

Nolin, Melissa (DFO/MPO)

From: McCorquodale, Brenda (DFO/MPO)
Sent: Thursday, November 14, 2024 1:11 PM
To: Newcomb, Reagan (DFO/MPO); Shaw, Kerra (DFO/MPO)
Cc: Bougie, Alyssa (DFO/MPO); AQFF / AQFF (DFO/MPO); Blasco, Nathan (DFO/MPO)
Subject: RE: Cermaq Canada - Facility Ref#1507, Update footprint - Bullets for briefing purposes

Can we have a chat about this. [REDACTED]

If they were changing the way they were managing the infrastructure they should have applied for a change prior to altering the infrastructure – no? **We don't let them put a new cage array in and then retroactively approve it.** Did we give them permission to do this before they changed the containment parameters?

We are going to have to be very clear about this going forward. What work have we done on standardizing the information we need and monitor related to closed or semi-closed sites?

If we are changing the licence I think we need an amendment. We could make a future licence for semi-closed or closed more flexible but we can't have them operating out of compliance with an existing licence – I hope we are all on the same page with that?

Brenda

Brenda McCorquodale (she/ her/ elle)

A/Senior Director /Directrice principale
Aquaculture Management / Gestion de l'aquaculture
Fisheries Management Branch / Direction de la gestion des pêches
Fisheries and Oceans Canada / Pêches et Océans Canada
1965 Island Diesel Way | Nanaimo, BC | Nanaimo, CB | V9S 5W8
250-902-8865
Email | Courriel: Brenda.McCorquodale@dfo-mpo.gc.ca

From: Newcomb, Reagan (DFO/MPO)
Sent: Thursday, November 14, 2024 9:57 AM
To: Shaw, Kerra (DFO/MPO) ; McCorquodale, Brenda (DFO/MPO)
Cc: Bougie, Alyssa (DFO/MPO) ; AQFF / AQFF (DFO/MPO) ; Blasco, Nathan (DFO/MPO)
Subject: FW: Cermaq Canada - Facility Ref#1507, Update footprint - Bullets for briefing purposes

Hi Kerra and Brenda,

Please see update from Alyssa below on Cermaq's use of their semi-closed containment system, and the fact that the only change with the SCCS being back at Millar Channel is with the benthic footprint. While an infrastructure change would be something that would constitute a requirement for an amendment, a change in benthic footprint for the same infrastructure within an existing tenure would, technically, not. For this reason, there is nothing obligating us to require an amendment application from Cermaq, and AEO does not have any concerns with this approach. I think we would just need to document this change, but if you feel an amendment is required, please let me know.

s.19(1)

Thanks very much,

s.21(1)(b)

Reagan Newcomb

Manager, Aquaculture Resource Management, Fisheries Management Branch, Pacific Region

Fisheries and Oceans Canada, Government of Canada
reagan.newcomb@dfo-mpo.gc.ca | 778-268-2854

Gestionnaire, Gestion des ressources de l'aquaculture, Direction de la gestion des pêches, Région pacifique
Pêches et Océans Canada, Gouvernement du Canada
reagan.newcomb@dfo-mpo.gc.ca | 778-268-2854

From: Bougie, Alyssa (DFO/MPO) <Alyssa.Bougie@dfo-mpo.gc.ca>
Sent: Thursday, November 7, 2024 10:40 AM
To: Newcomb, Reagan (DFO/MPO) <Reagan.Newcomb@dfo-mpo.gc.ca>
Cc: AQFF / AQFF (DFO/MPO) <DFO.AQFF-AQFF.MPO@dfo-mpo.gc.ca>; Blasco, Nathan (DFO/MPO) <Nathan.Blasco@dfo-mpo.gc.ca>
Subject: FW: Cermaq Canada - Facility Ref#1507, Update footprint - Bullets for briefing purposes

Hi Reagan,

Approximately two months ago, there was some back and forth with Cermaq about the use of their semi-closed containment system (SCCS) and whether they could move fish from their South Clayoquot site, Mussel Rock, to the North Clayoquot. Because of their area-based management approach, DFO had imposed a site specific condition of licence on the Mussel Rock licence that stated they were not able to transfer fish between fish health zones. Then, Cermaq moved their SCCS back to its previous location, Millar Channel.

We discussed what, if any, amendment would be needed now that their SCCS is back at Millar Channel. Because they already had the SCCS listed on their containment array management plan, and the only thing that is changing is the benthic footprint, we are recommending that DFO accept this updated benthic footprint and not require Cermaq to submit an amendment application for the change in benthic footprint through FrontCounter BC. AEO has no concerns with the change in benthic footprint.

Let us know if you have any questions, and if we can proceed with updating the benthic footprint in our records.

Thanks,
Alyssa

From: AQFF / AQFF (DFO/MPO) <DFO.AQFF-AQFF.MPO@dfo-mpo.gc.ca>
Sent: Monday, November 4, 2024 9:46 AM
To: Bougie, Alyssa (DFO/MPO) <Alyssa.Bougie@dfo-mpo.gc.ca>
Subject: FW: Cermaq Canada - Facility Ref#1507, Update footprint

Good morning,

Cermaq has submitted the attached document as notification on the change of footprint.

Please let me know what we do with this.

~Jess

From: [REDACTED]
Sent: Friday, November 1, 2024 2:13 PM
To: AQFF / AQFF (DFO/MPO) <DFO.AQFF-AQFF.MPO@dfo-mpo.gc.ca>
Cc: Blasco, Nathan (DFO/MPO) <Nathan.Blasco@dfo-mpo.gc.ca>
Subject: Cermaq Canada - Facility Ref#1507, Update footprint

Hello,

Please find attached an application to update the organic footprint at our Millar Channel Facility.

There are no changes to the Cage array Management Plan, Biomass or Species, only updated results from depositional modelling using the same parameters used in our more recent applications using the same Closed Containment (level1) Technology.

Should you require any further information please let me know.

Regards

[REDACTED]

Office +1 250-286-0022

Direct + [REDACTED]

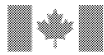
Mobile [REDACTED]

CERMAQ

Cermaq Canada Ltd.
203-919 Island Hwy
Campbell River, BC, V9W 2C2, Canada

Cermaq.ca [Facebook](#)

s.19(1)



Fisheries and Oceans
Canada

Pêches et Océans
Canada

Aquaculture Management
Division

Division de la gestion de
l'aquaculture

Director

Directeur

UNCLASSIFIED

GCCMS#: 2025-502-00003

EKME #: 4395386

MEMORANDUM FOR THE REGIONAL DIRECTOR, FISHERIES MANAGEMENT

**S745 – Cermaq Canada Ltd. Transfer Request
(FOR DECISION)**

Summary

The purpose of this note is to request your decision on the issuance of an Introductions and Transfer licence (under the authority of Section 56 (S.56) of *the Fishery (General) Regulations*), for marine finfish aquaculture. Details of the transfer are as follows:

Applicant: Cermaq Canada Ltd.

Quantity: [REDACTED]

Species: Atlantic salmon (*Salmo salar*)

Life Stage: Juveniles/Smolts

Source Facility: Millar Channel, 2km S Hayden Passage, Facility BC-1507

Receiving Facility: Ross Pass, Northeast McKay Island, Facility BC-314

Requested Transfer Start Date: January 15, 2025.

Background

Prior to issuing a licence to transfer live fish, the Minister must be satisfied that each of the three preconditions outlined in section 56 *Fishery (General) Regulations* (FGR) are met:

- a) the release or transfer of the fish would be in keeping with the proper management and control of fisheries;
- b) the fish do not have any disease or disease agent that may be harmful to the protection and conservation of fish; and,
- c) the release or transfer of the fish will not have an adverse effect on the stock size of fish or the genetic characteristics of fish or fish stocks.

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UNCLASSIFIED
2025-502-00003

Analysis and Considerations

The members of the Introductions and Transfers Committee reviewed this transfer request to ensure that each of the three preconditions (a, b, and c) under S.56 of the Fishery (General) Regulations is met. The full analysis can be reviewed in the attached Transfer Assessment document (Tab 1).

DFO site visit observations, mortality records review, **DFO testing**, and industry pre-transfer screening results all support that fish are healthy and may be transported.

This request to transfer live fish meets each of the three preconditions of section 56 of the FGR. No additional mitigating conditions of licence are recommended by the Introductions and Transfers Committee. The licence will be valid for 90 days, starting on the date of licence issuance.

A decision is requested by January 14, 2025.

McCorquodale, Brenda

Digitally signed by McCorquodale, Brenda
Date: 2025.01.08 10:40:43 -08'00'

Brenda McCorquodale
Director
Aquaculture Management Division



I concur with the recommendations



I do not concur with the recommendations

Davis, Neil

Digitally signed by Davis, Neil
Date: 2025.01.14 09:47:11 -08'00'

Neil Davis
Regional Director
Fisheries Management

Attachment: (1)

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Assessment of the Proposed Transfer of Live Fish under the FGR S.56

Details of Transfer:

Regional ITC Application#: S745

Applicant: Cermaq Canada Ltd.

Fish count: [REDACTED]

Species: Atlantic salmon (*Salmo salar*)

Life Stage: Juveniles/Smolts

Source Facility: Millar Channel, 2km S Hayden Passage, Facility BC-1507

Receiving Facility: Ross Pass, Northeast McKay Island, Facility BC-314

Requested Transfer Start Date: January 15, 2025.

S.56(a) Summary of Analysis for Transfer:

The receiving facility does have a current federal aquaculture licence issued under the authority of the Pacific Aquaculture Regulations (PAR) and the proposed transfer does align with the production plan associated with the source and destination facilities. The applicant is in compliance with the conditions of their aquaculture licence to ensure the proper management of fisheries.

Benthic monitoring required by the Aquaculture Activities Regulations ensures the extent and intensity of organic enrichment to the seabed is in keeping with the proper management of fisheries. Benthic monitoring has been completed for the receiving facility and is below thresholds.

The transferring facility and the receiving location are properly licensed to conduct the business of aquaculture. Both have been inspected and assessed by DFO staff to ensure compliance. The release or transfer of these fish is in keeping with the proper management and control of fisheries. There are wild fish and salmonids in the receiving environment, which can include stocks at risk or of concern. Due to the connectivity of BC's coast line and the dynamic nature of wild fish, it is assumed that all species and stocks of native wild fish could be present in the proximity of the farm during the time of operation, and therefore interact with farmed fish or infrastructure.

