Draft V8 TANK Plan Change

TANK PLAN CHANGE PC9 – DRAFT PLAN REVIEW

Editor: Mary-Anne Baker
Date: December 2018

<table>
<thead>
<tr>
<th>Draft Version</th>
<th>Sent to</th>
<th>Issued</th>
<th>Comments incorporated</th>
</tr>
</thead>
<tbody>
<tr>
<td>V3.0</td>
<td>TANK Members</td>
<td>27 February 2018</td>
<td></td>
</tr>
<tr>
<td>V4.0</td>
<td>TANK members</td>
<td>31 May 2018</td>
<td>VC, TPG, HBRC Editing, Meetings 38/39</td>
</tr>
<tr>
<td>V5</td>
<td>TANK Members</td>
<td>27th June</td>
<td>Meeting 40, TANK members including from TANK review versions 1-3, Peer reviewer</td>
</tr>
<tr>
<td>V6</td>
<td>TANK Members, Peer review (PlanWrite)</td>
<td>26 July 2018</td>
<td>TANK Members, Stakeholder organisations, Peer review</td>
</tr>
<tr>
<td>V7</td>
<td>TANK members, Regional Planning Committee</td>
<td></td>
<td>TANK Members, Stakeholder organisations, Joint Working Group (Drinking Water)</td>
</tr>
<tr>
<td>V8</td>
<td>Regional Planning Committee</td>
<td>12 December</td>
<td>TANK Members, Stakeholder organisations, Joint Working Group (Drinking Water), Legal opinion</td>
</tr>
</tbody>
</table>
TANK Plan Change (‘PC9’)  

to

Hawke’s Bay Regional Resource Management Plan

GREATER HERETAUNGA and AHURIRI (TANK) CATCHMENTS

PREAMBLE

HBRC has prepared this Plan Change to establish the objectives for managing water quality and quantity for the Tūtaekurī, Ahuriri, Ngaruroro and Karamu catchments and to identify policies and methods needed to achieve the objectives.

This Plan Change provides a framework for decision making about resource consent applications in conjunction with existing provisions in the Regional Resource Management Plan (RRMP) in the TANK catchments. The Plan Change also introduces a range of new methods aimed at achieving the stated objectives for aquatic ecosystems that have been developed through the TANK plan change process. These new methods and management approaches reflect the collaborative nature of the process and build on the more integrated and community approach to managing freshwater.

The Plan Change introduces new provisions that are applicable to the TANK catchments. However, some activities that are carried out in the TANK catchments as well as across the region may be subject to future regional plan changes to allow for a consistent approach for activities with similar effects.

The Plan Change meets the requirements of the Resource Management Act (1991) (RMA) and also enables the progressive implementation of the National Policy Statement for Freshwater Management 2014 (Amended 2017) and gives effect to the Regional Policy Statement.

The process used by HBRC to prepare this Plan Change has been a community based collaborative approach dependent on considerable input by the TANK Group members. This has involved consensus decision making by local representatives of a variety of interest and stakeholder groups and the significant influence of tangata whenua to develop the recommendations leading to this Plan Change.

Tangata whenua have been involved in and contributed to the collaborative process in a way that has enabled better community decision making. This is because being part of the collaborative process has ensured the wider TANK group better understood and accounted for tangata whenua aspirations and values during this process. HBRC’s Treaty obligations are also accounted for by not only ensuring Treaty parties were invited to be part of the TANK collaborative process, but also through the legal decision making framework provided by the Regional Planning Committee.

The process has meant that the freshwater management provisions take into account all of the values which people and communities hold for water bodies and their water, including the range and significance of culture and tikanga Māori, historic, economic, recreational and spiritual aspects that water has for people generally. It has also enabled an integrated and holistic approach to water body management incorporating the concept of Te Mana o te Wai that builds on the more fundamental requirements of the National Policy Statement for
Freshwater Management and the Regional Policy Statement for limit setting and accounting for the measured state of the water body.

Managing freshwater resources is complex and many issues are interconnected. The current environment has been modified by both past and current activities, many of which cannot be easily changed without significant costs to people and communities. HBRC and the TANK Group recognised that there is no ‘quick fix’ to solve existing issues and that a range of responses are required.

**WATER MANAGEMENT OVERVIEW**

This Plan Change uses a values based approach to identifying objectives for water management in the TANK catchments. This approach, also reflected in the NPSFM2014, requires that the community identify the values for which the water is to be managed, adopt objectives in relation to those values and establish methods, including limits to ensure those objectives will be met.

The process requires that attributes applicable to each value are identified and that attribute states are defined. This produces several readily measured and monitored water quality and quantity parameters. Most of these already form the basis of HBRC’s State of the Environment Monitoring programme. This plan change process has also identified gaps in the information databases that could be developed to better inform future decision making including those focussing specifically on Mātauranga Māori and local scale monitoring at a sub-catchment scale as part of a collective approach to meeting water quality objectives. The TANK Plan Change gives effect to the policies including the values and uses specified in Table 1 of the RPS (PCS) and has further incorporated Māori values for which all waterbodies in the TANK catchment area are to be managed. The RPS table has been supplemented by both a ‘mountains to the sea’ Ki Uta ki Tai approach, and by the more spiritual relationships and kaitiakitanga responsibilities of local tangata whenua encompassed in the Te Iho Matua to Te Aho Matua, Mana Atua heavens to the earth organisation of tangata whenua values. These values are described in the reports for the Ngaruroro, Tūtaekuri and Ahuriri catchments and which have informed the values identification and objective setting for this plan change.

**TANK ISSUES**

This section provides a brief overview of the issues being addressed in this plan change.

*Issue 1; Valuing Water: He Waihe Taonga*

Water, whether in a river or groundwater, has its own mana and intrinsic value. Maintaining mauri encompasses spiritual health of the water, of ecosystems, and of communities connected to and dependent on these elements, now and in the future.

Water is viewed as a taonga by Māori; a treasure where mauri and ecosystem health are protected and provided for. This is consistent with the requirements of the NPS for the protection of ecosystem health and the desire of the wider community to manage water sustainably for current and future generations.

The Plan also addresses the need to provide for the practical needs of the community for water of sufficient quality and quantity for the health and well-being of people as well as to meet their social and economic needs related to the abstraction of water. Instream and other values including flood and drainage values and those depending on abstraction are all recognised by this plan change.

Some existing land and water use practices can affect the mauri or ecosystem health. Some of the effects also arise from activities and events that occurred decades in the past, including through vegetation clearance, floods and flood protection, river diversions, wetland drainage and earthquakes. Changes to landscape, its waterbodies and vegetation have had enduring adverse effects on tangata whenua cultural practices and their role as kaitiaki.
The Plan focuses on the values for which water is to be managed by the setting of objectives, limits and other
management measures. It also acknowledges the wider Māori perspectives of kawa, kaupapa and tikanga that
support Māori values for water and its management and ensures the outcomes that are being sought are
consistent with those cultural principles and approaches. The relationship between values for which water is to
be managed and the Māori culture and traditions in relation to freshwater management are expressed in the
Figure 2.

There are several at risk and threatened or endangered indigenous plant and animal species dependant on
healthy aquatic ecosystems, including wetland and riparian margins. Freshwater ecosystem management for
indigenous species includes protection of fish spawning habitat and provision for fish passage. These indigenous
species contribute to the region’s biodiversity and land use and freshwater provisions for their habitat, including
water quality and quantity will complement the Hawkes Bay Biodiversity Strategy.

**Issue 2: Mauri, Ecosystem Health and Contaminant Discharges**

Water quality in some places does not uphold or protect mauri nor meet the needs of other cultural, tikanga
Māori, recreational or ecosystem health values in freshwater bodies and estuaries at all times. Of particular
concern is the protection of water quality for human health and drinking water, especially for community and
municipal water supplies.

Water quality is affected by direct discharges of contaminants, including in urban stormwater, and also as a result
of non-point source discharges arising from land use activities and cumulatively affecting water quality.

Adverse effects from point source discharges are being reduced through resource consenting processes.

Non-point source discharges, include loss of contaminants including nutrients from rural activities, soil loss from
land disturbance activities and stream bank erosion. To date, there has been little regulatory management of
non-point source discharges which cumulatively can contribute significant amounts of contaminants to
waterbodies.

Land use changes can also result in an increase in the amount of contaminants entering water. New
management systems are required to ensure water quality can be maintained or improved over time when these
sorts of land use change occur.

In the lowland tributaries, water quality is also affected by excessive macrophyte growth and reduced flows
which reduces oxygen levels, and high water temperatures during summer where waterbodies do not have
adequate shading.

The impact of contaminant inputs into estuary ecosystems is also a significant issue as the Waitangi and Ahuriri
estuaries both show declining trends for ecosystem health with consequential adverse effects on the values held
for those aquatic ecosystems.

**Issue 3: Mauri, Ecosystem Health, and Water Flows and Levels**

Mauri and ecosystem health, as well as the range of community held values including instream and ecosystem
values, rely on adequate water levels and flows to be maintained within water bodies.

The community also values water for a range of other uses including domestic and municipal water supply,
irrigation for a range of purposes including for food and fibre production and community gardens; mahi māra,
food processing, stock watering and industrial and commercial purposes.

There is a need to establish flow management regimes and allocation limits to guide the abstraction of water so
that appropriate levels of protection for mauri and ecosystem health are provided while acknowledging and
providing for the practical needs of the community for water at reasonable reliability of supply.
For some water bodies, flooding and drainage management activities as well as abstractive uses of water have resulted in significant adverse effects on aquatic ecosystems and instream values in the Heretaunga Plains where surface water flows and water quality, especially in summer, are not sufficient to ensure ecosystem health.

**Issue 4: Water Demand and Allocation, Efficient Use of Water**

Once allocation limits are specified for abstraction of water from ground and surface water bodies, Council must also manage the allocation and re-allocation of the water available for abstraction in an equitable way between the wide range of water users.

Water allocation regimes should result in appropriate provision for permitted activities and allocation of the allocatable water for the range of existing and potential end uses in an equitable manner that meets the current and future needs of the community. The allocation of water needs to recognise the significant investment that has been made in land and infrastructure that water takes support; and the way these takes provide for the wellbeing of communities.

In some areas where over-allocation has occurred, the resulting management regime will have variable impacts on some landowners and water users, particularly where the introduction of limits mean that new water use is restricted and opportunities for land use change is also reduced.

**Issue 5: Water Demand**

In some parts of the TANK catchments there is insufficient fresh water to meet all the abstraction demands placed on the resource all of the time, including as a result of population growth, and there may be opportunities for more efficient use, conserving, harvesting, storing and augmenting supplies.

The effects of climate change may also impact on rainfall, water flows and water availability making these opportunities even more relevant.

**Issue 6: Balancing Costs and Timeframes**

The restoration and protection of water quality to meet the objectives for mauri, ecosystem health and water quality enables the people and communities to continue to provide for their social, economic and cultural and tikanga Māori wellbeing/hauora.

In some places in the TANK catchments a significant investment into mitigation measures may be required to meet those objectives. A staged approach to change the provides sufficient time to make changes and enables people and communities to undertake adaptive management to continue to provide for their social, economic and cultural and tikanga Māori wellbeing/ hauora in the short term.

**Issue 7: Understanding TANK Freshwater Resources**

There are information gaps throughout these TANK catchments, with some arising because of the values-based approach to water management and the wider, more holistic approach that has been taken in relation to environmental management. Some of this results from developing understanding about the complex inter-relationships within freshwater and land systems, both at a local sub-catchment scale and in relation to the wider freshwater - coastal water interface.

In future, technology land and water practices and information availability are likely to change, both increasing understanding of ‘state’ and impacts and also improving management and mitigation responses. The scale of information collection is also likely to change as more focussed approaches to water management are used at a sub-catchment or marae scale.
Issue 8: Accounting for Predicted Climate Change

Climate is changing, which also has an impact on natural climate variability. The challenge which lies ahead is not knowing the extent to which climate variability will change further and how this may impact on water flows, levels and quality, or the precise timeframes within which these anticipated changes will occur.

HBRC is required to have particular regard to the effects of climate change when managing the use, development, and protection of natural and physical resources.
DRAFT TANK Plan Change (‘PC9’)

Introduction

Freshwater is essential to the region’s economic, environmental, cultural and social well-being. The way in which these well-beings are provided for is informed by how the values for freshwater are understood and identified. Figure 1 provides an illustration of the wider community values for the TANK freshwater bodies expressed across the four well-being domains.

This Plan also recognises Te Mana o te Wai, which puts the mauri of the waterbody and its ability to provide for te hauora o te tangata (the health of the people), te hauora o te taiao (health of the environment) and te hauora o te wai (the health of the waterbody) to the forefront of freshwater management.

Water is viewed as a taonga by Māori; a treasure where mauri and ecosystem health are protected and provided for. Mauri is a spiritual value that is manifested by abundant and healthy water and aquatic resources, including plants and animals that depend on water.

Figure 1: Community Values and attributes for water management

Figure 2 shows the interrelated nature and cultural connections of the values held by Māori for water. These core values are underpinned by a philosophy of etiquette, customs, harmony and timing.
The two expressions of the values for freshwater complement and build on each other. They enable the directions of the National Policy Statement for Freshwater Management to be given effect to and ensure the Plan provides for all of the community’s values.

Figure 2: Wāriu (value) groups and aspects for management

This articulation of community values has enabled decisions to be made about the use and management of waterbodies of the TANK catchments.

The Plan focuses on all the values for which water is to be managed by the setting of objectives, limits and other management measures that enable the needs of those values to be met. It also acknowledges the wider Māori perspectives of kawa, kaupapa and tikanga that support Māori values for water and its management and ensures the outcomes that are being sought are consistent with those cultural principles and approaches.

Key attributes that allow the state of the values to be assessed and monitored have been developed and objectives established for them. Attributes for both water quality and water quantity have been identified and the desired attribute state has been agreed. For some water bodies, the desired state meets the actual state, however, for others, the state is less than desired and the plan provides measures and introduces new rules that will enable the objectives to be met. This includes objectives for water quality attributes as well as limits and flows for managing quantity of water.
TANK OBJECTIVES

Objective 1  When setting objectives, limits and targets;
  a) Te Mana o te Wai\(^3\) and integrated mountains to the sea, ki uta ki tai principles are upheld;
  b) A continuous improvement approach to the use and development of natural resources is adopted and the collective management of freshwater is enabled;
  c) The kaitiakitanga role of tangata whenua and their whakapapa and cultural connection with water are recognised and provided for;
  d) The responsibilities of people and communities for sustainable resource use and development is recognised and supported; and
  e) The water body values listed in Table 1 (RPS) are provided for.

Objective 2  Land and water use, contaminant discharge and nutrient loss activities are carried out so that the quality of the TANK freshwater bodies is maintained where objectives are currently being met, or is improved in degraded waterbodies so that they meet water quality attribute states in Schedule 1 by 2040 provided that:
  a) For any specific water body where the attribute state is found to be higher than that given in Schedule 1, the higher state is to be maintained and
  b) Maintenance of a state is at the measured state\(^4\).

Objective 3  Te Mana o te Wai, kaitiakitanga and the needs for the values set out in Schedule 1, particularly Mauri and ecosystem health are achieved through collectively managing all of the specified attributes.

Objective 4  The quality of the TANK freshwater bodies set out in Schedule 2 will be implemented through future plan changes.

Objective 5  In combination with meeting the water quality states specified in Schedule 1, the use and development of land, the discharge of contaminants and nutrients, and the taking, using damming and diverting of freshwater is carried out in the Ahuriri freshwater catchments so that the mauri, water quality and water quantity are maintained and enhanced where necessary to enable;
  a) Ahuriri estuary sediments to be healthy and not accumulate excessively;
  b) healthy ecosystems that contribute to the health of the estuary;
  c) healthy and diverse indigenous aquatic plant, fish and bird populations;
  d) people and communities to safely meet their domestic water needs\(^5\);
  e) primary production water for community social and economic well-being;

and provide for;

---

\(^3\) From Objective AA and Policy AA in NPSFM

\(^4\) The state is as measured according to the method specified for each attribute. It does not allow for decline to a lower state within any band specified in the NPSFM:2014 (as amended 2017);

\(^5\) the objective is more general and not specifically targeting SPZs and municipal supplies at this level. People also expect to access water for domestic supply and the objective must be to protect groundwater in a more general sense. The SPZs are a more targeted tool/method that focuses on one aspect of water quality protection in relation to the risk to larger communities.
f) contribution to the healthy functioning of the Ahuriri estuary ecosystem and enable people to safely carry out a wide range of social, cultural and recreational activities including swimming and the collection of mahinga kai in the estuary.

**Objective 6:** In combination with meeting the water quality states specified in Schedule 1, the use and development of land, the discharge of contaminants and nutrients, and the taking, using damming and diverting of freshwater is carried out in the **Ngaruroro River catchment** so that the mauri, water quality and water quantity are maintained in the mainstem above the Whanawhaha Cableway and in the Taruarau River, and are improved in the tributaries and lower reaches where necessary to enable:

a) healthy ecosystems;

b) healthy and diverse indigenous aquatic plant, animal and bird populations especially whitebait, torrent fish, macroinvertebrate communities, bird habitat on braided river reaches and a healthy trout fishery;

c) people to safely carry out a wide range of social, cultural and recreational activities especially swimming and boating, including jet-boatting in the braided reaches of the Ngaruroro;

d) protection of the instream values and hydrological functioning of the mainstem, Taruarau and Omahaki tributaries

e) collection of mahinga kai to provide for social and cultural well-being;

f) people and communities to safely meet their domestic water needs;

g) primary production water needs and water required for associated processing and other urban activities to provide for community social and economic well-being;

and provide for;

h) contribution to water flows and water quality in the connected Heretaunga Plains Aquifers;

i) contribution to the healthy functioning of Waitangi Estuary ecosystem and to enable people to safely carry out a wide range of social, cultural and recreational activities and the collection of mahinga kai in the estuary.

**Objective 7** In combination with meeting the water quality states specified in Schedule 1, the use and development of land, the discharge of contaminants and nutrients, and the taking, using damming and diverting of freshwater is carried out in the **Tūtaekuri River** catchment so that the mauri, water quality and water quantity are maintained in the upper reaches of the mainstem and are improved in the tributaries and lower reaches where necessary to enable:

a) healthy ecosystems;

b) healthy and diverse indigenous aquatic and bird populations especially , whitebait, torrent fish, macroinvertebrate communities and a healthy trout fishery;

c) people to safely carry out a wide range of social, cultural and recreational activities, especially swimming and boating;

d) protection of the instream values and hydrological functioning of the mainstem and Mangatutu tributary

e) collection of mahinga kai to provide for social and cultural well-being;

f) people and communities to safely meet their domestic water needs;

g) primary production water needs and water required for associated processing and other urban activities to provide for community social and economic well-being;

and provide for;
h) contribution to the healthy functioning of Waitangi Estuary ecosystem and to enable people to safely carry out a wide range of social, cultural and recreational activities and the collection of mahinga kai in the estuary.

**Objective 8** In combination with meeting the water quality states specified in Schedule 1, the use and development of land, the discharge of contaminants and nutrients, and the taking, using damming and diverting of freshwater is carried out in the Karamu and Clive Rivers catchment so that the mauri, water quality and water quantity are improved to enable:

a) healthy ecosystems;
b) healthy and diverse indigenous aquatic and bird populations, especially black patiki, tuna and whitebait, and healthy macroinvertebrate communities;
c) people to safely carry out a wide range of social, recreational, and cultural activities, including rowing and waka ama in the Clive/Karamu;
d) collection of mahinga kai to provide for social and cultural well-being;
e) people and communities to safely meet their domestic water needs;
f) primary production water needs and water required for associated processing and other urban activities to provide for community social and economic well-being;

do for;

g) contribution to the healthy functioning of the Waitangi Estuary ecosystem and to enable people to safely carry out a wide range of social, cultural and recreational activities and the collection of mahinga kai in the estuary.

**Objective 9** In combination with meeting the water quality states specified in Schedule 1, the use and development of land, the discharge of contaminants and nutrients, and the taking and using of freshwater is carried out so that the mauri, water quality, water quantity and groundwater levels are maintained in the Groundwater connected to the Ngaruroro, Tūtaekurī and Karamu rivers and their tributaries to enable:

a) people and communities to safely meet their domestic water needs and to enable the provision of safe and secure supplies of water for municipal use;
b) primary production water needs and water required for associated processing and other urban activities to provide for community social and economic well-being;

do for;

c) the maintenance of groundwater levels at an equilibrium that accounts for annual variation in climate and prevents long term decline or seawater intrusion;
d) contribution to water flows and water quality in connected surface waterbodies.  

**Objective 10** In combination with meeting the water quality states specified in Schedule 1, the use and development of land, the discharge of contaminants and nutrients, and the taking, using damming and diverting of freshwater connected to the Wetlands and lakes within the TANK catchments is managed so that mauri, water quality and flows, and levels are maintained and improved to enable;

---

6 Includes waterbodies like springs
a) healthy and diverse indigenous fish, bird and plant populations in wetland areas and connected waterways;
b) improved hydrological functioning in connected waterways;
c) people to safely carry out a wide range of social and cultural activities;
d) collection of mahinga kai to provide for social and cultural well-being;
e) contribution to improved water quality in connected surface waters;

and to;

f) increase the total wetland area by protecting and restoring 200ha hectares of existing wetland and reinstating or creating 100ha of additional wetland by 2040;

**Objective 11:** Aquatic ecosystem health and mauri of water bodies in the TANK catchment is improved by appropriate management of riparian margins to:

a) reduce effects of contaminant loss from land use activities;
b) improve aquatic habitat and protect indigenous species including fish spawning habitat;
c) reduce stream bank erosion;
d) enhance natural character and amenity;
e) improve indigenous biodiversity;
f) reduce water temperature in summer;
g) reduced nuisance macrophyte growth.

**Objective 12:** Land use is carried out in a manner that reduces contaminant loss including soil loss and consequential sedimentation in freshwater bodies, estuaries and coastal environment.

**Objective 13:** Subject to limits, targets and flow regimes established to meet the needs of the values for the water body, water quantity allocation management and processes ensure;

a) Water is available for the essential needs of people;
b) There is equitable allocation of the water between competing end uses including priority allocation and reservation for domestic and municipal supply, and allocation for primary production especially on versatile soils, and for food processing, industrial and commercial end uses;
c) Water is allocated for municipal and papakāinga water use so that existing and future demand as described in HPUDS (2017) can be met within limits to enable the community to provide for its economic, social and cultural well-being;
d) The development of Māori economic, cultural and social well-being is supported through the allocation of the water available at high flows for taking, storage and use for this activity;
e) Water is available for abstraction at agreed reliability of supply standards;
f) Water use is efficient;
g) Allocation regimes are flexible and responsive, allowing water users to make efficient use of this finite resource;

**Objective 14:** The current and foreseeable water needs of future generations and for mauri and ecosystem health are secured through:

a) water conservation, water use efficiency, and innovations in technology and management;
b) flexible water allocation and management regimes;
c) water reticulation;

---

7 Amendments to reflect the water allocation policies and better reflect how the policies provide for different end uses.
d) aquifer recharge and flow enhancement

e) Water harvesting and storage

**Objective 15:** The Council, tangata whenua and the urban and rural community work together in a way that recognises the kaitiaki and guardianship roles they each play in freshwater management and;

a) recognise the importance of monitoring, resource investigations and the use of mātauranga Māori to inform decision making and limit setting for sustainable management

b) ensure good land and water management practices are followed and where necessary, mitigation or restoration measures adopted

c) support good decision making by resource users including rural and urban communities through marae and hapū initiatives, community or other catchment management programmes and monitoring initiatives, urban stormwater programmes, landowner collectives, farm management plans and industry good practice programmes.

