Biodiversity Impact Assessment (November 2014) for each site was presented. The DAL assessment determined that there are "no significant concerns" regarding hatchery potential impact on biodiversity due to hatchery operations. Nevertheless, it contains a number of "recommendations to further lessen the significance of these impacts". All recommendations are being implemented. The OFH Biodiversity Impact Assessment determined that "no significant concerns were identified in the evaluation of potential impacts to biodiversity based on operations at the Ocean Falls Hatchery." The report also determined that that effluent met the criteria of the Land-Based Finfish Waste Control Regulations and that effluent concentrations of ammonia, nitrate and total suspended solids were below the limits of the BC Water Quality Guidelines for the protection of aquatic wildlife. The BTC assessment determined that "no impacts to rare or endangered species or any impacts to critical habitats for fish or wildlife were noted during the assessment."	Compliant		
		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		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
8.4	**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) **Requirement:** 4 kg/mt of fish produced over a 12-month period **Applicability:** All Smolt Producers	**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.	Phosphorus discharged to the environment: DAL = -2.32 kg P/mt fish BTC = 2.73 kg P/mt fish From Skretting Canada, the phosphorus content of feed is 1.4%. DAL: Feed = 651.52 mt P in feed = 9.12 mt Fish produced = 655.31 mt P in fish = 2.82 Sludge = 147.63 mt @ 0.53% P P in sludge = 7.82 mt Total P released = 9.12 mt - (2.82 mt + 7.82 mt) = -1.52 mt = -2.32 kg P/mt fish BTC: Feed = 383.85 mt P in feed = 5.09 mt Fish produced = 381.58 mt P in fish = 1.64 mt Sludge = 45.46 mt @ 0.53% P P in sludge = 2.41 mt Total P released = 5.09 mt - (1.64 mt + 2.41 mt) = mt = 2.74 kg P/mt fish	Minor	Phosphorus released to the environment as calculated by the ASC method yielded a negative value for Dalrymple Hatchery.	
		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).				
		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.				

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.	The farm produces Atlantic salmon (Salmo salar) which is a non-native species. The aquaculture site authorizes production of Atlantic salmon and information from DFO indicates that Atlantic salmon eggs were first imported into British Columbia in 1985.	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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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 has not been any escape at either of the facilities. They are land-based tank systems with triple screening on outflows.	Compliant		Maximum number of escapees: OFH: 0 DAL: 0 BTC: 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, when loading transport containers for transfer from the hatchery and by the well boat when discharging to pens at the farm. There is a Smolt Inventory Control procedure (Document# FW269, 11/10/15) for hatcheries. Well boat counts are compared with hatchery counts for verification.	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 three facilities are part of Marine Harvest Canada. The feed bags, pallets and plastic are all sent back to the feed company. There is a Materials Storage, Handling and Waste Disposal Plan (Document# S/FW963, 06/22/16) covering all salt water and fresh water sites, as well as a posted Environmental and Biodiversity Policy signed by the Managing Director and dated May 2016, in which MHC's commitment to environmental certification programs such as ASC is declared.	Compliant		

