

New Zealand King Salmon – 2019-2020 – Compliance Report for Coastal Permit (U140295) – Kopaua Marine Farm

Assessment of compliance with consent U140295

This report sets out the compliance status for the Kopaua Marine Farm Coastal Permit – discharge to seawater. The information in this report is based on the 2019-2020 Annual Environmental Monitoring for the Salmon Farm (Report No. 3942); and Marine Environmental Monitoring – Adaptive Management Plan for Salmon Farms Ngamahau, Kopaua and Waitata (2019-2020) (Report No. 3369) provided by Cawthron.

Compliance Status has been indicated using a monitoring traffic light system where **green** indicates compliance; **yellow** indicates technical non-compliance; **orange** indicates that a breach of effects or best practice consent conditions has occurred with minor actual or potential adverse environmental effects, and **red** indicates significant non-compliance where a persistent or significant breach has occurred causing adverse environmental effects.

Compliance Status: Non-compliant

Report prepared by: Claire Frooms Environmental Protection Officer

Date: 26 August 2020

Please note that the following consent conditions are representative only, they do not include the complete list of conditions of consent.

Condition	Comment	Compliance Status										
<p>34. The annual tonnage of nitrogen that may be discharged to the marine farm is to be limited to 7% of the tonnage of feed that may be discharged in accordance with Condition 35 and Table 1 (i.e. if up to 3000 tonnes of feed can be discharged then up to 210 tonnes of nitrogen can be discharged).</p> <p>Table 1: Maximum initial and maximum annual feed discharges, and maximum increases in annual feed discharges (from one year to the next)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Farm</th> <th style="text-align: center;">Maximum Feed Discharge (tonnes per annum)</th> <th style="text-align: center;">Initial Discharge (tonnes per annum)</th> <th style="text-align: center;">Maximum Increase in Feed Discharge (tonnes per annum)</th> <th style="text-align: center;">Maximum Feed Discharge (tonnes per annum)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Richmond</td> <td style="text-align: center;">1500</td> <td style="text-align: center;">500</td> <td style="text-align: center;">500</td> <td style="text-align: center;">4000</td> </tr> </tbody> </table> <p>Notes</p> <ol style="list-style-type: none"> 1 The annual feed discharge may exceed the relevant maximum feed discharges specified in Table 1 by up to 15%; provided that over any continuous 3 year period, the average annual feed discharge does not exceed the relevant maximum feed discharges specified in Table 1. 2 There is no limit to any decrease in the annual tonnage of feed discharge. 	Farm	Maximum Feed Discharge (tonnes per annum)	Initial Discharge (tonnes per annum)	Maximum Increase in Feed Discharge (tonnes per annum)	Maximum Feed Discharge (tonnes per annum)	Richmond	1500	500	500	4000	<p>815 tonnes of feed was discharged at the farm in 2019. (763 tonnes fewer than in 2018).</p> <p>Nitrogen discharge averaged 5.1%.</p>	Compliant
Farm	Maximum Feed Discharge (tonnes per annum)	Initial Discharge (tonnes per annum)	Maximum Increase in Feed Discharge (tonnes per annum)	Maximum Feed Discharge (tonnes per annum)								
Richmond	1500	500	500	4000								