**Objective 16:** The effects of climate change in respect of each of the following are taken into account in making decisions about land and water management within the TANK catchments;

a) The effects on aquatic ecosystems, including indigenous biodiversity, freshwater bodies, water supply and human health, primary production and infrastructure from the predicted:
   
   (i) increases in intensity and frequency of rainfall

   (ii) effects of rainfall on erosion and sediment loss

   (iii) increases in sea level, and the effects of salt water intrusion

   (iv) increasing frequency of water shortages

   (v) increasing variability in river flows

b) The amount of information available and the scale and probability of adverse effects, particularly irreversible effects, as a consequence of acting or not acting

c) The timeframes relevant to the activity

d) Opportunities to improve community resilience for changes occurring as a result of (a)(i) to (iv).

**Objective 17** Activities in Source Protection Zones or within a default radius for Registered Drinking Water Supplies are managed to ensure that they do not cause water in these zones to become unsuitable for human consumption, and that risks to the supply of safe drinking water are appropriately managed.
POLICIES

SURFACE WATER AND GROUNDWATER QUALITY MANAGEMENT

Priority Management Approach

1. The Council with landowners, local authorities, industry and community groups, mana whenua and other stakeholders will manage land use activities and surface and groundwater bodies so that water quality attributes are maintained at their current state or where required show an improving trend towards the water quality target shown in Schedule 1 by prioritising;
   a) water quality improvement in sub-catchments (as described in Schedule 3) where water quality is not meeting specified freshwater quality targets;
   b) sediment management as a key contaminant pathway to also address phosphorus and bacteria losses
   c) the significant environmental stressors of excessive sedimentation and macrophyte growth in lowland rivers and nutrient loads entering the Ahuriri and Waitangi estuaries;
   d) the management of riparian margins
   e) the management of urban stormwater networks and the reduction of contaminants in urban stormwater.
   f) the protection of water quality for domestic and municipal water supply

2. In the Clive/Karamu Rivers and their tributaries, in addition to Policy 1 the Council will;
   a) reduce water temperature and increase the level of dissolved oxygen by
      (i) the establishment of riparian vegetation to shade the water and reduce macrophyte growth while accounting for flooding and drainage objectives
      (ii) reducing excessive macrophyte growth by physical removal of aquatic plants in the short term
   b) adopt flow management regimes to remedy or mitigate the effects of surface and ground water abstraction
   c) reduce the amount of sediment and nutrients entering the freshwater from adjacent land
   d) improve stormwater and drainage water quality and the ecosystem health of urban waterways and reduce contamination of stormwater associated with poor site management practices, spills and accidents in urban areas (refer also to Policies 26-31).

3. In lakes and wetlands in the TANK Catchments, in addition to Policy 1 the Council will;
   a) work at a catchment scale with land owners in the wetland or lake catchment (refer to Policies 21 and 22) to;
      (i) reduce sediment and nutrient inputs into the waterbody
      (ii) improve water quality by increasing macrophyte plant growth in shallow lakes
      (iii) improve ecosystem health and water quality by excluding stock and improving riparian management
      (iv) meet water quality objectives in Schedule 1 for water bodies downstream of the lake or wetland
      (v) support and assist landowners to protect, increase or restore existing wetlands or create new wetlands including for the management of urban stormwater.

4. In the lower Ngaruroro and Tūtaekuri Rivers and their tributaries, in addition to Policy 1 the Council will;
   a) improve water clarity and reduce deposited sediment by reducing the amount of sediment being lost from land;
   b) reduce risk of proliferation of algae by reducing nutrient losses from land, including by reducing phosphorous loss associated with sediment;
c) improve ecosystem health and water quality by excluding stock from surface water bodies and improving riparian management.

5. In the tributaries of the Ahuriri Estuary, in addition to Policy 1 the Council will;
   a) improve water clarity and reduce deposited sediment by reducing the amount of sediment being lost from land and river banks;
   b) reduce risk of proliferation of algae by reducing nutrient losses from land, including through management of phosphorous loss associated with sediment;
   c) improve stormwater and drainage water quality and the ecosystem health of urban waterways and reduce contamination of stormwater associated with poor site management practices, spills and accident in urban areas
   d) carry out further investigations to understand the estuary hydrology, functioning and environmental stressors.

6. For the groundwater of the Heretaunga Plains and surface waters used as source water for Registered Drinking water Supplies, in addition to Policy 1 the Council will;
   a) define the spatial extent of Source Protection Zones for Registered Drinking Water Supplies by defined technical methods or
   b) Where a Source Protection Zone has not been defined, apply a specified default radius for a Registered Drinking Water Supply.
   c) regulate activities within Source Protection Zones that may actually or potentially affect the quality of the source water or present a risk to the supply of safe drinking water because of:
      (i) direct or indirect discharge of a contaminant to the source water including by overland flow or percolation to groundwater;
      (ii) an increased risk to the safety of the water supply as a result of a non-routine event:
      (iii) potentially impacting on the level or type of treatment required to maintain the safety of the water supply
      (iv) shortening or quickening the connection between contaminants and the source water, including damage to a confining layer;
      (v) in the case of groundwater abstraction, the rate or volume of abstractions causing a change in groundwater flow direction or speed and/ or a change in hydrostatic pressure.

7. The Council will, when considering applications to discharge contaminants or carry out land use activities within;
   a) the specified default radius for Registered Drinking Water Supplies, take into account possible contamination pathways and risks to the quality of the source water for the water supply,
   b) a Source Protection Zone, avoid or mitigate risk of contamination from the activity of the source water for the water supply by taking into account criteria including but not limited to:
      (i) the amount, concentration and type of contaminants likely to be present as a result of the activity or in any discharge;
      (ii) the potential pathways for those contaminants, including any likely or potential preferred pathways;
      (iii) the mobility and survival rates of any pathogens likely to be in the discharge or arising as a result of the activity;
      (iv) any risks the proposed land use or discharge activity has either on its own or in combination with other existing activities, including as a result of non-routine events;
      (v) any effects of abstraction on groundwater flow direction or speed and/ or hydrostatic pressure.
(vi) the effectiveness of any mitigation measures to avoid or mitigate risk of contaminants entering the source water and the extent to which the effectiveness of the mitigation measure can be verified
(vii) notification, monitoring or reporting requirements to the Registered Drinking Water Supplier

8. The Council will work with the agencies which have roles and responsibilities for the provision of safe drinking water, including Napier City Council, Hastings District Council, Hawkes Bay District Health Board and Drinking Water Assessors and through multi-agency collaboration to;
   a) implement a multi-barrier approach to the delivery of safe drinking water for Registered Drinking Water Supplies, through the consideration of source protection measures, water treatment and supply distribution standards and;
   b) understand the nature and extent of the water resources used to supply communities, their connectivity with other waterbodies and their recharge sources,
   c) Understanding the nature of the relationship between water age and water quality, the use of water age as an attribute and implications for its management;
   d) understand risks to the quality of water used for Registered Drinking Water Supplies, including through consultation on any applicable resource applications in SPZs or default radius areas;
   e) maintain shared databases of activities that have the potential to adversely affect quality of water used for community supply;
   f) develop solutions that address risks to water quality including wastewater reticulation solutions in Source Protection Zones;
   g) implement a multi-barrier approach to the delivery of safe drinking water for Registered Drinking Water Supplies, through the consideration of source protection measures, and water treatment and supply standards

Riparian Management
9. The Council will promote and support the establishment of riparian vegetation, including in conjunction with stock exclusion and setback regulations that;
   a) contributes to the health of aquatic ecosystems especially for indigenous species;
   b) provides shading to reduce macrophyte growth and water temperature especially in lowland tributaries of the Karamu River;
   c) reduces contamination of water from land use activities;
   d) reduces river bank erosion;
   e) improves local amenity;
   f) enhances recreational activities;
   g) improves fish spawning habitat;
   h) assist in weed control.

10. When making decisions about riparian land management in accordance with Policy 9, the Council will account for management objectives related to land drainage and flood control and where appropriate, support establishment of native plant species in riparian margins to contribute to improving the region’s indigenous biodiversity, the collection of mahinga kai, taonga raranga and taonga rongoa and the mauri of the river.

11. The Council will support improvement of riparian management to meet the specified timeframes (Policy 25 to provide for the values in policies 9 and 10 by;
a) Working with industry groups and land owner collectives to identify where riparian management is to be improved;
b) Providing information about appropriate riparian planting that assists in meeting the values;
c) Regulating cultivation, stock access and indigenous vegetation clearance activities that have a significant adverse effect on functioning of riparian margins in relation to water quality and aquatic ecosystem health in adjacent waterbodies;
d) Providing funding assistance for riparian vegetation improvements;
and
e) when making decisions on applications for resource consent to;
   (i) take into account benefits arising to the values in Policy 9 as a result of the activity;
   (ii) consider whether to waive the fees and charges required to process the application where;
      1. there is significant public benefit from the activity or the nature and scale of the activity results in significant ecosystem benefits; and
      2. the activity is not a requirement of any other resource consent.

Wetland Management
12. The Council will regulate activities in and adjacent to wetlands and will support and encourage the maintenance and improvement of wetland values, including their value for;
   a) biodiversity and as a habitat for indigenous flora and fauna species;
   b) recreation (where appropriate);
   c) cultural uses including for tikanga Maori and mahinga kai;
   d) their role in the hydrological cycle, including their effects on both high and low flows;
   e) enhancement of water quality in connected waterbodies;
   f) fishery habitat.

13. The restoration and extension of natural wetlands and the reinstatement or creation of additional wetlands will be encouraged and supported by Council to provide for or improve the values (a) – (f) in Policy 12 by working with mana whenua, industry and community groups, land owners and other stakeholders in alignment with the Regional Biodiversity Strategy to;
   a) Identify priority areas where wetland management and extent can be improved;
   b) Provide information to landowners about wetland values and their management;
   c) Provide funding assistance for wetland protection and for construction of new wetlands;
   d) Target resources where multiple objectives can be met;
   and
   e) when making decisions on applications for resource consent to;
      (i) take into account benefits arising to the values in Policy 12 as a result of the activity;
      (ii) consider whether to waive the fees and charges required to process the application where;
         1. there is significant public benefit from the activity or the nature and scale of the activity result in significant ecosystem benefits; and
         2. the activity is not a requirement of any other resource consent.

Phormidium Management
14. The Council will address the risks to human health and dogs from toxic phormidium by;
   a) Regular monitoring and reporting on the incidence of algae, including toxic phormidium and nutrient concentrations and ratios of nutrients in freshwater related to phormidium establishment;
b) Adopting applicable national guidelines for the monitoring and management of toxic algae;

c) Supporting national investigations into the incidence of toxic phormidium, the reasons for its establishment and measures to reduce the incidence;

d) reducing nutrient and sediment inputs in accordance with Policies 15 and 16;

e) maintain flushing flow

f) ensuring the public has information about phormidium risk.
MANAGING ADVERSE EFFECTS FROM LAND USE ON WATER QUALITY (Diffuse Discharges);

Adaptive Approach to Nutrient and Contaminant Management

15. The Council will achieve or maintain the freshwater targets or objectives in Schedule 1 with landowners, industry groups, and other stakeholders and will implement the following measures;
   a) establish programmes and processes through Farm Environment Plans, Catchment Collectives and Industry Programmes to ensure land managers;
      (i) adopt industry good practice;
      (ii) identify critical source areas of contaminants at both property and catchment scale;
      (iii) adopt effective measures to mitigate or reduce contaminant loss;
      (iv) prepare nutrient management plans in catchment not meeting targets for dissolved nitrogen.

16. The Council will achieve or maintain the freshwater targets or objectives in Schedule 1 by;
   a) developing nutrient loads and limits for nutrient allocation if the management framework in Policy 15 is not leading to improved attribute states by the time this plan is reviewed;
   b) regulating land use change where there is a significant increased risk of nitrogen loss;
   c) gathering and assessing information about environmental state and trends and the impact of land use activities on these;
   d) working with industry groups, landowners and other stakeholders to undertake research and investigation into;
      (i) nutrient pathways, concentrations and loads in rivers and coastal receiving environments;
      (ii) nutrient uptake and loss pathways at a property scale;
      (iii) measures to reduce nutrient losses at a property as well as catchment scale including those delivered through industry programmes.

17. In catchments that do not meet objectives for dissolved nutrients specified in Schedule 1, the Council will ensure landowners, landowner collectives and industry groups have nutrient management plans according to the priority order in Schedule 3.

Sediment Management

18. The Council will reduce adverse effects on freshwater and coastal aquatic ecosystems from eroded sediment, and from the phosphorus associated with this, by prioritising the following mitigation measures;
   a) regulating cultivation, stock access and vegetation clearance activities;
   b) targeting priority areas and activities for sediment loss management where there is high sediment loss risk and working with land managers to identify and manage critical source areas of contaminants at both property and catchment scale;
   c) informing land managers where land is vulnerable to erosion, using tools such as SedNet and LUC; and providing information about measures that reduce soil loss;
   d) recognising the benefits provided by tree planting and retirement of land for erosion control as well as for mitigating climate change effects and improving indigenous biodiversity by;
      (i) targeting resources where multiple objectives can be met;
      (ii) and supporting landowners to retire land, establish forests where appropriate, and plant trees on land with high actual or potential erosion risk;
   e) Supporting and encouraging improved riparian management across all TANK catchments.

Land Use Change and Nutrient Losses

19. The Council will remedy or mitigate the potential impact of diffuse discharge of nitrogen on freshwater quality objectives by regulating land and water use changes that modelling indicates are likely to result in
increased nitrogen loss (modelled on an annual, whole of property or whole of farm enterprise basis) and in making decisions on resource consent applications, the Council will take into account;

a) Whether freshwater quality objectives or targets are being met in the catchment where the activity is to be undertaken;

b) Where any relevant TANK Industry Programme or Catchment Collective is in place the extent to which the changed land use activity is consistent with the Industry Programme or Collective outcomes, mitigation measures and timeframes;

c) Any mitigation measures required, and timeframes by which they are to be implemented that are necessary to ensure the actual or potential contaminant loss occurring from the property, in combination with other contamination losses in the catchment will be consistent with meeting freshwater quality objectives, including performance in relation to industry good practice, efficient use of nutrients and minimisation of nutrient losses;

and will

d) avoid land use change that will result in increased nitrogen loss that contributes to water quality objectives and targets in Schedule 1 for dissolved nitrogen not being met.

Stock Exclusion

20. The Council will regulate the exclusion of cattle, deer and pigs from rivers, lakes and wetlands, and when considering an application for resource consent or when making decisions about stock exclusion in Industry or Catchment Collective Plans or when making decisions about Farm Environment Plan requirements to take into account the following matters;

a) assessment of sources, scale and significance of adverse effects of sediment, phosphorus, nitrogen and bacterial inputs to the water body that could effectively or efficiently be reduced by stock exclusion, bridging or culverting;

b) identifying whether there are alternative measures to meet water quality outcomes and improve ecosystem health, including by managing bank erosion or reducing sediment losses to water in contributing areas, altering land uses, or providing reticulated water for stock;

c) whether stock exclusion is practicable in the circumstances including in relation to;

(i) total costs of stock exclusion measures compared to expected water quality benefit assessed in (a) and other possible adverse effects including stock welfare;

(ii) technical or practical challenges of any works required for stock exclusion to be effective;

(iii) potential costs and benefits provided by alternative measures compared to stock exclusion.

Industry Programmes and Catchment Management

21. The Council will support the establishment and operation of Industry Programmes and Catchment Collectives and;

a) ensure any relevant information or expertise for making sustainable land management decisions is available to land managers

b) support local investigation and water monitoring programmes where information gaps exist

c) support development and use of catchment scale models that assist in identification and management of critical source areas

d) support catchment and farm scale decision making to meet freshwater objectives and encourage local solutions and innovative and flexible responses to water quality issues

e) work with water permit holders to encourage and support establishment of catchment collectives that address both freshwater quality objectives and stream flow management through environmental management programmes as specified in Schedule 5 and within the timeframes specified in Schedule 3.
22. The Council will continue to work with landowners, industry groups and other stakeholders to manage land and water use activities so that they meet objectives for freshwater/aquatic ecosystems by:
   a) further supporting the development of Industry Programmes that contribute to meeting applicable freshwater objectives by;
      (i) identifying practices that contribute to meeting applicable freshwater objectives;
      (ii) specifying timeframes for completion or adoption of measures to mitigate contaminant losses;
      (iii) ensuring individual performance under an Industry Programme is monitored;
      (iv) providing annual reports to the Council on progressive implementation of measures identified in Industry Programmes established under Schedule 5 and progress towards meeting applicable objectives for water quality;
      (v) promoting adoption of good industry practice;
      (vi) ensuring that Industry Programmes are consistent with the requirements of Schedule 5;
   b) supporting landowners to establish Catchment Collectives to develop and implement environmental management plans that contribute to meeting applicable freshwater objectives by;
      (i) identifying and adopting measures at a property scale and collectively with other land managers that reduce contaminant losses or remedy or mitigate the effects of land use on freshwater objectives;
      (ii) specifying timeframes for completion or adoption of measures to mitigate contaminant losses;
      (iii) ensuring individual performance under a catchment collective is monitored;
      (iv) providing annual reports to the Council on progressive implementation of measures identified in landowner collectives established under Schedule 5 and progress towards meeting applicable objectives for water quality;
      (v) promoting adoption of good agricultural practice;
      (vi) ensuring programmes prepared by a collective is consistent with the requirements of Schedule 5;
   c) Approving any Landowner Collective or Industry Programme developed under Schedule 5;
   d) Auditing Landowner Collective or Industry Programmes prepared and approved under Schedule 5 including auditing of member properties.

23. Where a landowner is not part of an Industry Programme or Catchment Collective, the Council will require development and implementation of a Farm Environment Plan.

Management and compliance.

24. Where individuals are members of a Catchment Collective or Industry Programme but do not undertake their activity in accordance with the approved plan prepared in accordance with Schedule 5, or do not follow the agreed terms of membership the Council will;
   a) provide a conflict resolution service;
   b) where an individual is no longer, or is deemed through conflict resolution processes not to be, a member the Council will;
      (i) require the development of a farm plan for that property within 6 months or;
      (ii) require an application for a land use consent to be made; and
   c) take appropriate enforcement action.
Timeframes; Water and Ecosystem Quality

25. The Council will develop an implementation plan for this Plan Change with industry groups, landowners, water permit holders, tangata whenua, and other stakeholders to ensure that the land owners and lease holders are engaged in industry or landowner collective programmes or have prepared farm environmental plans within the timeframes in Schedule 3 and to ensure reporting (as specified in Schedule 5) on the milestones in Table 1 below;

Table 1: Milestones and Timeframes

<table>
<thead>
<tr>
<th>Action</th>
<th>Activity</th>
<th>Milestone</th>
<th>Output to be reported on</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock and Riparian Land Management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1; Stock exclusion and riparian planting</td>
<td>Stock excluded from rivers in flat and rolling hill country</td>
<td>Stock excluded by 2023</td>
<td>Km of stream with stock exclusion</td>
</tr>
<tr>
<td></td>
<td>Riparian margins planted</td>
<td></td>
<td>Km of riparian margins planted</td>
</tr>
<tr>
<td>2; Stock exclusion and sediment mitigation</td>
<td>Stock access and sediment mitigation in hill country managed through environmental programme or farm plan</td>
<td>According to priority set out in Schedule 3</td>
<td>Soil erosion and critical source area mitigation measures and timeframes for implementation</td>
</tr>
<tr>
<td>3; Riparian management</td>
<td>Shading and planting in Karamu catchment and Heretaunga plains</td>
<td>200km of waterway subject to planting programmes</td>
<td>200km Km of river in Karamu catchment with riparian planting for shade</td>
</tr>
<tr>
<td>Wetlands</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4; wetland management and improvement</td>
<td>Protection and restoration of existing wetlands,</td>
<td>100ha in 5 years and 200ha in ten years from operative date</td>
<td>Hectares of protected and restored wetland</td>
</tr>
<tr>
<td></td>
<td>Reinstatement or creation of additional wetland</td>
<td>100 ha reinstated or additional wetland</td>
<td>Hectares of new wetland</td>
</tr>
<tr>
<td>Nutrient Management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5; Nutrient management</td>
<td>Nutrient management plans</td>
<td>According to priority set out in Schedule 3</td>
<td>Number of properties subject to nutrient plan</td>
</tr>
</tbody>
</table>
STORMWATER MANAGEMENT -
New Urban Infrastructure

26. The effects of stormwater quality and quantity on aquatic ecosystems and community well-being arising from new urban development (including infill development) and its associated infrastructure will be progressively reduced or mitigated by local authorities:
   a) adopting an integrated catchment management approach to the collection and discharge of stormwater before 1 January 2025
   b) adopting, where practicable, a good practice approach to stormwater management including adoption of Low Impact Design for stormwater systems
   c) amending district plans, standards, codes of practice and bylaws by 1 January 2025 to specify design standards for stormwater reticulation and discharge facilities that will achieve the freshwater objectives set out in this plan
   d) developing and making available to the public by 1 January 2023 advice about good stormwater management options (including through HBRCs Waterways Guidelines)
   e) encouraging, through education and public awareness programmes, greater uptake and installation of measures that reduce risk of stormwater contamination.

27. When making decisions about new urban development (including infill development) and associated infrastructure at a site and network scale for stormwater and drainage reticulation, roading networks and public space, HBRC, and the Napier City and Hastings District Councils will, from 1 January 2020, reduce or remedy the effects of stormwater quality and quantity on aquatic ecosystems and community well-being by:
   a) specifying design standards to achieve freshwater objectives through consent conditions;
   b) requiring stormwater to be discharged into a reticulated stormwater network where such a network is available or will be made available as part of the development;
   c) requiring increased retention or detention of stormwater, while not creating flood hazards;
   d) taking into account site specific constraints such as in areas with high groundwater;
   e) taking into account the collaborative approach of HBRC, Napier City and Hastings District councils in managing urban growth on the Heretaunga Plains as it relates to stormwater management; and
   f) taking into account the effects of climate change when providing for new and upgrading existing infrastructure;

Source Control

28. Sources of stormwater contamination will, from 1 January 2023, be reduced, by local authorities;
   a) Specifying requirements for the design and installation of stormwater control facilities on sites where there is a high risk of freshwater contamination arising from either the direct discharge of stormwater to freshwater, the discharge of stormwater to land where it might enter freshwater or the discharge to a stormwater or drainage network;
   b) Requiring the implementation of good site management practices on all sites where there is a risk of stormwater contamination arising from the use or storage of any of the contaminants listed in Schedule 10;
   c) Controlling, and if necessary avoiding, activities that will result in water quality standards not being able to be met.
Dealing with the Legacy

29. Aquatic ecosystem health improvements and reduced stormwater contamination will be achieved through requiring, by 1 January 2020 the preparation and implementation of a site management plan and good site management practices on existing and new industrial and commercial sites with a high risk of stormwater contamination and those in the high priority areas of the Ahuriri catchment; the Karamu River and its tributaries; land over the unconfined aquifer and drinking water Source Protection Zones.

