

PROPOSED CONSENT CONDITIONS FOR THE MOTUKAWA HEPS

All resource consents for the Motukawa HEPS will be subject to the following general conditions:

GENERAL CONDITIONS

1. The conditions of these resource consents shall prevail except where:
 - a. The operation of any part of the Motukawa HEPS has been compromised as a result of a fault in any generator, associated control equipment or the transmission network servicing the Scheme; or
 - b. Manual control of any machine or associated equipment is required for the maintenance, re-commissioning or testing of any infrastructure associated with the Motukawa HEPS.

In the above circumstances, the consent holder shall take all practicable steps to ensure that the operating limits in these resource consents [insert consent and condition numbers in final set] continue to be maintained. Furthermore, the consent holder shall take all practicable steps to return the Motukawa HEPS to normal operation as soon as possible.

The consent holder shall notify the Chief Executive, Taranaki Regional Council ('the Chief Executive') within 24 hours of the circumstances identified in (a) or (b) occurring at the Motukawa HEPS.

2. On receipt of a requirement from the Chief Executive, the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of these resource consents.
3. Unless it is otherwise specified in the conditions of these resource consents, compliance with any monitoring requirement imposed by these consents shall be at the consent holder's expense.
4. The consent holder shall pay to the Taranaki Regional Council all required administrative charges fixed by the Council pursuant to section 36 of the Resource Management Act 1991 in relation to the administration, monitoring and supervision of these resource consents.
5. In accordance with sections 128 and 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review the conditions of these resource consents by giving notice of review two years from commencement of these consents; during the sixth year and every six years thereafter; for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of these resource consents which it was not appropriate to deal with at the time the consent was granted.



SPECIFIC CONDITIONS

Each resource consent for the Motukawa HEPS will be subject to specific conditions as detailed below:

A water permit for the damming of water in the Manganui River, and the diversion, take and use of water from the Manganui River for hydro-electricity generation purposes.

1. The consent holder may divert and take up to 5,200 litres / second of water from the Manganui River via an intake structure for hydro-electricity generation purposes, subject to compliance with the follow conditions:
 - a. Condition 2 – residual flow requirements;
 - b. Condition 4 – low flow conditions in the Waitara River;
 - c. Condition 5 – flushing flow requirements in the Manganui River; and
 - d. Condition 6 – water temperatures in the Manganui River.
2. The consent holder shall maintain a residual flow of not less than 400 litres / second in the Manganui River immediately downstream of the diversion weir. The residual flow shall be provided via the two fish passes located either side of the diversion weir.
3. The consent holder shall install and operate a monitoring device capable of measuring, at a minimum of 15 minute intervals and with +/- 5% measurement accuracy, the diversion and taking rate of water from the Manganui River (and the residual flow retained in the river). The monitoring device shall be telemetered and report the data electronically to the Chief Executive once per day.
4. In the event that the flow in the Waitara River, as measured at the Bertrand Road hydrology gauging site, is equal to or less than 5,000 litres / second, the consent holder shall ensure that all flow in the Manganui River either:
 - a. Passes directly over the diversion weir / fish passes; or
 - b. Passes continuously through Lake Ratapiko, subject to the residual flow required in the Manganui River in accordance with Condition 2, and the Motukawa Power Station into the Makara Streamin order to mitigate the effects of low flows in the Waitara River.
5. In the event that the flow immediately downstream of the diversion weir has not exceeded 13.3 cubic metres per second for a consecutive 30 day period commencing on 1 November and concluding on 31 March each year, the consent holder shall reduce its diversion and take of water from the Manganui River for a continuous period of six hours during the next fresh that exceeds three times the median flow in order to allow a flushing flow of at least 13.3 cubic metres per second to pass down the Manganui River so as to minimise the potential accumulation of periphyton growth downstream of the diversion weir.