Condition	Comment	Compliance Status										
<p>35. The annual tonnage of feed that may be discharged to the marine farm is limited as follows:</p> <p>a. The initial feed discharged (in at least each of the first three years) shall not exceed the Maximum Initial Feed Discharge specified in Table 1;</p> <p>b. In any year, the tonnage of feed discharged shall not exceed the Maximum feed Discharge specified in Table 1;</p> <p>c. Any increase in feed discharged (from one year to the next) shall not exceed the Maximum Increase in Feed Discharge specified in Table 1;</p> <p>d. Whether or not the annual tonnage of feed discharge may increase above the Maximum Initial Feed Discharge, or may reach the Maximum Feed Discharge, is dependent upon compliance with Condition 36 below.</p>	<p>815 tonnes were discharged, which is less than the maximum permitted in Table 1.</p>											
<p>36. The annual tonnage of feed discharged to the marine farm may only be increased above the Maximum Initial Feed Discharge specified in condition 35, or above any subsequent allowable annual feed discharge level, if the following requirements are met:</p> <p>The requirements of Condition 37</p> <p>The requirements of conditions 38-44 (relating to compliance with Environmental Quality Standards (EQS)); and</p> <p>Any specifications for marine farm management in the Marine Environmental Monitoring and Adaptive Management Plan (MEM-AMP) for that year (condition 65).</p> <p>Table 1 Maximum initial and maximum annual feed discharges, and maximum increase in annual feed discharges (from one year to the next)</p> <p>Farm Richmond</p> <p>Maximum Initial Feed Discharge (tonnes per annum) 1500</p> <p>Maximum Increase in Feed Discharge (tonnes per annum) 500</p> <p>Maximum Feed Discharge (tonnes per annum) 4000</p> <p>Notes</p> <p>1. The annual feed discharge may exceed the relevant maximum feed discharges specified in Table 1 by up to 15% provided that over any continuous 3 year period, the average annual feed discharge does not exceed the relevant maximum feed discharges specified in Table 1.</p> <p>2. There is no limit to any decrease in the annual tonnage of feed discharge.</p>	<p>The marine farm is not eligible for an increase in feed discharge, as detailed in condition 37 comments below.</p>											
<p>37. There shall be no increase in the annual tonnage of feed discharged to the marine farm unless the following requirements are met:</p> <p>a. The marine farm shall have operated at or near ($\pm 15\%$) its current maximum annual feed discharge level for at least 3 years; and</p> <p>b. Annual monitoring results of the Enrichment Stage (ES) from the most recent two successive years shall be comparable, based on the monitoring undertaken in condition 66, assessed as follows. The Enrichment Stage (ES) from the annual monitoring, assessed in accordance with Condition 40, shall statistically not be significantly more than the ES from the previous year, based on the average result for all sampling stations (figure 3) within each compliance Zone. The requirement must be met for each of the Environmental Quality Standards (EQS) compliance Zones for</p>	<p>The marine farm did not operate at $\pm 15\%$ of its current maximum annual feed discharge in the 2019-2020 monitoring period. So it is not eligible for a feed discharge increase.</p> <table border="1" data-bbox="906 1765 1375 2056"> <thead> <tr> <th>Year</th> <th>Feed discharged</th> </tr> </thead> <tbody> <tr> <td>2019</td> <td>815</td> </tr> <tr> <td>2018</td> <td>1578</td> </tr> <tr> <td>2017</td> <td>999</td> </tr> <tr> <td>2016</td> <td>1107</td> </tr> </tbody> </table>	Year	Feed discharged	2019	815	2018	1578	2017	999	2016	1107	
Year	Feed discharged											
2019	815											
2018	1578											
2017	999											
2016	1107											