30. Aquatic ecosystem health improvements and reduced stormwater contamination will be achieved by HBRC with the Napier City and Hastings District Councils
   a) requiring stormwater network discharges to meet the management objectives for freshwater and estuary health through resource consent conditions that require, in a way that recognises affordability for ratepayers;
      (i) Application of the Stream Ecological Valuation methodology;
      (ii) Installation of treatment devices within the drainage network;
      (iii) Stream planting/re-alignment for aquatic ecosystem enhancement;
      (iv) Wetland creation and other opportunities for increasing stormwater infiltration where appropriate;
   and
   b) requiring stormwater discharges to meet water quality objectives (where they are degraded by stormwater) and the identification of measures that ensure stormwater discharges will achieve at least the 80th percentile level of species protection in receiving waters by 31 December 2023 and the 95th percentile level of species protection by 31 December 2040.

Consistency and Collaboration; Integration of city, district and regional council rules and processes.

31. To achieve the freshwater quality objectives in this Plan, HBRC, with the Napier City and Hastings District Councils will, by 1 January 2023, implement similar performance standards including through adopting:
   a) consistent engineering standards, plan rules and bylaws;
   b) shared approaches to education and advocacy;
   c) shared processes for monitoring and auditing individual site management on sites at high risk of stormwater contamination;
   d) consistent levels of service for stormwater management and infrastructure design;
   e) an integrated stormwater catchment management approach;
   and through
   f) undertaking a programme of mapping the stormwater networks and recording their capacity.
   g) aligning resource consent processes and having joint hearings to achieve integrated management of urban development proposals particularly in respect of stormwater, water supply and wastewater provisions and implementation of the HPUDS

Ahuriri Catchment

32. The Council will support the wider community commitment to the Ahuriri Estuary Integrated Catchment Management Plan (ICMP) including from Mana Ahuriri, Napier City Council, Department of Conservation by adopting measures to improve the quality of freshwater entering the Ahuriri Estuary and to carry out investigations to help better understand processes and functions occurring within the estuary and its connected freshwater bodies.
MONITORING and REVIEW

33. The Council will recognise and support hapū and landowner involvement in local scale monitoring and monitoring according to mātauranga Māori to assess ecosystem health and water quality in relation to identified values and its contribution to:
   a) understanding local ecosystem health, mahinga kai and mauri especially water quality,
   b) enabling kaitiaki and resource managers’ responsibilities for sustainable freshwater management to be met
   c) assessing effectiveness of mitigation measures adopted to meet freshwater objectives
   d) understanding state and trends of local water quality
   e) adding to the regional knowledge about environmental state and trends
   by;
   f) developing protocols and procedures for monitoring appropriate to the purpose of the monitoring
   g) providing assistance and advice
   h) supporting the provision of monitoring materials
   i) collating and reporting on data as appropriate.

34. Council will meet regularly with representatives from TANK stakeholder groups and mana whenua representatives to;
   a) Review and report on the TANK implementation plan,
   b) Identify issues arising and develop measures to enable their resolution

35. The Council will monitor the effectiveness of the TANK water quality management policies and rules and to assist in making decisions about reviewing or changing this management framework, the Council will:
   a) Continue to monitor instream water quality and review and report on the progress towards and achievement of the water quality objectives in Schedule 1 and according to Objectives 2 and 3 in its regular State of the Environment monitoring;
   b) Monitor and report on the state of riparian land and wetlands, and carry out regular ecosystem habitat assessments, including native fish monitoring and through the application of mātauranga Māori tools and approaches when they are developed;
   c) Monitor the progress towards the milestones listed in Policy 25, according to timeframes specified in Schedule 3 and collate and report annually on information about;
      (i) the nature and extent of the mitigation measures being adopted to meet water quality and/or quantity outcomes through Catchment Collectives, Industry Programmes and Farm Plans;
      (ii) the establishment of Catchment Collectives and assess progress in implementing the measures specified in their environment plans;
      (iii) the preparation of Farm Environment Plans and assess progress in implementing the measures specified in that plan;
   d) Work with Industry Groups to collate information annually on the functioning and success of any Industry Programme in implementing measures specified in the Industry Programme;
   e) Along with the Napier City Council and Hastings District Council, report annually on progress towards the improvement of the stormwater network, including reporting on the preparation of Site Management Plans for activities at risk of contaminating stormwater in urban areas;
   And
   f) commence a review of these provisions within ten years of <operative date> in accordance with section 79 of the RMA.
MINIMUM FLOW REGIMES, GROUNDWATER LEVELS AND ALLOCATION LIMITS;

Heretaunga Plains Freshwater Quantity Management
36. The Council recognises the actual and potential adverse effects of groundwater abstraction in the Heretaunga Plains Water Management Zone on;
   a) groundwater levels and aquifer depletion;
   b) flows in connected surface waterbodies;
   c) flows of the Ngaruroro River;
   d) groundwater quality through risks of sea water intrusion and water abstraction;

and will carry out the following management steps to avoid further adverse effects;

   e) adopt an interim groundwater allocation limit of 90 Mm$^3$ per year;
   f) restrict any new allocations of groundwater;
   g) allow site to site transfers of allocated water provided they do not result in an increase in water use above the use covered by clause (h);
   h) for applications in respect of existing consents due for expiry, or when reviewing consents, to allocate water on the basis of actual and reasonable use that reflects the existing land and water use investment authorised up to August 2017 (except as provided by Policy 47 and will;
      (i) allocate groundwater for the annual or seasonal water demand;
      (ii) when establishing the volume allocated to each consent, take into account water meter information to determine actual and reasonable use, existing infrastructure investment, water sharing arrangements and crop rotation/development phases and the effects of previous water bans on actual water use;
      (iii) allocate water for irrigation based on a reliability standard that meets demand 95% of the time;
      (iv) require water meters to be installed for all water takes authorised by a water permit provided that telemetry will not normally be required where a take has a consented rate of take of less than 5 L/sec.

37. The Council will re-allocate water to holders of permits to take and use water in the Heretaunga Water Management Zone issued before the <plan notification date> according to the new plan policies and rules either;

   a) upon expiry of the consent; or
   b) in accordance with a review of all applicable permits within ten years of <the operative date>;

whichever is the sooner.

Flow enhancement
38. The Council will remedy, or offset if remedying is not practicable, the stream depletion effects and effects on tikanga Māori of groundwater takes in the Heretaunga Plains Water Management Zone on the Karamu River and its tributaries by;

   a) developing stream flow and habitat enhancement schemes that;
      (i) improve stream flows in lowland rivers where groundwater abstraction is depleting stream flows and;
      (ii) improve oxygen levels and reduce water temperatures;

and to;

   b) consult on the design and management of the stream flow enhancement regime;
c) assess the contribution to stream depletion from groundwater takes; and
   (i) Impose costs equitably on consent holders based on the level of stream depletion while providing for exceptions for the use of water for essential human health; and
   (ii) work with permit holders to progressively develop and implement flow enhancement schemes as water permits are replaced or reviewed, including through the establishment and support of catchment collectives in the order consistent with water permit expiry dates;
   (iii) allow site to site transfer of water to enable the operation of a flow enhancement scheme

d) regulate groundwater abstraction so that water use ceases when the minimum flow for the affected stream is reached if a permit holder does not contribute to an applicable flow enhancement scheme;

39. The Council will remedy the stream depletion effects of groundwater takes in the Heretaunga Plains on the Ngaruroro River, in consultation with mana whenua, land and water users and the wider community through;
   a) further investigating the environmental, technical, cultural and economic feasibility of a water storage and release scheme to off-set the cumulative stream depletion effect of groundwater takes;
   b) if such a scheme is feasible, to develop options for funding, construction and operation of such a scheme including through a targeted rate; and
   c) if such a scheme is not feasible, to review alternative methods and examine the costs and benefits of those.

Groundwater management review
40. After water has been re-allocated and consents reviewed in accordance with Policies 36 and 37, the Council will commence a review of these provisions within ten years of <operative date> in accordance with Section 79 of the RMA and will determine;
   a) the amount of water allocated in relation to the interim allocation limit;
   b) the total annual metered groundwater use for the HPWMZ during the ten years prior to the time of review;
   c) if any changes in the relationship between groundwater abstraction and the flows of rivers and groundwater levels have occurred;
   d) the degree of success of any stream flow enhancement schemes in relation to specified objectives for water quality and minimum flows;

And will;
   e) assess the effects of the groundwater takes on the freshwater objectives;
   f) assess the effectiveness of improved riparian management and wetland creation in meeting freshwater objectives;
   g) review the appropriateness of the allocation limit in relation to the freshwater objectives;
   h) develop a plan change to ensure any over-allocation is phased out.

SURFACE WATER LOW FLOW MANAGEMENT
Flow Management Regimes
41. The Council will manage river flows and lake or wetland water levels affected by surface water abstraction activities including groundwater abstraction in Zone 1 during low flow periods so that they meet objectives for aquatic ecosystem health, mauri, tikanga Māori values, and other instream values by;

For the Ngaruroro River;
a) maintaining the existing minimum flows for the Ngaruroro River and its tributaries
b) reducing the effects of abstraction from the mainstem and connected groundwater in Zone 1 by reducing the allocation limit for the Ngaruroro River
c) establishing allocation limits for the river, connected groundwater in Zone 1 and tributaries to account for the cumulative effects of all abstraction and provide water for abstraction at a reasonable security of supply
d) establishing a limit for groundwater abstraction in the upper Ngaruroro catchment based on existing actual and reasonable use until more information about the nature and extent of that resource is available...

For the Tūtaekuri River;

e) increasing the minimum flow for the Tūtaekuri River and the Managone tributary and maintaining the minimum flow for the Managtutu tributary.
f) reducing the effects of abstraction from the mainstem and connected groundwater in Zone 1 by reducing the allocation limit for the Tūtaekuri River
g) establishing allocation limits for the river, connected groundwater in Zone 1 and tributaries to account for the cumulative effects of all abstraction and provide water for abstraction at a reasonable security of supply
h) establishing a limit for groundwater abstraction in the upper Tūtaekuri catchment based on existing actual and reasonable use until more information about the nature and extent of that resource is available

For the Karamu River;
i) maintaining existing flow management regimes for the Karamu River and its tributaries and contributing lakes and wetlands affected by groundwater abstraction and surface water abstractions.
j) establishing allocation limits for the river and tributaries to account for the cumulative effects of all abstraction and provide water for abstraction at a reasonable security of supply

For the Ahuriri Catchment Freshwater Streams;
k) establishing limits for ground and surface water abstraction based on existing actual and reasonable use until more information about the nature and extent of that resource is available

For all water abstraction

l) requiring water meters to be installed for all water takes authorised by a water permit in zones that are fully or over-allocated provided that telemetry will not normally be required where the consented rate of take is less than 5 L/sec
m) ensuring water allocation from tributaries is accounted for within the total allocation limit for the relevant zone and that the total abstraction from any tributary does not exceed 30% of the MALF for that tributary unless otherwise specified in Schedule 6.

n) offsetting the stream depletion effects of any groundwater takes in Zone 1, that were not previously considered stream depleting, by managing them as if they were in the Heretaunga Plains Water Management Zone; and
   i. requiring contributions to lowland stream enhancement programmes at a rate equivalent to the stream depletion effect consistent with Policy 38;
   or
   ii. requiring the water take to cease when the minimum flow for the affected river is reached if a permit holder does not contribute under clause (i) to lowland stream enhancement;
and
iii. providing for further technical assessments to determine the extent of stream depletion effect.

GENERAL WATER ALLOCATION POLICIES
Water Use and Allocation – Efficiency
42. The Council will ensure efficient management of the allocation of water available for abstraction by:
   a) ensuring allocation limits and allocations of water for abstraction are calculated with known security of supply;
   b) ensuring water is allocated to meet actual and reasonable requirements 
   c) encouraging and supporting flexible management of water by permit holders so that the allocatable water can be used efficiently and within permissible limits.
   on-going data collection and monitoring of water resources and water use to better understand patterns of water availability and water use and further develop efficient and effective water management provisions;
43. When considering applications for resource consent, the Council will ensure water is allocated and used efficiently by:
   a) ensuring that the technical means of using water are physically efficient through:
      (i) allocation of water for irrigation end-uses based on soil, climate and crop needs;
      (ii) Requiring the adoption of good practice water use technology and processes that minimise the amount of water wasted; and
      (iii) the use of water meters;
   b) Using the IRRICALC water demand model if available for the land use being applied for (or otherwise by a suitable equivalent approved by Council) to determine efficient water allocations for irrigation uses.
   c) Allocating water for irrigation on the basis of a minimum efficiency standard of 80%
   d) Requiring all non-irrigation water takes (except as provided by Policy 47 for municipal and papakainga supplies) to show how water use efficiency of at least 80% is being met and is consistent with any applicable industry good practice.
   e) Requiring new water takes and irrigation systems to be designed and installed in accordance with industry codes of practice and standards.
   f) Requiring irrigation and other water use systems to be maintained and operated to ensure on-going efficient water use in accordance with any applicable industry codes of practice.

Water Use Change/Transfer
44. When considering any application to change the water use specified by a water permit, or to transfer a point of take to another point of take, to consider;
   a) declining applications where the transfer is to another water management zone unless;
      (i) new information provides more accurate specification of applicable zone boundaries;
      (ii) where the lowland tributaries of the Karamu River are over-allocated, whether the transfer of water take from surface to groundwater provides a net beneficial effect on surface water flows;
   b) effects on specified minimum flows and levels or other water users’ access to water resulting from any changes to the rates or volume of take;
   c) any alteration to the nature, scale and location of adverse effects on the water body values listed in Table 1 (RPS) and in the objectives of this Plan;
d) effects of the alteration to the patterns of water use over time, including changes from seasonal use to water use occurring throughout the year or changes from season to season;

e) except where a change of use and/or transfer is for the purpose of a flow enhancement or ecosystem improvement scheme, declining applications to transfer water away from irrigation end uses in order to protect water availability for the irrigation of the versatile land of the Heretaunga Plains for primary production especially the production of food;

f) in Water Quality Management Units that are over-allocated, ensuring that transfers do not result in increased water use and to prevent the transfer of allocated but unused water;

g) declining applications for a change of use from frost protection to any other end use.

Water Allocation - Permit Duration

45. When making decisions about applications for resource consent to take and use water, the Council will set common expiry dates for water permits to take water in each water management zone, that enables consistent and efficient management of the resource and will set durations that provide a periodic opportunity to review effects of the cumulative water use and to take into account potential effects of changes in:

a) knowledge about the water bodies

b) over-allocation of water

c) patterns of water use

d) development of new technology

e) climate change effects

f) efficacy of flow enhancement schemes and any riparian margin upgrades

by the consented water takes within the water management zone and will impose consent durations of 15 years according to specified water management unit expiry dates. Future dates for expiry or review of consents within that catchment are every 15 years thereafter. Consents granted within three years prior to the relevant common catchment expiry date may be granted with a duration to align with the second common expiry date, except where the application is subject to section 8.2.4 of the RRMP.

Water Allocation - Priority

46. The Council will recognise reasonably foreseeable needs for municipal, papakainga and community water supply for human health and community well-being (excluding any provision for industrial uses that take or are supplied with water from a municipal water supply at rates more than 15m3/day) as priority uses for water available for allocation within allocation limits and,

a) will reserve any water that becomes available for allocation or re-allocation for those uses;

if no application is made or no reasonably foreseeable needs identified for this water use within 5 years of it becoming available, Council will not re-allocate any of the available water until such time as alternative allocation mechanisms are provided through the RMA.

47. In making decisions about resource consent applications for municipal and papakāinga water supply the Council will ensure the water needs of future community growth are met within water limits and;

a) allocate water for population and urban development projections for the area according to estimates provided by the HPUDS (2017) to 2045

b) calculate water demand according to existing and likely residential, non-residential (schools, hospitals, commercial and industrial) demand within the expected reticulation areas and;

(i) require that water demand and supply management plans are developed and adopted and industry good practice targets for water infrastructure management and water use efficiency including meeting an Infrastructure Leakage Index of 4 are met.
(ii) seek that the potential effects of annual water volumes are reflected in level of water supply service and reliability of supply objectives in asset management plans and bylaws for water supply.

(iii) identify communities at risk from water reliability or quality and investigate reticulation options with relevant TLAs, and to allow for transfer of water between community and municipal supplies to enable efficient delivery of water supplies.

48. When making water shortage directions under Section 329, to provide for water uses in the following priority order;
   a) water for the maintenance of public health;
   b) water necessary for the maintenance of animal welfare
   c) essential community well-being and health.
   d) emergency water for surface water users in the Ngaruroro and Tūtaekūri Rivers
   e) uses where water is subject to seasonal demand for primary production
   f) uses for which water is essential for the continued operation of a business, except where water is subject to seasonal demand for primary production or processing

The following uses will not be authorised under a water shortage direction:

   g) use of water uses not associated with the continued operation of a business or community well-being;
   h) non-essential amenity uses such as private swimming pools and car washing

Takes not subject to any restrictions are:

   i) firefighting uses;
   j) non-consumptive uses;

Over-Allocation

49. Except as provided by Policy 36 when establishing limits for permitted water takes or when making decisions on resource consent applications or when reviewing consents where water has been allocated in excess of the specified allocation limits the Council will phase out over-allocation by;

   a) Preventing any new allocation of water (not including any reallocation in respect of permits issued before <date of notification> and those covered by policy 44);
   b) For applications in respect of existing consents due for expiry or when reviewing consents, to;
      (i) allocate water according to demonstrated actual and reasonable need and history of use within the 10 years prior to <the date of notification> (except as provided for by Policy 47)
      (ii) impose conditions that require efficiency gains to be made, including through altering the volume, rate or timing of the take and requesting information to verify efficiency of water use relative to industry good practice standards;
   c) provide for, within the duration of the consent, meeting water efficiency standards and staged reductions in water take and application of minimum flow requirements where hardship can be demonstrated;
   d) reducing the amount of water permitted to be taken without consent, including those provided for by s14 (3)(b) of the RMA, except for authorised uses existing before <date of notification>;
   e) encouraging voluntary reductions, site to site transfers (subject to clause (f)) or promoting water augmentation/harvesting;
   f) ensuring site to site transfers will only be consented where the water use is demonstrated by accurate water or land use records;
g) enabling and supporting permit holders to develop flexible approaches to management and use of allocatable water within a management zone including through catchment collectives, water user groups, consent sharing or global water permits;

h) enabling and supporting the rostering of water use or reducing the rate of takes in order to avoid restrictions at minimum or trigger flows;

**Frost Protection**

50. When considering applications for resource consent to take water for frost protection;

a) from groundwater in the HPWMZ, the Council will avoid, remedy or mitigate actual and potential effects of the take on its own or in combination with other water takes on;

(i) neighbouring bores and existing water users;

(ii) connected surface water bodies;

(iii) water quality as a result of any associated application of the water onto the ground where it might enter water;

b) from surface water, the Council will avoid remedy or mitigate actual and potential effects of the take on its own or in combination with other takes on;

(i) instantaneous flow in the surface water body;

(ii) fish spawning and existing water users;

(iii) applicable minimum flows during November and April.

(iv) water quality as a result of any associated application of the water onto the ground where it might enter water

By;

c) taking into account any stream depletion effects of groundwater takes

d) imposing limits on the total amount able to be abstracted, the maximum rates of take and the duration of any take

e) requiring water metering, monitoring and reporting use of water for frost protection
HIGH FLOW ALLOCATION REGIME

Adverse Effects - Water Damming

51. When assessing applications to dam water and to take water from the dam impoundment, the Council will avoid, remedy or mitigate adverse effects of:
   a) potential changes to water quality arising from subsequent changes to land use activities that may occur as a result of water being allocated for take and use from the dam and whether relevant freshwater quality objectives can be met;
   b) the dam and any associated lake or reservoir, and any effects of the volume, velocity, frequency, and duration of flow releases from the dam, either by itself or cumulatively with other storage structures or dams, on;
      (i) the uses and values for any water body identified in RPS Table 1;
      (ii) water levels and flows in connected water bodies, including lakes and wetlands;
      (iii) water quality, including effects on temperature and management of periphyton in connected water bodies;
      (iv) river ecology and aquatic ecosystems, including passage of fish and eels, indigenous species habitat and riparian habitat, including in relation to the storage impoundment;
   c) whether there are practicable alternatives
   And, except as prohibited by Policy 55, will limit the amount of flow alteration so that the damming of surface water either on its own or in combination with other dams or water storage in a catchment does not cumulatively affect the frequency of flows above three times the median flow by more than 6.3% (in the Ngaruroro River) and ???% in the Tūtaekuri River and provided that any dam in combination with other dams or high flow takes shall not cause changes to the river flow regime that are inconsistent with text to specified flow triggers.

Adverse Effects - Water Take and Storage

52. When assessing applications to take water for off-stream storage or to take water from the impoundment the Council will avoid remedy or mitigate adverse effects of:
   a) potential changes to water quality arising from subsequent changes to land use activities as a result of water being allocated for take and use from the impoundment and whether relevant freshwater quality objectives can be met;
   b) the magnitude, frequency, duration and timing of water takes either by itself or cumulatively with other storage structures or dams, on;
      (i) the uses and values for any water body identified in RPS Table 1;
      (ii) water levels and flows in connected water bodies, including lakes and wetlands;
      (iii) water quality, including effects on temperature and management of periphyton in connected water bodies;
      (iv) river ecology and aquatic ecosystems, including passage of fish and eels, indigenous species habitat and riparian habitat, including in relation to the storage impoundment;
      (v) groundwater recharge;
      (vi) downstream land, property and infrastructure at risk from failure of the proposed storage structure;
(vii) other water users;

and will limit the amount of flow alteration so that the taking of surface water does not cumulatively affect the frequency of flows above three times the median flow in the Ngaruroro and Tūtaekurī Rivers by more than 6.3% and 6.7% respectively and provided that;

(viii) the high flow take ceases when the river is at or below the median flow;
(ix) such high flow takes do not cumulatively exceed the specified allocation limits;
(x) any takes to storage existing as at <date of notification> will continue to be provided for within new allocation limits and subject to existing flow triggers.

Benefits of Water Storage and Augmentation
53. The Council will recognise beneficial effects of water storage and augmentation schemes, including water reticulation in the TANK catchments and out-of-stream storage, and when considering applications for resource consent will take into account the nature and scale of the following criteria;

a) benefits for aquatic organisms and other values listed in RPS Table 1 or in relation to the objectives of this plan in affected water bodies
b) whether water availability is improved or the level to which the security of supply for water users is enhanced
c) whether the proposal provides for the productive potential of un-irrigated land or addresses the adverse effects of water allocation limits on land and water users, especially in relation to primary production on versatile land
d) whether the proposal provides benefits to downstream water bodies at times of low flows provided through releases from storage or the dam.
e) the nature and scale of potential ecosystem benefits provided by the design and management of the water storage structure, its margins and any associated wetlands.
f) benefits for other water users including recreational and cultural uses and any public health benefits.
g) other community benefits including improving community resilience to climate change
h) whether the proposal provides for renewable electricity generation

54. The Council will carry out further investigation to understand the present and potential future regional water demand and supply including for abstractive water uses and environmental enhancement and in relation to climate change. It will consider water storage options according to the criteria in Policy 53 in consultation with local authorities, tangata whenua, industry groups, resource users and the wider community when making decisions about water augmentation proposals in its Annual and Long Term Plans.