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.	The hatchery reporting is under the same process as that of the marine site. Energy use assessments are conducted quarterly. For 2017: OFH: Energy consumption = 10,059,021,256 kJ Biomass produced = 409 mt Energy use = 24,594,184 kJ/mt DAL: Energy consumption = 18,752,529,168 kJ Biomass produced = 327 mt Energy use = 57,347,184 kJ/mt BTC: Energy consumption = 13,046,558,802 kJ Biomass produced = 174mt Energy use = 74,980,223 kJ/mt	Compliant		
		b. Confirm that the smolt supplier calculates total energy consumption in kilojoules (Ki) 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.				
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.	GHG emissions are calculated, recorded and reported to the global Marine Harvest company for inclusion in the annual report. Emission factors have been previously chosen by the head office in Norway and used by all the Marine Harvest companies, and are based on the designations of UK Department of Environment, Food and Rural Affairs (DEFRA). The hatcheries undergo annual GHG assessments. GHG emissions for 2017 were: 1,219,951 kg CO2e at OFH; 2,018,685 kg CO2e at DAL; and, 1,112,364 at BTC.	Compliant		
		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.				
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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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 (October 2017) covers both freshwater and marine operations. It covers the requirements of the Finfish Aquaculture Licence and references a comprehensive set of applicable SOPs. The FHMP was signed off by MHC veterinarian. Section 1.1.1 designates the veterinarian's duties and responsibilities, including the responsibility for overseeing matters of fish health management for Marine Harvest Canada.	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.	The Fish Health Management Plan contains the list of disease of significant risk to salmon in the waters of British Columbia. Vaccination is not mandatory but is the common practice of the three Atlantic salmon aquaculture companies operating in the province. Aquafarmer records show that all fish received the following vaccines: (1) Renogen for *Renibacterium salmoninarum* , the causative agent of BKD; (2) Forte Micro for *Aeromonas salmonicida* and *Vibrio* spp., causative agents for, respectively, furunculosis and vibriosis; and, (3) APEX-IHN for the infectious haemopoietic necrosis virus. Fish in Pen 1 and some fish in Pen 9 had also been vaccinated with Ermogen for *Yersinia ruckeri* , the causative agent of enteric redmouth disease.	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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.	The diseases for which fish must be tested prior to movement are listed in Appendix 3 of the Freshwater Aquaculture Licence issued by DFO. Kennebec River Biosciences in Maine are used as a testing laboratory for all the diseases listed in Appendix 3 of the licence. Laboratory reports were viewed: (1) ID M116-5739 (08/24/16) for OFH; (2) ID M16-566 (08/16/16) for DAL; (3) ID M16-226 (05/03/16) for BTC.	Compliant		
		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).				
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.	None of the fish at Okisollo farm had been treated with chemicals or therapeutants	N/A	None of the fish at Okisollo farm had been treated with chemicals or therapeutants at the freshwater facilities.	

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
8.15	**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] **Requirement:** Yes **Applicability:** All Smolt Producers	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. 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.	The freshwater facilities are owned by MHC. The same procedures apply to the marine sites and the freshwater sites. MHC's Prohibited Chemical and Therapeutant Purchasing Policy, signed by the Managing Director, refers to the website of the Canadian Food Inspection Agency where the list of banned chemicals is found. None of the fish at Okisollo farm had been treated with chemicals or therapeutants at the freshwater facilities.	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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.	None of the fish at Okisollo farm had been treated with antibiotics at the freshwater facilities.	Compliant		
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 hatcheries are owned by MHC and the WHO list is available on MHC SharePoint. Hatcheries did not use any antimicrobial appearing on the list.	Compliant		
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.	The facilities are owned by MHC and the OIE Aquatic Animal Health Code is available on MHC SharePoint.	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.	See Principle 6	Compliant		

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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 **Applicability:** All Smolt Producers	**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.				
		a. From each smolt supplier obtain documentary evidence of consultations and engagement with the community.	See Principle 7	Compliant		
		b. Review documentation from 8.20a to verify that the smolt supplier's consultations and community engagement complied with requirements.				
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.	See Principle 7	Compliant		
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.	See Principle 7	Compliant		
		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.				
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.	See Principle 7			
		b. Where relevant, obtain documentary evidence that smolt suppliers undertake proactive consultations with indigenous communities.				

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.	The freshwater facilities hold fish in land-based tanks.	N/A	The freshwater facilities are not net pen operations.	
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.	The freshwater facilities hold fish in land-based tanks.	N/A	The freshwater facilities are not net pen operations.	
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) **Requirement:** Yes **Applicability:** All Smolt Producers Using Open Systems	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. 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.	The freshwater facilities hold fish in land-based tanks.	N/A	The freshwater facilities are not net pen operations.	
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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.	The freshwater facilities hold fish in land-based tanks.	N/A	The freshwater facilities are not net pen operations.	
		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).	The freshwater facilities hold fish in land-based tanks.	N/A	The freshwater facilities are not net pen operations.	
		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.				