6. In the event that the water temperature at a monitoring site located approximately 2.3 km downstream of the diversion weir exceeds a rolling one hour average of 25 °C, the consent holder shall maintain a flow of [flow for this condition to be confirmed in trials by Trustpower during Summer 21/22] litres / second in the Manganui River immediately downstream of the diversion weir for a period of 24 hours and then until such time as the water temperature at the downstream monitoring site reduces to below 25 °C (based on a rolling one hour average).
7. The consent holder shall only be required to comply with Condition 6 when it is diverting and taking water from the Manganui River in accordance with Condition 1 of this resource consent.
8. The consent holder shall install and operate, to the satisfaction of the Chief Executive, a telemetered water temperature logger in the Manganui River at the monitoring site located approximately 2.3 km downstream of the diversion weir to monitor the water temperature on a rolling one-hour average. The monitoring device shall be telemetered and report the data electronically to the Chief Executive once per day.
9. The consent holder shall prepare and implement an Ecological Monitoring and Management Plan, the objective of which shall be to ensure the diversion and take of water from the Manganui River appropriately manages water temperatures and minimises the accumulation of periphyton growth in the Manganui River downstream of the diversion weir.

In order to achieve the objective set out above, the Ecological Monitoring and Management Plan shall, as a minimum, address the following matters:

- a. The monitoring methodology to be undertaken over a period of three years to assess the effectiveness of the flushing flow regime in Condition 5 above in dealing with any exceedances of the guideline levels for *New Zealand Periphyton Guideline: Detecting, Monitoring and Managing Enrichment of Streams (Biggs, 2000)*;
- b. The monitoring methodology to be undertaken over a period of three years to assess the effectiveness of the supplementary flows in Condition 6 above in reducing water temperatures below 25°C in the Manganui River; and
- c. The potential additional measures that could be implemented to avoid, remedy or mitigate adverse effects in the Manganui River in the event that it is determined that the supplementary flows and flushing flow regime are not effective in managing water temperatures and periphyton growth in the river.

The consent holder shall submit the Ecological Monitoring and Management Plan to the Chief Executive for certification no later than six months from the commencement of this resource consent.

10. Following the conclusion of the three years of monitoring required in accordance with the Ecological Monitoring and Management Plan, the consent holder shall prepare a monitoring report by a suitable qualified and experienced ecologist that:

- a. Presents, summarises and analyses the monitoring results; and
- b. Provides recommendations to the Chief Executive regarding the effectiveness of the supplementary flows and flushing flow regime, and whether any of the additional measures identified in Condition 9(c) or additional monitoring is required if the monitoring results are inconclusive.

The Chief Executive shall review the monitoring report and determine whether the supplementary flows required under Condition 6 and flushing flow regime required under Condition 5 have been effective, and whether any of the potential additional measures identified in the Ecological Monitoring and Management Plan need to be implemented or if additional monitoring is required.

The Chief Executive shall also determine whether there is a need to serve notice on the consent holder of its intention to review Conditions 5 and 6 of this resource consent in accordance with Sections 128 to 131 of the Resource Management Act 1991 where there is a need to alter the supplementary flows and flushing flow regime in the Manganui River.

11. The consent holder shall maintain and monitor a race water level control system to manage the diversion / taking of water from the Manganui River into the Motukawa Race. The purpose of the control system shall be to avoid or minimise flooding of farmland attributable to the activities of the consent holder. The control system shall have an emergency power source capable of monitoring the system for up to 48 hours and shutting the race intake gate.
12. The consent holder shall maintain a flow of 150 litres / second in the Motukawa Race during maintenance periods. In the event that it is not practicable to maintain a flow of 150 litres / second due to the nature of the maintenance works required in the Motukawa Race, the consent holder shall arrange a fish salvage operation to relocate stranded fish from the race as the water level is lowered in the affected race section.
13. The consent holder shall operate and maintain a trap and transfer programme within the Silt Pond and Motukawa Race to assist in the maintenance of populations of native fish species in the Manganui River catchment. The objective of the trap and transfer programme shall be to reduce the number of native fish species entrained within the Silt Pond and Motukawa Race as result of the diversion and taking of water from the Manganui River.
14. The trap and transfer programme required under Condition 13 shall be supported by a management plan that addresses the following matters:
 - a. The design and location of traps / netting;
 - b. The period over which the trap and transfer programme will be operated;
 - c. The methodology to be used in the transfer of the fish, including the locations for the transfer of species to suitable areas;

- d. The measures to be undertaken to enhance fish survival during the transfer and post release periods; and
 - e. The monitoring / recording of fish transferred as part of the programme and the reporting frequency to the Chief Executive.
15. The consent holder shall prepare the management plan in consultation with Ngāti Maru and Pukerangiora.

The consent holder shall submit the management plan, including all comments received from Ngāti Maru and Pukerangiora, to the Chief Executive for certification within 12 months of the commencement of this resource consent.