55. The Council will protect the instream water values and uses identified in RPS Table 1 for the Ngaruroro and Tūtaekurī Rivers and the tributaries, Taruarau, Omahaki, Mangatutu and Mangaone Rivers by prohibiting the construction of dams on the mainstem of those rivers.

56. The Council will allocate 20% of the total water available at times of high flow in the Ngaruroro or Tūtaekurī River catchments for abstraction, storage and use for the following activities

a) The improvement of Māori economic well-being by;
   (i) direct (funding) contribution to Māori organisations as a result of the use of the stored water at a rate proportional to the amount of water being taken;
   (ii) a direct increase in employment opportunities for Māori at a rate proportional to the amount of water being taken;
(iii) improvement of access to water for domestic use for marae and papakainga;
(iv) contribution to environmental enhancement (that is in addition to any conditions imposed on the water storage proposal);
(v) the development of land returned through Treaty Settlements or acquired through Treaty Settlement funding where there is insufficient water for full development of the land through existing water permits.

And in making decisions on resource applications for this water the Council will;

(vi) require information to be provided that demonstrates how these activities will be provided for;
(vii) have regard to the views of Māori organisations arising from consultation about the application and any assessment of the potential to provide part, or all of the 20% high flow reservation for Māori development
(viii) have regard to any relevant provisions for the storage and use of high flow allocation water for Māori development in any joint iwi/hapu management plans.

57. When making decisions about resource consent applications to take high flow water, the Council will take into account the following matters:

a) whether water allocated for development of Māori well-being is still available for allocation;
b) whether there is any other application to take and use the high flow allocation for development of Māori well-being relevant to the application.
c) the scale of the application and whether cost effective or practicable options for taking and using the high flow allocation for Māori development can be incorporated into the application;
d) the location of the application and whether cost effective or practicable options for including taking and using water for Māori development can be developed as part of the application;
e) whether there has been consultation on the potential to include taking and using all or part of the water allocated for Māori development into the application;
f) whether it is the view of the applicant that a joint or integrated approach is not appropriate or feasible, and the reasons why this is the case.

SPECIFIC POLICIES
Paritua/Karewarewa Streams
58. The Council will recognise the connectivity between ground and surface water abstraction on the flows in the Paritua/Karewarewa Streams and their tributaries, acknowledge the contribution of flows from these streams to the flows in the Awanui Stream, Karamu River and the Heretaunga Plains Aquifer, and their importance to local marae and work with water permit holders, landowners and tangata whenua to;

a) further refine the Heretaunga Plains Aquifer Model to improve model outputs for this catchment;
b) investigate opportunities for wetland creation to improve hydrological functioning and water quality in the river, especially during low flows;
c) improve riparian management to provide shade, reduce macrophyte growth, increased dissolved oxygen levels and decrease water temperature;
d) carry out resource investigations to understand natural stream flow regimes and feasible options for remediation including;
   (i) managed aquifer recharge;
   (ii) flow enhancement from groundwater;
(iii) streambed modification to reduce losses to groundwater in highly conductive reaches;

e) enable and support water permit holders and landowners to collectively manage the
   maintenance of specified flows in the Paritua/Karewarewa Streams;

f) provide for water to be diverted from the Ngaruroro for the enhancement of flows in the
   Paritua Stream.

METHODS OF IMPLEMENTATION

The methods of implementation (not rules) are contained in the accompanying Implementation Plan and
address methods of implementation and measures to be carried out not just by HBRC, but also by the
stakeholder, and mana whenua groups who were part of developing this plan.
### RULES

**Production Land**

<table>
<thead>
<tr>
<th>RULE</th>
<th>ACTIVITY</th>
<th>STATUS</th>
<th>CONDITIONS/STANDARDS/TERMS</th>
<th>MATTERS</th>
</tr>
</thead>
</table>
| TANK1 Production Land Use | The use of production land on farm properties or farming enterprises in the TANK catchments that are greater than 10 hectares pursuant to s9(2) RMA and associated non-point source discharges pursuant to Section 15 (RMA) | Permitted | a) The property or farming enterprise land area has less than 75% plantation forest cover.  
b) Either;  
1. The owner or manager of the property or enterprise is either a member of a TANK Industry Programme or a member of a TANK Catchment Collective within the timeframes specified in Schedule 3 and accordance with the requirements of Schedule 5.  
Or;  
2. The property or enterprise owner or manager of the property shall prepare a Farm Environment Plan in accordance with the requirements of Schedule 5 and within the timeframes specified in Schedule 3; The Farm Environment Plan is being implemented and;  
1. the Council shall be provided with the Farm Environment Plan upon request  
2. information about the implementation of the mitigation measures identified for the property shall be supplied to the Council on request | . |
| Stock Exclusion: | (c) The entry into or over the bed of any river lake or wetland by cattle, deer and pigs is a permitted activity provided that;  
(i) stock are at a stocking rate less than 18su/ha in the paddock adjacent to the river the stock have access to and  
(ii) The slope over 60% or more of the paddock is greater than 15 degrees. | . |
(d) Rivers that are crossed by formed stock races are bridged or culverted by 31 May 2023.
(e) The entry into or over the bed of any river, lake or wetland by cattle, deer and pigs not permitted by condition (c) is a permitted activity until 31 May 2023.
(f) Conditions (d) to (e) apply only to rivers with an active formed channel.

| TANK2 Production Land Use | The use of production land on farm properties or farming enterprises that are greater than 10 hectares in the TANK catchments pursuant to s9(2) RMA and associated non-point source discharges pursuant to Section 15 (RMA) | Controlled | The activity does not meet condition (b) of Rule TANK1.  
1. The water quality limits and targets in Schedule 1 for the catchment where the activity is being undertaken and any measures required to reduce the actual or potential contaminant loss occurring from the property, taking into account their costs and likely effectiveness and including performance in relation to industry good practice and requirements for; 
   a) Efficient use of nutrients and minimisation of nutrient losses, 
   b) Wetland management 
   c) Riparian management 
   d) Management of farm wastes 
   e) Management of stock including in relation to water ways and contaminant losses to ground and surface water 
   f) Measures required to maintain or improve the physical and biological condition of soils so as to reduce risks of erosion, movement of soil into waterways, and damage to soil structure 
   g) Measures to prevent or minimise any adverse effects on the quality of the source water used for a Registered Drinking Water Supply 
2. Nature and scale of actual and potential contamination loss from the property in relation to the objectives specified in Schedule 1 
3. Timeframes for any alternative mitigation measures 
4. Duration of consent 
5. Lapsing of consent 
6. Review of consent conditions; 
7. The collection, recording, monitoring and provision of information concerning the exercising of the consent 
Non Notification provision to be inserted with this rule |
### TANK 3
#### Stock Access
- **Stock Access to rivers lakes and wetlands**
- **Restricted Discretionary**

The activity does not meet any of the conditions (c) – (f) of Rule TANK 1

1. An assessment of sources, scale and significance of adverse effects of sediment, phosphorus, nitrogen and bacterial inputs to the waterbody that could be effectively or efficiently reduced by stock exclusion, bridging or culverting
2. Alternative measures to meet water quality outcomes and improve ecosystem health, including by managing bank erosion or reducing sediment losses to water in contributing areas, altering land uses, or providing reticulated water for stock;
3. Whether stock exclusion is practicable in the circumstances including in relation to:
   a) total costs of stock exclusion measures compared to expected water quality benefit as assessed in relation to matter 1 and other possible adverse effects including stock welfare
   b) technical or practical challenges of any works required for stock exclusion to be effective
   c) potential costs and benefits provided by alternative measures compared to stock exclusion
4. Measures to prevent or minimise any adverse effects on the quality of the source water used for a Registered Drinking Water Supply
5. Timeframes for any alternative mitigation measures
6. Duration of consent
7. Lapsing of consent
8. Review of consent conditions;
9. The collection, recording, monitoring and provision of information concerning the exercising of the consent

### TANK 4
#### Production Land Use
- **The changing of a use of production land on farm properties or**
- **Controlled**

a) Any change to the production land use activity commencing after <date of notification> is over more than 10% of the property or farming enterprise area.
b) The production land is subject to a Catchment Collective Programme meeting the requirements of

1. Modelling using Oversee, or alternative model approved by Council to demonstrate the change in land use activity will be consistent with the requirements of Policy 19
2. The measures being undertaken by the TANK Landowner Collective in undertaking measures to meet water quality objectives, including how the effect of the new land use activity on
| TANK 4a Production Land Use | Restricted Discretionary | a) The production land use activity does not meet the conditions of TANK 4a  
b) Any change to a production land use activity over more than 10ha?? % of the property or enterprise area commencing after <date of notification> that results in the annual nitrogen loss increasing by more than the applicable amount shown in Table 2 in Schedule 4. | contributing to the water quality objectives is being collectively addressed including by;  
a) Efficient use of nutrients and minimisation of nutrient losses,  
b) Wetland management  
c) Riparian management  
d) Management of farm wastes  
e) Management of stock including in relation to waterways and contaminant losses to ground and surface water  
f) Measures required to maintain or improve the physical and biological condition of soils so as to reduce risks of erosion, movement of soil into waterways, and damage to soil structure  
g) Measures to prevent or minimise any adverse effects on the quality of the source water used for a Registered Drinking Water Supply  
3. Timeframes for any alternative mitigation measures  
4. Duration of consent  
5. Lapsing of consent  
6. Review of consent conditions  
7. The collection, recording, monitoring and provision of information including Overseer or alternative model files,  
Non Notification provision to be inserted with this rule |

| farming enterprises that are greater than 10 hectares in the TANK catchments pursuant to s9(2) RMA resulting in an increase in annual N loss and associated non-point source discharges pursuant to Section 15 (RMA) | Schedule 5B by a TANK Catchment Collective which meets the requirements of Schedule 5A.  
c) The Council may require information to be provided about production land use changes (note that the schedule 5 requires collectives to record land use changes) |  

1. Modelling using Overseer, or alternative model approved by Council to demonstrate the change in land use activity will be consistent with the requirements of Policy 19  
2. Whether water quality limits and targets in Schedule 1 are being met in the catchment where the new activity is to be undertaken.  
3. The extent to which the land use change will affect the ability to meet water quality objectives  
4. Any measures required to reduce the actual or potential contaminant loss occurring from the property, taking into account their costs and likely effectiveness and including performance in relation to industry good practice and requirements for; |
### Amend existing rule 7

<table>
<thead>
<tr>
<th>Indigenous vegetation clearance</th>
<th>Permitted</th>
</tr>
</thead>
</table>

An RRMP amendment to Rule 7 to include an exception for land disturbance activities in the TANK catchments.

f. In the TANK catchments, there is no clearance of indigenous vegetation within 10m of any rivers (ref maps/ zones) except:

(i) where the activity is subject to a management plan prepared as part of the NESPF requirements

(ii) where the clearance is part of improvements to riparian management for water quality/biodiversity purposes as specified in the relevant Farm Environment or Catchment Collective Plan

(iii) where the clearance is associated with construction of crossings or installation of reticulated or network service.

---

### Efficient use of nutrients and minimisation of nutrient losses,

b) Wetland management
c) Riparian management
d) Management of farm wastes
e) Management of stock including in relation to waterways and contaminant losses to ground and surface water
f) Measures required to maintain or improve the physical and biological condition of soils so as to reduce risks of erosion, movement of soil into waterways, and damage to soil structure
g) Measures to prevent or minimise any adverse effects on the quality of the source water used for a Registered Drinking Water Supply

---

5. Timeframes for any alternative mitigation measures
6. Duration of consent
7. Lapsing of consent
8. Review of consent conditions
9. The collection, recording, monitoring and provision of information including Overseer or alternative model files,
### Amend existing rule 7

<table>
<thead>
<tr>
<th>Cultivation – steep land</th>
<th>Permitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>An RRMP amendment to rule 7 to include an exception for soil disturbance activities in the TANK catchments;</td>
<td></td>
</tr>
<tr>
<td>g. In the TANK catchments there is no cultivation of land (ref maps/zones) over 20° except;</td>
<td></td>
</tr>
<tr>
<td>(i) where the activity is subject to a management plan prepared as part of the NESPF requirements</td>
<td></td>
</tr>
<tr>
<td>(ii) where it is less than 10% of the paddock area.</td>
<td></td>
</tr>
</tbody>
</table>

### Amend existing rule 7

<table>
<thead>
<tr>
<th>Cultivation - Setbacks</th>
<th>Permitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>An RRMP amendment to rule 7 to include an exception for soil disturbance activities in the TANK catchments;</td>
<td></td>
</tr>
<tr>
<td>h. In the TANK catchments, there is no cultivation of land (ref maps/zones) that results in exposure of bare soil within;</td>
<td></td>
</tr>
<tr>
<td>(i) 5 m of any river, modified watercourse or drain where the land is flat to gently rolling (0-7°)</td>
<td></td>
</tr>
<tr>
<td>(ii) 10 m of any river, modified watercourse or drain where the land is moderately rolling (&gt;7 – 20°)</td>
<td></td>
</tr>
<tr>
<td>(iii) 15 m of any river, modified watercourse or drain where the land is over 20°</td>
<td></td>
</tr>
<tr>
<td>except</td>
<td></td>
</tr>
<tr>
<td>(iv) except where the activity is subject to a management plan prepared as part of the NESPF requirements</td>
<td></td>
</tr>
<tr>
<td>(v) where cultivation is part of improvements to riparian management for water quality/biodiversity purposes as specified in the relevant Farm Environment or Catchment Collective Plan</td>
<td></td>
</tr>
<tr>
<td>(vi) where the cultivation is in relation to activities permitted by Rule 70.</td>
<td></td>
</tr>
</tbody>
</table>

**Note for Rule 7:** The conditions in rule 7 need not apply if the property is part of an industry programme or landowner collective and the activity is described in the relevant property (farm) plan along with a description of the measures that are adopted to mitigate the risk of sediment loss to water to a similar standard.
## Water – Take and Use

<table>
<thead>
<tr>
<th>RULE</th>
<th>ACTIVITY</th>
<th>STATUS</th>
<th>CONDITIONS/STANDARDS/TERMS</th>
<th>MATTERS</th>
</tr>
</thead>
</table>
| TANK 5       | The take and use of surface water in the TANK water Management Zones      | Permitted | a) Except as provided by condition (b), the take is not from any of the following rivers or their tributaries, or Water Management Zones;  
Maraekakaho Stream  
Ahuriri Water Management Zone  
Awanui Stream and its tributaries  
Lake Poukawa Water Management Zone  
Louisa Stream  
b) The take does not exceed 5 cubic metres per day per point of take per any one property except;  
(i) Takes existing as at <date of notification> which may continue to take up to 20 cubic metres per property per day and existing takes to meet the existing needs of animals for drinking water.  
(ii) Takes occurring for a period of less than 28 days within any 90 day period, the total volume taken on any property shall not exceed 200 cubic metre per 7 day period.  
c) The taking of water does not cause any stream or river flow to cease.  
d) Fish and eels shall be prevented from entering the reticulation system  
A Means of Compliance for Condition d)  
Installation of a screen or screens on the river intake that has a screen mesh size not greater than 3 millimetres and is constructed so that the intake velocity at the screen’s outer surface is less than 0.3 metres per second and is maintained in good working order at all times. |         |
<table>
<thead>
<tr>
<th><strong>TANK 6 Groundwater takes...</strong></th>
<th><strong>Permitted</strong></th>
<th><strong>The take and use of groundwater in the TANK Water Management Zones including under Section14(3)(b) of the RMA</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>e) The activity shall not cause changes to the flows or levels of water in any connected wetland.</td>
<td>a) Except as provided by condition (b)(i) for existing activities, the take is not from the Lake Poukawa Freshwater Management Sub-unit (Quantity).</td>
<td></td>
</tr>
<tr>
<td>f) The take shall not prevent from taking water any other lawfully established efficient groundwater take, or any lawfully established surface water take, which existed prior to commencement of the take.</td>
<td>b) There is only one point of take per property and the take does not exceed 5 cubic metres per day except;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(i) Permitted takes existing as at &lt;date of notification&gt; which may continue to take up to 20 cubic metres per property per day and to meet the reasonable needs of animals for drinking water.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(ii) Takes occurring for a period of less than 28 days within any 90 day period, the total volume taken on any property shall not exceed 200 cubic metre per 7 day period.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(iii) The taking of water for aquifer testing is not restricted</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c) The rate of take shall not exceed 10 l/s other than aquifer testing for which the rate of take is not restricted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>d) The take shall not prevent from taking water, any other lawfully established efficient groundwater take, or any lawfully established surface water take, which existed prior to commencement of the take.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>e) The take shall not cause changes to the flows or levels of water in any connected wetland.</td>
</tr>
</tbody>
</table>
| TANK 7  
Re-application for water permits – groundwater in HPWMZ | Restricted Discretionary | f) Backflow of water or contaminants into the bore shall be prevented |
|---|---|---|
| Application to continue to take water in respect of applications subject to section 124 (Heretaunga Plains Water Management Unit) | a) The taking and use of water from the Heretaunga Plains Water Management Unit (Quantity) does not comply with the conditions of rules TANK 6.  
b) The application is for the continuation of a water take and use authorised in a water permit that was issued before <proposed plan date> and that is due for renewal and section 124 applies.  

**Actual and Reasonable Re-allocation***  
c) The amount taken and used for irrigation is the actual and reasonable amount  
d) the amount taken and used for municipal, community and papakāinga water supply is:  
  (i) the quantity specified on the permit being renewed; or  
  (ii) any lesser rate applied for  
e) Other than as provided in (c) or (d) the amount taken and used is the least of:  
  (iii) the quantity specified on the permit due for renewal or  
  (iv) any lesser rate applied for  
  (v) the maximum annual water use in any one year within the 10 years preceding 1 August 2017 (including as demonstrated by accurate water meter records)  

**Stream Flow Enhancement**  
f) The stream flow depletion (in l/sec) will be calculated using the Stream Depletion Calculator* and when a stream flow enhancement scheme for the affected stream* is in        

The Council will impose conditions in respect of the following matters:  
1. The extent to which the need for water has been demonstrated and is actual and reasonable* provided that The quantities assessed or calculated may be amended after taking account of;  
   a. the completeness of the water permit and water meter data record;  
   b. the climate record for the same period as held by the Council (note: these records will be kept by the Council and publically available) and whether that resulted in water use restrictions or bans being imposed;  
   c. effects of water sharing arrangements  
   d. crop rotation/development phases  
2. The use of the land and any changes to the land use as a result of the use of the water so that annual nitrogen losses do not exceed the limits imposed by Table 2 in Schedule 4.  
3. Previous history of exercising the previous consent and whether the applicant has been served with an enforcement order or has been subject to abatement action by the Council  
4. The quantity, rate and timing of the take, including rates of take and any other requirements in relation to any minimum flow or level given in Schedule 4 and rates of take to limit drawdown effects on neighbouring bores.  
5. Where the take is in a Source Protection Zone, the actual or potential effects of the rate of take and volume abstracted on the quality of source water for the water supply and any measures to prevent or minimise any adverse effects on the quality of the source water used for a Registered Drinking Water Supply irrespective of any treatment including notification requirements to the Registered Drinking Water supplier
place a contribution to stream flow enhancement will be calculated according to the extent of total stream flow depletion and based on the allocated amount of water.

**g)** The volume and rate of water able to be abstracted is reduced by an amount equivalent to the stream flow depletion calculated in (e) (as determined by the Stream Depletion Calculator*) at any time the flows in the affected stream reduces below the minimum flows in schedule 4

**h)** Any take authorised under clause (d) is not subject to conditions (f) and (g) in respect of that part of the total allocated amount used for essential human health.

**General Conditions**

**i)** A water meter is installed

**j)** Back flow of water or contaminant entry into the bore shall be prevented

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6.</td>
<td>For applications to take water for municipal, community and papakāinga water supply;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. provisions for demand reduction and asset management over time so that water use is at reasonable and justifiable levels including meeting an Infrastructure Leakage Index of 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Rate and volumes of take limited to the projected demand for the urban area provided in the HPUDS 2017.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. water demand based on residential and non-residential use including for schools, rest homes, hospitals commercial and industrial demand within the planned reticulation areas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>The effects of any water take and use for frost protection on the flows in connected surface water bodies.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>For applications other than irrigation, municipal, community or papakāinga water supply or frost protection, measures to ensure that the take and use of water meets an efficiency of use of at least 80%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Measures to achieve efficient water use or water conservation and avoid adverse water quality effects including the method of irrigation application necessary to achieve efficient use of the water and avoid adverse water effects through ponding and runoff and percolation to groundwater.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Management of bores including means of backflow prevention and ensuring well security.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Information to be supplied and monitoring requirements including timing and nature of water metering data reporting and the installation of telemetered recording and reporting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>The duration of the consent (Section 123 of the Act) as provided for in Schedule 6 timing of reviews and purposes of reviews (Section 128 of the Act).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Lapsing of the consent (Section 125(1)).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Contribution to services or works for the enhancement of river flows associated with groundwater abstraction and stream depletion in the HPWMZ) be provided in respect of the</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TANK 8

<table>
<thead>
<tr>
<th>Surface and groundwater water takes (abstraction at low flows)</th>
<th>Application to continue to take and use water in respect of permits subject to section 124</th>
<th>Restricted Discretionary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>a) The take is not from the Heretaunga Plains Freshwater Management Unit (quantity)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b) The taking and use of water from surface or groundwater water bodies does not comply with conditions of TANK 5, TANK 6.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c) The application is for the continuation of a water take and use authorised in a water permit that was issued before &lt;proposed plan date&gt; and that is due for renewal and section 124 applies except;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(i) where the consent being renewed includes any condition restricting takes at flows that are higher than the applicable flow specified in Schedule 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Actual and Reasonable* Re-allocation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>d) The amount taken and used for irrigation is the actual and reasonable amount</td>
</tr>
<tr>
<td></td>
<td></td>
<td>e) The amount taken and used for municipal, community and papakāinga water supply is:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(i) the quantity specified on the permit being renewed; or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(ii) any lesser rate applied for</td>
</tr>
<tr>
<td></td>
<td></td>
<td>f) Other than as provided in (c) or (d) the amount taken and used is the least of:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(i) the quantity specified on the permit due for renewal or</td>
</tr>
</tbody>
</table>

The Council will restrict its discretion to the following matters;

1. The extent to which the need for water has been demonstrated and is actual and reasonable provided that the quantities assessed or calculated may be amended after taking account of;
   a. the completeness of the water permit and water meter data record;
   b. the climate record for the same period as held by the Council (note: these records will be kept by the Council and publically available) and whether that resulted in water use restrictions or bans being imposed;
   c. effects of water sharing arrangements
   d. crop rotation/development phases

2. The use of the land and any changes to the land use as a result of the use of the water so that annual nitrogen losses do not exceed the limits imposed by Table 2 in Schedule 4.