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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). 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.	The freshwater facilities hold fish in land-based tanks.	N/A	The freshwater facilities are not net pen operations.	
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.	The freshwater facilities hold fish in land-based tanks.	N/A	The freshwater facilities are not net pen operations.	
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.	The freshwater facilities hold fish in land-based tanks.	N/A	The freshwater facilities are not net pen operations.	
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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.	Water quality data submitted to ASC did not include the data from Big Tree Creek which was one of the facilities supplying fish for the Okisollo farm. Testing of the water is carried out monthly. Testing includes TSS, TP, TAN, BOD, chloride, nitrite, nitrate, salinity, pH and DO. Water quality data for the OFH and DAL facilities has been submitted.	Minor	Water quality data submitted to ASC did not include the data from Big Tree Creek which was one of the facilities supplying fish for the Okisollo farm.	
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).	The oxygen saturation reading for April 2017 at Dalrymple Hatchery was 57.5%. The lowest readings in 2017 at OFA and BTC were 80% and 76%, respectively.	Minor	Dalrymple hatchery had one monthly oxygen saturation reading below 60%.	
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.					

Indicator		Compliance Criteria (Required Client Actions):	Audit evidence	Evalu-ation	Description of NC	Value/ Metric
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.	A copy was presented of the report *An examination of macrobenthic community structure and health upstream and downstream of effluent discharge from the Dalrymple Creek Hatchery.* Sampling was conducted by Mainstream Biological Consulting, and analytical work was performed by Biologica. Surveys were conducted as required in Appendix III-3. The 2015 macro-benthic survey revealed negative impacts on downstream macro-benthic community. As a result, MHC has undertaken surveys twice annually. Surveys took place in February and July of 2016. The February survey found "no detectable effects", whereas there was "some negative impact" found in the July survey. In the latter survey, a control station showed similar results as the negatively-impacted downstream station, thereby leading analysts to speculate that the creek's flow rate is playing a role. Similar results were found in the 2015 macro-benthic survey. MHC will continue the twice-yearly sampling program in order to ensure that downstream communities continue to recover in winter. The report of the 2017 studies was not available at time of audit. MHC also presented the report *An examination of macrobenthic community structure and health upstream and downstream of effluent discharge from the Big Tree Creek Hatchery* . Sampling was by Mainstream Biological Consulting and analyses by Biologica. The study found that upstream and downstream macrobenthic communities were equally healthy.	Compliant		
8.35	**Indicator**: Evidence of implementation of biosolids (sludge) Best Management Practices (BMPs) (Appendix VIII-4) **Requirement:** Yes **Applicability:** All Smolt Producers Using Semi-Closed or Closed Production Systems	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. c. Obtain a declaration from smolt supplier stating that no biosolids were discharged into natural water bodies in the past 12 months. d. Obtain records from smolt suppliers showing monitoring of biosolid (sludge) cleaning maintenance, and disposal as described in Appendix VIII-2.	Marine Harvest has a Biosolids Best Management practices SOP for all its freshwater units. The latest revision of the SOP was 09/21/15. Process flow plan is in place. Biosolids are separated by drum filters and settling pond, and sludge is removed on a monthly basis. The auditor viewed invoices for the removal of sludge by Able & Ready Septic and Vortex Drain Services from DAL and BTC sites. There is no sludge collection or removal at the OFH site.	Compliant		