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S.56(b) Summary of Analysis for Transfer:

Date of Last Records Review: December 20, 2024

Source Facility Inspection Date: November 26, 2024

The Fish Health Attestation (FHA) was signed on December 12, 2024 by [REDACTED]. The fish to be transferred have experienced mortalities, equal to or greater than [REDACTED] per day for more than four consecutive days during the 30-days prior to signing of the FHA, however mortalities have been attributed to smoltification stress from delayed transport. Moving the fish to saltwater has reduced the smoltification stress lesions in fish already transported. No Canadian Food Inspection Agency (CFIA) reportable diseases have been detected. All fish have been vaccinated prior to saltwater entry with the standard Atlantic salmon vaccines. There has been no record of CFIA reportable disease at the facility.

Fish to be moved in this transfer are still arriving to the site under currently open transfer licences from Little Bear Bay (Licence # 141850), Oceans (Licence # 142134), and Boot Lagoon (Licence # 141870) hatcheries. A Millar Channel mortality report was provided for the period of December 6, 2024 to December 12, 2024, which covers fish that have already arrived at the Closed Containment System (CCS) at Millar Channel. Mortalities on fish recently transferred to the CCS are low and primarily related to hatchery related issues, which are not a concern for this transfer.

A 30-day mortality report was also provided to DFO for the period of November 12, 2024 to December 12, 2024, which covers fish that are currently being transferred into Millar Channel under existing licences. No mortalities were related to disease. Daily mortality rates are low when adjusted for anthropogenic causes and were comprised of [REDACTED] [REDACTED] were primarily seen at Little Bear Bay hatchery and are consistent with the smoltification stress lesions mentioned in the recent FHA, and are historically common at this hatchery when fish densities increase. There have been no mortality events for these fish, or fish that were previously held in the CCS.

One Fish Health Event was reported for Millar Channel on October 5, 2024, for fish that are currently in the Millar Channel net pen array system. The presence of [REDACTED]

[REDACTED] (but not yet in the fish for transfer), with the latest report submitted to DFO on December 6, 2024. Mitigation measures have been implemented with the fish undergoing appropriate antibiotic treatment.

The December 6, 2024 fish health report also indicates that there have been no sea lice issues at Millar Channel at this time. Cermaq reported conducting pre-transfer screening on the fish to be moved with this transfer and the results indicate that there was no evidence of pathogens of

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concern. It should be noted that there are no pre-transfer screening requirements for marine-to-marine transfers so Cermaq is taking a proactive approach with their screening and testing prior to the proposed transfer application

The cohort of fish currently being proposed for this application were last seen by DFO staff in July 2024 and August 2024 at various hatcheries. Given the very close proximity between Millar Channel and Ross Pass it is expected that any ubiquitous pathogens, such as *Tenacibaculum maritimum*, that fish may be exposed to during their short stay at Millar Channel will also be present at Ross Pass. Since fish will be housed in their CCS, pathogen exposure may be less or at least similar as compared to moving fish directly from the hatcheries into Ross Pass. There is no evidence of pathogens of concern including *Tenacibaculum maritimum* currently affecting fish to be transferred. Both the source and receiving environment are prepared with adequate mitigation plans for Mouth Rot, if needed.

The transferring and receiving facilities are properly licensed to conduct the business of aquaculture. The fish to be transferred have been tested for relevant pathogens, and the facility was inspected by DFO staff. [REDACTED]

[REDACTED] However, the fish population proposed for transfer have not tested positive for this disease agent. This pathogen can be mitigated through the use of antibiotics, which results in negligible harm to the health of wild fish in the vicinity of the farm. The receiving facility has data associated with it that allows an understanding of future health, licence conditions in place for proper welfare and husbandry, and will continue to be inspected by DFO staff to ensure compliance.

This assessment was completed by:

Dr. Derek Price, DFO Aquaculture Epidemiologist

Dr. Emily Rutherford, DFO Aquaculture Veterinarian

S.56(c) Summary of Analysis for Transfer:

Atlantic salmon do not pose a genetic risk to Pacific salmon, as they are a different genus and do not interbreed with Pacific salmon. It is possible that if significant numbers of fish escape containment, they could compete with wild salmon for resources. However, decades of research and monitoring demonstrate that low levels of escaped Atlantic salmon survive (the majority starve to death), few are able to find suitable spawning habitat and partners, and no escaped Atlantic salmon have returned to natal streams or have created naturalized populations. Although genetic and ecological risks are low, growers still have stringent rules in place to ensure robust and appropriate containment, regular net inspection and maintenance, record-keeping and reporting. DFO staff also conduct routine site inspections to ensure

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compliance. The transfer of these fish should not have an adverse impact on stock size of fish and the genetic characteristics of fish stocks.

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TAB 1: S.56 Supporting Assessments

Does the receiving facility have a current federal aquaculture licence issued under the authority of the Pacific Aquaculture Regulations (PAR)? Yes

Does the proposed transfer align with the production plan associated with the source and destination facilities? N/A

Is the applicant in compliance with the conditions of their aquaculture licences to ensure the proper management of fisheries? N/A

Benthic monitoring required by the Aquaculture Activities Regulations has been conducted at the receiving facility and the impact is below thresholds, for transfers to marine finfish sites? Yes

Has there been a recent fish escape in the vicinity? No

Have the fish to be moved tested positive for an infectious agent? No

Do the fish proposed to be moved have clinical signs of infectious disease? No

Is there a Fish Health Concern that requires reporting? Yes

What is the nature of concern(s) identified.

[REDACTED]

What are the transfer conditions to mitigate concern(s).
In-feed treatment

Is it likely that transferring fish will cause the farm or nearby farms to result in a farm-level diagnosis of a disease? No

Has the disease or disease agent previously been detected (on wild and/or farmed salmon as known) in the receiving environment (e.g. fish health zone or smaller areas as needed)? Yes

Are there aggregates of wild fish in the receiving environment that are susceptible to the disease agent? Yes

Is it likely that transferring fish will cause harm to aggregate of wild fish in the environment? No

Has there been a change in the pathogens and diseases that have been reported on the site/vicinity? (e.g., change in the type of diseases, timing of diseases, etc.) No changes.

Tab 2: S.56 (a), (b), and (c) FGR Descriptions

S.56(a) Description:

The impacts that the transfer may have on the conservation of fish stocks, fish and fish habitat are specifically addressed in subsections 56(b) and (c) of the FGR, and those are described below. The Minister must also be satisfied that the proposed transfer would be consistent with the proper management and control of the fisheries as a common property resource; which may include social, economic or other grounds, either in conjunction with steps taken to conserve, protect, and harvest the resource, or simply to carry out social, cultural or economic goals and policies.

S.56(b) Description:

The Minister must also be satisfied that the transferred fish do not have a disease or disease agent that may be harmful to the conservation or protection of fish. In order to make a decision on the transfer, the first step required is to determine if the fish have any disease or disease agent.

1. DFO defines disease¹ as: an abnormality of structure or function which results in a measurable compromise in physiological or behavioural performance, which is not a direct result of physical injury.
2. DFO defines disease agent² as: an infectious agent (e.g., a virus or bacteria) that causes or contributes to the development of a disease.

If DFO scientists advise that if an “agent” does not “cause or contribute to the development of a disease”, it would not be a “disease or disease agent” that could potentially result in the transfer being prohibited under S. 56(b) of the FGR.

The second step is determining if that disease or disease agent may be harmful to the conservation and protection of fish.

1. DFO interprets protection and conservation³ as: the protection, maintenance, and rehabilitation of genetic diversity, species, and ecosystems to sustain biodiversity and the continuance of evolutionary and natural production processes.
2. The *Fisheries Act* defines fish as: parts of fish, shellfish, crustaceans, marine animals and any parts of shellfish, crustaceans or marine animals, and the eggs, sperm, spawn, larvae, spat and juvenile stages of fish, shellfish, crustaceans and marine animals.
3. DFO interprets the conservation and protection of fish to be assessed at an aggregate of fish level (rather than the individual animal). Aggregates are set at a level that will best support a sound, evidence-based decision on the possibility of harm to the protection and

¹ Oxford Dictionary

² World Organization for Animal Health (OIE)

³ Wild Salmon Policy page 38

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conservation of fish, and an assessment will consider any relevant information on the status of any relevant aggregates of fish.

4. Under the Section 56 (FGR) Decision Framework, if conservation risks from the proposed introduction or transfer to aggregates of wild fish is assessed as “high”, DFO staff will recommend against approving the transfer. If conservation risks are assessed as “low”, DFO staff will recommend that the transfer would not be prohibited under s. 56(b) of the FGR. If the conservation risks are assessed as “medium”, DFO staff will consider the overall evidence regarding the specific decision, any available adaptive management measures, and any uncertainty regarding the evidence, and make a recommendation on whether the proposed release or transfer “may be harmful to the protection and conservation of fish” or not.

S.56(c) Description:

The Minister must be satisfied that the proposed release or transfer of live fish will not have an adverse impact on stock size or the genetic characteristics of wild fish stocks. A conclusion that the transfer “will not have an adverse effect” should not reasonably require absolute scientific certainty, so long as such a conclusion is reasonable in light of the evidence and reflects a precautionary approach. An adverse impact should be read as having some type of negative or detrimental impact. Releases or transfers of live fish that are considered by the Minister to make the overall stock weaker, from a quantitative or qualitative perspective, should be viewed as an adverse impact.

TAB 3: Mandate under Section 56 of the *Fishery General Regulations*

Fisheries and Oceans Canada (DFO) uses this form to assess the transfer of live finfish into fish-bearing waters of British Columbia (BC) for a licensing decision; specifically for finfish commercial aquaculture movements between marine sites or from hatchery to marine sites or marine sites to hatchery.

Prior to issuing a licence to transfer live fish, the Minister must be satisfied that each of the three preconditions outlined in *Fishery (General) Regulations* (FGR) S.56 are met:

- a. the release or transfer of the fish would be in keeping with the proper management and control of fisheries;
- b. the fish do not have any disease or disease agent that may be harmful to the protection and conservation of fish; and
- c. the release or transfer of the fish will not have an adverse effect on the stock size of fish or the genetic characteristics of fish or fish stocks.

