

# Appendix J. Proposed Conditions of Resource Consents

# Aratapu Water Storage Reservoir: Proposed Resource Consent Conditions

## Glossary of Abbreviations and Definitions

|       |  |
|-------|--|
| AMP   | Avifuana Management Plan                     |
| CMP   | Construction Management Plan                 |
| BMP   | Bat Management Plan                          |
| ESCP  | Erosion and Sediment Control Plan            |
| FFSRP | Freshwater Fauna Salvage and Relocation Plan |
| KDC   | Kaipara District Council                     |
| LMP   | Lizard Management Plan                       |
| NRC   | Northland Regional Council                   |
| ORMP  | Operational Reservoir Management Plan        |
| WCR   | Works Completion Report                      |
| WSMP  | Water Supply Management Plan                 |

## **Authorised Activities**

To undertake the following activities associated with the construction and operation of the Aratapu Water Storage Reservoir at or about location co-ordinates: <To be inserted>

1. Erect (construct) and use a water storage dam in, on, and over the beds of two unnamed tributaries of the Aratapu Creek, including depositing a substance in, on, or under the beds.
2. Disturb the beds of the unnamed tributaries of the Aratapu Creek, including any excavation, drilling and tunnelling.
3. Reclaim the beds of the two unnamed tributaries of the Aratapu Creek associated with constructing the reservoir embankment.
4. Dam and divert water in the two unnamed tributaries of the Aratapu Creek.
5. Earthworks associated with the construction of a dam.
6. Vegetation clearance associated with the construction of a dam and land-contouring.
7. Divert and discharge stormwater associated with earthworks for the construction the dam and land contouring.
8. Take and use water from the Aratapu Water Storage Reservoir.
9. Discharge stormwater to water and to land where it may enter water during land disturbance activities.

## **General Conditions**

1. The Consent Holder must undertake the activities in general accordance with the Aratapu Water Storage Reservoir application for resource consents. If there is any inconsistency between these conditions and the application for resource consents, the conditions take precedence.
2. The Consent Holder must, on becoming aware of any discharge associated with the Consent Holder's operations that is not authorised by these consents:
  - a. Immediately take such action, or execute such work as may be necessary, to stop and/or contain the discharge; and
  - b. Immediately notify Northland Regional Council (NRC) by telephone of the discharge; and

- c. Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the discharge; and
- d. Report to the NRC's Compliance Manager in writing within one week on the cause of the discharge and the steps taken, or being taken, to effectively control or prevent the discharge.

### **Construction**

- 3. Prior to the commencement of construction works pursuant to these consents, the Consent Holder must provide NRC and (KDC) with a Construction Management Plan (CMP) prepared by a suitably qualified and experienced person(s). The CMP must be approved by NRC and KDC prior to the commencement of construction activities.
- 4. The CMP must include (where relevant):
  - a. The name and contact details of the principal contractor and sub-contractors.
  - b. The name and contact details of the person(s) responsible for implementing and monitoring the CEMP;
  - c. Detailed design drawings;
  - d. The construction methodology and timetable;
  - e. Diagrams and/or plans, of a scale suitable for on-site reference, showing the locations of the cut and fill operations, disposal sites for unsuitable materials and erosion and silt control structures/measures;
  - f. An Erosion and Sediment Control Plan (ESCP) to be prepared in accordance with Condition 5 of this resource consent;
  - g. Design details of the stream diversion works, including culvert, required for the diversion of water past or through the dam construction site;
  - h. Measures to prevent spillage of fuel, oil and similar contaminants;
  - i. Contingency containment and clean-up provisions in the event of accidental spillage of hazardous substances;
  - j. Measures to ensure sediment or dust discharge from the earthworks activity does not create a nuisance on neighbouring properties;
  - k. Means of ensuring contractor compliance with the CEMP;

5. The ESCP required as part of the CMP must contain:
  - a. The expected duration (timing and staging) of earthworks, disposal sites for unsuitable materials, and clean water diversions;
  - b. Diagrams and/or plans, of a scale suitable for on-site reference, showing the locations of the cut and fill operations, disposal sites for unsuitable materials and erosion and silt control structures/measures;
  - c. Details of all erosion and sediment controls;
  - d. Supporting calculations and catchment boundaries for the erosion and sediment controls;
  - e. The commencement and completion dates for the implementation of the proposed erosion and sediment controls; and
  - f. Details of surface revegetation of disturbed sites and other surface covering measures to minimise erosion and sediment runoff following construction.
6. NRC and FKDC must be notified of commencement of works at least two weeks beforehand. A site meeting between the principal contractor and the Council's assigned monitoring officers must be held on site prior to any earthworks commencing.
7. Copies of the consent documentation must be provided to any person who is to carry out the works authorised by these consents, prior to any work commencing.
8. All earthworks must be undertaken in accordance with the certified CMP or any amendments, as agreed in consultation with the Northland Regional Council's assigned monitoring officer.
9. All bare areas of land beyond the reservoir footprint must be stabilised following the completion of earthworks.
10. No earthworks must be carried out between 1 May and 30 September in any year unless the prior written agreement of the council's Compliance Manager has been obtained.
11. Any request to undertake works between 1 May and 30 September in any year must be in writing and must be made at least two weeks prior to the proposed date that the works are required to be undertaken. This written request must include an amended CEMP for the works that has been prepared in accordance with Condition 3.