11 Findings

11.1 DO NOT DELETE ANY COLUMN
11.2 Columns B/C/D/E (in black) are automatically populated from the species checklist/audit manual
11.3 Each NC is raised against a standard indicator or a CAR requirement
11.4 Use the "sort" function for presenting the list to your liking (e.g. grading, status, closure deadline, etc.)
11.5 Add new rows as needed
11.6 Adjust the column wide 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 implemented	Deadline for NC close-out	Evaluation by CAB (including evidence)	Date request for delay received	Justification for delay	Next deadline	Request evaluation by CAB	Date request approved
	2.1.1	Minor	Peak biomass sampling has not yet occurred and data was not available.	Peak biomass sampling has not yet occurred and data was not available. A peak biomass benthic monitoring survey was conducted during the last cycle, and MHC presented the report: Benthic Biodiversity Assessment Okisollo Farm Site. The survey occurred August 24-25, 2016, and peak biomass occurred on August 16. The report contains a map showing the boundary of the AZE as determined on the basis of DEPOMOD simulations. According to the report, the site has both soft and hard bottom substrate. Sampling and analyses were performed according to ASC requirements. Samples collected along transects A and C yielded sufficient material for analysis and the average sulfide concentrations at stations outside the AZE were 35.6 µM and 15.5 µM, respectively. Data for the current cycle will be submitted once peak biomass monitoring has been completed. Peak biomass is expected July 2018.	28/03/2018	Open		Site has not yet reached peak biomass	Sampling to be completed by Ocean Dynamics July 2018 - agreement in place.	March 28, 2019	Action plan accepted by Conrad Powell, April 14, 2018. Update, June 8, 2018: MHC advised peak biomass to occur first week of August which is later than expected. Ocean Dynamics will adjust survey schedule accordingly, and sampling is to occur either July or August, within 15 days of peak. As data becomes available, it will be reported to CAB.					
	2.1.2	Minor	Peak biomass sampling has not yet occurred and data was not available.	Peak biomass sampling has not yet occurred and data was not available. The Benthic Biodiversity Report (see 2.1.1) contains a map showing the AZE. Samples were collected according to ASC requirements and were analysed by Columbia Science. MHC chose to use option #4 (Infaunal Trophic Index, ITI), and ITI values of 68 and 75 were reported for stations outside the AZE along transects A and C, respectively. Transect B ran along hard bottom substrate and grab samples were not obtained. Data for the current cycle will be submitted once peak biomass monitoring has been completed. Peak biomass is expected July 2018.	28/03/2018	Open		Site has not yet reached peak biomass	Sampling to be completed by Ocean Dynamics July 2018 - agreement in place	March 28, 2019	Action plan accepted by Conrad Powell, April 14, 2018. Update, June 8, 2018: MHC advised peak biomass to occur first week of August which is later than expected. Ocean Dynamics will adjust survey schedule accordingly, and sampling is to occur either July or August, within 15 days of peak. As data becomes available, it will be reported to CAB.					
	2.1.3	Minor	Peak biomass sampling has not yet occurred and data was not available.	Peak biomass sampling has not yet occurred and data was not available. The Benthic Biodiversity Report (see 2.1.1) contains a map showing the AZE. Samples were collected according to ASC requirements and were analysed by Columbia Science. Pollution indicator species were excluded from reported data which shows the number of highly abundant taxa to be 5 and 1 at stations within the AZE along transects A and C. The site is deemed compliant on the basis that 0 highly abundant taxa were found at reference station 1,000m from the farm. Data for the current cycle will be submitted once peak biomass monitoring has been completed. Peak biomass is expected July 2018.	28/03/2018	Open		Site has not yet reached peak biomass	Sampling to be completed by Ocean Dynamics July 2018 - agreement in place	March 28, 2019	Action plan accepted by Conrad Powell, April 14, 2018. Update, June 8, 2018: MHC advised peak biomass to occur first week of August which is later than expected. Ocean Dynamics will adjust survey schedule accordingly, and sampling is to occur either July or August, within 15 days of peak. As data becomes available, it will be reported to CAB.					
	3.1.4	Minor	Sea lice data has not been submitted to ASC.	Sea lice data has not been submitted to ASC. Sea lice data was presented at time of audit. MHC conducts weekly sampling year-round and data were available for all weeks of the current cycle, including the sensitive period which had just begun March 1. The sensitive period runs from March 1 to June 30 each year and is the period of out-migration for wild smolts. The most recent lice count at the site is posted on the MHC website, and MHC maintains a log of sampling date and posting date to verify counts are entered within the seven day timeframe.	28/03/2018	Closed		Transcription error in submission	Updated transparency document submitted to ASC/SGS. In future blank templates will be used for submission to avoid accidental submission of previous site data	June 28, 2018	The following evidence was accepted by Conrad Powell, April 14, 2018: Corrected transparency document submitted to ASC 03/28/18.					
	3.4.3	Minor	The estimated unexpected loss reported to ASC was incorrect.	The estimated unexpected loss reported to ASC was incorrect. The correct estimated unexpected loss was provided during audit. Records of stocking count, mortalities, escapes and harvest count are maintained on the Aquafarmer system. Estimated unexplained loss (EUL) for the last production cycle was 5,577 pieces, or 0.85% of expected harvest number. MHC posts EUL information on the on its website, and data for Okisollo farm will be posted once the farm is certified. EUL for the last cycle has been submitted to ASC, and EUL for current cycle will be posted once harvest is completed.	28/03/2018	Closed		Transcription error in submission	Updated transparency document submitted to ASC/SGS. In future blank templates will be used for submission to avoid accidental submission of previous site data	June 28, 2018	The following evidence was accepted by Conrad Powell, April 14, 2018: Corrected transparency document submitted to ASC 03/28/18.					
	4.2.2	Minor	The FFDRo value submitted to ASC was incorrect.	The FFDRo value submitted to ASC was incorrect. Inventory of feed used is in the Aquafarmer system. The farm uses option 1 and by-products are excluded from the FFDRo calculation. The FFDRo value for the last cycle was 2.05, whereas the submitted value was 2.01.	28/03/2018	Closed		Transcription error in submission	Updated transparency document submitted to ASC/SGS. In future blank templates will be used for submission to avoid accidental submission of previous site data	June 28, 2018	The following evidence was accepted by Conrad Powell, April 14, 2018: Corrected transparency document submitted to ASC 03/28/18.					