Additional guidance for this assessment process is provided in the interim *Risk-based approach on the movement of live fish under section 56 of the Fishery (General) Regulations* and the draft *Framework for Aquaculture Risk Management* (FARM).

As the lead federal authority, DFO must ensure that wild fish and their habitat are protected during aquaculture operations, using avoidance, mitigation, monitoring, compliance, and remediation approaches that are aligned with the potential risk to the environment. The primary tools to ensure the proper management and control of fisheries, with respect to the activity of aquaculture, are not the S.56 transfer permits, but are in place both before and after a transfer actually occurs.

One such tool to avoid and mitigate possible harm to fish and fish habitat prior to licence issuance is the siting considerations DFO has in place to guide applicants away from high value habitats (e.g. eelgrass and kelp beds, saltmarshes and estuaries, the nearshore photic zone), areas where commercial fisheries species such as herring and salmon are known to congregate or spawn, habitats sensitive to deposition or shading (e.g. eelgrass, rocky reefs, glass sponge reefs), and critical habitats of species at risk. Other information is gathered during the application process: the area is surveyed by industry and DFO for wild fish habitat and species usage, and interactions between the farm site and fisheries or fisheries resources are assessed. Lastly, a comprehensive review process is undertaken of all industry-generated data and any information collected by DFO to make an informed risk-based decision. A consultative process is in place to seek feedback from First Nations on traditional usage and ecosystem knowledge before PAR licensing decisions are made. New facilities are not licensed if the activity of aquaculture would prevent the proper management and control of fisheries.

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Once an application has been approved, a licence is issued under the authority of the *PAR* and the activity also falls under the authority of the *Aquaculture Activities Regulations*. At that point, there are additional tools in place which pertain to the proper management and control of fisheries. Licence holders have many requirements to mitigate harm to wild fish species and their habitats, as well as the recording and reporting of associated information. This includes data regarding: incidental catch of wild fish, marine mammals, deposition and impact from organic substances (i.e. fish feed and feces), farmed fish health, the use of therapeutants and pesticides, escape management and containment. Multi-year licences are renewed upon expiry, and are updated to reflect new science, add clarity, ensure enforceability and demonstrate adaptive management.

All pre- and post-licensing measures are in place to ensure that the activity of aquaculture is conducted in a manner consistent with all relevant legislation and regulations. Additional mitigation and monitoring may be applied post operation to even further reduce the risk or uncertainty during operations. Any transfer of fish to or from these licence facilities is considered in the context of this precaution and mitigation already applied during the licence application and review decision making process and the monitoring and compliance checks applied during operations.

First Nations have raised concerns that their rights should be adequately considered, particularly for S.56 (a) on preferred species, locations, and runs of fish. [REDACTED]

[REDACTED]

Nolin, Melissa (DFO/MPO)

From: McCorquodale, Brenda (DFO/MPO)
Sent: Wednesday, January 29, 2025 10:33 AM
To: Sandberg, Krista (DFO/MPO); PAC AMD Exec Correspondence / Correspondance exec DGA PAC (DFO/MPO)
Subject: Fw: incident at Clayoquot SCCS

Follow Up Flag: Follow up
Flag Status: Completed

Krista - are you able to look into this in more detail? When [REDACTED] initially asked us about mortalities, I was told that mortalities related to the bomb cyclone had occurred on a transport vessel, but [REDACTED] is concerned that the semi containment facility may not be operating properly or maybe experiencing some sort of event. I think we have a crew going out to Clayoquot in the near future, maybe we could also get them to pop in if the fish are still in the facility at that point.

It would be great if you could get me an update fairly quickly in order to respond to [REDACTED] even if it is just to assure him that we will be out on site to inspect the facility.

Brenda

From: [REDACTED]
Sent: Tuesday, January 28, 2025 5:08 PM
To: McCorquodale, Brenda (DFO/MPO) <Brenda.McCorquodale@dfo-mpo.gc.ca>
Cc: [REDACTED] Andrea.Cyr@ised-isde.gc.ca <Andrea.Cyr@ISED-ISDE.GC.CA>; Fish Farm Task Force <BCSATTaskForce-GroupeDeTravailTSCB@ised-isde.gc.ca>; Sony Perron <Sony.Perron@ISED-ISDE.GC.CA>; [REDACTED]
Subject: incident at Clayoquot SCCS

Hi Brenda,

Something has been going on at Cermaq's semi-closed containment system (SCCS) for the past 2 months. [REDACTED] emailed you about this in November, and got a response from Kerra Shaw.

Kerra's answer was that the fish were damaged during a routine transfer from the SCCS into adjacent Millar Channel open-net pen. The ship was unable to dock during the bomb cyclone, and the fish were harmed while being jostled around inside the transport vessel.

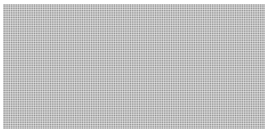
This answer doesn't explain why the floating fat and flesh is inside and all around the SCCS... Here are some images and footage of the incident: <https://drive.google.com/drive/folders/1EhYZcTvEI5gdnfkiOtMjcheobA2HKKHJ>

This appears to be a serious incident, and I'm hoping DFO can investigate and provide answers to these questions as soon as possible. These incidents have repercussions on surrounding habitat, fish and wildlife and are relevant to the aquaculture transition:

1. Did fish die in the SCCS fish farm, and if so, what level of mortality occurred?
2. What are the substances arising in and near the SCCS fish farm, and why have they persisted for so long?
3. Did the SCCS experimental fish farm have a technological failure, and if so what happened?

Thank you Brenda for your attention to this.

Cheers,



Clayoquot Action

Box 511,

Tofino, BC

V0R 2Z0

in unceded hiškwiiʔath, ʔaahuusʔath, and ʔaʔuukwiiʔath territories

<http://clayoquotaction.org>

s.19(1)

No further information has been severed or removed from this page

Nolin, Melissa (DFO/MPO)

From: McCorquodale, Brenda (DFO/MPO)
Sent: Friday, January 31, 2025 3:06 PM
To: Davis, Neil (DFO/MPO); De Vito, Marianne (DFO/MPO); Sandberg, Krista (DFO/MPO)
Cc: Yook, Alena (DFO/MPO)
Subject: RE: incident at Clayoquot SCCS

We visited in the last week of November and will be back on site within the next two weeks.
At this point our staff don't have any outstanding concerns and agree that this is the likely cause.

Brenda
Brenda McCorquodale (she/ her/ elle)

A/Senior Director /Directrice principale
Aquaculture Management / Gestion de l'aquaculture
Fisheries Management Branch / Direction de la gestion des pêches
Fisheries and Oceans Canada / Pêches et Océans Canada
1965 Island Diesel Way | Nanaimo, BC | Nanaimo, CB | V9S 5W8
250-902-8865
Email | Courriel: Brenda.McCorquodale@dfo-mpo.gc.ca

From: Davis, Neil (DFO/MPO) <Neil.Davis@dfo-mpo.gc.ca>
Sent: Friday, January 31, 2025 12:01 PM
To: McCorquodale, Brenda (DFO/MPO) <Brenda.McCorquodale@dfo-mpo.gc.ca>; De Vito, Marianne (DFO/MPO) <Marianne.DeVito@dfo-mpo.gc.ca>; Sandberg, Krista (DFO/MPO) <Krista.Sandberg@dfo-mpo.gc.ca>
Cc: Yook, Alena (DFO/MPO) <Alena.Yook@dfo-mpo.gc.ca>
Subject: RE: incident at Clayoquot SCCS

Thanks for the heads up Brenda. Have we verified this w a site visit or anything like that, or are we relying on info from industry for all this? something to be prepared for in terms of potential qns from others

From: McCorquodale, Brenda (DFO/MPO) <Brenda.McCorquodale@dfo-mpo.gc.ca>
Sent: Friday, January 31, 2025 8:30 AM
To: De Vito, Marianne (DFO/MPO) <Marianne.DeVito@dfo-mpo.gc.ca>; Sandberg, Krista (DFO/MPO) <Krista.Sandberg@dfo-mpo.gc.ca>
Cc: Davis, Neil (DFO/MPO) <Neil.Davis@dfo-mpo.gc.ca>; Yook, Alena (DFO/MPO) <Alena.Yook@dfo-mpo.gc.ca>
Subject: RE: incident at Clayoquot SCCS

Thanks – we have been following up with them.

Brenda
Brenda McCorquodale (she/ her/ elle)

A/Senior Director /Directrice principale
Aquaculture Management / Gestion de l'aquaculture
Fisheries Management Branch / Direction de la gestion des pêches

Fisheries and Oceans Canada / Pêches et Océans Canada
1965 Island Diesel Way | Nanaimo, BC | Nanaimo, CB | V9S 5W8
250-902-8865
Email | Courriel: Brenda.McCorquodale@dfo-mpo.gc.ca

From: De Vito, Marianne (DFO/MPO) <Marianne.DeVito@dfo-mpo.gc.ca>
Sent: Thursday, January 30, 2025 10:06 AM
To: McCorquodale, Brenda (DFO/MPO) <Brenda.McCorquodale@dfo-mpo.gc.ca>
Cc: Davis, Neil (DFO/MPO) <Neil.Davis@dfo-mpo.gc.ca>; Yook, Alena (DFO/MPO) <Alena.Yook@dfo-mpo.gc.ca>
Subject: RE: incident at Clayoquot SCCS

Hi Brenda – no concerns with the suggested messaging and approach.

Just one question – does the CFIA need to be made aware of this feed issue?

From: McCorquodale, Brenda (DFO/MPO) <Brenda.McCorquodale@dfo-mpo.gc.ca>
Sent: Thursday, January 30, 2025 12:51 PM
To: De Vito, Marianne (DFO/MPO) <Marianne.DeVito@dfo-mpo.gc.ca>; Davis, Neil (DFO/MPO) <Neil.Davis@dfo-mpo.gc.ca>
Cc: Yook, Alena (DFO/MPO) <Alena.Yook@dfo-mpo.gc.ca>
Subject: FW: incident at Clayoquot SCCS

Neil/ Marianne

As you are aware, we have both received media inquiries and direct communications from environmental organizations about some unusual oily residue being present at the Cermaq closed containment facility. Here are some updates on the concerns being raised. **Media lines are being prepared**. Are there any concerns with me responding directly to the environmental groups?