3. Previous history of exercising the previous consent and whether the applicant has been served with an enforcement order or has been subject to abatement action by the Council

4. The quantity, rate and timing of the take, including rates of take and any other requirements in relation to any relevant minimum flow or level or allocation limit given in Schedule 4

5. Where the take is in a Source Protection Zone, the actual or potential effects of the rate of take and volume abstracted on the quality of source water for the water supply and any measures to prevent or minimise any adverse effects on the performance of conditions and administration charges (Section 108 of the Act).

Note: the amount to be contributed to the stream flow enhancement as required by conditions (f) and (g) will be determined by council in consultation with water permit holders and will be included in the schedule of fees and charges and reviewed annually.

There is still some analysis required to ensure this approach is both robust and legal.
(ii) any lesser rate applied for the maximum annual water use in any one year within the 10 years preceding <date of notification> (including as demonstrated by accurate water meter records)

Surface Water Management (quantity)

g) Any take from groundwater in Zone 1 authorised as at <date of notification> in any surface Water Management Unit (quantity) is subject to either:

(i) a restriction in water flow when the applicable minimum flow is reached in the relevant zone (as shown in schedule ??)

Or

(ii) the take complies with conditions (e) and (f) of rule TANK 7

General Conditions

h) A water meter is installed

i) Fish and eels are prevented from entering the reticulation system

A Means of Compliance for Condition i)
Installation of a screen or screens on the river intake that has a screen mesh size not greater than 3 millimetres and is constructed so that the intake velocity at the screen's outer surface is less than 0.3 metres per second and is maintained in good working order at all times.

j) Back flow of water or contaminants into any bore shall be prevented

quality of the source water used for a Registered Drinking Water Supply irrespective of any treatment including notification requirements to the Registered Drinking Water supplier

6. For applications to take water for municipal, community and papakāinga water supply;
   a. provisions for demand reduction and asset management over time so that water use is at reasonable and justifiable levels including meeting an Infrastructure Leakage Index of 4
   b. Rate and volumes of take limited to the projected demand for the urban area provided in the HPUDS 2017.
   c. water demand based on residential and non-residential use including for schools, rest homes, hospitals commercial and industrial demand within the planned reticulation areas

7. The location of the point(s) of take

8. The effects of any water take and use for frost fighting on the natural flow regime of the river.

9. Information to be supplied and monitoring requirements including timing and nature of water meter data reporting and the installation of telemetered recording and reporting.

10. For applications other than irrigation, municipal, community or papakāinga water supply or frost protection, evidence that the take and use of water meets an efficiency of use of at least 80%

11. Measures to achieve efficient water use or water conservation and avoid adverse water quality effects including the method of irrigation application necessary to achieve efficient use of the water and avoid adverse water effects through ponding and runoff and percolation to groundwater.

12. Management of bores and other water take infrastructure including means of backflow prevention.
13. The duration of the consent (Section 123 of the Act) as provided for in Schedule timing of reviews and purposes of reviews (Section 128 of the Act).
14. Lapsing of the consent (Section 125(1)).
15. For takes from Zone 1 in the Ngaruroro and Tūtaekurī Management Zones Contribution to services or works for the enhancement of river flows associated with groundwater abstraction and stream depletion in relation to takes subject to condition (e)) provided in respect of the performance of conditions and administration charges (Section 108 of the Act).

*Note: the amount to be contributed to the streamflow enhancement as required by conditions (e)(iv) and (j) will be determined by council in consultation with water permit holders and will be included in the schedule of fees and charges and reviewed annually.*

| TANK 9 | Groundwater and Surface water takes (low Flow) | Discretionary | a) The take and use does not comply with the conditions of TANK 7 and TANK 8. The take is not for frost protection and the total amount taken, either by itself or in combination with other authorised takes in the same water management unit does not exceed the total allocation limit in the relevant management unit as specified in Schedule 4 except

(i) where the application is for the continuation of a water take and use authorised in a water permit that was issued before <proposed plan date> and that is due for renewal and section 124 applies and where the consent being renewed includes any condition restricting takes at flows that are higher than the applicable flow specified in Schedule 4.

| TANK 10 | Taking water | Non-complying | a) the activity does not comply with the condition b) of TANK 9.


<table>
<thead>
<tr>
<th>TANK 10b</th>
<th>Moved to RRMP rules below.</th>
<th>a)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TANK 11</td>
<td>Taking water – high flows</td>
<td>Discretionary</td>
<td>a) The take to storage on its own or in combination with other authorised takes is still available for allocation within the limits specified in both columns (D) and (E) of Schedule 7. b) The take to storage does not breach the applicable minimum flow as shown for the relevant river in Schedule 7. c) Except as provided in Schedule 7 the take to storage either on its own or in combination with other takes to storage or damming in the same catchment does not cause the flow regime of the river to be altered by more than the amount specified for that river. Notes; 1. The construction of dams greater than 4 metres in height and holding more than 20,000 m³ will also need a Building Consent. Dams smaller than this are exempt from the Building Act provisions. For rules relating to the construction and maintenance of dams, refer to section 28.2 (Dams and Weirs) in Part IV (Rivers and Lakes).</td>
</tr>
<tr>
<td>TANK 12</td>
<td>Damming</td>
<td>Discretionary</td>
<td>Except as prohibited by Rule TANK 14, and in schedule 7, the damming and discharge from the dam either on its own or in combination with other takes to storage or damming in the same water management zone does not cause the flow regime of the river to be altered by more than 7% of the FREs for that river.</td>
</tr>
<tr>
<td>TANK 13</td>
<td>Take and use from a dam or water impoundment</td>
<td>Discretionary</td>
<td>The taking and use of water from a dam or water impoundment that does not comply with TANK 5.</td>
</tr>
<tr>
<td>TANK 14</td>
<td>Construction of Dams or the damming of water</td>
<td>Prohibited</td>
<td>On the mainstem of the following rivers a) Ngauroro River and its tributaries: (i) Taruarau River (ii) Omahaki River b) Tūtaekuri River and its tributaries: (i) Mangaone River (ii) Mangatutu River No application may be made.</td>
</tr>
</tbody>
</table>
## Discharge Activities

<table>
<thead>
<tr>
<th>RULE</th>
<th>ACTIVITY</th>
<th>STATUS</th>
<th>CONDITIONS/STANDARDS/TERMS</th>
<th>MATTERS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RRMP Rule 32</strong>&lt;br&gt;Drainage water</td>
<td>Diversion and discharge of land drainage water into water (gravity drainage systems)</td>
<td>Permitted</td>
<td>Insert at the end of condition (f);&lt;br&gt;Except in the TANK WMZ&lt;br&gt;&lt;br&gt;(g) After &lt;ten years after date of notification&gt; in the TANK WQMZs dissolved nutrient and sediment concentrations in the discharge water are no more than in the receiving water at the point of discharge as measured by&lt;br&gt;   (i) DIN&lt;br&gt;   (ii) DRP&lt;br&gt;   (iii) suspended sediment</td>
<td>Matters for control/discretion</td>
</tr>
<tr>
<td><strong>New RRMP rule 33A</strong>&lt;br&gt;Drainage water</td>
<td>The diversion and discharge of land drainage water from an existing pumped drainage system (small scale)</td>
<td>Permitted</td>
<td>a) the discharge is in a TANK Water Quality Freshwater Management Unit&lt;br&gt;b) The pumped drainage system existed at &lt;date of notification&gt;&lt;br&gt;c) The land area being serviced by the drainage network is less than 10ha&lt;br&gt;d) There shall be no increase in flooding on any property owned or occupied by another person, as a result of any discharge from the drainage activity.&lt;br&gt;e) The discharge shall not cause any scouring or erosion of any land or any watercourse beyond the point of discharge.&lt;br&gt;f) The activity shall not result in changes to water levels in any connected wetland&lt;br&gt;g) The discharge shall not cause the natural temperature of any receiving water to be changed by more than 3°Celsius from normal seasonal water temperature fluctuations, after reasonable mixing.&lt;br&gt;h) Any discharge of water arising from a drainage system shall be to the same catchment as that to which the water would naturally flow.&lt;br&gt;i) After &lt;ten years after date of notification&gt; in the TANK FQMUs dissolved nutrient and sediment concentrations in the</td>
<td></td>
</tr>
<tr>
<td>RRMP Rule</td>
<td>Activity</td>
<td>Controlled/Permitted Details</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>----------</td>
<td>-----------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RRMP Rule 1</td>
<td>Bore drilling</td>
<td>Controlled, Insert after a); b) The bore is not located within a Source Protection Zone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RRMP Rule 2</td>
<td>Bore drilling</td>
<td>Restricted discretionary, Insert after e); f) The actual or potential effects of the bore and bore drilling on the quality of source water for Registered Drinking Water Supplies and any measures to reduce the risk to the water quality including notification requirements to the Registered Drinking Water supplier, the maintenance of the bore and the well head, including decommissioning the bore where necessary.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RRMP Rule 2</td>
<td>Decommissioning bores</td>
<td>Permitted, Insert after e) Where the bore is in a Source Protection Zone, information to confirm compliance with conditions (a) to (e) shall be provided to the Council upon request</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RRMP Rule 5</td>
<td></td>
<td>Permitted, Insert after (d)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Discharge water are no more than in the receiving water at the point of discharge as measured by:
(i) DIN
(ii) DRP
(iii) suspended sediment

For activities carried out in the TANK FMUs (quality), add additional Matter of Control:

h. Measures or methods required for meeting the receiving water quality standards.

i. Monitoring for water quality
<table>
<thead>
<tr>
<th>Feedlots and feedpads</th>
<th>e) The feedpad or feedlot is not located in a Source Protection Zone</th>
</tr>
</thead>
</table>
| RRMP Rule 6           | Restricted discretionary
| Feedlots and feedpads | Insert after e) The actual or potential effects of the feedlot or feedpad on the quality of source water for Registered Drinking Water Supplies irrespective of any treatment and any measures to reduce the risk to the water quality including notification requirements to the Registered Drinking Water supplier. |
| RRMP Rule 12          | Permitted
| Stock feed            | Insert after g) h) Where the activity is in a Source Protection Zone, information to confirm compliance with conditions (a) to (g) shall be provided to the Council upon request. |
| RRMP Rule 13          | Permitted
| Use of compost, biosolids and other soil conditioners | Insert after i) j) Where the activity is in a Source Protection Zone, the storage or processing of compost or bio-solids and other soil conditions does not exceed < cubic metres> of material. |
| RRMP Rule 14          | Controlled
| Animal Effluent       | Insert after g) h) The activity is not in a source Protection Zone |
| RRMP Rule 15          | Discretionary
| Discharge of animal effluent in sensitive catchments | Insert at the end of the list Or in any Source Protection Zones |
| RRMP Rule 16          | Permitted
| Management of solid waste on production land | Insert after k) l) The activity is not located in a Source Protection Zone |
| RRMP Rule 37          | Permitted
<p>| | Insert after r) |</p>
<table>
<thead>
<tr>
<th>New Sewerage systems</th>
<th></th>
<th>s) The activity is not located in a Source Protection Zone</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RRMP Rule 40</strong> Discharges from Closed landfills</td>
<td>Controlled</td>
<td>Insert after f) The actual or potential effects of the activity on the quality of source water for Registered Drinking Water Supplies and any measures to reduce the risk to the water quality including notification requirements to the Registered Drinking Water supplier.</td>
<td></td>
</tr>
<tr>
<td><strong>RRMP Rule 48</strong> Discharges of solid contaminants including cleanfill to land</td>
<td>Inset after h) i) The activity is not located in a Source Protection Zone</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RRMP Rule 49</strong> Discharges to land that may enter water</td>
<td>Permitted Inset after l) m) The activity is not located in a Source Protection Zone</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RRMP Rule 61</strong> Transfer of Permits to take and use surface water from a river</td>
<td>The transfer of a permit to take and use water from a river to another site Controlled Insert after d) e) The transfer is not in any TANK Freshwater Quantity Management Unit.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RRMP Rule 62</strong> Transfer of Permits to take and use groundwater</td>
<td>The transfer of a permit to take and use groundwater to another site Controlled Insert after d) e) The transfer is not in any TANK Freshwater Quantity Management Unit.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inset new RRMP Rule 62a Transfer of Permits to take and use water</td>
<td>Permanent or temporary transfer of water in accordance with S136(2)(b)(i) of the RMA Controlled a) The transfer is the whole or any part of the holder’s interest in the permit for taking and use of surface or groundwater; 1. To any person or occupier of the site in respect of which the permit is granted, or 2. To another person on another site ( b) The transfer is not between ground and surface water point of take 1. Any applicable conditions on the permit being transferred and any water use permit at the location the water is to be transferred to. 2. The quantity, rate and timing of the take, including rates of take and any other requirements in relation to any relevant minimum flow or level or allocation limit or drawdown effects, including in relation to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
</tbody>
</table>
| **c)** The permit is  
(i) within the same catchment to any point downstream (excluding downstream tributaries) of the location to which the permit applies;  
(ii) for groundwater takes in the Heretaunga Plains FMU (Quantity), the transfer is to any point downstream of any affected stream*; and  
(iii) the transfer is within the same Freshwater Management Unit (Quantity)  
|   |   |   |
| **d)** The transfer of a groundwater take is to an existing bore for which pump tests are available and there is no change to the nature and scale of drawdown effects on neighbouring bores or connected waterbodies as a result of the transfer  
|   |   |   |
| **e)** The transfer does not result in an increase in nitrogen loss as specified in Table 2 in Schedule 4  
|   |   |   |
| **f)** All parties to the transfer shall have metering and reporting at any applicable recording and reporting level except for temporary transfers of less than five days per annum.  
|   |   |   |
| **g)** In fully or over-allocated management units, the transfer shall only be of that part of the permit for which there is actual and reasonable use*  
|   |   |   |
| **h)** The permit shall be transferred only to parties who hold a current consent for the use of water  
|   |   |   |
| **i)** The purpose for the water use does not change except  
(i) that water takes for irrigation use may be transferred for irrigation of different crops subject to condition (e)  
(ii) for transfers that enable the operation of a flow enhancement scheme (ref Policy 38)  
|   |   |   |
| **Advisory Notes**  
- Pursuant to s136(3) of the RMA, the transfer has no effect until written notice of the transfer is received by Hawkes Bay Regional Council. The HBRC will accept transfers via any website being managed for this purpose as satisfying this requirement  
|   |   |   |
| **3. Compliance with any applicable minimum flows and levels including flow enhancement in any applicable stream**  
|   |   |   |
Section 136(5) of the RMA provides that when notification of the transfer has occurred, the permit or that part of the permit transferred shall be deemed to be cancelled, and the permit or part transferred shall be deemed to be a new permit subject to the same conditions as the original permit.

**Insert new rule 62b**

| Permanent or temporary transfer of water in accordance with S136(2)(b)(i) of the RMA | a) The transfer is the whole or any part of the holder’s interest in the permit for taking and use of surface or groundwater that does not comply with TANK 62a |

**RMMP Rule 71 Activities Affecting river control and drainage scheme**

| Insert at the end of the first bullet point: Except for riparian vegetation established to provide shade in the Karamu catchments | Discretionary | The exception needs to be supported by a permitted activity that ensures any riparian planting in these areas is subject to performance standards (and somehow according to a planting guide (that the HBRC is yet to prepare)) |

---

**STORMWATER**

<table>
<thead>
<tr>
<th>RULE</th>
<th>ACTIVITY</th>
<th>CLASSIFICATION</th>
<th>CONDITIONS/STANDARDS/TERMS</th>
<th>MATTERS FOR CONTROL/DISCRETION</th>
</tr>
</thead>
</table>
| **STORMWATER 1** | The diversion and discharge of stormwater into water, or onto land where it may enter water from any new and existing small- | Permitted | (1) The diversion and discharge shall not;  
(a) cause scouring or erosion of land or any water course at or beyond that point of discharge  
(b) cause or contribute to flooding of any property  
(c) contain hazardous substances  
(d) cause to occur or contribute to any of the following:  
I) production of oil or grease films, scums or foams, or floatable or suspended materials  
II) any emission of objectionable odour |  |  |
| Scale and residential activities | iii) Any conspicuous change in colour or the visual clarity of the receiving water body  
iv) any freshwater becoming unsuitable for consumption by farm animals  
v) the destruction or degradation of any habitat, mahinga kai, plant or animal in any water body or coastal water  
vii) the discharge of microbiological contaminants |

(2) There is no stormwater network within a distance of xxx from the property boundary

(3) Any structure associated with the point of discharge or diversion is maintained in a condition such that it is clear of debris, does not obstruct fish passage and is structurally sound.

(4) The person who discharges or diverts, or who causes the discharge or diversion to occur, shall provide such information upon request by the Council to show how conditions (1a) [Erosion], (1b) [Flooding], (1c) [Hazardous Substances], (1d) [Water Quality] will be met or have been met.

| STORMWATER 2 | **Controlled** | Any application for resource consent shall include an Integrated Catchment Management plan includes;  
(i) A monitoring programme to assess existing water quality and level of impact on receiving water quality standards  
(ii) Identification of the spatial extent of the stormwater network to which the application for consent relates  
(iii) Identification of the priority streams or catchments where stormwater discharges currently result in receiving water quality below the standards specified in Schedule 1 |

1) The efficacy of the Integrated Catchment Management Plan including, but not limited to:  
- Its contribution to achieving water quality objectives  
- Its implementation programme and milestones,  
- The comprehensiveness and reliability of the monitoring regime  
- The use of low impact stormwater design methods

2) Its contribution to the avoidance of adverse effects, including cumulative effects, on aquatic ecosystem

---

14 As defined in the district plan in which the property is located
(iv) A programme of mitigation measures including timeframes and milestones for the enhancement of streams identified in (iii),

(v) Identification of any industrial or trade sites, that use, store or produce the discharge of any contaminant of concern (as defined in Table 3.1 of Hawke’s Bay Waterway Guidelines Industrial Stormwater Design),

(vi) Identification of sites within catchments that have a high risk of contaminants entering the stormwater network or land where it might enter surface or groundwater, including industrial and trade premises and areas subject to new urban development.

(vii) For sites identified in (vi) above, a programme to ensure Urban Site Specific Stormwater Management Plans are prepared and implemented so that stormwater quality risks are managed. (schedule 9)

(viii) Identification of areas at risk of flooding, and where levels of service to protect communities from flooding are not being met provide information about how this will be managed.

(ix) The potential effects of climate change on infrastructure capacity and a description of any planned mitigation measures including the identification of secondary flow paths and the capacity of the receiving environment.

(x) Identification of measures to demonstrate how discharges shall not cause scouring or erosion of land or any water course beyond the point of discharge.

(xi) Where the stormwater network (or part thereof) or discharge locations are situated within a Source Protection Zone of a registered drinking water supply, a description of measures to prevent or minimise adverse effects on the quality of the source water for the registered drinking water supply or any increase in the risk of unsafe drinking water being provided to

health and mahinga kai, contact recreation and Māori customary use

(3) The characteristics of the proposed discharge and its effects on the receiving environment

(4) Duration of the consent

(5) Review of consent conditions

(6) Compliance monitoring
persons and communities from the drinking water supply

(xii) Description of measures to demonstrate how the discharge shall not contain hazardous substances\textsuperscript{15} or contaminants (including wastewater) and shall not cause any of the following to occur after reasonable mixing\textsuperscript{16}:

i) production of oil or grease films, scums or foams, or floatable or suspended materials
ii) any emission of objectionable odour
iii) Any conspicuous change in colour or visual clarity of the receiving water
iv) Any freshwater becoming unsuitable for consumption by farm animals
v) the destruction or degradation of any habitat, mahinga kai, plant or animal in any water body or coastal water.

| STORMWATER 3 | Discharge of stormwater to water or onto land where it may enter water from any industrial or trade premises that is deemed to be low risk (as determined Stormwater Risk Matrix, Schedule 10) | Controlled | (1) The diversion and discharge;

(a) shall not cause scouring or erosion of land or any water course beyond the point of discharge
(b) shall not cause or contribute to flooding of any property,
(c) shall not result in surface ponding persisting for longer than 6 hours after the cessation of rainfall
(c) shall not contain hazardous substances\textsuperscript{17}
(d) shall not cause, after reasonable mixing\textsuperscript{18}:

i) production of oil or grease films, scums or foams, or floatable or suspended materials
ii) any emission of objectionable odour | (i) Site design to minimise the potential for contamination release
(ii) Operational procedures to minimise the release of contaminants
(iii) Spill contingency and emergency procedures to minimise the release of contaminants during accidents
(iv) Compliance with relevant industry guidelines and best practice standards
(v) The characteristics of the proposed discharge and its effects on the receiving environment
(vi) Duration of the consent
(vii) Review of consent conditions |

\textsuperscript{15} As defined in the Hazardous Substances and New Organisms Act 1996

\textsuperscript{16} As defined at definition 9.7 in the Glossary of the Hawke’s Bay Regional Resource Plan

\textsuperscript{17} As defined in the Hazardous Substances and New Organisms Act 1996

\textsuperscript{18} As defined in definition 9.7 in the Glossary of the Hawke’s Bay Regional Resource Plan
### STORMWATER 4

| Discharge of stormwater to water or onto land where it may enter water from any industrial or trade premises where the activity is deemed to be of high risk (as determined by the Stormwater Risk Matrix, Schedule 10) | Restricted discretionary | (a) Any application for resource consent shall include an Urban Site Specific Stormwater Management Plan (Schedule 9)  
(b) The diversion and discharge;  
(i) shall not cause scouring or erosion of land or any water course beyond that point of discharge  
(ii) shall not cause or contribute to flooding of any property,  
(iii) shall not result in surface ponding persisting for longer than 6 hours after the cessation of rainfall  
(iv) shall not contain hazardous substances  
(v) is not to land if the industrial or trade premises is located in a Source Protection Zone  
(c) The diversion and discharge shall not cause any of the following to occur after reasonable mixing  
(i) production of oil or grease films, scums or foams, or floatable or suspended materials  
(ii) any emission of objectionable odour  
(iii) Any conspicuous change in colour or the visual clarity | (viii) Compliance monitoring  
(ix) The actual or potential effects of the discharge on the quality of source water for Registered Drinking Water Supplies and any measures to reduce the risk to the water quality |

---

19 As defined in definition 9.7 of the Glossary of the Hawke’s Bay Regional Resource Plan
<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV) result in any freshwater becoming unsuitable for consumption by farm animals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V) the destruction or degradation of any habitat, mahinga kai, plan or animal in any water body or coastal water</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VI) the discharge of microbiological contaminants.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d) There is no reticulated stormwater network at the property boundary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e) Any structure associated with the point of discharge or diversion is maintained in a condition such that it is clear of debris, does not obstruct fish passage and is structurally sound.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(f) Where the activity is located within a Source Protection Zone for a registered drinking water supply the proposed discharge has no adverse effect on the quality of source water within the Secure Protection Zone and its suitability for drinking water use without treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4) The characteristics of the proposed discharge and its effects on the receiving environment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5) Duration of the consent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(6) Review of consent conditions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(7) Compliance monitoring</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## SCHEDULE 1: FRESHWATER QUALITY OBJECTIVES