Condition	Comment	Compliance Status														
<p>which ES are specified in condition 39; and</p> <p>c. The marine farm complies with all the EQS specified in condition 40 and is less than the relevant maximum EQS for each Zone.</p>																
<p>38. Environmental Quality Standards (EQS) The discharge of feed, marine biofouling and antifouling at the marine farm shall meet the requirements of conditions 39-44 relating to Environmental Quality Standards (EQS) at all times. Any breach of these requirements shall, as soon as practicable, be notified to the Marlborough District Council and the members of the Tangata Whenua Panel (refer to condition 77).</p>	<p>The marine farm is non-compliant with condition 40 (see below for details).</p> <p>Mark Preece confirmed via email on 24 August 2020 that the Tangata Whenua Panel are aware of the status of the site.</p>															
<p>39. Environmental Quality Standards (EQS) - Seabed Deposition EQS Compliance Zones shall be defined for the marine farm, in accordance with Figure 3 and the dimensions and area contained in Table 2.</p> <p>Table 2: Maximum distances of EQS Compliance Zone 2/3 and Zone 3/4 boundaries from the nearest edge of the marine farm net pens; and the maximum total affected areas of Zones 1, 2 and 3.</p> <table border="1" data-bbox="164 790 858 943"> <thead> <tr> <th rowspan="2">Farm</th> <th colspan="2">EQS Compliance Zone boundary dimensions (maximum distances)</th> <th rowspan="2">EQS Compliance Zone Area (Maximum area)</th> </tr> <tr> <th>Distance from nearest net pen to Zone 2/3 boundary</th> <th>Distance from nearest net pen to Zone 3/4 boundary</th> </tr> </thead> <tbody> <tr> <td></td> <td>Metres (m)</td> <td>Metres (m)</td> <td>Hectares (ha)</td> </tr> <tr> <td>Richmond</td> <td>60</td> <td>250</td> <td>10</td> </tr> </tbody> </table> <p>a. The above Zones shall be fixed.</p> <p>b. Notwithstanding, Condition 39a, the size and shape of the above Zones will be reviewed (to enable comparison with the zone dimensions contained in Table 2), after 3 years of operation at the Initial Feed Discharge level in Table 1, as part of the Annual Report (refer to Condition 67;) for that year. The dimensions and area of the Zones may be amended as a result of a recommendation in the Annual Report, provided that the total area of Zones 1, 2 & 3 does not increase by more than 10% from the area specified in Table 2.</p>	Farm	EQS Compliance Zone boundary dimensions (maximum distances)		EQS Compliance Zone Area (Maximum area)	Distance from nearest net pen to Zone 2/3 boundary	Distance from nearest net pen to Zone 3/4 boundary		Metres (m)	Metres (m)	Hectares (ha)	Richmond	60	250	10	<p>a. The annual report states that sampling took place at 60N, 250N and 250S in accordance with the zone boundaries.</p> <p>b. This was not the third year of operation at the Initial Feed Discharge level so condition 39b is not applicable.</p>	
Farm		EQS Compliance Zone boundary dimensions (maximum distances)			EQS Compliance Zone Area (Maximum area)											
	Distance from nearest net pen to Zone 2/3 boundary	Distance from nearest net pen to Zone 3/4 boundary														
	Metres (m)	Metres (m)	Hectares (ha)													
Richmond	60	250	10													
<p>40. At all times, the seabed beneath and in the vicinity of the marine farm shall comply with the EQS specified in Table 3. Zone dimensions and area for compliance purposes shall be defined in accordance with condition 39. Enrichment Stage (ES shall be defined in accordance with Figure 4 and table 5.</p> <p>Table 3: Environmental Quality Standards (EQS) – Seabed Deposition</p> <table border="1" data-bbox="164 1339 879 1805"> <thead> <tr> <th>Zone</th> <th>Compliance Monitoring Location</th> <th>EQS</th> </tr> </thead> <tbody> <tr> <td>Zones 1 & 2 – beside and beneath the net pens</td> <td>Measured beneath the edge of the net pens – ‘Pen’ Stations on Figure 3</td> <td>ES ≤ 5.0 No more than one replicate core with no taxa (azoic), No obvious, spontaneous out-gassing (H₂S/methane), Bacteria mat (<i>Beggiatoa</i>) coverage not greater than localized/patchy in distribution.</td> </tr> <tr> <td>Zone 3 – near to the net pens</td> <td>Measured at the Zone 2/3 Boundary Stations on Figure 3</td> <td>ES ≤ 4.0 Infauna abundance is not significantly higher than at corresponding ‘Pen’ Station Number of taxa >75% of number at relevant / appropriate reference Station(s)</td> </tr> <tr> <td>Zone 4 – outside the footprint area</td> <td>Measured at the Zone 3/4 Boundary Stations on Figure 3</td> <td>ES < 3.0 Conditions remain statistically comparable with relevant / appropriate reference Station(s)</td> </tr> </tbody> </table> <p>ES exceedance</p> <p>a. In the event that the ES is up to and including 0.3 above the EQS for the 1/2 (Pen), 2/3 or 3/4 Zone Boundary Stations in Table 3, the consent holder shall in the year following receipt of confirmed notice of such an ES result through its monitoring (and allowing one month from any initial notice to provide for re-testing), reduce the amount of feed discharged to the marine farm by 20% of the amount discharged in the year before.</p>	Zone	Compliance Monitoring Location	EQS	Zones 1 & 2 – beside and beneath the net pens	Measured beneath the edge of the net pens – ‘Pen’ Stations on Figure 3	ES ≤ 5.0 No more than one replicate core with no taxa (azoic), No obvious, spontaneous out-gassing (H ₂ S/methane), Bacteria mat (<i>Beggiatoa</i>) coverage not greater than localized/patchy in distribution.	Zone 3 – near to the net pens	Measured at the Zone 2/3 Boundary Stations on Figure 3	ES ≤ 4.0 Infauna abundance is not significantly higher than at corresponding ‘Pen’ Station Number of taxa >75% of number at relevant / appropriate reference Station(s)	Zone 4 – outside the footprint area	Measured at the Zone 3/4 Boundary Stations on Figure 3	ES < 3.0 Conditions remain statistically comparable with relevant / appropriate reference Station(s)	<p>Zones 1 & 2 (Pens 1; 2; &3):</p> <ul style="list-style-type: none"> The overall ES levels remained ≤5.0. No replicate cores were indicative of azoic conditions. No spontaneous out-gassing was observed. Bacteria mat coverage was identified as mat-forming and patchy major under pens 1 and 2 respectively. Non-compliant. <p>Zone 3 (60N):</p> <ul style="list-style-type: none"> Overall ES levels remained ≤4.0. Infauna abundance was marginally elevated. Number of taxa was reduced in some samples (average 14 per core). Average no taxa at reference stations were 32.3; 42; 19.3; 18.7; 33.3 (PS Ctl 3; PS Ctl 4; PS Ctl 5; PS Ctl 7; and PS Ctl 8 respectively). This is an overall average of 29.12. So number of taxa was not >75% of number at reference stations. Non-compliant. <p>Zone 4 (250N & 250S):</p> <ul style="list-style-type: none"> Overall ES levels remained ≤3.0. Statistical comparison of conditions with relevant reference stations shows that redox and 			
Zone	Compliance Monitoring Location	EQS														
Zones 1 & 2 – beside and beneath the net pens	Measured beneath the edge of the net pens – ‘Pen’ Stations on Figure 3	ES ≤ 5.0 No more than one replicate core with no taxa (azoic), No obvious, spontaneous out-gassing (H ₂ S/methane), Bacteria mat (<i>Beggiatoa</i>) coverage not greater than localized/patchy in distribution.														
Zone 3 – near to the net pens	Measured at the Zone 2/3 Boundary Stations on Figure 3	ES ≤ 4.0 Infauna abundance is not significantly higher than at corresponding ‘Pen’ Station Number of taxa >75% of number at relevant / appropriate reference Station(s)														
Zone 4 – outside the footprint area	Measured at the Zone 3/4 Boundary Stations on Figure 3	ES < 3.0 Conditions remain statistically comparable with relevant / appropriate reference Station(s)														