- **The oily substances arising in and near the Millar Channel containment facility over the past couple of months were attributable to production issues with a specific batch of feed.**
- This resulted in non-typical residues being present in the water which were related to the insoluble and cohesive nature of the oils present in the feed.
- **It is not anticipated that there will be any negative environmental impacts associated with this issue.**
- **The residue is not associated with any issues with the operation of the containment facility.** Mortalities associated with the operation of the containment facility have been within the normal expected range.
- The containment facility continues to be licenced and is being utilized by the licence-holder to grow salmon.

Brenda
Brenda McCorquodale (she/ her/ elle)

A/Senior Director /Directrice principale
Aquaculture Management / Gestion de l'aquaculture
Fisheries Management Branch / Direction de la gestion des pêches
Fisheries and Oceans Canada / Pêches et Océans Canada
1965 Island Diesel Way | Nanaimo, BC | Nanaimo, CB | V9S 5W8
250-902-8865
Email | Courriel: Brenda.McCorquodale@dfo-mpo.gc.ca

From: [REDACTED]
Sent: Tuesday, January 28, 2025 5:08 PM
To: McCorquodale, Brenda (DFO/MPO) <Brenda.McCorquodale@dfo-mpo.gc.ca>
Cc: [REDACTED]; Andrea.Cyr@ised-isde.gc.ca <Andrea.Cyr@ISED-ISDE.GC.CA>; Fish Farm Task Force <BCSATTaskForce-GroupeDeTravailTSCB@ised-isde.gc.ca>; Sony Perron <Sony.Perron@ISED-ISDE.GC.CA>; [REDACTED]
Subject: incident at Clayoquot SCCS

Hi Brenda,

Something has been going on at Cermaq's semi-closed containment system (SCCS) for the past 2 months. [REDACTED] emailed you about this in November, and got a response from Kerra Shaw.

Kerra's answer was that the fish were damaged during a routine transfer from the SCCS into adjacent Millar Channel open-net pen. The ship was unable to dock during the bomb cyclone, and the fish were harmed while being jostled around inside the transport vessel.

This answer doesn't explain why the floating fat and flesh is inside and all around the SCCS... Here are some images and footage of the incident: <https://drive.google.com/drive/folders/1EhYZcTvEI5gdnfkiOtMjcheobA2HKKHJ>

This appears to be a serious incident, and I'm hoping DFO can investigate and provide answers to these questions as soon as possible. These incidents have repercussions on surrounding habitat, fish and wildlife and are relevant to the aquaculture transition:

1. Did fish die in the SCCS fish farm, and if so, what level of mortality occurred?
2. What are the substances arising in and near the SCCS fish farm, and why have they persisted for so long?
3. Did the SCCS experimental fish farm have a technological failure, and if so what happened?

Thank you Brenda for your attention to this.

Cheers,

[REDACTED]

Clayoquot Action
Box 511,
Tofino, BC
V0R 2Z0
in unceded hiškwiiʔath, ʔaahuusʔath, and ʔaʔuukwiiʔath territories

<http://clayoquotaction.org>

s.19(1)

Nolin, Melissa (DFO/MPO)

From: McCorquodale, Brenda (DFO/MPO)
Sent: Friday, January 31, 2025 7:11 PM
To: Sandberg, Krista (DFO/MPO)
Cc: Manning, Michelle (DFO/MPO)
Subject: FW: incident at Clayoquot SCCS

Info – what is the date that the staff are going out there. I could maybe go out then instead of on the 18th/19th.

Brenda
Brenda McCorquodale (she/ her/ elle)

A/Senior Director /Directrice principale
Aquaculture Management / Gestion de l'aquaculture
Fisheries Management Branch / Direction de la gestion des pêches
Fisheries and Oceans Canada / Pêches et Océans Canada
1965 Island Diesel Way | Nanaimo, BC | Nanaimo, CB | V9S 5W8
250-902-8865
Email | Courriel: Brenda.McCorquodale@dfo-mpo.gc.ca

From: [REDACTED]
Sent: Friday, January 31, 2025 4:04 PM
To: McCorquodale, Brenda (DFO/MPO) <Brenda.McCorquodale@dfo-mpo.gc.ca>
Cc: Andrea.Cyr@ised-isde.gc.ca; Fish Farm Task Force <BCSATTaskForce-GroupeDeTravailTSCB@ised-isde.gc.ca>; Sony Perron <Sony.Perron@ISED-ISDE.GC.CA>; [REDACTED]
Subject: Re: incident at Clayoquot SCCS

Dear Brenda,

Thanks for your response. I'm not sure you have the full picture. Have you been able to get an ROV down to assess what is actually happening?

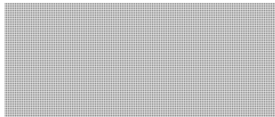
Please review our video. <https://drive.google.com/drive/folders/1EhYZcTvEI5gdnfkiOtMjcheobA2HKKHJ>

1. There is no feed visible on the surface. The oil is rising to the surface from underwater. The bubbles are rising all around the bay, including adjacent to the Millar open-net pen. I mapped this on January 29 on our 6th visit to the incident, and can send you the map Monday if that is helpful.
2. Perhaps you should visit the site personally and experience the stench. Doesn't make sense that oily pellets would produce this ongoing odour. We've never smelled this during normal feeding operations; only during die-offs.
3. Your explanation does not align with Kerra Shaw's explanation, that the cause was an incident where salmon were trapped in a transfer vessel due to the Nov bomb cyclone.

Whatever is happening here, the fact that there has been sludge and oil all around the site for 2 months now clearly signals some type of failure of the system.

What specific branch/agency of the federal government is reviewing this issue? Can you provide me with a contact?

Cheers,



Clayoquot Action

Box 511,

Tofino, BC

V0R 2Z0

in unceded hiškwiiʔath, ʔaahuusʔath, and ʔaʔuukwiiʔath territories

<http://clayoquotaction.org>

On Jan 31, 2025, at 08:24, McCorquodale, Brenda (DFO/MPO) <Brenda.McCorquodale@dfo-mpo.gc.ca> wrote:

Hi 

I apologize for the delay in responding. Thanks for your note and thank you for reaching out. The oily substances which you have noted were present near the Millar Channel facility in recent weeks were attributable to milling issues with a specific batch of fish feed. This is not atypical, but in this case resulted in higher than normal residues being present in the water which were related to the insoluble and cohesive nature of oils present in the feed. The Government of Canada is reviewing this issue to ensure that there were no negative environmental impacts, and to ensure that companies were compliant with all conditions of licence.

Mortalities associated with the operation of the containment facility have been within the normal expected range. The containment facility is licenced and continues to be operated by the licence-holder to grow salmon. DFO staff regularly visit sites where fish are in production, including this site, to review fish health, environmental performance, and overall compliance.

Brenda

Brenda McCorquodale (she/ her/ elle)

A/Senior Director /Directrice principale
Aquaculture Management / Gestion de l'aquaculture
Fisheries Management Branch / Direction de la gestion des pêches
Fisheries and Oceans Canada / Pêches et Océans Canada
1965 Island Diesel Way | Nanaimo, BC | Nanaimo, CB | V9S 5W8
250-902-8865
Email | Courriel: Brenda.McCorquodale@dfo-mpo.gc.ca

From: 

Sent: Thursday, January 30, 2025 11:49 AM

To: McCorquodale, Brenda (DFO/MPO) <Brenda.McCorquodale@dfo-mpo.gc.ca>

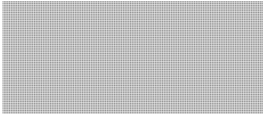
Subject: Fwd: incident at Clayoquot SCCS

Importance: High

Hi Brenda,

Did you see my email the other day?

Cheers,



Clayoquot Action

Box 511,

Tofino, BC

V0R 2Z0

in unceded hiškwiiʔath, ʔaahuusʔath, and ʔaʔuukwiiʔath territories

<http://clayoquotaction.org>

Begin forwarded message:

From: [REDACTED]
Subject: incident at Clayoquot SCCS
Date: January 28, 2025 at 17:08:37 PST
To: Brenda McCorquodale <Brenda.McCorquodale@dfo-mpo.gc.ca>
Cc: [REDACTED]
"Andrea.Cyr@ised-isde.gc.ca" <Andrea.Cyr@ISED-ISDE.GC.CA>, Fish Farm Task Force <BCSATTaskForce-GroupeDeTravailTSCB@ised-isde.gc.ca>, Sony Perron <Sony.Perron@ISED-ISDE.GC.CA>, [REDACTED]
[REDACTED]

Hi Brenda,

Something has been going on at Cermaq's semi-closed containment system (SCCS) for the past 2 months. [REDACTED] emailed you about this in November, and got a response from Kerra Shaw.

Kerra's answer was that the fish were damaged during a routine transfer from the SCCS into adjacent Millar Channel open-net pen. The ship was unable to dock during the bomb cyclone, and the fish were harmed while being jostled around inside the transport vessel.

This answer doesn't explain why the floating fat and flesh is inside and all around the SCCS... Here are some images and footage of the incident:

<https://drive.google.com/drive/folders/1EhYZcTvEI5gdnfkiOtMjcheobA2HKKHJ>

This appears to be a serious incident, and I'm hoping DFO can investigate and provide answers to these questions as soon as possible. These incidents have repercussions on surrounding habitat, fish and wildlife and are relevant to the aquaculture transition:

1. Did fish die in the SCCS fish farm, and if so, what level of mortality occurred?

2. What are the substances arising in and near the SCCS fish farm, and why have they persisted for so long?
3. Did the SCCS experimental fish farm have a technological failure, and if so what happened?

Thank you Brenda for your attention to this.