A land use consent for the use and maintenance of an existing diversion weir, intake structure and fish passes in the Manganui River.

1. The consent holder shall maintain and operate the diversion weir and all its ancillary / appurtenant structures in accordance with the New Zealand Society on Large Dams (NZSOLD) Dam Safety Guidelines 2015, or subsequent updates to the Dam Safety Guidelines.
2. The consent holder shall maintain and monitor, to the satisfaction of the Chief Executive, a structure at the diversion weir to enable the passage of eels, native fish, juvenile and adult trout in the Manganui River.
3. The consent holder shall maintain a trash rack with a bar spacing of 150 mm at the intake to the Motukawa Race.
4. That the consent holder shall maintain and operate an electrical barrier at the entrance of the intake structure for the purpose of assisting with diverting fish away from the intake.
5. The consent holder shall design, install and maintain a barrier on the vertical wall of the outlet of the sluice gate channel to the Manganui River in order to restrict the ability of eelers and other species to climb into the channel.

The barrier structure shall be constructed within six months of the commencement of this resource consent. The consent holder shall notify the Chief Executive at least 48 hours prior to the commencement of construction of the barrier structure.

A discharge permit for the discharge of water and contaminants over an existing diversion weir, fish passes and sluice gate to the Manganui River.

N/A

A water permit for the damming of water in the Motukawa Race via an existing dam structure for hydro-electric power generation purposes.

1. The consent holder shall manage the water levels in the Motukawa Race so as to avoid or minimise the potential for flooding of adjacent farmland attributable to the activities of the consent holder by ensuring a maximum race water level (metres), above mean sea-level of:
 - a. 205.20 at Salisbury Road (NZTM: 1711773E - 5658233N);
 - b. 199.30 at Mangaotea (NZTM: 1712685E - 5658307N);
 - c. 199.25 at the Mangaotea Aqueduct (NZTM: 1712760E - 5658335N);
 - d. 199.15 at Lower Mangaotea (NZTM: 1713893E - 5659542N).
2. The consent holder shall survey stage boards at the sites noted in Condition 1 for the purpose of providing a visual check of race water levels, to the satisfaction of the Chief Executive.
3. The consent holder shall maintain and monitor a race water level control system for the purpose of achieving compliance with Condition 1. The purpose of the control system shall be to avoid or minimise flooding of farmland attributable to the activities of the consent holder. The control system shall have an emergency power source capable of monitoring the system for up to 48 hours and shutting the intake gate to the Motukawa Race.
4. The consent holder shall, during the period 1 November to 28 February each year, open the bypass valve to the in-race generator in order to enable the passage of trout through the Motukawa Race.

The in-race generator may continue to operate during the period in which the bypass valve is open.

A water permit for the diversion and take of water from the Motukawa Race for hydro-electric power generation purposes in association with an existing in-race generator

1. The consent holder shall install and maintain, to the satisfaction of the Chief Executive, a fish screen with 75 mm bar spacing at the intake to the in-race generator.

A discharge permit for the discharge of water from the Mangaotea Aqueduct into the Mangaotea Stream

1. The consent holder may discharge up to 2,000 litres / second of water from the Mangaotea Aqueduct to the Mangaotea Stream.

2. The consent holder shall manage the discharge so as to avoid or minimise the potential for the flooding of land and roads below the discharge to the Mangaotea Stream that is attributable to the activities of the consent holder.

A water permit for the diversion and use of stormwater run-off and the flows from various unnamed watercourses draining into the Motukawa Race and into Lake Ratapiko for hydro-electric power generation purposes