NC reference	Indicator	Grade of NC	Description of NC	Evidence	Date of detection	Status	Related VR (#)	Root cause (by client)	Corrective/ preventive actions implemented	Deadline for NC close-out	Evaluation by CAB (including evidence)	Date request for delay received	Justification for delay	Next deadline	Request evaluation by CAB	Date request approved
	4.6.2	Minor	The value submitted for greenhouse gas emissions to was incorrect.	The value submitted for greenhouse gas emissions to was incorrect. The correct value was available during the audit. Records are maintained using the DEFRA (Department of Environment, Food and Rural Affairs) diagnostic tool database. There are no scope 2 GHG emissions, and scope 1 emissions in the last cycle were 176,625 kg CO2e. Emissions factors are recorded on the GHG Energy Assessment Sheet reviewed and data is reviewed and updated every four months.	28/03/2018	Closed		Transcription error in submission	Updated transparency document submitted to ASC/SGS. In future blank templates will be used for submission to avoid accidental submission of previous site data	June 28, 2018	The following evidence was accepted by Conrad Powell, April 14, 2018: Corrected transparency document submitted to ASC 03/28/18.					
	4.6.3	Minor	The greenhouse gas emissions from feed value submitted to ASC was incorrect.	The greenhouse gas emissions from feed value submitted to ASC was incorrect. The correct GHG value was provided during the audit. For the previous year class, the GHG from feed value 173,625 kg CO2eq. GHG for the current cycle will be submitted once the cycle is completed.	28/03/2018	Closed		Transcription error in submission	Updated transparency document submitted to ASC/SGS. In future blank templates will be used for submission to avoid accidental submission of previous site data	June 28, 2018	The following evidence was accepted by Conrad Powell, April 14, 2018: Corrected transparency document submitted to ASC 03/28/18.					
	5.2.1	Minor	Data submitted to ASC was incomplete as the florfenicol treatment October-November 2017 was missing.	Data submitted to ASC was incomplete as the florfenicol treatment October-November 2017 was missing. The Aquafarmer database system is used to record all therapeutant use. Records identify the prescribing veterinarian, the product and chemical name, reason for use, treatment dates, pens treated, amount of drug and dosage, biomass treated, WHO classification and drug supplier. Prescriptions are maintained at the farm as per DFO requirements. There has been one SLICE treatment for sea lice thus far in the current cycle, and one antibiotic treatment for atypical furunculosis. In the last cycle, there were two SLICE treatments and no antibiotic treatments.	28/03/2018	Closed		Transcription error in submission	Updated transparency document submitted to ASC/SGS. In future blank templates will be used for submission to avoid accidental submission of previous site data	June 28, 2018	The following evidence was accepted by Conrad Powell, April 14, 2018: Corrected transparency document submitted to ASC 03/28/18.					
	6.5.1	Minor	Noted on the safety tour that there were a few Health & Safety items that were observed. 1. First Aid box was missing from the crew boat (Silver Bullet) 2. Confined space harness was last inspected in April 2015 3. Two (2) life rings were incorrectly attached to the system 4. One hard hat was noted not to have been tested to any certified standard. (Climbing helmet)	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 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. This site has achieved 96 percent 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 with respect to 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 Noted on the safety tour that there were a few Health & Safety items that were observed.	28/03/2018	Closed		1. First aid boxed removed for use 2. Harness no longer used on site 3. Rings attached to ensure none are lost during storms 4. Hard hat with straps trialled to ensure protection does not fall off when working on projects	1. First aid kit replaced, updated H&S monthly checklist to ensure all kits present/up to date (see next tab) 2. Harness inspected, harness check added to H&S monthly checklist 3. Strings on life rings cut, H&S investigating options to keep life rings attached but easily removable in case of emergency 4. H&S notifing all sites of hard hat requirements (see next tab)	June 28, 2018	The following evidence was accepted by Leon Reed, April 16, 2018: 1. Purchase order for Level 1 First Aid Kit; 2. Photograph of up-to-date inspection tag; 3. Photograph showing life rings with proper attachment to system; 4. Email sent from MHC H&S to all sites advising of hard hat requirements.					