Cheers,



s.19(1)

Clayoquot Action

Box 511,

Tofino, BC

V0R 2Z0

in unceded hiškwiiʔath, ʔaahuusʔath, and ʔaʔuukwiiʔath territories

<http://clayoquotaction.org>

No further information has been severed or removed from this page

Nolin, Melissa (DFO/MPO)

From: McCorquodale, Brenda (DFO/MPO)
Sent: Wednesday, February 5, 2025 4:21 PM
To: Delaney, Paula (DFO/MPO)
Cc: PAC AMD Exec Correspondence / Correspondance exec DGA PAC (DFO/MPO)
Subject: RE: For approval: Media inquiry - Cermaq's fish farm at Millar Channel

Yes I approve with edits - thx

Brenda
Brenda McCorquodale (she/ her/ elle)

A/Senior Director /Directrice principale
Aquaculture Management / Gestion de l'aquaculture
Fisheries Management Branch / Direction de la gestion des pêches
Fisheries and Oceans Canada / Pêches et Océans Canada
1965 Island Diesel Way | Nanaimo, BC | Nanaimo, CB | V9S 5W8
250-902-8865
Email | Courriel: Brenda.McCorquodale@dfo-mpo.gc.ca

From: Delaney, Paula (DFO/MPO)
Sent: Wednesday, February 5, 2025 1:10 PM
To: McCorquodale, Brenda (DFO/MPO)
Cc: PAC AMD Exec Correspondence / Correspondance exec DGA PAC (DFO/MPO)
Subject: FW: For approval: Media inquiry - Cermaq's fish farm at Millar Channel


Hi Brenda,

Could you please confirm if COMMS can move ahead with your approval as per the email below RE: Media inquiry - Cermaq's fish farm at Millar Channel.

Thank you, Paula

From: Qutob, Moh'D (DFO/MPO) <MohD.Qutob@dfo-mpo.gc.ca>
Sent: Wednesday, February 5, 2025 1:08 PM
To: Delaney, Paula (DFO/MPO) <Paula.Delaney@dfo-mpo.gc.ca>
Subject: RE: For approval: Media inquiry - Cermaq's fish farm at Millar Channel

Hello Paula,

Wondering if we can move ahead with Brenda's approval on this. I saw in the document that she made edits and added a comment, but not sure if there was any further changes requested:  [ML Cermaq Millar Channel Inquiry Glacier Media.docx](#)

Thanks!
Mo

From: Delaney, Paula (DFO/MPO) <Paula.Delaney@dfo-mpo.gc.ca>
Sent: Friday, January 31, 2025 2:33 PM
To: Qutob, Moh'D (DFO/MPO) <MohD.Qutob@dfo-mpo.gc.ca>
Subject: RE: For approval: Media inquiry - Cermaq's fish farm at Millar Channel

Thank you !! have a great weekend,
Paula

From: Qutob, Moh'D (DFO/MPO) <MohD.Qutob@dfo-mpo.gc.ca>
Sent: Friday, January 31, 2025 2:32 PM
To: Delaney, Paula (DFO/MPO) <Paula.Delaney@dfo-mpo.gc.ca>
Subject: RE: For approval: Media inquiry - Cermaq's fish farm at Millar Channel

Hi Paula,

There is no big rush on this one, preferably by COB Monday.

Thanks!
Mo


From: Delaney, Paula (DFO/MPO) <Paula.Delaney@dfo-mpo.gc.ca>
Sent: Friday, January 31, 2025 2:31 PM
To: Qutob, Moh'D (DFO/MPO) <MohD.Qutob@dfo-mpo.gc.ca>
Subject: RE: For approval: Media inquiry - Cermaq's fish farm at Millar Channel

When do you require this by Mo?
Thank you, Paula

From: Qutob, Moh'D (DFO/MPO) <MohD.Qutob@dfo-mpo.gc.ca>
Sent: Friday, January 31, 2025 2:25 PM
To: PAC AMD Exec Correspondence / Correspondance exec DGA PAC (DFO/MPO) <DFO.PACAMDExecCorrespondence-CorrespondanceexecDGAPAC.MPO@dfo-mpo.gc.ca>
Cc: Delaney, Paula (DFO/MPO) <Paula.Delaney@dfo-mpo.gc.ca>; Young, Jennifer (she, her / elle, la) (DFO/MPO) <Jennifer.Young2@dfo-mpo.gc.ca>; Vazeos, Athina (DFO/MPO) <Athina.Vazeos@dfo-mpo.gc.ca>
Subject: For approval: Media inquiry - Cermaq's fish farm at Millar Channel

Hi Brenda,

We received a media inquiry from Glacier Media (*Times Colonist, BIV, North Shore News, Pique Newsmagazine*) regarding Cermaq's Millar Channel facility operations.

With input from C&P and Krista, we developed the responses in this SP document for your approval:  [ML Cermaq Millar Fish Die-off Glacier Media.docx](#)

Let me know if you see any potential changes or have any concerns.

Cheers,
Mo

From: [REDACTED]
Sent: Wednesday, January 29, 2025 1:33 PM
To: NCR Media / Médias RCN (DFO/MPO) <DFO.NCRMEDIA-MediasRCN.MPO@DFO-MPO.GC.CA>
Subject: Re: Alleged fish farm die-off

Hi there,

I'm following up on allegations of pollution at an "experimental" fish farm off the coast of Vancouver Island.

A non-profit watchdog shared with me photos and video of what it says are large quantities of an oil, fat and salmon-coloured sludge emanating from Cermaq's experimental semi-closed containment system (SCCS) fish farm at Millar Channel, in Clayoquot Sound UNESCO Biosphere Reserve.

The images appear to have been shot between late November 2024 and early January 2025.

Watershed Watch Salmon Society points to [documents](#) it obtained through access to information requests showing some farmed salmon died in a transport vessel in November while moving fish from the facility to the nearby open net-pen fish farm.

But the group claims this does not explain the months of images of polluting substances coming from inside the salmon farm and spreading around the Millar Channel site.

Can you tell me:

- Did fish die in the SCCS fish farm. If so, what level of mortality occurred?
- What are the substances arising in and near the SCCS fish farm, and why have they persisted for so long?
- Did the SCCS experimental fish farm have a technological failure?
- Is DFO conducting an investigation into the what happened at the farm? If so what concerns does it have?

Best,

[REDACTED]
[Glacier Media](#) syndicated (*Times Colonist, BIV, North Shore News, Pique Newsmagazine*)

s.19(1)

Nolin, Melissa (DFO/MPO)

From: McCorquodale, Brenda (DFO/MPO)
Sent: Wednesday, February 5, 2025 7:48 PM
To: Sandberg, Krista (DFO/MPO); PAC AMD Exec Correspondence / Correspondance exec DGA PAC (DFO/MPO)
Subject: RE: Marine Mammal Update

Ooo – good question – let me check.

Brenda
Brenda McCorquodale (she/ her/ elle)

A/Senior Director /Directrice principale
Aquaculture Management / Gestion de l'aquaculture
Fisheries Management Branch / Direction de la gestion des pêches
Fisheries and Oceans Canada / Pêches et Océans Canada
1965 Island Diesel Way | Nanaimo, BC | Nanaimo, CB | V9S 5W8
250-902-8865
Email | Courriel: Brenda.McCorquodale@dfo-mpo.gc.ca

From: Sandberg, Krista (DFO/MPO) <Krista.Sandberg@dfo-mpo.gc.ca>
Sent: Wednesday, February 5, 2025 3:16 PM
To: McCorquodale, Brenda (DFO/MPO) <Brenda.McCorquodale@dfo-mpo.gc.ca>; PAC AMD Exec Correspondence / Correspondance exec DGA PAC (DFO/MPO) <DFO.PACAMDExecCorrespondence-CorrespondanceexecDGAPAC.MPO@dfo-mpo.gc.ca>
Subject: RE: Marine Mammal Update

Hi Brenda,

Michelle had advised a couple months ago that there was a new process for briefing on marine mammal updates, and that they were to just go to the Exec inbox to be forwarded on to NHQ. Is that only for specific drowning incidents rather than the overview of interactions like I have provided below? Do you still want DM bullets or just an email?

Krista Sandberg

A/Regional Manager, Aquaculture Environmental Operations |
Directrice régionale par intérim, Opérations environnementales de l'aquaculture
Fisheries and Oceans Canada | Pêches et Océans Canada



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of Canada

Gouvernement
du Canada

Canada

From: McCorquodale, Brenda (DFO/MPO) <Brenda.McCorquodale@dfo-mpo.gc.ca>
Sent: Wednesday, February 5, 2025 3:03 PM
To: Sandberg, Krista (DFO/MPO) <Krista.Sandberg@dfo-mpo.gc.ca>; PAC AMD Exec Correspondence / Correspondance exec DGA PAC (DFO/MPO) <DFO.PACAMDExecCorrespondence-CorrespondanceexecDGAPAC.MPO@dfo-mpo.gc.ca>
Subject: RE: Marine Mammal Update

Thanks - We'll need something for the DM updates please that summarizes that a number of farms are currently facing challenges. A little context around the seasonal nature of sea lions, how long they will be around for, and the geographic area of the licences – where is Fortune Channel?

Brenda
Brenda McCorquodale (she/ her/ elle)

A/Senior Director /Directrice principale
Aquaculture Management / Gestion de l'aquaculture
Fisheries Management Branch / Direction de la gestion des pêches
Fisheries and Oceans Canada / Pêches et Océans Canada
1965 Island Diesel Way | Nanaimo, BC | Nanaimo, CB | V9S 5W8
250-902-8865
Email | Courriel: Brenda.McCorquodale@dfo-mpo.gc.ca

From: Sandberg, Krista (DFO/MPO) <Krista.Sandberg@dfo-mpo.gc.ca>
Sent: Wednesday, February 5, 2025 2:42 PM
To: McCorquodale, Brenda (DFO/MPO) <Brenda.McCorquodale@dfo-mpo.gc.ca>; PAC AMD Exec Correspondence / Correspondance exec DGA PAC (DFO/MPO) <DFO.PACAMDExecCorrespondence-CorrespondanceexecDGAPAC.MPO@dfo-mpo.gc.ca>
Subject: FW: Marine Mammal Update

Please see below update on sea lion activity. Of note:

- Mowi's Duncan Island facility near Port Hardy has sea lions that have breached the system and are being aggressive to staff. They have requested to rubber bullets to gain control of the situation.
- A sea lion gained access to the bottom chamber of the SCCS facility at Millar. Divers were able to release the animal.
- Fortune Channel has had its worst sea lion season to date and have dedicated a large amount of time to releasing sea lions from the system. As of January 27th, there is one sea lion remaining within the predator net. The facility is currently harvesting and should be empty within the next few weeks.

