



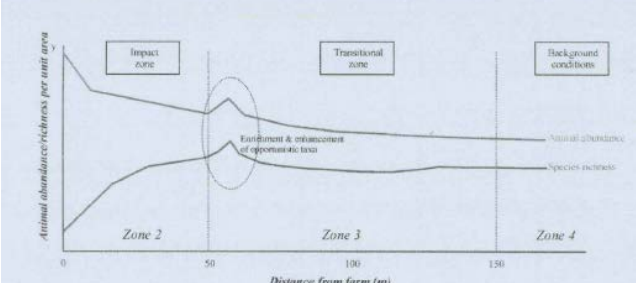
The New Zealand King Salmon Company Limited- 2015 Compliance Report for Coastal Permit (040412)

Assessment of Compliance with Resource Consent U040412

This report sets out the compliance status for the disposal of discharge from the New Zealand King Salmon Forsyth Site. The information in this report is based on the 'Environmental Impacts of the Forsyth Bay Salmon: Annual Monitoring 2015' Report provided by Cawthron Institute.

Compliance Status has been indicated using a monitoring traffic light system where **green** indicates compliance; **yellow** indicates technical non-compliance; **orange** indicates that corrective or remedial action(s) is required and a time frame for completion has been set, and **red** indicates non-compliance.

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 | | | | | | | | | | | | | | | |
|---|---|---|-----------------------------|---|---|--|---|---|---|---|---|--|-----------|--|---|--|--|
| Coastal Permit (Discharge to Seawater) 2. Only extruded pellets or similar shall be fed at the marine farm. | Pellets are the only type of feed at this farm. | | | | | | | | | | | | | | | | |
| 11. STAGE 3 Following receipt by council of the reports required in Stage 2 above and subject to any review of the conditions of this consent, pursuant to condition 24 of this consent the consent holder may then discharge the maximum volume permitted under the consent of <u>4000 metric tonnes per annum</u> . | The monitoring report shows that the total feed input for 2015 was 769 Tonnes between May and October 2015. This is well within this consent limit of 4000 metric Tonnes therefore this is compliant. | | | | | | | | | | | | | | | | |
| ENVIRONMENTAL QUALITY STANDARDS 14. The environmental quality standards (EQS) that shall be applied for seabed effects follow the model as presented in the application i.e. seabed effects are 'zoned' around the cages to allow for a mixing or transition zone. Outside this zone no adverse effect on the seabed is allowed. Three 'zones' under and around the marine farm shall be established as follows: a. Referred to as 'Zone 1' – Beneath the cages and out to 50 m from the cages. b. Referred to as 'Zone 2' - From 50 m to 150 m from the outside edge of the cages. c. Referred to as 'Zone 3' - Beyond 150 m from the outside edge of the cages. | The sampling method explained in the monitoring report (figure 5.) shows that the sampling was undertaken in the required three zones as described in the consent condition. | | | | | | | | | | | | | | | | |
| 17. The EQS in each zone is as follows: <table border="1" data-bbox="92 1451 730 1809"> <thead> <tr> <th>Zone</th> <th>Spatial Extent</th> <th>Description and Bottom Line</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Beneath the cages and out to 50 m from their outside edge</td> <td>Sediments become highly impacted and contain low species diversity, dominated by opportunistic taxa (e.g. polychaetes, nematodes). It is expected that a gradient will exist within this zone, with higher impacts present directly beneath the cages.</td> </tr> <tr> <td>2</td> <td>From 50 m to 150 m from the outside edge of the cages</td> <td>A transitional zone between zones 2 and 4. Within this zone, some enrichment and enhancement of opportunistic species may occur, however species diversity remains high with no displacement of functional groups. It is expected that a gradient will also exist within this zone.</td> </tr> <tr> <td>3</td> <td>Beyond 150 m from the outside edge of the cages</td> <td>Normal conditions (i.e. background or control conditions).</td> </tr> <tr> <td>All Zones</td> <td>These conditions are not permitted beneath any NZKS farm</td> <td>Sediments that are anoxic and azoic (i.e. no life present) will not be permitted.</td> </tr> </tbody> </table>  | Zone | Spatial Extent | Description and Bottom Line | 1 | Beneath the cages and out to 50 m from their outside edge | Sediments become highly impacted and contain low species diversity, dominated by opportunistic taxa (e.g. polychaetes, nematodes). It is expected that a gradient will exist within this zone, with higher impacts present directly beneath the cages. | 2 | From 50 m to 150 m from the outside edge of the cages | A transitional zone between zones 2 and 4. Within this zone, some enrichment and enhancement of opportunistic species may occur, however species diversity remains high with no displacement of functional groups. It is expected that a gradient will also exist within this zone. | 3 | Beyond 150 m from the outside edge of the cages | Normal conditions (i.e. background or control conditions). | All Zones | These conditions are not permitted beneath any NZKS farm | Sediments that are anoxic and azoic (i.e. no life present) will not be permitted. | <p>- The most impacted site on the NZKS site is the Pen 1 and 2 stations (zone 1) which still possessed low level abundances of taxa therefore the NZKS farm has not reached anoxic and azoic sediments. The average zinc concentrations are recorded as exceeding the ISQG low trigger level however the report concludes that it is unlikely to be as a result of continued accumulation of metal. Pen 1 had midwater and surface reductions of Dissolved Oxygen, the report states that this is a localised and relatively minor effect of the salmon farm. The report indicates that the DO reduction does not indicate substantial effects of benthic enrichment. The report has concluded that Pen 2 enrichment scale is inconsistent with the best management practice and would require an 'alert' management response under the BMP.</p> <p>- Zone 2 species diversity high, described as being more similar to that of the control sites. The total recoverable zinc at the 50m station was less than half the ISQG low.</p> | |
| Zone | Spatial Extent | Description and Bottom Line | | | | | | | | | | | | | | | |
| 1 | Beneath the cages and out to 50 m from their outside edge | Sediments become highly impacted and contain low species diversity, dominated by opportunistic taxa (e.g. polychaetes, nematodes). It is expected that a gradient will exist within this zone, with higher impacts present directly beneath the cages. | | | | | | | | | | | | | | | |
| 2 | From 50 m to 150 m from the outside edge of the cages | A transitional zone between zones 2 and 4. Within this zone, some enrichment and enhancement of opportunistic species may occur, however species diversity remains high with no displacement of functional groups. It is expected that a gradient will also exist within this zone. | | | | | | | | | | | | | | | |
| 3 | Beyond 150 m from the outside edge of the cages | Normal conditions (i.e. background or control conditions). | | | | | | | | | | | | | | | |
| All Zones | These conditions are not permitted beneath any NZKS farm | Sediments that are anoxic and azoic (i.e. no life present) will not be permitted. | | | | | | | | | | | | | | | |