Condition	Comment	Compliance Status																																																																						
<p>b. In the event that the ES is greater than 0.3 and not greater than 0.6 above the EQS for the 1/2 Pen, 2/3 or 3/4 Zone Monitoring Locations in Table 3, the consent holder shall in the year following receipt of confirmed notice of such an ES result through its monitoring (and allowing one month from any initial notice to provide for re-testing), reduce the amount of feed discharged to the marine farm by 40% of the amount discharged in the year before.</p> <p>c. In the event that the ES is greater than 0.6 above the EQS for the 1/2 Pen, 2/3 or 3/4 Zone Monitoring Locations in Table 3, the consent holder shall with four months from the date the consent holder receives confirmed notice of such an ES result through its monitoring (and allowing one month from any initial notice to provide for re-testing), remove stock and fallow the site until compliance is achieved. Upon any re-stocking, the consent holder shall ensure that the amount of stock shall be designed to ensure that the ES levels required in Table 3 for the 1/2 Pen, 2/3 and 3/4 Zones Monitoring Locations will be met in the following year.</p>	<p>sulphides are not statistically comparable with reference stations. ES scores at 250N were also not statistically comparable with reference stations as detailed on page 14 of the annual report. Non-compliant.</p> <table border="1" data-bbox="906 472 1377 696"> <thead> <tr> <th>Station</th> <th>Organic loading ES</th> <th>Sediment chemistry ES</th> <th>Macrofauna ES</th> <th>Overall ES (2019/20)</th> <th>Overall ES 2018/19</th> <th>Below EQS?</th> </tr> </thead> <tbody> <tr> <td>Pen 1</td> <td>3 (0.0)</td> <td>4.2 (0.1)</td> <td>4.5 (0.1)</td> <td>4.3 (0.1)</td> <td>4.7 (0.2)</td> <td>✓</td> </tr> <tr> <td>Pen 2</td> <td>3 (0.0)</td> <td>4.1 (0.4)</td> <td>4.5 (0.2)</td> <td>4.2 (0.1)</td> <td>4.4 (0.2)</td> <td>✓</td> </tr> <tr> <td>Pen 3</td> <td>3 (0.0)</td> <td>4 (0.2)</td> <td>4.6 (0.1)</td> <td>4.3 (0.0)</td> <td>4.7 (0.2)</td> <td>✓</td> </tr> <tr> <td colspan="7">Zone of maximal effect (ZME); EQS ≤ 5.0</td> </tr> <tr> <td>60 N</td> <td>3 (0.0)</td> <td>4 (0.1)</td> <td>4 (0.4)</td> <td>3.9 (0.2)</td> <td>3.6 (0.1)</td> <td>✓</td> </tr> <tr> <td colspan="7">Zone 2/3 boundary; EQS ≤ 4.0</td> </tr> <tr> <td>250 N</td> <td>3 (0.0)</td> <td>3.7 (0.2)</td> <td>2.5 (0.2)</td> <td>2.8 (0.2)</td> <td>2.3 (0.3)</td> <td>✓</td> </tr> <tr> <td>250 S</td> <td>3 (0.0)</td> <td>3.2 (0.2)</td> <td>2.5 (0.5)</td> <td>2.6 (0.4)</td> <td>2.7 (0.2)</td> <td>✓</td> </tr> <tr> <td colspan="7">Outer limit of effects (OLE); EQS < 3.0</td> </tr> </tbody> </table>	Station	Organic loading ES	Sediment chemistry ES	Macrofauna ES	Overall ES (2019/20)	Overall ES 2018/19	Below EQS?	Pen 1	3 (0.0)	4.2 (0.1)	4.5 (0.1)	4.3 (0.1)	4.7 (0.2)	✓	Pen 2	3 (0.0)	4.1 (0.4)	4.5 (0.2)	4.2 (0.1)	4.4 (0.2)	✓	Pen 3	3 (0.0)	4 (0.2)	4.6 (0.1)	4.3 (0.0)	4.7 (0.2)	✓	Zone of maximal effect (ZME); EQS ≤ 5.0							60 N	3 (0.0)	4 (0.1)	4 (0.4)	3.9 (0.2)	3.6 (0.1)	✓	Zone 2/3 boundary; EQS ≤ 4.0							250 N	3 (0.0)	3.7 (0.2)	2.5 (0.2)	2.8 (0.2)	2.3 (0.3)	✓	250 S	3 (0.0)	3.2 (0.2)	2.5 (0.5)	2.6 (0.4)	2.7 (0.2)	✓	Outer limit of effects (OLE); EQS < 3.0							
Station	Organic loading ES	Sediment chemistry ES	Macrofauna ES	Overall ES (2019/20)	Overall ES 2018/19	Below EQS?																																																																		
Pen 1	3 (0.0)	4.2 (0.1)	4.5 (0.1)	4.3 (0.1)	4.7 (0.2)	✓																																																																		
Pen 2	3 (0.0)	4.1 (0.4)	4.5 (0.2)	4.2 (0.1)	4.4 (0.2)	✓																																																																		
Pen 3	3 (0.0)	4 (0.2)	4.6 (0.1)	4.3 (0.0)	4.7 (0.2)	✓																																																																		
Zone of maximal effect (ZME); EQS ≤ 5.0																																																																								
60 N	3 (0.0)	4 (0.1)	4 (0.4)	3.9 (0.2)	3.6 (0.1)	✓																																																																		
Zone 2/3 boundary; EQS ≤ 4.0																																																																								
250 N	3 (0.0)	3.7 (0.2)	2.5 (0.2)	2.8 (0.2)	2.3 (0.3)	✓																																																																		
250 S	3 (0.0)	3.2 (0.2)	2.5 (0.5)	2.6 (0.4)	2.7 (0.2)	✓																																																																		
Outer limit of effects (OLE); EQS < 3.0																																																																								
<p>41. Environmental Quality Standards (EQS) - Copper and Zinc Levels</p> <p>Composite samples of sediments beneath and beside the net pens (measured beneath the edge of the net pen - Pen Stations on Figure 3) shall be assessed against the ANZECC (2000) ISQG-Low criteria for copper and zinc; as a first tier trigger level.</p>	<p>Copper and Zinc levels at the pen stations were all compliant with the ANZECC (2000) ISQG-Low criteria:</p> <table border="1" data-bbox="906 853 1377 1025"> <thead> <tr> <th>Sample</th> <th>Copper</th> <th>Zinc</th> </tr> </thead> <tbody> <tr> <td>Pen 1</td> <td>7</td> <td>73</td> </tr> <tr> <td>Pen 2</td> <td>8</td> <td>69</td> </tr> <tr> <td>Pen 3</td> <td>7</td> <td>71</td> </tr> <tr> <td>ANZECC ISQG-Low</td> <td>65</td> <td>200</td> </tr> <tr> <td>ANZECC ISQG-High</td> <td>270</td> <td>410</td> </tr> </tbody> </table>	Sample	Copper	Zinc	Pen 1	7	73	Pen 2	8	69	Pen 3	7	71	ANZECC ISQG-Low	65	200	ANZECC ISQG-High	270	410																																																					
Sample	Copper	Zinc																																																																						
Pen 1	7	73																																																																						
Pen 2	8	69																																																																						
Pen 3	7	71																																																																						
ANZECC ISQG-Low	65	200																																																																						
ANZECC ISQG-High	270	410																																																																						
<p>43. Environmental Quality Standards (EQS) - Water Column The marine farm shall be operated at all times in such a way as to achieve the following Water Quality Objectives in the water column:</p> <p>a. To not cause an increase in the frequency, intensity or duration of phytoplankton blooms (i.e. chlorophyll a concentrations greater than or equal to 5 mg/m³) [Note: water clarity as affected by chlorophyll a concentrations is addressed by this objective];</p> <p>b. To not cause a change in the typical seasonal patterns of phytoplankton community structure (i.e. diatoms vs. dinoflagellates), and with no increased frequency of harmful algal blooms (HAB's) (i.e. exceeding toxicity thresholds for HAB species);</p> <p>c. To not cause reduction in dissolved oxygen concentrations to levels that are potentially harmful to marine biota [Note: Near bottom dissolved oxygen under the net pens is addressed separately through the EQS – Seabed Deposition];</p> <p>d. To not cause elevation of nutrient concentrations outside the confines of established natural variation for the location and time of year, beyond 250m from the edge of the net pens;</p> <p>e. To not cause a statistically significant shift, beyond that which is likely to occur naturally, from a oligotrophic/mesotrophic state towards a eutrophic state;</p> <p>f. To not cause an obvious or noxious build-up of macroalgal (e.g. sea lettuce) biomass [Note: to be monitored in accordance with condition 66h].</p>	<p>a. The report states that there has not been an increase in frequency of harmful algal blooms.</p> <p>b. The report states that diatoms were the dominant group and that this was a return to typical patterns seen in 2016 and 2017 after elevated levels of dinoflagellates in 2018.</p> <p>c. The report states that the DO concentrations were only outside WAS in August and not for three successive months so an amber alert level was not triggered. In the 2018 annual report a reduction in DO at reference stations was attributed to salmon farming, no such comment was made in the 2019-2020 annual report.</p> <p>d. The report states that the farm has not caused elevated nutrient concentrations beyond 250m. It does however recognise that August TN concentrations at 500S were higher than the net pen but lower than reference stations and not outside of historic variation at that time of year.</p> <p>e. The report states that there has not been a statistical shift towards a eutrophic state based on a study undertaken by Broekhuizen and Plew (2018).</p> <p>f. The report doesn't comment on macroalgal biomass. Unable to assess.</p>																																																																							
<p>44. The marine farm shall be operated at all times in such a way as</p>	<p>a. The farm has been operating for more</p>																																																																							