NC reference	Indicator	Grade of NC	Description of NC	Evidence	Date of detection	Status	Related VR (#)	Root cause (by client)	Corrective/ preventive actions implemented	Deadline for NC close-out	Evaluation by CAB (including evidence)	Date request for delay received	Justification for delay	Next deadline	Request evaluation by CAB	Date request approved
	8.4	Minor	Phosphorus released to the environment as calculated by the ASC method yielded a negative value for Dalrymple Hatchery.	From Skretting Canada, the phosphorus content of feed is 1.4%. DAL: Feed = 651.52 mt P in feed = 9.12 mt Fish produced = 655.31 mt P in fish = 2.82 Sludge = 147.63 mt @ 0.53% P P in sludge = 7.82 mt Total P released = 9.12 mt - (2.82 mt + 7.82 mt) = -1.52 mt = -2.32 kg P/mt fish	28/03/2018	Closed	VR231	Problems with ASC method for calculation phoshporus release and proposed alternate method contained in variance request submitted by Acoura July 14, 2017.	VR 231, issued May , 2018, permits MHC hatcheries to calculate release of phosphorus by the alternate method specified in the variance. The alternate method gives results meeting the ASC requirement.	28/06/2018	The following evidence was accepted by Conrad Powell, May 15, 2018: VR 231 - The variance allows MHC hatcheries to to calculate total phosphorus released into the environment using volumes of effluent and phosphorus concentration in the effluent as measured on a monthly basis. Using this approach, the total phosphorus released for DAL and BTC in 2017 was 1.417 kg P/mt fish and 2.050 kg P/mt, respectively.					
	8.32	Minor	Water quality data submitted to ASC did not include the data from Big Tree Creek which was one of the facilities supplying fish for the Okisollo farm.	Water quality data submitted to ASC did not include the data from Big Tree Creek which was one of the facilities supplying fish for the Okisollo farm. Testing of the water is carried out monthly. Testing includes TSS, TP, TAN, BOD, chloride, nitrite, nitrate, salinity, pH and DO. Water quality data for the OFH and DAL facilities has been submitted.	28/03/2018	Closed		Transcription error in submission	Updated transparency document submitted to ASC/SGS. In future blank templates will be used for submission to avoid accidental submission of previous site data	June 28, 2018	The following evidence was accepted by Conrad Powell, April 14, 2018: Corrected transparency document submitted to ASC 03/28/18.					
	8.33	Minor	Dalrymple hatchery had one monthly oxygen saturation reading below 60%.	The oxygen saturation reading for April 2017 at Dalrymple Hatchery was 57.5%. The lowest readings in 2017 at OFA and BTC were 80% and 76%, respectively.	28/03/2018	Closed		Dalrymple had previously experienced issues with low DO in effluent, as it exits settling pond with low flow. Site is currently upgrading effluent system, planned for completion 2019.	Until effluent system upgrade is complete, effluent discharge pipe has been moved to ensure greater DO, as seen in readings since April 2017.	June 28, 2018	The following evidence was accepted by Conrad Powell, April 14, 2018: Dalrymple DO data to March 2018.					

ASC Audit Report - Traceability

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 is no risk of substitution as the entire farm site is within the unit of certification.	Fully automated tracking system enables tracking of product, both forward and back, of all fish, including: brood stock and hatchery sources, through to nursery and grow-out sites, harvesting, transportation, processing and distribution. A comprehensive suite of documented procedures supports traceability and product identification and segregation. The processing facility is certified to ASC Chain of Custody and the GFSI standard Best Aquaculture Practices. Both standards require effective traceability and input-output reconciliation (mass balance), and these elements are verified during third-party audits.