12. Works in any active river channel<sup>1</sup> must be planned to minimise the duration of the works and the generation of sediment.
13. Drains and cut-offs constructed to divert stormwater must be capable of conveying stormwater during not less than the estimated 1 in 20-year rainfall event. All channels on grades greater than 2% must be protected to avoid erosion occurring.
14. No slash, soil, debris and detritus associated with the exercise of these consents must be placed in a position where it may be washed into any water body.
15. All bare areas of land that will not be covered by water must be covered with aggregate or topsoiled and established with a suitable vegetation to achieve an 80% groundcover within six months of the completion of earthworks. Temporary mulching or other suitable groundcover material must be applied to achieve total groundcover of any areas unable to achieve the above requirement.
16. The construction operations must not give rise to any discharge of contaminants (e.g. dust), at or beyond the property boundary, which is noxious, dangerous, offensive or objectionable to such an extent that it has, or is likely to have, an adverse effect on the environment. Dust control measures must be available on site, to ensure compliance with this condition.
17. The discharges from the land disturbance activities must not cause any of the following effects on the water quality of the Aratapu Creek, as measured 200 metres from the dam footprint, compared to sites within the water body, unaffected by land disturbance activities:
  - a. The production of any conspicuous oil or grease films, scums or foams, floatable or suspended materials, or emissions of objectionable odour; or
  - b. Any conspicuous change of colour or visual clarity.
18. The upstream and downstream passage of longfin and shortfin eels must be provided for and be effective under the flow range conditions of the Aratapu Creek environment during the construction of the dam and reservoir area.
19. All construction activity under this consent must comply with the certified Freshwater Fauna Salvage and Relocation Plan (FFSRP), Bat Management Plan (BMP), Avifauna Management Plan (AMP), and Lizard Management Plan (LMP).
20. A Works Completion Report (WCR) must be prepared within 3 months of completion of earthworks. The report must be submitted to NRC and KDC for certification. The WCR must contain sufficient detail to address the following matters:

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<sup>1</sup> Active river channel is the part of the river bed where water is flowing but does not include parts of the bed where water has been diverted to enable works to be undertaken.

- (a) A summary of the works undertaken within the development area.
- (b) Records of unexpected contamination encountered and the response actions, if applicable.

### **General Water Take Conditions**

- 21. A fish screening device must be maintained on the intake structure that limit the intake velocity across the screen to less than 0.3 metres/second and have no holes or slots with a diameter or width greater than 5 millimetres.
- 22. Prior to the first exercise of this consent, a water meter must be installed to measure the volumes of water taken, in cubic metres, for the take. The water meter must:
  - (a) Be able to provide data in a form suitable for electronic storage;
  - (b) Be sealed and as tamper-proof as practicable;
  - (c) Be installed at the location from which the water is taken; and
  - (d) Have an accuracy of +/-5%.

The Consent Holder must, at all times, provide safe and easy access to each meter installed for Council to undertake visual inspections and record water take measurements.

- 23. The Consent Holder must verify that the meter required by Condition 15 is accurate. This verification must be undertaken prior to 30 June:
  - (a) Following the first taking of water in accordance with this consent; and
  - (b) At least once in every five years thereafter.

Each verification must be undertaken by a person, who in the opinion of the Council's Compliance Manager, is suitably qualified. Written verification of the accuracy must be provided to the Northland Regional Council's assigned Monitoring Officer no later than 31 July following the date of each verification.

- 24. The Consent Holder must keep a record of the volume of water taken from each site of abstraction in cubic metres, including all nil abstractions, using the readings from the meter required by Condition 22. Recorded measurements must be kept in 15-minute increments.
- 25. The water meter must have an electronic datalogger for automatic logging of meter data.
- 26. A copy of the records required to be kept by Condition 24 must be forwarded to the Northland Regional Council's assigned Monitoring Officer daily via telemetry. In addition, a copy of

these records must be forwarded immediately to the Council's assigned Monitoring Officer on written request. The records must be in an electronic format that has been agreed to by the council.