Condition	Comment	Compliance Status
<p>to comply with Water Quality Standards (WQS), and associated responses, for the near-farm and wider-scale water column environment of Pelorus Sound. Two tiers of response to potential breaches of WQS shall be set, the first trigger further monitoring and the second to require reduced stocking on the marine farm following the next harvest of salmon on the marine farm. The WQS and responses shall be established as follows:</p> <p>a. For the first three years of marine farm operation, initial WQS for chlorophyll a (chl a), dissolved oxygen (DO), Total Nitrogen (TN) concentrations and an integrated trophic index to achieve the qualitative Water Quality Objectives a, c, d and e of condition 43 shall be specified in the Baseline Report (condition 64) and may be reviewed in the Annual Report at the end of the first and second years of marine farm operation (condition 67).</p> <p>b. The initial WQS shall be reviewed in the Annual Report at the end of the third year of marine farm operation (condition 67) and WQS specified to achieve the Water Quality Objectives a-e of condition 43. These WQS shall be reviewed through the Annual Report every three years thereafter unless any other Annual report (condition 67) necessitates earlier review.</p> <p>c. WQS shall be specified at the locations specified in condition 63c.</p> <p>d. In the Baseline Report and each Annual Report, a hierarchy of responses to potential breaches of the WQS shall be specified, including:</p> <p>i. A first level response requiring further monitoring and/or analysis to determine the operation of the marine farm is causing the relevant WQS not to be achieved; and</p> <p>ii. A second level response requiring a plan of action as soon as practicable, with clear timeframes to reduce effects on the water column and achieve full compliance with e WQS, through reduced stocking on the marine farm following the next harvest of salmon on the marine farm.</p>	<p>than three years – not applicable.</p> <p>b. Not applicable this year.</p> <p>c. Sampling has been conducted at the locations required by condition 63c.</p> <p>d. The report provides a hierarchy of responses on page 41.</p>	
<p>45. Discharge of Greywater to Coastal Water Greywater may be discharged from the staff facilities on the marine farm, including from showers, wash basin, kitchen and laundry facilities. The greywater discharge shall not exceed 1m³ per day from the marine farm. The consent holder shall ensure that an appropriate system is operated at the marine farm to determine the volume of greywater discharge. The results shall be provided to the Council not less frequently than once a year. The consent holder shall notify the Council of a non-compliance with this condition, and explain the reason for it, within one month of the consent holder becoming aware of the non-compliance.</p>	<p>Email from Mark Preece on 4 June 2020 stated that 518 litres per day were discharged from Kopaua.</p>	
<p>61. Other than as specified in condition 60, having had particular regard to any recommendations from the Peer Review Panel, the consent holder shall provide the following plans and reports specified in condition 56 to the Council and the Tangata Whenua Panel (refer condition 77), in accordance with the following timing:</p> <p>a. The first MEM-AMP - following the provision of the Baseline Report to the Council and prior to the first discharge of feed to the marine farm;</p> <p>b. Each subsequent annual MEM-AMP - 31 July each year.</p> <p>c. The Annual report - by 30 April each year.</p>	<p>The annual report was provided to Council on 29 May 2020 and is therefore technically non-compliant. However Council understands this was due to COVID-19 lockdown restrictions and therefore some allowance is provided.</p> <p>It is not clear from the annual report whether the report was provided to Tangata Whenua Panel, a point raised by the peer review panel. However Mark Preece confirmed via email on 24 August 2020 that the Tangata Whenua Panel have been provided with this information. The peer review panel was provided with a draft of the report and gave their recommendations. The report has incorporated some recommendations but not all. It is not clear</p>	