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.	MHC harvesting, transport and storage activities preclude the risk of substitution. The pen or pens harvested on a given day are identified in advance and on all paperwork associated with the harvest, transport and reception of fish at MHC-owned processing facility. Fish from different pens are held in separate holds on well boats. At processing facility, incoming lots are assigned five-digit lot number which remains with the lot throughout processing, packing and distribution, and by which products can be traced forward as well as back to farm and cage. The processing facility has only one lot of fish in production at a time and completely runs through a lot before another lot enters production.	Fully automated tracking system enables tracking of product, both forward and back, of all fish, including: brood stock and hatchery sources, through to nursery and grow-out sites, harvesting, transportation, processing and distribution. A comprehensive suite of documented procedures supports traceability and product identification and segregation. The processing facility certified to ASC Chain of Custody and the GFSI standard Best Aquaculture Practices. Both standards require effective traceability and input-output reconciliation (mass balance), and these elements are verified during third-party audits.
10.3	The possibility of subcontractors being used to handle, transport, store, or process certified products.	The only contracting involved is the vessel that harvests and transports fish from farm to processing faculty. Harvest vessel is contracted exclusively by MHC and harvesting is controlled by MHC. All other activities are under direct MHC control.	Fully automated tracking system enables tracking of product, both forward and back, of all fish, including: brood stock and hatchery sources, through to nursery and grow-out sites, harvesting, transportation, processing and distribution. A comprehensive suite of documented procedures supports traceability and product identification and segregation.
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.	None identified.	Fully automated tracking system enables tracking of product, both forward and back, of all fish, including: brood stock and hatchery sources, through to nursery and grow-out sites, harvesting, transportation, processing and distribution. A comprehensive suite of documented procedures supports traceability and product identification and segregation.

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	Fish are seined and pumped aboard a vessel exclusively contracted to MHC, and transported to MHC's Port Hardy Processing Plant. All activities are fully controlled by MHC, and fish can be traced with the use of electronic systems from brood stock source to hatchery to farm to processing and distribution.
10.6	Traceability 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	MHC has in place systems to ensure effective traceability and segregation of products, and can readily verify that products sold as ASC-certified originated from a certified unit of certification. The processing facility is certified to ASC Chain of Custody and the GFSI standard Best Aquaculture Practices. Both standards require effective traceability and input-output reconciliation (mass balance), and these elements are verified during third-party audits.
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.	Chain of custody begins at MHC's Port Hardy Processing Plant.
10.6.4	Is a separate chain of custody certificate required for the producer?	No

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.	Overall, there was a high degree of compliance with the specific elements of the standard and guidance documents. All non-conformities were deemed minor and the majority (7/13) were due to errors and omissions in transparency data that had been submitted to ASC. Complete and accurate data was submitted by end of audit. Other non-conformities involved safety issues observed at farm, one low monthly DO reading at a hatchery and the lack of benthic biodiversity data from the current cycle as peak biomass had not been reached by time of audit.
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).	The unit of certification is fully capable of consistently meeting the objectives of the ASC Salmon Standard v1.1.
12.3 In cases where Biodiversity Environmental Impact Assessment (BEIA) or Participatory Social Impact Assessment (PSIA) is available, it shall be added in full to the audit report. IF these	Not required for the ASC Salmon Standard

13 Decision

13.1 Has a certificate been issued? (yes/no)	Yes
13.2 The Eligibility Date (if applicable)	23-May-18

13.3 Is a separate coc certificate required for the producer? (yes/no)	Yes, in place already (MHC Port Hardy ASC-C-00540)
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.	23 May 2018 - 23 May 2021
13.4.2 The scope of the certificate	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.	All complaints and/or objections should be submitted in writing to asc.reports@sgs.com. The related procedures can be found at www.sgs.com.

14 Surveillance

14.1 Next planned Surveillance	
14.1.1 Planned date	Mar-19
14.1.2 Planned site	Mar-19
14.2 Next audit type	
14.2.1 Surveillance 1	x
14.2.2 Surveillance 2	
14.2.3 Re-certification	
14.2.4 Other (specify type)	