1. The consent holder may divert and use up to 8,000 litres / second of stormwater run-off and the entire flow of various unnamed watercourses draining into the Motukawa Race and into Lake Ratapiko for hydro-electricity generation purposes.
2. The consent holder shall manage the water levels in the Motukawa Race so as to avoid or minimise the potential for flooding of adjacent farmland attributable to the activities of the consent holder by ensuring a maximum race water level (metres), above mean sea-level of:
 - a. 205.20 at Salisbury Road (NZTM: 1711773E-5658233N);
 - b. 199.30 at Mangaotea (NZTM: 1712685E-5658307N);
 - c. 199.25 at the Mangaotea Aqueduct (NZTM: 1712760E-5658335N);
 - d. 199.15 at Lower Mangaotea (NZTM: 1713893E-5659542N).
3. The consent holder shall survey stage boards at the sites noted in Condition 2 for the purpose of providing a visual check of race water levels, to the satisfaction of the Chief Executive.
4. The consent holder shall maintain and monitor a race water level control system for the purpose of achieving compliance with Condition 2. The purpose of the control system shall be to avoid or minimise flooding of farmland attributable to the activities of the consent holder. The control system shall have an emergency power source capable of monitoring the system for up to 48 hours, and shutting the intake gate to the Motukawa Race.
5. The consent holder shall install and operate monitoring devices capable of measuring the water level, at a minimum of 15 minute intervals and with a measurement accuracy of +/- 0.1 metres, in the Motukawa Race at the locations specified in Condition 2. The monitoring devices shall be telemetered and report the data electronically to the Chief Executive once per day, and shall include the rainfall data at hourly intervals from the station established at the Mangaotea Road culvert.

A land use consent for the damming of the Mako Stream via an existing dam structure to form Lake Ratapiko for hydro-electric power generation purposes, including the service and auxiliary spillway structures

1. The consent holder shall maintain and operate the Ratapiko Dam and all its ancillary / appurtenant structures in accordance with the New Zealand Society on Large Dams (NZSOLD) Dam Safety Guidelines 2015, or subsequent updates to the Dam Safety Guidelines.
2. The consent holder may maintain a structure on top of the service spillway crest for the purpose of increasing lake storage.
3. The consent holder shall ensure that a minimum water level of 194 metres above mean sea level is retained in Lake Ratapiko at all times, except during periods of maintenance, in order to maintain aquatic habitat.

Where maintenance is required, the consent holder shall draw the level of Lake Ratapiko down gradually over a seven day period in order to avoid or minimise fish stranding. The consent holder shall notify the Chief Executive and Fish and Game New Zealand at the commencement of the draw down of Lake Ratapiko.

4. The consent holder shall ensure that a maximum level of 198.7 metres above mean sea level is not exceeded in Lake Ratapiko under normal operating conditions.
5. The consent holder shall manage the structure provided for in Condition 2 and the level of Lake Ratapiko so as to avoid or minimise the potential for the flooding of land adjoining the lake and the Motukawa Race that is attributable to the activities of the consent holder.
6. The consent holder shall maintain and monitor a facility to enable elvers to climb up and over the service spillway. The monitoring information is to be forwarded to the Chief Executive at twelve monthly intervals.
7. The consent holder shall install and operate a monitoring device capable of measuring the lake water level, at a minimum of 15 minute intervals and with a measurement accuracy of +/- 0.1 metres, at the service spillway. The monitoring devices shall be telemetered and report the data electronically to the Chief Executive once per day.

A discharge permit to discharge water via existing spillways and lake drainage valves from Lake Ratapiko into the Mako Stream

1. The consent holder may discharge up to 55 cubic metres per second of water via spillways and lake drainage valves from Lake Ratapiko into the Mako Stream.
2. The consent holder shall manage the discharge of water from the Ratapiko Dam so as to avoid or minimise the potential flooding of adjacent farmland attributable to the activities of the consent holder.

A land use consent for the disturbance of the bed of Lake Ratapiko associated with dredging.

1. The consent holder may only dredge sediment / material from the bed of Lake Ratapiko within the area marked on the attached plan [include a plan reference number].
2. The consent holder may only dredge up to 10,000 cubic metres/year of sediment / material from Lake Ratapiko within the area marked on the attached plan [include a plan reference number].
3. Dredging shall only occur when the level of Lake Ratapiko is below 195 metres mean sea level.
4. During the exercise of this consent, no stockpiles of sediment or other material shall be left in a position where they may enter the wetted areas of Lake Ratapiko.
5. Dredging shall only occur between 1 March and 30 April inclusive each year.
6. The consent holder shall install a temporary hardstand gravel work platform in the bed of Lake Ratapiko to facilitate the dredging activities by drag lines. The temporary hardstand gravel work platforms shall be removed by the consent holder at the conclusion of each dredging season.
7. The refuelling of machinery shall not occur within the bed of Lake Ratapiko.
8. The consent holder shall notify the Chief Executive at least 48 hours prior to the commencement of any disturbance activities.