**Advice Note:** *If no water is taken during any calendar month then the Consent Holder is still required to notify the Northland Regional Council's Monitoring Manager in writing of the nil abstraction. Water use record sheets in an electronic format are available from the council's website at [www.nrc.govt.nz/wur](http://www.nrc.govt.nz/wur).*

### **Operation of the Aratapu Water Storage Reservoir (Compliance Performance Monitoring by NRC and FNDC)**

27. The structures covered by these consents must be maintained in good order and repair so that they work effectively at all times.
28. The Consent Holder must, prior to the filling of the reservoir, prepare and submit an ORMP which sets out the methodologies, practices and procedures to be adopted in order to manage the reservoir. The ORMP must be submitted to NRC's Monitoring Manager for certification prior to operating the reservoir, and must contain the following details:
  - (a) An overview of the reservoir characteristics, construction and features and where details about the construction can be found;
  - (b) As-built drawings;
  - (c) Roles and responsibilities of the various parties associated with the operation of the Matawii Water Storage Reservoir;
  - (d) Inspection forms for engineering, water monitoring and maintenance inspections;
  - (e) Design levels, flows, triggers and telemetric monitoring requirements;
  - (f) Data management and information ownership;
  - (g) Maintenance functions and reporting requirements;
  - (h) Emergency Action and Response Plan; and
  - (i) Details of annual reporting requirements to Northland Regional Council and Far North District Council.
29. Upstream and downstream passage for native eels will be provided during the operation of the Aratapu Water Storage Reservoir. The methods for provision of native eel upstream and downstream passage during the operation of the Aratapu Water Storage Reservoir will be documented in the ORMP.



30. The ORMP will be reviewed following two full years of reservoir operation for the purpose of verifying the performance of the plan, in particular in meeting residual flow requirements. The review, including any proposed changes to improve the performance associated with meeting residual flow and fish passage requirements, will be submitted to the NRC before the end of the third year of reservoir operation.
31. The Consent Holder must submit to the KDC by 30 September of each year a report from a suitably qualified and experienced independent registered engineer on the performance and maintenance of the dam structure and ancillary equipment. All recommended remedial works outlined in an annual report must be carried out promptly.
32. In addition to the annual reports required by Condition 31, a review of the safety and efficiency of the dam structure and ancillary equipment must be undertaken at five yearly intervals by a suitably qualified and experienced independent registered engineer. The review report must be for the preceding five-year period ending 30 June. A copy of the review report must be forwarded to the KDC by the following 30 September. Any recommended remedial works must be carried out in accordance with the timeframe specified in the review report.
33. The maximum rate of the take from the Aratapu Water Storage Reservoir must not exceed 95 litres per second.
34. Except during the initial filling of the dam post-construction, between 1 September and 30 April each year the exercise of these consents must not result in the flow of the unnamed tributary of the Aratapu Creek, as measured immediately downstream of the dam, to be reduced below 32 litres per second.
35. Between 1 May and 31 August each year when catchment inflows (i.e., upstream of the dam) are less than 32 litres per second, the exercise of these consents must not result in the flow of the unnamed tributary of the Aratapu Creek, as measured immediately downstream of the dam, to be reduced below 3.8 litres per second.
36. Catchment inflows into the Aratapu Water Storage Reservoir must be based on a water balance approach, augmented where practical by direct flow measurements in representative sub-catchments, and as documented through the Operational Reservoir Management Plan (ORMP).

**Advice Note:** *If the building consent issued for the reservoir under the Building Act 2004 has a same or similar condition to Conditions of 31 and 32 of this resource consent, then Conditions 31 and 32 do not apply.*

## **Ecological Management**

37. The Consent Holder must engage a suitably qualified expert(s) to develop the following management plans:

- (a) A Freshwater Fauna Salvage and Relocation Plan (FFSRP) for all parts of the site where works will occur in-stream or aquatic habitat will be inundated will be developed.
- (b) Avifauna Management Plan (AMP).
- (c) Bat Management Plan (BMP)
- (d) Lizard Management Plan (LMP).

These plans are intended to provide the methodologies that will be used to identify the presence of indigenous flora and fauna within each proposed area of works, and the methodology for the protection or removal. The plans must be prepared by a suitably qualified and experienced ecologist and the methodologies must be in accordance with nationally recognized and accepted methods.

38. The FFSRP must be submitted to NRC's Monitoring Manager for certification.

39. The BMP, AMP, and LMP must be submitted to the FNDC's Monitoring Manager for certification.

40. Additionally, the Consent Holder must, at least one month before construction work begins, submit to the NRC Monitoring Manager for certification, an Offset and Compensation Plan (OCP) prepared by a suitably qualified and experienced ecologist that must include, but not be limited to:

- (a) Planting proposals and plans for environmental enhancement of the Aratapu Creek upstream and downstream of the Aratapu Water Storage Reservoir, or of other streams in the area; and
- (b) The measures to be undertaken to strengthen and complement the natural vegetation patterns within the site and immediately surrounding area; and
- (c) Terrestrial offset and compensation package which identifies sites where restoration will take place and how, including but not limited to, initial and operational pest plant and animal eradication measures.
- (d) Details on how the effectiveness of the offsetting and compensation measures will be monitored and reported over time.