Krista Sandberg
A/Regional Manager, Aquaculture Environmental Operations |
Directrice régionale par intérim, Opérations environnementales de l'aquaculture
Fisheries and Oceans Canada | Pêches et Océans Canada



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of Canada

Gouvernement
du Canada

Canada

From: Blasco, Nathan (DFO/MPO) <Nathan.Blasco@dfo-mpo.gc.ca>
Sent: Tuesday, February 4, 2025 2:49 PM
To: Sandberg, Krista (DFO/MPO) <Krista.Sandberg@dfo-mpo.gc.ca>
Subject: FW: Marine Mammal Update

From Blair.

From: Fraser, Blair (DFO/MPO) <Blair.Fraser@dfo-mpo.gc.ca>
Sent: Tuesday, February 4, 2025 2:13 PM

To: Blasco, Nathan (DFO/MPO) <Nathan.Blasco@dfo-mpo.gc.ca>

Subject: Marine Mammal Update

- Mowi is only reporting problems at one farm, their Duncan Island facility in Goletas Channel. Duncan Island has seen a steady increase of pred attack mortality from November through January. The week of January 22nd, during a sea lice treatment, sea lions were able breach the cages at Duncan and were becoming aggressive to staff. Mowi requested the use of a QI to use rubber bullets against the animals. This is the second use of aggressive deterrents at Duncan this sea lion season.
- Grieg has had two farms with increased sea lion activity this season. Noo-la and Lutes. The interactions at Noo-la peaked in November and early December when two sea lions were able to breach the system. Once these sea lions were released there has been minimal pred attack mortality reported at the farm. The second Grieg farm to experience some pred problems is Lutes Creek. Lutes Creek has seen a steady increase in pred attack mortality through December and January. Site workers believe there are one or two seals responsible for the majority of the pred attack mortality. There are a half dozen sea lions hanging around farm but not causing major issue.
- Creative Salmon has had minimal interactions with sea lions this season
- There are three farms active in Tofino North, Bawden, Dixon and Millar Channel. These farms [REDACTED] Each farm is reporting 5 to 15 sea lions hanging around their farms, so far there has been no breaches to any of the conventional cages. However, at the SCCS at Millar Channel, one sea lion was able to gain access to the bottom chamber of the SCCS. This area is described as the area between the fish containment bag and the sludge collector. Divers inspected and believed to have released the sea lion.
- There are five sites active in Tofino South. These farms [REDACTED] McIntyre Lake, Westside, Rant Point and Plover Point are all reporting three to six sea lions hanging around their farms. The sea lions are affecting feeding but there have been minimal system breaches at these farms. Fortune Channel has had the worst sea lion season to date. Through December and January there have been multiple system breaches. FC have dedicated a large amount of time to releasing sea lions from their system. As of January 27th, there is one sea lion still within the predator net. Fortune Channel is harvesting and should be empty within the next few weeks.

Blair Fraser

Aquaculture Biologist | Biologiste de l'aquaculture

Aquaculture Management Division | Gestion de l'aquaculture

Fisheries Management | Direction des pêches

Fisheries and Oceans Canada | Pêches et Océans Canada

1520 Tamarac St., Campbell River, BC V9W 3M5

Blair.fraser@dfo-mpo.gc.ca

Telephone | Téléphone 604-753-7616

Government of Canada | Gouvernement du Canada

s.20(1)(c)

s.21(1)(b)

Nolin, Melissa (DFO/MPO)

From: McCorquodale, Brenda (DFO/MPO)
Sent: Friday, February 7, 2025 12:32 PM
To: Sandberg, Krista (DFO/MPO)
Subject: RE: Millar Channel Site Visit Briefing

Thanks – if they did not produce records they were required to produce at the site upon request pls follow up from a compliance perspective.

Brenda
Brenda McCorquodale (she/ her/ elle)

A/Senior Director /Directrice principale
Aquaculture Management / Gestion de l'aquaculture
Fisheries Management Branch / Direction de la gestion des pêches
Fisheries and Oceans Canada / Pêches et Océans Canada
1965 Island Diesel Way | Nanaimo, BC | Nanaimo, CB | V9S 5W8
250-902-8865
Email | Courriel: Brenda.McCorquodale@dfo-mpo.gc.ca

From: Sandberg, Krista (DFO/MPO)
Sent: Friday, February 7, 2025 9:13 AM
To: McCorquodale, Brenda (DFO/MPO)
Subject: FW: Millar Channel Site Visit Briefing

Update on SCCS

Krista Sandberg
A/Regional Manager, Aquaculture Environmental Operations |
Directrice régionale par intérim, Opérations environnementales de l'aquaculture
Fisheries and Oceans Canada | Pêches et Océans Canada



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Canada

From: Blasco, Nathan (DFO/MPO) <Nathan.Blasco@dfo-mpo.gc.ca>
Sent: Friday, February 7, 2025 9:02 AM
To: Sandberg, Krista (DFO/MPO) <Krista.Sandberg@dfo-mpo.gc.ca>
Subject: FW: Millar Channel Site Visit Briefing

Good morning Krista,

This is from Nick sent last night after there visit to Millar. A lot of detail but not a lot of answers. I believe, and so do my team, that the issue is as Cermaq has said, which is that it's a feed issue but we may not be getting the whole story.

Nathan

From: Mercer, Nick (DFO/MPO) <Nick.Mercer@dfo-mpo.gc.ca>
Sent: Thursday, February 6, 2025 8:53 PM
To: Blasco, Nathan (DFO/MPO) <Nathan.Blasco@dfo-mpo.gc.ca>
Cc: Fraser, Blair (DFO/MPO) <Blair.Fraser@dfo-mpo.gc.ca>; Gyimah, Pious (DFO/MPO) <Pious.Gyimah@dfo-mpo.gc.ca>
Subject: Millar Channel Site Visit Briefing

Hey Nathan,

Here are some bullets on what happened on our trip to Millar Channel today. I've saved a few screenshots from some of the video we collected and saved them at the following location:

\\Dcbcvanna01b\VAN RHQ 4\Aqua\AEO\2. Marine Finfish AEO\Benthic Fieldwork\Fieldwork Data\2025\2025-02-06
Millar SCCS

Please note that this is not a comprehensive review, just a summary with a few photos/videos of what we observed today. We will probably discuss this and put a more when we are back in the office.

February 6, 2025

- NM, BF, PG arrived at Millar Channel at 9:35 and immediately observed ~20 seagulls diving on something in the water between the SCCS and the Millar feed shed. When we got closer to it, we noticed an oil surface residue near the feedpipe going to the SCCS. See photo 1
- We drove alongside the feedpipe and noticed an oily residue along the side of the Millar system, on the tires and floatation, near where the feedpipe for the SCCS enters the water. See photo 2.
- A strong odor was present and BF and PG were certain that it smelled like fish feed. Also, we felt as though the surface residue was from feed and/or feed oil.
- We tied up to the back of the Millar facility and [REDACTED] immediately met us on the back deck. He mentioned that he was extremely busy and didn't really have time for a site inspection. He said that he [REDACTED] and has no idea what is going on with the SCCS. He insisted we talk to [REDACTED]
- Blair went with [REDACTED] to look at fish health records for Millar, but [REDACTED] mentioned again that he didn't really have time for an inspection. Blair returned to the vessel to talk with Nick and Pious. [REDACTED] came out to the vessel to talk to DFO staff. He informed us that he spoke with [REDACTED] and the oil residue was from an oily feed, and that any printouts need to go through a request to [REDACTED] and we can't do it on site.
- NM flew the drone over the back of the Millar house and the SCCS, noticed a large area covered in an oily residue. See photos 3&4.
- We flew an ROV transect from the SCCS to the Millar system below the feedpipe on the surface. No clear leaks were present and there was minimal feed/residue observed below the water near the pipe. The surface film was clear and visible the whole time – see photo 5
- We flew an ROV transect below the SCCS feed pipe on bottom, and shortly into the transect noticed a “trench” that appeared to be approximately 30 cm wide. The trench appeared to be dug out of the mud bottom and it was full of fish feces. We followed the trench with the ROV for about 5-6 minutes with no end observed. The video did not save properly to the laptop, and we don't have that footage.
- We returned to the ROV start point and found the trench again – see photo 6
- We followed the trench the opposite direction and went under the SCCS. The trench led to a massive area below the SCCS covered 100% with feces and fish feed. See photo 7
- We noticed that a significant amount of feed was falling through the water column below the SCCS – see photo 8
- We flew the ROV up to a few of the ports along the bottom of the SCCS and observed a significant amount of feed and feces coming out of the outflow ports – see photo 9
- We also flew the ROV to the bottom of the SCCS and took video of the outflow pipe and netting – see photo 10
- While ROVing, [REDACTED] came up to the boat and introduced himself. He mentioned that the oil residue has been around for about a month and a half and is starting to get better now.

In summary, during our visit we noticed what looked like feed oil residue on the surface of the water near the SCCS. There was a large sheen on the surface with no clear obvious point source. There were no signs of mortality issues at the time, but we faced challenges in getting records from farm staff at the time of the visit. We identified a few anomalies on the seafloor below the SCCS, including a large amount of feed pellets on the seafloor as well as consistent feed falling down through the water column. All the feed appeared to be coming out of the outflow ports at the bottom of the SCCS. At this point we should review the video together and discuss some of the findings. Additionally, FH can follow up on mortality concerns when they are here next week.