Condition	Comment	Compliance Status
	why some have been adopted and others have not.	
<p>62. The consent holder shall undertake the monitoring, analysis, marine farm management and other actions in accordance with the Baseline Plan and the current provisions of the MEM-AMP for that year. The monitoring and analysis shall be undertaken by a person or persons with appropriate knowledge and expertise.</p>	<p>Sampling of soft sediment habitats and water column was undertaken in accordance with the 2019-2020 MEMAMP by Cawthron institute. The annual report doesn't detail the lighting effects monitoring as required in Table 2 (page 5) of the 2019-2020 MEMAMP. Technically non-compliant.</p>	
<p>67. The Annual Report shall include, but not be limited to, the following:</p> <p>a. A statement as to the tonnage of feed and nitrogen discharged each month over the previous year.</p> <p>b. The results of all monitoring undertaken in the previous year.</p> <p>c. A comprehensive analysis of the results of that monitoring, including:</p> <p>i. whether the monitoring information obtained is fit for the purpose of determining the effects from the operation of the marine farm and for determining whether compliance with the EQS specified in conditions 38-44 is achieved.</p> <p>ii. whether there are any evident trends of effects from the operation of the marine farm.</p> <p>EQS - Deposition on the Seabed</p> <p>d. An assessment and conclusions as to whether compliance with the EQS specified in condition 48 has, or has not, been achieved for the previous year.</p> <p>e. Recommendations as to any amendments to management practices (including any increases or decreases on the tonnage of feed to be discharged) at the marine farm in order to ensure that the EQS in condition 40 are complied with.</p> <p>EQS – Copper and Zinc Levels</p> <p>f. An assessment and conclusions as to whether compliance with the ANZECC (2000) ISQG-Low criteria for copper and zinc set out in condition 41 has, or has not, been achieved for the previous year.</p> <p>g. Where the ANZECC (2000) ISQG-Low criteria for copper and zinc have been exceeded, recommendation as to any amendments to monitoring and management actions at the marine farm, in accordance with condition 42.</p> <p>EQS – Water Column</p> <p>h. An assessment and conclusions as to whether the WQS specified in condition 44 have, or have not, been complied with, for the previous year.</p> <p>i. Recommendations as to any amendments to management practices (including any increases or decreases in the tonnage of feed to be discharged) at the marine farm, in order to ensure that the WQS specified in condition 44 continue to be complied with. In the case of non-compliance with the WQS, recommendations as to monitoring, analysis and/or management responses in accordance with condition 44d.</p> <p>Review of the Dimensions of the EQS Compliance Zones in Table 2</p> <p>j. Following 3 years of operation at the Initial Feed Discharge level in Table 1, a review of the results of the monitoring undertaken in terms of condition 66i. This shall include a comparison of those</p>	<p>a. The annual report provides a statement of feed and nitrogen tonnage for the previous year.</p> <p>b. The report provides monitoring results for the previous year.</p> <p>c. The report provides an analysis of the results of the monitoring. It recommends that a BACI-type analysis as described in the BMP would be more appropriate than the consent requirement for statistical analysis, to assess effects at 250N sample station (page 14-15).</p> <p>d. The report provides a compliance overview on page ii of the report.</p> <p>e. The report states that in order to reduce the bacterial mat under the pens a reduction in feed discharge would be required.</p> <p>f. The report provides an assessment of compliance with the ANZECC (2000) ISQG-Low criteria for copper and zinc.</p> <p>g. Not applicable.</p> <p>h. The report provides a summary of compliance with WQS.</p> <p>i. The report doesn't provide recommendations for changes to management practices to ensure compliance with WQS to continue. Technically non-compliant.</p> <p>j. This was not the third year of monitoring – not applicable.</p> <p>k. There were no breaches of condition 44 and no amendments specified.</p> <p>l. The report states that in order to achieve compliance with the bacterial mat under the pens a reduction in feed discharge will be required.</p> <p>m. No other recommendations are provided in the report.</p>	