## **Water Use**

41. The Consent Holder must maintain its water supply reticulation so that it operates effectively at all times and the loss of water from the reticulation network is, as far as is practicable, minimised. A record of all maintenance must be available to view by NRC's Monitoring Manager immediately on request by that manager.
42. The Consent Holder must prepare a Water Supply Management Plan (WSMP) for the Aratapu Water Storage Reservoir and submit it to the NRC's Monitoring Manager within 12 months of the date of the commencement of these consents. The Water Supply Management Plan must identify the overall water supply strategies to manage the potential effects of the use of water by people who receive water from the Aratapu Water Storage Reservoir under supply agreements.
43. The WSMP must include but not be limited to:
- (a) A general policy on how decisions will be made to supply water to persons from the scheme;
  - (b) Identification of allocation quantities to persons as set out under Water Supply Agreements;
  - (c) Responsibilities of persons receiving the water to ensure water is conveyed and used efficiently, including the following considerations:
    - (i) An assessment of the demonstrated need for water, including current and likely future demand; and
    - (ii) Implementation of industry good management practices, taking into account the nature of the activity, to efficiently use water.
44. The WSMP must be reviewed annually from the date of first certification by the NRC to adjust operational practices as necessary to ensure compliance with consent conditions. Any amendments to the WSMP must be provided to the NRC's Monitoring Manager within 10 working days of the change being made.

### **Reservoir Water Quality**

45. At quarterly intervals samples of water from the reservoir must be collected and analysed for the following:
- (a) Five-day biochemical oxygen demand ( $\text{g/m}^3$ )
  - (b) Dissolved inorganic nitrogen ( $\text{g/m}^3$ )
  - (c) Dissolved reactive phosphorus ( $\text{g/m}^3$ )

- (d) Cyanobacteria (mm<sup>3</sup>/L)
- (e) Phytoplankton (mg-chlorophyll-a/m<sup>3</sup>)
- (f) Escherichia coli (cfu/100 mL)

46. All samples must be collected using standard procedures and in appropriate laboratory supplied containers.
47. All samples collected as part of this monitoring programme must be transported in accordance with standard procedures and under chain of custody to the laboratory.
48. All samples collected must be analysed at a laboratory with registered quality assurance procedures, and all analyses are to be undertaken using standard methods, where applicable.
49. By 30 September, the results of monitoring for the previous calendar year must be provided to the NRC's Monitoring Manager.

### Review Condition

50. NRC or FNDC may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions annually during the month of August for any one or more of the following purposes:
- (a) To deal with any adverse effects on the environment that may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; or
  - (b) To require the adoption of the best practicable option to remove or reduce any adverse effect on the environment.

### Consent Duration

| Land use consents   |            |          |
|---|------------|----------|
| Activity  | RMA        | Duration |
| <ul style="list-style-type: none"> <li>• Erect a dam structure in, on, under, and under the bed of the Aratapu Creek<sup>2</sup></li> <li>• Disturb the bed of the Aratapu Creek</li> <li>• Deposit a substance in, or, and under the bed of the Aratapu Creek</li> <li>• Reclaim the bed of the Aratapu Creek</li> </ul> | Section 13 | 10 years |
| Water permits   |            |          |
| Activity  | RMA        | Duration |
| <ul style="list-style-type: none"> <li>• Temporarily divert the Aratapu Creek Sduring construction</li> </ul>   | Section 14 | 10 years |
| <ul style="list-style-type: none"> <li>• Divert and dam freshwater behind the proposed reservoir embankment when catchment inflows exceed the median flows</li> </ul>   | Section 14 | 35 years |

<sup>2</sup> Once the embankment is constructed its presence is a permitted activity as it has been lawfully established.

|   |            |                 |
|---|------------|-----------------|
| <ul style="list-style-type: none"> <li>• Divert and dam available 'core allocation' freshwater behind the proposed reservoir embankment outside the irrigation season (May – October)</li> <li>• Divert freshwater through the proposed embankment</li> <li>• Divert freshwater around the proposed embankment (via spillway)</li> <li>• Take and use dammed water</li> </ul> |            |                 |
| <b>Discharge permits</b>  |            |                 |
| <b>Activity</b>   | <b>RMA</b> | <b>Duration</b> |
| <ul style="list-style-type: none"> <li>• Discharge stormwater to water associated with land disturbance activities</li> </ul>   | Section 15 | 10 years        |
| <ul style="list-style-type: none"> <li>• Discharge groundwater from dewatering activities to water</li> </ul>   | Section 15 | 10 years        |