Thanks,

Nick Mercer

Aquaculture Biologist | Biologiste de l'aquaculture
Aquaculture Management Division | Gestion de l'aquaculture
Fisheries Management | Direction des pêches
Fisheries and Oceans Canada | Pêches et Océans Canada
1520 Tamarac St., Campbell River, BC V9W 3M5
Nick.Mercer@dfo-mpo.gc.ca
Telephone | Téléphone 250-895-9554
Government of Canada | Gouvernement du Canada

Nolin, Melissa (DFO/MPO)

From: McCorquodale, Brenda (DFO/MPO)
Sent: Friday, February 7, 2025 12:34 PM
To: Sandberg, Krista (DFO/MPO)
Subject: RE: Millar Channel Site Visit Briefing

Can you send me the photos too

Brenda
Brenda McCorquodale (she/ her/ elle)

A/Senior Director /Directrice principale
Aquaculture Management / Gestion de l'aquaculture
Fisheries Management Branch / Direction de la gestion des pêches
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To: McCorquodale, Brenda (DFO/MPO)
Subject: FW: Millar Channel Site Visit Briefing

Update on SCCS

Krista Sandberg
A/Regional Manager, Aquaculture Environmental Operations |
Directrice régionale par intérim, Opérations environnementales de l'aquaculture
Fisheries and Oceans Canada | Pêches et Océans Canada



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Sent: Friday, February 7, 2025 9:02 AM
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Sent: Thursday, February 6, 2025 8:53 PM

To: Blasco, Nathan (DFO/MPO) <Nathan.Blasco@dfo-mpo.gc.ca>

Cc: Fraser, Blair (DFO/MPO) <Blair.Fraser@dfo-mpo.gc.ca>; Gyimah, Pious (DFO/MPO) <Pious.Gyimah@dfo-mpo.gc.ca>

Subject: Millar Channel Site Visit Briefing

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Millar SCCS

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time, but we faced challenges in getting records from farm staff at the time of the visit. We identified a few anomalies on the seafloor below the SCCS, including a large amount of feed pellets on the seafloor as well as consistent feed falling down through the water column. All the feed appeared to be coming out of the outflow ports at the bottom of the SCCS. At this point we should review the video together and discuss some of the findings. Additionally, FH can follow up on mortality concerns when they are here next week.

Thanks,

Nick Mercer

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1520 Tamarac St., Campbell River, BC V9W 3M5
Nick.Mercer@dfo-mpo.gc.ca
Telephone | Téléphone 250-895-9554
Government of Canada | Gouvernement du Canada

Nolin, Melissa (DFO/MPO)

From: McCorquodale, Brenda (DFO/MPO)
Sent: Friday, February 7, 2025 8:41 PM
To: [REDACTED]
Subject: Re: incident at Clayoquot SCCS

You too!
Brenda

From: [REDACTED]
Sent: Friday, February 7, 2025 5:04:08 PM
To: McCorquodale, Brenda (DFO/MPO)
Subject: Re: incident at Clayoquot SCCS
Okay thank you Brenda. Look forward to hearing what you find.

Have a good weekend.

Cheers,

[REDACTED]

Clayoquot Action
Box 511,
Tofino, BC
V0R 2Z0
in unceded hiškwii?ath, ʔaahuus?ath, and ʔa?uukwii?ath territories

<http://clayoquotaction.org>

On Feb 7, 2025, at 15:44, McCorquodale, Brenda (DFO/MPO) <Brenda.McCorquodale@dfo-mpo.gc.ca> wrote:

I have had staff at the site, and we are still collecting information.
Brenda
Brenda McCorquodale (she/ her/ elle)

A/Senior Director /Directrice principale
Aquaculture Management / Gestion de l'aquaculture
Fisheries Management Branch / Direction de la gestion des pêches
Fisheries and Oceans Canada / Pêches et Océans Canada
1965 Island Diesel Way | Nanaimo, BC | Nanaimo, CB | V9S 5W8
250-902-8865
Email | Courriel: Brenda.McCorquodale@dfo-mpo.gc.ca

From: [REDACTED]
Sent: Friday, February 7, 2025 3:13 PM

s.19(1)

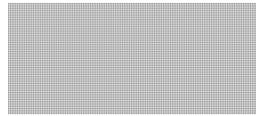
To: McCorquodale, Brenda (DFO/MPO) <Brenda.McCorquodale@dfo-mpo.gc.ca>

Subject: Re: incident at Clayoquot SCCS

Thanks Brenda. Just wanted to clarify—it was a bit vague.

Will you let me know what you are finding?

Cheers,



Clayoquot Action

Box 511,

Tofino, BC

V0R 2Z0

in unceded hiškwiiʔath, ʔaahuusʔath, and ʔaʔuukwiiʔath territories

<http://clayoquotaction.org>

On Feb 7, 2025, at 15:05, McCorquodale, Brenda (DFO/MPO)

<Brenda.McCorquodale@dfo-mpo.gc.ca> wrote:

Hi [REDACTED] – DFO is the lead agency responsible for activities conducted under an aquaculture licence both under the Pacific Aquaculture Regulations and the Aquaculture Activity Regulations. We continue to review this issue.

Brenda

Brenda McCorquodale (she/ her/ elle)

A/Senior Director /Directrice principale

Aquaculture Management / Gestion de l'aquaculture

Fisheries Management Branch / Direction de la gestion des pêches

Fisheries and Oceans Canada / Pêches et Océans Canada

1965 Island Diesel Way | Nanaimo, BC | Nanaimo, CB | V9S 5W8

250-902-8865

Email | Courriel: Brenda.McCorquodale@dfo-mpo.gc.ca

From: [REDACTED]

Sent: Friday, February 7, 2025 11:28 AM

To: McCorquodale, Brenda (DFO/MPO) <Brenda.McCorquodale@dfo-mpo.gc.ca>

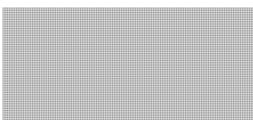
Subject: Re: incident at Clayoquot SCCS

Good morning Brenda,

Hoping you can let me know which federal agency is conducting the investigation, and if you have a contact for that person (no doubt they are liaising with DFO?).

Thank you.

Cheers,



Clayoquot Action

Box 511,

Tofino, BC

V0R 2Z0

s.19(1)

in unceded hiškwiiʔath, ʔaahuusʔath, and ʔaʔuukwiiʔath territories

<http://clayoquotaction.org>

On Jan 31, 2025, at 08:24, McCorquodale, Brenda (DFO/MPO)

<Brenda.McCorquodale@dfo-mpo.gc.ca> wrote:

Hi [REDACTED]

I apologize for the delay in responding. Thanks for your note and thank you for reaching out.

The oily substances which you have noted were present near the Millar Channel facility in recent weeks were attributable to milling issues with a specific batch of fish feed. This is not atypical, but in this case resulted in higher than normal residues being present in the water which were related to the insoluble and cohesive nature of oils present in the feed.

The Government of Canada is reviewing this issue to ensure that there were no negative environmental impacts, and to ensure that companies were compliant with all conditions of licence. Mortalities associated with the operation of the containment facility have been within the normal expected range. The containment facility is licenced and continues to be operated by the licence-holder to grow salmon. DFO staff regularly visit sites where fish are in production, including this site, to review fish health, environmental performance, and overall compliance.

Brenda

Brenda McCorquodale (she/ her/ elle)

A/Senior Director /Directrice principale
Aquaculture Management / Gestion de l'aquaculture
Fisheries Management Branch / Direction de la gestion des pêches
Fisheries and Oceans Canada / Pêches et Océans Canada
1965 Island Diesel Way | Nanaimo, BC | Nanaimo, CB | V9S 5W8
250-902-8865

Email | Courriel: Brenda.McCorquodale@dfo-mpo.gc.ca

From: [REDACTED]

Sent: Thursday, January 30, 2025 11:49 AM

To: McCorquodale, Brenda (DFO/MPO) <Brenda.McCorquodale@dfo-mpo.gc.ca>

Subject: Fwd: incident at Clayoquot SCCS

Importance: High

Hi Brenda,

Did you see my email the other day?

Cheers,

s.19(1)



Clayoquot Action
Box 511,
Tofino, BC
V0R 2Z0
in unceded hiškwiiʔath, ʔaahuusʔath, and ʔaʔuukwiiʔath territories

<http://clayoquotaction.org>

Begin forwarded message:

From: [REDACTED]

Subject: incident at Clayoquot SCCS

Date: January 28, 2025 at 17:08:37 PST

To: Brenda McCorquodale

<Brenda.McCorquodale@dfo-mpo.gc.ca>

Cc: [REDACTED]

<Andrea.Cyr@ised-isde.gc.ca>

<Andrea.Cyr@ISED-ISDE.GC.CA>, Fish Farm

Task Force <BCSATTaskForce-

GroupeDeTravailTSCB@ised-isde.gc.ca>, Sony

Perron <Sony.Perron@ISED-ISDE.GC.CA>, [REDACTED]

Hi Brenda,

Something has been going on at Cermaq's semi-closed containment system (SCCS) for the past 2 months. [REDACTED]

[REDACTED] emailed you about this in November, and got a response from Kerra Shaw.

Kerra's answer was that the fish were damaged during a routine transfer from the SCCS into adjacent Millar Channel open-net pen. The ship was unable to dock during the bomb cyclone, and the fish were harmed while being jostled around inside the transport vessel. This answer doesn't explain why the floating fat and flesh is inside and all around the SCCS... Here are some images and footage of the

incident: <https://drive.google.com/drive/folders/1EhYZcTvEI5gdnfkiOtMjcheobA2HKKHJ>

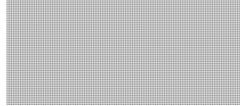
This appears to be a serious incident, and I'm hoping DFO can investigate and provide answers to these questions as soon as possible. These incidents have repercussions on surrounding habitat, fish and wildlife and are relevant to the aquaculture transition:

1. Did fish die in the SCCS fish farm, and if so, what level of mortality occurred?
2. What are the substances arising in and near the SCCS fish farm, and why have they persisted for so long?
3. Did the SCCS experimental fish farm have a technological failure, and if so what happened?

s.19(1)

Thank you Brenda for your attention to this.

Cheers,



Clayoquot Action

Box 511,

Tofino, BC

V0R 2Z0

in unceded hiškwiiʔath, ʔaahuusʔath, and
łaʔuukwiiʔath territories

s.19(1)

<http://clayoquotaction.org>

No further information has been severed or removed from this page

Nolin, Melissa (DFO/MPO)

From: McCorquodale, Brenda (DFO/MPO)
Sent: Monday, February 10, 2025 11:26 AM
To: Sandberg, Krista (DFO/MPO); Manchester, Howie (DFO/MPO)
Cc: Blasco, Nathan (DFO/MPO)
Subject: RE: Millar CCS FH Data

Sensitivity: Confidential

Thanks!

Brenda
Brenda McCorquodale (she/ her/ elle)

A/Senior Director /Directrice principale
Aquaculture Management / Gestion de l'aquaculture
Fisheries Management Branch / Direction de la gestion des pêches
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1965 Island Diesel Way | Nanaimo, BC | Nanaimo, CB | V9S 5W8
250-902-8865
Email | Courriel: Brenda.McCorquodale@dfo-mpo.gc.ca

From: Sandberg, Krista (DFO/MPO)
Sent: Monday, February 10, 2025 8:14 AM
To: Manchester, Howie (DFO/MPO)
Cc: Blasco, Nathan (DFO/MPO) ; McCorquodale, Brenda (DFO/MPO)
Subject: RE: Millar CCS FH Data
Sensitivity: Confidential

Excellent. Thanks so much for this Howie!