Condition	Comment	Compliance Status
<p>monitoring results with the dimensions and areas of the EQS compliance Zones specified in Table 2, condition 39. In accordance with condition 39b, the Annual Report shall specify any recommendations for amendments to the dimensions and areas of the EQS compliance Zones in Table 2, condition 39, and to the location of the representative compliance monitoring Stations specified in table 3, condition 40, for the subsequent years;</p> <p>Determination of WQS</p> <p>k. The Annual report will include the relevant reviews of the near farm and wider-scale water column and ecosystem monitoring results and of WQS and associated hierarchy of responses to breaches of the WQS as specified in condition 44. Prior to specifying amendments to the WQS and responses, the consent holder shall consult with the Council and the Department of Conservation.</p> <p>Other Recommendations</p> <p>l. Where identified as a result of the monitoring, and recommendations for other actions to be undertaken to address potential effects from the operation of the marine farm set out in condition 54 and to achieve to Purposes in condition 55, including to avoid, remedy or mitigate any significant adverse effects from the operation of the marine farm.</p> <p>m. Any other recommendation for amendments to the monitoring programme for the following year.</p>		
<p>70. The Peer Review Panel shall report to the consent holder and/or the Council (as required by condition 68) on the following matters:</p> <p>a. Its review of the Baseline Plan, its assessment as to the adequacy of the existing water quality data and monitoring to achieve the requirements of condition 63 and whether the actions and methods are in accordance with good practice, and any recommendation regarding changes to the monitoring proposed or any requirements for further modelling;</p> <p>b. Its review of the Baseline Report, its assessment as to whether it adequately responds to the results of the monitoring undertaken in terms of the Baseline Plan and achieves the requirements of condition 64 and any recommendations regarding changes to the conclusions and recommendation contained in the Baseline Report. This shall specifically include a review of, and any recommendation for changes to, the initial WQS required by conditions 44a and the hierarchy of responses to breaches of the WQS;</p> <p>c. Its annual review of the MEM-Amp, its assessment as to the adequacy of the monitoring and marine farm management and other actions proposed to achieve the requirements of conditions 65-66 and whether the actions and methods are in accordance with good practice, and any recommendations regarding changes to the monitoring proposed or any requirement for further modelling.</p> <p>d. Its annual review of the Annual Report, its assessment as to whether it adequately responds to the results of the monitoring undertaken in terms of the previous MEM-AMP and achieves the requirements of condition 67 and any recommendations regarding changes to the conclusions, recommendations and other matters specified in the Annual Report. This shall specifically include a review of, and any recommendations for changes to, the WQS required by Condition 44b and the hierarchy of responses to breaches of the WQS;</p> <p>e. Prior to any increase in the annual tonnage of feed discharge to the marine farm, confirmation that the requirements of conditions 36-37 are complied with, and any associated recommendations regarding changes to the monitoring proposed or any requirement</p>	<p>d. The peer review panel provided a report to the consent holder with its assessment of the annual report.</p>	