<table>
<thead>
<tr>
<th>Water quality attribute</th>
<th>Surface WQ areas¹</th>
<th>Water Quality Objective or /Target²</th>
<th>Application</th>
<th>Critical Value ³</th>
<th>Also relevant for</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Water clarity (m)</strong></td>
<td>Upper Ngaruroro and Upper Tūtaekurī Rivers</td>
<td>≥ 5 m</td>
<td></td>
<td>Trout fishery - outstanding</td>
<td>Recreation, ecosystem health, mauri, natural character, Uu, amenity natural character, indigenous biodiversity and mahinga kai, taonga and tohu species and habitat, abstractive uses including for domestic, farm and community water supply, primary production and food production, industrial and commercial use</td>
</tr>
<tr>
<td></td>
<td>Lower Ngaruroro and Upper Tūtaekurī Rivers</td>
<td>≥ 3.75 m</td>
<td>Median, &lt;median flows</td>
<td>Trout fishery - significant</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ngaruroro and Tūtaekurī Tributaries</td>
<td>≥ 3.75 m</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lowland tributaries</td>
<td>≥ 1.6 m</td>
<td>Median, all flows</td>
<td>Recreation / aesthetics</td>
<td></td>
</tr>
<tr>
<td><strong>Turbidity (NTU)</strong></td>
<td>Upper Ngaruroro and Upper Tūtaekurī Rivers</td>
<td>≤ 0.7</td>
<td>Median, at &lt; median flows</td>
<td>trout fishery</td>
<td>Recreation, ecosystem health, UU, ecosystem health, kaitiakitanga, waimaori, natural character, mauri, domestic and farm water supply</td>
</tr>
<tr>
<td></td>
<td>Lower Ngaruroro and Upper</td>
<td>≤ 4.1</td>
<td>Median, all flows</td>
<td>statistical GL</td>
<td>UU, ecosystem health, kaitiakitanga, waimaori, natural character, mauri, abstractive uses including for domestic, farm and community water supply,</td>
</tr>
</tbody>
</table>

¹ Surface WQ areas refer to specific catchment areas. ² Water Quality Objective or Target indicates the specific value or target for each area. ³ Critical Value refers to the threshold level that must be maintained to achieve the objectives.
<table>
<thead>
<tr>
<th>Tūtaekurī Rivers</th>
<th>Ngaruroro and Tūtaekurī Tributaries</th>
<th>≤ 4.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowland tributaries</td>
<td>≤ 5.6</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Deposited sediment (%)</th>
<th>Upper Ngaruroro and Upper Tūtaekurī Rivers</th>
<th>&lt; 20% / &lt; 15% (May-Oct)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Ngaruroro and Upper Tūtaekurī Rivers</td>
<td>&lt; 20%</td>
<td></td>
</tr>
<tr>
<td>Ngaruroro and Tūtaekurī Tributaries</td>
<td>&lt; 20%</td>
<td></td>
</tr>
<tr>
<td>Lowland tributaries</td>
<td>&lt; 20%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Periphyton biomass (mg/m²)²</th>
<th>Lower Ngaruroro and Upper</th>
<th>&gt;50 - &lt;120 mg/m² max 1 p.a.</th>
<th>max 8% exceedance over</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecosystem health (NOF)</td>
<td>Uu, waimaori, natural character, mauri, ecosystem health, kaitiakitanga, he aha haere, taonga/tohu species habitat and spawning, mahinga kai,</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

primary production and food production, industrial and commercial use.
<table>
<thead>
<tr>
<th>Periphyton cover (annual max, %PeriWCC)</th>
<th>Tūtaekurī Rivers</th>
<th>3 years monthly observations</th>
<th>nohoanga, cultural practices, tauranga waka, maori land, marae/hapū, indigenous biodiversity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Ngaruroro and Upper Tūtaekurī Rivers</td>
<td>≤ 20 %</td>
<td>Monthly observations, all year.</td>
<td>Ecosystem health</td>
</tr>
<tr>
<td>Lower Ngaruroro and Upper Tūtaekurī Rivers</td>
<td>≤ 40 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ngaruroro and Tūtaekurī Tributaries</td>
<td>≤ 40 %</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Periphyton cover (seasonal max, %PeriWCC)</th>
<th>Upper Ngaruroro and Upper Tūtaekurī Rivers</th>
<th>3 years monthly observations</th>
<th>nohoanga, cultural practices, tauranga waka, maori land, marae/hapū, indigenous biodiversity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Ngaruroro and Upper Tūtaekurī Rivers</td>
<td>≤ 30 %</td>
<td>Monthly observations, all year (for Uu)</td>
<td>Recreational</td>
</tr>
<tr>
<td>Lower Ngaruroro and Upper Tūtaekurī Rivers</td>
<td>≤ 30 %</td>
<td></td>
<td>Recreational</td>
</tr>
<tr>
<td>Ngaruroro and Tūtaekurī Tributaries</td>
<td>≤ 30 %</td>
<td></td>
<td>Recreational</td>
</tr>
</tbody>
</table>

Uu, waimaori, natural character, mauri, ecosystem health, kaitiakitanga, he aha haere, taonga/tohu species habitat and spawning, mahinga kai, nohoanga, cultural practices, tauranga waka, maori land, marae/hapū, abstractive uses including stock drinking
<table>
<thead>
<tr>
<th>Feature</th>
<th>Area</th>
<th>Threshold</th>
<th>Monitoring</th>
<th>Impact Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyanobacteria (benthic cover %)</td>
<td>All Management Areas</td>
<td>&lt; 20 %</td>
<td>Monthly observations, all year.</td>
<td>Recreation, Waimaori, natural character, Mauri, Ecosystem health, Kaitiakitanga, He aha haere, Taonga/tohu species habitat and spawning, Mahinga Kai, Nohoanga, Cultural practices, Tauranga Waka, Maori land, Marae/hapū, Abstractive uses including stock drinking</td>
</tr>
<tr>
<td>Macrophytes (max %CAV)</td>
<td>Lowland tributaries</td>
<td>≤ 50 %</td>
<td>Monthly observations, all year.</td>
<td>Ecosystem health, Waimaori, natural character, Mauri, Ecosystem health, Kaitiakitanga, Taonga/tohu species, Mahinga Kai, Nohoanga, Cultural practices, Tauranga Waka, Indigenous biodiversity, Abstractive uses including for domestic, Farm and community water supply, Primary production and food production, Industrial and commercial use</td>
</tr>
<tr>
<td>MCI (index)</td>
<td>Upper Ngaruroro and Upper Tūtaekurī Rivers</td>
<td>≥ 120</td>
<td>Average, flow &lt; median</td>
<td>Ecosystem health, Waimaori, natural character, Mauri, Ecosystem health, Kaitiakitanga, Whakapapa, Taonga/tohu species habitat and spawning, Indigenous biodiversity, Trout</td>
</tr>
<tr>
<td></td>
<td>Lower Ngaruroro and Upper Tūtaekurī Rivers</td>
<td>≥ 100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ngaruroro and Tūtaekurī Tributaries</td>
<td>≥ 100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lowland Tributaries</td>
<td>≥ 90</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| DIN (mg/L) | Upper Ngaruroro and Upper Tūtaekurī Rivers | < 0.05 mg/L | biodiversity and taonga/tohu species habitat and spawning
| Lower Ngaruroro and Upper Tūtaekurī Rivers | < 0.15 mg/L | Median, all flows | Estuary ecosystem health, recreation, uu, waimaori, mauri, aquifer recharge, mahinga kai, taonga/tohu species, natural character, ecosystem health, abstractive uses, drinking water
| Ngaruroro and Tūtaekurī Tributaries | < 0.3 mg/L | Algal growth | Estuary ecosystem health, recreation, uu, waimaori, mauri, aquifer recharge, mahinga kai, taonga/tohu species, natural character, ecosystem health, abstractive uses including for domestic, farm and community water supply, primary production and food production, industrial and commercial use
| Lowland tributaries | < 0.444 mg/L | Estuary ecosystem health | Recreation, uu, waimaori, mauri, aquifer recharge, mahinga kai, taonga/tohu species, natural character, abstractive uses, drinking water

| DRP (mg/L) | Upper Ngaruroro and Upper Tūtaekurī Rivers | < 0.003 mg/L | Algal growth | Estuary ecosystem health, recreation, uu, waimaori, mauri, aquifer recharge, mahinga kai, taonga/tohu species, natural character, abstractive uses
| Lower Ngaruroro and Upper | < 0.015 mg/L | Algal growth | Estuary ecosystem health, recreation, uu, waimaori, mauri, aquifer recharge, mahinga kai, taonga/tohu species, natural character, aquifer recharge, abstractive uses

Estuary ecosystem health, recreation, uu, waimaori, mauri, aquifer recharge, mahinga kai, taonga/tohu species, natural character, ecosystem health, abstractive uses including for domestic, farm and community water supply, primary production and food production, industrial and commercial use.
<table>
<thead>
<tr>
<th>Tūtaekuri Rivers</th>
<th>Ngaruroro and Tūtaekuri Tributaries</th>
<th>&lt; 0.015 mg/L</th>
<th>Algal growth</th>
<th>Estuary ecosystem health, recreation, uu, waimaori, mauri, aquifer recharge, mahinga kai, taonga/tohu species, natural character, abstractive uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowland tributaries</td>
<td>&lt; 0.015 mg/L</td>
<td></td>
<td>Estuary ecosystem health</td>
<td>Uu, waimaori, mauri, aquifer recharge, mahinga kai, taonga/tohu species, natural character, ecosystem health, abstractive uses</td>
</tr>
<tr>
<td>Nitrate (mg NO₃-N/L)</td>
<td>Upper Ngaruroro and Upper Tūtaekuri Rivers</td>
<td>median ≤ 1 / 95th%ile ≤ 1.5</td>
<td>annual median, annual 95th%ile (Hazen method), all flows</td>
<td>Toxicty (NOF)</td>
</tr>
<tr>
<td>Ngaruroro and Tūtaekuri Tributaries</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowland Streams</td>
<td>median ≤ 2.4 / 95th%ile ≤ 3.5</td>
<td></td>
<td>Waimaori, mauri, aquifer recharge, indigenous taonga/tohu species habitat and spawning, ahu moana</td>
<td></td>
</tr>
<tr>
<td>Ammonia (mg NH₄-N/L)</td>
<td>Upper Ngaruroro and Upper Tūtaekuri Rivers</td>
<td>median ≤ 0.03 / max ≤ 0.05</td>
<td>Annual median, annual max unionised ammonia based</td>
<td>Toxicty (NOF)</td>
</tr>
</tbody>
</table>
### Lower Ngaruroro and Upper Tūtaekurī Rivers

<table>
<thead>
<tr>
<th>E. coli (cfu/100 ml)</th>
<th>on pH8 at 20°, all flows</th>
<th>Abstractive uses including for domestic, farm and community water supply, primary production and food production, industrial and commercial use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ngaruroro and Tūtaekurī Tributaries</td>
<td>&lt;5% over 540/100ml &lt;20% over 260/100ml median &lt; 130/100ml</td>
<td></td>
</tr>
</tbody>
</table>

### Ngaruroro and Tūtaekurī Tributaries

<table>
<thead>
<tr>
<th>E. coli (cfu/100 ml)</th>
<th>on pH8 at 20°, all flows</th>
<th>Abstractive uses including for domestic, farm and community water supply, primary production and food production, industrial and commercial use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowland tributaries 4</td>
<td>&lt;5% over 1000/100ml &lt;30% over 260/100ml &lt;10% over 540/100ml</td>
<td></td>
</tr>
</tbody>
</table>

### Upper Ngaruroro and Upper Tūtaekurī Rivers

<table>
<thead>
<tr>
<th>E. coli (cfu/100 ml)</th>
<th>on pH8 at 20°, all flows</th>
<th>Abstractive uses including for domestic, farm and community water supply, primary production and food production, industrial and commercial use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ngaruroro and Tūtaekurī Tributaries</td>
<td>&lt;5% over 540/100ml &lt;20% over 260/100ml median &lt; 130/100ml</td>
<td></td>
</tr>
</tbody>
</table>

### Lowland tributaries

<table>
<thead>
<tr>
<th>E. coli (cfu/100 ml)</th>
<th>on pH8 at 20°, all flows</th>
<th>Abstractive uses including for domestic, farm and community water supply, primary production and food production, industrial and commercial use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowland tributaries 4</td>
<td>&lt;5% over 1000/100ml &lt;30% over 260/100ml &lt;10% over 540/100ml</td>
<td></td>
</tr>
<tr>
<td>Dissolved oxygen (mg/L or %) from continuous data</td>
<td>Upper Ngaruroro and Upper Tūtaekuri Rivers</td>
<td>≥8 (7-d mean min) / ≥7.5 (1-d min) / (≥80% saturation)</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>---------------------------------------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>Lower Ngaruroro and Upper Tūtaekuri Rivers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ngaruroro and Tūtaekuri Tributaries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowland tributaries</td>
<td></td>
<td>≥5 (7-d mean min) / ≥4 (1-d min)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Temperature (°C) 5-day CRI from continuous data</th>
<th>Upper Ngaruroro and Upper Tūtaekuri Rivers</th>
<th>≤ 22°C</th>
<th>Cox-Rutherford-Index from continuous measurements, hottest 5 consecutive days, all flows</th>
<th>Ecosystem health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Ngaruroro and Upper Tūtaekuri Rivers</td>
<td></td>
<td>≤ 23°C</td>
<td></td>
<td>Waimaori, natural character, mauri, kaitiakitanga, whakapapa, taonga/tohu species, ahumoana, ahuwahenua mahinga kai indigenous biodiversity, trout</td>
</tr>
</tbody>
</table>
### DRAFT Plan Change for TANK catchments. For Discussion Only – not HBRC policy

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Ecosystem Health</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ngaruroro and Tūtaekuri Tributaries</strong></td>
<td>≤ 23°C</td>
<td></td>
</tr>
<tr>
<td><strong>Lowland tributaries</strong></td>
<td>≤ 23°C&lt;sup&gt;9&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td><strong>Waimaori, natural character, mauri, kaitiakitanga, whakapapa, taonga/tohu species, ahumoana, ahuwhenua mahinga kai</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Indigenous biodiversity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>6.5 – 8.</td>
<td>Ecosystem health</td>
</tr>
<tr>
<td><strong>All areas (not upper Ngaruroro and Tūtaekuri)</strong></td>
<td>6.5–8.5</td>
<td></td>
</tr>
<tr>
<td><strong>At all times, 95&lt;sup&gt;th&lt;/sup&gt; %ile</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BOD (ScBOD&lt;sub&gt;5&lt;/sub&gt;)&lt;sup&gt;10&lt;/sup&gt;</strong></td>
<td>All areas: &lt;2 mg/l</td>
<td>Flow &lt; median</td>
</tr>
<tr>
<td><strong>Flow</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ecosystem health</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Heavy metals and metalloids, pesticides and organic contaminants, radioactive contaminants&lt;sup&gt;10&lt;/sup&gt;</strong></td>
<td>Upper Ngaruroro and Upper Tūtaekuri Rivers: 99% species protection</td>
<td>Ecosystem Health</td>
</tr>
<tr>
<td></td>
<td>All areas (not upper Ngaruroro and Tūtaekuri): 95% species protection</td>
<td>Ecosystem Health</td>
</tr>
<tr>
<td></td>
<td>At all times</td>
<td></td>
</tr>
<tr>
<td><strong>Guideline value for any aesthetic determinand</strong></td>
<td>Groundwater quality all areas&lt;sup&gt;8&lt;/sup&gt;: Within guidelines specified in the NZ</td>
<td>At all times</td>
</tr>
<tr>
<td><strong>(Drinking Water)</strong></td>
<td></td>
<td>Human Health</td>
</tr>
</tbody>
</table>
Standards for New Zealand DWSNZ\(^1\) & Drinking Water Standards & \\

| E. coli (maximum concentration per 100mls) & Groundwater quality all areas\(^8\) & <1 & At all times & Human Health & \\
| Nitrate- nitrogen (concentration of nitrate-nitrogen (mg N-\(\text{NO}_3\)/l)\(^6\)) & Groundwater quality all areas\(^8\) & <1mg/l & At all times & Ecosystem Health & \\
| All other determinands Standards for New Zealand DWSNZ) & Groundwater quality all areas\(^8\) & Guideline value for determinand (Drinking Water Standards for New Zealand DWSNZ) & At all times & Human Health & \\
| Placeholder for mātauranga Māori attributes that are yet to be developed & & & & & \\

*the areas that these water quality objectives refer to are on the attached planning maps

Note 1; Surface water quality management areas for rivers. The management areas are shown on the Planning Maps Details for wetland and lake water quality targets and limits still to come.

Note 2; Where the numeric number is currently being met it is the freshwater objective, and if it is not currently being met then it is a target.

Note 3; The critical value is the value most sensitive to the attribute state (has the highest water quality demand for that attribute). If the needs of the critical value are met, the needs of other values are also met.

Note 4; The council collects information about the periphyton biomass at a limited number of sites. It also has extensive data on periphyton cover, including cyanobacteria at all SOE sites

Note 5; MfE Alert-level framework: New Zealand guidelines for cyanobacteria in recreational fresh waters: Interim guidelines (2009)
### Notes

<table>
<thead>
<tr>
<th>Note</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Maximum 95th percentile concentration of nitrate-nitrogen (mg N-NO₃ /l) shall be calculated as the 95th percentile of monitoring results obtained over a period of 5 consecutive years.</td>
</tr>
<tr>
<td>7</td>
<td>Some aesthetic determinands including iron, manganese and hardness are affected by geological conditions and will affect natural water quality.</td>
</tr>
<tr>
<td>8</td>
<td>The attributes are as measured in groundwater at 10m below ground level.</td>
</tr>
<tr>
<td>9</td>
<td>Subject to external review.</td>
</tr>
<tr>
<td>10</td>
<td>Attribute state established to guide assessment of applications for contaminant discharges.</td>
</tr>
</tbody>
</table>
### SCHEDULE 2: FRESHWATER QUALITY OBJECTIVES

Schedule 2 does not have a regulatory function. It is not a statutory requirement and is an optional provision. However it is included because it satisfies cultural and social needs for a long term and more integrated approach to the way freshwater is managed. It also provides additional direction for the monitoring and research efforts of the Council. This is particularly relevant for the integration of freshwater and estuary ecosystems.

<table>
<thead>
<tr>
<th>Water quality attribute</th>
<th>Zone</th>
<th>Limit / Objective</th>
<th>Value</th>
<th>Protection level</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MCI (index)</strong></td>
<td>Upper Ngaruroro and Upper Tūtaekurī Rivers</td>
<td>≥ 120</td>
<td>Ecosystem health</td>
<td>Ecological condition excellent (for hill country streams and rivers)</td>
<td>average, flow &lt; median</td>
</tr>
<tr>
<td></td>
<td>Lower Ngaruroro and Upper Tūtaekurī Rivers, Ngaruroro and Tūtaekurī Tributaries</td>
<td>≥ 100</td>
<td></td>
<td>Ecological condition good</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>≥ 100</td>
<td></td>
<td>Ecological condition excellent (for lowland streams, Class A)</td>
<td></td>
</tr>
<tr>
<td><strong>Dissolved oxygen (mg/L or %)</strong> from continuous data</td>
<td>Upper Ngaruroro and Upper Tūtaekurī Rivers</td>
<td>≥8 (7-d mean min) / ≥7.5 (1-d min) / (≥80% saturation)</td>
<td>Ecosystem health</td>
<td>Band A No stress caused by low dissolved oxygen on any aquatic organisms that are present at matched reference (near-pristine) sites.</td>
<td>Continuous DO measurements</td>
</tr>
<tr>
<td></td>
<td>Lower Ngaruroro and Upper Tūtaekurī Rivers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ngaruroro and Tūtaekurī Tributaries</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lowland tributaries</td>
<td>≥7 (7-d mean min) / ≥5 (1-d min)</td>
<td></td>
<td>Band B occasional short periods of minor stress on sensitive organisms.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>reference</td>
<td>≤ 21°C</td>
<td></td>
<td>Current state reference condition</td>
<td></td>
</tr>
</tbody>
</table>
### Temperature (°C)

<table>
<thead>
<tr>
<th>Area</th>
<th>Critical Value</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Ngaruroro and Upper Tūtaekurī Rivers</td>
<td>≤ 22°C (A band)</td>
<td>≤1°C increment compared to reference condition</td>
</tr>
<tr>
<td>Lower Ngaruroro and Upper Tūtaekurī Rivers</td>
<td>≤ 23°C (B band)</td>
<td>≤2°C increment compared to reference condition</td>
</tr>
<tr>
<td>Ngaruroro and Tūtaekurī Tributaries, Lowland tributaries</td>
<td>≤ 22°C</td>
<td>(needs further investigation)</td>
</tr>
</tbody>
</table>

### Table 1: Estuary Water and Ecosystem Attributes

<table>
<thead>
<tr>
<th>Water quality attribute</th>
<th>Estuary</th>
<th>Water Quality Objective</th>
<th>Critical Value</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water column dissolved oxygen</td>
<td>Ahuriri</td>
<td>7 day mean ≥7.0mg/L, 7 day minimum ≥6.0mg/L, 1 day minimum ≥5.0mg/L</td>
<td>Ecosystem health Kaitiakitanga</td>
<td>Continuous logger in most susceptible areas of estuary. Summer monitoring data for discrete specified periods. All 3 statistics must be met for each band</td>
</tr>
<tr>
<td></td>
<td>Waitangi</td>
<td>7 day mean ≥7.0mg/L, 7 day minimum ≥6.0mg/L, 1 day minimum ≥5.0mg/L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Escherichia coli/Enterococci</td>
<td>Ahuriri</td>
<td>Microbiological Assessment Category B</td>
<td>Recreation</td>
<td>Microbiological Assessment Category as outlined in</td>
</tr>
<tr>
<td>Parameter</td>
<td>Location</td>
<td>Criteria</td>
<td>Health Category</td>
<td>Note</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>-----------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Water column temperature</td>
<td>Ahuriri and Waitangi</td>
<td>The water temperature shall not be greater than 3°C compared to a reference site</td>
<td>Ecosystem health</td>
<td>Continuous monitoring or summer maxima</td>
</tr>
<tr>
<td>pH</td>
<td>Ahuriri and Waitangi</td>
<td>7.0 &lt; pH &lt; 8.5</td>
<td>Ecosystem health</td>
<td>Preferably use continuous measurements for pH, however in the absence of continuous measurements daily summer maxima can be used</td>
</tr>
<tr>
<td>Nitrate toxicity</td>
<td>Ahuriri and Waitangi</td>
<td>Annual Median 2.4mg/L; and 95th%ile &lt; 3.5mg/L</td>
<td>Ecosystem health</td>
<td>Annual median, annual 95th%ile (Hazen method).</td>
</tr>
<tr>
<td>Ammonia toxicity</td>
<td>Ahuriri and Waitangi</td>
<td>0.46 mg/L</td>
<td>Ecosystem health</td>
<td>Annual maximum within a 12 month period when corrected for pH and temperature</td>
</tr>
<tr>
<td>Toxicants in water</td>
<td>Ahuriri and Waitangi</td>
<td>Should not exceed the 95% level of protection detailed in ANZG, 2018</td>
<td>Ecosystem health</td>
<td>Annual median</td>
</tr>
<tr>
<td>Parameter</td>
<td>Location</td>
<td>Trigger levels. Annual median ≤:</td>
<td>Ecosystem health</td>
<td>Annual median of no less than 8 samples within a 12 month period.</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>-------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>------------------</td>
<td>-------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Nitrogen and Phosphorous in water column      | Ahuriri and Waitangi | - 0.015 Dissolved Reactive Phosphorus mg/L  
- 0.05 Total Phosphorus mg/L  
- 0.05 Nitrate-Nitrogen mg/L  
- 0.11 Total Nitrogen mg/L | Ecosystem health Kaitiakitanga |                                                                                     |
<p>| Nuisance macroalgae cover                     | Ahuriri and Waitangi | tbc                                                                                           | Ecosystem health Kaitiakitanga | tbc                                                               |
| Planktonic chlorophyll                        | Ahuriri and Waitangi | 0.004 mg/L                                                                                     | Ecosystem health Kaitiakitanga | Annual median of no less than 8 samples within a 12 month period. |
| Sediment mud content                          | Ahuriri and Waitangi | The areal coverage of soft mud* substrate in an estuary should not increase from its current extent | Ecosystem health Kaitiakitanga Mahinga kai | Spatial analysis of estuary grainsize. Wet sieving (7 class), no pre-treatment. |</p>
<table>
<thead>
<tr>
<th>Toxicants in sediments</th>
<th>Ahuriri and Waitangi</th>
<th>Should not exceed the 95% level of protection detailed in ANZG, 2018</th>
<th>Ecosystem health Kaitiakitanga Mahinga Kai</th>
<th>Annual median of site replicates at Estuarine Ecological Monitoring sites</th>
</tr>
</thead>
</table>