A water permit for the take and use of water from Lake Ratapiko for hydro-electric power generation purposes.

1. The consent holder may take and use up to 7,787 litres / second of water from Lake Ratapiko for hydro-electric power generation purposes.
2. The consent holder shall install and maintain, to the satisfaction of the Chief Executive, a fish screen with 40 mm bar spacing at the intake to the Motukawa Power Station on Lake Ratapiko.
3. The consent holder shall maintain and operate an electrical barrier at the intake structure for the purpose of assisting with diverting fish away from the intake.
4. The consent holder shall operate and maintain a trap and transfer programme within Lake Ratapiko to assist in the maintenance of populations of native fish species in the Manganui River catchment. The objective of the trap and transfer programme shall be to reduce the number of native fish species entrained within Lake Ratapiko as result of the diversion and taking of water from the Manganui River, and the damming of the Mako Stream.
5. The trap and transfer programme required under Condition 4 shall be supported by a management plan that addresses the following matters:
 - a. The design and location of traps / netting;

- b. The period over which the trap and transfer programme will be operated;
 - c. The methodology to be used in the transfer of the fish, including the locations for the transfer of species to suitable areas;
 - d. The measures to be undertaken to enhance fish survival during the transfer and post release periods; and
 - e. The monitoring / recording of fish transferred as part of the programme and the reporting frequency to the Chief Executive.
6. The consent holder shall prepare the management plan in consultation with Ngāti Maru and Pukerangiora.
- The consent holder shall submit the management plan, including all comments received from Ngāti Maru and Pukerangiora, to the Chief Executive for certification within 12 months of the commencement of this resource consent.
7. The consent holder shall ensure that a minimum water level of 194 metres above mean sea level is retained in Lake Ratapiko at all times, except during periods of maintenance, in order to maintain aquatic habitat.
- Where maintenance is required, the consent holder shall draw the level of Lake Ratapiko down gradually over a 7-day period in order to avoid or minimise fish stranding. The consent holder shall notify the Chief Executive and Fish and Game New Zealand at the commencement of the draw down of Lake Ratapiko.
8. The consent holder shall ensure that a maximum water level of 198.7 metres above mean sea level is not exceeded in Lake Ratapiko under normal operating conditions.
9. The consent holder shall manage the level of Lake Ratapiko so as to avoid or minimise the potential for the flooding of land adjoining the lake and the Motukawa Race that is attributable to the activities of the consent holder.

A discharge permit for the discharge of water from the surge chamber of the Motukawa Power Station to an unnamed tributary of the Makara Stream.

1. The consent holder may discharge up to 2,000 litres per second of water from the surge chamber of the Motukawa Power Station to an unnamed tributary of the Makara Stream.
2. The consent holder shall notify the Chief Executive at least 48 hours prior to the discharge occurring to the unnamed tributary of the Makara Stream.

A discharge permit for the discharge of water from the Motukawa Power Station to the Makara Stream.

1. The consent holder may discharge up to 7,787 litres per second of water from the Motukawa Power Station to the Makara Stream.
2. The consent holder shall operate a monitoring device capable of measuring, at a minimum of 15 minute intervals and with +/- 5% measurement accuracy, the discharge of water from the Motukawa Power Station to the Makara Stream. The monitoring device shall be telemetered and report the data electronically to the Chief Executive once per day.
3. The consent holder shall operate and maintain a trap and transfer programme at the Motukawa Power Station to assist in the maintenance of populations of native fish species in the Manganui River catchment. The objective of the trap and transfer programme shall be to reduce the number of native fish species entrained within the Makara Stream as result of the discharge from the Motukawa Power Station.
4. The trap and transfer programme required under Condition 3 shall be supported by a management plan that addresses the following matters:
 - a. The design and location of traps / netting;
 - b. The period over which the trap and transfer programme will be operated;
 - c. The methodology to be used in the transfer of the fish, including the locations for the transfer of species to suitable areas;
 - d. The measures to be undertaken to enhance fish survival during the transfer and post release periods; and
 - e. The monitoring / recording of fish transferred as part of the programme and the reporting frequency to the Chief Executive.
5. The consent holder shall prepare the management plan in consultation with Ngāti Maru and Pukerangiora.

The consent holder shall submit the management plan, including all comments received from Ngāti Maru and Pukerangiora, to the Chief Executive for certification within 12 months of the commencement of this resource consent.