

From: Gina Ferguson-7541
Sent: 12 Mar 2020 12:28:49 +1300
To: monitoring
Subject: FW: NZKS - Seal and Mammal
Attachments: Annual Seal Report 2019 .pdf

From: Aine O'Neill [mailto:aine.oneill@kingsalmon.co.nz]
Sent: Thursday, 12 March 2020 12:24 p.m.
Subject: NZKS - Seal and Mammal

Dear Sir, Madam

Please see the attached report on the 2019 Mammal activity for NZKS. All incidents are publicly reported on our Website [Mammals](#) [Seabirds](#). The report has been independently reviewed by Earnest and Young and results with additional metrics will be published in the Global Salmon Initiative (GSI) Sustainability report.

Regards,

Aine

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Sustainability Specialist



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Annual Seal Report – 2019

Introduction

The New Zealand King Salmon Co. Limited (NZKS) currently has nine salmon farms (11 sites) in the Marlborough Sounds:

Pelorus Sound fallow.	Forsyth Bay, Waihinau Bay, Waitata, Kopāua (Richmond) & Crail Bay x 2
Queen Charlotte	Ruakaka Bay & Otanerau Bay
Tory Channel	Te Pangu Bay, Clay Point & Ngamahau

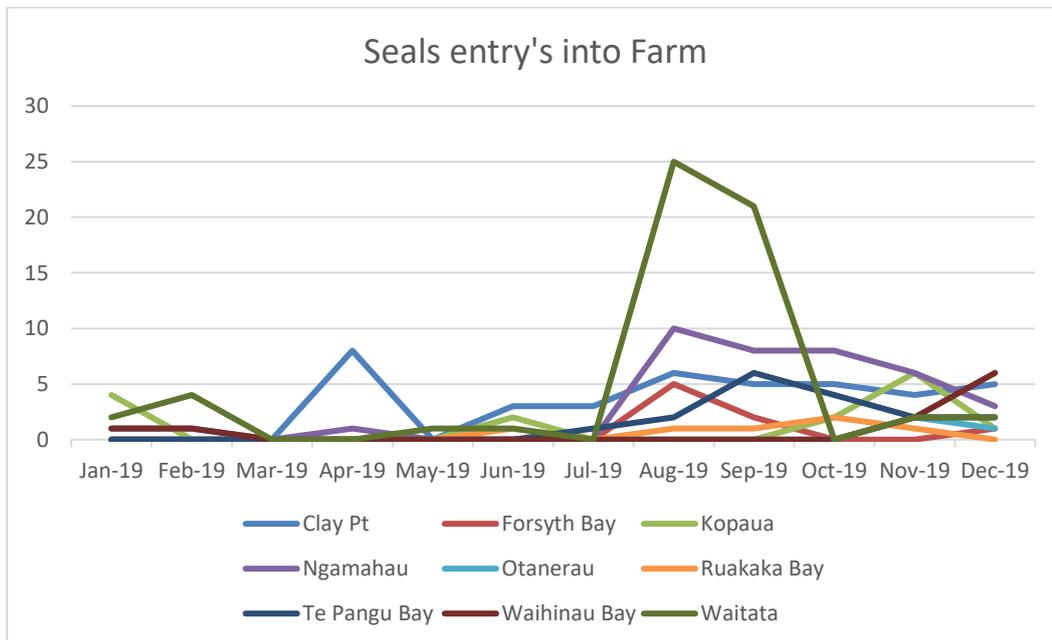
Statutory Requirements

NZKS as the resource consent holder for all the farms listed above has overall responsibility for ensuring that all statutory requirements of the resource consent conditions are complied with and that all activities carried out at the farms occurs in accordance with the NZKS Marine Mammal and Shark Management Plan, and NZKS permit to 'take' marine mammals as issued by DOC, dated 20 June, 2014.

Numbers and Trends

The main source of information has been weekly management reports & Fish Talk reports for the period January to December 2019, all data recorded moved to FishTalk in July 2019.

Below is a graph detailing the number of seals that were able to gain access into the farm in 2019



Seal behaviour

Clay Point: The presence and entry of seals on the farm have been regular and consistent in number throughout the year. NZKS has identified an issue with the predator net in the original design that makes walls chaffing with pen's weights, generating holes at 17-29 metres deep alongside the edge facing the Tory Channel. Most of these seals entries were due to holes in the walls and the floor of the predator net. This has been raised with the field team who will ensure the recommendations are used in the design of new nets. Both predator nets are to be replaced

Annual Seal Report - 2019

after the fallow periods in 2020. Seals were removed regularly throughout the year, using approved methods in the seal permit.

Te Pangu: The farm had few seal entries last year; all are recorded in the Fishtalk monitoring system. The Field Team managed base and side searches. This is primarily where the holes were found. No separation between the parent and predator net is still our leading cause for holes on the base, mainly in the U30s rather than the U25s. Also, the harvest barge set up caused a few surface holes and the jump fence down allowed seal entries which was controlled later by farm divers. The farm team undertakes side searches of the predator net monthly, which has proved effective in identifying areas where a breach may occur. The new predator net is scheduled for 2020 after the farm has been fallowed.