Notes *Soft mud relates to the proportion of the substrate that is less than 63 microns (can pass through a 63 micron (0.63mm) sieve)*
SCHEDULE 3: PRIORITY CATCHMENTS

This schedule sets out the list of priority catchments or places where

1. Risk of sediment loss is higher than 500t/km²/year (as modelled by SedNet)
2. SOE monitoring shows the freshwater objectives for nitrate concentrations for water quality are not being met
3. Probability that dissolved nutrients do not meet freshwater objectives for nitrogen (as modelled by SOURCE and using Overseer data)
4. The level of dissolved oxygen (specific for lowland streams with slope <2 m/km)
5. There is a Source Protection Zone

The priority order assigned in relation to each of these water quality issues is as follows:

<table>
<thead>
<tr>
<th></th>
<th>High priority</th>
<th>Medium priority</th>
<th>Low priority</th>
<th>Long term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sediment yield (SedNet)</td>
<td>&gt;500 t/km²/year</td>
<td>350 - 500 t/km²/year</td>
<td>250 - 350 t/km²/year</td>
<td>&lt;250 t/km²/year</td>
</tr>
<tr>
<td>TN concentrations (all flows, median)</td>
<td>&gt; 2 mg/L</td>
<td>&gt; 1.2 mg/L</td>
<td>&gt; 1 mg/L</td>
<td>&lt;1 mg/L</td>
</tr>
<tr>
<td>TN yield (modelled) (all flows, average per sub-catchment)</td>
<td>&gt; 10kg/ha/yr</td>
<td>&gt; 3.5 kg/ha/yr</td>
<td>&gt; 1.2 kg/ha/yr</td>
<td>&lt;1.2 kg/ha/yr</td>
</tr>
<tr>
<td>Dissolved Oxygen levels Class A streams (and/or where stream gradient &lt;2m/km)</td>
<td>anoxia (periods of little or no oxygen)</td>
<td>&lt; 3 mg/L daily minimum and/or DO saturation &lt;30%</td>
<td>&lt; 4mg/L daily minimum and/or DO saturation &lt;40%</td>
<td>&lt; 6 mg/L daily minimum and/or DO saturation &lt;60%</td>
</tr>
</tbody>
</table>

Catchment maps will be prepared to show where priority areas are as part of the Implementation Plan. The thresholds for priority are unlikely to change significantly while the status of catchments will change as work is completed within the catchment.

Farm Environment and Catchment Collective Plans and Industry Programmes are to be completed in the following priority order; High, Medium and Low Priority over the first 3, 6 and 9 years respectively following <the operative date> of the plan (although work can commence at any time and farmers will be encouraged to start with their own programme as soon as possible).
**SCHEDULE 4: LAND USE CHANGE**

If the use of production land on farm properties or farming enterprises in the TANK catchments changes over more than 10% of the land area information may be requested from the landowner or land manager to demonstrate or model the annual Nitrogen loss (using Overseer or SPASMO or alternative model approved by HBPRC) in order to:

1. show compliance with the requirements of TANK Rule 4 and 4a
2. enable Policy 15 to be implemented
3. assist landowners to implement the requirements of Schedule 5 items (b)(iii), and (e)

Calculation of changes to the annual nitrogen loss will be based on the data in Table 1 unless more accurate model data specific for the property in question is available.

Table 2 specifies the allowable change in nitrogen load.

The loads are calculated according to the following formula. For each column; the maximum difference between the highest and lowest Nitrogen loss x 10ha.

Where the land use activity involves cropping on a rotational basis, including on lease land at variable locations, production land use change does not include ????

**TABLE 1; NITROGEN LOSSES FOR PRODUCTION LAND**

<table>
<thead>
<tr>
<th>Land Use Type</th>
<th>TN Load (kg/ha/y) (Overseer)</th>
<th>TN Load (kg/ha/y) SPASMO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Esk/Omahu/Pakipaki Soils</td>
<td>Average Other soils</td>
</tr>
<tr>
<td>Beef</td>
<td>20</td>
<td>9</td>
</tr>
<tr>
<td>Dairy</td>
<td>32</td>
<td>9</td>
</tr>
<tr>
<td>Scrub or tree cover</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Mixed sheep, beef and deer</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>Kiwifruit</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Pipfruit</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Summer fruit</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Grapes</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Squash</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Onions</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Sweetcorn/maize</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Peas and beans</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Other vegetable crops</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cereal crops</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Winter forage crops</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE 2 – NITROGEN LOSS THRESHOLDS PER PROPERTY OR FARM ENTERPRISE (ref TANK Rule 4a)**

<table>
<thead>
<tr>
<th>Annual Nitrogen loss change threshold (kg/yr)</th>
<th>Esk/Omahu/Pakipaki Soil types</th>
<th>Other soils</th>
<th>Farndon/Omarunui/Te Awa soil types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unirrigated land uses</td>
<td>290</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irrigated land uses</td>
<td>80</td>
<td>240</td>
<td>430</td>
</tr>
</tbody>
</table>

Change between non-irrigated and irrigated land uses will be subject to a maximum permitted change of 290 (kg/ha/yr) using SPASMO to calculate the change.
SCHEDULE 5: LANDOWNER COLLECTIVE, INDUSTRY PROGRAMME AND FARM ENVIRONMENT PLAN

The TANK Plan provides for an Industry Group or a Catchment Collective to work collectively on behalf of their members to meet local water quality and environmental objectives. Alternatively, landowners may also prepare an individual Farm Environment Plan.

This schedule sets out the requirements for the establishment of a TANK Industry Group or TANK Catchment Collective and their environment plan in order for them to be approved by the Hawke’s Bay Regional Council. It also sets out the requirements for Farm Environment Plans.

Heretaunga Plains Water Management Zone

In the Heretaunga Plains Water Management Zone, requirements for stream flow enhancement will be imposed through conditions of a water permit. Management of a stream flow enhancement scheme is not required to be done by water permit holders acting collectively, however, an Environmental Management Plan can address collective management of any flow enhancement scheme and also address water quality issues according to Sections A and B at the same time.

Industry Groups and Catchment Collectives

A TANK Industry Group or a TANK Catchment Collective must meet the requirements set out in Section A below.

Industry Programme or Catchment Collective Programme

Each TANK Industry or TANK Catchment Collective must prepare an Industry Programme or Catchment Collective Programme that meets the requirements set out in Section B below. This programme must identify the key water quality and water quantity management issues identified in this Plan that are relevant to:

- the catchment
- the nature of the land and water use activities carried out within that catchment
- the scale of the effects on water quality or water quantity from the land and water use activities in that catchment

The Programme will describe an environmental management strategy relevant to the freshwater water management objectives where the member properties are located. An Industry Programme can be based on existing good agricultural practice industry programmes, and will in addition need to address local water quality and quantity issues.

A summary of the Programme objectives and outputs will be publicly available through the Council website.

Any TANK Programme prepared in accordance with Schedule 1 may include or contribute to other initiatives or objectives (such as in relation to farm production, pest control, biodiversity or other land management issue) as desired by the Catchment Collective or Industry Programme.

---

22 This refers to existing industry programmes such as Hort NZ GAP, Sustainable Winegrowing, Fonterra Clean Stream etc.
aspects are not subject to the Council’s approval, but may be a means of enabling integrated land and water management for a wider range of management objectives.

**Farm Environment Plan**

The requirements of the Farm Environment Plan are set out in Section C below.

**Programme Requirements**

**Section A: Industry Groups and Catchment Collectives**

As a minimum an Industry Group or Catchment Collective shall meet the following requirements:

1. **Minimum requirements for establishment**

2. **Governance and Management**

Each Catchment Collective or Industry Group must undertake to carry out the requirements of Section B and must specify the manner it will carry this out. This must address the following:

Details relating to the governance and management arrangements of the Programme including

(i) How decisions are to be made and how the requirements of Section B will be carried out including obligations by members to carry out the property specific requirements

(ii) Conditions of membership of the Programme by individual land managers (the ‘Members’ who commit to the Programme), including the circumstances and terms of membership, sanctions or removal from the Collective or Industry Programme including in relation to unreasonable non-performance of actions identified in clauses 3-6 below.

(iii) The process for assessing performance at an individual property level compared to agreed actions at the catchment scale.

Note 1: the Collective or Industry Programme may prepare its own terms of reference as well as manage their own decision making processes and administration. This may include appointing a spokesperson or secretary to ensure recording and reporting work is completed as necessary. Note 2: If a membership is lapsed, refused or discontinued, the Council will require the landowner to comply with rule TA1

**Information and management systems and processes to ensure;**

(iv) Competent and consistent performance in meeting the requirements of this schedule

(v) Robust data management, including up-to-date registers of Programme Members.

(vi) Timely provision of suitable quality data and information required under the following clauses to Hawke’s Bay Regional Council

(vii) Conditions of membership of the Programme by individual land managers (the ‘Members’) who commit to the Programme

A description of the Programme area including

(viii) locations and maps,
(ix) land uses,
(x) key environmental issues and risks, including;
   a. identifying areas at risk of sediment loss including as a result of land disturbance activities
   b. the location of drains (including subsurface drains), streams, rivers, wetlands and other water bodies
   c. The location of any Source Protection Zone or default radius for any Registered Drinking Water Supply that any properties in the programme area are located in, plus the contact details of the water supply manager
   (Note – Maps included with this plan show the locations of the SPZs and the default radius for any Registered Drinking Water Supplies. Contact information for the supply manager is available on the Council website)
   d. activities at particular risk of nutrient loss
(xi) property boundaries and details about ownership and property managers
(xii) contact details of individual land managers and landowners within the Programme (the ‘Members’).

Section B: Requirements for Catchment Collectives

This section sets out the requirements for the environment plan for each Catchment Collective or Industry Programme

3. Environmental Outcomes

   a) With reference to specified water quality outcomes in Schedule 1 of this Plan relevant to the location of Members’ properties and activities being undertaken, a statement of the measures or practices needed in relation to minimising and mitigating the cumulative environmental effects of land use that will enable the specified water quality objectives to be met including where appropriate for;
      (i) managing contaminant losses (especially sediment, nutrients and bacteria) to waterways including efficient use of nutrients and good practice when carrying out land disturbance activities
      (ii) where water quality is degraded, identifying how there will be reductions in losses that contribute to meeting the specified water quality objectives in Schedule 1
      (iii) managing riparian margins, including to meet the outcomes specified in Policy 9 maintaining or improving the physical and biological condition of soils (Policy 18 ) in order to avoid, remedy or mitigate problems arising from:
               a) Loss of topsoil by wind or water erosion
               b) Movement of soils and contaminants into waterways
               c) Damage to soil structure and health
               d) Mass movements of soil
      (iv) wetland management including to meet the outcomes specified in Policies 12 and 13
      (v) Management of animal effluent to avoid contamination of ground and surface waters
      (vi) Measures required to reduce risk of contamination of the source water for any Registered Drinking Water Supply23.

23 Landowners may require further information that helps them understand the types of measures that should be adopted. If there are particular mitigations that must be adopted, they should be specified.
Management of stock, including in relation to river or stream crossings and exclusion from waterways in a manner that is consistent with Policy 20

In the Karamu and Lake Poukawa Catchments; an assessment of the state of riparian margins in the programme area, and the identification of opportunities to provide shading of the adjacent waterway or improvements to riparian margin values as specified in Policy 1(c) and Policy 2.

4. **Timeframes**

a) Timeframes for when each of the actions or mitigations at a property or catchment scale are to be implemented and which are consistent with meeting the timeframes specified for relevant water quality objectives and milestones specified in the Plan.

5. **Information Requirements**

a) The Catchment Collective or Industry programme must prepare a statement of the data and information that will be collected in order to develop the Catchment Collective Programme or Industry Programme, monitor implementation and report to Council. This will include details about the format and timing of data or information collection and delivery by the member properties and by the Catchment Collective or Industry Programme including:

   i) Any information or assessments about the nature and significance of any land use change in accordance with Policy 19 and based on land uses at the date of plan notification

   ii) Any requirements for record keeping by property managers including information about changes to land ownership

   iii) any environmental monitoring to be carried out by the Catchment Collective or Industry Programme

b) A statement of the information and data to be provided for the member properties (such as might be provided by a Farm Environment Plan) which will be used to develop the Catchment Collective or Industry Programme and which includes where appropriate:

   i) an assessment of the contaminant loss risks (particularly for nutrients, sediment and E. coli) associated with the major farming activities on the member properties or in relation to critical contaminant source areas (including risks associated with direct runoff into waterways and indirect contaminant losses and including contaminant loss risks associated with vegetation clearance).

   ii) A statement (consistent with what is industry agreed good practice) of how the identified contaminant loss risks and soil management will be managed by the property manager, including in relation to industry specified benchmarks or good practice for nitrogen and phosphorous loss and including where appropriate information about

      a) LUC (Land Use Capability)

      b) Olsen P

      c) Stocking rates and densities of different classes of stock

      d) Application of fertilisers

      e) Application of collected animal effluent

      f) Cultivation, soil disturbance or vegetation clearance activities
(iii) A Catchment Collective member may adopt or integrate a plan or documentation developed as part of an Industry Good Agricultural Practice programme, provided that the Plan or documentation is consistent with the requirements of the Catchment Collective Programme.

6. **Nutrient Management**

a) In any catchment or programme area where water quality objectives for nitrogen concentrations as detailed in Schedule 1 (or as further detailed for local rivers) are not being met:
   (i) an inventory of the nitrogen loss rate (kg/ha/year) as determined by application of Overseer (or an alternative nutrient budget model approved by the Hawke’s Bay Regional Council) by a suitably qualified independent practitioner.
   (ii) a description of any mitigation measures identified as necessary to meet water quality objectives on those properties or within the relevant catchment.
   (iii) annual recording and reporting of nutrient input and export data, including annual nitrogen loss rates.

7. **Approval**

a) The Catchment Collective plan or Industry Programme will be submitted for approval by the HBRC by the end of the relevant year specified for that catchment in Schedule 3. In making decisions to approve the Programme the Council will take into account:
   (i) whether the requirements of this Schedule are met
   (ii) whether the programme is consistent with the policies, water quality objectives and milestones that are relevant for that Catchment Collective or Industry Programme
   (iii) whether the Programme was appropriately informed by person(s) with the necessary professional qualifications to make assessments about the contaminant loss risk and mitigation measures
   (iv) whether the governance and management systems are in place to enable the implementation of the programme

8. **Reporting**

a) A summary report on the implementation of the Programme shall be submitted every year to the Hawke's Bay Regional Council that describes:
   (i) The programme area and location and membership
   (ii) Relevant freshwater objectives including where improvements are required in degraded water bodies
   (iii) Any amendments to the programmed mitigation measures plus any changes made to them and reasons for them (including any adverse events such as severe weather, earthquakes etc)
   (iv) The amount, location or nature of mitigation measures implemented,
   (v) Data collected in relation to nutrient loss in clause (e)
   (vi) Any significant land use changes shall be described as necessary to identify any changes in contaminant loss risks and this shall be shown in amendments to the Plan

---

24 This refers to existing industry programmes such as Hort NZ GAP, Sustainable Winegrowing, Fonterra Clean Stream etc.
25 Significant can be interpreted to mean more than 10% of the programme area
(vii) Issues or matters that require input or direction from the Council, including the management of activities outside the Catchment Collective which may be adversely affecting the achievement of the **Catchment Collective Programme**

9. **Programme Review**

b) Each Catchment Collective or Industry Group will review its Programme no less than every 5 years and report to the HBRC on the findings of the review including:
   (i) progress towards meeting freshwater management objectives
   (ii) rate of implementation of identified works to reduce contaminant losses, including sediment and nutrients.
   (iii) adoption of any new mitigation or good practice measures identified by industry,
   (iv) identification of opportunities for improvements to the programme including where necessary amending performance standards, and in relation to nutrient management in clause 6
   (v) any issues arising with meeting objectives or milestone

10. **Auditing**

a) The HBRC will;
   (i) Publicly report on the implementation of TANK Programmes
   (ii) Undertake random annual audits of TANK Industry or Catchment Collective Programmes including on member properties in relation to individual and programme implementation of programmed works, adoption of identified good management practices, including nutrient management budgets where required, and progress towards water quality objectives.

*Note 2: that if the conditions of any applicable rules for specific activities in section 6 of this plan are not being specifically complied with, there is information in the Catchment Collective or Industry Programme to show how the relevant contaminant loss risks are to be managed to a similar level of performance.*

**Section C: Requirements for Farm Plans**
This section sets out the requirements for Farm Environment Plans.

1. **A Farm Environment Plan must;**

   a) be prepared by a person with the professional qualifications necessary to prepare such a plan.

   b) contain the following information;
      (i) physical address
      (ii) details about ownership and property managers including contact details for the person responsible for the implementation of the Plan

   c) be accompanied by maps or aerial photograph at a scale to clearly show
      (i) property boundaries
      (ii) locations or activities likely to result in contaminant loss or at risk from contaminant loss including
      (iii) areas at risk of sediment loss
(iv) the location of drains (including subsurface drains), streams, rivers, wetlands and other water bodies
(v) The location of any Source Protection Zone or default radius for any Registered Drinking Water Supply that any properties in the programme area are located in, plus the contact details of the water supply manager (Note – Maps included with this plan show the locations of the SPZs and the default radius for any Registered Drinking Water Supplies. Contact information for the supply manager is available on the Council website)
(vi) activities at particular risk of nutrient loss
(vii) contaminant discharge activities
(viii) land uses,
(ix) LUC classifications within the farm

d) The requirements of Clauses 3, 4, 5b) and 6 in Section B of this schedule as applicable for the property, its location and the land use activities being carried out.

2. Reporting and Review

a) the council shall be advised when the Farm Environment Plan has been prepared and provided with details about the mitigation measures and timeframes for their completion
b) Information about the implementation of identified mitigation measures or good management practices shall be provided to Council upon request
c) Any amendments to the programmed mitigation measures plus any changes made to them and reasons for them (including any adverse events such as severe weather, earthquakes etc) shall be provided to the Council on request
d) Any significant land use changes 26 shall be described as necessary to identify any changes in contaminant loss risks and this shall be shown in amendments to the Plan
e) The Plan must be reviewed no less than every 5 years and information about the review findings provided to the Council upon request

3. Auditing

b) The HBRC will;
   (i) Publicly report on the implementation of TANK Farm Environment Plan requirements
   (ii) Undertake random annual audits of properties in relation the Farm Environment Plan implementation of programmed works, adoption of identified good management practices, including nutrient management budgets where required.

Note 2: that if the conditions of any applicable rules for specific activities in section 6 of this plan are not being specifically complied with, there is information in the farm Environment Plan to show how the relevant contaminant loss risks are to be managed to a similar level of performance.

---

26 Significant can be interpreted to mean more than 10% of the programme area
Note: the diagram below shows how the three environmental management approaches provided for in TANK 1 and Schedule 1 inter-relate with each other and their relationship with Council regulations. (The diagram is not part of the Plan Change but is included here for assistance in interpretation.)

| Having a Farm Environment Plan signed off by council does not preclude a producer from being involved in an Industry Programme that is not signed off by the Council | Having an Industry Programme signed off by the Council does not preclude a producer from having their own farm plan that is not signed off by Council | Being in a Collective that is signed off by Council does not preclude a producer from having their own farm plan or Industry Programme that is not signed off by Council. But the Collective is the mechanism by which the producer is held accountable by the Council |

27 Diagram is from TANK plan change: Barriers and risks to the adoption of proposed mechanisms to coordinate management action June 2018 Report by: Justin Connolly Director, Deliberate
SCHEDULE 6: FLOWS, LEVELS AND ALLOCATION LIMITS

Minimum and Trigger Flows and Allocation Limits
<table>
<thead>
<tr>
<th>Water Management Units (quantity) and includes any tributaries of the named river</th>
<th>Water bodies</th>
<th>Minimum flow/flow enhancement site</th>
<th>Minimum Flow (litres/second)</th>
<th>Flow enhancement Trigger</th>
<th>Allocation limit (litres/second for surface water and M³/week for groundwater)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ahuriri</td>
<td>All surface water</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>Existing use only¹</td>
</tr>
<tr>
<td></td>
<td>All groundwater</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>Existing use only²</td>
</tr>
<tr>
<td></td>
<td>Karamu/Clive River</td>
<td>Awanui</td>
<td>The Flume</td>
<td>120</td>
<td>Total not to exceed 30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kawerawera/Paritua</td>
<td>Turamoe Rd</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ongaru</td>
<td>Wenley Rd</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Irongate</td>
<td>Clarks Weir</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Louisa Stream</td>
<td>Te Aute Rd</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Te Waikaha Stream</td>
<td>Muntiny Rd</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mangateretere Stream</td>
<td>Napier Rd</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Karamu River</td>
<td>Floodgates</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Raupare Stream</td>
<td>Ormond Rd</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lake Poukawa Surface water</td>
<td>At Douglas Rd</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lake Poukawa Groundwater</td>
<td>At Douglas Rd</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maraekakaho River</td>
<td>Taits Rd</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tūtaekurī - Waimate</td>
<td>Goods Bridge</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>Ngaruroro River s/w and g/w</td>
<td>Ngaruroro River (surface and Zone 1)</td>
<td>Chesterhope</td>
<td>? (awaiting a date for transfer of the monitoring site?)</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ngaruroro Groundwater</td>
<td>N/a</td>
<td>n/a</td>
<td>1300</td>
</tr>
<tr>
<td></td>
<td>Tūtaekurī River s/w and g/w</td>
<td>Mangatutu Stream</td>
<td>Puketapu</td>
<td>3800³⁵</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mangaone River</td>
<td>Puketapu</td>
<td>2500</td>
<td>140</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tūtaekurī (surface plus Zone1)</td>
<td>Puketapu</td>
<td>2500</td>
<td>1140</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tūtaekurī groundwater</td>
<td>n/a</td>
<td>n/a</td>
<td>Existing use only²</td>
</tr>
<tr>
<td>Heretaunga Plains Water Management Unit (Quantity)</td>
<td>Heretaunga Plains groundwater</td>
<td>n/a</td>
<td>n/a</td>
<td>(Interim limit 90Mm³ per year) Existing use only</td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>-------------------------------</td>
<td>-----</td>
<td>-----</td>
<td>-----------------------------------------------</td>
<td></td>
</tr>
</tbody>
</table>

**Note 1:** Any authorised take of surface water existing at <date of notification> is also subject to actual and reasonable assessments.