Condition	Comment	Compliance Status
for further modelling; f. Confirmation that the requirements of condition 38-44 have been complied with; g. Any other matters it considers appropriate in fulfilling its purposes in terms of condition 68 above; h. Any recommendations as to whether it considers any particular condition(s) should be subject to review in accordance with sections 128 and 128 of the Act.		

Please Note:

Monitoring Fees

Pursuant to section 36 of the Resource Management Act 1991 and the Marlborough District Council's (Council) schedule of fees, the consent holder shall be responsible for all costs associated with the monitoring of this consent in accordance with the schedule of fees.

Where non-compliance is noted on an inspection visit, remedial action is identified and advised to the consent holder in writing. A follow-up visit may confirm that appropriate remedial action has been taken. The consent holder shall receive an additional charge for the costs of the follow-up inspections undertaken by Council, or their agent, to ensure that compliance with consent conditions is met.

Privacy Statement and publication of information

Council needs to collect personal information (including names and contact details) to effectively monitor compliance with resource consents, plan requirements and the NES-PF. Personal information that you provide in response to this communication will be held and protected by Council in accordance with the Privacy Act 1993. You can access and correct that information by contacting Council through the contact details below. The information that we receive from you will be made available to the public through Council's online resource consent files.



Marlborough District Council
 15 Seymour Street, PO Box 443
 Blenheim 7240
www.marlborough.govt.nz

Telephone 03 520 7400
 Fax 03 520 7496
 Email mdc@marlborough.govt.nz