Ruakaka: Two seals were recorded to have entered into the farm. Farm divers completed monthly checks of the sides. Which is primarily where seals gain entry. Parent net weights rub on the predator net and cause holes, largely due to not having any separation between nets. The new predator net is scheduled for 2020 after the farm has been fallowed and restructured.

Otanerau: Fish entered this site in May 2019 - we had two recorded seal entries in this time. A couple of strong storms caused holes in the northern edge of the farm, which were caused by the net being buffeted by high seas and rubbing on flange points. Farm divers responded to these incidents. Regular monthly dives on the sides have had a positive impact on finding and limiting holes. Wear points tend to be where the parent net weights rub the predator net.

Waihinau: The site went through a number of infrastructure changes during the year. During these changes, the learning made from previous years was implemented which reduced seal interaction. At the beginning of the year, there was an unfortunate incident in which a seal died on the farm. A seal enclosure had been set up to assist in the animals leaving the farm once they had breached the predator net. In the last quarter of the year, seals did gain access to the farm through a hole in the base of the predator net. NZKS Divers repaired the hole & NZKS Team members began removing the animals from the farm.

Forsyth: The farm was re-stocked with fish in the 2nd quarter of the year for the 1st time in many years. In the course of the year, seals did gain access to the farm through a hole in the side of the predator net. NZKS team members evicted the animals safely and there were no more incidents.

Waitata: The site continued to prove a challenge throughout the growing cycle. Seals were able to gain access to the farm through holes in the predator net. The holes were caused by floating debris in the water column, tearing holes in the net and also by the force of the current which damaged the rope used to close the sections of nets. Team members continued to work hard to evict the animals. The netting and various techniques were used to facilitate the evictions as quickly as possible. This was particularly evident around pen WTW173N where there were significant seal breaches into the pen, increasing mortality rates.

Kopāua: Seals presented a significant issue during the year at this site which has relatively high-water flow. Seals were able to enter the farm through holes in the predator net. The cause of these holes was often floating debris that passed through the farm and caused tears in the nets. Different materials have been tried in an attempt to prevent this occurring which has made some improvements but not eliminated the issue.

Ngamahau: During the first 3 months of the year, the seal situation in the old cages continued as per the previous year until the harvest was completed, representing 36.7% of the annual total predator mortality. The new structures remained free of seals for 8 months, when on June 10th, during the installation of a new predator net a hole occurred which allowed access to the farm. This was monitored over the next 2 months and caused 63.3% of the total mortality reported. By December, the situation was completely controlled with no further access to the grower nets. The new type of predator net is a stronger material and works better for our farms.

Annual Seal Report - 2019

Fish losses and impacts:

Fish losses during the period due to seals are detailed in the table below.

	Clay Point	Te Pangu	Ruakaka	Otanerau	Waihinau	Forsyth	Waitata	Kopāua	Ngamahau
2019	3649	1959	399	51	832	41	7976	4045	8743
2018	3546	1757	554	89	3896	0	10063	1097	17547
2017	9080	3037	1713	632	2594	0	13714	1347	7575
2016	3767	2317	152	5427					6160
2015	2066	2975	503	193					3
2014	2583	2826	684	1268					
2013	1251	2077	3370	0					
2012	149	1541	0	0					

Fatalities

Waihinau: 31/01/19. A seal was found dead inside a seal enclosure on the farm. Seal enclosures are used as a method to evict seals from the farm. The enclosures are set up to be as stress-free as possible for the animal while also providing protection for the team members when evicting the seals. In this incident team members spotted a seal inside the enclosure. When they went to release the animal, they found it to be deceased. DOC was contacted who worked with NZKS to establish the cause of the death. As a result of the combined investigation, it was established that the likely cause was natural causes while in the enclosure.

Ngamahua: 01-Mar-19. Dead seal floating inside the farm, deceased from unknown causes on the farm. It was reported to DoC and authorised to be removed and disposed of.

Defences and way forward

The daily procedure to check the net from above the water level will continue. There will also be monthly visual checks made below the water level. In-water cleaning of the predator net continues to maintain water flow and also identifies any potential entry points and ensures the longevity of the nets. This significantly reduces the interaction between NZKS personnel and the seals.

The nets at the farms are going to be changed out as per new all-in-all out or single year class policy.

Tory Channel Region: The nets are made of a new, stronger material which is showing significant improvements at Ngamahau. A project to improve the separation between the predator net and the parent nets is underway to try to reduce the interaction between the fish and the seals.

Queen Charlotte Sound Region: No change at Otanerau as they are using the predator net from last season. Ruakaka had all predator nets removed after harvest in November. New nets will be installed once the farm becomes operational in 2020.

Pelorus Sound Region: The use of improved stronger netting continues to develop and will be further implemented in the coming year. The weighting of the predator nets has been changed which will increase the separation between the predator nets and the grower nets which hold the fish. The grower nets have been improved in design which will increase the separation between the seals and the fish. These improvements should reduce the ability of the seals to access the fish through the nets.

Shark interactions

There were no shark incidents or interactions in 2019.

Annual Seal Report - 2019

Dolphin interactions

Pelorus Sound Region: 03/07/19. At Kopaua a Common Dolphin was found floating deceased within the farm. DOC was informed of the incident and a formal investigation was conducted. Further meetings were conducted with NZKS and DOC to update the combined response to any future event. These actions will improve the combined response to future events where the carcass of deceased marine mammals enter the farms.