**Note 2:** This limit constrains use to existing levels existing at <date of notification> until more information is available about nature and extent of the groundwater including recharge information and connections with other water bodies.

---

35 reflects existing consents
### SCHEDULE 7: HIGH FLOW ALLOCATION

**Table; High Flow Allocation Limits and Triggers**

<table>
<thead>
<tr>
<th>(A) RIVER NAME</th>
<th>(B) FLOW MANAGEMENT SITE</th>
<th>(C) FLOW TRIGGER</th>
<th>(D) HIGH FLOW ALLOCATION</th>
<th>(E) AMOUNT RESERVED FOR MĀORI DEVELOPMENT</th>
<th>(F) LIMITS FOR DAMMING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ngaruroro R</td>
<td>Fernhill</td>
<td>20 m³/sec</td>
<td>8,000 litres per second*</td>
<td>1,600 litres per second</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>This includes:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- the 2 m³/sec allocation allocated in consents existing at &lt;date of notification&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- the amount taken from high flow in any tributary of the Ngaruroro</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- the amount specified in column (E)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Abstraction of up to 1 m³/sec authorised in consents existing as at &lt;date of notification&gt; Included in the 1 m³/sec is abstraction of up to 400 l/sec which is solely available to be discharged into the Paritua Stream to provide for stream enhancement</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>200 l/sec which is solely available to be discharged into the Paritua Stream to provide for stream enhancement</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>Ngaruroro and Tūtaekurī Tributaries</td>
<td>Median flow</td>
<td>Proportionally in comparison to flow contributions to the main stem. This is included as part of the total allocation for the mainstem high flow allocation.</td>
<td>20% of any high flow allocation from any tributary.</td>
<td>No change of more than 10% to FREs in the mainstem of the applicable River</td>
<td></td>
</tr>
<tr>
<td>Tūtaekurī</td>
<td>Puketapu</td>
<td>8,000 litres per second</td>
<td>2,500 litres per second</td>
<td>500 litres per second</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>This includes</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- the amount taken from high flow in any tributary of the Tūtaekurī</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- the amount specified in column (E)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**SCHEDULE 8; WATER PERMIT EXPIRY DATES**

Refer to Policy 45. Note; Some current catchment dates still need to be confirmed.)

The Council will consider the following schedule when determining the duration of any permit to take and use water. Where appropriate, the duration of the consent will be consistent with the next common expiry date for the relevant water management as shown in this schedule.

If an application is made up to three years before the next due date for the relevant zone, the Council may issue the permit for the following expiry date.

For applications in an area for which no expiry date is specified, the duration of the consent will be a matter for Council’s discretion.

<table>
<thead>
<tr>
<th>Current common expiry date</th>
<th>Management Area</th>
<th>Next expiry dates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Groundwater (HPWMU)</td>
<td></td>
</tr>
<tr>
<td>2019 + 2018</td>
<td>Poraiti – (Heretaunga Plains WMU)</td>
<td>2033 2048</td>
</tr>
<tr>
<td>2019 + 2018</td>
<td>Ahuriri</td>
<td>2033 2048</td>
</tr>
<tr>
<td>2019</td>
<td>Unconfined Aquifer &amp; Unconfined Part Of Twyford</td>
<td>2035 2050</td>
</tr>
<tr>
<td>2020</td>
<td>Twyford Confined</td>
<td>2035 2050</td>
</tr>
<tr>
<td>2021</td>
<td>St George</td>
<td>2036 2051</td>
</tr>
<tr>
<td>2022</td>
<td>Te Mata</td>
<td>2037 2052</td>
</tr>
<tr>
<td>2023</td>
<td>Longlands/Pakipaki, Hastings</td>
<td>2038 2053</td>
</tr>
<tr>
<td>2024</td>
<td>Haumoana, Whakatu/Clive,</td>
<td>2039 2054</td>
</tr>
<tr>
<td>2024</td>
<td>Twyford</td>
<td>2040 2055</td>
</tr>
<tr>
<td>2025</td>
<td>Pakowhai, Omarunui,</td>
<td>2040 2055</td>
</tr>
<tr>
<td>2026</td>
<td>Moteo</td>
<td>2041 2056</td>
</tr>
<tr>
<td>2027</td>
<td>Napier/Meeanee</td>
<td>2042 2057</td>
</tr>
<tr>
<td>2028?</td>
<td>Poraiti ???</td>
<td>2043 2058</td>
</tr>
<tr>
<td>2023</td>
<td>Karamu Catchment</td>
<td>2040 2058</td>
</tr>
<tr>
<td>2028</td>
<td></td>
<td>2043 2058</td>
</tr>
<tr>
<td></td>
<td>Groundwater (other not including Zone 1 or HP)</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>Ahuriri</td>
<td>2039 2059</td>
</tr>
<tr>
<td>2029</td>
<td></td>
<td>2044 2059</td>
</tr>
<tr>
<td>2023</td>
<td>Karamu Catchment</td>
<td>2040 2058</td>
</tr>
<tr>
<td>2028</td>
<td></td>
<td>2043 2058</td>
</tr>
<tr>
<td>2028?</td>
<td>Tūtaekuri Catchment</td>
<td>2043 2058</td>
</tr>
<tr>
<td>2025</td>
<td>Ngaruroro Catchment</td>
<td>2040 2055</td>
</tr>
<tr>
<td></td>
<td>Surface Water (including Zone 1 gw)</td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td>Karamu (and all tribs except</td>
<td>2040 2058</td>
</tr>
<tr>
<td>2028</td>
<td>Raupare</td>
<td>2043 2058</td>
</tr>
<tr>
<td>2025</td>
<td>Raupare</td>
<td>2044 2059</td>
</tr>
<tr>
<td>2026</td>
<td>Tūtaekuri-Waimate</td>
<td>2041 2055</td>
</tr>
<tr>
<td>2028</td>
<td>Tūtaekuri (Whole Catchment)</td>
<td>2043 2058</td>
</tr>
<tr>
<td>2025</td>
<td>Ngaruroro (Whole Catchment)</td>
<td>2040 2055</td>
</tr>
<tr>
<td>2019</td>
<td>Ahuriri</td>
<td>2039 2059?</td>
</tr>
<tr>
<td>+ 2028</td>
<td></td>
<td>2043 2059?</td>
</tr>
</tbody>
</table>
SCHEDULE 9: SITE MANAGEMENT PLAN - STORMWATER MANAGEMENT

Refer to Rule TANK xx of the RRMP, a Site Management Plan (SMP) is required to outline the methods by which the consent holder will address the risk posed by usage and storage of contaminants of concern associated with the industrial or retail activity. The SMP will specifically include the following information (further refinement still necessary):

1. Name and description of Company and location of site
   Full description of the entity and the physical location of the site.

2. Site activities and stores
   What activities are on site? What facilities are on site? Attach maps/diagrams if necessary.

3. Site layout and drainage plan(s)
   Written summary and maps and plans. Boundaries, location of proposed activities and location of water features on property (streams, drains, ponds etc.)

4. Site receiving environments
   Insert information about the discharge areas into receiving environments and attach maps/plans if necessary.

5. Identification of risks with the activities on the property and how they will be managed
   Descriptions of:
   - Management of contaminants of concern: how the consent holder will ensure contaminants of concern and hazardous substances are not discharged
   - Methods of protecting and where possible improving receiving water quality environments
   - Source control: methods of good site management

6. Management of stormwater treatment devices
   Insert full descriptions of all your stormwater treatment devices and reasoning for use. If you need to install devices but have not yet done so explain here including the timeframe for doing so.

7. Maintenance programme
   Written summary of how stormwater devices will be monitored over time.
**SCHEDULE 10: STORMWATER RISK MATRIX**

(note this requires reformatting)

<table>
<thead>
<tr>
<th>CATCHMENT:</th>
<th>SUB-CATCHMENT:</th>
<th>UNIQUE SITE ID:</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE:</td>
<td>SUB-CATCHMENT:</td>
<td>UNIQUE SITE ID:</td>
</tr>
<tr>
<td>MAP GRID:</td>
<td>SUB-CATCHMENT:</td>
<td>UNIQUE SITE ID:</td>
</tr>
</tbody>
</table>

**A. SITE LOCATED IN POTABLE SOURCE PROTECTION ZONE?**

- Y  N (If Yes Site is classed as High Risk but still carry out assessment as below)

**B. SITE DATA AND BASIC CLASSIFICATION**

- Category: Commercial Industrial Miscellaneous
  - Institutional Municipal Golf Course
  - Transport-Related Marina
  - Animal Facility
- Consent Status: Consented Unconsented Unknown
- Basic Description of Operation:

**C. VEHICLE OPERATIONS**

- N/A (Skip to part C)
- Observed Pollution Source?

**C1. Types of vehicles:**
- Fleet vehicles
- School buses
- Other: ________________

**C2. Approximate number of vehicles:**

**C3. Vehicle activities (circle all that apply):**
- Maintained
- Repaired
- Recycled
- Fueled
- Washed
- Stored

**C4. Are vehicles stored and/or repaired outside?**
- Y  N  Can’t Tell

**C5. Are these vehicles lacking runoff diversion methods?**
- Y  N  Can’t Tell

**C6. Is there evidence of spills/leakage from vehicles?**
- Y  N  Can’t Tell

**C7. Are uncovered outdoor fueling areas present?**
- Y  N  Can’t Tell

**C8. Are fueling areas directly connected to storm drains?**
- Y  N  Can’t Tell

**D. OUTDOOR MATERIALS**

- N/A (Skip to part D)
- Observed Pollution Source?

**D1. Are loading/unloading operations present?**
- Y  N  Can’t Tell

**D2. Are materials stored outside?**
- Y  N  Can’t Tell

**D3. Is the storage area directly or indirectly connected to storm drain (circle one)?**
- Y  N  Can’t Tell

**D4. Is staining or discoloration around the area visible?**
- Y  N  Can’t Tell

**D5. Does outdoor storage area lack a cover?**
- Y  N  Can’t Tell

**D6. Are liquid materials stored without secondary containment?**
- Y  N  Can’t Tell

**D7. Are storage containers missing labels or in poor condition (rusting)?**
- Y  N  Can’t Tell

**E. WASTE MANAGEMENT**

- N/A (Skip to part E)
- Observed Pollution Source?

**E1. Type of waste (check all that apply):**
- Rubbish
- Construction materials
- Hazardous materials

**E2. Waste Bin condition (check all that apply):**
- No cover
- Lid is open
- Damaged
- Poor condition
- Leaking

**E3. Is the Waste Bin located near a storm drain inlet?**
- Y  N  Can’t Tell

Adapted from the Hotspot Site Investigation Model, United States Environmental Protection Agency

A-1
### F. PHYSICAL PLANT

| Evidence that maintenance results in discharge to storm drains (staining/discoloration)? □ Y □ N □ Don’t know |

| F2. Roofing Material: □ Clean □ Stained □ Dirty □ Damaged □ Asbestos? |

| Surface material □ Paved/Concrete □ Gravel □ Permeable □ Don’t know |

| F4. Do downspouts discharge to impervious surface? □ Y □ N □ Don’t know □ None visible |
| Are downspouts directly connected to storm drains? □ Y □ N □ Don’t know |

| F5. Evidence of poor cleaning practices for construction activities (stains leading to storm drain)? □ Y □ N □ Can’t Tell |

| F6. Evidence of poor cleaning practices for washing activities (observed washwater dumping, stains leading to storm drain)? □ Y □ N □ Can’t Tell |

### G. TURF/LANDSCAPING AREAS

| G1. % of site with: Forest canopy _____% Turf grass _____% Landscaping _____% Bare Soil 20 % |
| G2. Rate the turf management status. □ High □ Medium □ Low 40% medium to high |

| G3. Evidence of permanent irrigation or “non-target” irrigation □ Y □ N □ Can’t Tell |

| G4. Do landscaped areas drain to the storm drain system? □ Y □ N □ Can’t Tell |

| G5. Do landscape plants accumulate organic matter (leaves, grass clippings) on adjacent impervious surface? □ Y □ N □ Can’t Tell |

### H. STORM WATER INFRASTRUCTURE

| H1. Are storm water treatment practices present? □ Y □ N □ Unknown If yes, please describe: ____________________ |

| H2. Are there maintenance records? |

| H3. Are private storm drains located at the facility? □ Y □ N □ Unknown > 25 |

| H4. Is stormwater connected to sewer? □ Y □ N □ Unknown |

### I. INITIAL HOTSPOT STATUS - INDEX RESULTS

- □ Not a hotspot (fewer than 5 circles and no boxes checked)
- □ Potential hotspot (5 to 10 circles but no boxes checked)
- □ Confirmed hotspot (10 to 15 circles and/or 1 box checked)
- □ Severe hotspot (>15 circles and/or 2 or more boxes checked)

*Index: ○ denotes potential pollution source; ______________ denotes confirmed polluter (evidence was seen)“}

Adapted from the Hotspot Site Investigation Model, United States Environmental Protection Agency

A-2
<table>
<thead>
<tr>
<th>Follow-up Action:</th>
<th>Fueling Islands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate (1 week)</td>
<td>Cover fueling islands</td>
</tr>
<tr>
<td>Refer for immediate enforcement</td>
<td>Install dry spill response kits</td>
</tr>
<tr>
<td>Test for illicit discharge</td>
<td>Landscaping / turf</td>
</tr>
<tr>
<td>Mid-term (2-3 months)</td>
<td>Turf conversion to landscading / Bayscaping</td>
</tr>
<tr>
<td>Schedule a review of storm water pollution prevention plan</td>
<td>Pervious area restoration</td>
</tr>
<tr>
<td>Suggest follow-up on-site inspection</td>
<td>Tree planting</td>
</tr>
<tr>
<td>Long-term (1 year)</td>
<td>Reduce maintenance (mowing, herbicides, fertilizers)</td>
</tr>
<tr>
<td>Onsite non-residential retrofit</td>
<td>Vehicle repairs</td>
</tr>
<tr>
<td>Suggest pollution prevention training for employees</td>
<td>Plumbers indoor shop drains to sanitary</td>
</tr>
<tr>
<td>Other:</td>
<td>Store fluids/batteries inside or under cover</td>
</tr>
<tr>
<td>Identified Opportunities:</td>
<td>Outdoor materials</td>
</tr>
<tr>
<td>General</td>
<td>Provide cover or secondary containment</td>
</tr>
<tr>
<td>Include in future education effort (add specifics to Notes)</td>
<td>Place materials on pallets</td>
</tr>
<tr>
<td>Stencil or mark storm drain inlets</td>
<td>Waste Bin management</td>
</tr>
<tr>
<td>Signage opportunities (buffer, wetland, bacteria, etc.)</td>
<td>Cover or add/repair lids</td>
</tr>
<tr>
<td>Other:</td>
<td>Move dumpsters away from storm drains or streams</td>
</tr>
<tr>
<td>Roofline</td>
<td>Parking lots</td>
</tr>
<tr>
<td>Evaluate feasibility of cistern or water reuse</td>
<td>Find and fix fluid leaks</td>
</tr>
<tr>
<td>Downspout disconnection</td>
<td>Trash and litter pick-up, sweeping</td>
</tr>
<tr>
<td>Loading Areas</td>
<td>Identify retrofit projects</td>
</tr>
<tr>
<td>Sweep loading areas</td>
<td>Reduce salt application</td>
</tr>
<tr>
<td>Cover loading docks or redesign drainage</td>
<td>Stormwater Infrastructure</td>
</tr>
<tr>
<td></td>
<td>Clean out storm drain inlets</td>
</tr>
<tr>
<td></td>
<td>Perform maintenance inspection</td>
</tr>
</tbody>
</table>

Adapted from the Hotspot Site Investigation Model, United States Environmental Protection Agency
A-3
DRAW A SKETCH OF THE PROPOSED PROJECT(S) AND/OR ADD ADDITIONAL NOTES. FOR SKETCHES, INCLUDE ITEMS SUCH AS PARKING LOTS, CURBS, ROOF AREAS, DOWNSPOUTS, DIRECTION OF FLOW, OBVIOUS UTILITIES, EXISTING LARGE TREES, ETC.

Adapted from the Hotspot Site Investigation Model, United States Environmental Protection Agency
A-4
GLOSSARY OF TERMS USED

Insert or amend meanings for the following words and terms into the Glossary. Note that where a term is already included, its meaning is only changed in respect of the TANK catchments.

**Actual and Reasonable** in relation to applications to take and use water means;

a) no more than the quantity specified on the permit due for renewal or any lesser amount applied for;

and the least of either

b) the maximum annual amount as measured by accurate water meter data in the ten years preceding 1 August 2017 for groundwater takes in the HPGWZ or in the preceding ten years as applicable and, for any other take, the amount measured in l/sec and calculated as the sum of weekly maximum averaged over a month in the ten years preceding <date of notification>, or

c) the quantity required to meet the modelled crop water demand for the irrigated area with an efficiency of application of no less than 80% as specified by the IRRICALC water demand model (if it is available for the crop and otherwise with an equivalent method), and to a 95% reliability of supply where the irrigated area is;

   a. no more than in the permit due for renewal, or any lesser amount applied for and

   b. where evidence is supplied to demonstrate that the area has, and can continue to be, irrigated and the permit substantially given effect to.

**Affected stream** is one which the Stream Depletion Calculator identifies the greatest magnitude of flow reduction in stream depletion caused by that take (a take may affect more than one stream). The stream with the largest effect is the “affected stream”.

**Allocation Limit** for surface water means the maximum quantity that is able to be allocated in water permits and abstracted expressed in litres per second and calculated as the sum of weekly maximum water permit allocations for a river, or management zone averaged over one month.

**Allocation limit for Groundwater** means the maximum quantity that is able to be allocated in water permits and abstracted during each year, expressed in cubic metres per year, and is calculated as the sum of maximum water permit allocations for the groundwater zone. Allocations for irrigation will be further restricted in relation to the irrigation period of November- May. The HPWMU Groundwater Allocation Limit will be addition to water taken and used for Frost Protection which is expressed as an instantaneous take in litres per second and calculated as the sum of water permit allocations.

**Allocation limit for high flow takes** means the maximum quantity that is able to be allocated in water permits and abstracted expressed in litres per second as an instantaneous flow and calculated as the sum of the instantaneous flow allocations in water permits for a river or management zone.

**Applicable stream enhancement scheme** is a stream flow enhancement scheme developed either by Council or water permit holders to pump groundwater into the affected stream when the trigger flow is reached. If not scheme is feasible, then there is no applicable scheme.

**Aquifer testing** means taking and using groundwater at a constant rate not exceeding 3 consecutive days in any 28 day period to test attributes and characteristics of an aquifer and/or groundwater.
Those characteristics may include transmissivity, storativity and chemical composition. It does not include the taking or use of groundwater where a device is connected to that might result in variability of water flow. What about geological surveys etc?

**Default Radius in respect of Registered Drinking Water Supplies means** ....and are shown on the planning maps in schedule

**Essential human health needs** means the proportion of water supplied to residential and other end users for essential human health needs and will be calculated at a rate of 200l/person per day. (Note this is from MfE Guidance being the sum of Drinking 2, Cooking and Food 3, Toilet flushing 80, Bathing and Showering 100, 23% of washing needs 15, Total 200l/p/d)

**Farm Environment Plan** means a plan that has been prepared in accordance with the requirements of Schedule 1C by a person with the professional qualifications necessary to prepare such a plan which is implemented by a landowner or on behalf of a landowner.

**Farming Enterprise** – as defined in the RMMP but to include TANK catchments

**Forestry Management Plan** means

**Fre** means.... according to the Regional Council records

**Hapū** (In TANK catchments) means kinship group, section of a large kinship group and the primary political unit in traditional Maori society.

**Indigenous vegetation** for the purposes of rules regulating removal of vegetation means: means any area of naturally occurring vegetation where the cover of indigenous plants is the same as or greater than exotic plants but excludes any indigenous vegetation which grows beneath plantation forestry.

Kaitiakitanga; add “and in TANK catchments can only be passed down through generations via whakapapa”

**Ki uta ki tai** – means The movement of water from mountains to sea, through the landscape and the numerous interactions it may have on its journey. Ki uta ki tai acknowledges the connections between the atmosphere, surface water, groundwater, land use, water quality, water quantity, and the coast. It also acknowledges the connections between people and communities, people and the land, and people and water.

**Mahinga Kai** insert “ and in the TANK catchments mahinga kai generally refers to indigenous freshwater species that have traditionally been used as food, tools, or other resources. Mahinga kai provide food for the people of the rohe and these species give an indication of the overall health of the catchment. For this value, kai would be safe to harvest and eat and knowledge transfer is present (intergenerational harvest). In freshwater management units that are highly valued for providing mahinga kai, the desired species are plentiful enough for long-term harvest and the range of desired species is present across all life stages.

**Māori** means the aboriginal people of New Zealand that migrated from Hawaiki in successive waves of migration settling throughout the Pacific.

**Marae** A marae is a fenced-in complex of carved buildings and grounds that belongs to a particular iwi (tribe), hapū (sub tribe) or whānau (family). Māori people see their marae as tūrangawaewae - their place to stand and belong. Marae are places of refuge for maori and provide facilities to enable maori to continue with our own way of life within the total structure of their own terms and values.
The marae is an institution from classical Māori society that has survived the impact of western civilisation.

Matauranga Māori means cultural knowledge of the natural world

Mauri Insert “and in the TANK catchments Mauri is a spiritual value that expresses itself within the natural world in a particular manner. In the Māori world view, all-natural things have Mauri, both animate and inanimate. Within freshwater environments, the manifestation of healthy mauri is abundant and healthy water and aquatic resources, including the fish, insects, birds and plants that interact with the water”

Papakainga means a group of houses of three or more, developed on Maori land that has multiple-owners

Registered Drinking Water Supply (or Supplies) means ....

Registered Drinking Water Supplier means

Reticulated Stormwater Network

River - defined as in the RMA. This will be interpreted to align with the implementation for Tukituki PC and applies to all flowing permanent and intermittent rivers/creeks, lakes and wetlands. An intermittent river or creek is a waterway that periodically flows and has a defined river bed that is predominantly un-vegetated and comprised of silt, sand, gravel and similar.

Source Protection Zone means ............and is shown on the planning maps in (tbc)

Stream Depletion Calculator

TANK Industry Programme or a TANK Catchment Collective is a group of people meeting the requirements of Schedule 5A and which has a Catchment Collective or Industry Programme that has been prepared in accordance with the requirements of Schedule 5B by a person with the professional qualifications necessary to prepare such a Programme

Technical Method in respect of defining a Source Protection Zone means

Waka ama is a New Zealand term for the traditional sport used in the Pacific of outrigger canoeing