Krista Sandberg

A/Regional Manager, Aquaculture Environmental Operations |
Directrice régionale par intérim, Opérations environnementales de l'aquaculture
Fisheries and Oceans Canada | Pêches et Océans Canada



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du Canada

Canada

From: Manchester, Howie (DFO/MPO) <Howie.Manchester@dfo-mpo.gc.ca>
Sent: Monday, February 10, 2025 8:09 AM
To: Sandberg, Krista (DFO/MPO) <Krista.Sandberg@dfo-mpo.gc.ca>
Cc: Blasco, Nathan (DFO/MPO) <Nathan.Blasco@dfo-mpo.gc.ca>
Subject: FW: Millar CCS FH Data
Sensitivity: Confidential

Good Morning Krista,

Here is the mortality history for the SCCS only at Millar including its two separate entries, one starting on September 15th and transferred out on November 21 and the 2nd entry occurring on December 6th and currently still in the SCCS. Mortalities in the **first group** appear normal and primarily related to transport, hatchery causes (fungus, parr) or [REDACTED] two Florfenicol treatments were completed to deal with [REDACTED] both seemed effective. Total inventory of fish in the first group was [REDACTED]

For the second group, transport started on December 6th to present, mortality has been primarily transport, hatchery related or [REDACTED] While mortalities the week of between December 29th and January 11th were elevated due to [REDACTED] and transport, the percentage of the population did not exceed a Mortality Event and was within normal expected levels. The population at this point was nearly [REDACTED] smolts. Smolt entries occurred between December 6th and January 5th, therefore the occurrence of [REDACTED] was also staggered in each entry population, it appears that a total of 5 florfenicol treatments were administered to treat [REDACTED] Treatments appeared effective. Mortality appears to have decreased since January 12 and as of February 6th mortality is at normal low levels.

We will be conducting a scheduled quarterly audit at Millar today, including the SCCS and will get further information on the SCCS as well as the conventional net pens at this facility.

Let me know if you have any questions.

Thanks
Howie

From: [REDACTED]
Sent: Friday, February 7, 2025 4:26 PM
To: Manchester, Howie (DFO/MPO) <Howie.Manchester@dfo-mpo.gc.ca>
Subject: Millar CCS FH Data
Sensitivity: Confidential

Hello Howie,

Please find attached the Mortality for the two populations of fish that have been through/ currently in the CCS cage.

Start Date	End Date	Site	Drug
2024-10-04	2024-10-10	Millar CCS#1	Florfenicol
2024-10-15	2024-10-21	Millar CCS#1	Florfenicol
2024-12-18	2024-12-23	Millar CCS#2	Florfenicol
2024-12-28	2025-01-02	Millar CCS#2	Florfenicol
2025-01-13	2025-01-18	Millar CCS#2	Florfenicol
2025-01-22	2025-01-28	Millar CCS#2	Florfenicol
2025-02-05	2025-02-14	Millar CCS#2	Florfenicol

Also attached are the treatment dates.

It's been a little tougher for me to track down someone to provide me with the daily med feed amounts but your guys should be able to see those when they are there next week.

Thanks

Office +1 250-286-0022

Direct +

Mobile

s.19(1)

CERMAQ

Cermaq Canada Ltd.
203-919 Island Hwy
Campbell River, BC, V9W 2C2, Canada

Cermaq.ca Facebook

No further information has been severed or removed from this page

Nolin, Melissa (DFO/MPO)

From: McCorquodale, Brenda (DFO/MPO)
Sent: Thursday, February 13, 2025 12:01 PM
To: Sandberg, Krista (DFO/MPO)
Subject: RE: AAR and benthic monitoring

Follow Up Flag: Follow up
Flag Status: Flagged

Thanks to you and Nathan. I agree with the assessment and recommendations and suggest AMD move forward with looking at a proposed amendment to the licence for conservation reasons.

We should also get a sense of [REDACTED]

Brenda
Brenda McCorquodale (she/ her/ elle)

A/Senior Director /Directrice principale
Aquaculture Management / Gestion de l'aquaculture
Fisheries Management Branch / Direction de la gestion des pêches
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Email | Courriel: Brenda.McCorquodale@dfo-mpo.gc.ca

s.20(1)(c)

s.21(1)(b)

From: Sandberg, Krista (DFO/MPO) <Krista.Sandberg@dfo-mpo.gc.ca>
Sent: Wednesday, February 12, 2025 3:25 PM
To: McCorquodale, Brenda (DFO/MPO) <Brenda.McCorquodale@dfo-mpo.gc.ca>
Subject: FW: AAR and benthic monitoring

Hi Brenda,

Here is Nathan's summary of the benthic monitoring and SCCS facilities. Key take aways:

- Containment structures that are >60m apart are to be monitored independently, so the SCCS would have it's own transects that AEO can specify based on depositional monitoring and observable locations of greatest impact.
- However, the timing of benthic monitoring is based on the Facility such that it is required at the Peak Biomass of all pens collectively, so is currently required at the end of the production cycle of the conventional netpens.
- The SCCS contains over [REDACTED] smolts, approximately [REDACTED] so does not fall within the category of marine pens that are exempt from monitoring
- It is likely that this will be the last group of smolts entered into the SCCS at Millar as all northern facilities are now stocked. Benthic monitoring will occur in early 2026.

- AEO has concerns relating to the benthic impacts of repeated smolt entries, that need to be considered in the amendment to the Mussel Rock facility that proposes to use that site for stocking of both the south and north Clayoquot facilities.

Krista Sandberg

A/Regional Manager, Aquaculture Environmental Operations |
Directrice régionale par intérim, Opérations environnementales de l'aquaculture
Fisheries and Oceans Canada | Pêches et Océans Canada



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From: Blasco, Nathan (DFO/MPO) <Nathan.Blasco@dfo-mpo.gc.ca>

Sent: Wednesday, February 12, 2025 2:32 PM

To: Sandberg, Krista (DFO/MPO) <Krista.Sandberg@dfo-mpo.gc.ca>

Subject: AAR and benthic monitoring

Krista,

With respect to monitoring requirements and considerations of the Millar Channel SCCS:

1. AAR section 10 requires owner/operators of BC mff aquaculture facilities to conduct benthic monitoring as per Annex 7- The Monitoring Standard and Annex 8- Program Protocols for Marine Finfish Environmental Monitoring in BC.
2. Annex 8 (1.1)(f) states that “if adjacent containment structures or containment structure arrays are less than 60m apart they will be considered to be a single array when [benthic monitoring] transects are located” and Annex 7 defines containment structures as “an assembly of interconnected cages used to cultivate fish”.
 - At the Millar Channel facility, the SCCS and the traditional open netpen system are 135m apart and therefore are considered separate containment arrays and require their own monitoring transects (ie. stations).
3. Annex 7, Section II (9), regarding the timing of operational benthic monitoring, states “benthic monitoring samples or video must be taken at the facility at least once during the production cycle at sea or every 24 months for farms with finfish continuously on site: (1) in British Columbia, within 30 days of peak feeding or peak biomass...”. Annex 8 states same regarding benthic monitoring timing. The word “Facility” and phrase “Production cycle” are not defined in the AAR or its Annexes but are defined in the MFF COLs: “facility” means the collective structures used for the purposes of aquaculture, including but not limited to, net pens, walkways, barges, floats and living accommodations, plus associated lines and anchors, and; “Production Cycle” means the period of time from stocking the Containment Structures to the time of Harvest or removal of all finfish.
 - So, based on language/definitions, monitoring would be required within 30 days of peak biomass of the “facility” and not the individual “containment array structures”. Specifically, this would require the LH to calculate when their entire facility hits peak given the production from both containment array structures, which is likely within thirty days of peak biomass of the open net-pen array since the production is so much higher before the system is emptied (e.g. [REDACTED] for the open net pens and [REDACTED] for the SCCS).

s.20(1)(c)

In the case of the current production cycle at Millar:

- Cermaq entered fish into the SCCS on September 15th;
- They transferred all the fish from the SCCS to the Millar open net pen system on Nov 24th;
- They re-entered fish into the SCCS throughout Dec and into Jan (from Dec 6th -Jan 5th);

- are planning on transferring those fish to their Ross Pass facility Feb 16th;
- likely harvesting the open net pen system in Feb-Mar 2026.

By the definitions, despite the movement of fish in and out of the SCCS, there has been no “peak” in production at Millar “facility” so far since the “facility” encompasses both “containment array structures”. Technically, monitoring will be required at both containment structure arrays just before harvest of Millar’s open net pen system (ie. peak biomass of the facility) which will likely be in Feb-Mar 2026.

However, the intent of the AAR is that benthic monitoring occurs when the benthic impact is at its highest (e.g. near peak biomass) and monitoring occurs at each containment array structure. Had this kind of scenario been predicted when the AAR was written, I believe the monitoring would likely have been specified for each containment array be monitored at their peak (instead of the facility at its peak).

To ensure that habitat protections are in place as intended, we may consider putting in a site-specific condition in the Millar licence that state something like: “The licence holder must conduct benthic monitoring, in accordance with the AAR, at any approved containment array structure”. There are two issues with this: 1) we may not be able to create conditions specific to benthic monitoring in our COLs since those requirements may only be found in the AAR (not entirely sure on this point), and; 2) we need to determine if Cermaq’s intention to have multiple rounds of stock and empty the SCCS to determine the most appropriate time to monitor (e.g. after the final round SCCS stocking).

Finally, Cermaq is trying to have all usage of the SCCS and future SCCS/CC pens at their Mussel Rock facility and I believe FH is currently determining suggested SSCOLs to make that happen. The addition of a SSCOL may be a pointless exercise.

Nathan Blasco

Senior Aquaculture Biologist | Biologiste principal
Fisheries and Oceans Canada | Pêches et Océans Canada
Aquaculture Management Division | Gestion de l'aquaculture
nathan.blasco@dfo-mpo.gc.ca
Cellular | Cellulaire 250-830-4592
Office | Bureau 250-286-5826



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