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| | - The 150m station and control stations were all assessed as having an ES of 2 or 1.8. This is consistent with the requirements of the EQS. | |
| ENVIRONMENTAL MONITORING AND REPORTING 18. Prior to exercising the consent, the consent holder shall prepare an environmental monitoring programme to show compliance with the Environmental Quality Standards set out in conditions 14 to 17 of this consent. | The annual monitoring plan and methods for the 2015 monitoring period was submitted to Council in October 2015. | |
| 20. The survey/monitoring programme shall describe: a. the surveys, baseline and/or ongoing, to be undertaken; b. location and extent of environmental features within the vicinity and potential impacts on these features; c. the environmental performance indicators that are to be used to assess effects; d. methods, location and frequency of sampling, including reference sites; e. a definition of species diversity and what comprises the transitional zone; and f. recording and reporting requirements. | The annual monitoring plan for 2015 covered all aspects required in condition 20. | |
| ONGOING ANNUAL MONITORING 21. A monitoring report is to be prepared at least annually, and will include: a. a description of the types, location and area of structures within the 2 hectare authorised area and a description of any movement or relocation of structures over the previous year; b. presentation of monitoring results; c. a comprehensive and integrated report on the effects of the development and operation of the farm to date, including maximum biomass of fish and feed volumes discharged over that year; d. an assessment as to whether or not the farm is having a significant adverse effect on the environment or not; e. recommendations as to how any adverse effects on the environment can be avoided, remedied or mitigated; and f. the adequacy of the monitoring programme. NB: The monitoring programme shall be public record. | An annual monitoring report was provided to Council dated February 2016. The monitoring report has included all aspects required by condition 21. Recommendations have been made for the site. It has also been recognised that this site is now fallowed for 2016 due to the increased enrichment of the site however Cawthron have recommended ES monitoring for 2016. Council agrees with this recommendation as it is important to assess the recovery of the seabed from the fallow. Further detail regarding the adequacy of the monitoring programme should be discussed in the next monitoring report as it was discussed minimally. | |
| 22. The consent holder shall commission an independent person (or persons) with appropriate expertise in environmental monitoring to undertake the monitoring and reporting work required by the conditions of this consent. | The Cawthron Institute completed the environmental monitoring required at this site. This is an independent organisation with appropriate expertise. | |
| 23. The Council may require an independent peer review of the surveys, monitoring and reporting required under conditions 17 to 22 above. Such a peer review will be at the cost of the consent holder. | Independent peer review completed by Dr Kenny Black. | - |
| Coastal Permit (Structure) 2. Cages will be restricted to within a clearly defined 2 hectare area (plan attached). | The map provided in the annual monitoring report shows, in figure 5, the 2015 pen position is located partially outside of the 2ha boundary however the gps margin of error may account for this. | |

Please Note:

Pursuant to section 36 of the Resource Management Act 1991 and the Marlborough District Council's 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. No charge is made for this visit if the consent holder is at this stage complying with the consent conditions. If the conditions of the consent are not being complied with the consent holder is charged and subsequent visits maybe required.